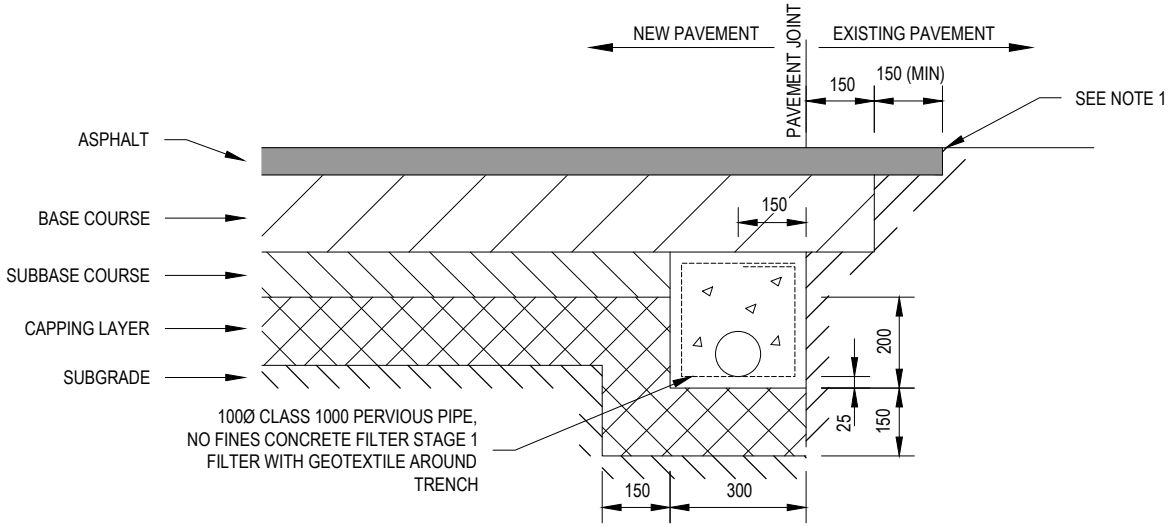
ENGINEERING DESIGN AND CONSTRUCTION MANUAL

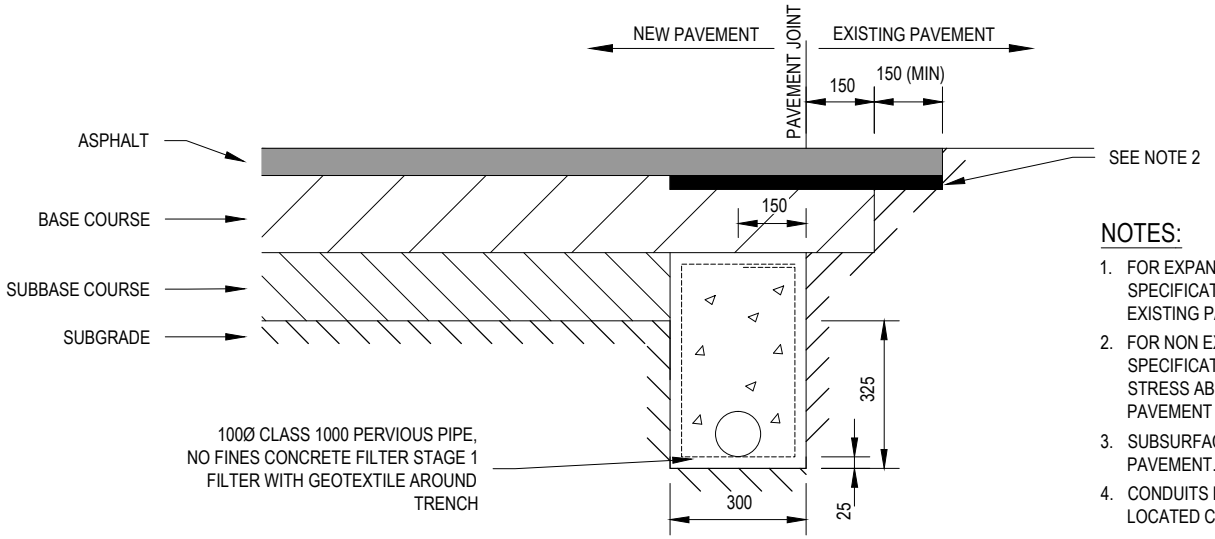
STANDARD DRAWING INDEX

EDCM	REVISION	DATE	DESCRIPTION
201	0	December 2015	Joint Detail for Road Pavements
202	0	December 2015	Subsurface Drain Back of Kerb
301	0	December 2015	Barrier Kerb, Edge and Invert Profiles
302	0	December 2015	Semi Mountable & Mountable Kerb profiles
303	0	December 2015	Kerb Markings
401	0	December 2015	Concrete Footpath Cross Sections and Joints
402	0	December 2015	Concrete Joint Locations And Thicknesses at Pits
403	0	December 2015	Pedestrian Crossing Kerb Ramp Details
501	0	December 2015	Residential Vehicle Crossing – Single
502	0	December 2015	Residential Vehicle Crossing – Double
503	0	December 2015	Heavy Duty Vehicle Crossing
601	0	December 2015	Single Side Entry Pit Grated 600 - B2 Kerb & Channel
602	0	December 2015	Double Side Entry Pit Grated 600 - B2 Kerb & Channel
603	0	December 2015	Single Side Entry Pit Grated SM2 Kerb & Channel
604	0	December 2015	Double Side Entry Pit Grated SM2 Kerb & Channel
605	0	December 2015	900 x 600 Junction Pit Up To 3600 mm Depth
606	0	December 2015	900 x 600 Junction Pits 3601 mm To 10,800 mm Depth
607	0	December 2015	Haunched Junction Pit Up To 3600 mm Depth
608	0	December 2015	Haunched Junction Pits 3601 mm To 10,800 mm Depth
609	0	December 2015	Step Irons
701	0	December 2015	Property Inlet Type A
702	0	December 2015	Property Inlet Type B
703	0	December 2015	Property Inlet Type C
704	0	December 2015	Property Inlet Type D



EXPANSIVE SUBGRADE

NOT TO SCALE



NON EXPANSIVE SUBGRADE

NOT TO SCALE

NOTES:

1. FOR EXPANSIVE SUBGRADE, SAW CUT EXISTING ASPHALT. REFER TO SPECIFICATION SECTION 407.17 FOR JOINT DETAIL. APPLY PRIME AND SAMI TO EXISTING PAVEMENT.
2. FOR NON EXPANSIVE SUBGRADE, SAW CUT EXISTING ASPHALT. REFER TO SPECIFICATION SECTION 407.17 FOR JOINT DETAIL. PLACE 600mm MIN WIDE STRESS ABSORBING MEMBRANE. GEOTEXTILE TO BE LOCATED CENTRALLY OVER PAVEMENT JOINT.
3. SUBSURFACE DRAINS TO BE PROVIDED BEFORE THE CONSTRUCTION OF THE PAVEMENT.
4. CONDUITS FOR GAS, WATER, ELECTRICITY AND TELECOM SERVICES TO BE LOCATED CLEAR OF PAVEMENT AND THE SUBSURFACE DRAIN.
5. THE JOINT BETWEEN NEW AND OLD WEARING COURSE TO BE CRACK SEALED.
6. THE JOINT BETWEEN NEW AND OLD WEARING COURSE MUST BE CONSTRUCTED AT A LOCATION OUTSIDE THE WHEEL PATH ZONE.

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	JP	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

JOINT DETAIL FOR ROAD PAVEMENTS

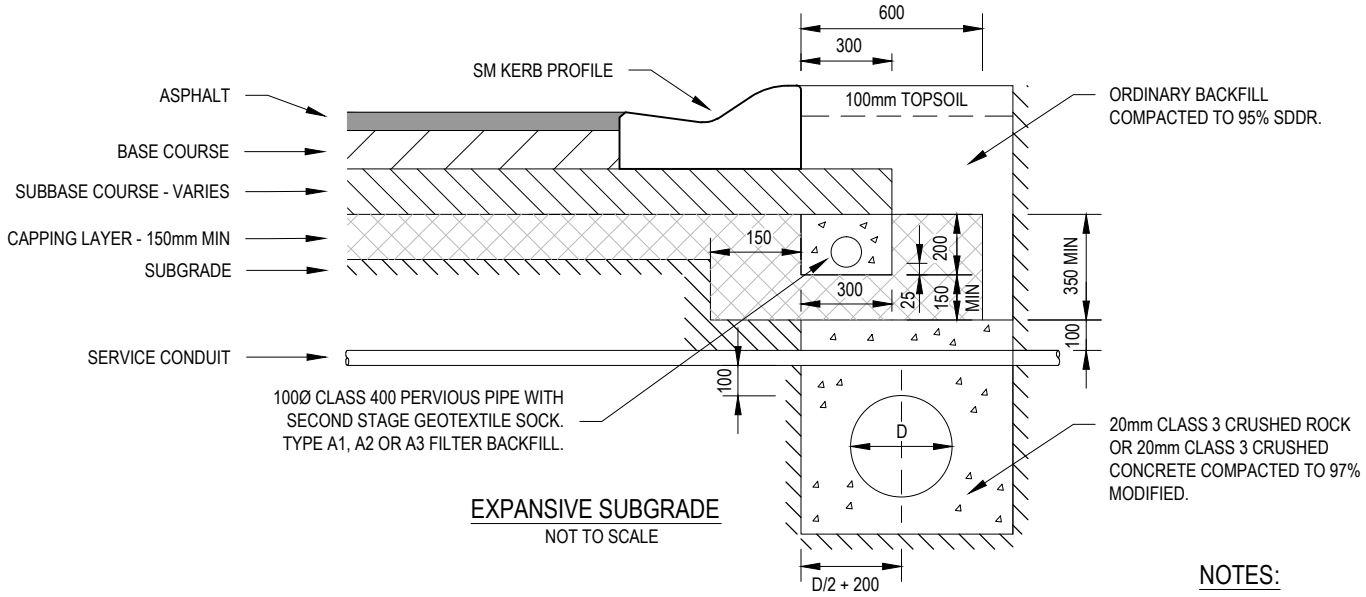
Revision 0

Date DEC 2015

EDCM 201

Plot Date: 16 November 2015 - 2:33 PM Plotted by: Kerry Walton

Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 201.dwg

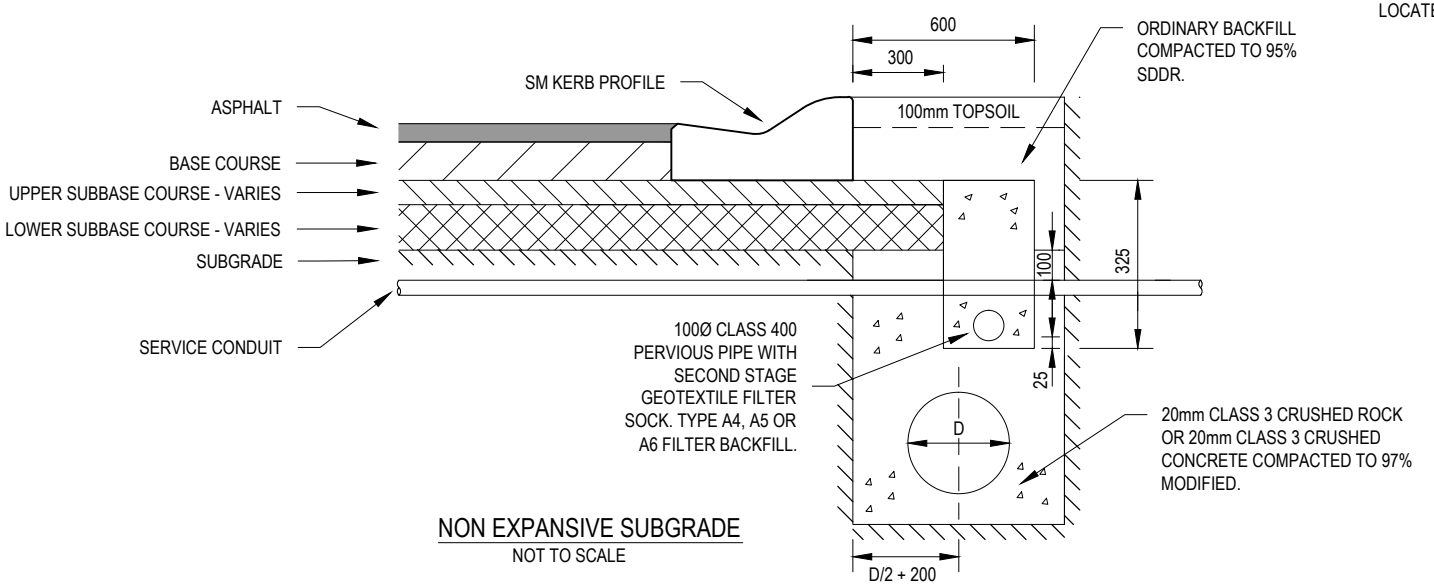


EXPANSIVE SUBGRADE

NOT TO SCALE

NOTES:

1. CONDUITS FOR GAS, WATER, ELECTRICITY AND TELECOM SERVICES TO BE LOCATED CLEAR OF PAVEMENT AND THE SUBSURFACE DRAIN.



NON EXPANSIVE SUBGRADE

NOT TO SCALE

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

SUBSURFACE DRAIN BACK OF KERB

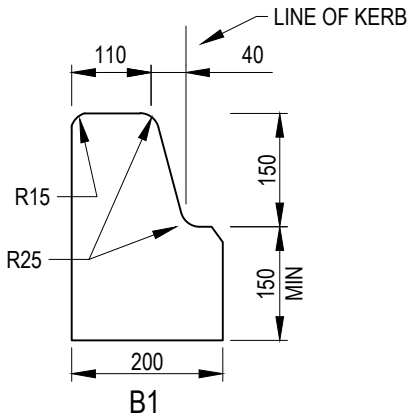
Revision 0

Date DEC 2015

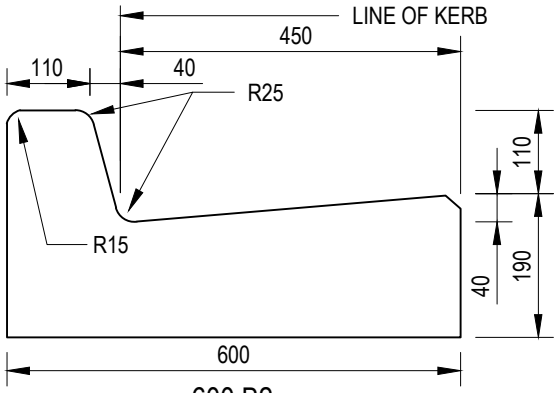
EDCM 202

Plot Date: 16 November 2015 - 2:43 PM Plotted by: Kerry Walton

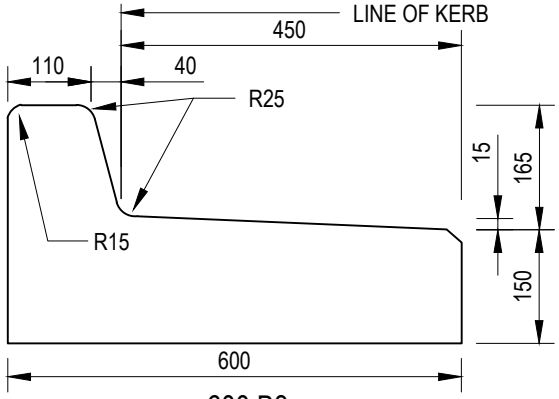
Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 202.dwg



B1



600 B2



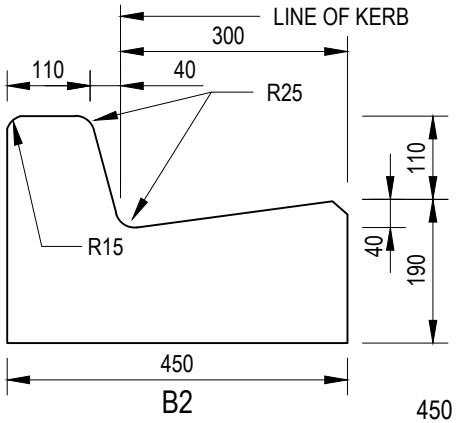
600 B3

600 WIDE BARRIER KERB

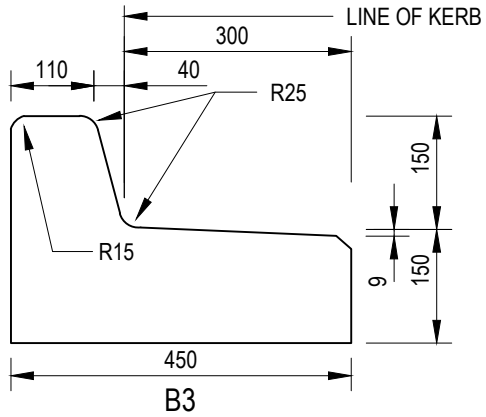
NOT TO SCALE

NOTES:

1. CONCRETE SHALL BE NORMAL CLASS N25 COMPLYING WITH THE REQUIREMENTS OF AS. 1379. REFER TO VICROADS STANDARD SPECIFICATION 703 FOR REQUIREMENTS OF CONCRETE TO BE USED IN EXTRUSION MACHINES.
2. REFER TO AUSTROADS GUIDE TO ROAD DESIGN PART 3: GEOMETRIC DESIGN FOR THE RECOMMENDED USE OF KERBS AND CHANNELS.
3. WEAK PLANE JOINTS (WPJ) TO BE PLACED AT 2500 CENTRES.
4. CHAMFERS ARE 15mm X 15mm UNLESS OTHERWISE SHOWN.
5. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SHOWN.



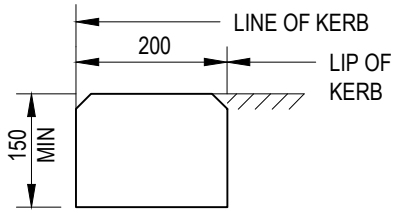
B2



B3

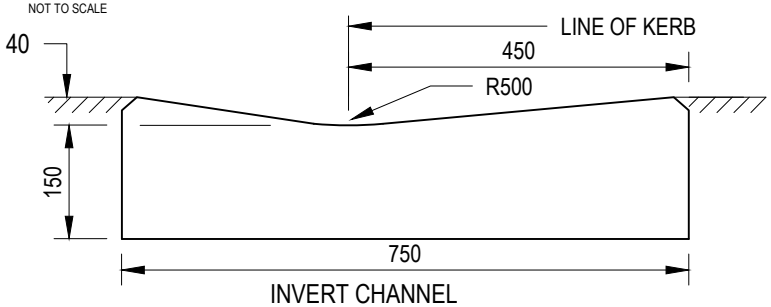
450 WIDE BARRIER KERB

NOT TO SCALE



EDGE STRIP

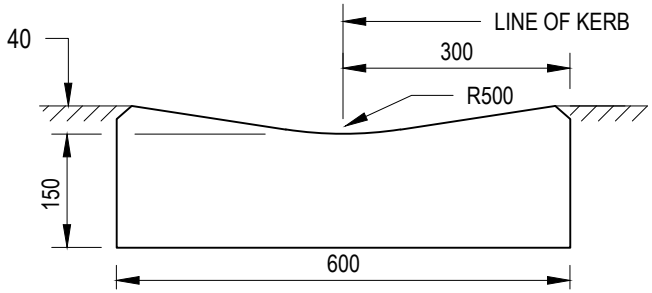
NOT TO SCALE



INVERT CHANNEL

(TO INTERSECT WITH 600-WIDTH BARRIER KERB & CHANNEL)

NOT TO SCALE



INVERT CHANNEL

(TO INTERSECT WITH SEMI-MOUNTABLE OR 450-WIDTH BARRIER KERB & CHANNEL)

NOT TO SCALE

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Checked	Approved	Date
0	FINAL ISSUE		DG	MM	-	16.11.15

Plot Date: 16 November 2015 - 2:48 PM Plotted by: Kerry Walton

Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 301.dwg

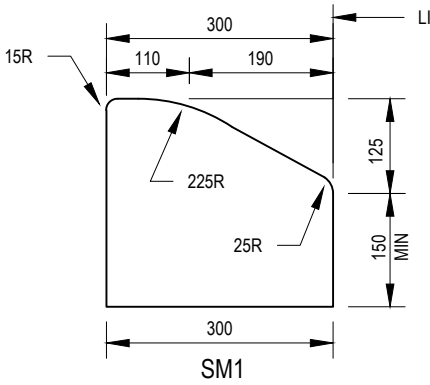
STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

BARRIER KERB, EDGE AND INVERT PROFILES

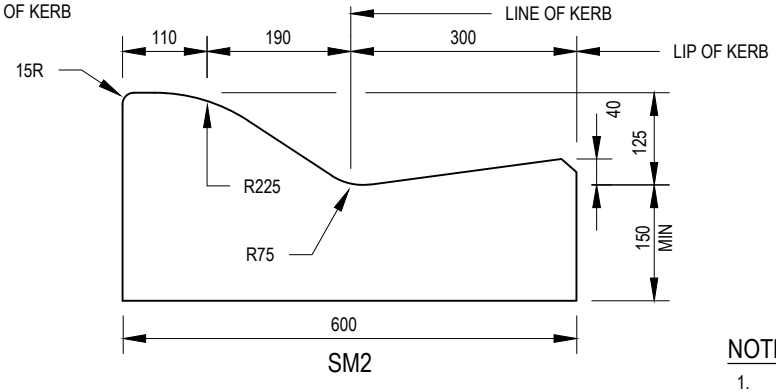
Revision 0

Date DEC 2015

EDCM 301



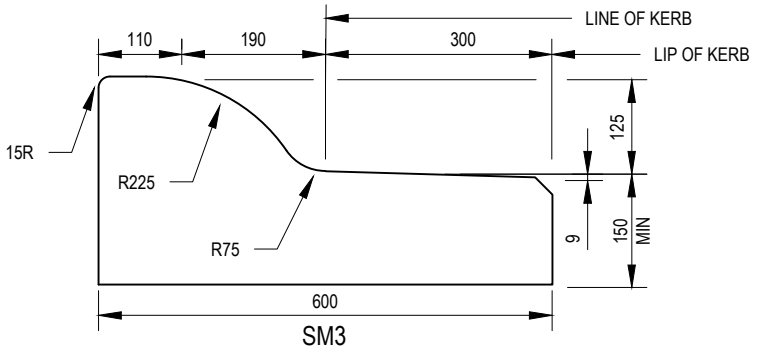
SM1



SM2

SEMI-MOUNTABLE KERBS

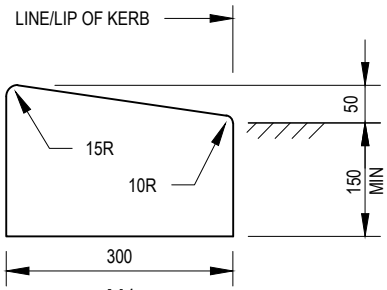
NOT TO SCALE



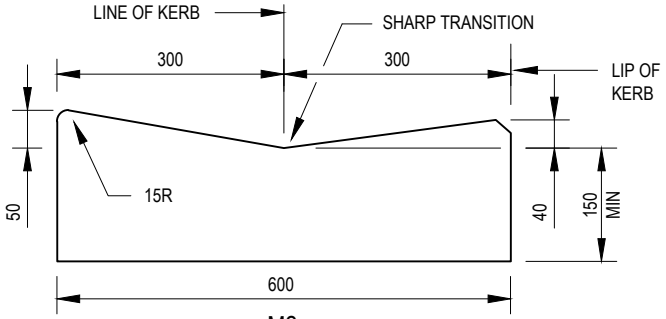
SM3

NOTES:

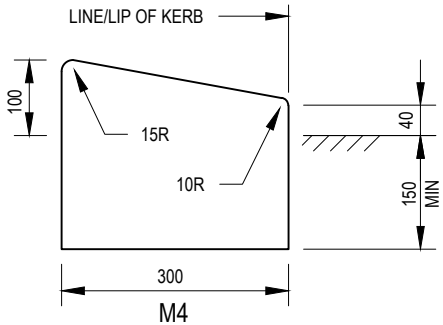
1. CONCRETE SHALL BE NORMAL CLASS N25 STANDARD STRENGTH GRADE COMPLYING WITH THE REQUIREMENTS OF AS. 1379. REFER TO VICROADS STANDARD SPECIFICATION 703 FOR REQUIREMENTS OF CONCRETE TO BE USED IN EXTRUSION MACHINES.
2. REFER TO AUSTROADS GUIDE TO ROAD DESIGN PART 3: GEOMETRIC DESIGN FOR THE RECOMMENDED USE OF KERBS AND CHANNELS.
3. CONTRACTION JOINTS TO BE PLACED AT 3000 CENTRES.
4. CHAMFERS ARE 15mm X 15mm UNLESS OTHERWISE SHOWN.
5. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SHOWN.



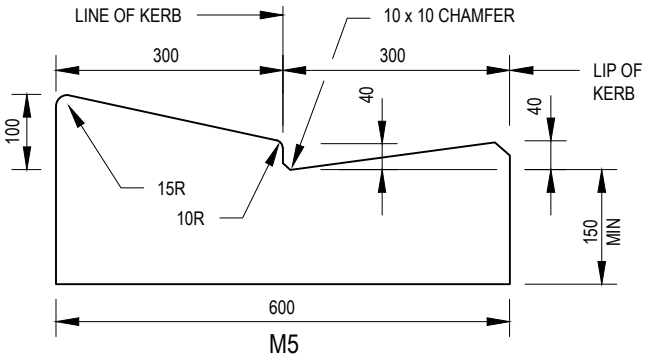
M1



M2



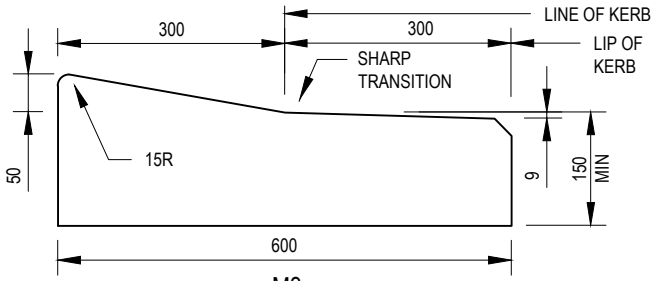
M4



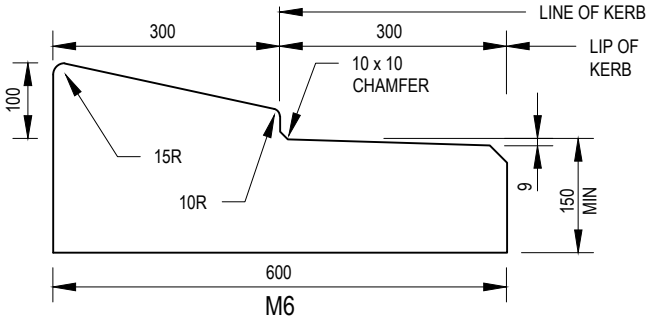
M5

MOUNTABLE KERBS

NOT TO SCALE



M3



M6

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

SEMI MOUNTABLE & MOUNTABLE KERB PROFILES

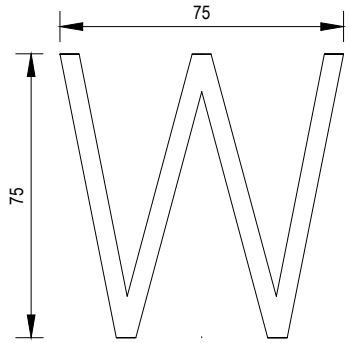
Revision 0

Date DEC 2015

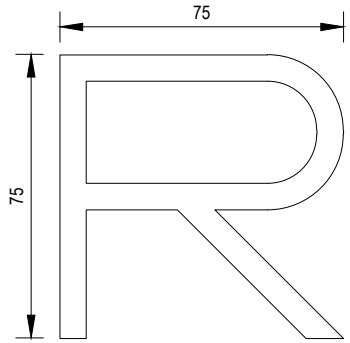
EDCM 302

Plot Date: 16 November 2015 - 2:51 PM Plotted by: Kerry Walton

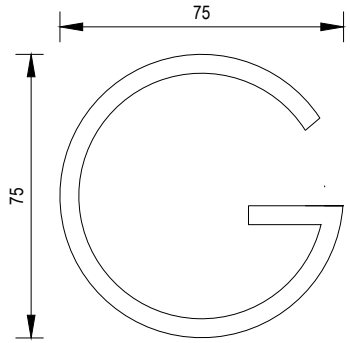
Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 302-2.dwg



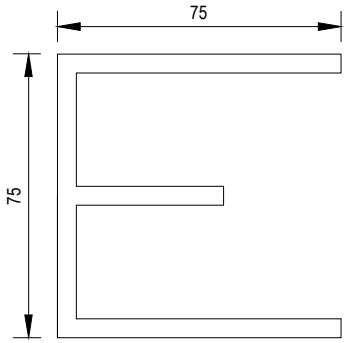
THIS SYMBOL SHALL BE MARKED ON THE FACE OF THE KERB IMMEDIATELY ABOVE THE POSITION WHERE A WATER SERVICE CONDUIT IS PLACED ACROSS THE ROADWAY.



