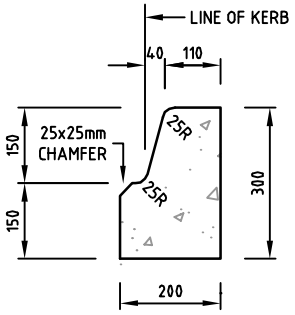
STANDARD DRAWING INDEX SHEET

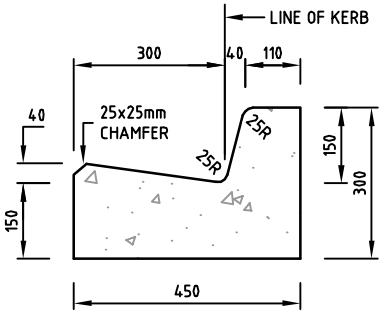
DRAWING No.	DESCRIPTION	DATE LAST MODIFIED
100	KERBS	
SD 100	TYPICAL KERB PROFILES 'B' TYPE, 'SM' TYPE & 'M' TYPE	30/01/2013
SD 105	TYPICAL INDUSTRIAL KERB PROFILES 'B' TYPE, 'SM' TYPE & 'M' TYPE	1/03/2013
SD 110	TYPICAL KERB BEDDING DETAIL	30/11/2011
SD 120	LAYBACK FOR 'B2' & 'B3' KERBING	30/01/2013
SD 130	KERB & CHANNEL INSTALLATION ABUTTING EXISTING PAVEMENT	4/03/2013
SD 140	HEAVY DUTY KERB ADAPTORS FOR 'B2' AND 'SM2' KERBS	30/11/2011
SD 145	SUBSOIL DRAINAGE	4/03/2013
200	PAVEMENTS	
SD 200	PEDESTRIAN CROSSING	22/02/2012
SD 205	TYPICAL FOOTPATH DETAIL	30/01/2013
SD 210	TYPICAL FOOTPATH JOINTS	30/01/2013
SD 215	REINFORCED CONCRETE PAVEMENT SEALANT DETAILS	30/01/2013
SD 220	REINFORCED CONCRETE PAVEMENT ISOLATION JOINT	30/01/2013
SD 225	REINFORCED CONCRETE PAVEMENT TYPICAL JOINT DETAILS	25/08/2010
SD 235	RETROFIT RESIDENTIAL VEHICLE CROSSING	30/01/2013
SD 240	NEW RESIDENTIAL SINGLE VEHICLE CROSSING DETAIL	4/03/2013
SD 245	NEW RESIDENTIAL DOUBLE VEHICLE CROSSING DETAIL	4/03/2013
SD 250	NEW INDUSTRIAL VEHICLE CROSSING DETAIL	4/03/2013
SD 255	TYPICAL SWALE DRAIN VEHICLE CROSSING (RURAL ENTRANCE)	30/01/2013
SD 260	TYPICAL SWALE DRAIN VEHICLE CROSSING (FRINGE URBAN RESIDENTIAL ENTRANCE)	4/03/2013
SD 265	TYPICAL B DOUBLE VEHICLE CROSSING (RURAL ENTRANCE)	30/01/2013
300	TRENCHING BACKFILL	
SD 310	TRENCHING BACKFILL (TRENCHES WITHIN 1m OF COUNCIL ASSETS)	30/01/2013
400	PITS & DRAINAGE STRUCTURES	
SD 400	TYPICAL PIT DIMENSIONING AND SETTING OUT DETAIL	30/01/2013
SD 405	UNHAUNCHED PITS (450Ø MAX. PIPE)	30/01/2013
SD 410	HAUNCHED PITS	30/01/2013
SD 415	MIN. WALL THICKNESS FOR REINFORCEMENT IN MASS CONCRETE PITS (CAST IN-SITU)	30/01/2013
SD 420	JUNCTION PIT IN ROAD RESERVE	30/01/2013
SD 425	JUNCTION PIT WITH CONCRETE COVER (NON TRAFFICABLE AREAS)	30/01/2013
SD 430	SIDE ENTRY PIT 900m INLET WITH CAST IRON COVER & CONCRETE SURROUND FOR 'B2'	30/01/2013
SD 431	900 x 600mm SIDE ENTRY PIT PIPES UP TO 450mmØ (PRECAST CONCRETE LINTEL)	30/01/2013
SD 435	SIDE ENTRY PIT-09m INLET WITH CAST IRON COVER & CONCRETE SURROUND FOR 'SM2'	30/01/2013
SD 440	SIDE ENTRY PIT 900mm INLET WITH CAST IRON COVER & CONCRETE SURROUND FOR 'SM2-M'	30/01/2013
SD 445	DOUBLE SIDE ENTRY PIT 1900mm INLET WITH APPROVED COVER & CONCRETE SURROUND FOR 'B2'	30/01/2013
SD 450	DOUBLE SIDE ENTRY PIT 1900mm INLET WITH CAST IRON COVER & CONCRETE SURROUND FOR 'SM2'	30/01/2013
SD 455	DEPRESSED GRATED PIT	30/01/2013
SD 460	INLET CATCH PIT	30/01/2013
SD 465	REINFORCED CONCRETE WINGWALL (IN-SITU)	30/01/2013
SD 470	CONCRETE ENDWALL FOR PIPES UP TO 300mmØ (WALKWAYS, PATHS & TRACKS	30/01/2013
SD 475	GRATED SIDE ENTRY PIT INLET 900mm WITH CONCRETE SURROUND FOR 'B2'	30/01/2013
SD 480	GRATING PIT FOR SM2 MODIFIED KERB & CHANNEL	22/02/2012
SD 490	900 x 600mm SIDE ENTRY PIT WITH GRATING	30/01/2013
SD 495	SPOON PIT WITH GRATING	30/01/2013

STANDARD DRAWING INDEX SHEET

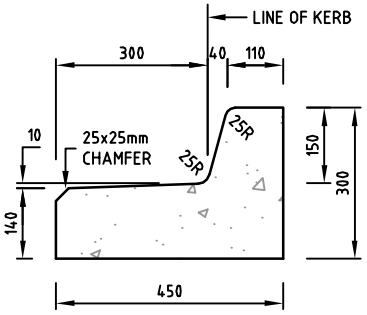
DRAWING No.	DESCRIPTION	DATE LAST MODIFIED
500	PITS & DRAINAGE STRUCTURES	
SD 500	CATCH DRAIN DETAILS	4/03/2013
SD 505	HOUSE DRAIN TO KERB & CHANNEL	30/01/2013
SD 510	HOUSE DRAIN UNDER ROAD PAVEMENT	30/01/2013
SD 515	STREET DRAIN CONNECTION	30/01/2013
SD 516	STREET DRAIN CONNECTION (45° TO PIPE WHERE COVER LIMITED)	31/01/2013
SD 520	EASEMENT DRAIN CONNECTION	4/03/2013
SD 525	FLUSHOUT RISER DETAIL	25/08/2010
SD 530	FLUSHOUT RISER COVER DETAIL	25/08/2010
SD 535	DRAINAGE PIPE ANCHOR BLOCK	30/11/2011
600	TYPICAL ROAD PROFILE	
SD 600	TYPICAL ROAD PROFILES RURAL	30/01/2013
SD 605	TYPICAL ROAD PROFILES RESIDENTIAL	30/01/2013
SD 610	TYPICAL ROAD PROFILES - ACCESS PLACE & STREET / COLLECTOR LEVEL 1 & 2	4/03/2013
SD 615	TYPICAL ROAD PROFILES - LOW DENSITY RESIDENTIAL COLLECTOR / RURAL ACCESS	30/01/2013
SD 620	TYPICAL ROAD PROFILES - RURAL LIVING ACCESS & COLLECTOR / LOW DENSITY RESIDENTIAL ACCESS	30/01/2013
SD 625	TYPICAL ROAD PROFILES - COMMERCIAL STREET / INDUSTRIAL STREET	30/01/2013



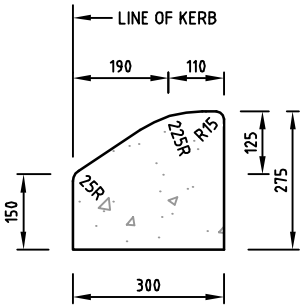
B1



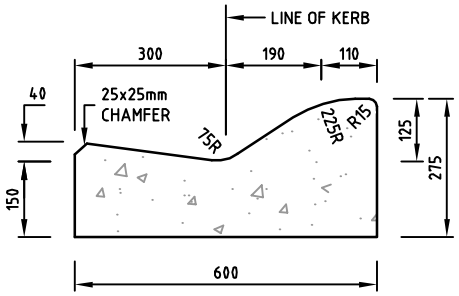
B2



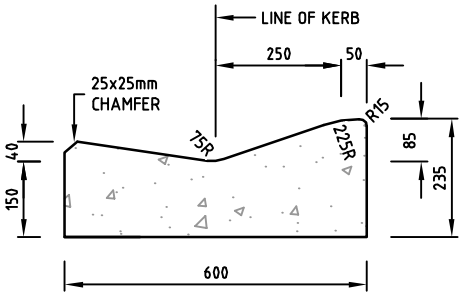
B3



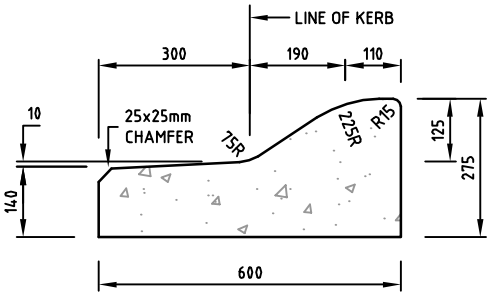
SM1



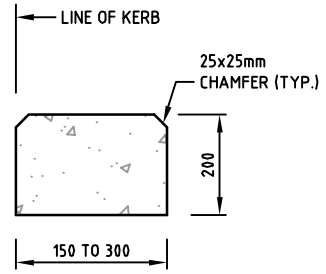
SM2



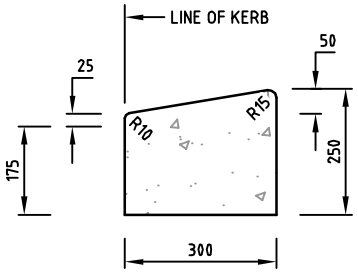
SM2-M (MODIFIED)



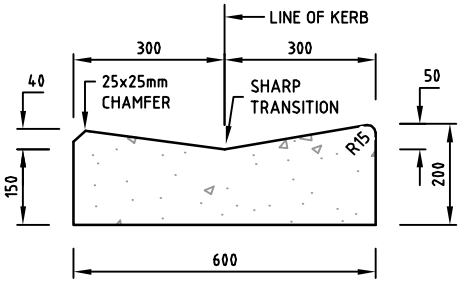
SM3



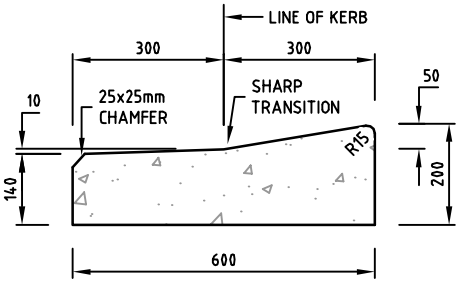
EDGE STRIP



M1



M2



M3

NOTES:

1. REFER TO AS. 2876-2000 CONCRETE KERBS AND CHANNELS FOR SPECIFIC REQUIREMENTS.
2. REFER TO AUSTROADS GUIDE TO ROAD DESIGN PART 3: GEOMETRIC DESIGN FOR THE RECOMMENDED USE OF KERBS AND CHANNELS.
3. CONCRETE SHALL BE NORMAL CLASS N25 STANDARD STRENGTH GRADE COMPLYING WITH THE REQUIREMENTS OF AS. 1379. REFER TO VICROADS STANDARD SPECIFICATION 703 FOR REQUIREMENTS OF CONCRETE TO BE USED IN EXTRUSION MACHINES.
4. BEDDING TO BE COMPACTED CLASS 3 F.C.R. SUPPLIED BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED. (REFER SD110)
5. INCREASE OVERALL KERB PROFILE (DEPTH OF CONCRETE):
   a) 80mm FOR COMMERCIAL PROPERTIES
   b) 80mm WITH L8TM TRENCH MESH FOR INDUSTRIAL PROPERTIES (MESH TO HAVE 40mm COVER)
6. CONCRETE TO BE SMOOTH TROWELLED FINISHED ON TRAY AND KERB.
7. CONCRETE SPONGE FINISHED ON LAYBACK.
8. CONSTRUCTION JOINTS LOCATED - 2500mm MAXIMUM SPACING
   - 75mm MINIMUM DEPTH
9. ELIMINATE 25mm BULLNOSE ON ALL POSITIVE FALL PEDESTRIAN CROSSINGS.
10. WIDTHS SPECIFIED IN CROSS SECTIONS ARE FACE (LINE) OF KERB MINIMUM.
11. MINIMUM CONCRETE STRENGTH TO BE 25 MPA.
12. LINE OF KERB IS USED TO DETERMINE CARRIAGEWAY WIDTHS.

ALL MEASUREMENTS IN MILLIMETRES

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TYPICAL KERB PROFILES 'B' TYPE, 'SM' TYPE & 'M' TYPE

Infrastructure Design Manual Standard Drawings

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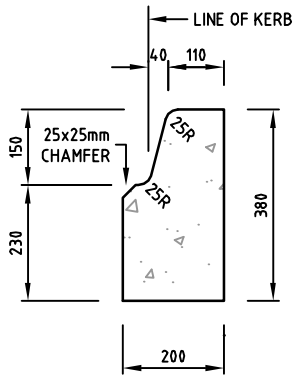
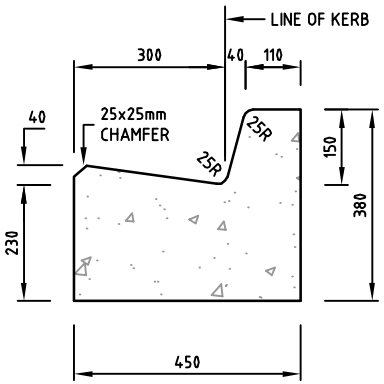
LAST UPDATED 30/01/2013

SD 100

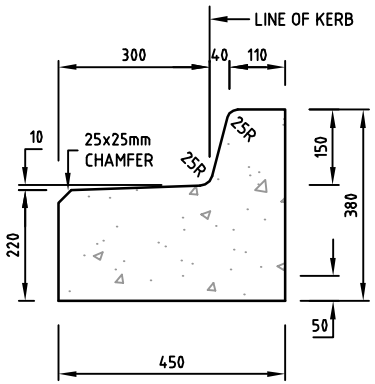
NOT TO SCALE



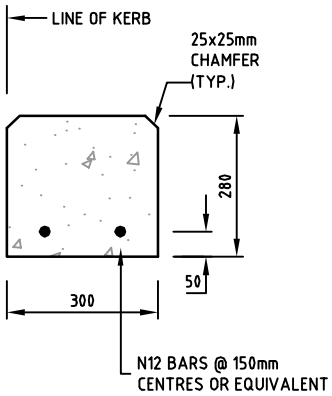
B1 (INDUSTRIAL)



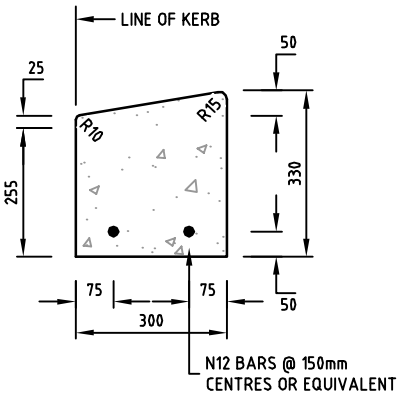
B2 (INDUSTRIAL)



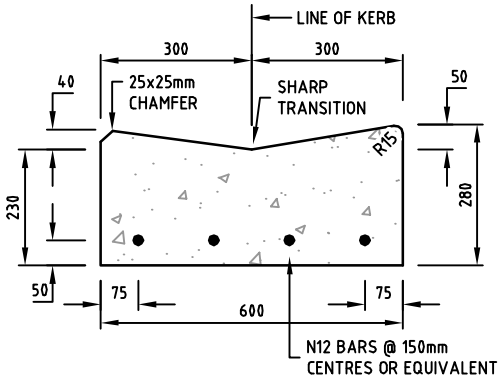
B3 (INDUSTRIAL)



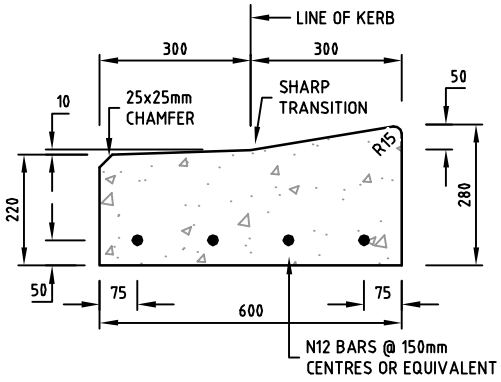
EDGE STRIP (INDUSTRIAL)



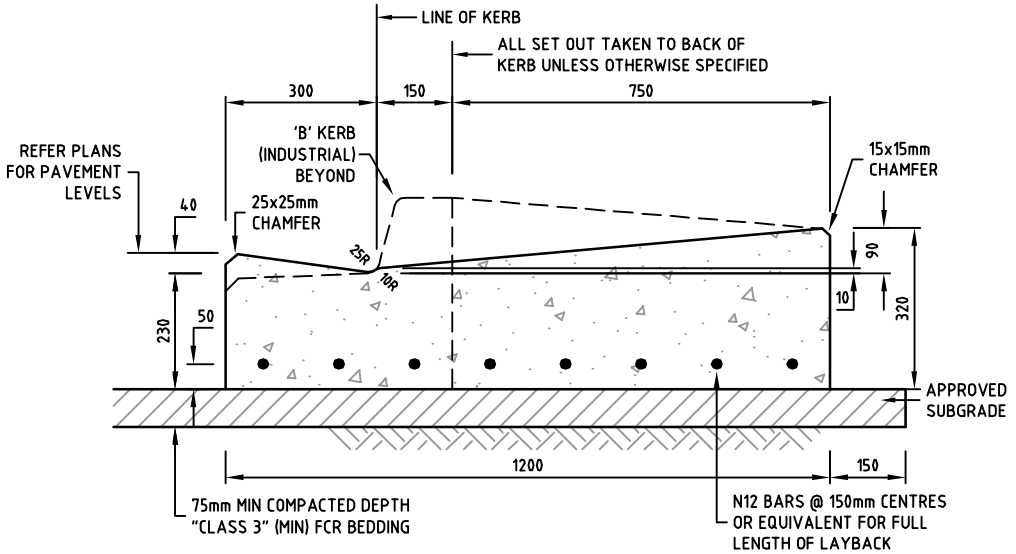
M1 (INDUSTRIAL)



M2 (INDUSTRIAL)



M3 (INDUSTRIAL)



TYPICAL INDUSTRIAL KERB LAYBACK

NOTES:

1. REFER TO AS. 2876-2000 CONCRETE KERBS AND CHANNELS FOR SPECIFIC REQUIREMENTS.
2. REFER TO AUSTROADS GUIDE TO ROAD DESIGN PART 3: GEOMETRIC DESIGN FOR THE RECOMMENDED USE OF KERBS AND CHANNELS.
3. CONCRETE SHALL BE NORMAL CLASS N25 STANDARD STRENGTH GRADE COMPLYING WITH THE REQUIREMENTS OF AS. 1379. REFER TO VICROADS STANDARD SPECIFICATION 703 FOR REQUIREMENTS OF CONCRETE TO BE USED IN EXTRUSION MACHINES.
4. BEDDING TO BE COMPACTED CLASS 3 F.C.R. SUPPLIED BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED. (REFER SD110)
5. INCREASE OVERALL KERB PROFILE (DEPTH OF CONCRETE):
   a) 80mm FOR COMMERCIAL PROPERTIES
   b) 80mm WITH L8TM TRENCH MESH FOR INDUSTRIAL PROPERTIES (MESH TO HAVE 40mm COVER)
6. CONCRETE TO BE SMOOTH TROWELLED FINISHED ON TRAY AND KERB.
7. CONCRETE SPONGE FINISHED ON LAYBACK.
8. CONSTRUCTION JOINTS LOCATED - 2500mm MAXIMUM SPACING
   - 75mm MINIMUM DEPTH
9. ELIMINATE 25mm BULLNOSE ON ALL POSITIVE FALL PEDESTRIAN CROSSINGS.
10. WIDTHS SPECIFIED IN CROSS SECTIONS ARE FACE (LINE) OF KERB MINIMUM.
11. MINIMUM CONCRETE STRENGTH TO BE 25 MPA.
12. LINE OF KERB IS USED TO DETERMINE CARRIAGEWAY WIDTHS.

ALL MEASUREMENTS IN MILLIMETRES

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TYPICAL INDUSTRIAL KERB PROFILES 'B' TYPE & 'M' TYPE

Infrastructure Design Manual Standard Drawings

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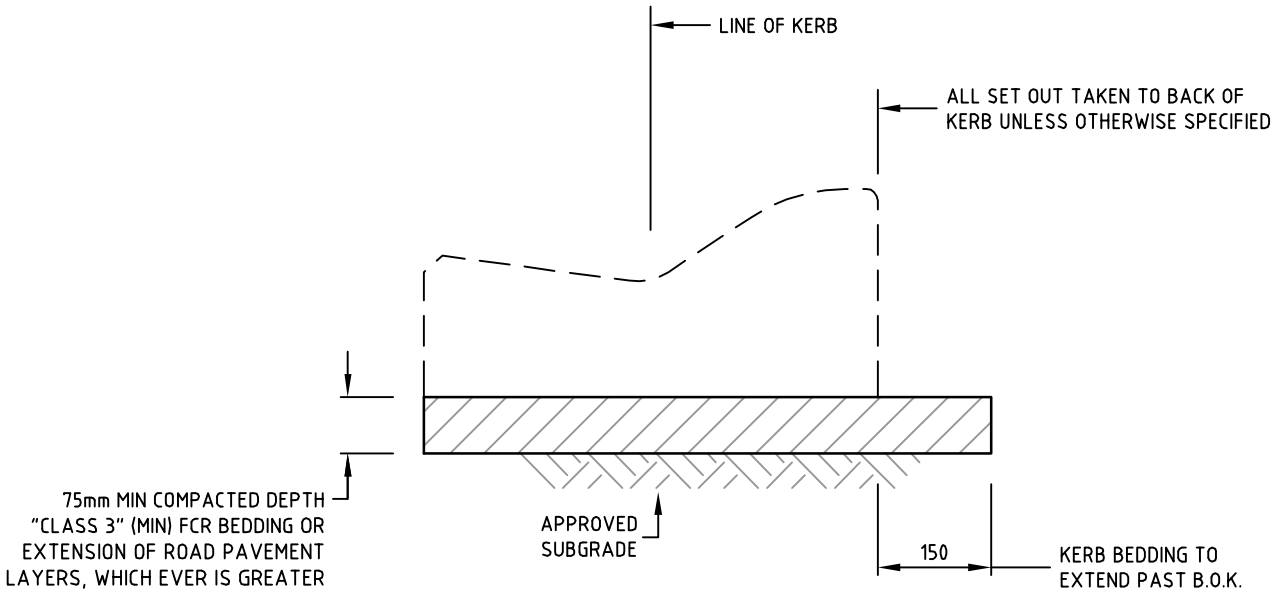
www.designmanual.com.au

LAST UPDATED 01/03/2013

SD 105

NOT TO SCALE



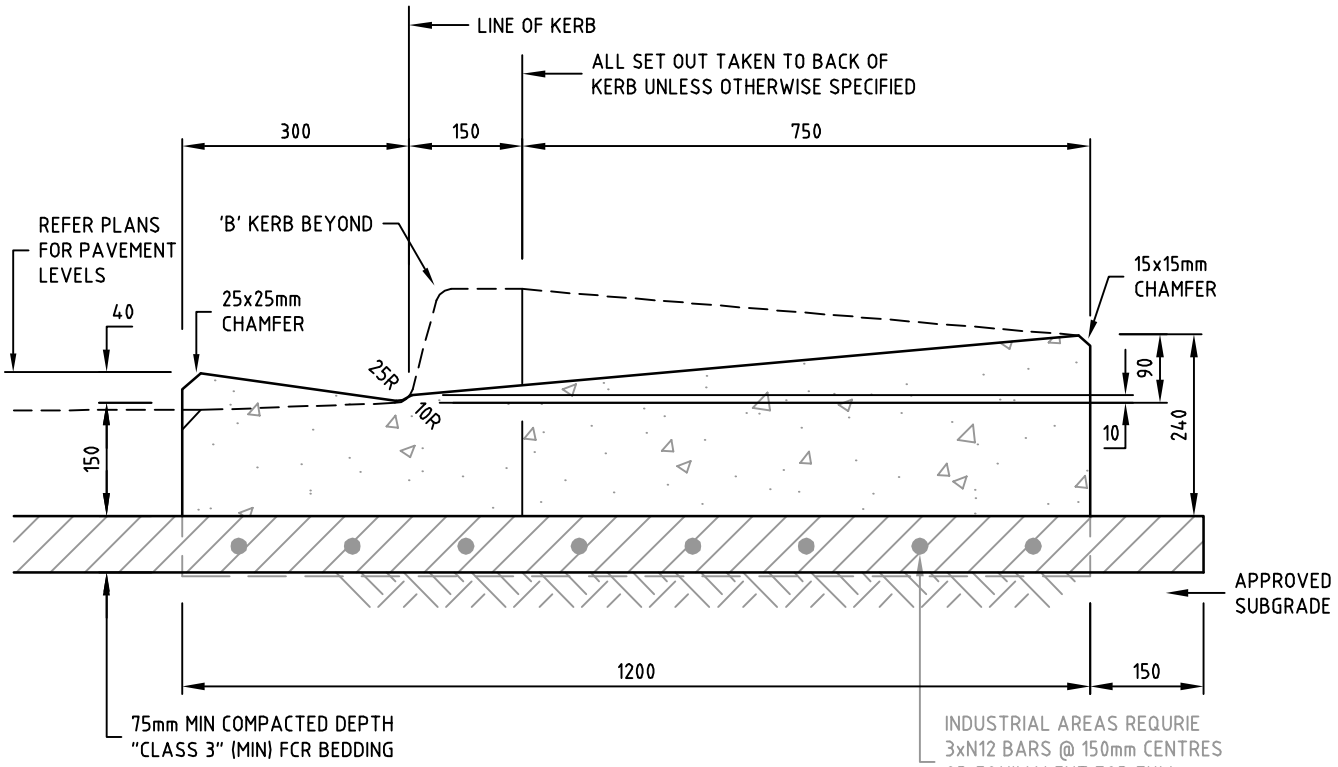
TYPICAL KERB BEDDING

NOTES:

1. BEDDING TO BE COMPACTED CLASS 3 F.C.R. SUPPLIED BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	TYPICAL KERB BEDDING DETAIL	LAST UPDATED 30/11/2011
	Infrastructure Design Manual Standard Drawings	SD 110
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	SCALE 1:10



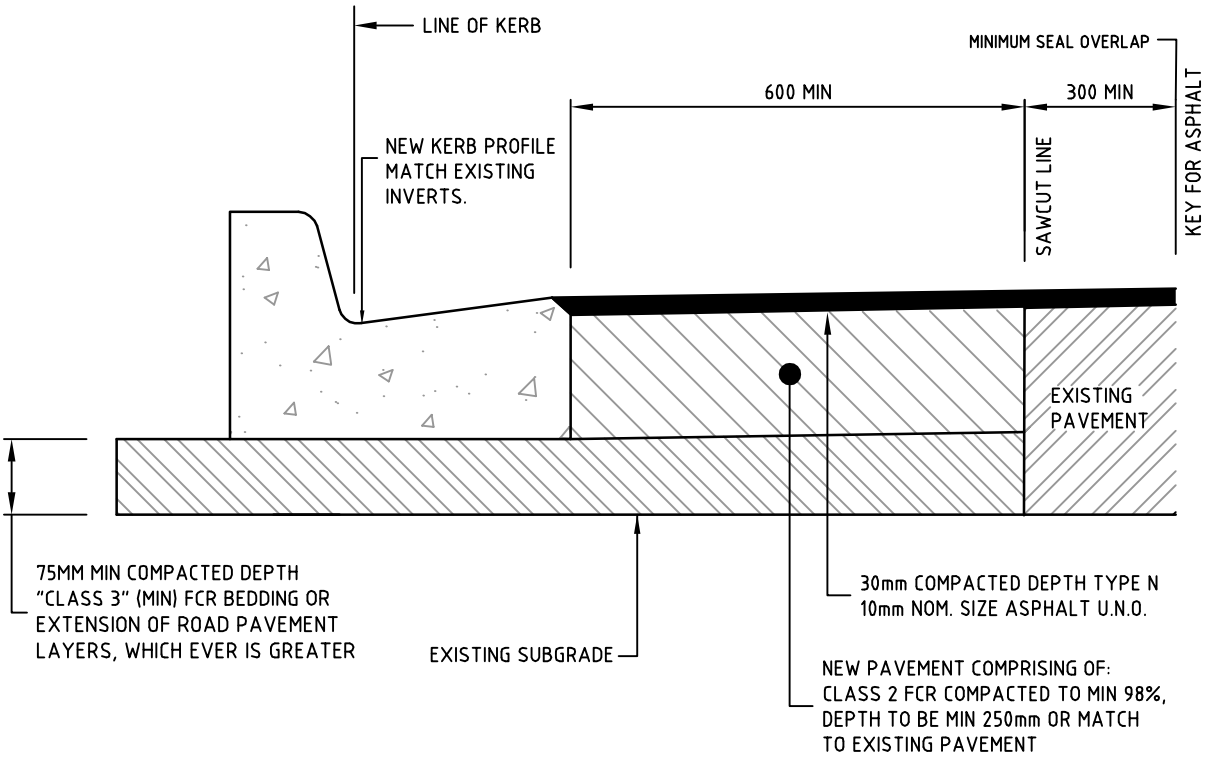
TYPICAL SECTION

NOTES:

1. REFER TO AS. 2876-2000 CONCRETE KERBS AND CHANNELS FOR SPECIFIC REQUIREMENTS
2. BEDDING TO BE COMPACTED CLASS 3 F.C.R. SUPPLIED BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED
3. INCREASE DEPTH OF CONCRETE
   a) 80mm FOR COMMERCIAL PROPERTIES
   b) 80mm WITH SL72 MESH FOR INDUSTRIAL PROPERTIES (MESH TO HAVE 40mm COVER)
4. CONCRETE TO BE SMOOTH TROWELLED FINISHED ON TRAY AND KERB
5. CONCRETE SPONGE FINISHED ON LAYBACK
6. CONSTRUCTION JOINTS LOCATED - 2500mm MAXIMUM SPACING
   - 75mm MINIMUM DEPTH
7. ELIMINATE 25mm BULLNOSE ON ALL POSITIVE FALL PEDESTRIAN CROSSINGS
8. WIDTHS SPECIFIED IN CROSS SECTIONS ARE FACE (LINE) OF KERB.

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	LAYBACK FOR 'B2' & 'B3' KERBING	LAST UPDATED 30/01/2013
	Infrastructure Design Manual Standard Drawings	SD 120
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	SCALE 1:10



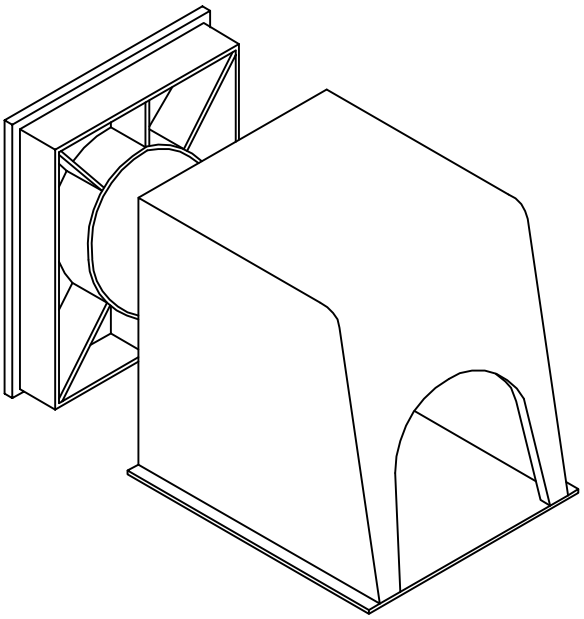
TYPICAL SECTION

NOTES:

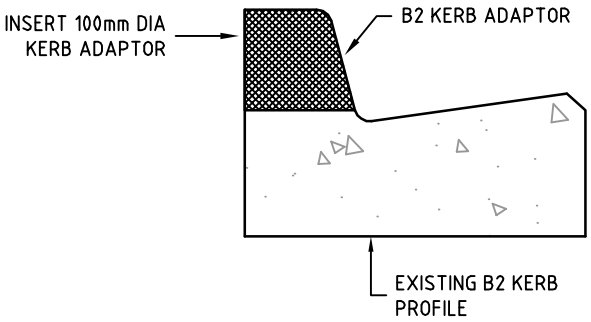
1. REFER TO CONCRETE AS. 2876-2000 CONCRETE KERBS AND CHANNELS
2. BEDDING TO BE COMPACTED CLASS 3 F.C.R. SUPPLIED BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED
3. CONCRETE TO BE SMOOTH TROWELLED FINISHED ON TRAY AND KERB
4. CONSTRUCTION JOINTS LOCATED - 2500mm MAXIMUM SPACING
   - 75mm MINIMUM DEPTH
5. ELIMINATE 25mm BULLNOSE ON ALL POSITIVE FALL PEDESTRIAN CROSSINGS
6. WIDTHS SPECIFIED IN CROSS SECTIONS ARE FACE (LINE) OF KERB.

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	KERB & CHANNEL INSTALLATION ABUTTING EXISTING PAVEMENT	LAST UPDATED 04/03/2013
	Infrastructure Design Manual Standard Drawings	SD 130
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	SCALE 1:10



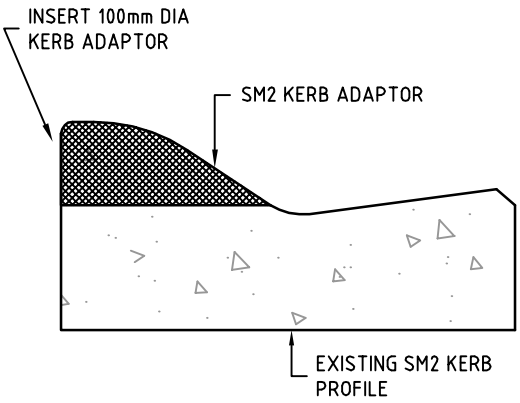
B2 KERB ADAPTOR



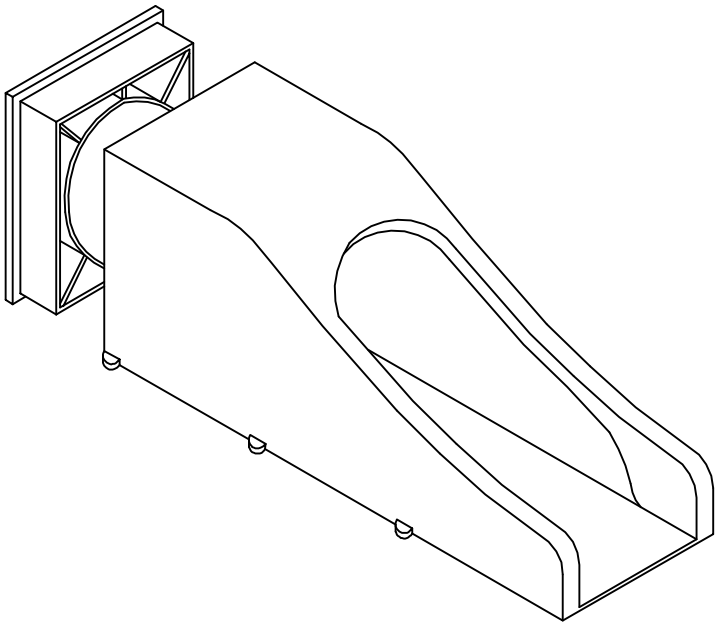
B2 KERB WITH HEAVY DUTY KERB ADAPTOR SECTIONAL VIEW

NOTES:

ALL KERB ADAPTORS ARE TO BE AN APPROVED PROPRIETARY PRODUCT CONSTRUCTED FROM EITHER HEAVY DUTY UPVC OR HOT DIPPED GALVANIZED MILD STEEL. KERB IS TO BE NEATLY SAW CUT & KERB ADAPTOR EPOXIED INTO POSITION. B2 KERB ADAPTOR NOW AVAILABLE IN GAL. STEEL



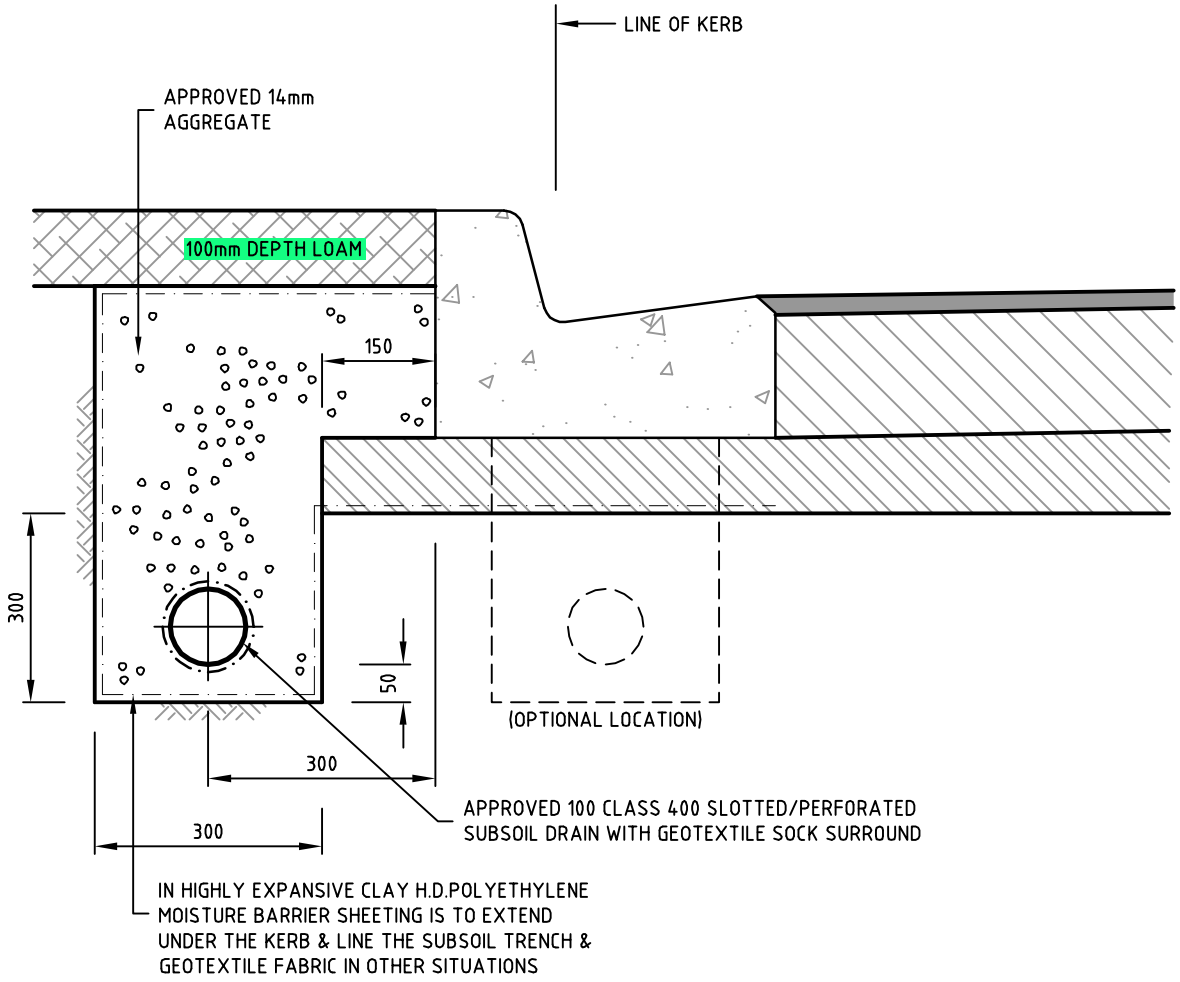
SM2 KERB WITH HEAVY DUTY KERB ADAPTOR SECTIONAL VIEW



SM2 KERB ADAPTOR

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	HEAVY DUTY KERB ADAPTORS FOR 'B2' AND 'SM2' KERBS	LAST UPDATED 30/11/2011
	Infrastructure Design Manual Standard Drawings	SD 140
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	SCALE 1:10



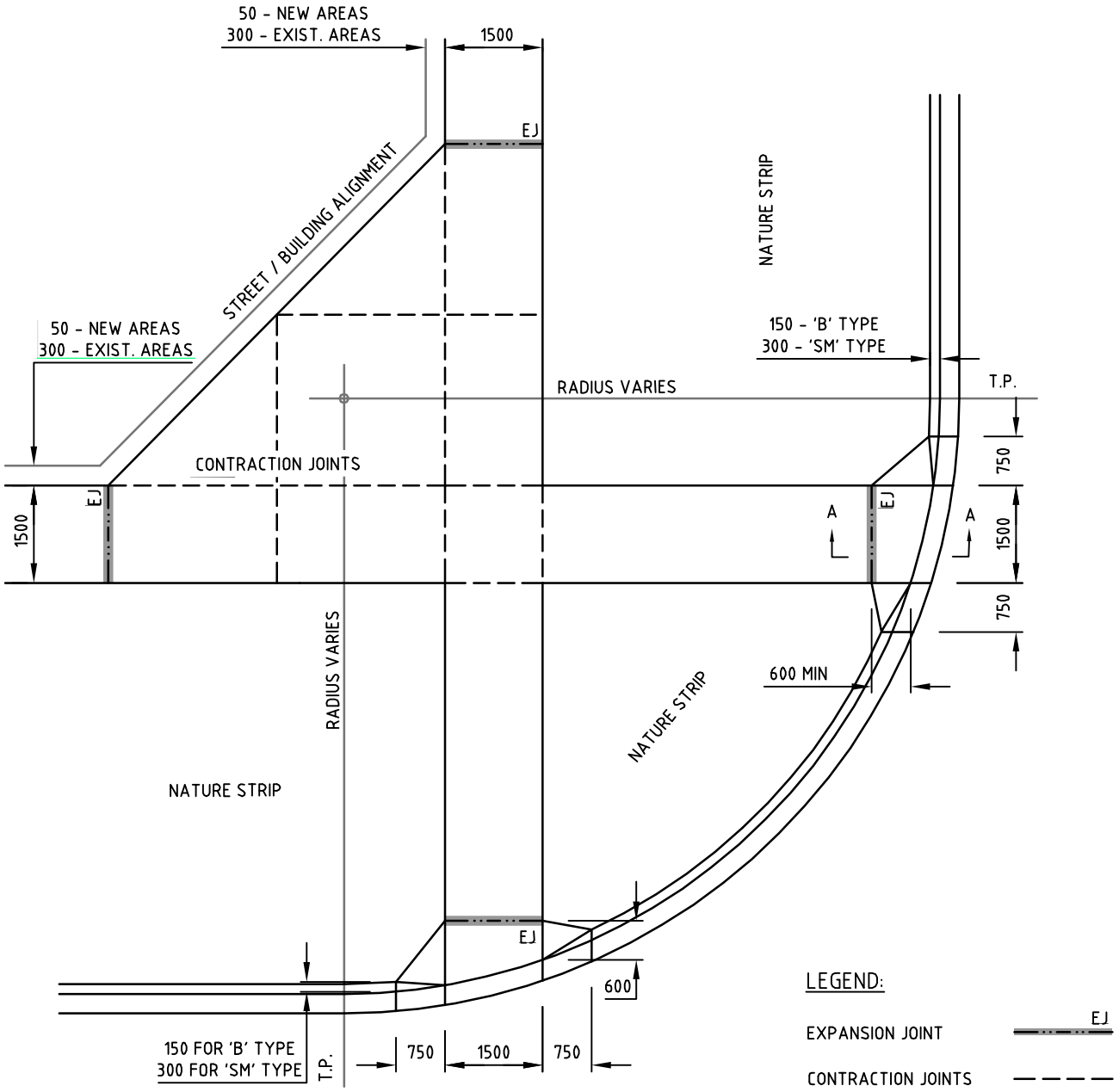
TYPICAL SECTION

NOTES:

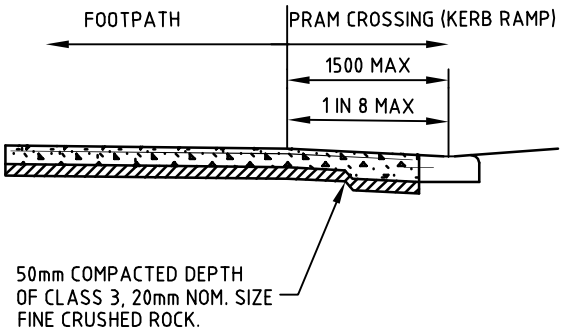
1. THE DRAINS SHALL BE LAID ON A GRADE PARALLEL TO THE FINISHED SURFACE.
2. FOR FLUSHOUT RISER DETAILS REFER TO STANDARD DRAWINGS SD530 & SD535.

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	SUBSOIL DRAINAGE	LAST UPDATED 04/03/2013
	Infrastructure Design Manual Standard Drawings	SD 145
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



TYPICAL ARRANGEMENT PLAN



SECTION A-A
NOT TO SCALE

NOTES:

1. LOCATION OF CROSSINGS TO BE CASE BY CASE & TO BE APPROVED BY COUNCIL.
2. CROSSING GENERALLY TO BE LOCATED AT TANGENT POINTS.
3. CONCRETE TO BE SMOOTH TROWELLED FINISH ON TRAY.
4. CONCRETE TO BE FINE SOFT HAIR BROOM FINISH ON LAYBACK.
5. MINIMUM CONCRETE STRENGTH TO BE 25 MPA.
6. BEDDING TO BE COMPACTED CLASS 3 (OR BETTER) F.C.R. SUPPLIED BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED
7. IF SPLAY IS NOT REQUIRED FOOTPATH IS TO CONTINUE THROUGH TO LAYBACKS.
8. TGI'S (TILES), WHERE REQUIRED, ARE TO BE TO BE INSTALLED TO AS1428.4

ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual

PEDESTRIAN CROSSING

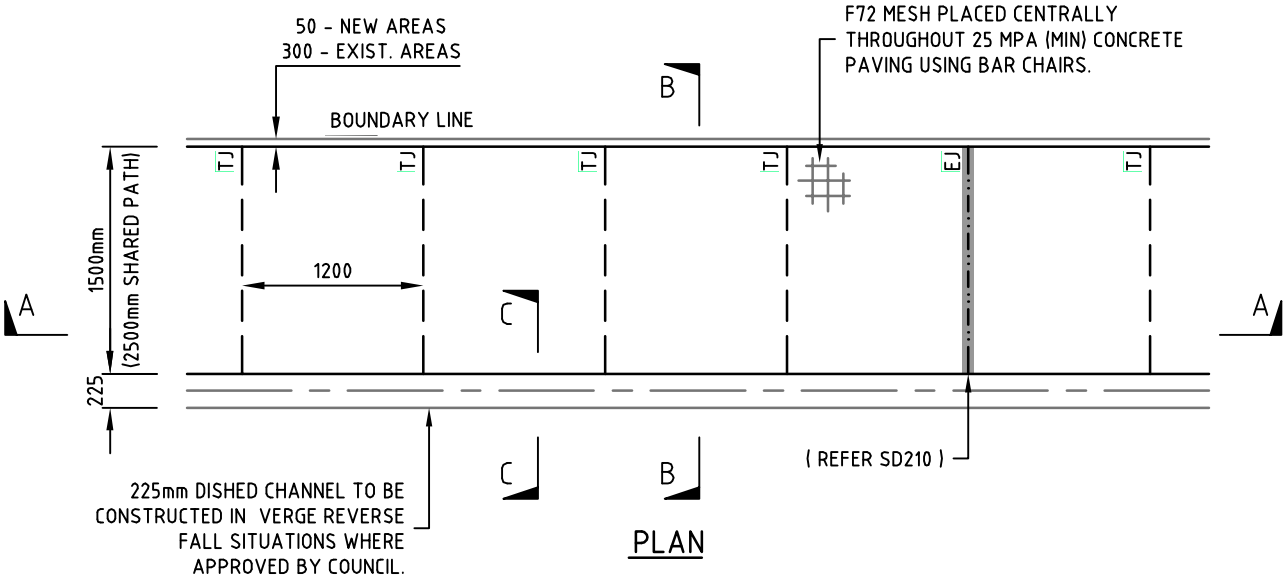
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website
www.designmanual.com.au

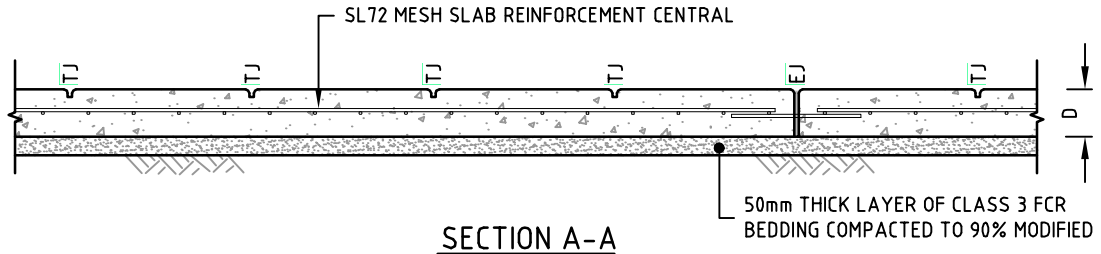
LAST UPDATED 22/02/2012

SD 200

SCALE 1:10

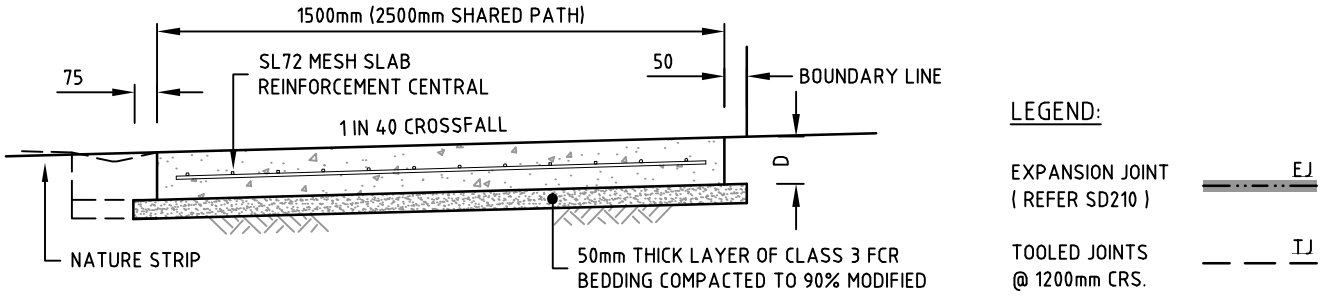


PLAN



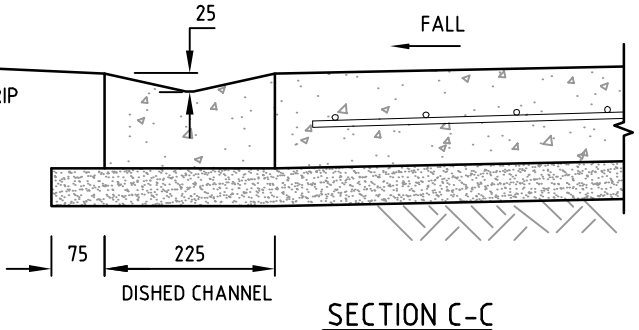
SECTION A-A

TYPICAL 125mm & 150mm FOOTPATH SECTION



SECTION B-B

TYPICAL 125mm & 150mm FOOTPATH SECTION



SECTION C-C

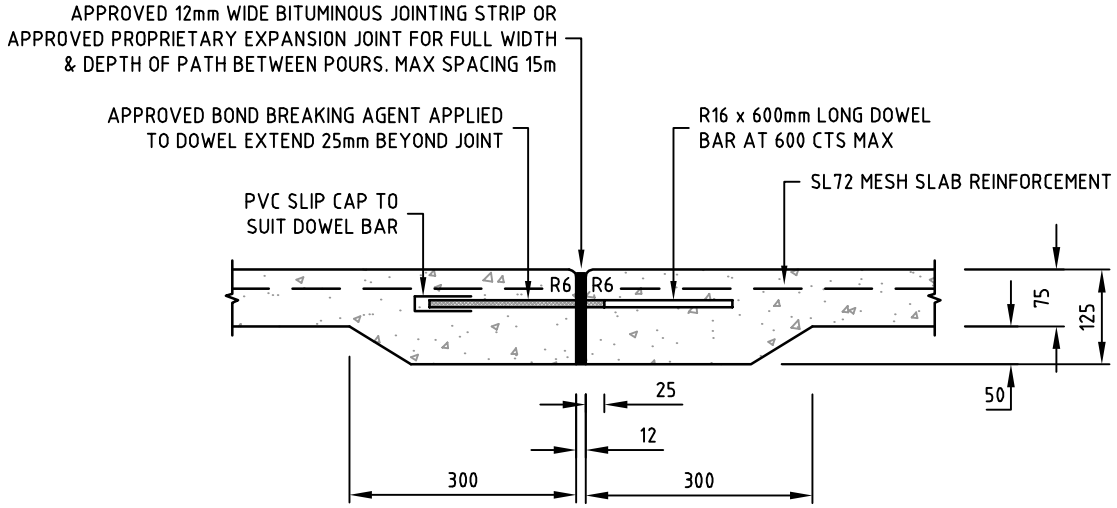
(ONLY TO BE USED WITH COUNCIL APPROVAL)

NOTES:

1. 'D' = DEPTH OF CONCRETE FOOTPATH
   TYPICAL RESIDENTIAL 'D'= 125mm THICK (25 MPa)
   TYPICAL INDUCTRIAL / COMMERCIAL 'D' = 150mm (32MPa)
2. TOOLED JOINTS TO BE MADE WITH T-IRON (OR CONCRETE SAW WITHIN 24 Hrs OF POUR).
3. IF A SAW CUT JOINT IS TO BE USED AS OPPOSED TO A TOOLED JOINT THEN REFER TO SD215

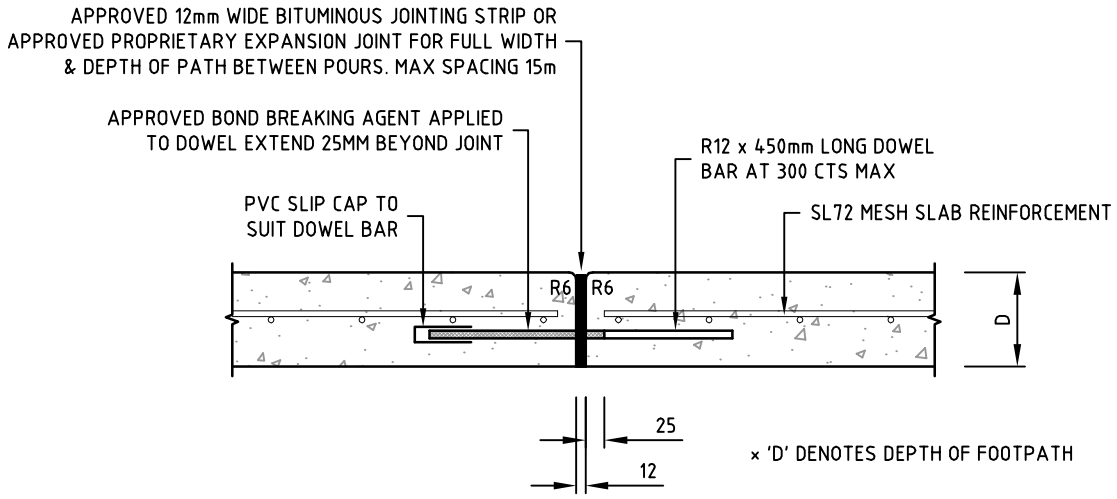
ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	TYPICAL FOOTPATH DETAIL	LAST UPDATED 30/01/2013
	Infrastructure Design Manual Standard Drawings	SD 205
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



75mm FOOTPATH EXPANSION JOINT - SECTION

(EXISTING DEVELOPED AREAS ONLY)



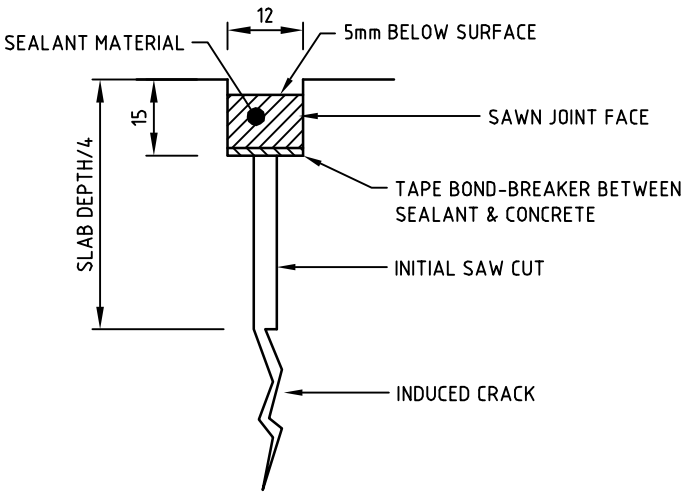
125mm & 150mm FOOTPATH EXPANSION JOINT - SECTION

NOTES:

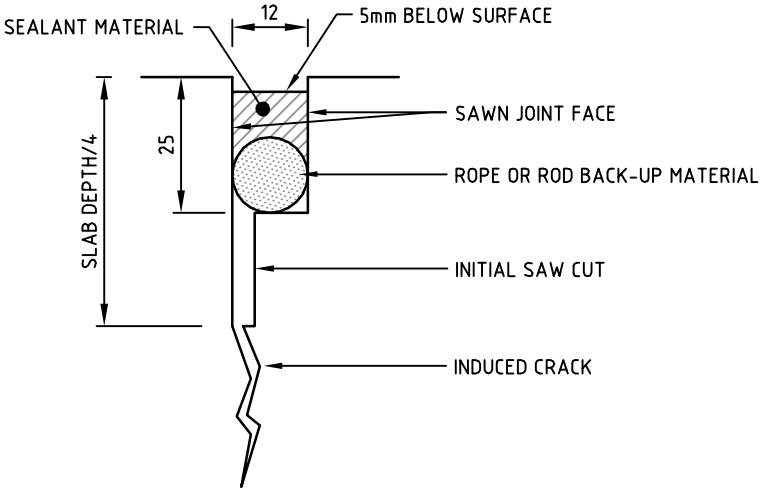
1. 'D' = DEPTH OF CONCRETE FOOTPATH
   TYPICAL RESIDENTIAL 'D'= 125mm THICK (25 MPa)
   TYPICAL INDUSTRIAL / COMMERCIAL 'D' = 150mm (32MPa)
2. APPROVED PROPRIETARY JOINTS CAN BE USED WITH COUNCIL APPROVAL.

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	TYPICAL FOOTPATH JOINTS	LAST UPDATED 30/01/2013
	Infrastructure Design Manual Standard Drawings	SD 210
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



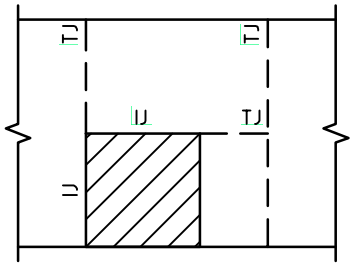
SEALANT DETAIL TYPE 1



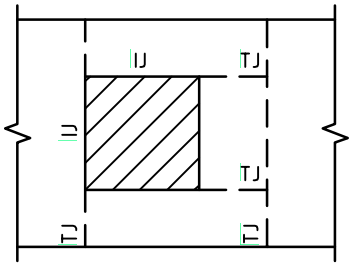
SEALANT DETAIL TYPE 2

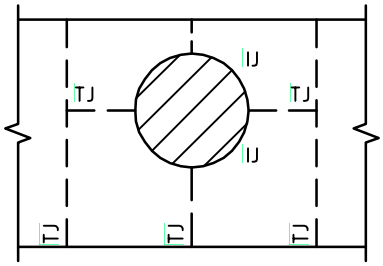
ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	REINFORCED CONCRETE PAVEMENT SEALANT DETAILS	LAST UPDATED 30/01/2013
	Infrastructure Design Manual Standard Drawings	SD 215
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	SCALE 1:10



PIT / ACCESS HOLE AT EDGE (PLAN)



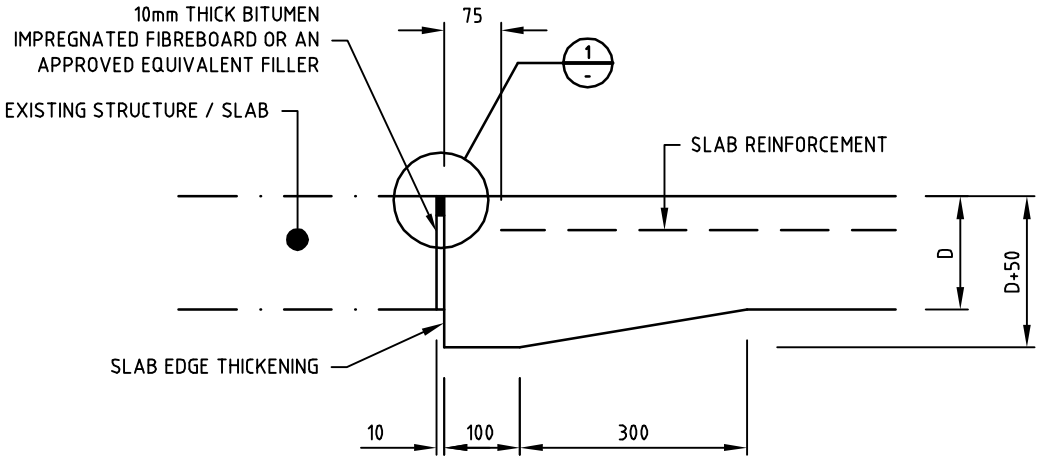


PIT / ACCESS HOLE NOT AT EDGE (PLAN)

LEGEND:

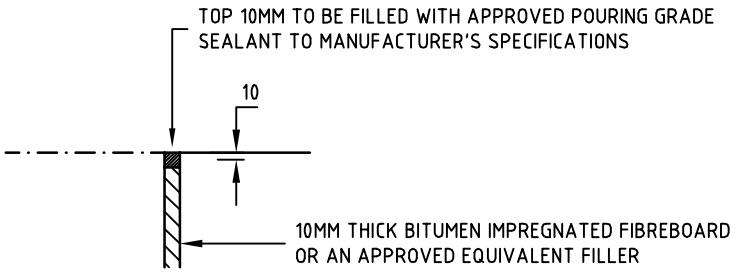
ISOLATION JOINT — IJ

TOOLED JOINTS — TJ



TYPICAL SECTION

SCALE 1:10



DETAIL 1 -

SCALE 1:5

× 'D' DENOTES DEPTH OF PAVEMENT

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual

REINFORCED CONCRETE PAVEMENT ISOLATION JOINT

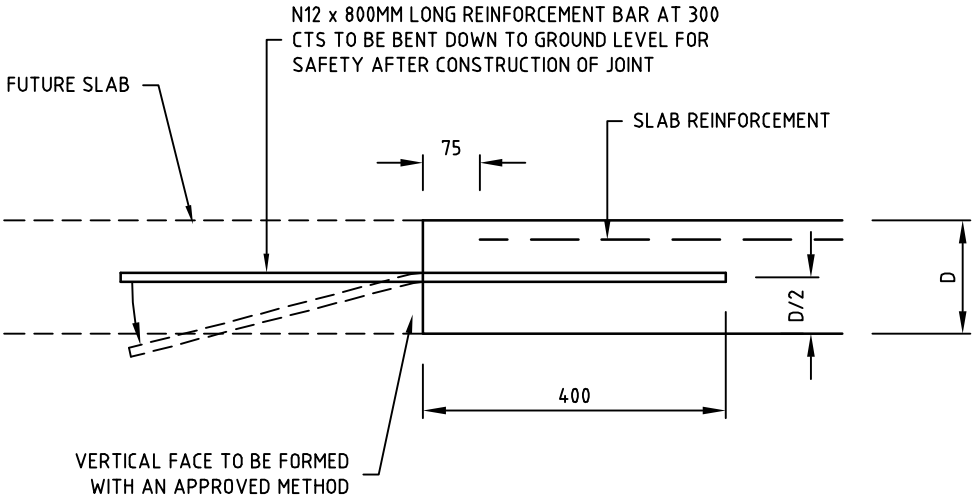
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

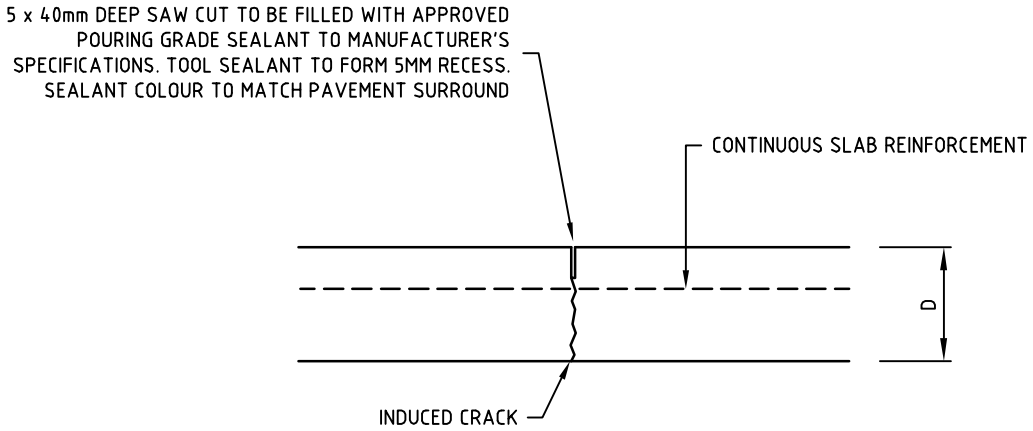
LAST UPDATED 30/01/2013

SD 220

SCALE 1:10



TYPICAL FUTURE CONSTRUCTION JOINT

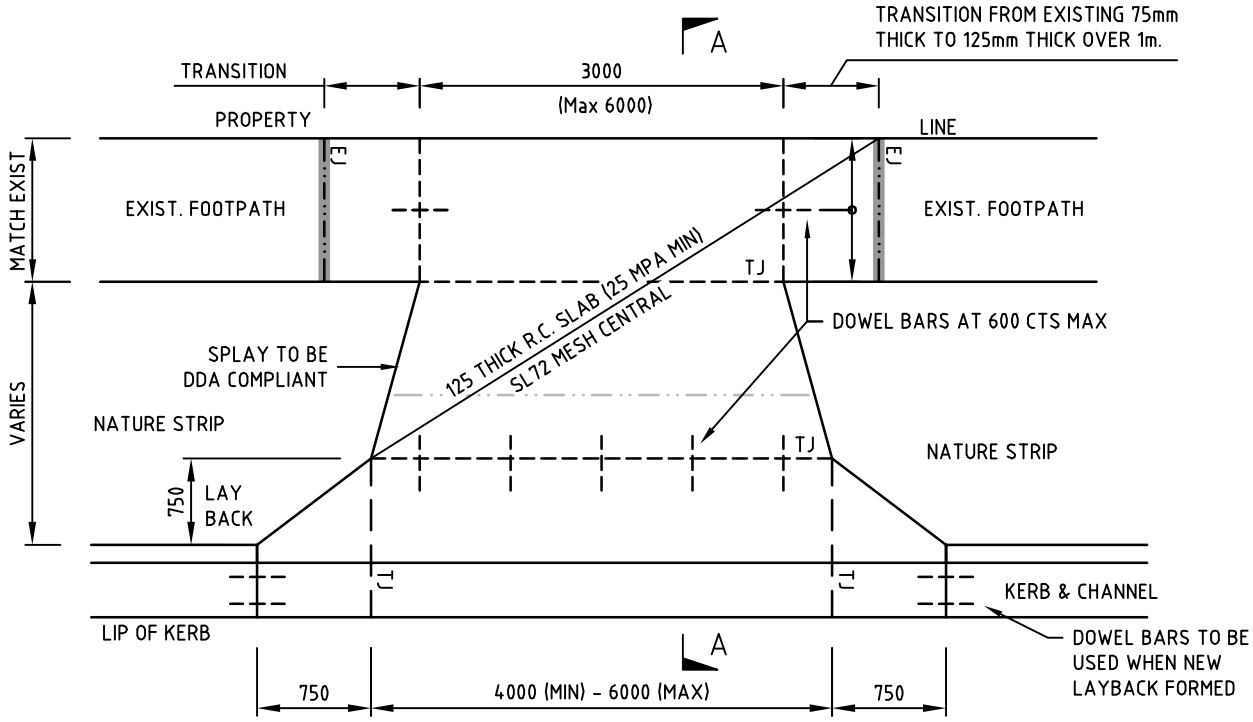


TYPICAL SAWN CONTRACTION JOINT

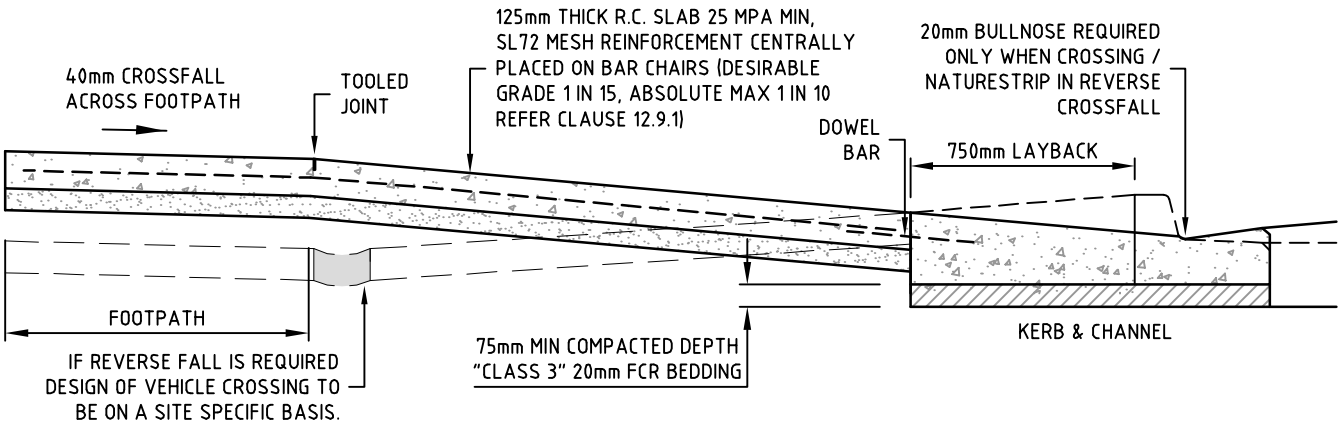
x 'D' DENOTES DEPTH OF FOOTPATH

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	REINFORCED CONCRETE PAVEMENT TYPICAL JOINT DETAILS	LAST UPDATED 25/08/2010
	Infrastructure Design Manual Standard Drawings	SD 225
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	SCALE 1:10



PLAN



CROSS SECTION A-A

LEGEND:

EXPANSION JOINT — EJ

TOOLED JOINTS — TJ

NOTES:

1. CROSS REFERENCES:
   INDUSTRIAL CROSSINGS - SD250
   RURAL CROSSINGS - SD255 / SD260
   IDM - SECTION 12.9.1.
2. THIS DRAWING DETAILS DIMENSIONS FOR STANDARD RESIDENTIAL CROSSINGS ONLY.
3. CROSSING WIDTHS EXCEEDING THE MAXIMUM ALLOWABLE WILL REQUIRE APPLICATION FOR SPECIAL CONSIDERATION.
4. JOINTS AND DOWEL BARS ARE REQUIRED ON EITHER SIDE OF THE CROSSING AT THE INTERFACE WITH THE FOOTPATH. PROVISION SHALL BE MADE IN EXISTING CONCRETE SECTIONS BY DRILLING HOLES TO A MINIMUM DEPTH OF 150mm AND INSERTING R12 X 300mm LONG DOWEL BARS.
5. AN APPROVED JOINT FILLER SHALL BE PLACED ON EITHER SIDE OF THE CROSSING AGAINST FOOTPATH SLABS. DOWEL BARS ARE TO HAVE AN APPROVED BOND BREAKER APPLIED TO THE END OF THE BAR INSERTED INTO THE EXISTING CONCRETE FOOTPATH SECTIONS REFER SD220.
6. ADDITIONAL TOOLED JOINT REQUIRED IF DISTANCE FROM BACK OF KERB TO FOOTPATH IS GREATER THAN 3000 AND SHALL BE PLACED AT THE MIDPOINT OF THE DISTANCE.
7. THE MAXIMUM NUMBER OF CROSSINGS, WHERE ANY CROSSING EXCEEDS 3.5 METRES WIDTH, SHALL BE ONE (1) CROSSING WITH THE MAXIMUM WIDTH OF THAT CROSSING TO BE 6.0 METRES. CROSSINGS TO ADJACENT PROPERTIES SHALL BE EITHER FULLY COMBINED, AND OF MAXIMUM WIDTH OF 6.0 METRES, OR ELSE HAVE A MINIMUM SEPARATION OF 9 METRES.
8. FOOTPATHS OF 75mm THICKNESS ARE ACCEPTABLE ONLY WHERE THE LOTS ARE DEVELOPED ALREADY AND THE RISK OF SITE CONSTRUCTION DAMAGE IS NEGLIGIBLE. WHERE GREENFIELD SITES AND FUTURE HOUSING IS STILL TO BE DONE, THEN THE DEPTH OF THE FOOTPATH SHALL BE 125mm THROUGHOUT.