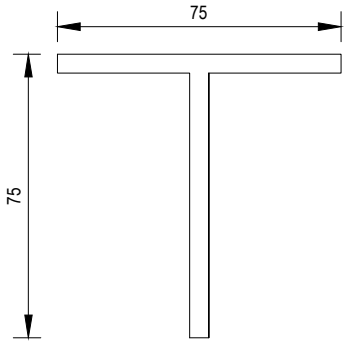
THIS SYMBOL SHALL BE MARKED ON THE FACE OF THE KERB IMMEDIATELY ABOVE THE POSITION WHERE A RECYCLED WATER SERVICE CONDUIT IS PLACED.



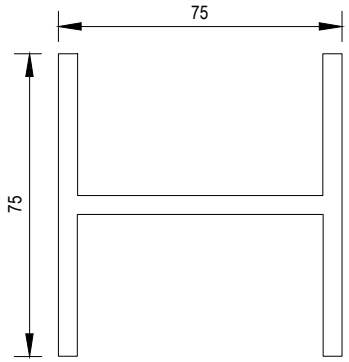
THIS SYMBOL SHALL BE MARKED ON THE FACE OF THE KERB IMMEDIATELY ABOVE THE POSITION WHERE A GAS SERVICE CONDUIT IS PLACED.



THIS SYMBOL SHALL BE MARKED ON THE FACE OF THE KERB IMMEDIATELY ABOVE THE POSITION WHERE AN ELECTRICAL SERVICE CONDUIT IS PLACED.



THIS SYMBOL SHALL BE MARKED ON THE FACE OF THE KERB IMMEDIATELY ABOVE THE POSITION WHERE A TELECOMMUNICATIONS SERVICE CONDUIT IS PLACED.



THIS SYMBOL SHALL BE MARKED ON THE FACE OF THE KERB IN LINE WITH THE POSITION WHERE A PROPERTY STORMWATER CONNECTION IS PROVIDED TO AN UNDERGROUND STORMWATER PIPE OR PIT.

NOTES:

1. WIDTH AND DEPTH OF LETTERS TO BE 2-5mm.

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Checked	Approved	Date
0	FINAL ISSUE		DG	MM	-	16.11.15

Plot Date: 16 November 2015 - 2:54 PM Plotted by: Kerry Walton

Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 303.dwg

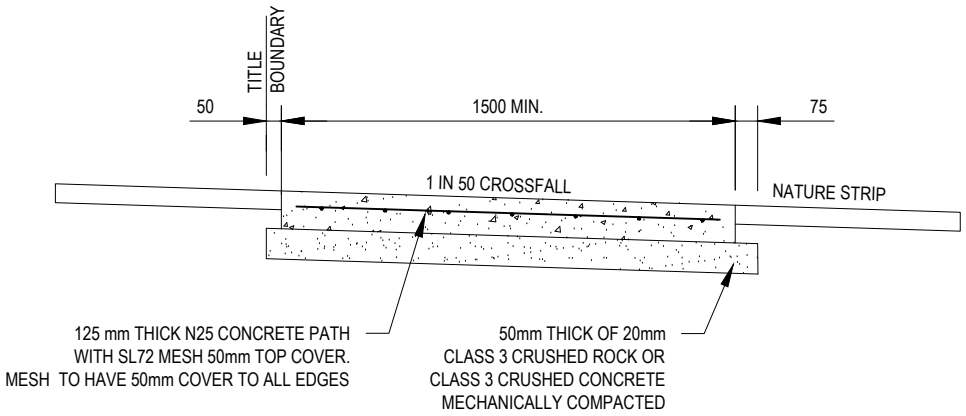
STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

KERB MARKINGS

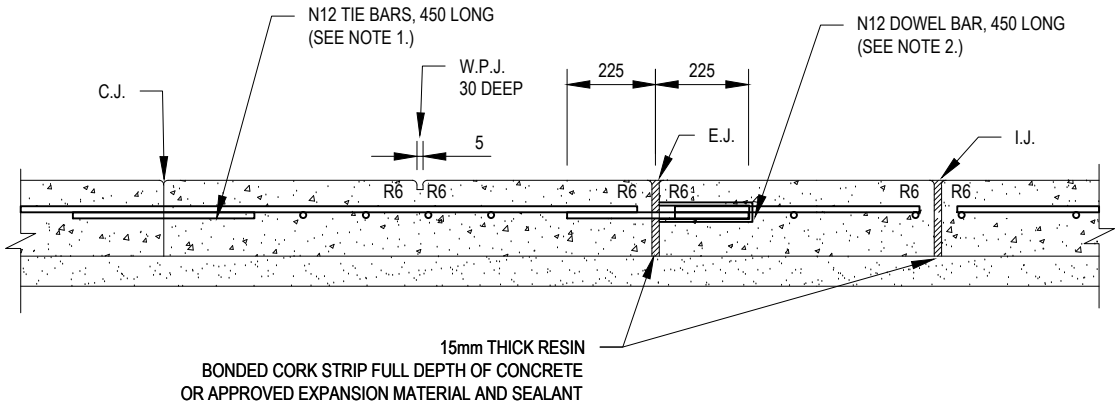
Revision 0

Date DEC 2015

EDCM 303



TYPICAL FOOTPATH CROSS SECTION



CONSTRUCTION JOINT (C.J.) (NOTE 1.)	CONTROL JOINT / WEAKENED PLANE JOINT (W.P.J.) (NOTE 4.)	EXPANSION JOINT (E.J.) (NOTE 2.)	ISOLATION JOINT (I.J.)

CONCRETE JOINT DETAILS

NOTES:

1. TIE BARS TO BE INSTALLED AT 400 MAXIMUM CENTRES COMMENCING 150 FROM EDGE.
2. DOWEL BARS TO BE INSTALLED AT 400 CENTRES COMMENCING AT A MINIMUM OF 100 AND A MAXIMUM OF 200 FROM THE EDGE OF PATH. 16 DIAMETER PVC SLEEVE WITH END CAP OR CLOSED END TO BE FITTED TO ONE END OF THE BAR. DOWEL BARS TO BE SECURELY TIED TO LONGITUDINAL REINFORCING MESH.
3. EXPANSION JOINTS (EJ) LOCATED BOTH SIDE OF VEHICLE CROSSING AND AT A MAXIMUM OF 12000 CENTRES.
4. WEAKENED PLANE JOINTS LOCATED AT SPACINGS EQUAL TO THE WIDTH OF THE PATH AND MADE WITH A 'T' IRON OR CONCRETE SAW CUT.
5. IN SHARED PATHS WEAKENED PLANE JOINTS MUST BE MADE BY CONCRETE SAW CUTTING.
6. CONCRETE TO BE LIGHT BROOM FINISH WITH EDGE AND JOINTS NEATLY TOOLED AFTER THE BROOM IS APPLIED.
7. ALL FINISHED SURFACES TO COMPLY WITH AS 4586 SLIP RESISTANT CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIAL.
8. THE USE OF COLOURED CONCRETE MUST BE APPROVED BY COUNCIL. MINIMUM STRENGTH OF COLOURED CONCRETE TO BE 32 MPa.
9. FORMWORK TIMBER TO BE MIN. 125mm DEEP.
10. ALL DIMENSIONS IN MILLIMETRES.
11. SHARED PATHS TO BE 2.5m IN WIDTH MINIMUM. REFER TO APPROVED CONSTRUCTION PLANS FOR ACTUAL WIDTH.

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Checked	Approved	Date
0	FINAL ISSUE		DG	MM	-	16.11.15

Plot Date: 16 November 2015 - 4:24 PM Plotted by: Kerry Walton Cad File No: Q:\Infrastructure Planning\EDCM Standard Drawings\ECDM - 401.dwg

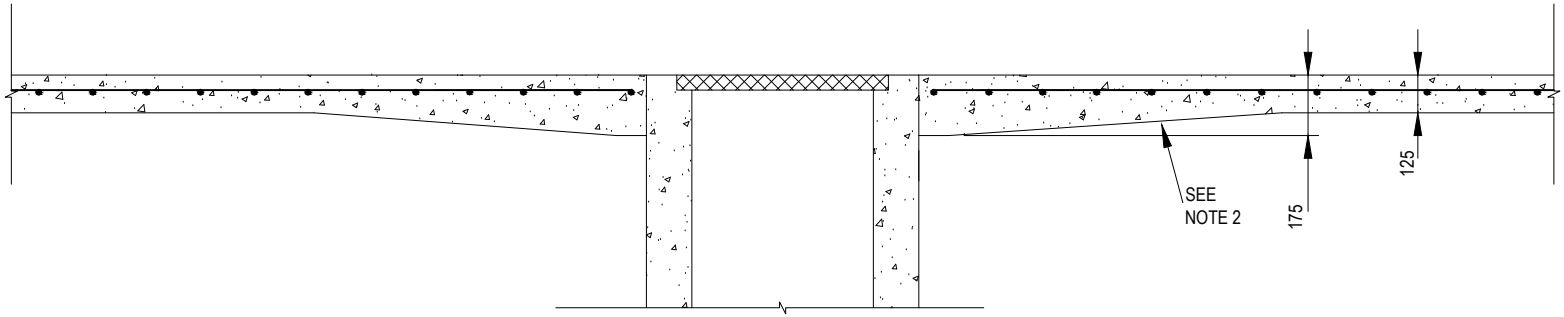
STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

CONCRETE FOOTPATH CROSS SECTIONS AND JOINTS

Revision 0

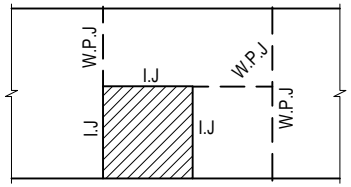
Date DEC 2015

EDCM 401



FOOTPATH THICKENING AROUND PITS

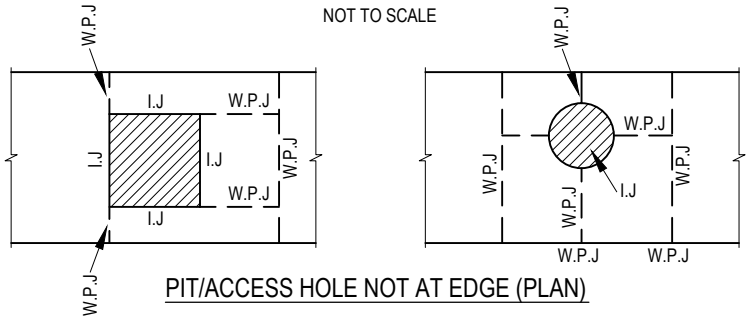
NOT TO SCALE



REFER FIGURE EDCM401 FOR JOINT DETAILS
W.P.J = WEAKENED PLANE JOINT
I.J = ISOLATION JOINT

PIT/ACCESS HOLE AT EDGE (PLAN)

NOT TO SCALE



PIT/ACCESS HOLE NOT AT EDGE (PLAN)

NOT TO SCALE

NOTES:

1. FOR JOINT & CONCRETE DETAILS REFER EDCM 401.
2. FOOTPATH THICKENING AT PIT TO EXTEND FROM PIT TO NEXT W.P.J. OR 500mm WHICH EVER IS THE GREATER.