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual

RETROFIT RESIDENTIAL VEHICLE CROSSING DETAIL

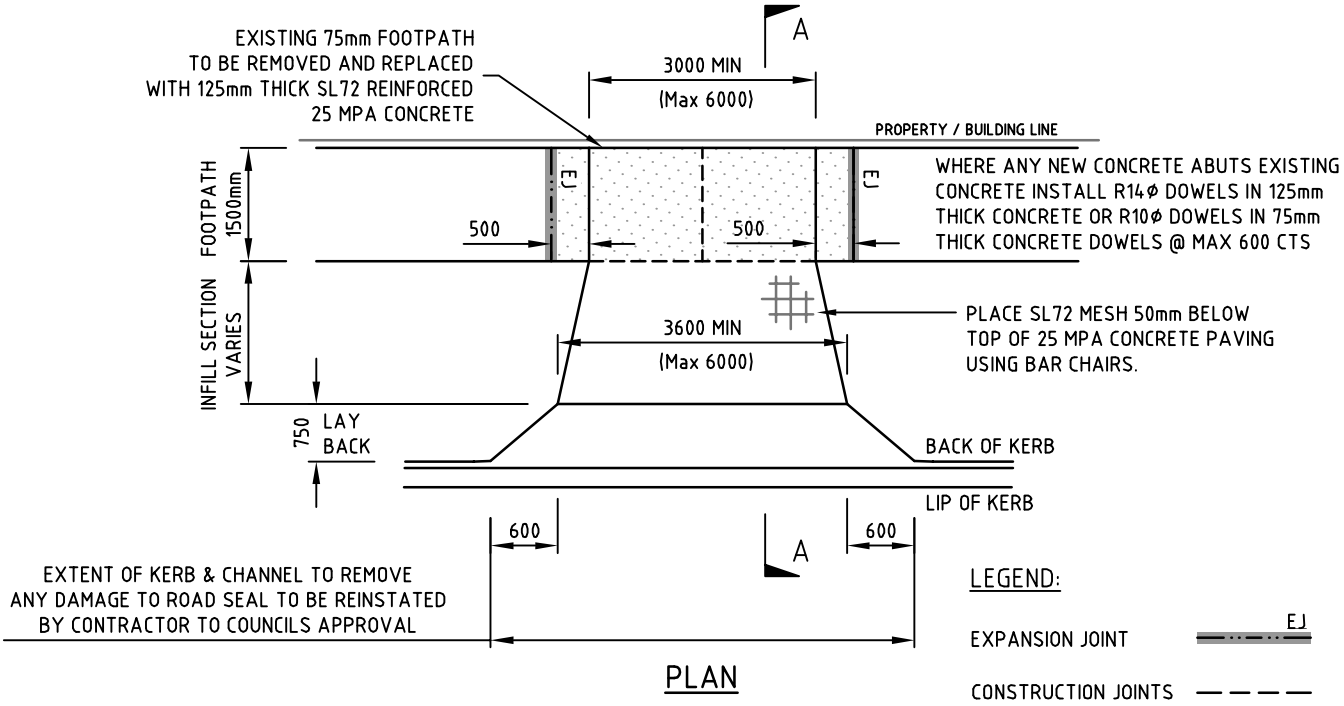
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

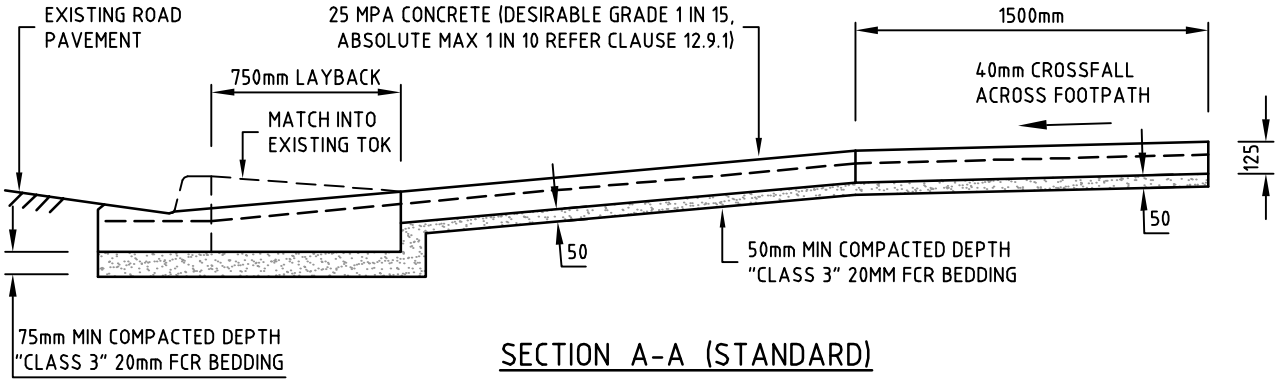
LAST UPDATED 30/01/2013

SD 235

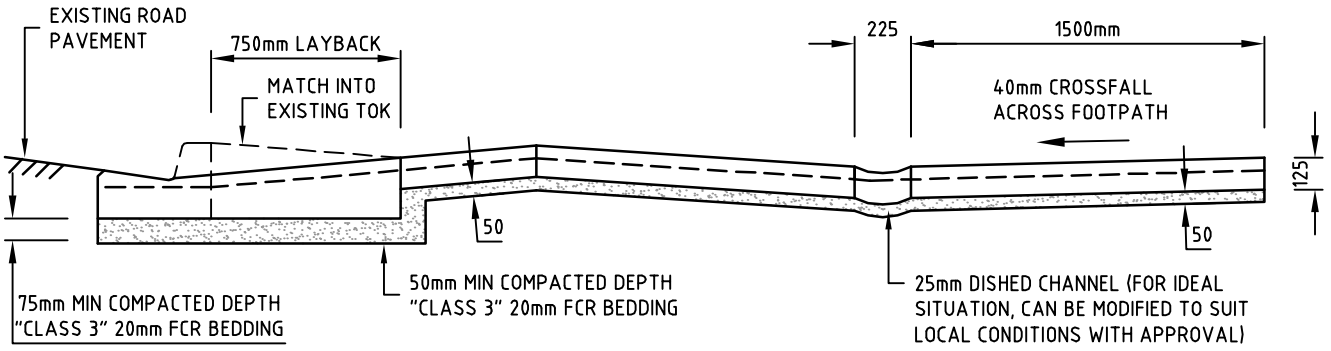
NOT TO SCALE



PLAN



SECTION A-A (STANDARD)



SECTION A-A (REVERSE FALL)

(ONLY TO BE USED WITH COUNCIL APPROVAL)

NOTE:

FOR GRADES STEEPER THAN 1 IN 15 REFER CLAUSE 12.9.1.
LAYBACK & CROSSOVER, TO BE CONSTRUCTED IN PLAIN CONCRETE ONLY (NO COLOURED CONCRETE BEYOND PROPERTY BOUNDARY)
T.O.K. DENOTES TOP OF KERB

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual

NEW RESIDENTIAL SINGLE VEHICLE CROSSING DETAIL

Infrastructure Design Manual Standard Drawings

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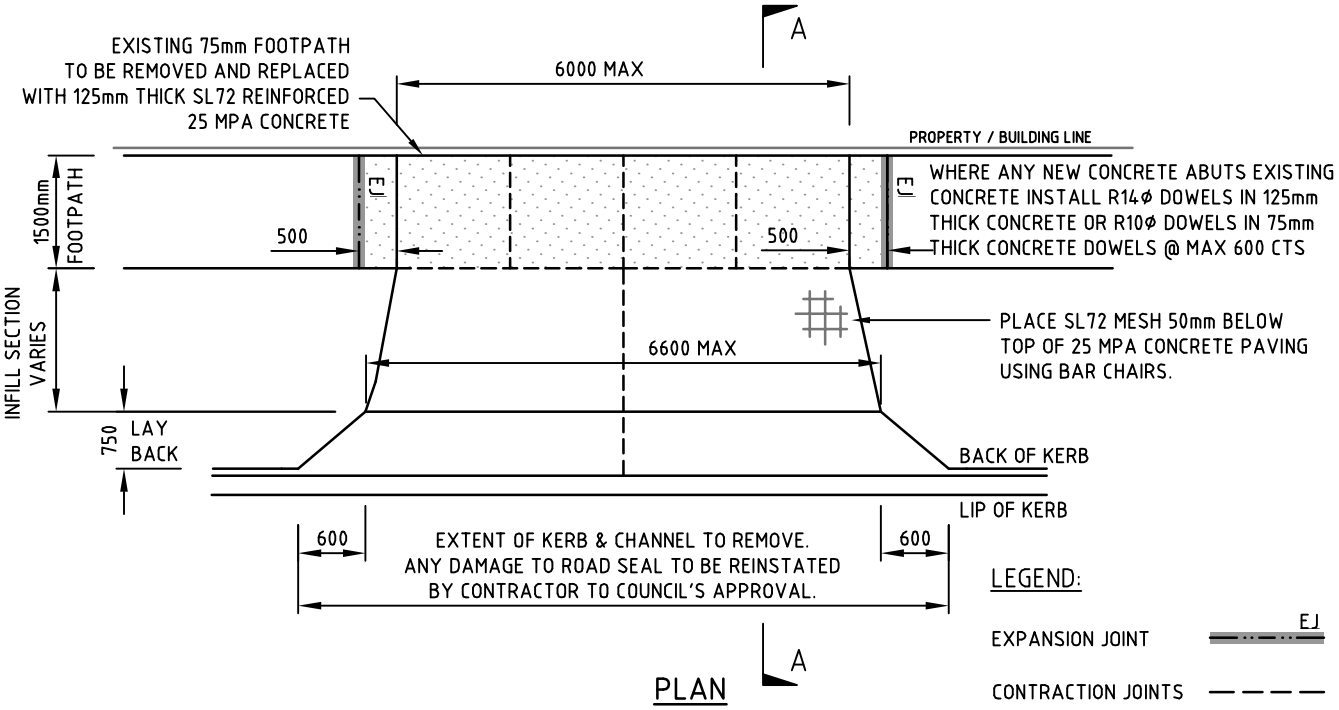
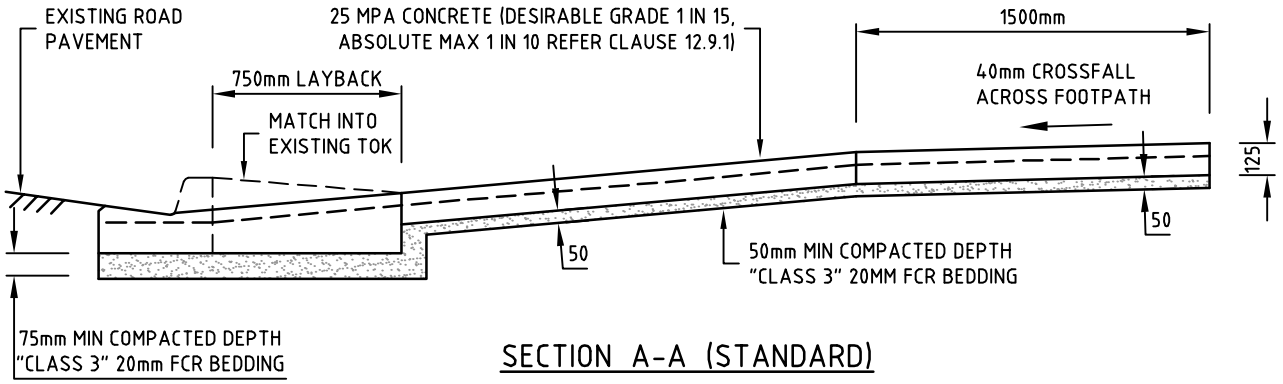
LAST UPDATED 04/03/2013

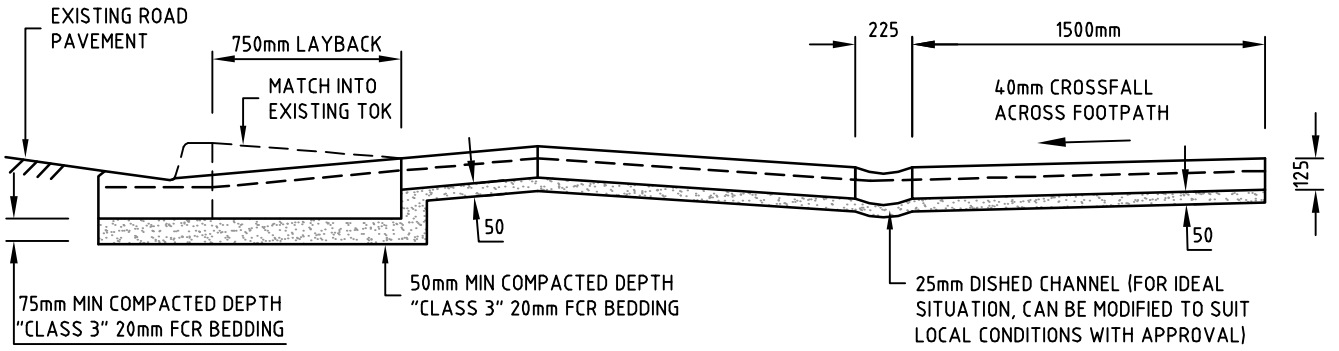
SD 240

NOT TO SCALE





SECTION A-A (STANDARD)



SECTION A-A (REVERSE FALL)

(ONLY TO BE USED WITH COUNCIL APPROVAL)

NOTE:

FOR GRADES STEEPER THAN 1 IN 15 REFER CLAUSE 12.9.1.
LAYBACK & CROSSOVER, TO BE CONSTRUCTED IN PLAIN CONCRETE
ONLY (NO COLOURED CONCRETE BEYOND PROPERTY BOUNDARY)
T.O.K. DENOTES TOP OF KERB

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual

NEW RESIDENTIAL DOUBLE VEHICLE CROSSING DETAIL

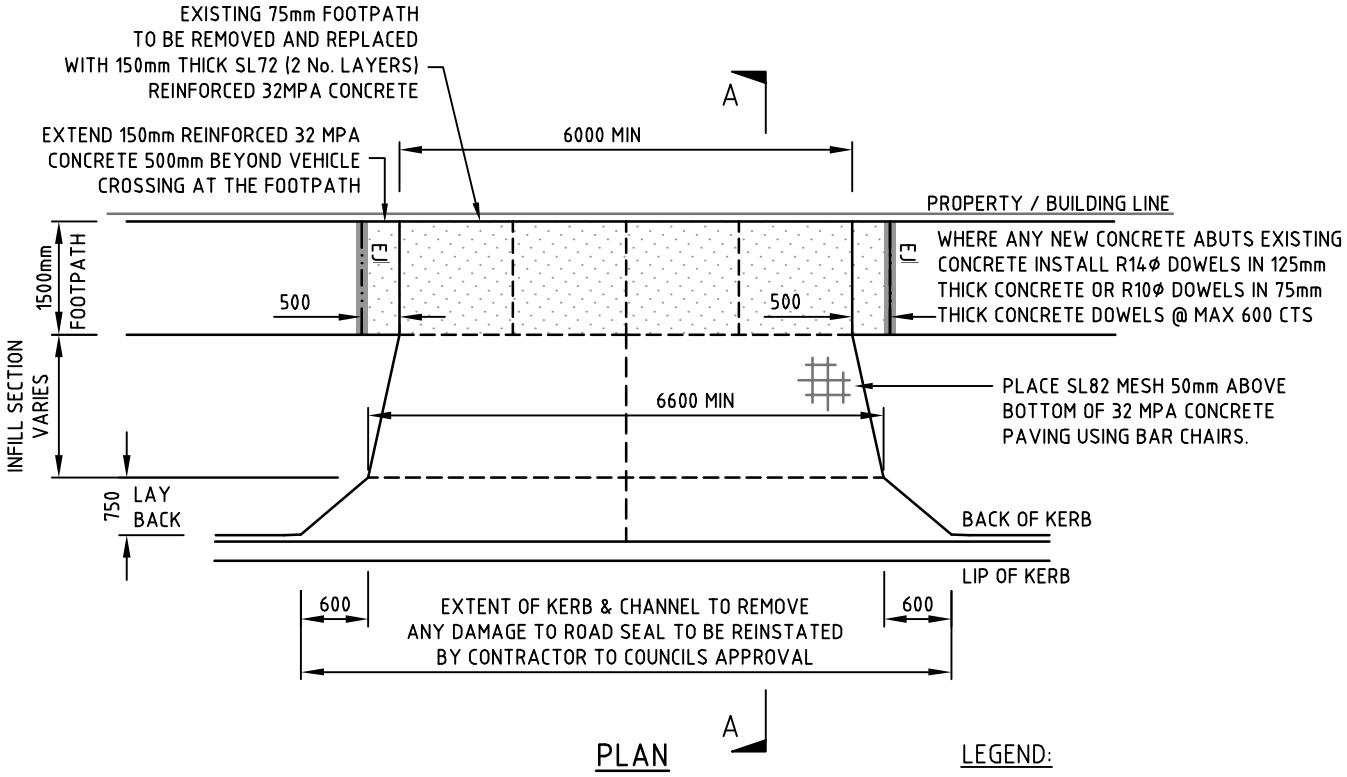
Infrastructure Design Manual Standard Drawings

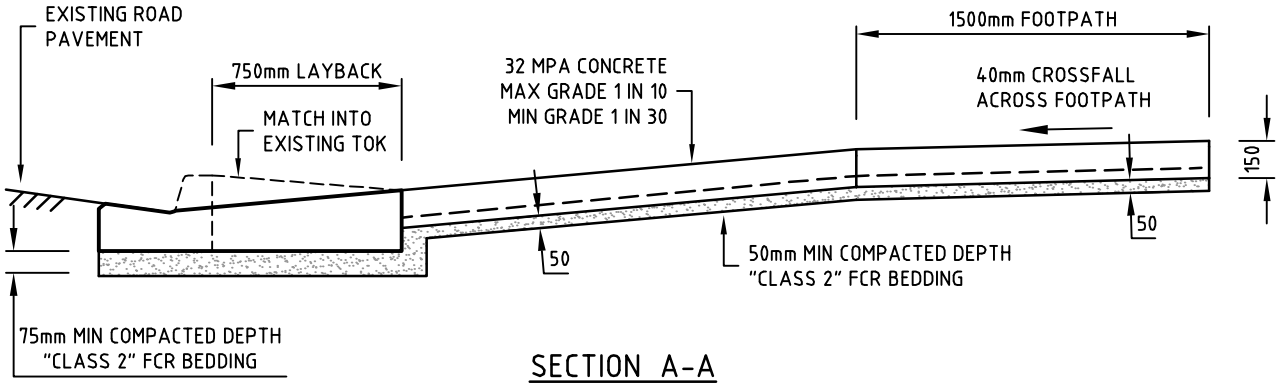
A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

LAST UPDATED 04/03/2013

SD 245

NOT TO SCALE



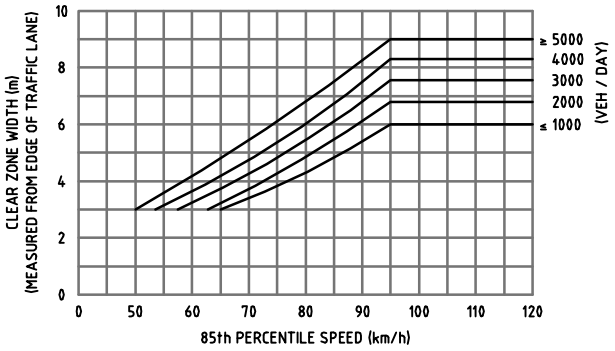


SECTION A-A

NOTE:
T.O.K. DENOTES TOP OF KERB

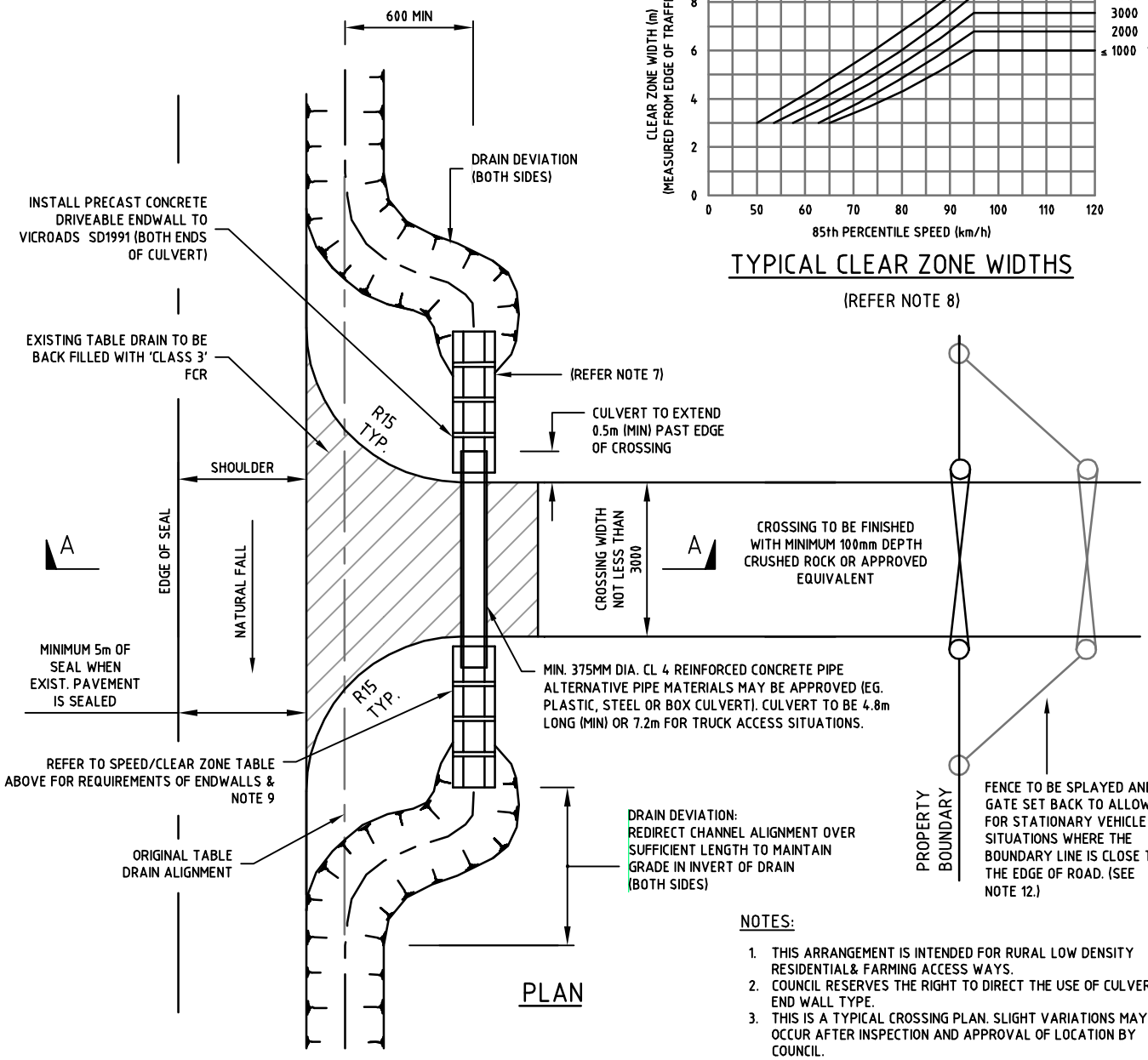
ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	NEW INDUSTRIAL VEHICLE CROSSING DETAIL	LAST UPDATED 04/03/2013
	Infrastructure Design Manual Standard Drawings	SD 250
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE

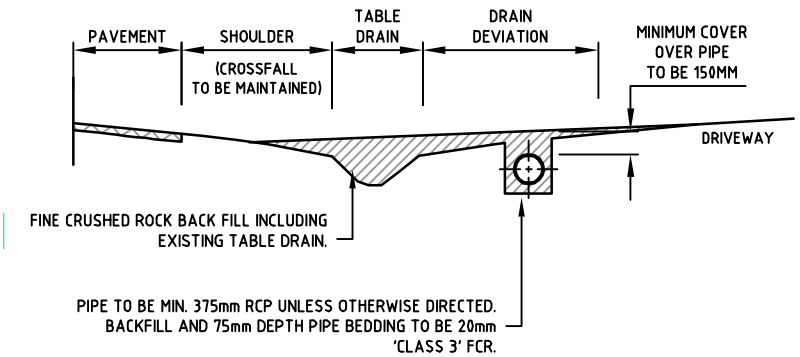


TYPICAL CLEAR ZONE WIDTHS

(REFER NOTE 8)



PLAN



SECTION A-A

NOTES:

1. THIS ARRANGEMENT IS INTENDED FOR RURAL LOW DENSITY RESIDENTIAL& FARMING ACCESS WAYS.
2. COUNCIL RESERVES THE RIGHT TO DIRECT THE USE OF CULVERT END WALL TYPE.
3. THIS IS A TYPICAL CROSSING PLAN. SLIGHT VARIATIONS MAY OCCUR AFTER INSPECTION AND APPROVAL OF LOCATION BY COUNCIL.
4. PRIOR TO THE CONSTRUCTION, THE CROSSING LOCATION SHALL BE APPROVED BY COUNCIL.
5. ALL WORKS TO BE COMPLETED TO THE SATISFACTION OF COUNCIL.
6. MAINTENANCE OF THE CROSSOVER REMAINS THE RESPONSIBILITY OF THE LAND OWNER.
7. INSTALL LOW PROFILE HEAD WALLS OUTSIDE CLEAR ZONE & DRIVEABLE END WALLS WITHIN CLEAR ZONE. NO CULVERT TO BE WITHIN 3m OF EDGE OF SEAL.
8. THE CLEAR ZONE TABLE SHOWN IS A GUIDE ONLY AND FOR FURTHER ACCURATE CLEAR ZONE GUIDELINES REFER TO AUSTROADS 'GUIDE TO ROAD DESIGN – PART 6: ROADSIDE DESIGN, SAFETY AND BARRIERS' TABLE 4.1: 'CLEAR ZONES DISTANCES FROM EDGE OF THROUGH TRAVELLED WAY'
9. TABLE DRAINS ARE NOT TO BE CLOSER THAN 1.0m FROM FENCE LINES OR SERVICES.
10. COUNCIL MAY REQUIRE THAT CROSSING PAVEMENT BE SEALED DEPENDING ON SITE LOCATION AND SPECIFICS.
11. GATE OFFSET DIMENSIONS:

STANDARD VEHICLE TYPE	MINIMUM GATE OFFSET FROM EDGE OF THROUGH LANE (m)
CAR (5.0m)	8.2
RIGID TRUCK (12.0m)	12.5
SEMI (19.0m)	22
B-DOUBLE (25.0m)	28

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual

TYPICAL SWALE DRAIN VEHICLE CROSSING (RURAL ENTRANCE)

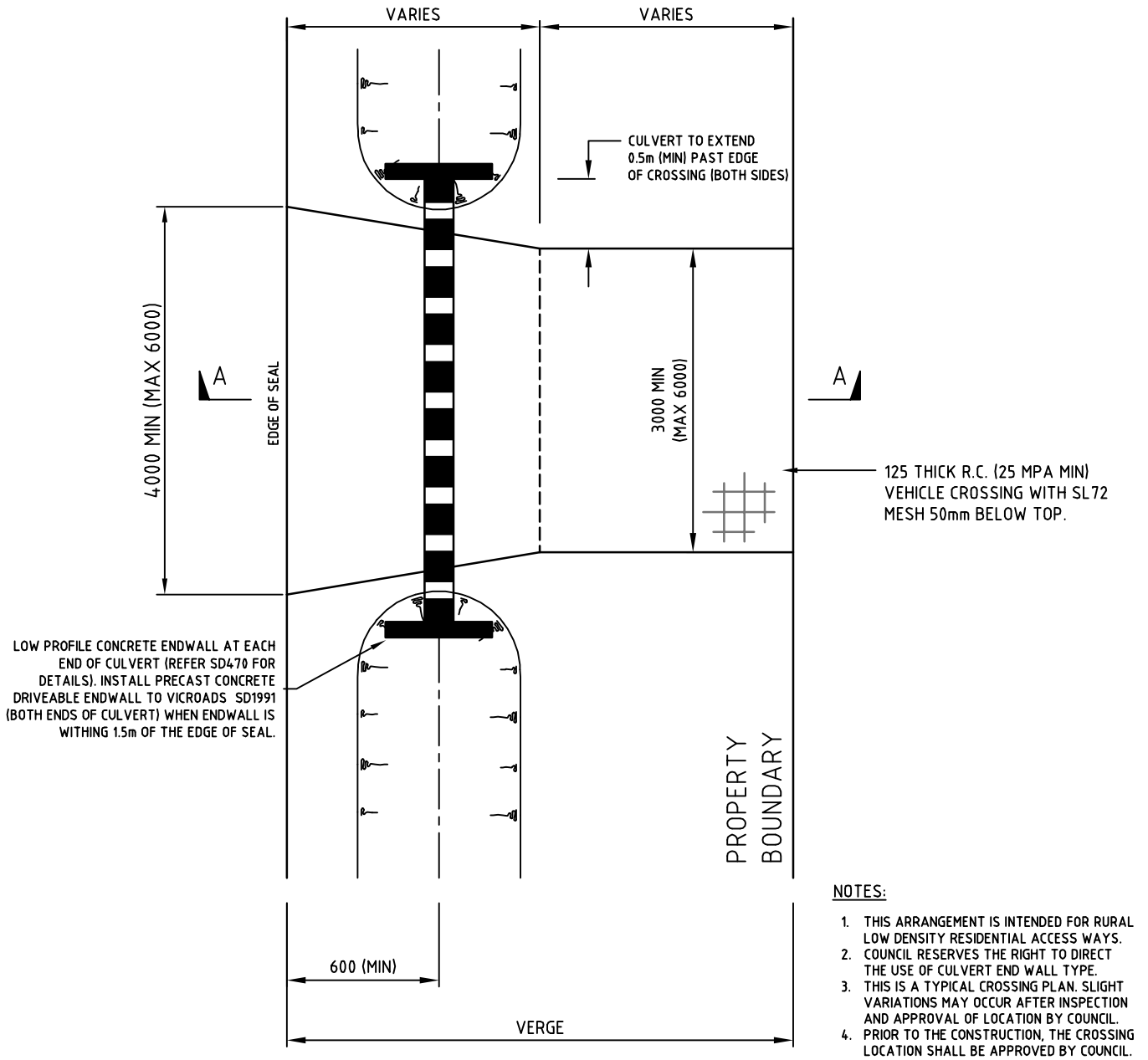
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

LAST UPDATED 30/01/2013

SD 255

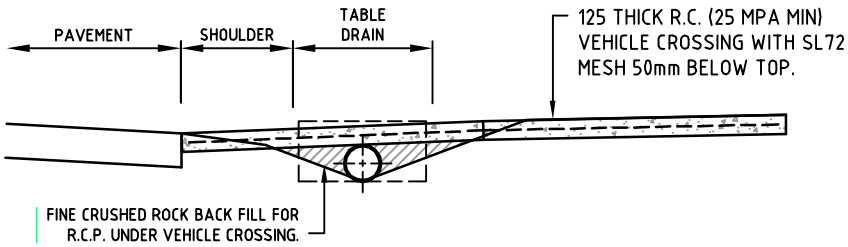
NOT TO SCALE



PLAN

NOTES:

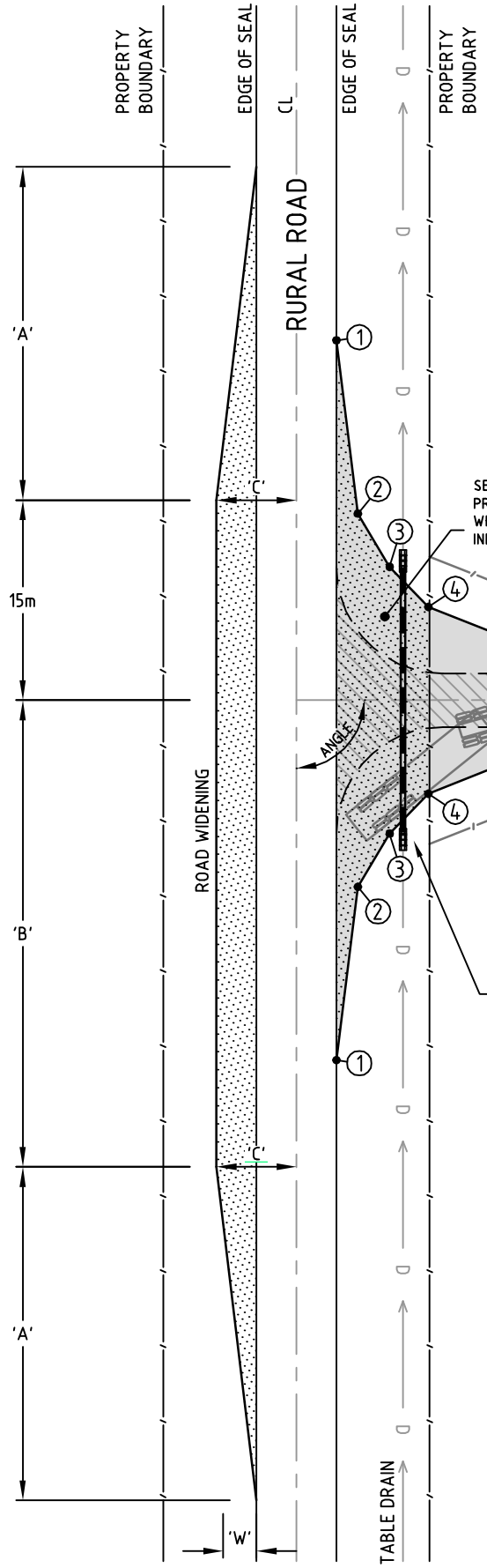
1. THIS ARRANGEMENT IS INTENDED FOR RURAL LOW DENSITY RESIDENTIAL ACCESS WAYS.
2. COUNCIL RESERVES THE RIGHT TO DIRECT THE USE OF CULVERT END WALL TYPE.
3. THIS IS A TYPICAL CROSSING PLAN. SLIGHT VARIATIONS MAY OCCUR AFTER INSPECTION AND APPROVAL OF LOCATION BY COUNCIL.
4. PRIOR TO THE CONSTRUCTION, THE CROSSING LOCATION SHALL BE APPROVED BY COUNCIL.
5. ALL WORKS TO BE COMPLETED TO THE SATISFACTION OF COUNCIL.
6. MAINTENANCE OF THE CROSSOVER REMAINS THE RESPONSIBILITY OF THE LAND OWNER.
7. DRIVEABLE ENDWALLS TO BE USED WITHIN 1.5m OF THE EDGE OF SEAL
8. TABLE DRAINS ARE NOT TO BE CLOSER THAN 1.0m FROM FENCE LINES OR SERVICES.



SECTION A-A

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	TYPICAL SWALE DRAIN VEHICLE CROSSING (FRINGE URBAN RESIDENTIAL ENTRANCE)	LAST UPDATED 30/11/2011
	Infrastructure Design Manual Standard Drawings	SD 260
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



SETOUT TABLE:

POINT No.	OFFSET DISTANCE FROM EDGE OF SEAL (m)	OFFSET DISTANCE FROM ACCESS CENTRELINE (m)
1	0.0	27.0
2	1.6	14.0
3	4.0	10.0
4	6.9	7.0
5	18.3	2.5
6	22.0	2.0

ROAD WIDENING:

A = $\frac{0.5 \times \text{SPEED (km/h)} \times W \text{ (m)}}{3.6}$

B =

ANGLE:	70°	90°	110°
LENGTH (m):	40	35	30

C = ON STRAIGHT: 6.0m (MIN)

ON CURVE: 2 x (3.0m + CORRESPONDING WIDENING FOR CURVE RADIUS)

W = FORMATION WIDENING (IF REQUIRED BY COUNCIL)

LEGEND:

TYPICAL EXISTING ACCESS =

RECOMENDED ACCESS SPLAY =

AREA TO BE SEALED=

NOTES:

1. THIS ARRANGEMENT IS INTENDED FOR RURAL / FARMING ACCESS WAYS THAT REQUIRE SEMI / B DOUBLE ACCESS.
2. PAVED AREAS TO BE A MINIMUM OF 150mm DEPTH COMPACTED GRAVEL. PAVEMENT AREAS & TYPE TO BE APPROVED BY COUNCIL.
3. COUNCIL RESERVES THE RIGHT TO DIRECT THE USE OF CULVERT END WALL TYPE.
4. THIS IS A TYPICAL CROSSING PLAN. SLIGHT VARIATIONS MAY OCCUR AFTER INSPECTION AND APPROVAL OF LOCATION BY COUNCIL.
5. PRIOR TO THE CONSTRUCTION, THE CROSSING LOCATION SHALL BE APPROVED BY COUNCIL.
6. ALL WORKS TO BE COMPLETED TO THE SATISFACTION OF COUNCIL.
7. MAINTENANCE OF THE CROSSOVER REMAINS THE RESPONSIBILITY OF THE LAND OWNER.
8. REFER SD 255 FOR CLEAR ZONE OFFSETS.
9. DRIVEABLE ENDWALLS TO BE USED INSIDE CLEARZONE.
10. TABLE DRAINS ARE NOT TO BE CLOSER THAN 1.0m FROM FENCE LINES OR SERVICES.
11. COUNCIL MAY REQUIRE THAT CROSSING PAVEMENT BE SEALED DEPENDING ON SITE LOCATION AND SPECIFICS.
12. GATE OFFSET DIMENSIONS:

STANDARD VEHICLE TYPE	MINIMUM GATE OFFSET FROM EDGE OF THROUGH LANE (m)
SEMI (19.0m)	22
B-DOUBLE (25.0m)	28

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual

TYPICAL B DOUBLE VEHICLE CROSSING (RURAL ENTRANCE)

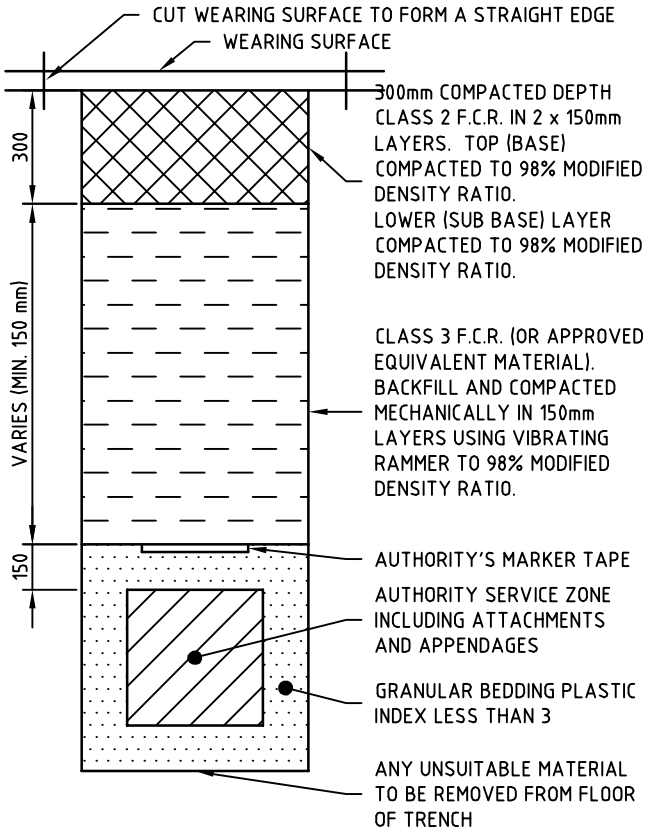
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

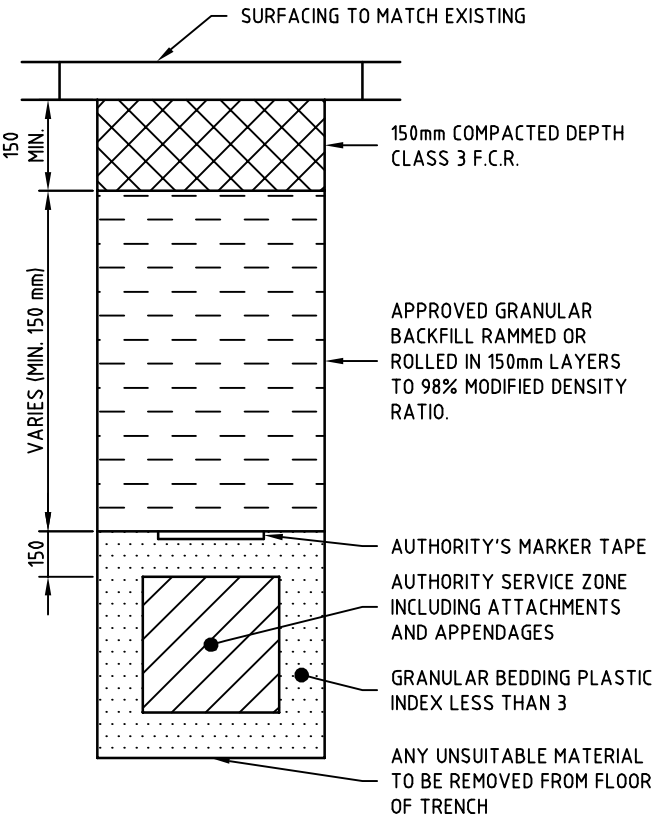
LAST UPDATED 30/01/2013

SD 265

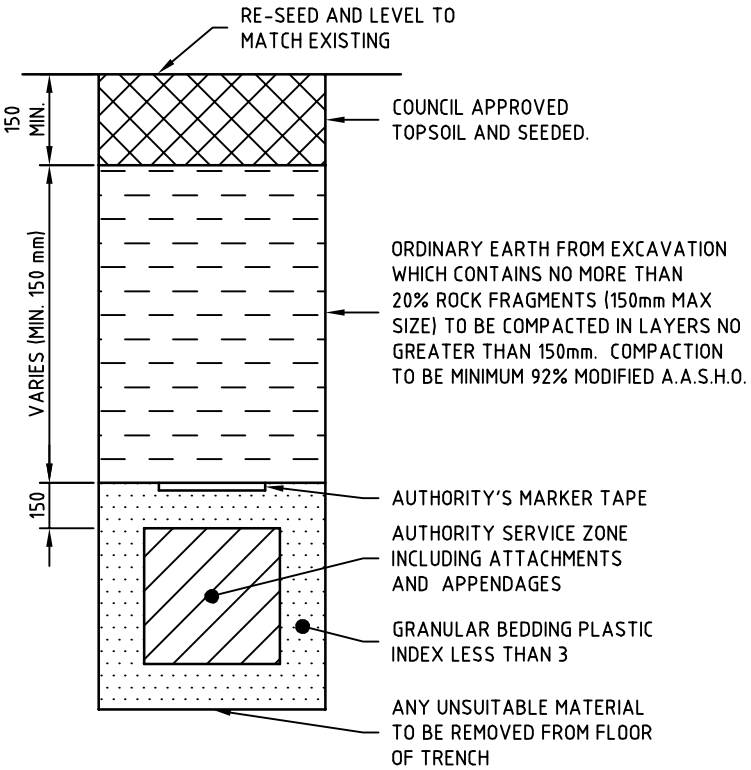
NOT TO SCALE



TRENCHES UNDER ROADS



TRENCHES UNDER FOOTPATHS



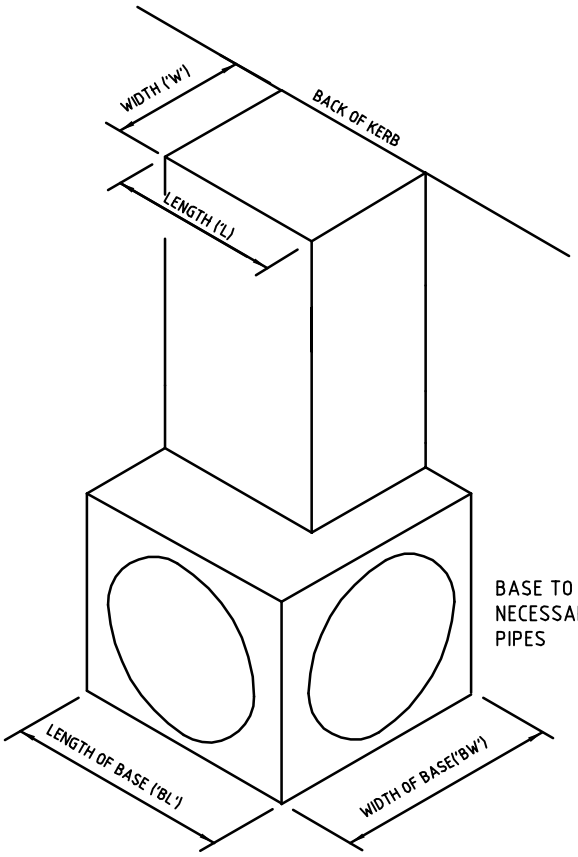
TRENCHES UNDER SWALES

NOTES:

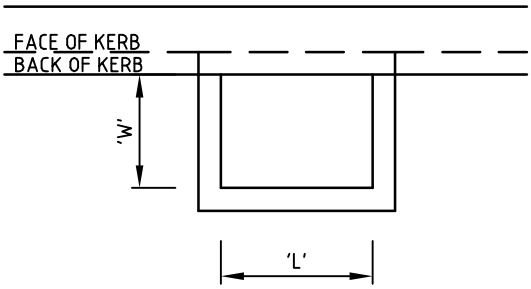
1. COMPULSORY MEASURES FOR THE PROTECTION OF TRENCHES 1.5m OR MORE IN DEPTH ARE TO COMPLY WITH THE REQUIREMENTS OF THE MINES ACT 1958 & O.H.&S. ACT 1985.
2. BITUMEN ROAD SURFACE SHALL BE CUT WITH A GRINDER.

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	TRENCHING BACKFILL (TRENCHES WITHIN 1m OF COUNCIL ASSETS)	LAST UPDATED 30/01/2013
	Infrastructure Design Manual Standard Drawings	SD 310
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE

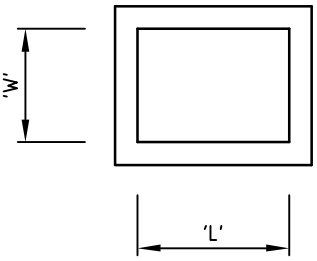


INTERNAL PIT DIMENSIONS



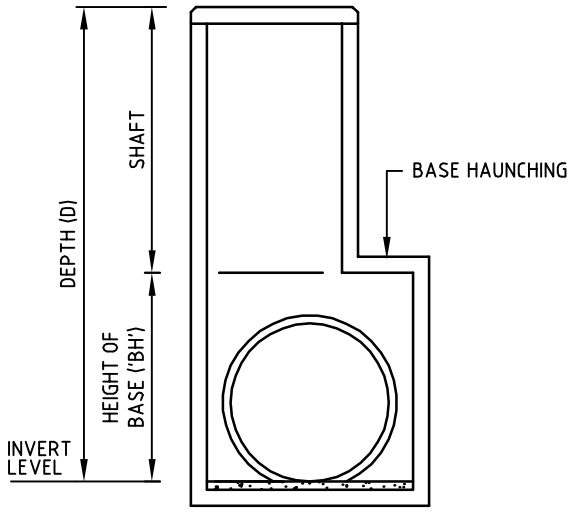
PLAN

SIDE ENTRY PIT



PLAN

JUNCTION PIT, GRATED PIT AND INLET CATCH PIT



SHAFT CONFIGURATIONS

PIT WITH HAUNCHED BASE

STANDARD PIT LISTING

PIT TYPE	COVER TYPE	SD DRG. NO.
UNHAUNCHED		SD405
HAUNCHED		SD410
JUNCTION	CAST IRON CONCRETE FIBREGLASS	SD425
GRATED	MILD STEEL/CAST IRON	SD425
SIDE ENTRY	CAST IRON CONCRETE FIBREGLASS	SD430, SD435, SD440, SD445, SD450
DEPRESSED GRATE	MILD STEEL/CAST IRON	SD455
INLET CATCH	CONCRETE	SD460

NOTES:

REFER SPECIFIC STANDARD DRAWINGS FOR FULL DIMENSIONS.

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual

TYPICAL PIT DIMENSIONING AND SETTING OUT DETAIL

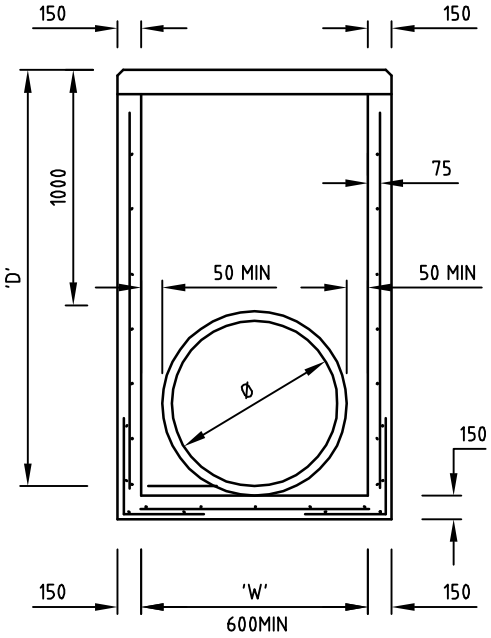
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

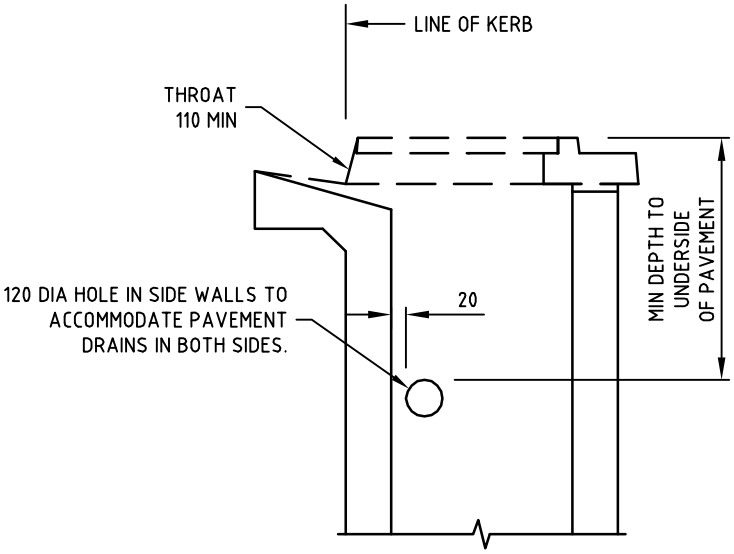
LAST UPDATED 30/01/2013

SD 400

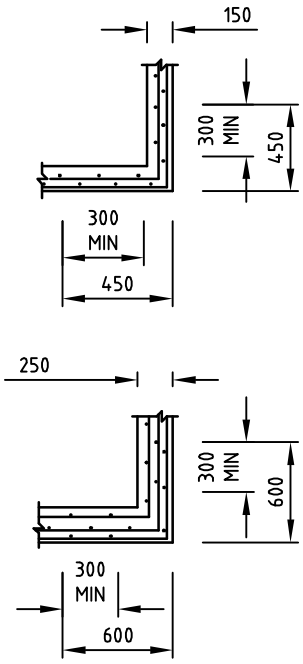
NOT TO SCALE



PITS UP TO 3600mm DEPTH



PRECAST PIT



PLAN VIEW

CORNER DETAILS

REINFORCEMENT DETAILS

PIT LENGTH 'L' OR WIDTH 'W'	REINFORCEMENT
UP TO 1200	SL92
1201 TO 1800	RL918
1801 TO 2400	RL1218

NOTES:

1. MINIMUM PIT SIZES:

PIPE DIAMETER		BASE DIMENSIONS 'W'
JP	SEP	
UP TO 450Ø	UP TO 450Ø	600
450Ø & UPWARDS	450Ø & UPWARDS	900

2. PIPES GREATER THAN 450mm DIA. MAY REQUIRE HAUNCHING. REFER TO SD410.
3. FOR DETAILS OF SPECIFIC PITS, REFER TO PIT SCHEDULE.
4. PIT REINFORCEMENT SHALL HAVE 300mm MIN LAPS. CLEAR COVER TO BE 50mm MIN. CORNER RETURN REINFORCEMENT MAY BE FABRIC OR EQUIVALENT BARS.
5. FOR TOP OF PIT DETAILS, REFER TO PIT SCHEDULE AND RELEVANT STANDARD DRAWINGS.
6. PRECAST PITS WITH THINNER WALLS AND LESS STEEL MAY BE ACCEPTED WHERE THE MANUFACTURER CAN DEMONSTRATE THAT THE PITS HAVE ADEQUATE CAPACITY TO SUPPORT A COMBINATION OF THE FOLLOWING LOADS:
   LATERAL LOADS - EARTH PRESSURE WITH 210 kN SURCHARGE
   - HYDROSTATIC PRESSURE
   - COMPACTION PRESSURE (25 kPa MIN)
   - VERTICAL LOAD 210 kN
7. SUBSURFACE DRAIN HOLES TO BE SEALED IF NOT USED.
8. PIT LENGTH 'L' REFER TO SD400.
9. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual

UNHAUNCHED PITS (450Ø MAX. PIPE)

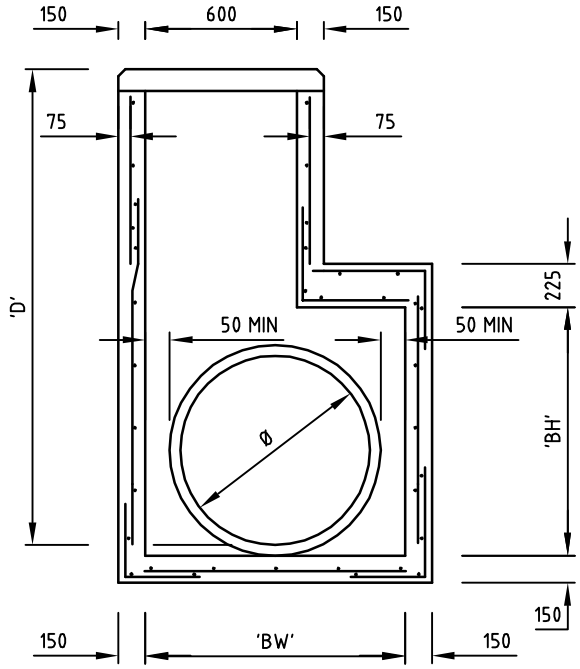
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

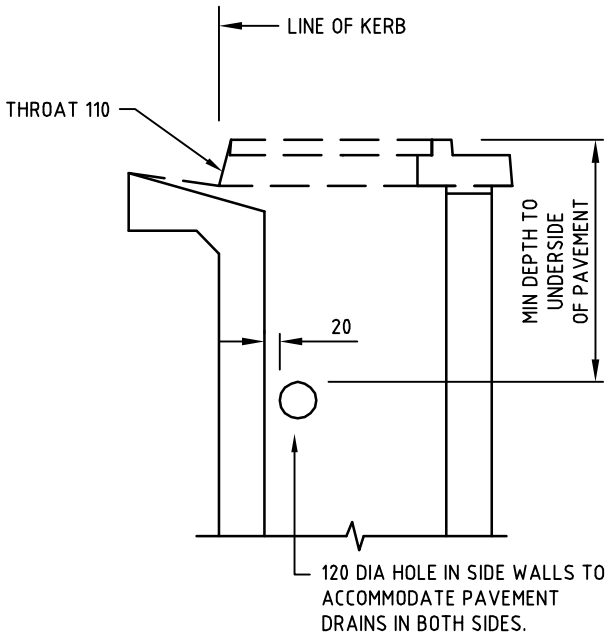
LAST UPDATED 30/01/2013

SD 405

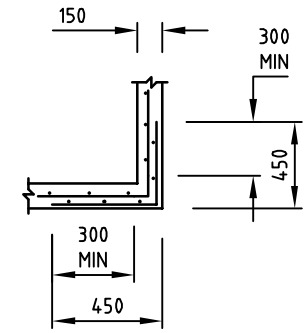
NOT TO SCALE

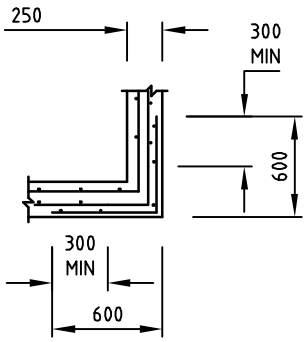


PITS UP TO 3600mm DEPTH



PRECAST PIT





PLAN VIEW

CORNER DETAILS

NOTES:

1. PIPES LESS THAN 525mm DIA. MAY NOT REQUIRE HAUNCHING. REFER SD405.
2. PITS WITH HAUNCHING IN TWO DIRECTIONS REQUIRE SPECIAL STRUCTURAL DESIGN.
3. FOR DETAILS OF SPECIFIC PITS, REFER TO PIT SCHEDULE.
4. PIT REINFORCEMENT SHALL HAVE 300mm MIN LAPS. CLEAR COVER TO BE 50mm MIN. CORNER RETURN REINFORCEMENT MAY BE FABRIC OR EQUIVALENT BARS.
5. FOR TOP OF PIT DETAILS, REFER TO PIT SCHEDULE AND RELEVANT STANDARD DRAWINGS.
6. PRECAST PITS WITH THINNER WALLS AND LESS STEEL MAY BE ACCEPTED WHERE THE MANUFACTURER CAN DEMONSTRATE THAT THE PITS HAVE ADEQUATE CAPACITY TO SUPPORT A COMBINATION OF THE FOLLOWING LOADS:
   LATERAL LOADS - EARTH PRESSURE WITH 210kN SURCHARGE
   - HYDROSTATIC PRESSURE
   - COMPACTION PRESSURE (25 kPa MIN)
   - VERTICAL LOAD 210 kN
7. SUBSURFACE DRAIN HOLES TO BE SEALED IF NOT USED.
8. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.

REINFORCEMENT DETAILS

PIT BASE LENGTH 'BL' OR BASE WIDTH 'BW'	REINFORCEMENT
UP TO 1200	SL92
1201 TO 1800	RL918
1801 TO 2400	RL1218

PIT SIZING

'BW' & 'BH' (mm)	'ø' (mm)
900	525
"	600
"	675
"	750
"	825
1200	900
"	975
"	1050
"	1125
1500	1200

ALL MEASUREMENTS IN MILLIMETRES

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HAUNCHED PITS

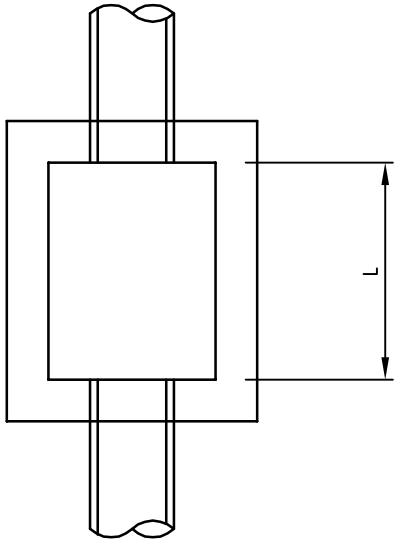
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website
www.designmanual.com.au

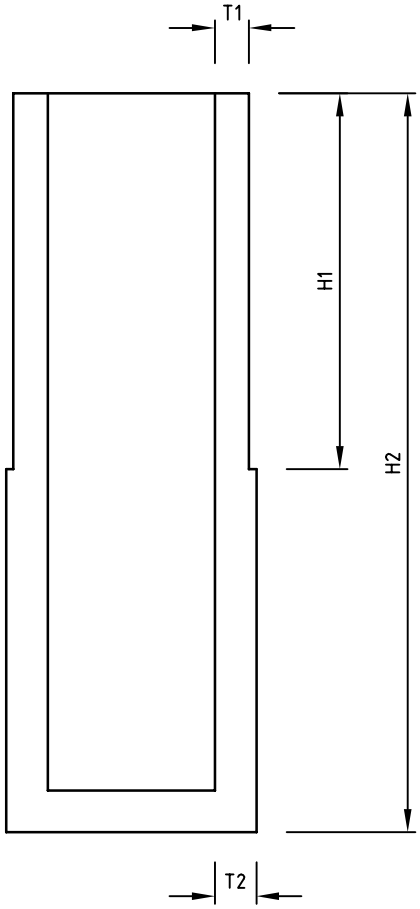
LAST UPDATED 30/01/2013

SD 410

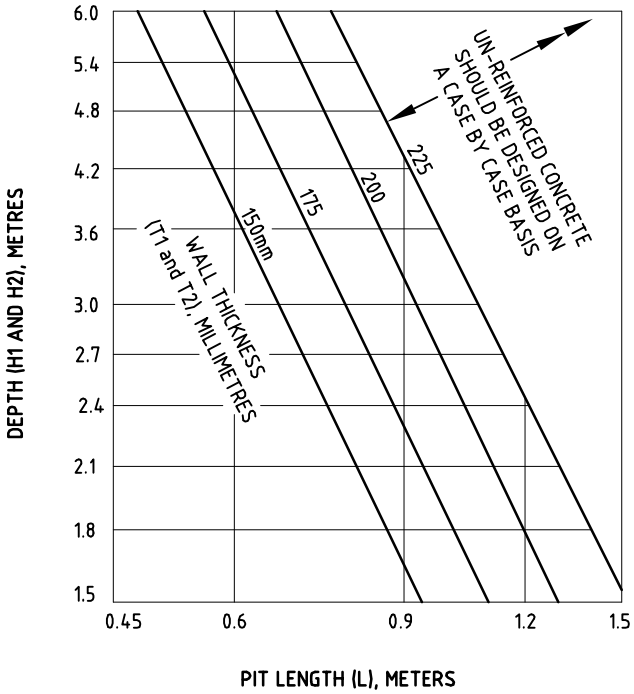
NOT TO SCALE



PLAN

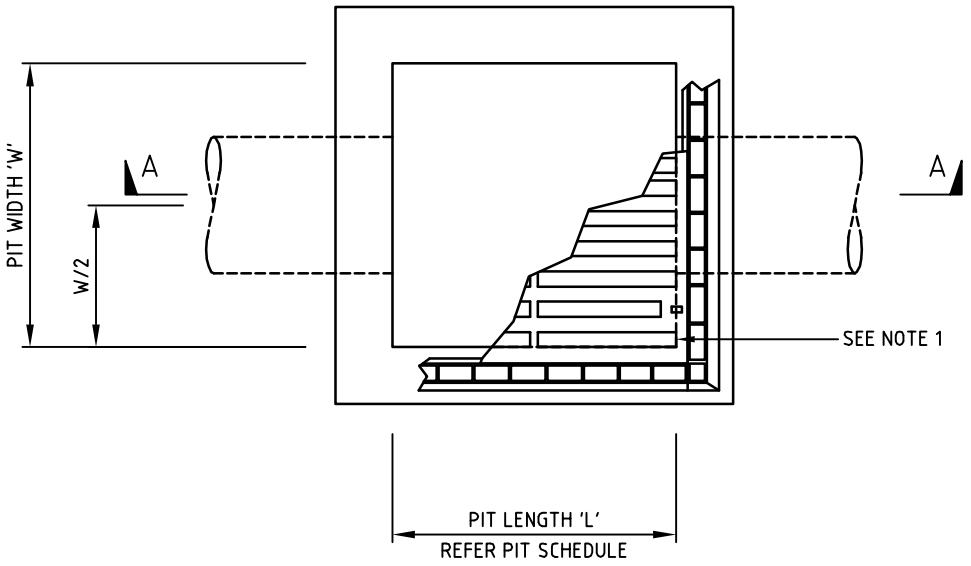


SECTION

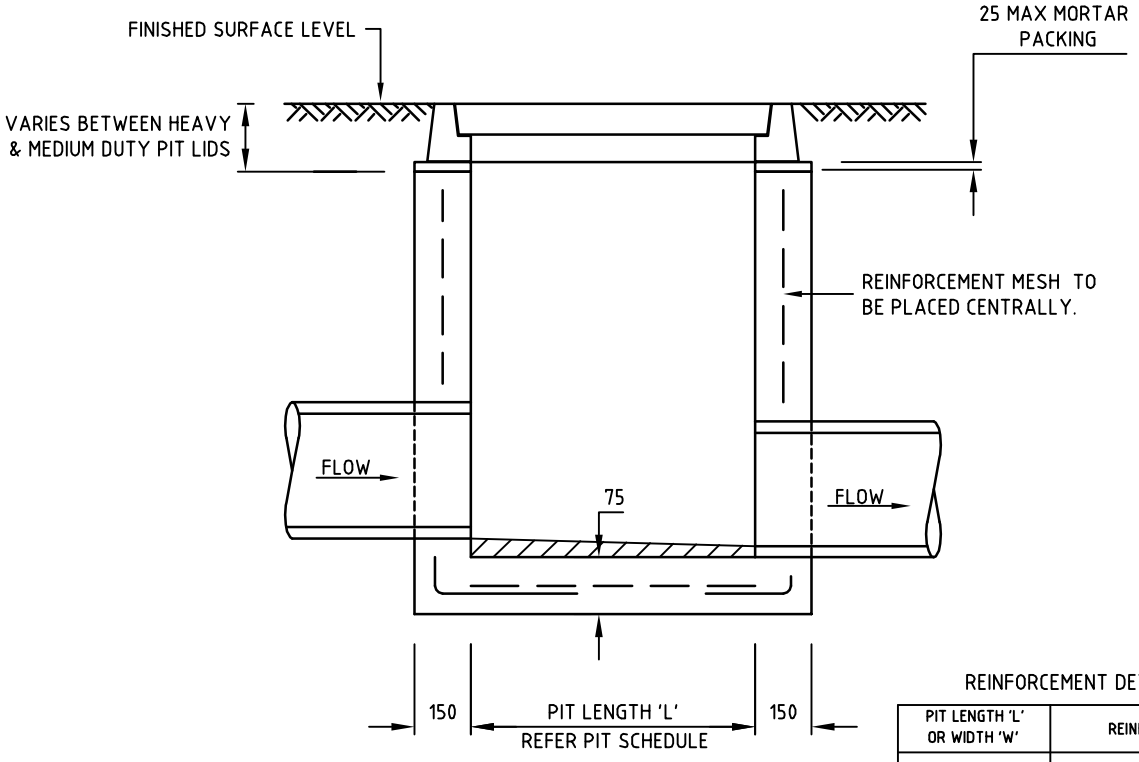


ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual	MIN. WALL THICKNESS FOR REINFORCEMENT IN MASS CONCRETE PITS (CAST IN-SITU)	LAST UPDATED 30/01/2013
	Infrastructure Design Manual Standard Drawings	SD 415
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



PLAN



SECTION A-A

REINFORCEMENT DETAILS

PIT LENGTH 'L' OR WIDTH 'W'	REINFORCEMENT
UP TO 1200	SL92
1201 TO 1800	RL918
1801 TO 2400	RL1218

MINIMUM PIT SIZES (EASEMENTS)

PIT DEPTH	PIT SIZE
<1000	600 x 600
>1000	600 x 900

MINIMUM PIT SIZES (ROAD RESERVE)

PIT DEPTH	PIT SIZE
ALL PITS	600 x 900

NOTES:

1. HEAVY DUTY COVERS TO BE USED WHEN SUBJECT TO TRAFFICABLE LOADS (AS3996 CLASS D - 210kN) OR APPROVED EQUIVALENT. MEDIUM DUTY COVERS TO BE USED IN OFF ROAD USE (AS3996 CLASS B - 80kN) OR APPROVED EQUIVALENT.
2. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.
3. JUNCTION PIT IN ROAD RESERVE TO HAVE MINIMUM INTERNAL PIT DIMENSIONS OF 600 X 900.

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual

JUNCTION PIT IN ROAD RESERVE

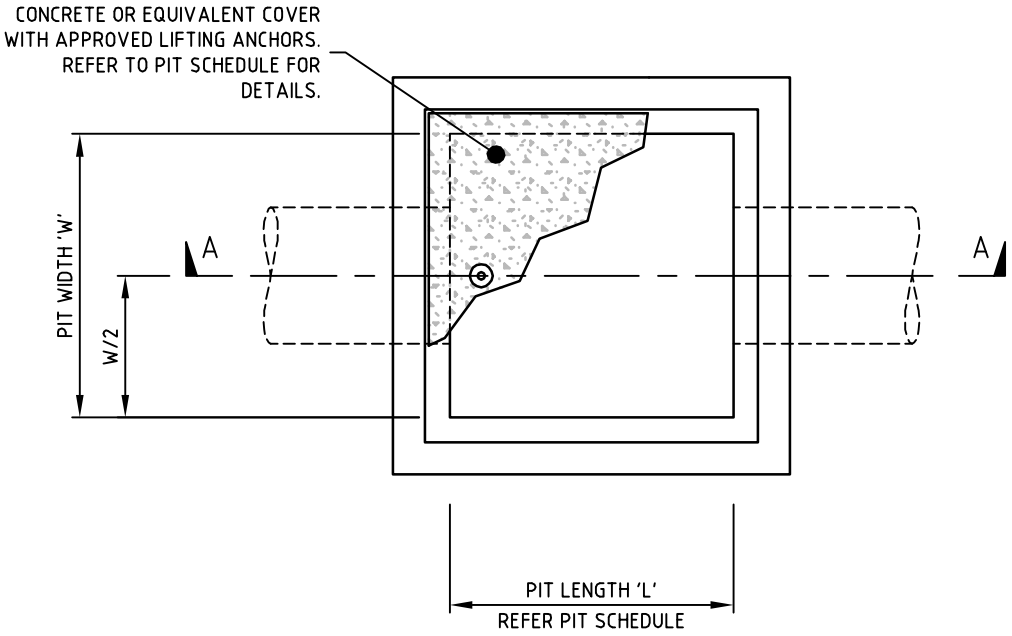
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

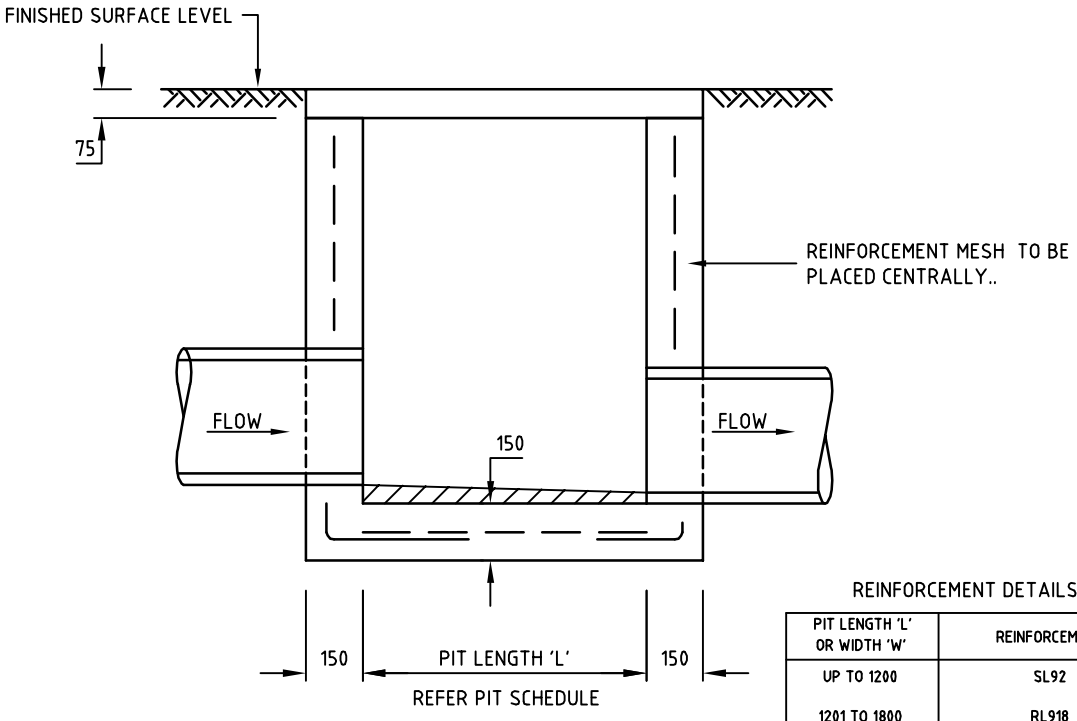
LAST UPDATED 30/01/2013

SD 420

NOT TO SCALE



PLAN



SECTION A-A

REINFORCEMENT DETAILS

PIT LENGTH 'L' OR WIDTH 'W'	REINFORCEMENT
UP TO 1200	SL92
1201 TO 1800	RL918
1801 TO 2400	RL1218

NOTES:

1. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.