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

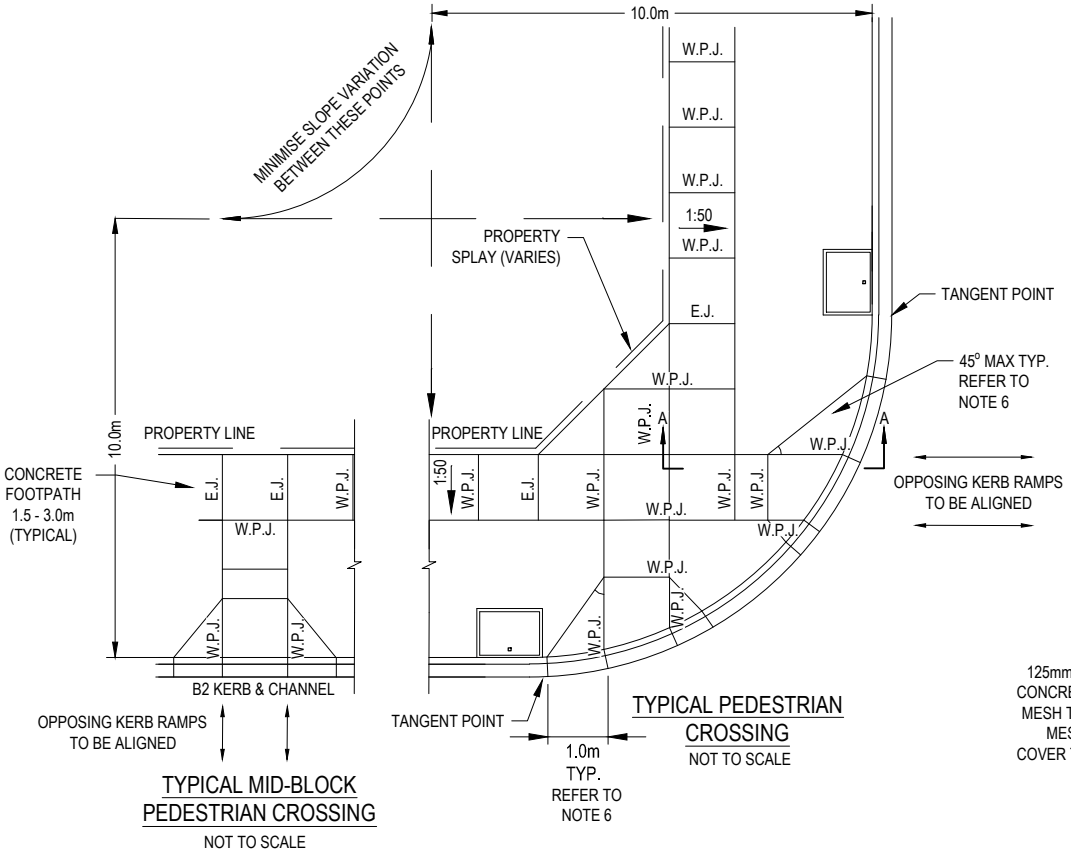
STANDARD DRAWINGS FOR
SUBDIVISION IN GROWTH AREAS

JOINT DETAIL FOR PITS WITHIN PATHS

Revision 0
Date DEC 2015

EDCM 402

Plot Date: 16 November 2015 - 3:05 PM Plotted by: Kerry Walton
Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 402.dwg

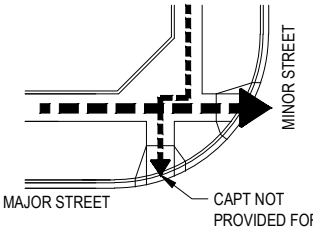


TYPICAL MID-BLOCK PEDESTRIAN CROSSING

NOT TO SCALE

TYPICAL PEDESTRIAN CROSSING

NOT TO SCALE



INTERSECTION TYPE	ROAD TAKING PRIORITY
LOCAL - LOCAL	ROAD WITH HIGHER PEDESTRIAN TRAFFIC VOLUME, I.E. CONTINUOUS LOCAL STREET OVER DEAD END/COURT BOWL TYPE.
COLLECTOR - LOCAL	COLLECTOR ROAD
COLLECTOR - COLLECTOR	ROAD WITH HIGHER PEDESTRIAN TRAFFIC VOLUME
ARTERIAL - COLLECTOR	ARTERIAL ROAD
ARTERIAL - ARTERIAL	ROAD WITH HIGHER PEDESTRIAN TRAFFIC VOLUME

DEFINITIONS:

CONTINUOUS ACCESSIBLE PATH OF TRAVEL (CAPT)

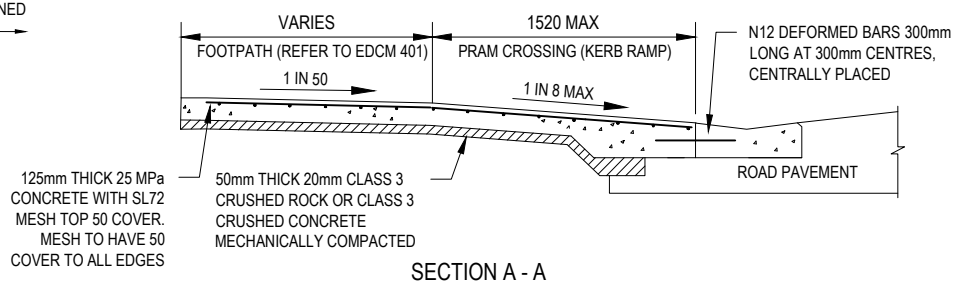
- AN UNINTERRUPTED PATH OF TRAVEL TO, INTO OR WITHIN A BUILDING PROVIDING ACCESS TO ALL ACCESSIBLE FACILITIES (AS1428.1)

DIRECT CAPT

- WHERE THE KERB RAMP IS ALIGNED WITH THE BUILDING LINE AND IN DIRECTION OF TRAVEL ACROSS THE CARRIAGEWAY (REFER FIGURE ABOVE)

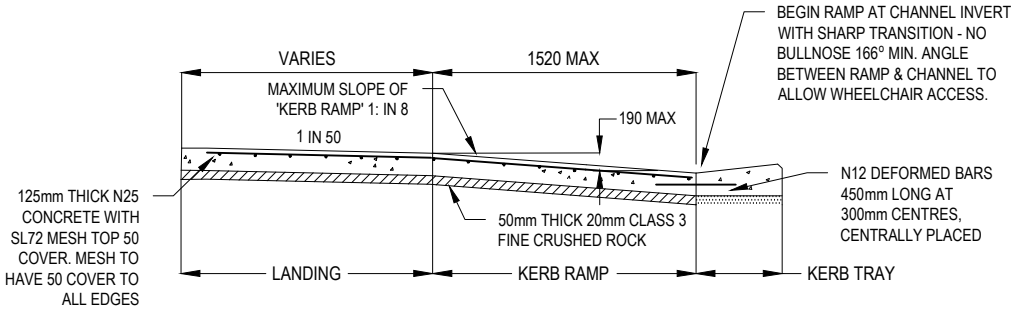
CONTINUOUS ACCESSIBLE PATH OF TRAVEL (CAPT)

NOT TO SCALE



SECTION A - A

NOT TO SCALE



SECTION A - A RETROFIT TO EXISTING KERB

NOT TO SCALE

NOTES:

1. TACTILE GROUND SURFACE INDICATORS (TGSI's) TO BE INSTALLED AT LOCATIONS SHOWN ON THE APPROVED PLANS, IN ACCORDANCE WITH AS1428.4.
2. ALL FINISHED SURFACES MUST COMPLY WITH AS 4586 - SLIP RESISTANT CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS.
3. FOR KERB RAMP RETRO-FITTING, SAW-CUT EXISTING KERB AND DRILL IN N12 DEFORMED BARS 450mm LONG AT 300mm CENTRES, PARALLEL TO KERB.
4. SPLAYS TO BE 1000mm WITH KERB TRANSITION, OR AT 45° IF KERB RAMP LENGTH IS LESS THAN 1000mm.
5. CONCRETE TO BE LIGHT BROOM FINISH, UNLESS OTHERWISE SPECIFIED, WITH EDGES AND JOINTS NEATLY TOOLED AFTER THE BROOM IS APPLIED.
6. ALL TRANSITIONS IN RAMP AND SPLAY GRADE SHALL BE SHARP, TO ASSIST PEDESTRIAN NAVIGATION.
7. NO BULLNOSE IN THE INVERT OF KERB SHALL BE ACCEPTED.
8. REFER TECHNICAL SPECIFICATION FOR ROADS AND DRAINAGE WORKS FOR JOINT SPACING REQUIREMENTS.

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

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Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 403.dwg

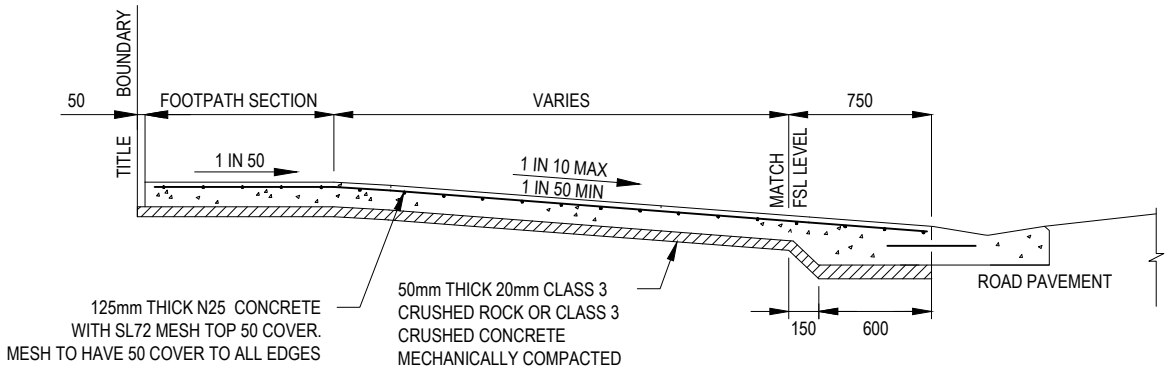
STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

PEDESTRIAN CROSSING KERB RAMP DETAILS

Revision 0

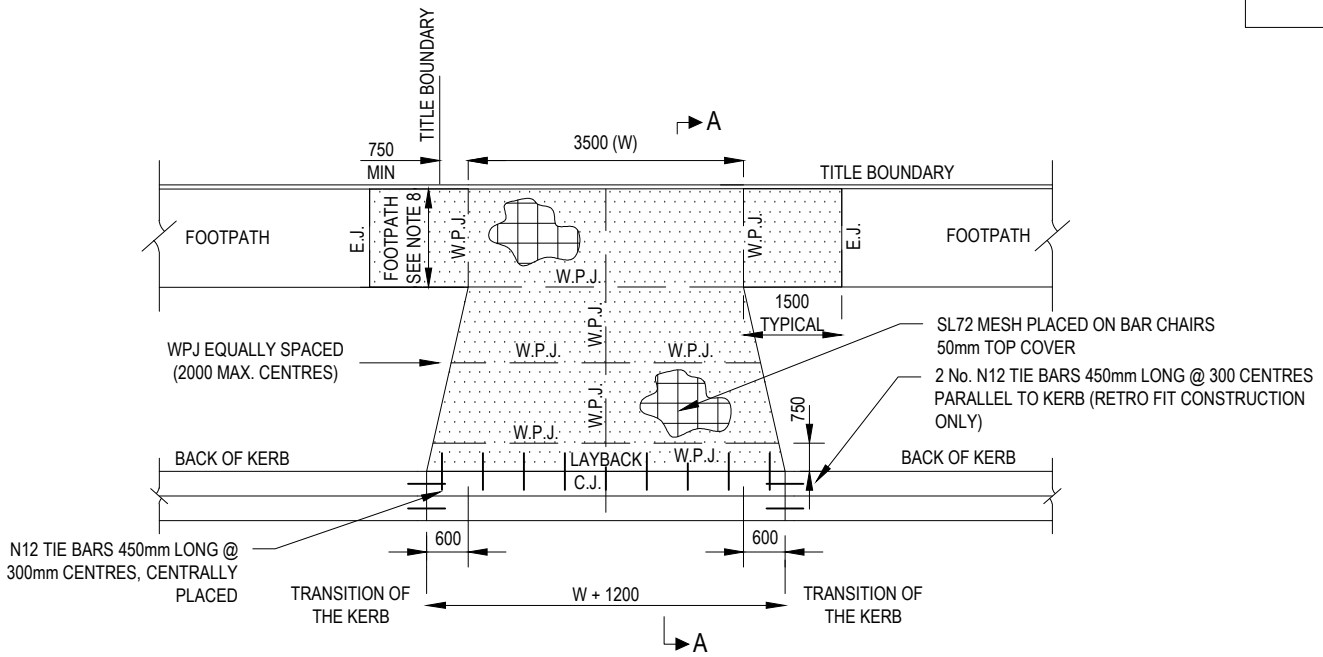
Date DEC 2015

EDCM 403



SECTION A - A
NOT TO SCALE

TABLE 1: MINIMUM CLEARANCES	
BETWEEN CROSSOVERS	7 METRES AT KERB
DRAINAGE PITS	0.75 METRES (WITHIN 0.75m - INSTALL CLASS D PIT LID)
TRAFFIC MANAGEMENT DEVICES	1 METRE
UTILITY SERVICE ASSETS	1 METRE
STREET LIGHT	1 METRE
INTERSECTIONS	6 METRES FROM TANGENT POINT AND CLEAR OF SPLITTER ISLANDS
PRAM CROSSING	2 METRES AT KERB
TREES	2.5 METRES
FIRE HYDRANT	1 METRE
LEGAL POINT OF DISCHARGE	1 METRE



PLAN
NOT TO SCALE

NOTES:

1. NO BULLNOSE IN THE INVERT OF KERB.
2. CONCRETE TO BE LIGHT BROOM FINISH WITH EDGES AND JOINTS NEATLY TOOLED AFTER THE BROOM IS APPLIED.
3. ALL FINISHED SURFACES TO COMPLY WITH AS 4586 - SLIP RESISTANT CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS.
4. THE USE OF PATTERN PAVING OR COLOURED CONCRETE MUST BE APPROVED BY COUNCIL. MINIMUM STRENGTH OF COLOURED CONCRETE 32 MPa.
5. WIDTH OF CROSSING (W) 3500 UNLESS SHOWN OTHERWISE ON APPROVED PLANS.
6. WHERE CONCRETE PAVING CROSSES SERVICE, SEWER AND DRAINAGE TRENCHES, THE TRENCHES TO BE BACKFILLED WITH COMPACTED 20mm CLASS 3 CRUSHED ROCK OR CLASS 3 CRUSHED CONCRETE.
7. WHERE VEHICLE CROSSING IS RETROFITTED THE EXISTING KERB AND CHANNEL IS TO BE REMOVED AND IF THE EXISTING FOOTPATH IS LESS THAN 125mm THICK - ONE BAY OF PATH (TYPICAL 1500 WIDE) ON EITHER SIDE OF THE CROSSING IS TO BE REMOVED, REPLACED WITH 125mm THICK FOOTPATH AND JOINED TO THE EXISTING PATH WITH AN EXPANSION JOINT REFER FIGURE EDCM401.

REFER FIGURE EDCM401 FOR JOINTING DETAILS
W.P.J = WEAKENED PLANE JOINT
E.J. = EXPANSION JOINT
C.J. = CONSTRUCTION JOINT

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

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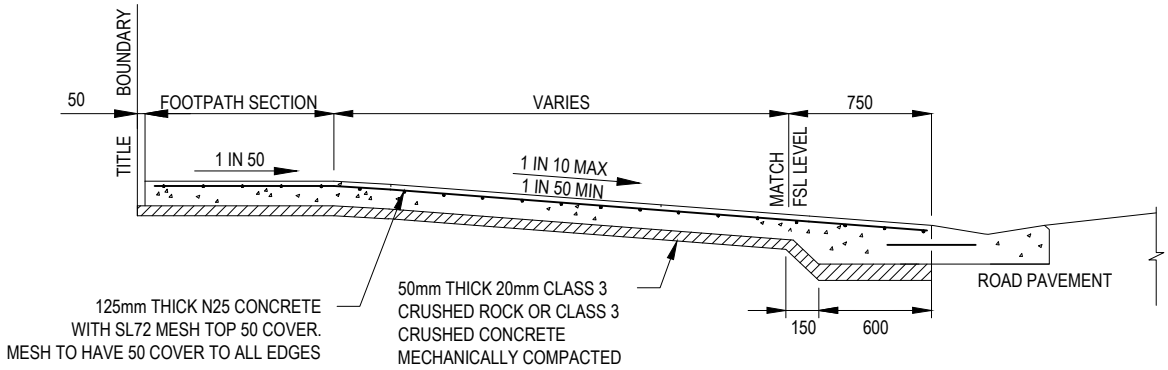
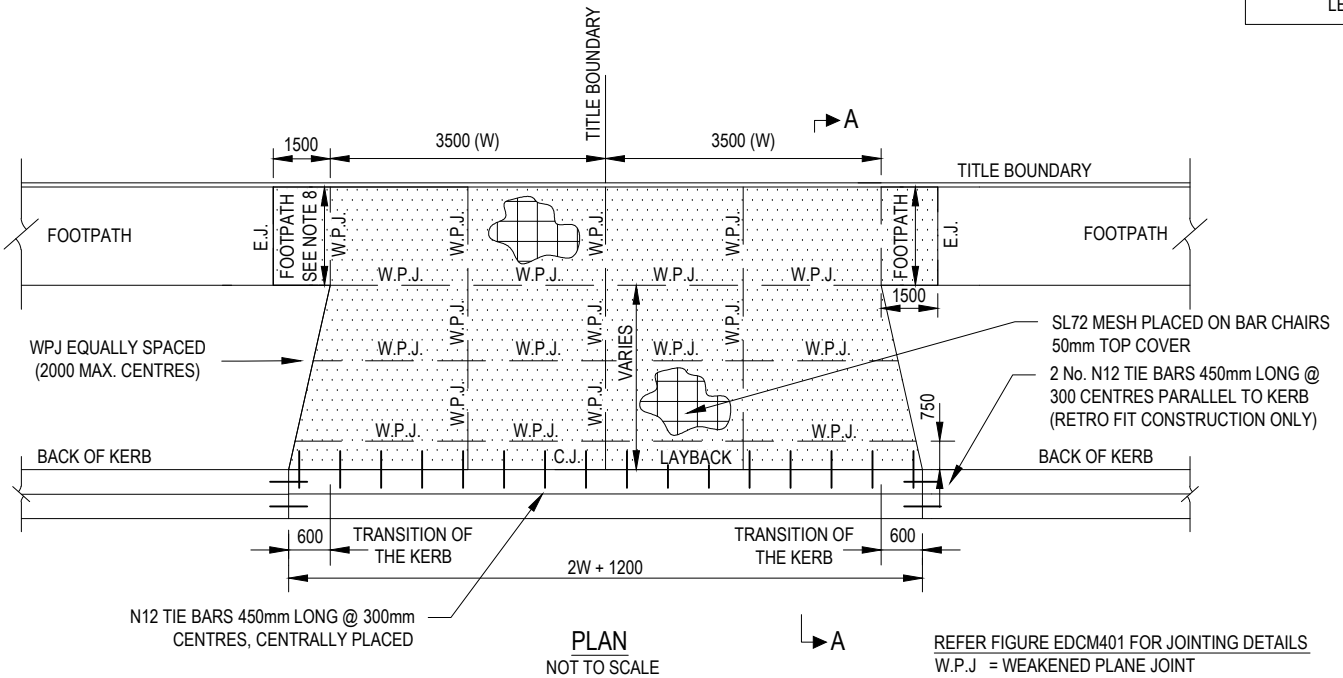
STANDARD DRAWINGS FOR
SUBDIVISIONS IN GROWTH AREAS
RESIDENTIAL
VEHICLE CROSSING - SINGLE

Revision 0
Date DEC 2015
EDCM 501



SECTION A - A
NOT TO SCALE



PLAN
NOT TO SCALE

REFER FIGURE EDCM401 FOR JOINTING DETAILS
W.P.J = WEAKENED PLANE JOINT
E.J. = EXPANSION JOINT
C.J. = CONSTRUCTION JOINT

TABLE 1: MINIMUM CLEARANCES	
BETWEEN CROSSOVERS	7 METRES AT KERB
DRAINAGE PITS	0.75 METRES (WITHIN 0.75m - INSTALL CLASS D PIT LID)
TRAFFIC MANAGEMENT DEVICES	1 METRE
UTILITY SERVICE ASSETS	1 METRE
STREET LIGHT	1 METRE
INTERSECTIONS	6 METRES FROM TANGENT POINT AND CLEAR OF SPLITTER ISLANDS
PRAM CROSSING	2 METRES AT KERB
TREES	2.5 METRES
FIRE HYDRANT	1 METRE
LEGAL POINT OF DISCHARGE	1 METRE

NOTES:

1. NO BULLNOSE IN THE INVERT OF KERB.
2. CONCRETE TO BE LIGHT BROOM FINISH WITH EDGES AND JOINTS NEATLY TOOLED AFTER THE BROOM IS APPLIED.
3. ALL FINISHED SURFACES TO COMPLY WITH AS 4586 - SLIP RESISTANT CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS.
4. THE USE OF PATTERN PAVING OR COLOURED CONCRETE MUST BE APPROVED BY COUNCIL. MINIMUM STRENGTH OF COLOURED CONCRETE 32 MPa.
5. WIDTH OF CROSSING (W) 3500 UNLESS SHOWN OTHERWISE ON APPROVED PLANS.
6. WHERE CONCRETE PAVING CROSSES SERVICE, SEWER AND DRAINAGE TRENCHES, THE TRENCHES TO BE BACKFILLED WITH COMPACTED 20mm CLASS 3 CRUSHED ROCK OR CLASS 3 CRUSHED CONCRETE.
7. WHERE VEHICLE CROSSING IS RETROFITTED THE EXISTING KERB AND CHANNEL IS TO BE REMOVED AND IF THE EXISTING FOOTPATH IS LESS THAN 125mm THICK - ONE BAY OF PATH (TYPICAL 1500 WIDE) ON EITHER SIDE OF THE CROSSING IS TO BE REMOVED, REPLACED WITH 125mm THICK FOOTPATH AND JOINED TO THE EXISTING PATH WITH AN EXPANSION JOINT REFER FIGURE EDCM401.

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Checked	Approved	Date
0	FINAL ISSUE		DG	MM	-	16.11.15

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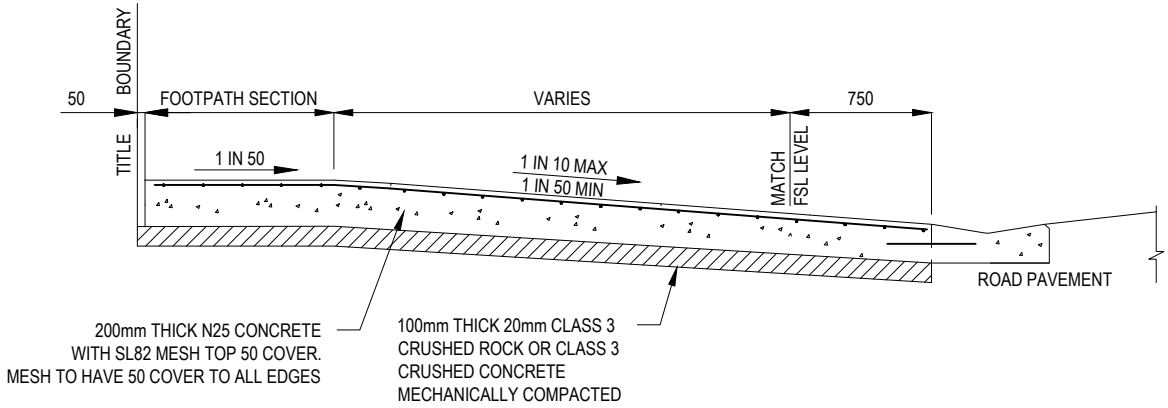
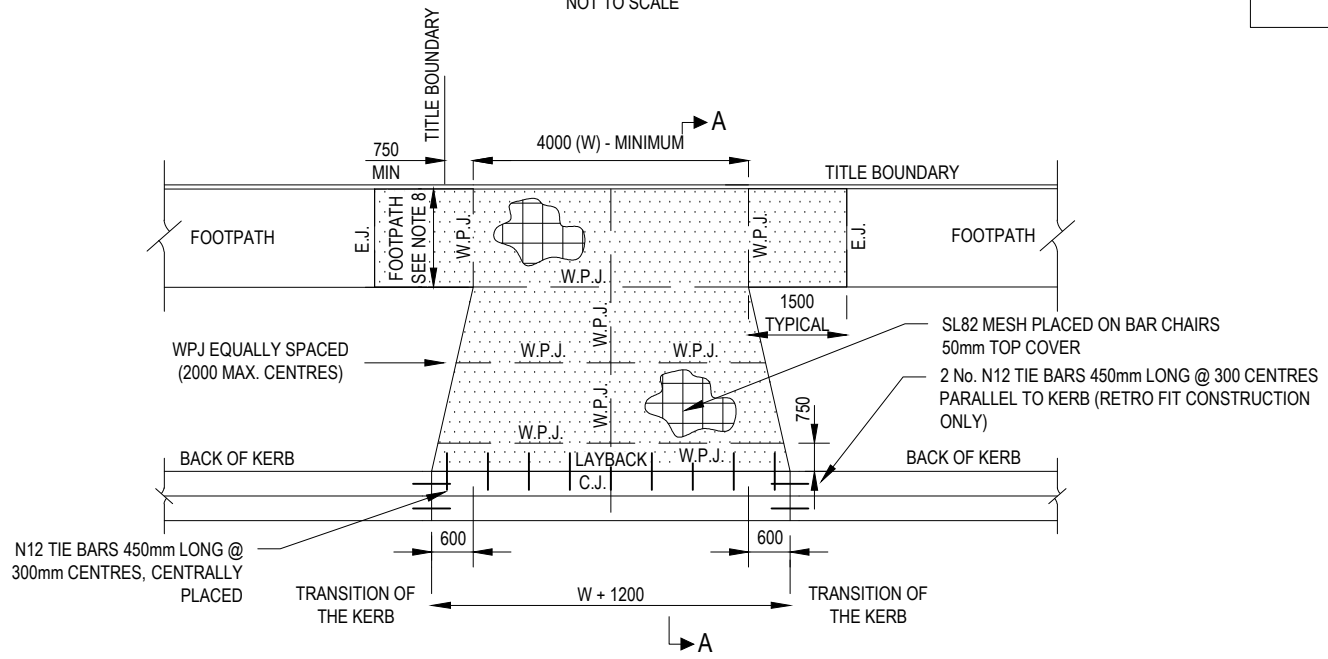
STANDARD DRAWINGS FOR
SUBDIVISIONS IN GROWTH AREAS
RESIDENTIAL
VEHICLE CROSSING - DOUBLE

Revision 0
Date DEC 2015

EDCM 502



SECTION A - A
NOT TO SCALE



PLAN
NOT TO SCALE

REFER FIGURE EDCM401 FOR JOINTING DETAILS
W.P.J = WEAKENED PLANE JOINT
E.J. = EXPANSION JOINT
C.J. = CONSTRUCTION JOINT

TABLE 1: MINIMUM CLEARANCES	
BETWEEN CROSSOVERS	7 METRES AT KERB
DRAINAGE PITS	0.75 METRES (WITHIN 0.75m - INSTALL CLASS D PIT LID)
TRAFFIC MANAGEMENT DEVICES	1 METRE
UTILITY SERVICE ASSETS	1 METRE
STREET LIGHT	1 METRE
INTERSECTIONS	6 METRES FROM TANGENT POINT AND CLEAR OF SPLITTER ISLANDS
PRAM CROSSING	2 METRES AT KERB
TREES	2.5 METRES
FIRE HYDRANT	1 METRE
LEGAL POINT OF DISCHARGE	1 METRE

NOTES:

1. NO BULLNOSE IN THE INVERT OF KERB.
2. CONCRETE TO BE LIGHT BROOM FINISH WITH EDGES AND JOINTS NEATLY TOOLED AFTER THE BROOM IS APPLIED.
3. ALL FINISHED SURFACES TO COMPLY WITH AS 4586 - SLIP RESISTANT CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS.
4. THE USE OF PATTERN PAVING OR COLOURED CONCRETE MUST BE APPROVED BY COUNCIL. MINIMUM STRENGTH OF COLOURED CONCRETE 32 MPa.
5. WIDTH OF CROSSING (W) 4000 UNLESS SHOWN OTHERWISE ON APPROVED PLANS.
6. WHERE CONCRETE PAVING CROSSES SERVICE, SEWER AND DRAINAGE TRENCHES, THE TRENCHES TO BE BACKFILLED WITH COMPACTED 20mm CLASS 3 CRUSHED ROCK OR CLASS 3 CRUSHED CONCRETE.
7. WHERE VEHICLE CROSSING IS RETROFITTED THE EXISTING KERB AND CHANNEL IS TO BE REMOVED AND IF THE EXISTING FOOTPATH IS LESS THAN 200mm THICK - ONE BAY OF PATH (TYPICAL 1500 WIDE) ON EITHER SIDE OF THE CROSSING IS TO BE REMOVED, REPLACED WITH 200mm THICK FOOTPATH ON 100mm THICK 20mm CLASS 3 CRUSHED ROCK OR CLASS 3 CRUSHED CONCRETE AND JOINED TO THE EXISTING PATH WITH AN EXPANSION JOINT REFER FIGURE EDCM401.