MINIMUM PIT SIZES (EASEMENTS)

PIT DEPTH	PIT SIZE
<1000	600 x 600
>1000	600 x 900

MINIMUM PIT SIZES (ROAD RESERVE)

PIT DEPTH	PIT SIZE
ALL PITS	600 x 900

ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual

JUNCTION PIT WITH CONCRETE COVER (NON TRAFFICABLE AREAS)

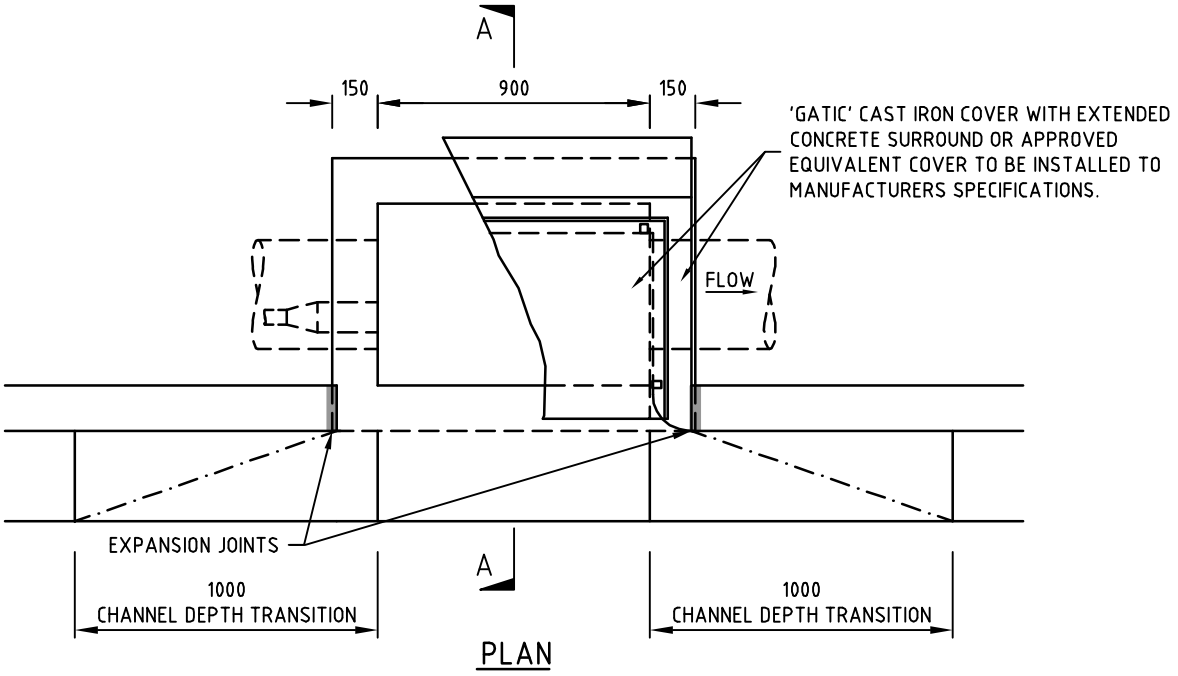
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

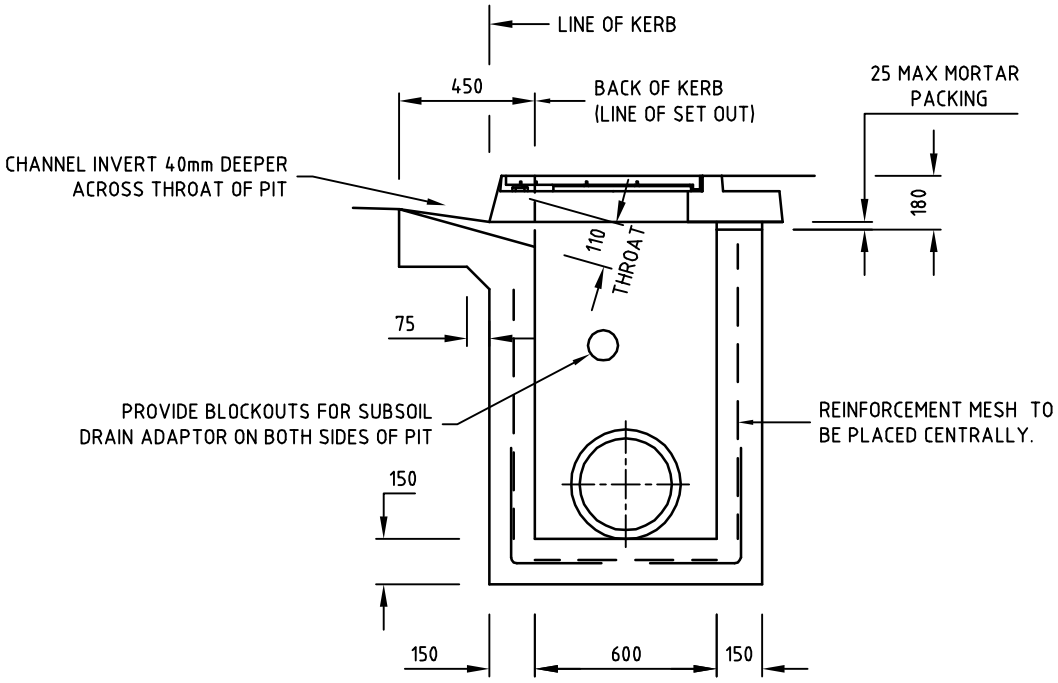
LAST UPDATED 30/01/2013

SD 425

NOT TO SCALE



PLAN



SECTION A-A

REINFORCEMENT DETAILS

PIT LENGTH 'L' OR WIDTH 'W'	REINFORCEMENT
UP TO 1200	SL92
1201 TO 1800	RL918
1801 TO 2400	RL1218

NOTES:

1. REFER TO SD100 FOR KERB DETAILS.
2. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.

ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual

SIDE ENTRY PIT 900mm INLET WITH CAST IRON COVER & CONCRETE SURROUND FOR 'B2'

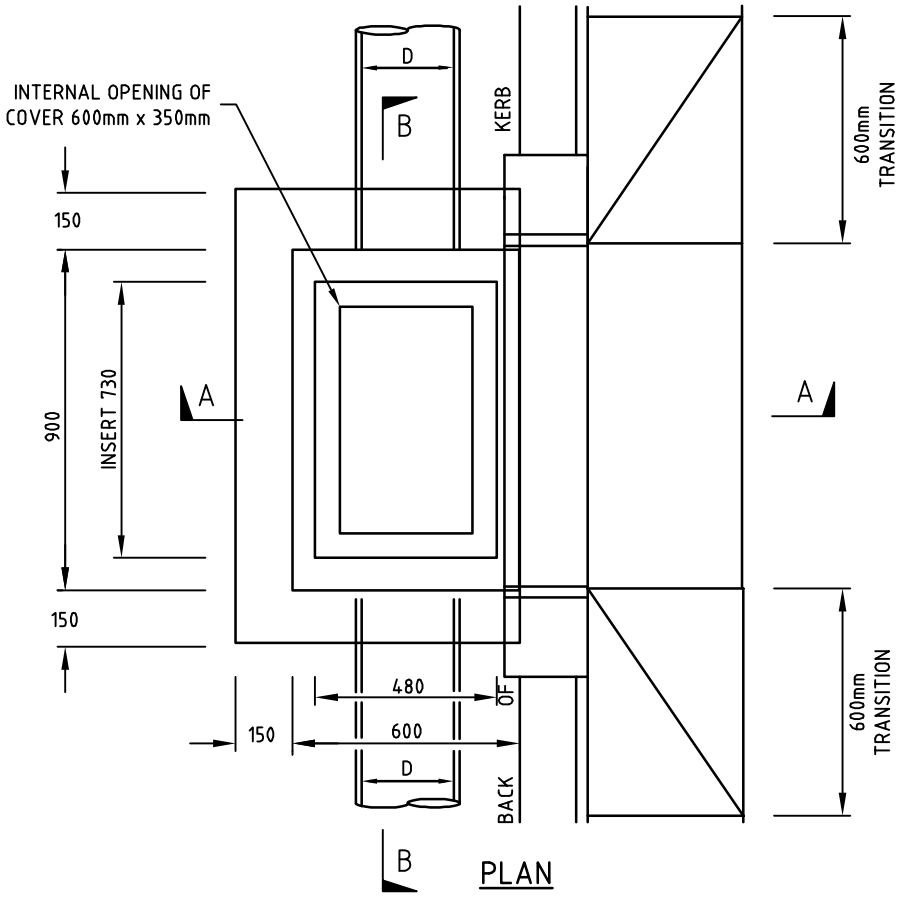
Infrastructure Design Manual Standard Drawings

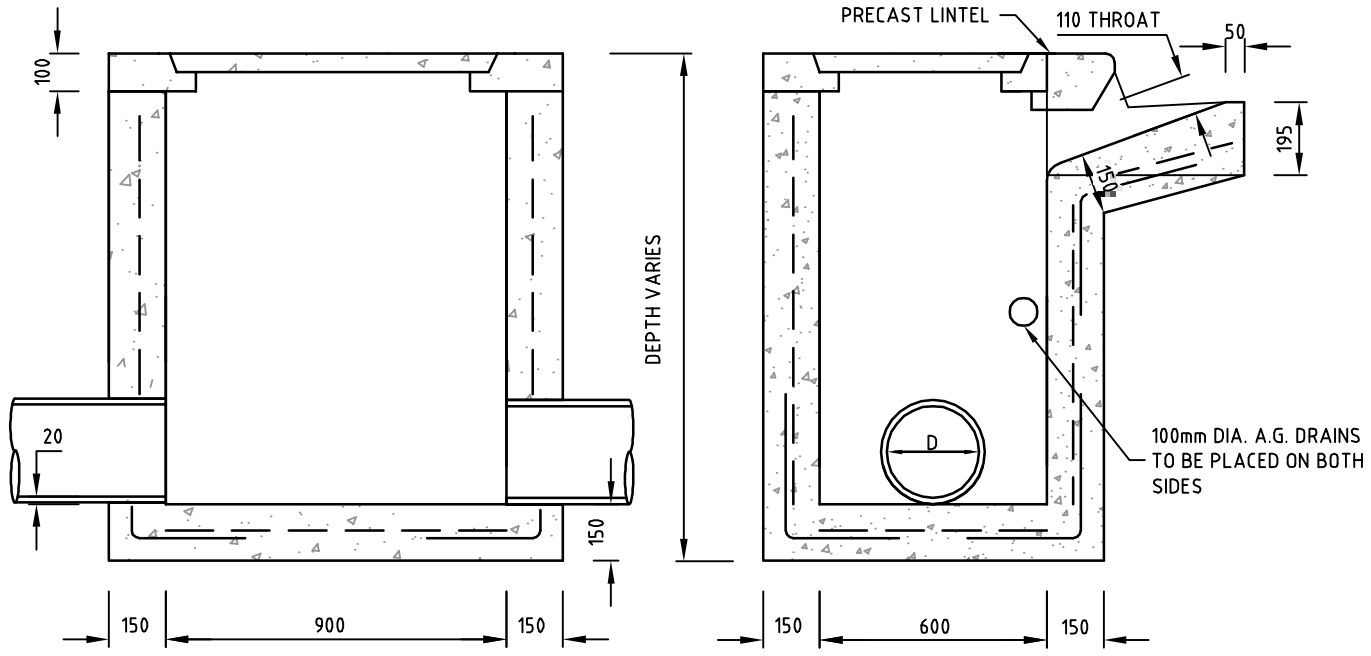
A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

LAST UPDATED 30/01/2013

SD 430

NOT TO SCALE





SECTION B-B

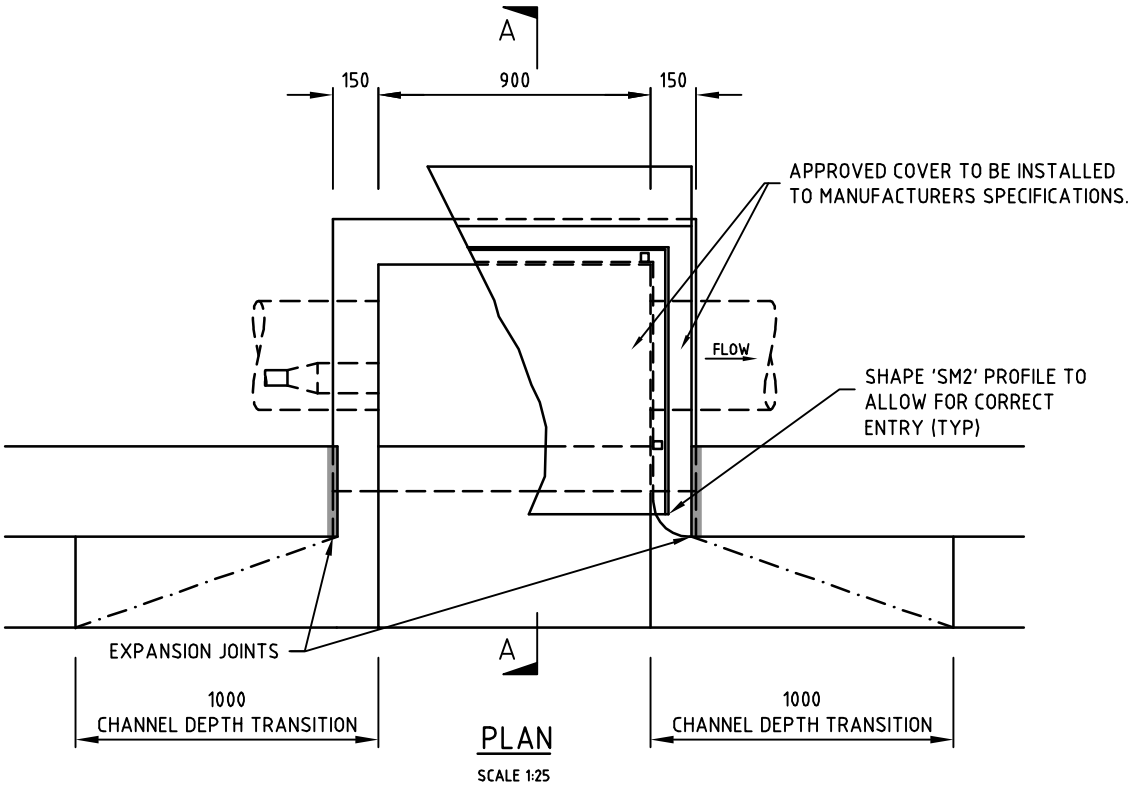
SECTION A-A

NOTES:

1. PIT TO BE CONSTRUCTED IN 2 STAGES. STAGE 2-TOP 500mm OF PIT IN CONJUNCTION WITH KERB AND CHANNEL.
2. WHERE PIT AT LOW POINT CONSTRUCT-100mm DIA. P.V.C. PIPE WITH CONSTRUCTION WORKS TO DRAIN WATER FROM PAVEMENT.
3. AT LOW POINT TRANSITION 600mm BOTH SIDES.
4. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.
5. FIBREGLASS PIT LIDS WITH EA FRAME AND LIGHTWEIGHT LOCKING LID OR APPROVED EQUIVALENT CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH AS3996 MAY BE USED INSTEAD OF CONCRETE.

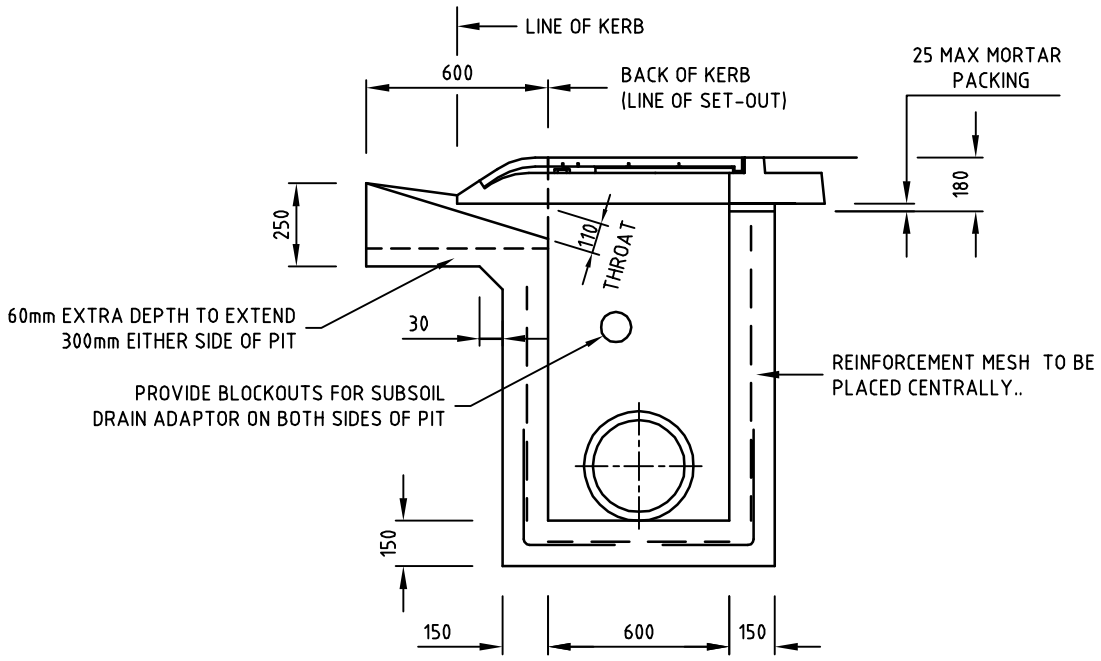
ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	900 x 600mm SIDE ENTRY PIT PIPES UP TO 450mmØ (PRECAST CONCRETE LINTEL) FOR B2 KERB & CHANNEL	LAST UPDATED 30/01/2013
	Infrastructure Design Manual Standard Drawings	SD 431
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



PLAN

SCALE 1:25



SECTION A-A

REINFORCEMENT DETAILS

PIT LENGTH 'L' OR WIDTH 'W'	REINFORCEMENT
UP TO 1200	SL92
1201 TO 1800	RL918
1801 TO 2400	RL1218

NOTES:

1. REFER TO SD100 FOR KERB DETAILS.
2. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.

ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual

SIDE ENTRY PIT900mm INLET WITH CAST IRON COVER & CONCRETE SURROUND FOR 'SM2'

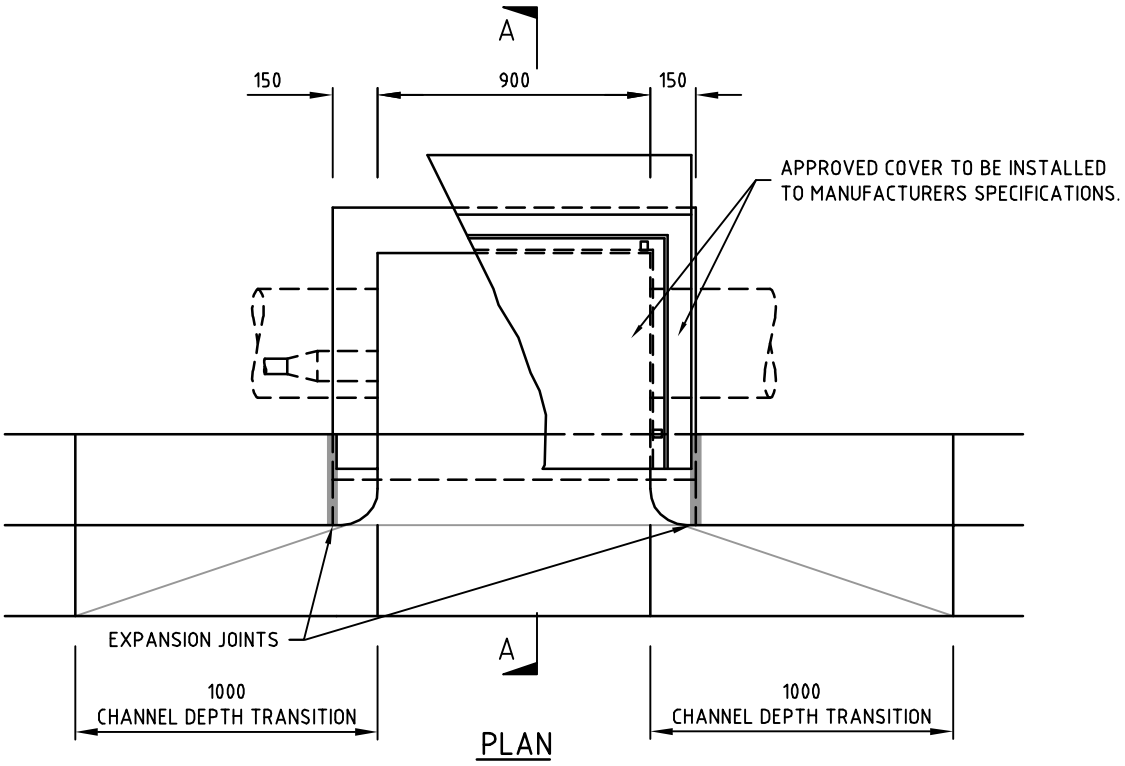
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

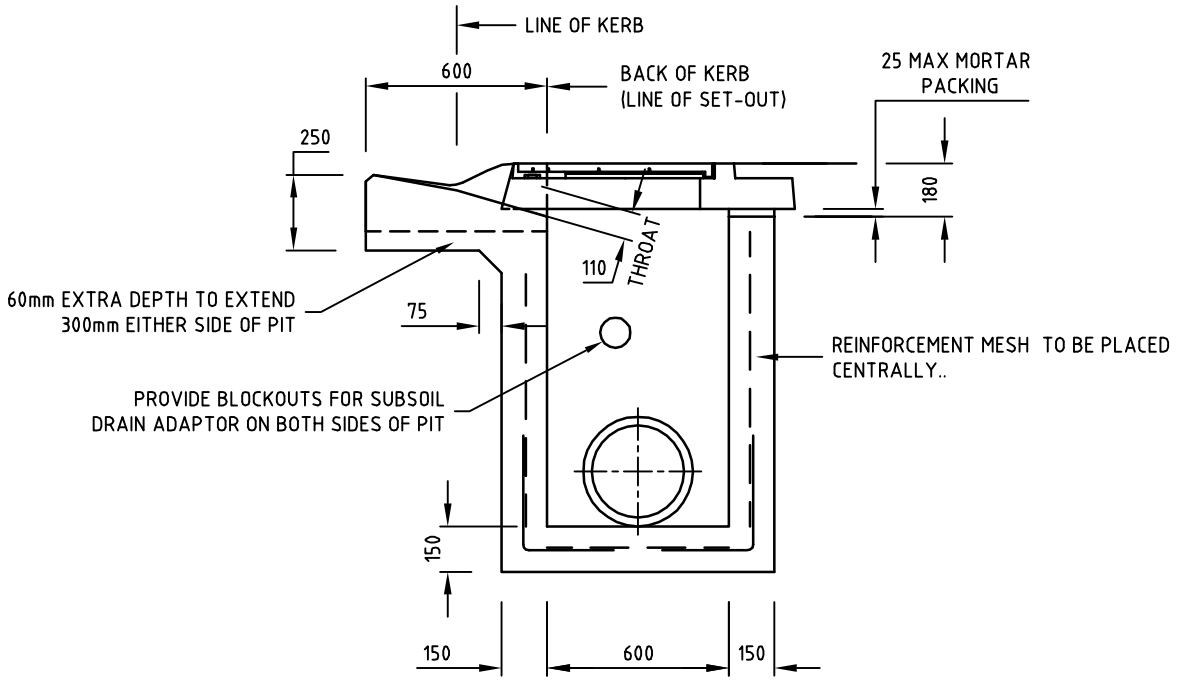
LAST UPDATED 30/01/2013

SD 435

NOT TO SCALE



PLAN



SECTION A-A

REINFORCEMENT DETAILS

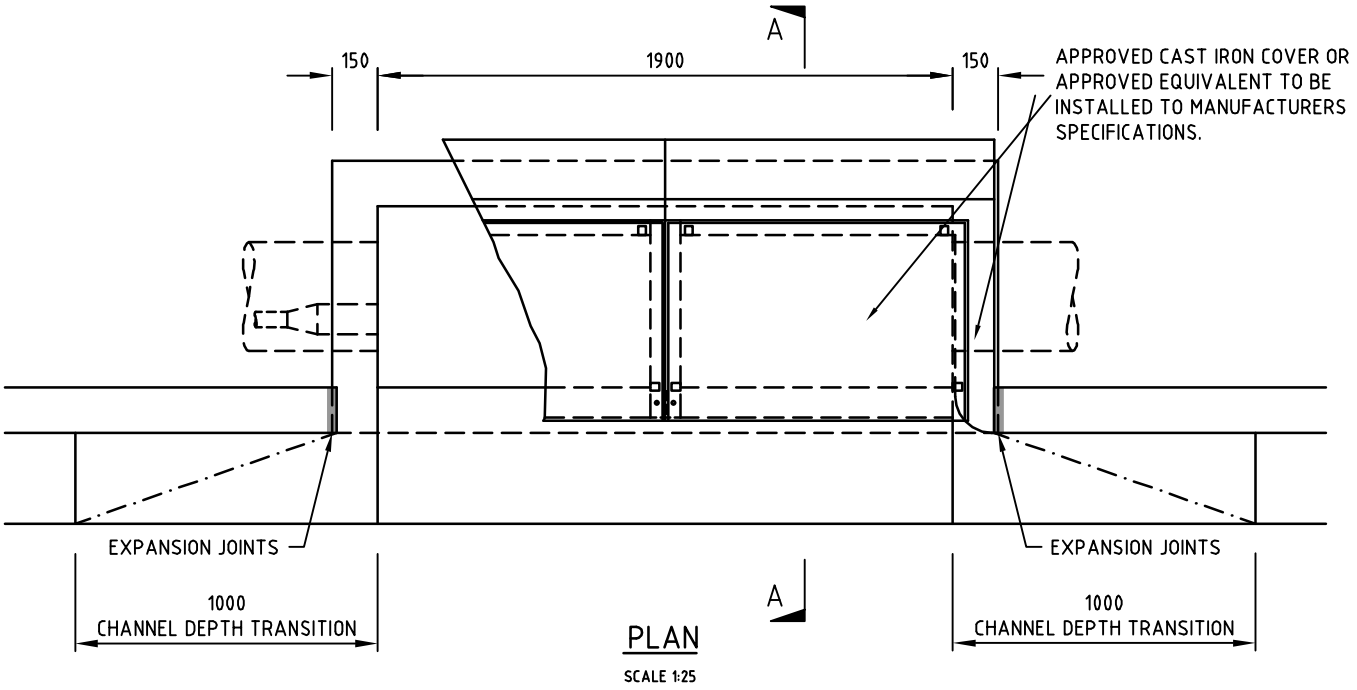
PIT LENGTH 'L' OR WIDTH 'W'	REINFORCEMENT
UP TO 1200	SL92
1201 TO 1800	RL918
1801 TO 2400	RL1218

NOTES:

1. REFER TO SD100 FR KERB DETAILS.
2. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.

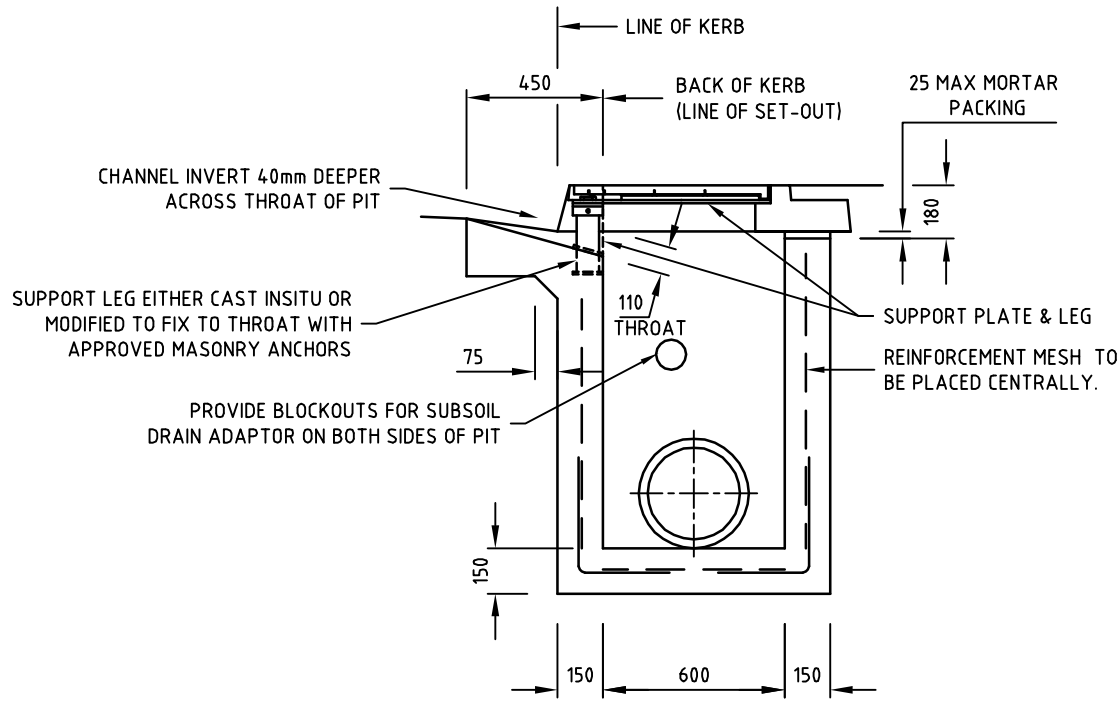
ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	SIDE ENTRY PIT 900mm INLET WITH CAST IRON COVER & CONCRETE SURROUND FOR 'SM2-M'	LAST UPDATED 30/01/2013
	Infrastructure Design Manual Standard Drawings	SD 440
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



PLAN

SCALE 1:25



SECTION A-A

REINFORCEMENT DETAILS

PIT LENGTH 'L' OR WIDTH 'W'	REINFORCEMENT
UP TO 1200	SL92
1201 TO 1800	RL918
1801 TO 2400	RL1218

NOTES:

1. REFER TO SD100 FR KERB DETAILS.
2. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.

ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual

DOUBLE SIDE ENTRY PIT 1900mm INLET WITH APPROVED COVER & CONCRETE SURROUND FOR 'B2'

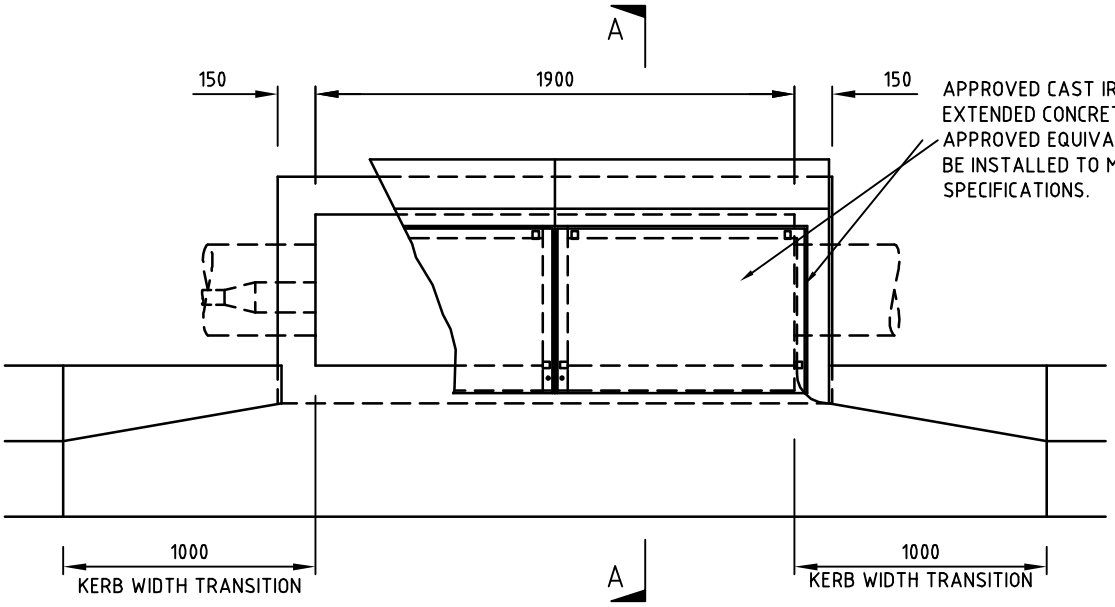
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

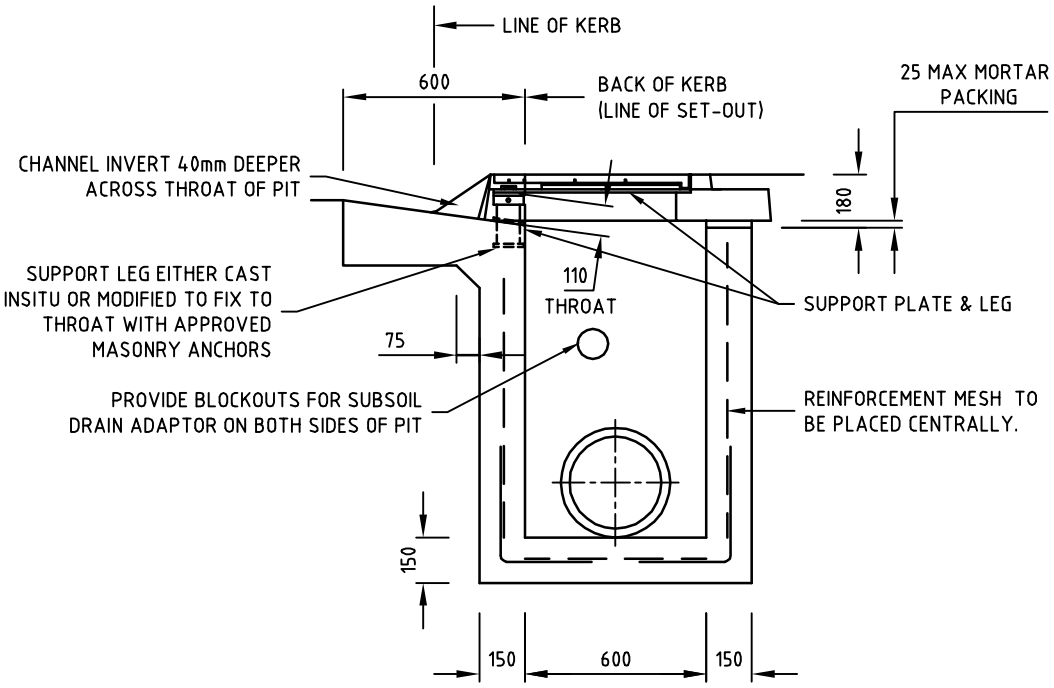
LAST UPDATED 30/01/2013

SD 445

NOT TO SCALE



PLAN



SECTION A-A

NOTES:

1. REFER TO SD100 FR KERB DETAILS.
2. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.

REINFORCEMENT DETAILS

PIT LENGTH 'L' OR WIDTH 'W'	REINFORCEMENT
UP TO 1200	SL92
1201 TO 1800	RL918
1801 TO 2400	RL1218

ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual

DOUBLE SIDE ENTRY PIT 1900mm INLET WITH CAST IRON COVER & CONCRETE SURROUND FOR 'SM2'

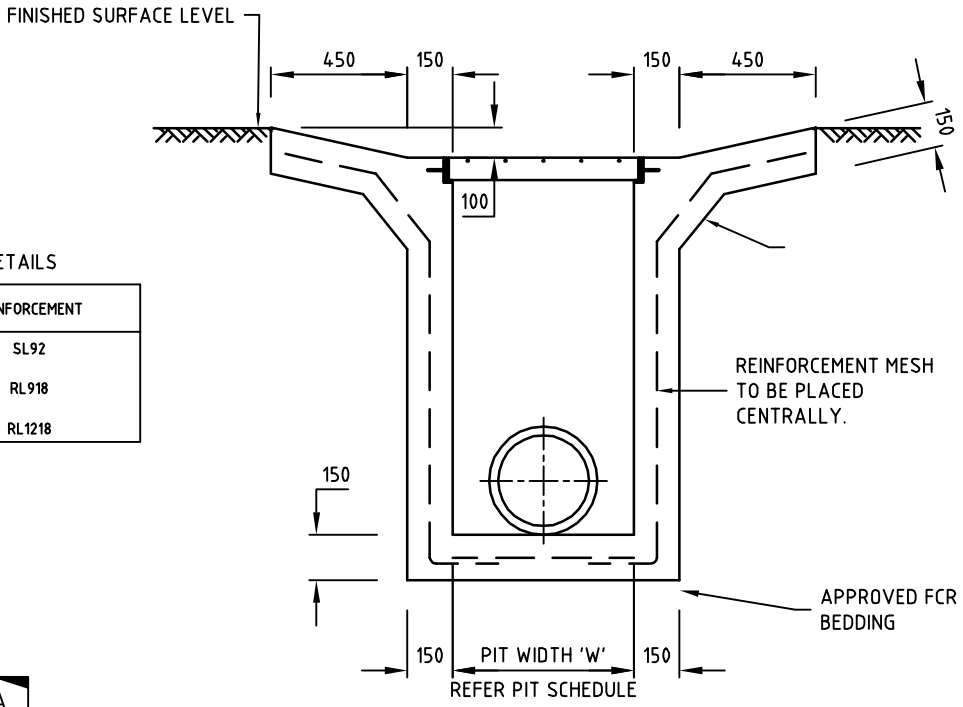
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

LAST UPDATED 30/01/2013

SD 450

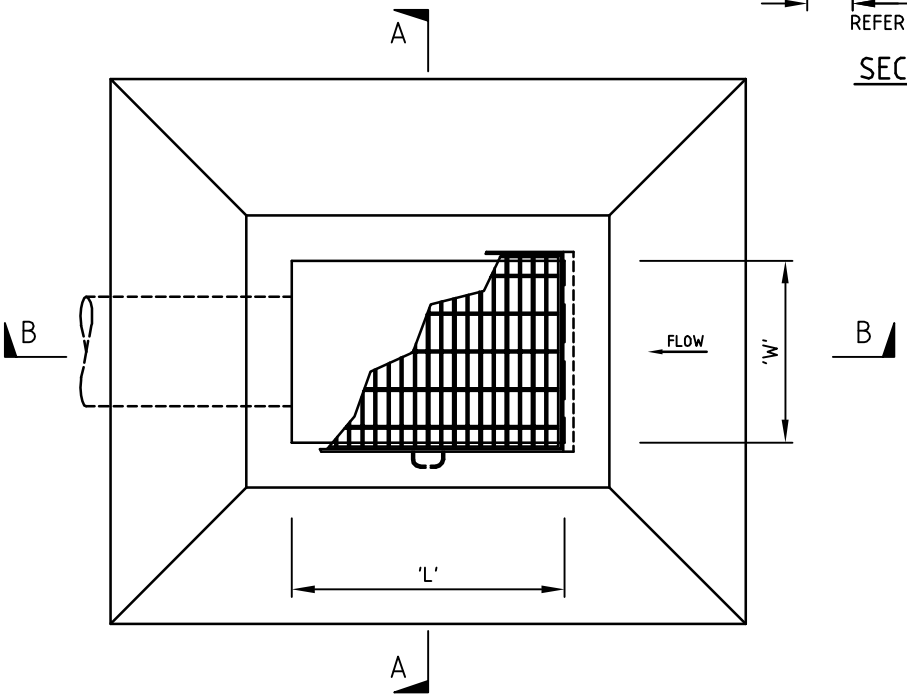
NOT TO SCALE



SECTION A-A

REINFORCEMENT DETAILS

PIT LENGTH 'L' OR WIDTH 'W'	REINFORCEMENT
UP TO 1200	SL92
1201 TO 1800	RL918
1801 TO 2400	RL1218



PLAN

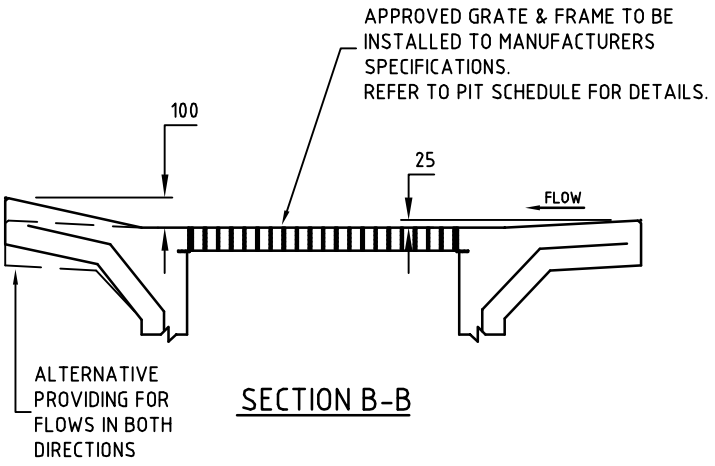
SCALE 1:25

NOTES:

1. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.

NOTES:

1. HEAVY DUTY COVERS TO BE USED WHEN SUBJECT TO TRAFFICABLE LOADS (AS3996 CLASS D - 210kN) OR APPROVED EQUIVALENT.
   MEDIUM DUTY COVERS TO BE USED IN OFF ROAD USE (AS3996 CLASS B - 80kN) OR APPROVED EQUIVALENT.
2. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.



SECTION B-B

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual

DEPRESSED GRATED PIT

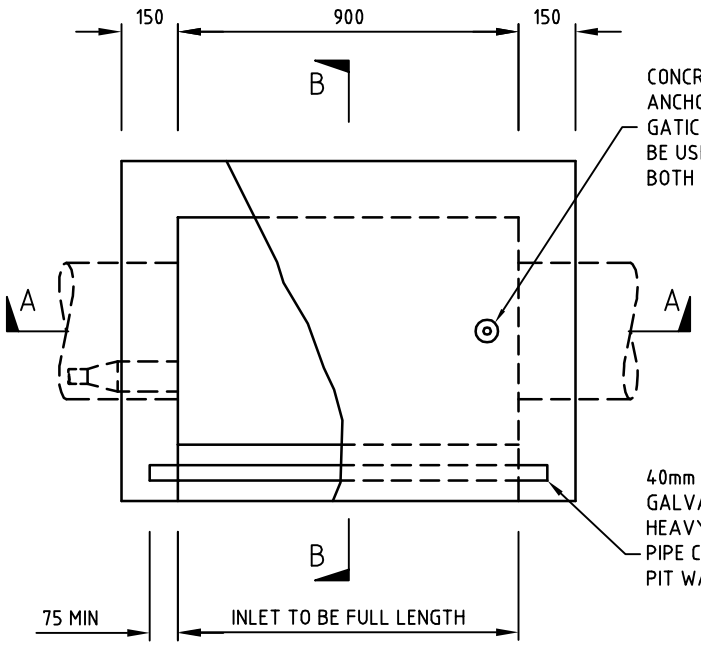
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

LAST UPDATED 30/01/2013

SD 455

NOT TO SCALE



PLAN

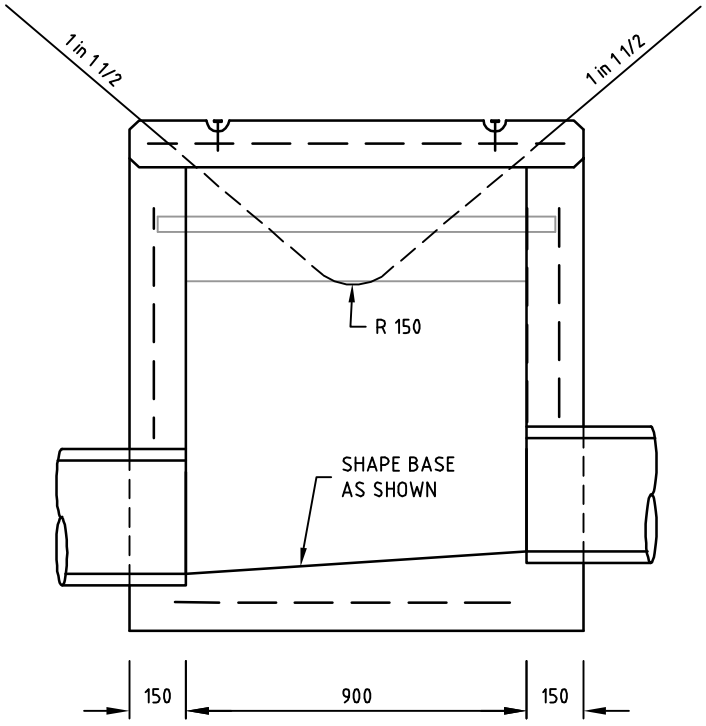
SCALE 1:25

REINFORCEMENT DETAILS

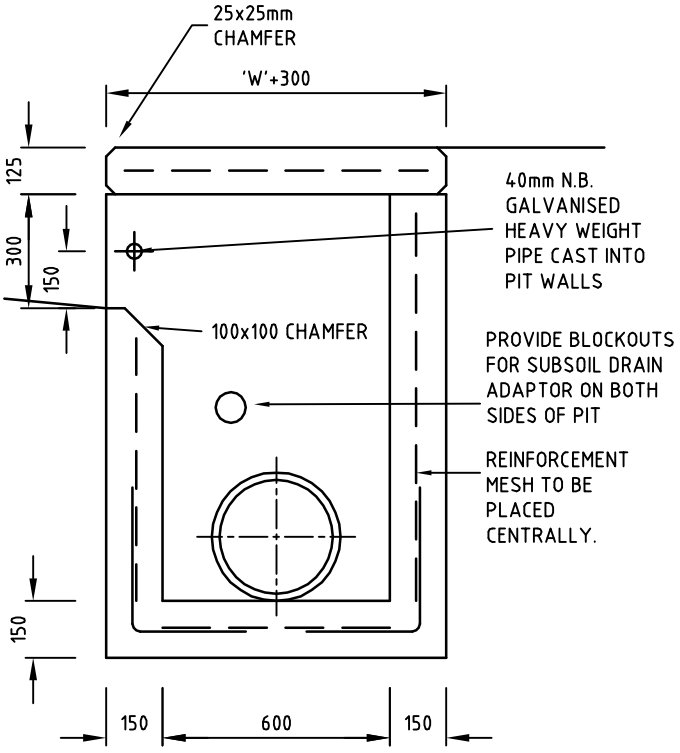
PIT LENGTH 'L' OR WIDTH 'W'	REINFORCEMENT
UP TO 1200	SL92
1201 TO 1800	RL918
1801 TO 2400	RL1218

NOTES:

1. PLACEMENT OF PIT WITHIN ROAD RESERVE / MUNICIPAL RESERVE SUBJECT TO COUNCIL APPROVAL.
2. REFER TO PIT SCHEDULE FOR CORRECT PIT ORIENTATION.
3. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.



SECTION A-A



SECTION B-B

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	INLET CATCH PIT	LAST UPDATED 04/03/2013
	Infrastructure Design Manual Standard Drawings	SD 460
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE

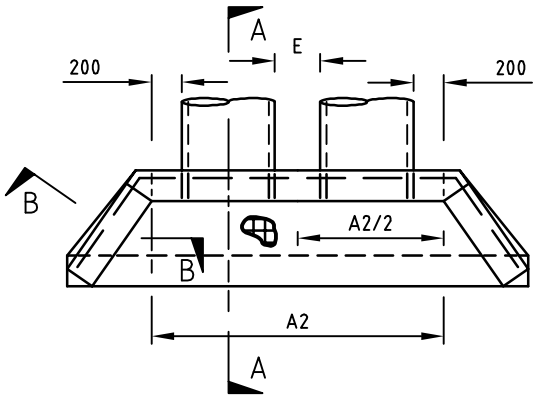
DIMENSIONS

TYPE 1 *SLOPE AT 1.5:1				TYPE 2 *SLOPE AT 2:1				TYPE 3 *SLOPE AT 3:1			
B	C	D	F	B	C	D	F	B	C	D	F
138	1037	197	240	138	1129	262	320	275	1312	393	480
221	1286	315	385	294	1433	420	513	441	1727	630	769
307	1547	438	535	409	1752	584	713	613	2161	876	1069
394	1804	563	687	525	2066	750	916	788	2591	1125	1373

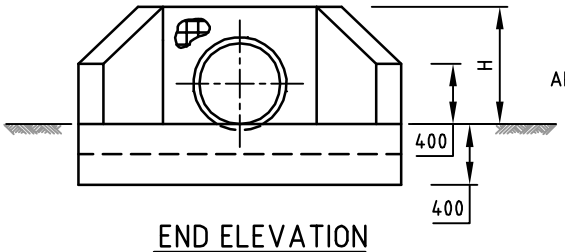
* THEORETICAL SLOPE OF WINGWALL MEASURED AT RIGHT ANGLES TO THE ROADWAY.
** A2=A+E+EXTERNAL DIAMETER OF PIPE
# APPROXIMATE ONLY

NOM PIPE DIA	EXTERNAL PIPE DIA#	A**	E	H
300	362	762	300	531
375	445	845	300	610
450	534	934	300	692
525	616	1016	300	775

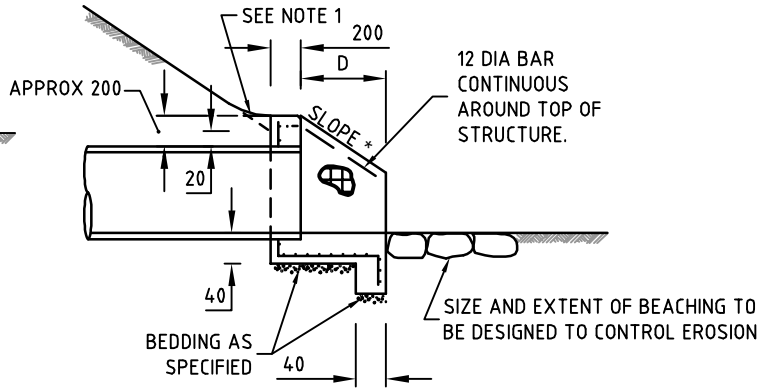
FOR LARGER PIPE DIAMETERS REFER TO VICROADS SD1931 REV B



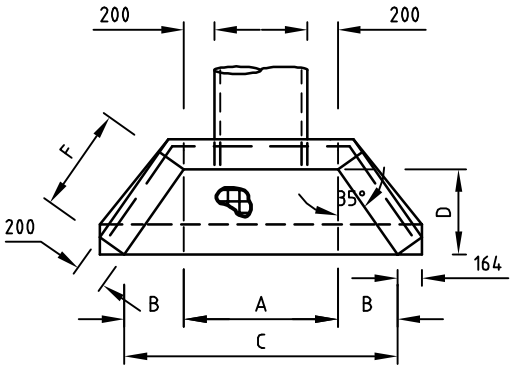
PLAN



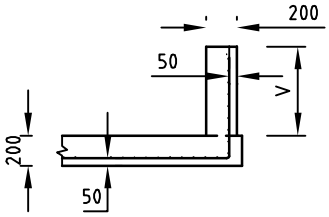
END ELEVATION



SECTION A-A



PLAN



SECTION B-B

V = VARIABLE HEIGHT OF THE WINGWALL

NOTES:

1. BECAUSE THE RELATION OF THE BATTER TO THE TOP OF THE ENDWALL IS ESSENTIAL FOR THE SAFETY OF THE MOTORIST THE DETAILS AS SHOWN IN SECTION A-A MUST BE ADHERED TO DURING CONSTRUCTION.
2. REINFORCEMENT, F82 UNLESS OTHERWISE SPECIFIED, SHALL BE CONTINUOUS AROUND CORNERS AND LOCATED AS SHOWN ON SECTIONS A-A AND B-B. CLEAR COVER 50 MIN. LAPS: FABRICS 300 MIN, BARS 25 X BAR DIAMETER MIN.
3. DISTRIBUTION BARS 12 DIA AT 200 CENTRES.
4. CONCRETE SHALL BE NORMAL-CLASS N32 STANDARD STRENGTH GRADE OR HIGHER COMPLYING WITH THE REQUIREMENTS OF AS 1379. EXPOSURE CLASSIFICATION UP TO AND INCLUDING B1.
5. EXPOSED EDGES SHALL HAVE 20 x 20 CHAMFERS.
6. COMPACTION PRESSURE BEHIND WALLS NOT TO EXCEED 15 kPa. (1.5 TONNE VIBRATORY ROLLER OR 300 kg VIBRATING PLATE WITHIN 0.5m OF WALL).
7. ENDWALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT PROVISIONS OF AS 3600.
8. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.

ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual

REINFORCED CONCRETE WINGWALL (IN-SITU)

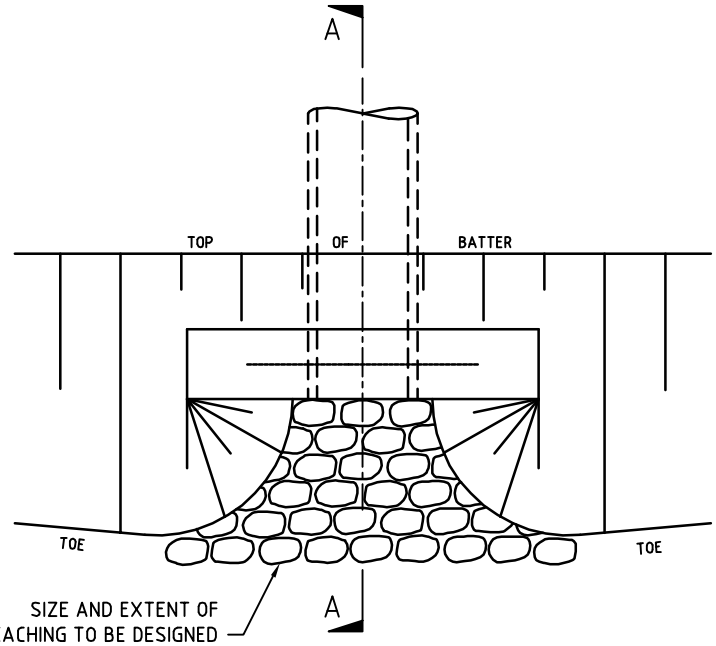
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

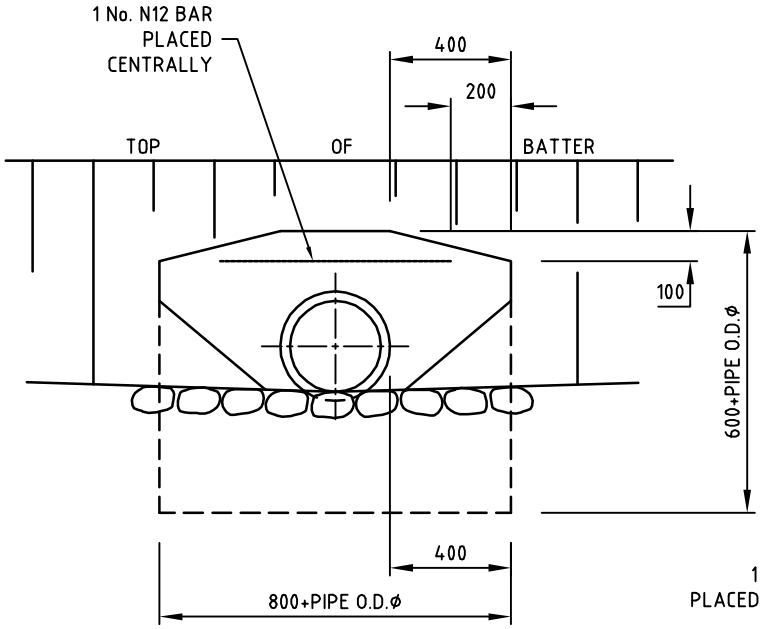
LAST UPDATED 30/01/2013

SD 465

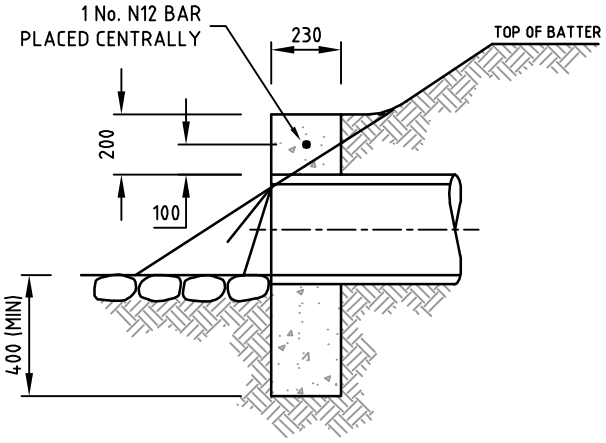
NOT TO SCALE



PLAN
NTS



END ELEVATION
NTS



SECTION A-A

NOTES:

1. COMPACTION PRESSURE BEHIND ENDWALLS IS NOT TO EXCEED 12.5kPa.REFER (1.5 TONNE VIBRATORY ROLLER).
2. A MAXIMUM PIPE SIZE OF 300Ø FOR THIS ENDWALL ARRANGEMENT.
3. NOT TO BE USED WHERE GENERAL VEHICULAR TRAFFIC IS PRESENT, (MAINTENANCE OR EMERGENCY VEHICLES EXCEPTED).
4. ALTERNATIVELY PRECAST ENDWALL MAY BE USED WHERE APPROVED BY COUNCIL.
5. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.

ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual

CONCRETE ENDWALL FOR PIPES UP TO 300mmØ (WALKWAYS, PATHS & TRACKS)

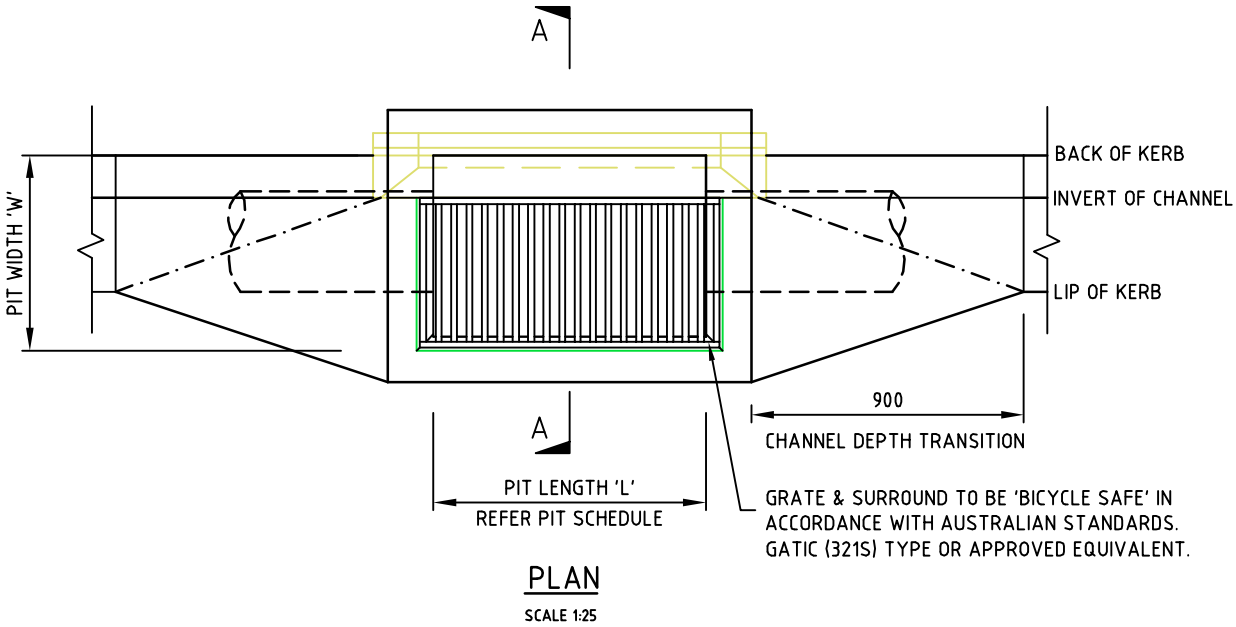
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website
www.designmanual.com.au

LAST UPDATED 30/01/2013

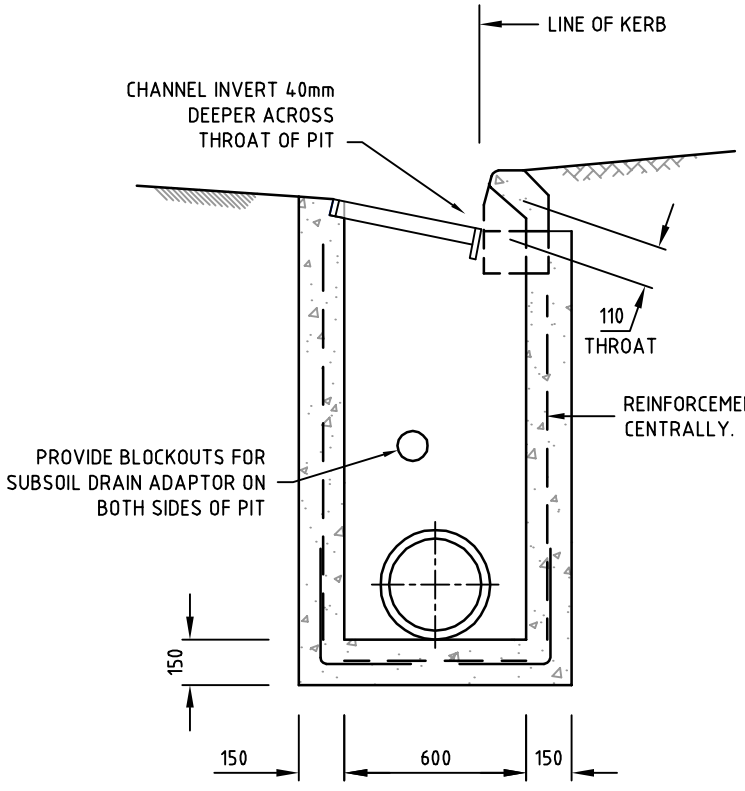
SD 470

NOT TO SCALE



PLAN

SCALE 1:25



SECTION A-A

REINFORCEMENT DETAILS

PIT LENGTH 'L' OR WIDTH 'W'	REINFORCEMENT
UP TO 1200	SL92
1201 TO 1800	RL918
1801 TO 2400	RL1218

NOTES:

1. REFER TO SD100 FOR KERB DETAILS.
2. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.

ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual

GRATED SIDE ENTRY PIT INLET 900mm WITH CONCRETE SURROUND FOR 'B2'

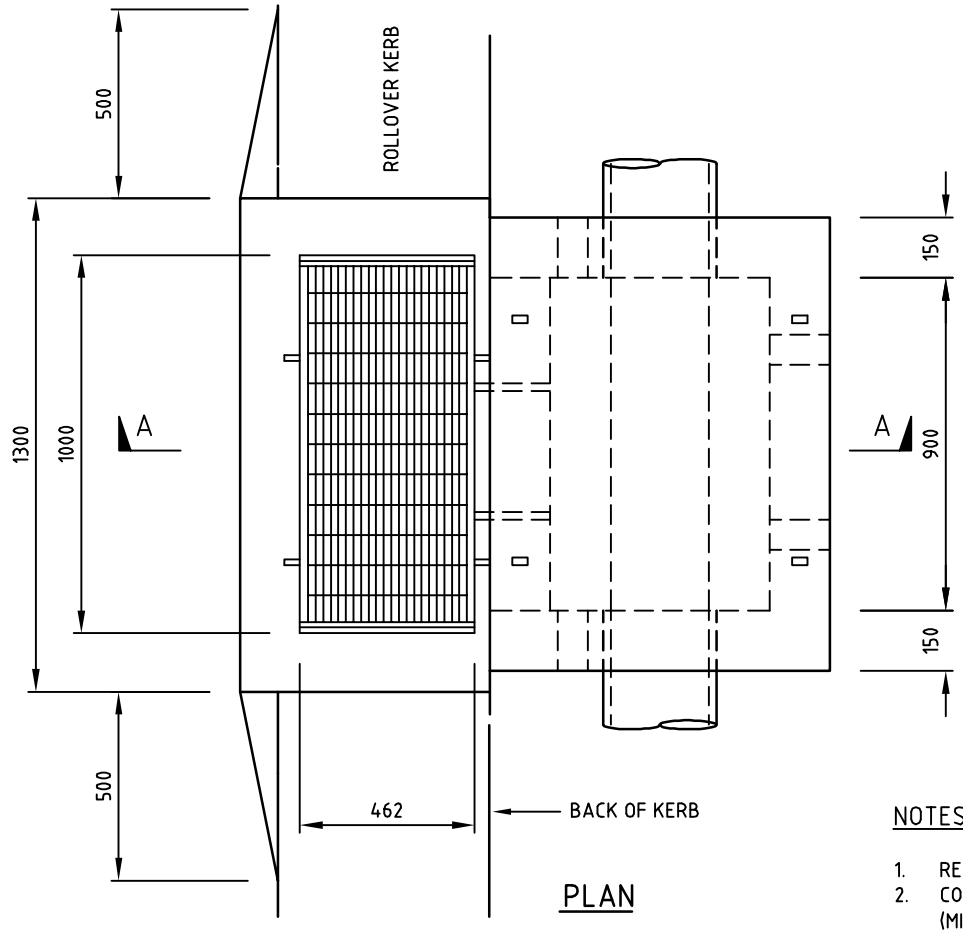
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

LAST UPDATED 30/01/2013

SD 475

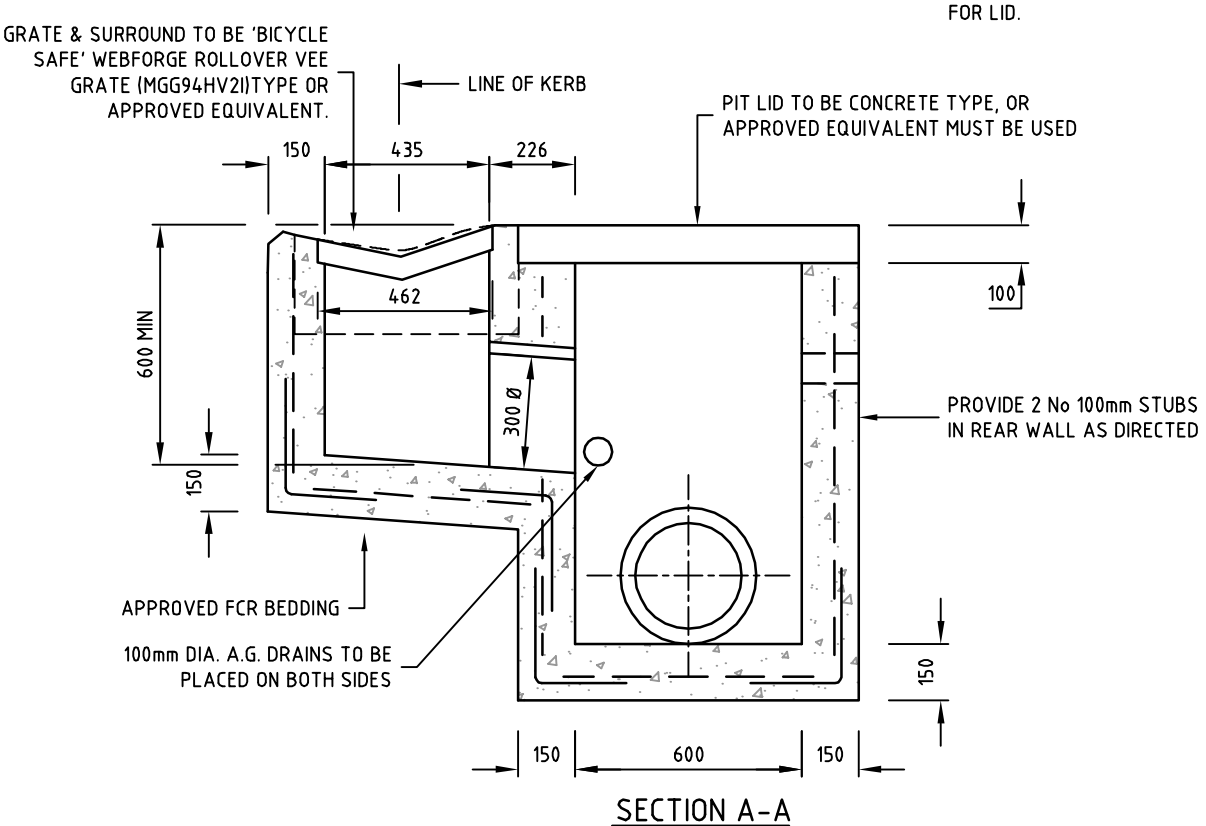
NOT TO SCALE



PLAN

NOTES:

1. REFER TO SD100 FR KERB DETAILS.
2. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS.
3. CLASS D LOADING IS REQUIRED FOR LID.



SECTION A-A

ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual

GRATING PIT FOR SM2 MODIFIED KERB & CHANNEL

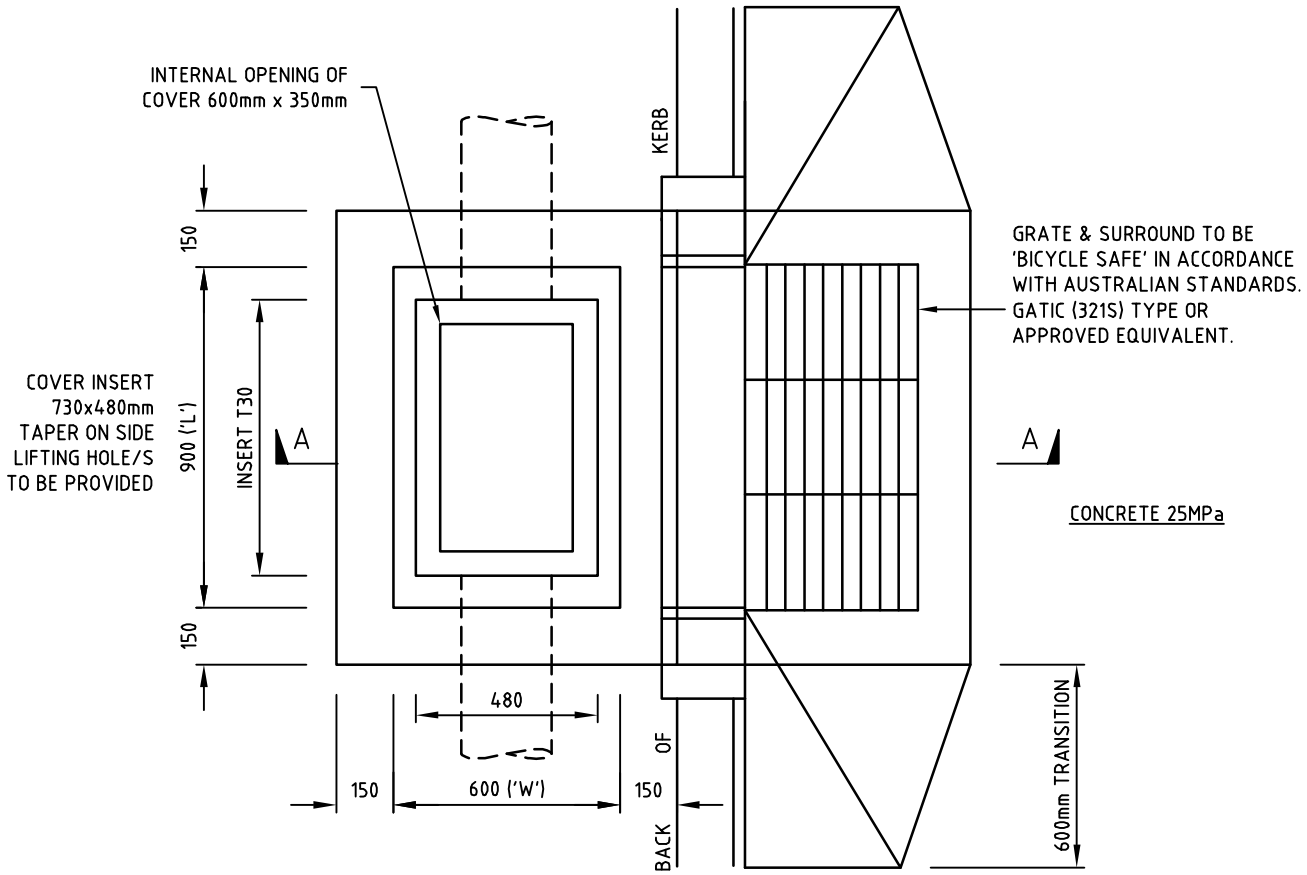
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

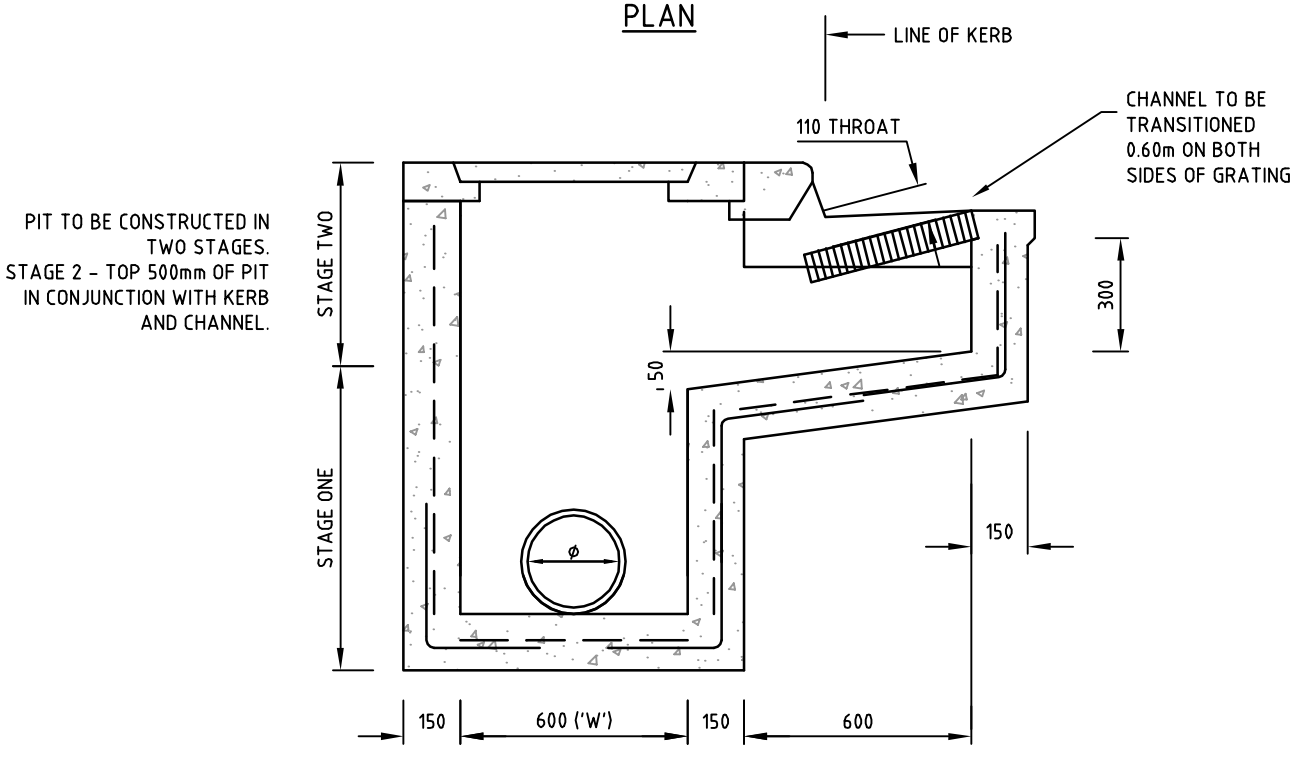
LAST UPDATED 22/02/2012

SD 480

NOT TO SCALE



PLAN



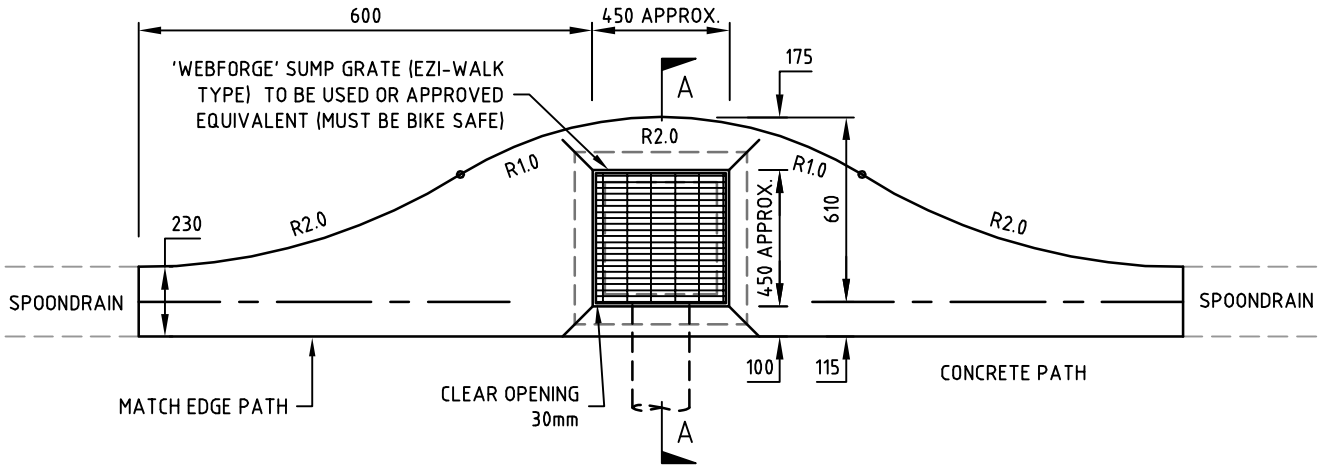
SECTION A-A

NOTES:

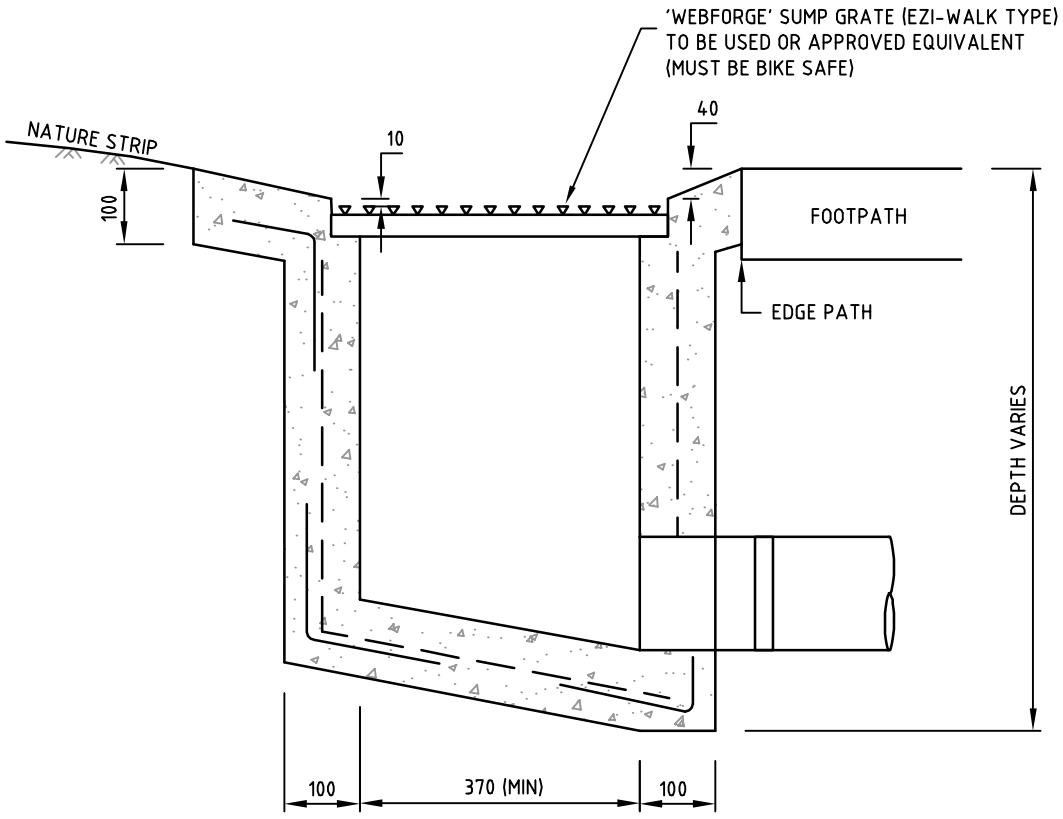
1. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	900 x 600mm SIDE ENTRY PIT WITH GRATING	LAST UPDATED 30/01/2013
	Infrastructure Design Manual Standard Drawings	SD 490
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



PLAN



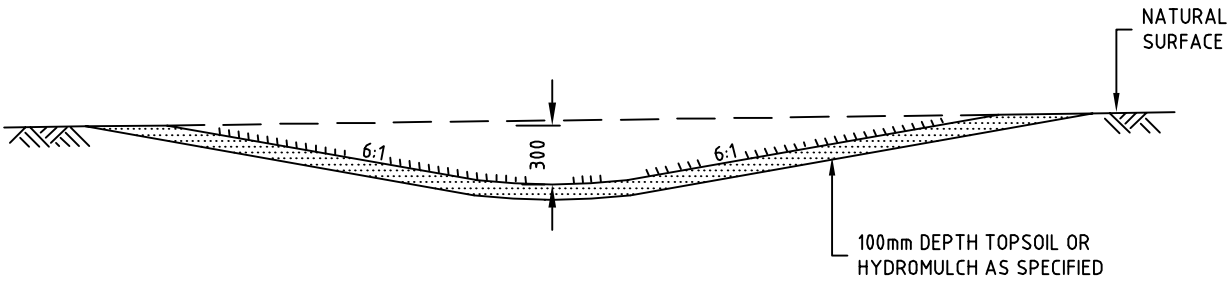
SECTION A-A

NOTES:

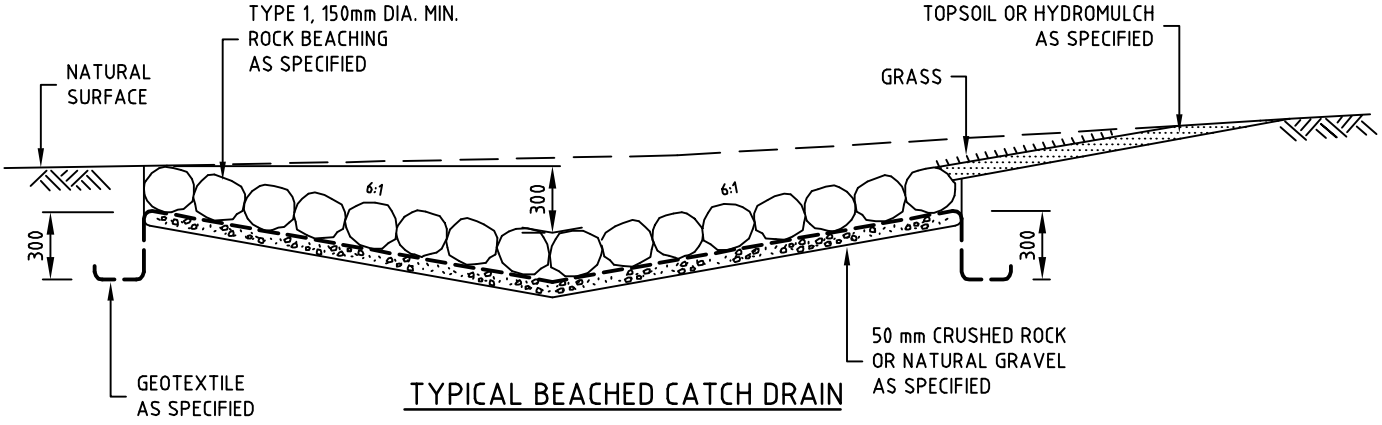
1. EDGE CONCRETE AROUND PERIMETER OF GRATE.
2. TOP OF GRATE 50mm BELOW EDGE OF PATH.
3. DO NOT BOND GRATE TO TO CONCRETE TO ALLOW EASY ACCESS TO PIT.
4. CONCRETE TO BE SMOOTH TROWELLED FINISH.
5. GRATE FRAME TO BE OILED IF INSTALLED IN WET CONCRETE.
6. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS

ALL MEASUREMENTS IN MILLIMETRES

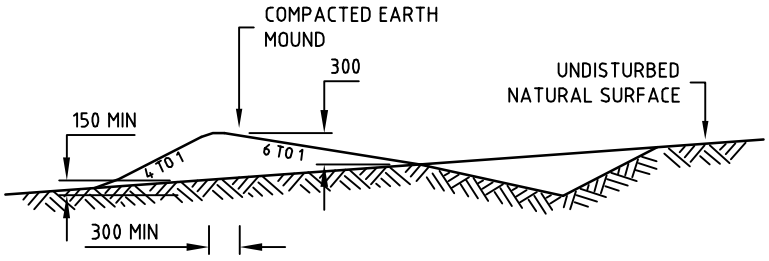
IDM infrastructure design manual	SPOON PIT WITH GRATING	LAST UPDATED 30/01/2013
	Infrastructure Design Manual Standard Drawings	SD 495
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



TYPICAL GRASS CATCH DRAIN SECTIONS



TYPICAL BEACHED CATCH DRAIN

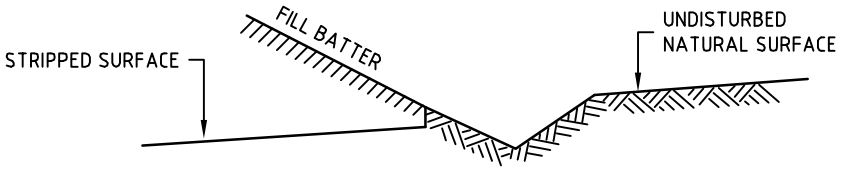


TYPICAL MOUNDED CATCH DRAIN

(ERODABLE TERRAIN)

NOTES:

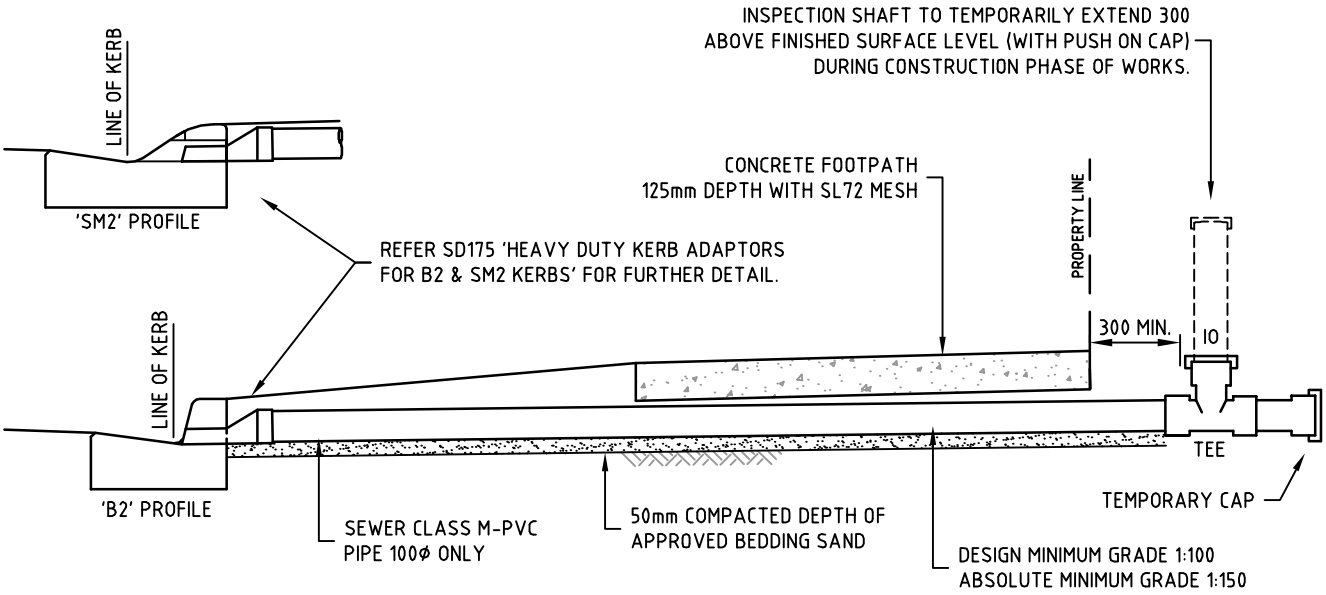
1. CATCH DRAINS SHALL BE CONSTRUCTED WHERE INDICATED ON ALIGNMENT PLANS.
2. CATCH DRAINS LOCATION RELATIVE TO THE BATTER SHALL BE DETERMINED BY THE COUNCIL REPRESENTATIVE.
3. CATCH DRAINS SHALL BE GRADED TO CULVERTS OR EXISTING LOW POINTS.
4. CATCH DRAINS SHALL BE LINED WITH TOPSOIL OR HYDROMULCH AS SHOWN.
5. REFER SD460 FOR INLET CATCH PIT DETAILS.



TYPICAL CATCH DRAIN AT TOE OF BATTER

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	CATCH DRAIN DETAILS	LAST UPDATED 04/03/2013
	Infrastructure Design Manual Standard Drawings	SD 500
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



TYPICAL CROSS SECTION

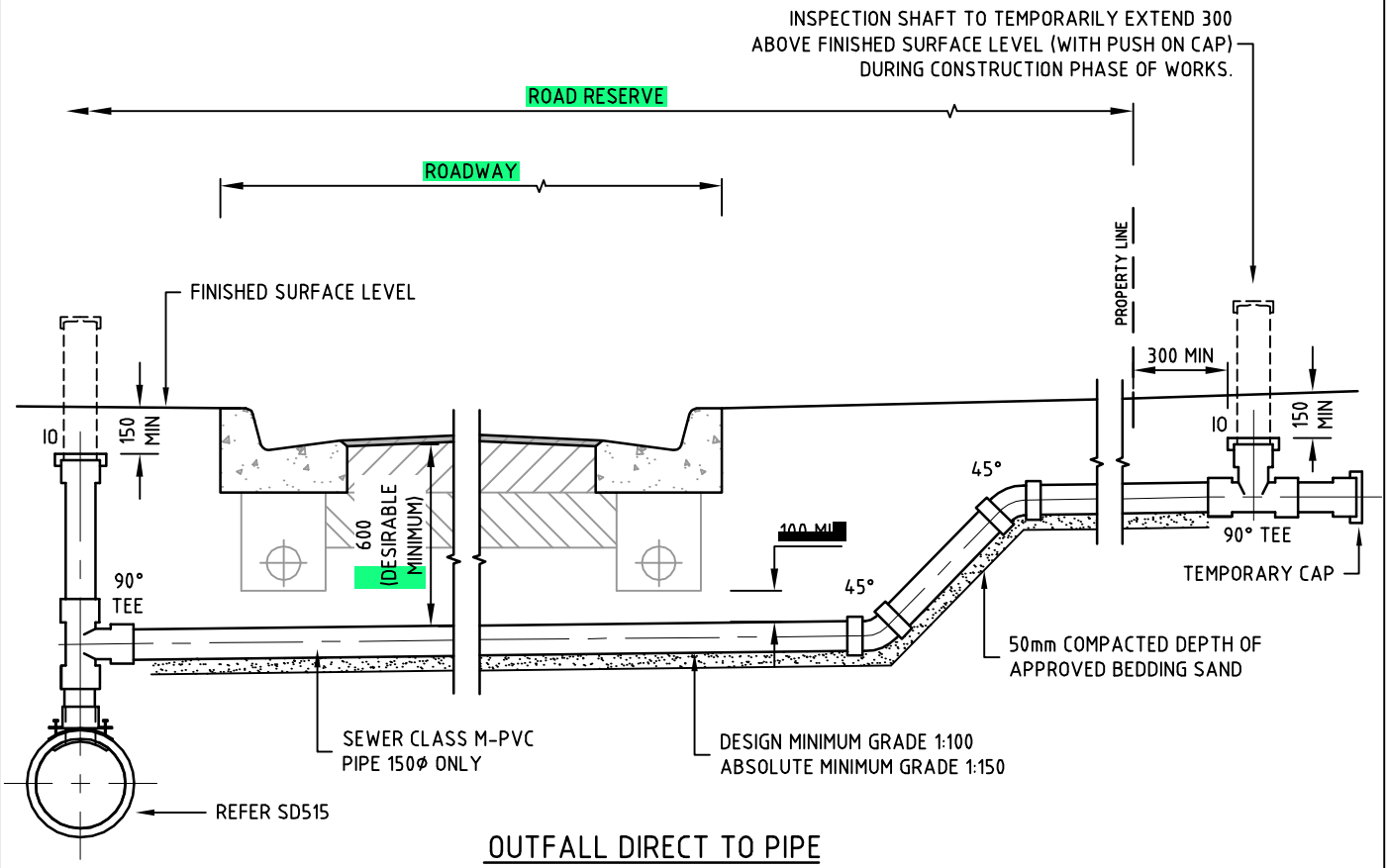
SCALE 1:25

NOTES:

1. LOCATION OF HOUSE DRAINS WITHIN PROPERTY BOUNDARY TO BE MARKED WITH AN APPROVED TAPE TIED TO EXTEND THROUGH FINISHED SURFACE FOR EASY LOCATION BY BUILDERS.
2. F.C.R. BACKFILL TO BE USED UNDER ROAD PAVEMENT.

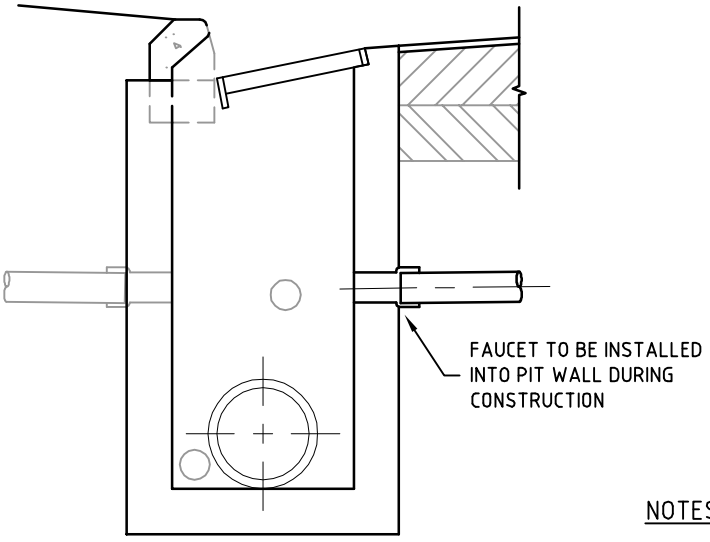
ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	HOUSE DRAIN TO KERB & CHANNEL	LAST UPDATED 30/01/2013
	Infrastructure Design Manual Standard Drawings	SD 505
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



OUTFALL DIRECT TO PIPE

(UNDER ROAD PAVEMENT)



OUTFALL DIRECT TO DRAINAGE PIT

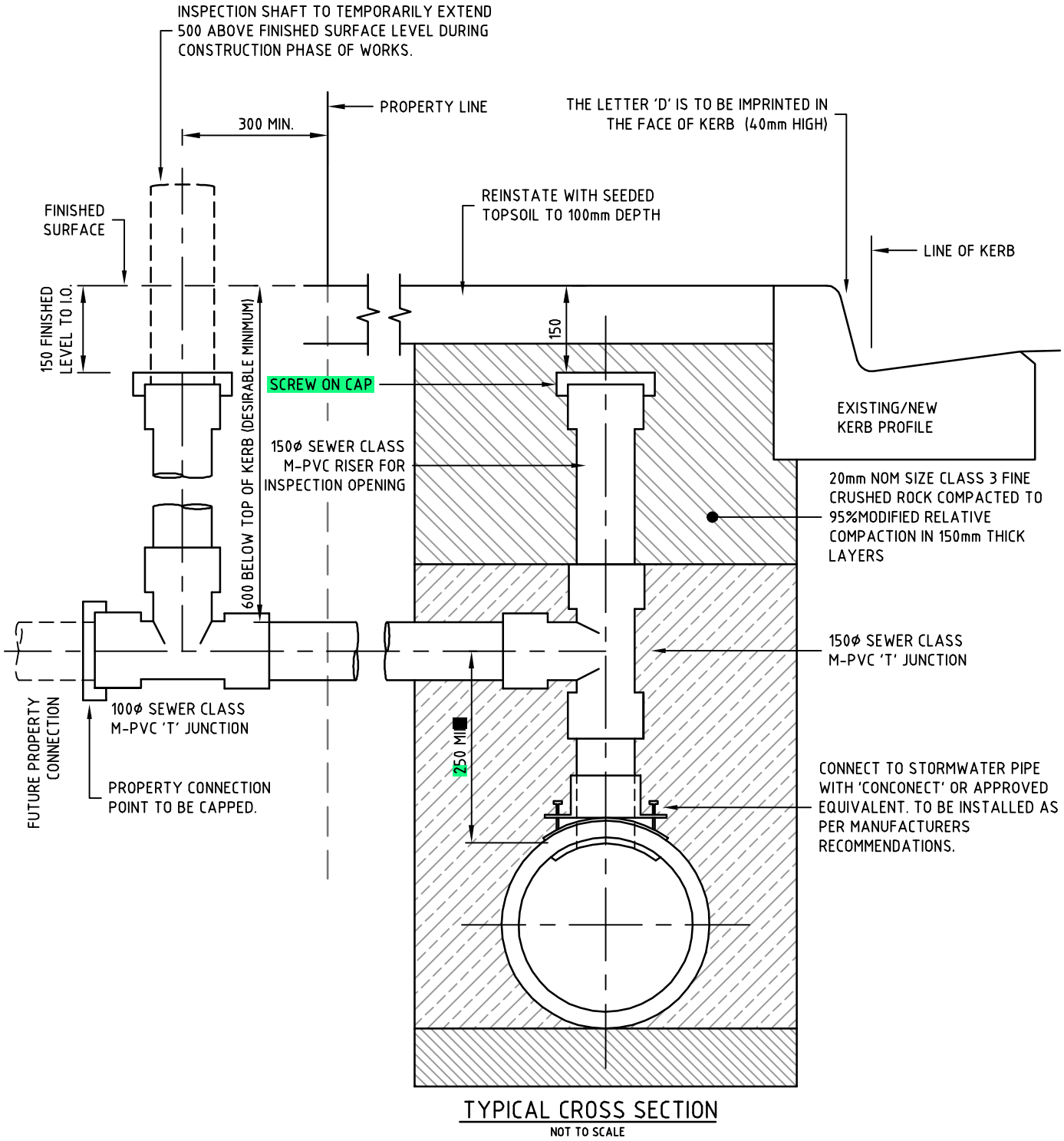
(STREET DRAINAGE)

NOTES:

1. 20mm CLASS 3 F.C.R. BACKFILL TO BE USED UNDER ROAD PAVEMENT.
2. CONCRETE KERB TO BE STAMPED WHEN CURING WITH THE LETTER 'D' ADJACENT THE HOUSE DRAIN CONNECTION POINT.

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	HOUSE DRAIN UNDER ROAD PAVEMENT	LAST UPDATED 30/01/2013
	Infrastructure Design Manual Standard Drawings	SD 510
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



TYPICAL CROSS SECTION

NOT TO SCALE

ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual

STREET DRAIN CONNECTION

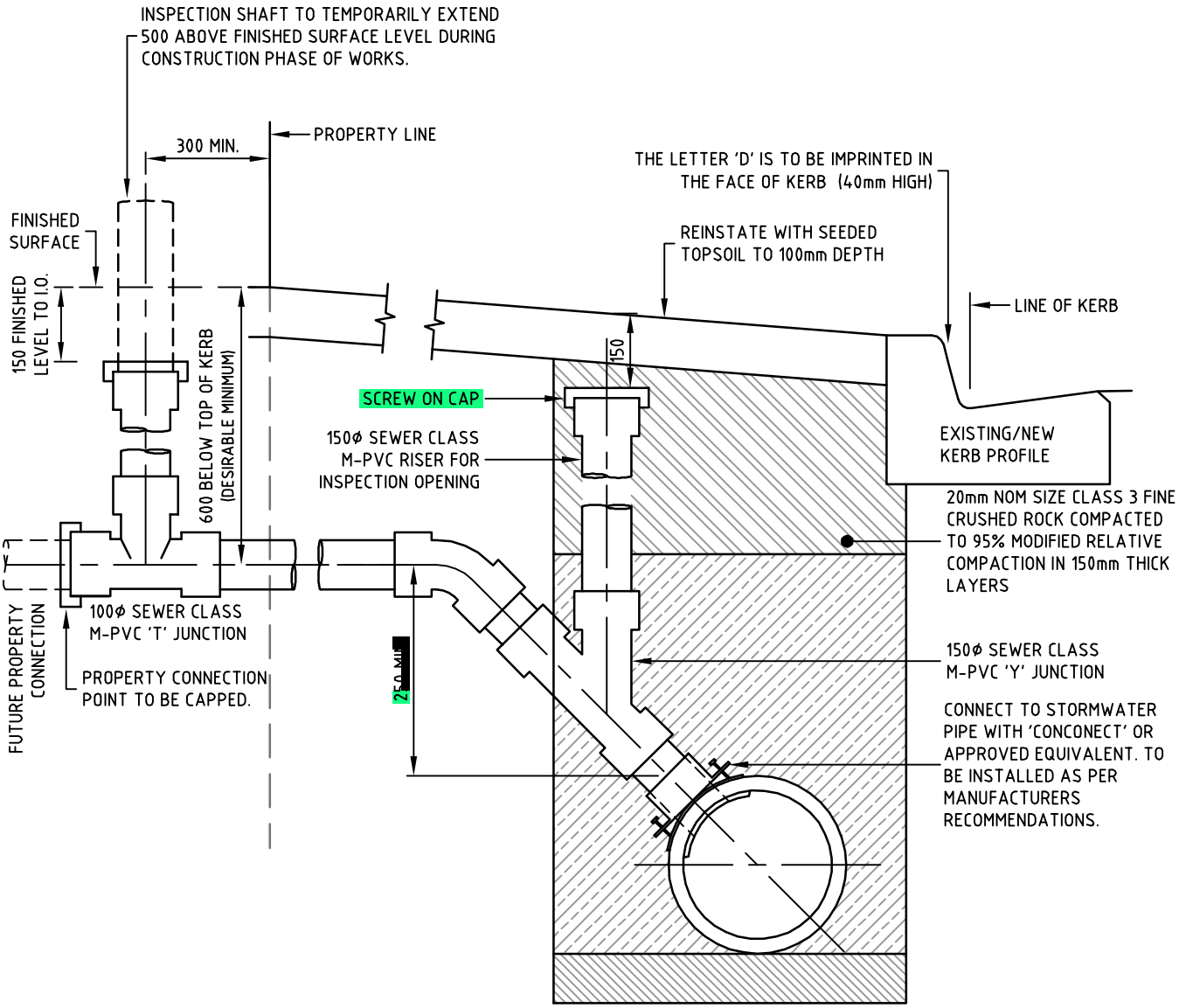
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

LAST UPDATED 30/01/2013

SD 515

NOT TO SCALE

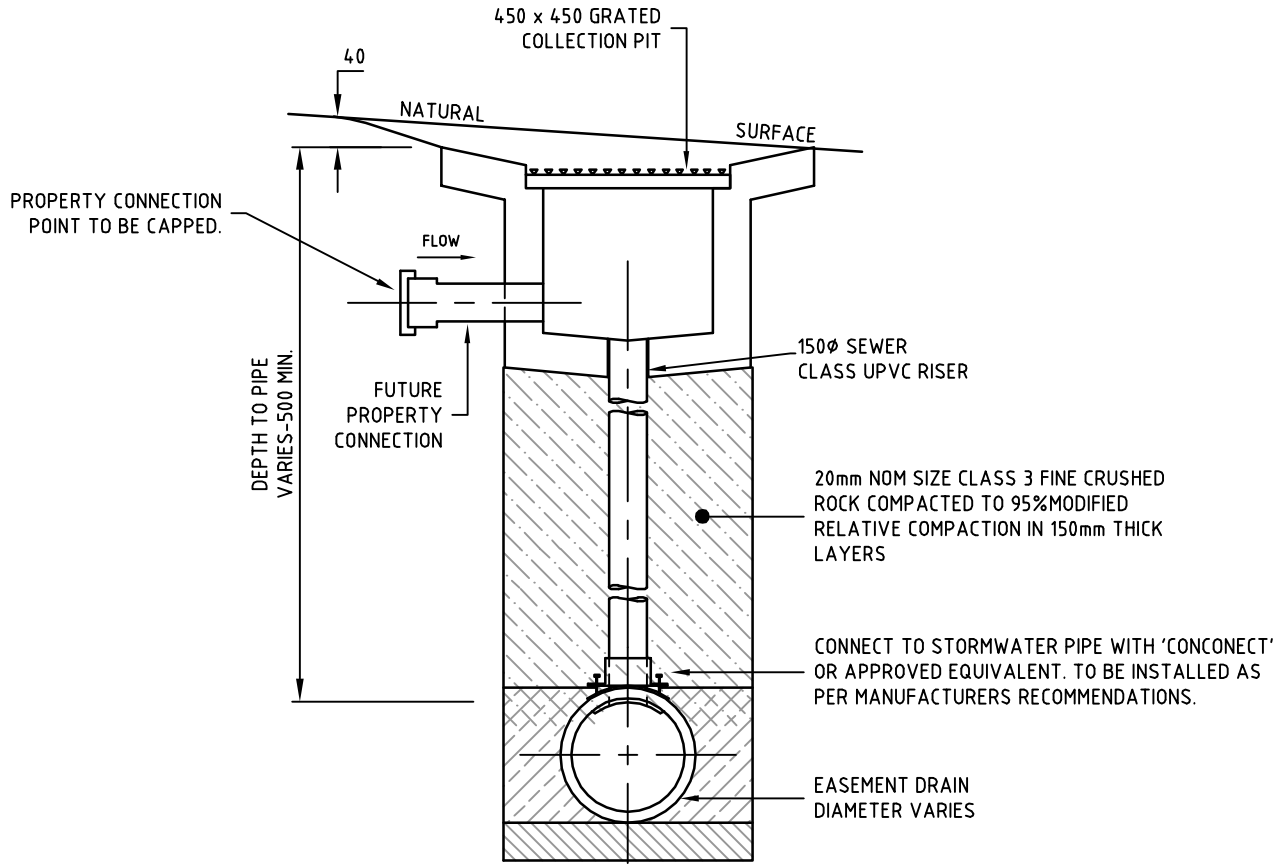


TYPICAL CROSS SECTION

NOT TO SCALE

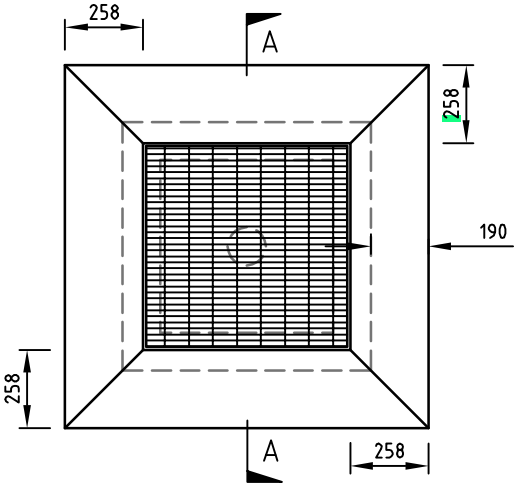
ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual	STREET DRAIN CONNECTION (45° TO PIPE WHERE COVER LIMITED)	LAST UPDATED 31/01/2013
	Infrastructure Design Manual Standard Drawings	SD 516
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