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

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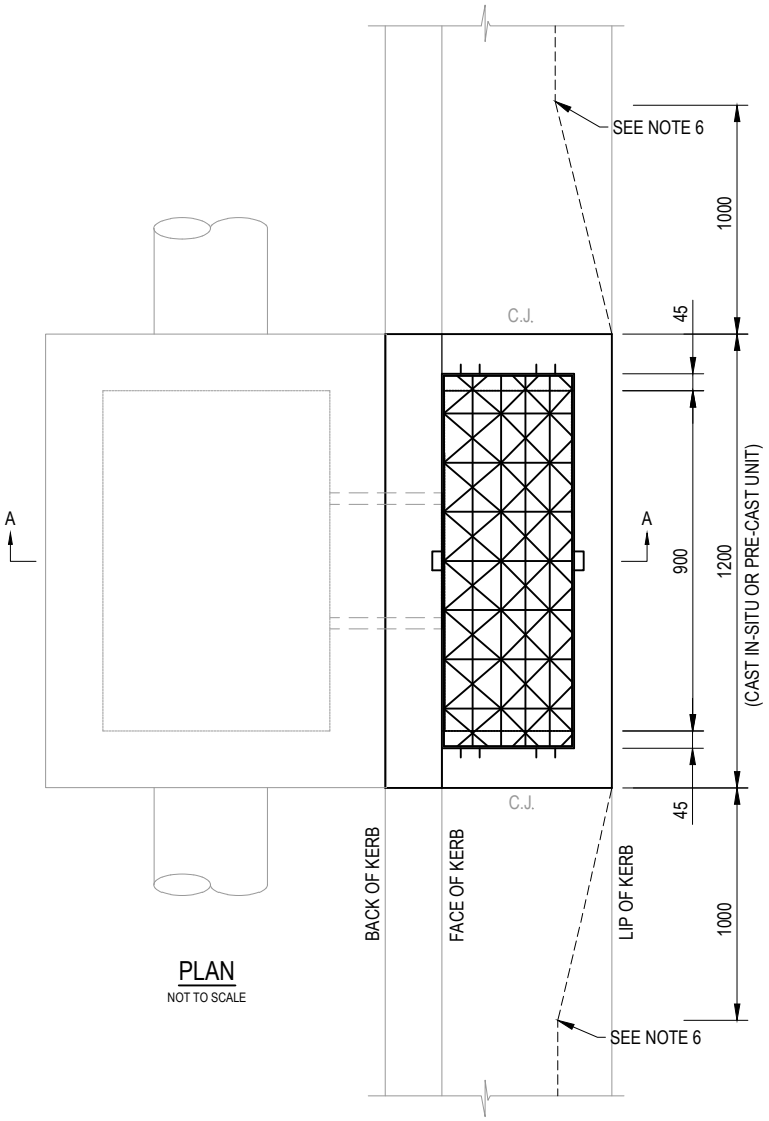
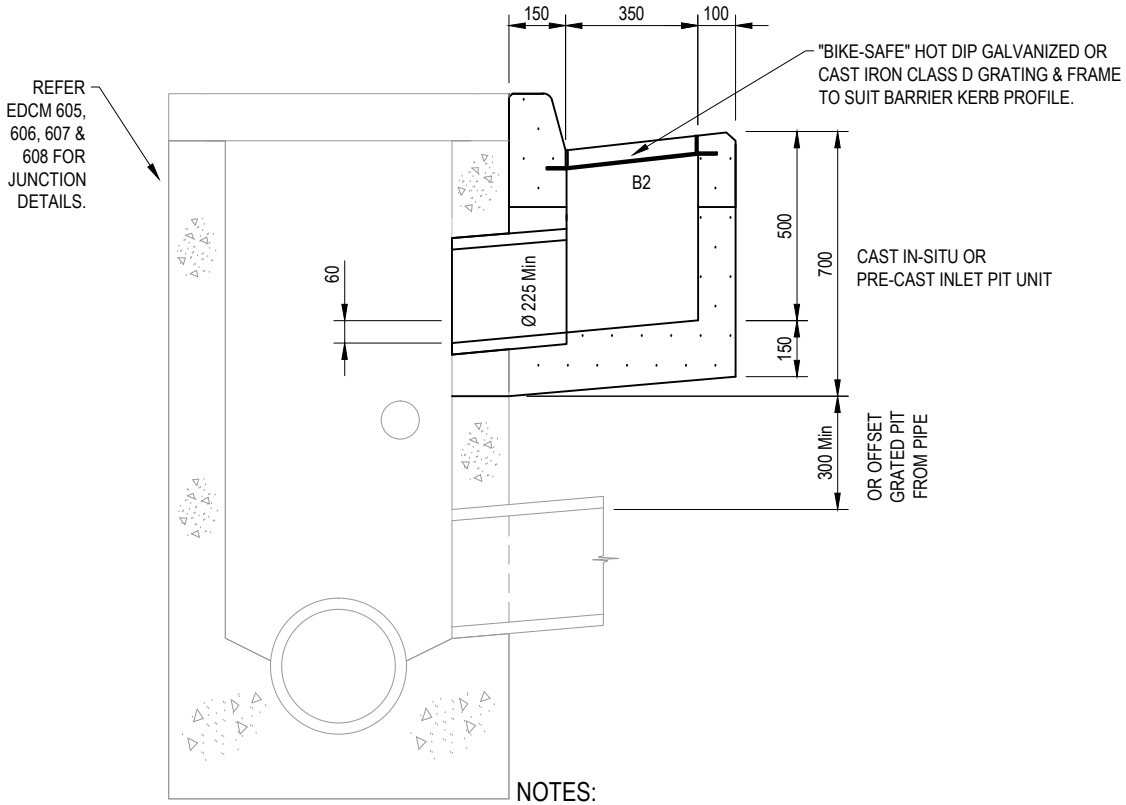
STANDARD DRAWINGS FOR
SUBDIVISIONS IN GROWTH AREAS
HEAVY DUTY
VEHICLE CROSSING

Revision 0
Date DEC 2015
EDCM 503



PLAN
NOT TO SCALE



SECTION A - A
NOT TO SCALE

NOTES:

1. PIPE CENTRE LINE TO BE DIAMETER OF PIPE / 2 + 200mm BEHIND BACK OF KERB.
2. FOR PIPE GREATER THAN 525mm JUNCTION PIT TO BE HAUNCHED.
3. SUBJECT TO COUNCIL APPROVAL PRECAST PITS COMPLYING WITH AS 5100 BRIDGE DESIGN AND VICROADS SPECIFICATION 705 DRAINAGE PITS MAY BE USED.
4. CHANNEL GRATES TO COMPLY WITH AS 3996, BE FITTED WITH AN APPROVED LOCKING DEVICE AND HAVE A CLEAR OPENING OF 900mm X 350mm.
5. 225mm DIAMETER SEWER GRADE PVC PIPE WHEN GAP BETWEEN CATCH PIT AND JUNCTION PIT IS LESS THAN 300mm. 225mm DIAMETER REINFORCED CONCRETE PIPE WHEN GAP IS GREATER THAN 300mm.
6. WHEN PIT IS USED WITH 300mm WIDE KERB TRAY-FLARE, KERB TRAY TO MATCH WIDTH OF PIT
7. SHAPE FLOOR OF PIT TO OUTLET & RENDER FLOOR AND WALLS TO CLASS 2 FINISH.
8. CONCRETE STRENGTH 32 MPa AT 28 DAYS.
9. NOT APPLICABLE TO MELBOURNE WATER CORPORATION DRAINAGE ASSETS. FOR MWC WORKS REFER TO MWC LAND DEVELOPMENT MANUAL

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

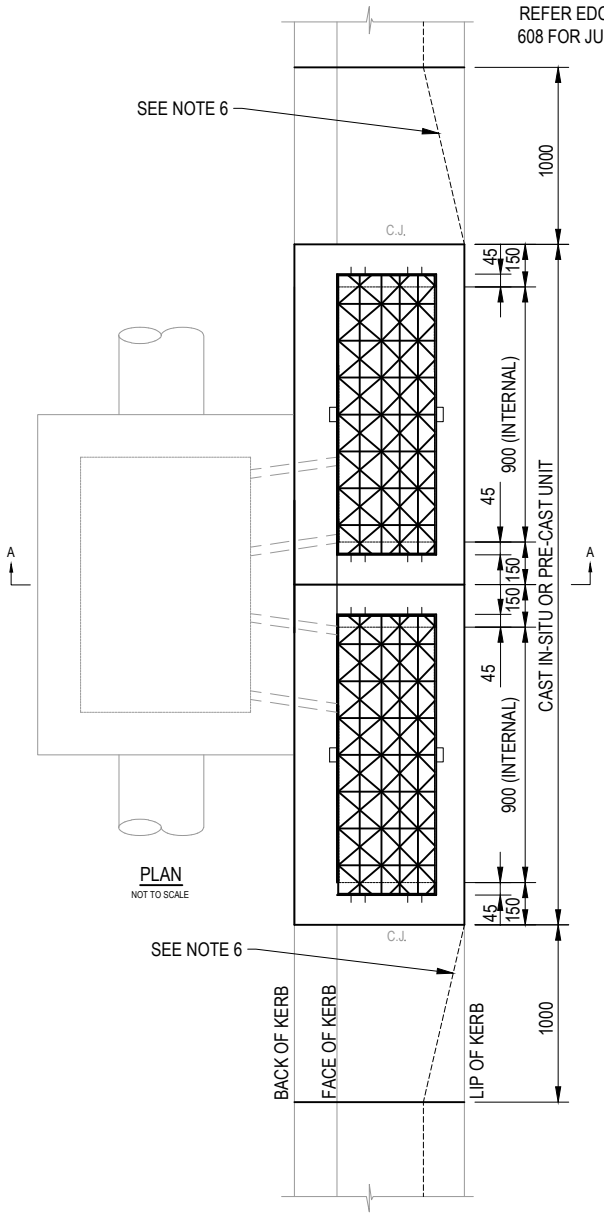
Plot Date: 16 November 2015 - 4:18 PM Plotted by: Kerry Walton Cad File No: Q:\Infrastructure Planning\EDCM Standard Drawings\ECDM - 601.dwg

STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

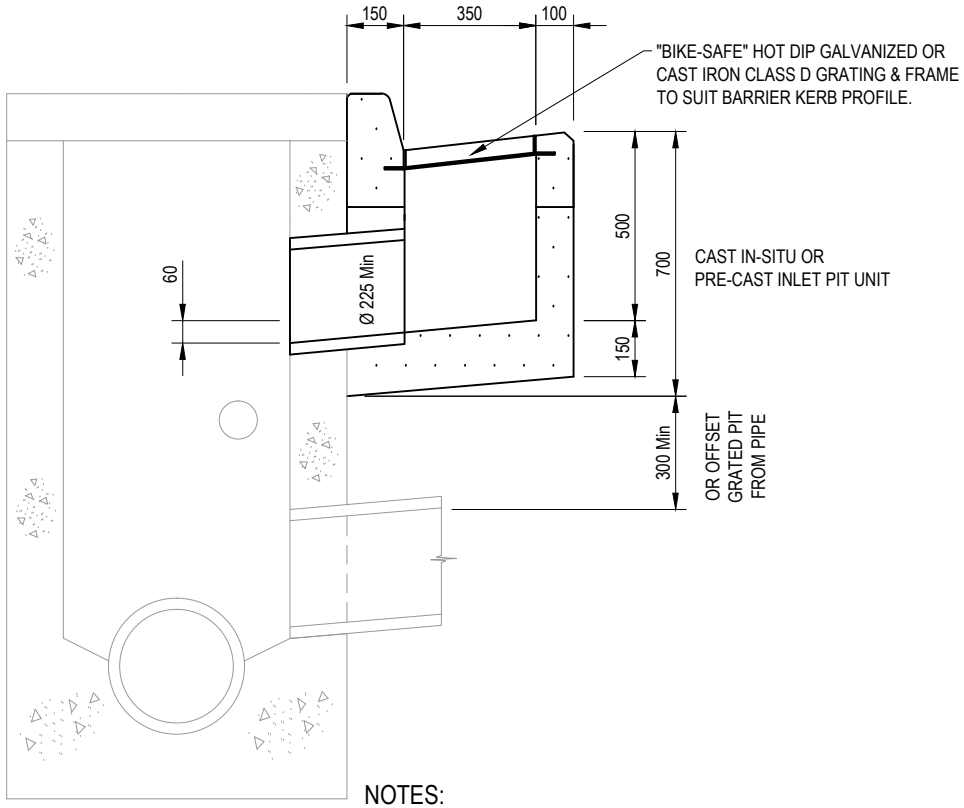
SINGLE SIDE ENTRY PIT GRATED 600 B2 KERB & CHANNEL

Revision 0
Date DEC 2015

EDCM 601



PLAN
NOT TO SCALE



SECTION A - A
NOT TO SCALE

NOTES:

1. PIPE CENTRE LINE TO BE DIAMETER OF PIPE / 2 + 200mm BEHIND BACK OF KERB.
2. FOR PIPE GREATER THAN 525mm JUNCTION PIT TO BE HAUNCHED.
3. SUBJECT TO COUNCIL APPROVAL PRECAST PITS COMPLYING WITH AS 5100 BRIDGE DESIGN AND VICROADS SPECIFICATION 705 DRAINAGE PITS MAY BE USED.
4. CHANNEL GRATES TO COMPLY WITH AS 3996, BE FITTED WITH AN APPROVED LOCKING DEVICE AND HAVE A CLEAR OPENING OF 900mm X 350mm.
5. 225mm DIAMETER SEWER GRADE PVC PIPE WHEN GAP BETWEEN CATCH PIT AND JUNCTION PIT IS LESS THAN 300mm. 225mm DIAMETER REINFORCED CONCRETE PIPE WHEN GAP IS GREATER THAN 300mm.
6. WHEN PIT IS USED WITH 300mm WIDE KERB TRAY - FLARE KERB TRAY TO MATCH WIDTH OF PIT.
7. SHAPE FLOOR OF PIT TO OUTLET & RENDER FLOOR AND WALLS TO CLASS 2 FINISH.
8. CONCRETE STRENGTH 32 MPa AT 28 DAYS.
9. NOT APPLICABLE TO MELBOURNE WATER CORPORATION DRAINAGE ASSETS. FOR MWC WORKS REFER TO MWC LAND DEVELOPMENT MANUAL

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

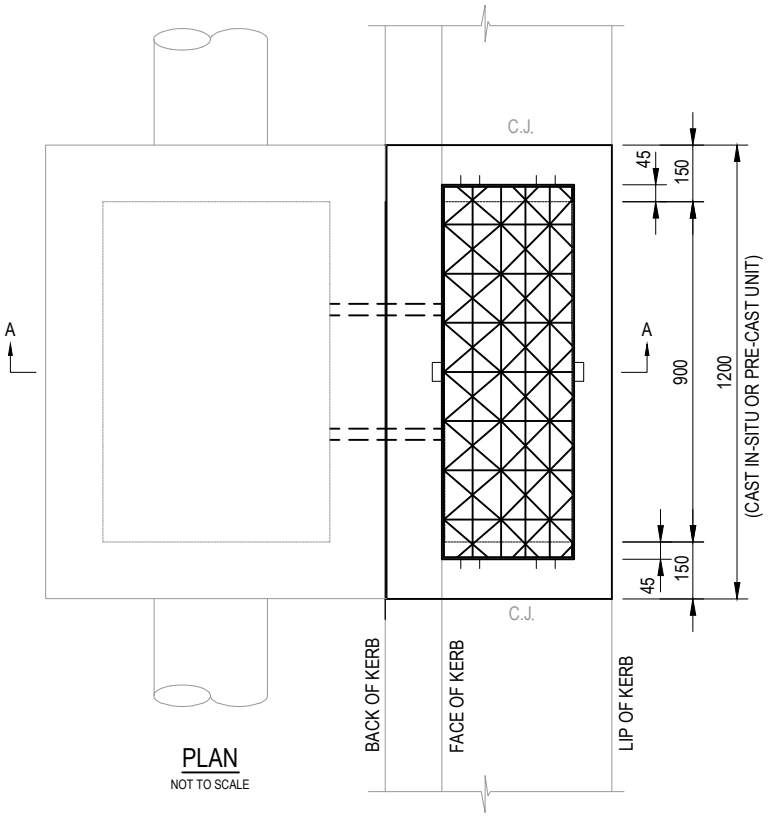
STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

DOUBLE SIDE ENTRY PIT GRATED 600 B2 KERB & CHANNEL

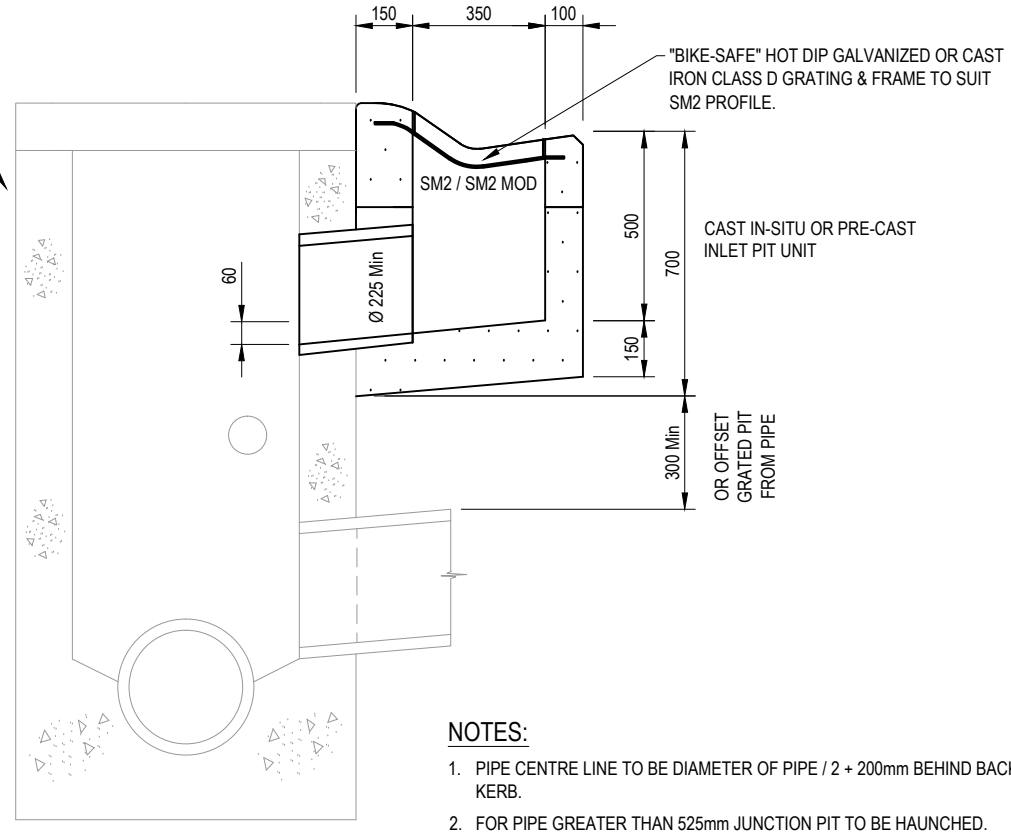
Revision 0
Date DEC 2015

EDCM 602

Plot Date: 16 November 2015 - 3:38 PM Plotted by: Kerry Walton
Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 602.dwg



PLAN
NOT TO SCALE



SECTION A - A
NOT TO SCALE

NOTES:

1. PIPE CENTRE LINE TO BE DIAMETER OF PIPE / 2 + 200mm BEHIND BACK OF KERB.
2. FOR PIPE GREATER THAN 525mm JUNCTION PIT TO BE HAUNCHED.
3. SUBJECT TO COUNCIL APPROVAL PRECAST PITS COMPLYING WITH AS 5100 BRIDGE DESIGN AND VICROADS SPECIFICATION 705 DRAINAGE PITS MAY BE USED.
4. CHANNEL GRATES TO COMPLY WITH AS 3996, BE FITTED WITH AN APPROVED LOCKING DEVICE AND HAVE A CLEAR OPENING OF 900mm X 350mm.
5. 225mm DIAMETER SEWER GRADE PVC PIPE WHEN GAP BETWEEN CATCH PIT AND JUNCTION PIT IS LESS THAN 300mm. 225mm DIAMETER REINFORCED CONCRETE PIPE WHEN GAP IS GREATER THAN 300mm.
6. SHAPE FLOOR OF PIT TO OUTLET & RENDER FLOOR AND WALLS TO CLASS 2 FINISH.
7. CONCRETE STRENGTH 32 MPa AT 28 DAYS.
8. NOT APPLICABLE TO MELBOURNE WATER CORPORATION DRAINAGE ASSETS. FOR MWC WORKS REFER TO MWC LAND DEVELOPMENT MANUAL

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

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Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 603.dwg

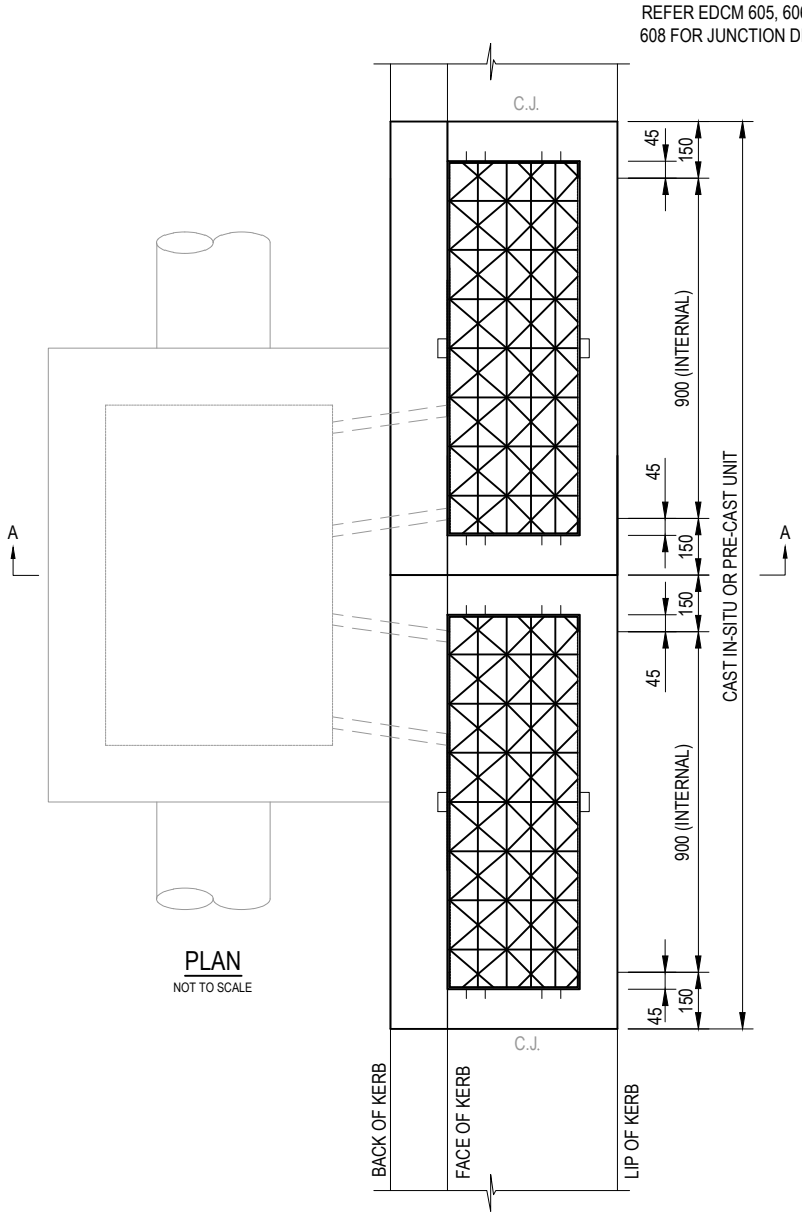
STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

SINGLE SIDE ENTRY PIT GRATED SM2 KERB & CHANNEL

Revision 0

Date DEC 2015

EDCM 603



PLAN
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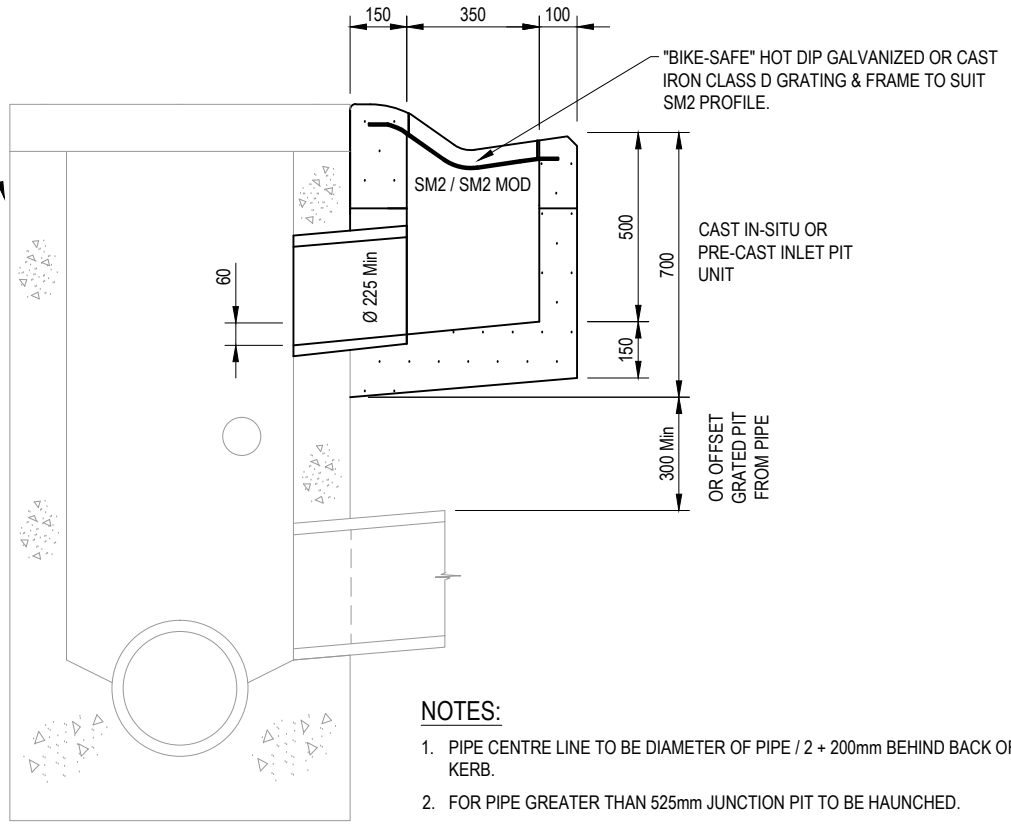