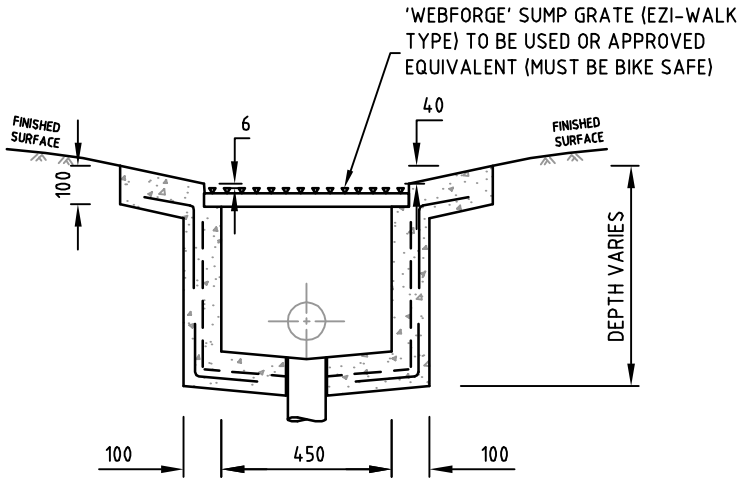
SIDE ELEVATION

NOT TO SCALE



COLLECTION PIT - PLAN

NOT TO SCALE



SECTION A-A

NOT TO SCALE

NOTES:

1. EDGE CONCRETE AROUND PERIMETER OF GRATE.
2. TOP OF GRATE 40mm (min) BELOW FINISHED SURFACE.
3. DO NOT BOND GRATE TO CONCRETE TO ALLOW EASY ACCESS TO PIT.
4. CONCRETE TO BE SMOOTH TROWELLED FINISH.
5. GRATE FRAME TO BE OILED IF INSTALLED IN WET CONCRETE.
6. CONCRETE STRENGTH F'C = 25MPa. (MIN) AT 28 DAYS

ALL MEASUREMENTS IN MILLIMETRES

IDM infrastructure design manual

EASEMENT DRAIN CONNECTION

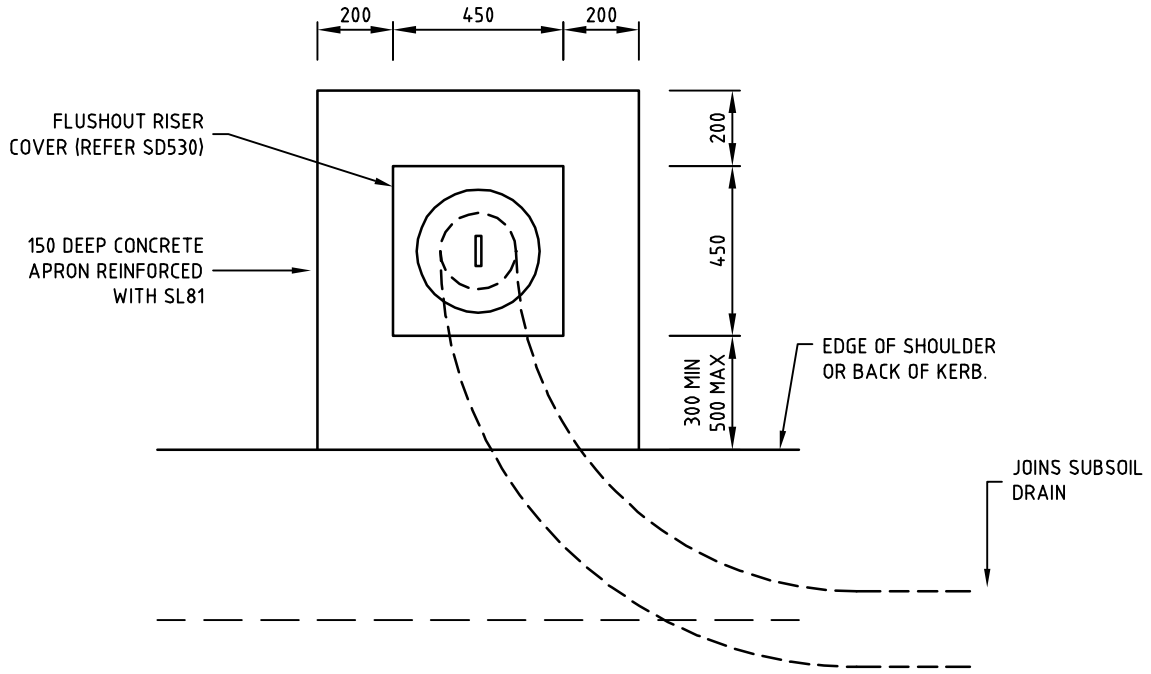
Infrastructure Design Manual Standard Drawings

A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au

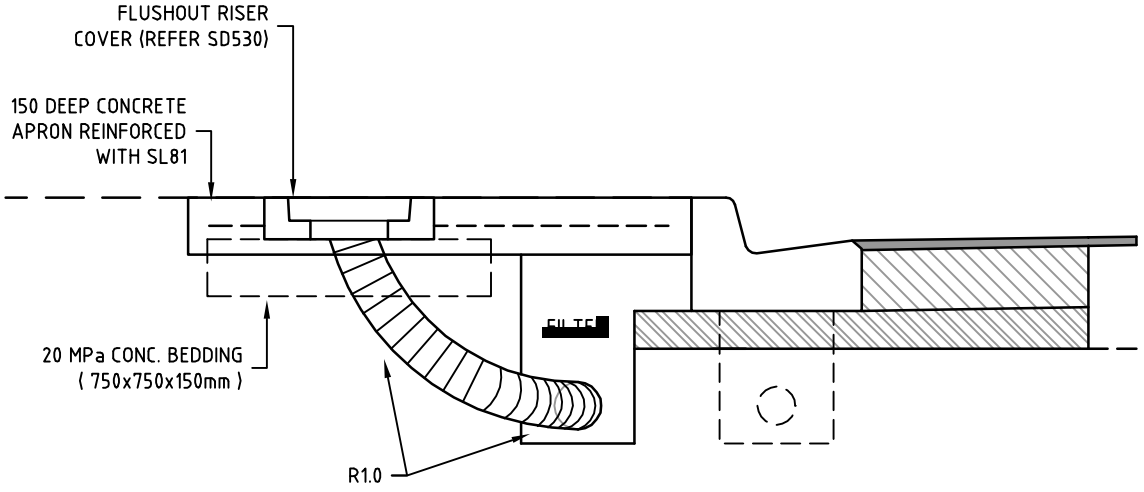
LAST UPDATED 04/03/2013

SD 520

NOT TO SCALE



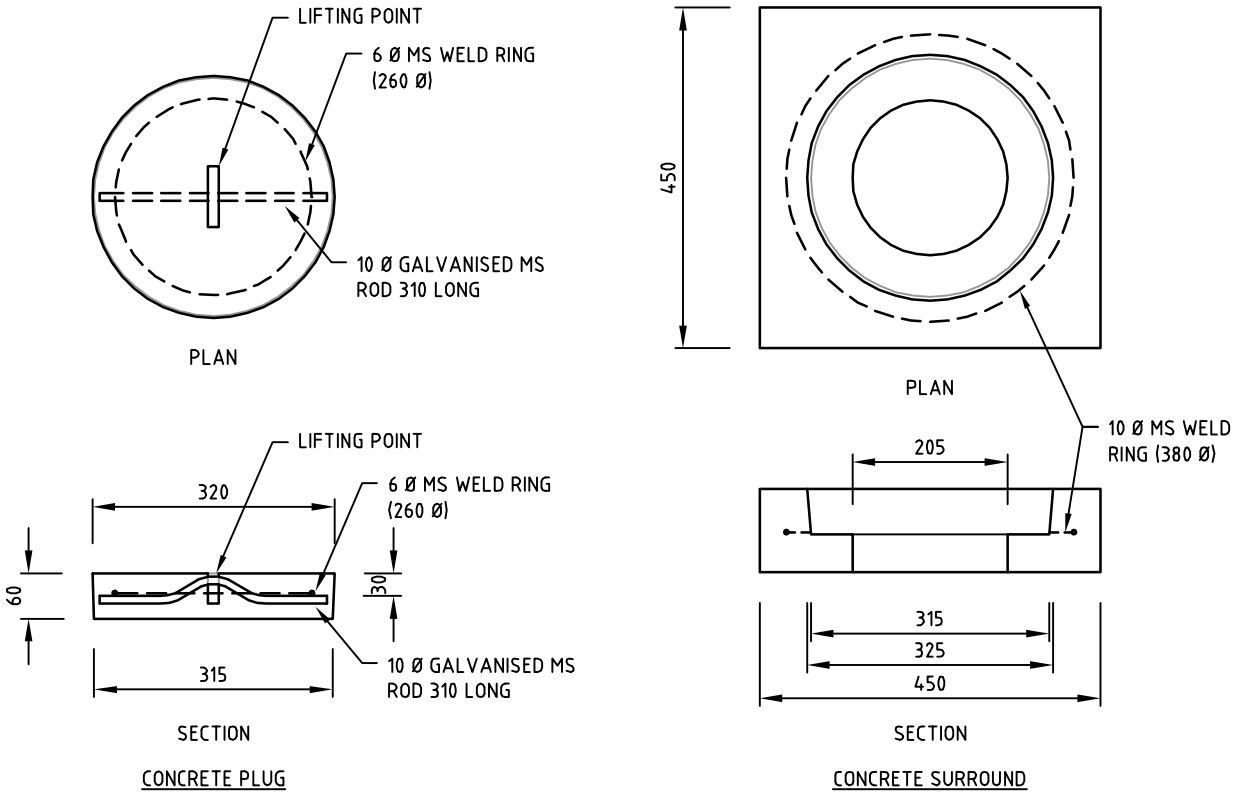
TYPICAL FLUSHOUT RISER PLAN



TYPICAL FLUSHOUT RISER SECTION

ALL MEASUREMENTS IN MILLIMETRES

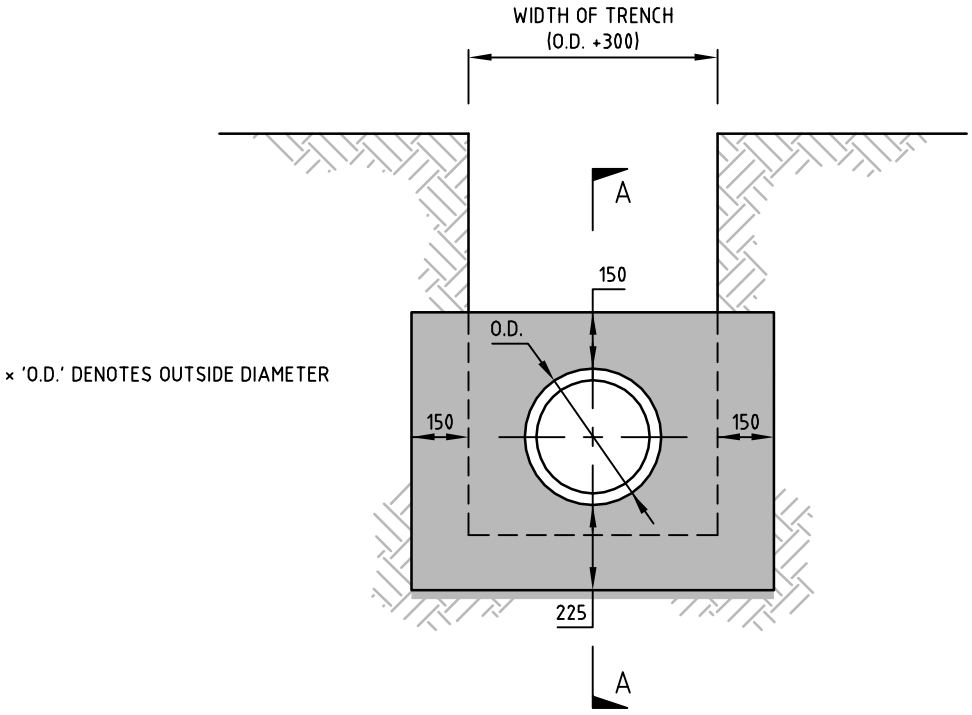
infrastructure design manual	FLUSHOUT RISER DETAIL	LAST UPDATED 25/08/2010
	Infrastructure Design Manual Standard Drawings	SD 525
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



FLUSHOUT RISER COVER DETAIL

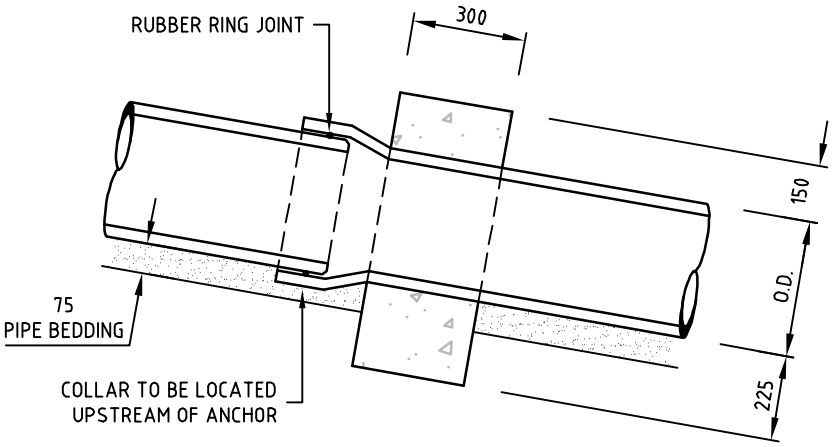
ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual	FLUSHOUT RISER COVER DETAIL	LAST UPDATED 25/08/2010
	Infrastructure Design Manual Standard Drawings	SD 530
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE



× 'O.D.' DENOTES OUTSIDE DIAMETER

ELEVATION



SECTION A-A

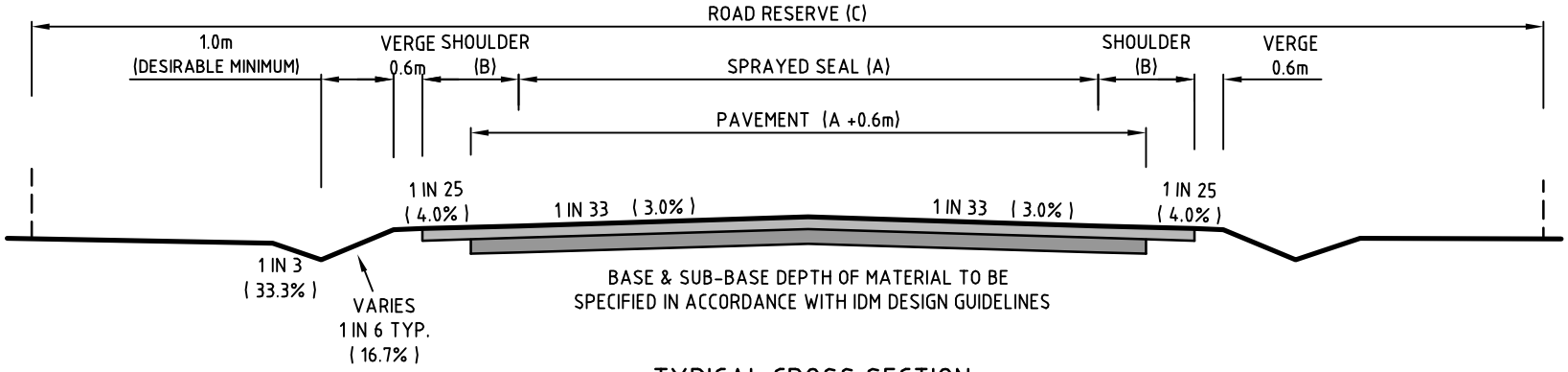
NOTES:

1. FOR USE ON PIPE AT GRADES OF 1 IN 10 OR GREATER.
2. TO BE CONSTRUCTED AT A MAXIMUM OF 10m CTRS.
3. CONCRETE STRENGTH TO BE 25MPa.

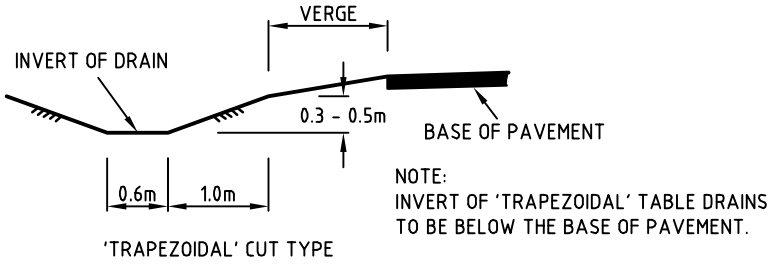
ALL MEASUREMENTS IN MILLIMETRES

infrastructure design manual	DRAINAGE PIPE ANCHOR BLOCK	LAST UPDATED 30/11/2011
	Infrastructure Design Manual Standard Drawings	SD 535
	A copy of the Infrastructure Design Manual can be viewed on the Design Manual website www.designmanual.com.au	NOT TO SCALE

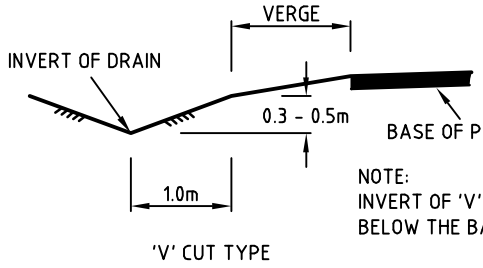
FOR DIMENSIONS (A) (B) & (C) REFER TO IDM DESIGN GUIDELINES:
CLAUSE 12.4 TABLE 6 – 'RURAL ROAD CHARACTERISTICS'.



TYPICAL CROSS SECTION
SEALED ROAD

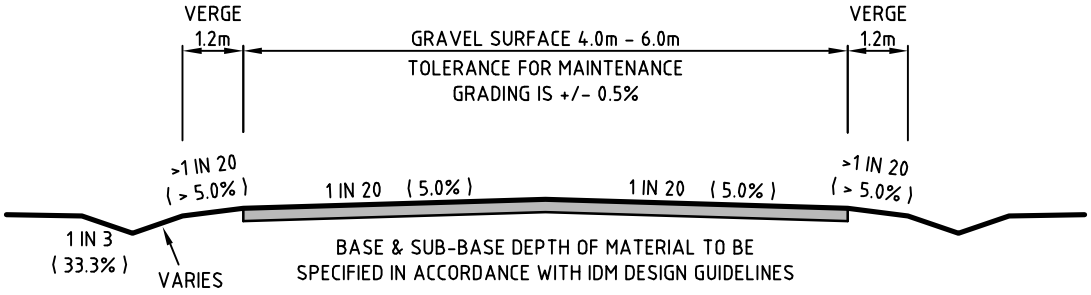


NOTE:
INVERT OF 'TRAPEZOIDAL' TABLE DRAINS
TO BE BELOW THE BASE OF PAVEMENT.



NOTE:
INVERT OF 'V' TABLE DRAINS TO BE
BELOW THE BASE OF PAVEMENT.

TYPICAL OPEN TABLE DRAINS



TYPICAL CROSS SECTION
GRAVEL ROAD

ALL MEASUREMENTS IN MILLIMETRES

TYPICAL ROAD PROFILES RURAL

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LAST UPDATED 30/01/2013

SD 600

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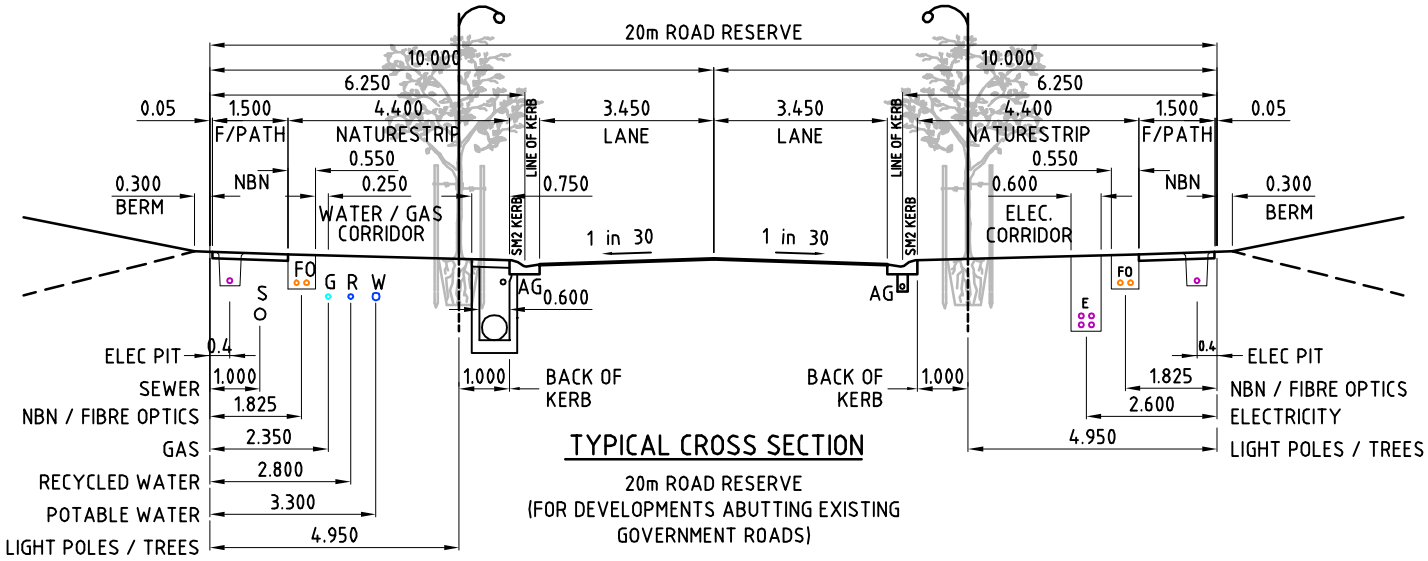
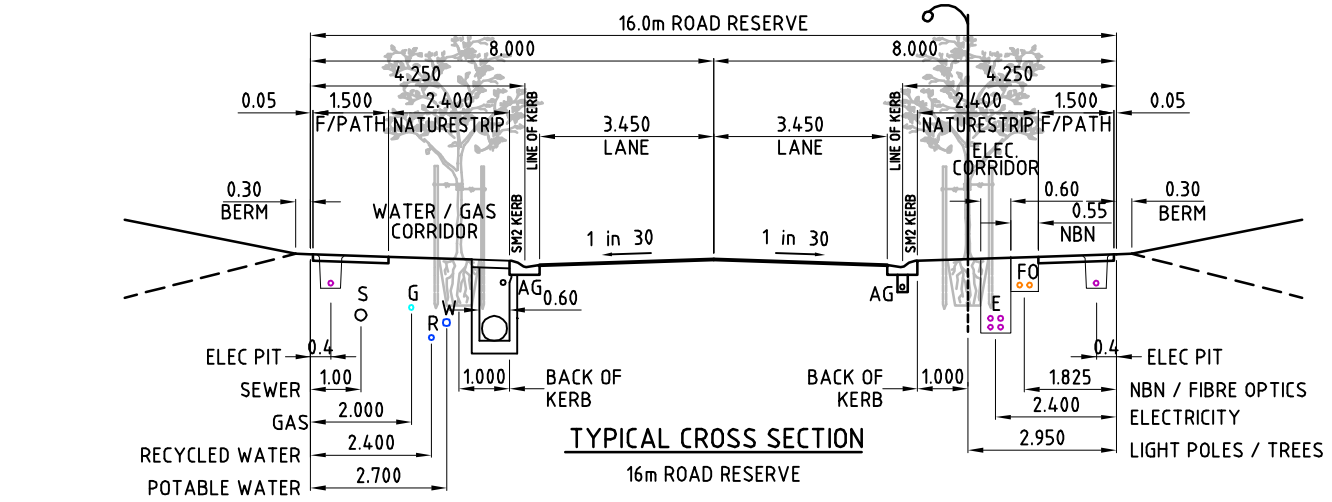


TYPICAL CROSS SECTION

20m ROAD RESERVE
(FOR DEVELOPMENTS ABUTTING EXISTING GOVERNMENT ROADS)



TYPICAL CROSS SECTION

16m ROAD RESERVE

NOTES:

1. IF ROAD RESERVE WIDTH VARIES FROM TYPICAL SECTIONS THEN A MODIFIED SECTION IS TO BE SUBMITTED AND APPROVED BY COUNCIL.
2. WATER / GAS CORRIDOR: ASSUME WATER 100mm CONDUIT AND GAS 50mm CONDUIT.
3. ELECTRICAL CORRIDOR: ASSUME 2x HV POWER CABLES IN 100mm CONDUITS AND 2x HV POWER CABLES IN 150mm CONDUITS.

ALL MEASUREMENTS IN MILLIMETRES

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TYPICAL ROAD PROFILES RESIDENTIAL

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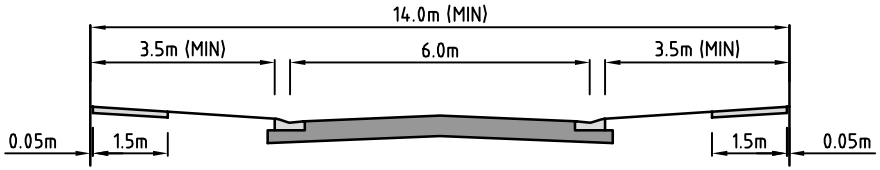
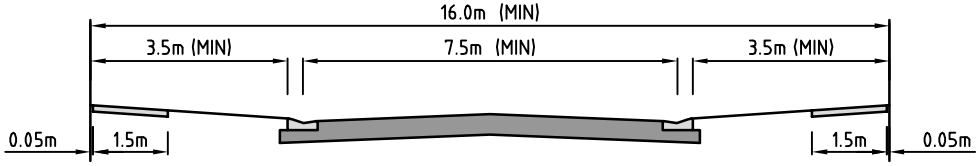
LAST UPDATED 30/01/2013

SD 605

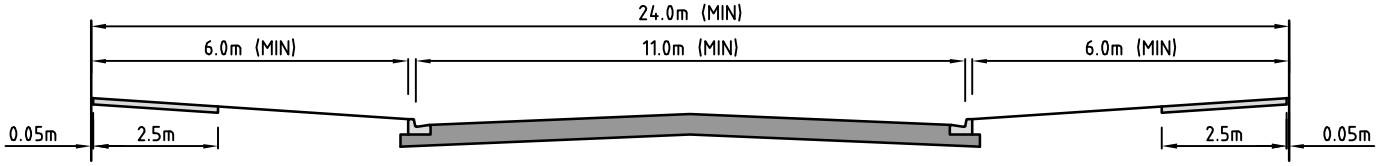
NOT TO SCALE



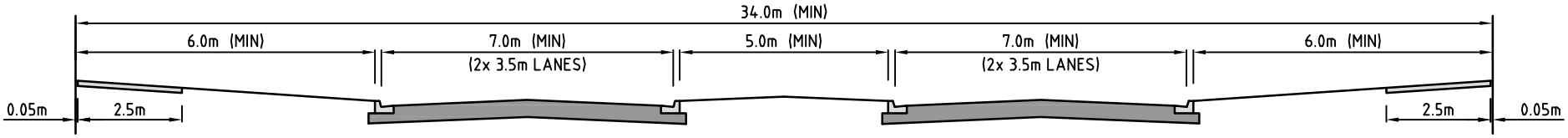
ACCESS PLACE



ACCESS STREET



COLLECTOR STREET - LEVEL 1



COLLECTOR STREET - LEVEL 2

NOTE:
REFER TO IDM DESIGN GUIDELINES: SECTION 12, TABLE 2 - 'URBAN ROAD / STREET CHARACTERISTICS'.

ALL MEASUREMENTS IN MILLIMETRES

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TYPICAL ROAD PROFILES ACCESS PLACE & STREET / COLLECTOR LEVEL 1 & 2

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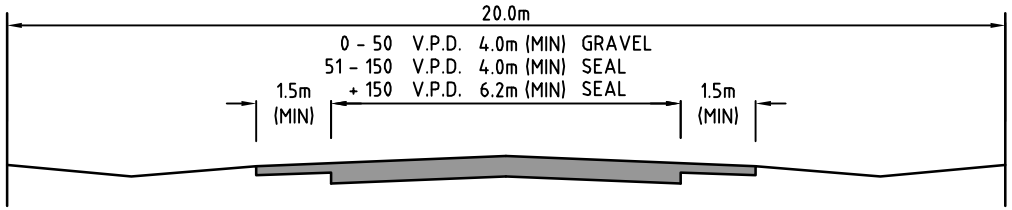
LAST UPDATED 04/03/2013

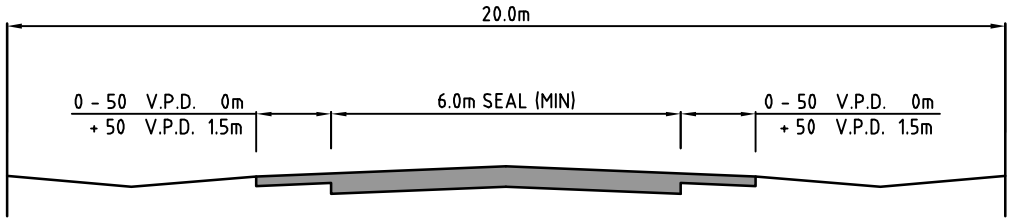
SD 610

NOT TO SCALE



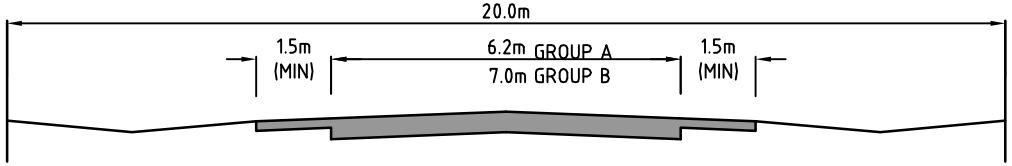
RURAL ACCESS – GROUP A COUNCILS

× V.P.D. = VEHICLES PER DAY

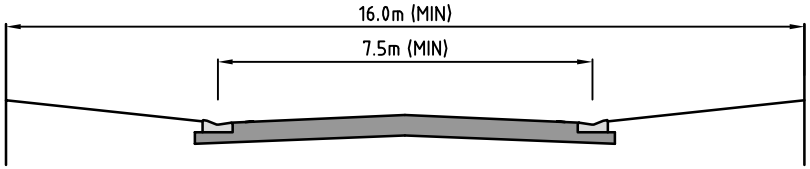


RURAL ACCESS – GROUP B COUNCILS

× V.P.D. = VEHICLES PER DAY



LOW DENSITY RESIDENTIAL COLLECTOR ROAD – GROUP A COUNCILS



LOW DENSITY RESIDENTIAL COLLECTOR ROAD – SOUTH GIPPSLAND

NOTE:
REFER TO IDM DESIGN GUIDELINES: SECTION 12, TABLE 6 – 'RURAL ROAD CHARACTERISTICS'.

ALL MEASUREMENTS IN MILLIMETRES

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TYPICAL ROAD PROFILES LOW DENSITY RESIDENTIAL COLLECTOR / RURAL ACCESS

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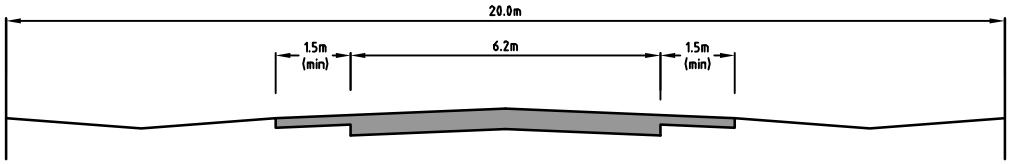
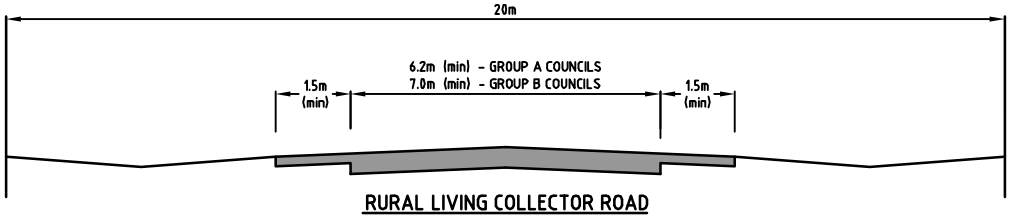
LAST UPDATED 30/01/2013

SD 615

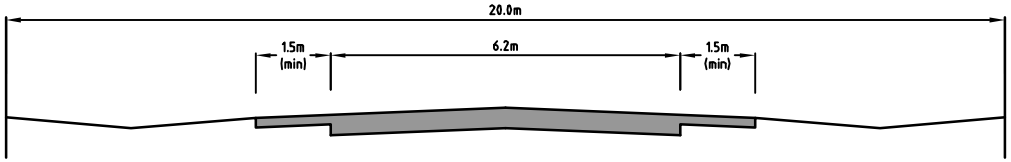
NOT TO SCALE



RURAL LIVING ACCESS ROAD



RURAL LIVING COLLECTOR ROAD



LOW DENSITY RESIDENTIAL ACCESS ROAD

NOTE:
REFER TO IDM DESIGN GUIDELINES: SECTION 12, TABLE 6 - 'RURAL ROAD CHARACTERISTICS'.

ALL MEASUREMENTS IN MILLIMETRES

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TYPICAL ROAD PROFILES RURAL LIVING ACCESS & COLLECTOR / LOW DENSITY RESIDENTIAL ACCESS

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LAST UPDATED 30/01/2013

SD 620

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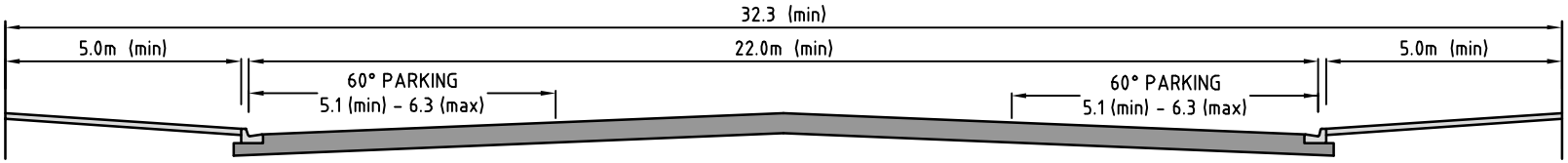
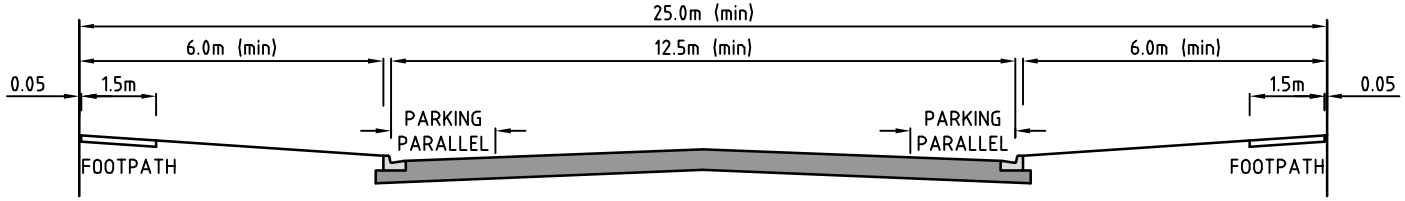


COMMERCIAL STREET



INDUSTRIAL STREET

NOTE:
REFER TO IDM DESIGN GUIDELINES: SECTION 12, TABLE 2 - 'URBAN ROAD / STREET CHARACTERISTICS'.

ALL MEASUREMENTS IN MILLIMETRES

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TYPICAL ROAD PROFILES COMMERCIAL STREET/ INDUSTRIAL STREET

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LAST UPDATED 30/01/2013

SD 625

NOT TO SCALE