SECTION A - A
NOT TO SCALE

NOTES:

1. PIPE CENTRE LINE TO BE DIAMETER OF PIPE / 2 + 200mm BEHIND BACK OF KERB.
2. FOR PIPE GREATER THAN 525mm JUNCTION PIT TO BE HAUNCHED.
3. SUBJECT TO COUNCIL APPROVAL PRECAST PITS COMPLYING WITH AS 5100 BRIDGE DESIGN AND VICROADS SPECIFICATION 705 DRAINAGE PITS MAY BE USED.
4. CHANNEL GRATES TO COMPLY WITH AS 3996, BE FITTED WITH AN APPROVED LOCKING DEVICE AND HAVE A CLEAR OPENING OF 900mm X 350mm.
5. 225mm DIAMETER SEWER GRADE PVC PIPE WHEN GAP BETWEEN CATCH PIT AND JUNCTION PIT IS LESS THAN 300mm. 225mm DIAMETER REINFORCED CONCRETE PIPE WHEN GAP IS GREATER THAN 300mm.
6. SHAPE FLOOR OF PIT TO OUTLET & RENDER FLOOR AND WALLS TO CLASS 2 FINISH.
7. CONCRETE STRENGTH 32 MPa AT 28 DAYS.
8. NOT APPLICABLE TO MELBOURNE WATER CORPORATION DRAINAGE ASSETS. FOR MWC WORKS REFER TO MWC LAND DEVELOPMENT MANUAL

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

Plot Date: 16 November 2015 - 3:43 PM Plotted by: Kerry Walton

Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 604.dwg

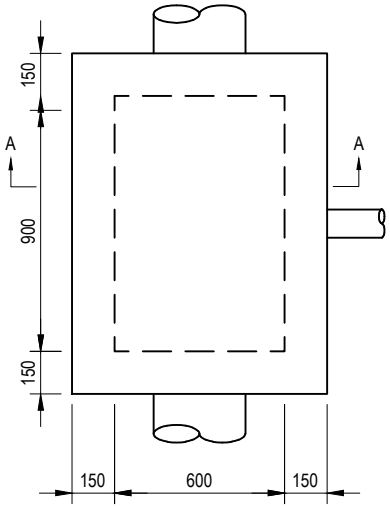
STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

GRATED CHANNEL PIT SM2 KERB - DOUBLE

Revision 0

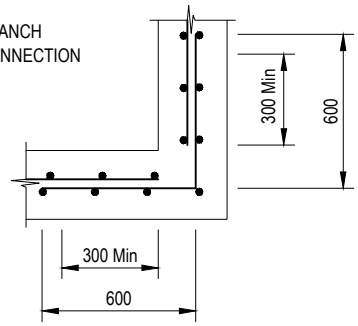
Date DEC 2015

EDCM 604



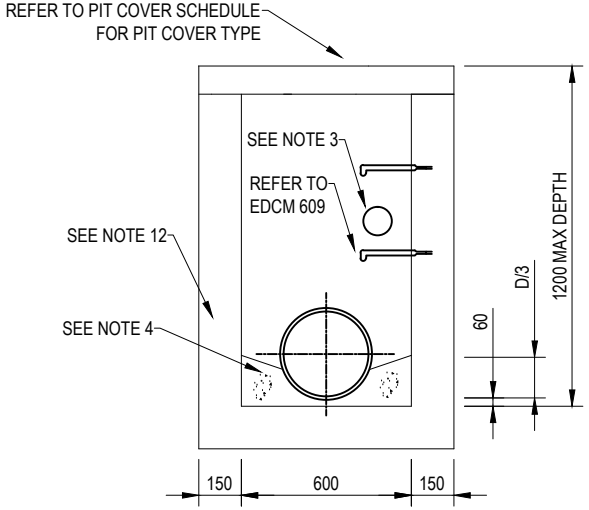
PLAN VIEW

NOT TO SCALE



CORNER REINFORCEMENT LAP DETAIL

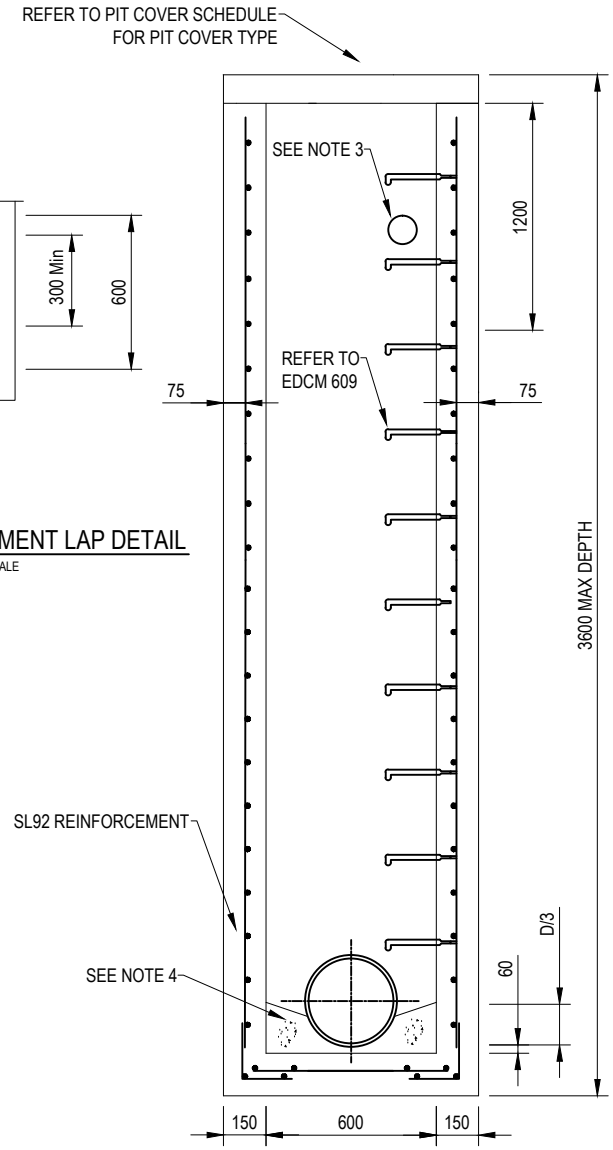
NOT TO SCALE



PIT TO 1200 DEPTH

SECTION A - A

NOT TO SCALE



PIT 1201 TO 3600 DEPTH

SECTION A - A

NOT TO SCALE

NOTES:

1. PIPE CENTRE LINE TO BE DIAMETER OF PIPE / 2 + 200mm BEHIND BACK OF KERB.
2. PIT TO BE HAUNCHED WHERE THE PIPE DIAMETER PLUS 75 IS GREATER THAN THE WIDTH OF THE PIT.
3. INSTALL 100mm DIAMETER PENETRATION FOR SUBSURFACE DRAINAGE.
4. FLOOR OF PIT TO BE SHAPED ON COMPLETION OF PIT WITH NO SLUMP CONCRETE.
5. SUBJECT TO COUNCIL APPROVAL PRECAST PITS COMPLYING WITH AS 5100 BRIDGE DESIGN AND VICROADS SPECIFICATION 705 DRAINAGE PITS MAY BE USED.
6. PITS TO BE FITTED WITH STEP IRONS.
7. PIT COVER LEVEL TO MATCH FINISHED SURFACE LEVEL.
8. PIT COVERS TO BE IMPRINTED WITH THE CLASS OF THE COVER AND WEIGHT.
9. FIBRE GLASS PIT COVERS TO BE FITTED WITH AN APPROVED LOCKING DEVICE AND INSTALLED TO OPEN TO THE VERGE SIDE OF THE ROAD.
10. FIBRE GLASS PIT COVERS TO BE ATTACHED WITH 4 N^{o} - 10mm DIA. 75mm LONG MASONRY ANCHORS OR AS PER MANUFACTURERS DETAILS.
11. FIBRE GLASS PIT COVERS TO HAVE A CLEAR OPENING OF 900mm X 600mm.
12. PITS GREATER THAN 1200 DEPTH TO BE REINFORCED
13. CONCRETE PIT COVERS TO BE INSTALLED ON A 5mm BED OF MORTAR.
14. FABRIC IN SHAFT TO HAVE MAIN BARS HORIZONTAL.
15. CLEAR COVER TO REINFORCEMENT NOT LESS THAN 50mm.
16. RETURN REINFORCEMENT BARS TO BE FABRIC OR EQUIVALENT BARS.
17. CONCRETE STRENGTH 32 MPa AT 28 DAYS.
18. NOT APPLICABLE TO MELBOURNE WATER CORPORATION DRAINAGE ASSETS. FOR MWC WORKS REFER TO MWC LAND DEVELOPMENT MANUAL.

MUNICIPALITIES	CARDINIA CASEY MELTON MITCHELL WHITTLESEA	HUME	WYNDHAM
LOCATION OF PIT			
RESERVES	CLASS B - FIBRE GLASS	CLASS B - CONCRETE	CLASS B - CONCRETE
EASEMENTS	CLASS B - FIBRE GLASS	CLASS B - CONCRETE OR FIBRE GLASS	CLASS B - CONCRETE
NATURESTRIPS	CLASS B - FIBRE GLASS	CLASS B - CONCRETE OR FIBRE GLASS	CLASS B - CONCRETE
WITHIN 0.75M OF A VEHICLE CROSSING	CLASS D - CAST IRON	CLASS D - CAST IRON	CLASS D - CAST IRON
WITHIN A VEHICLE CROSSING	CLASS D - CAST IRON	CLASS D - CAST IRON	CLASS D - CAST IRON
ROAD PAVEMENT	CLASS D - CAST IRON	CLASS D - CAST IRON	CLASS D - CAST IRON

PIT COVER SCHEDULE

No	Revision	Drawn	Checked	Approved	Date
				-	
0	FINAL ISSUE	DG	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

900mm X 600mm JUNCTION PIT UP TO 3600mm DEPTH

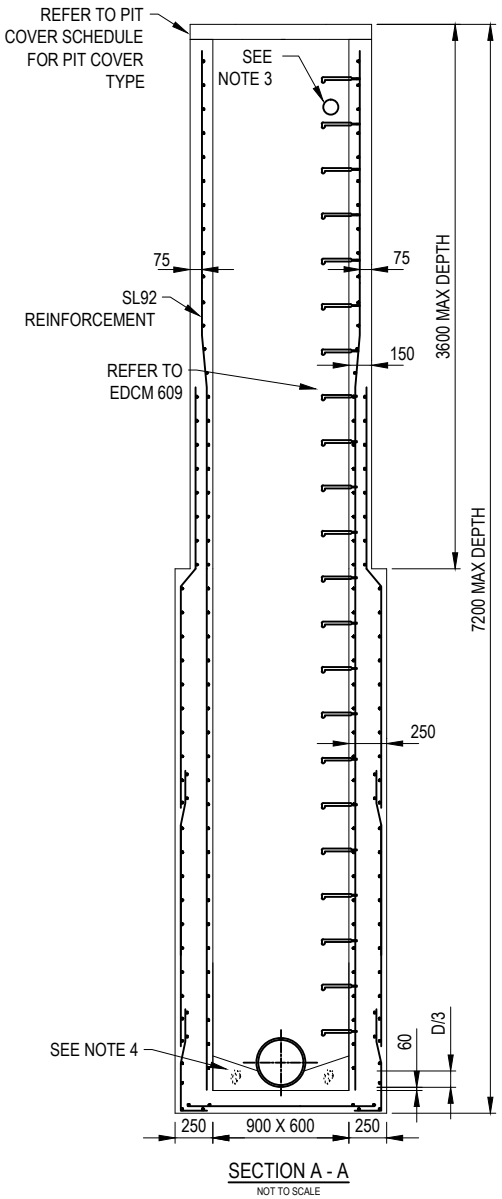
Revision 0

Date DEC 2015

EDCM 605

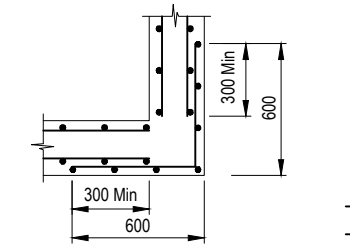
Plot Date: 16 November 2015 - 3:44 PM Plotted by: Kerry Walton

Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 605.dwg



SECTION A - A

NOT TO SCALE



CORNER REINFORCEMENT LAP DETAIL

NOT TO SCALE

SECTION A - A

NOT TO SCALE

NOTES:

1. PIPE CENTRE LINE TO BE DIAMETER OF PIPE / 2 + 200mm BEHIND BACK OF KERB.
2. PIT TO BE HAUNCHED WHERE THE PIPE DIAMETER PLUS 75 IS GREATER THAN THE WIDTH OF THE PIT.
3. INSTALL 100mm DIAMETER PENETRATION FOR SUBSURFACE DRAINAGE.
4. FLOOR OF PIT TO BE SHAPED ON COMPLETION OF PIT WITH NO SLUMP CONCRETE.
5. SUBJECT TO COUNCIL APPROVAL PRECAST PITS COMPLYING WITH AS 5100 BRIDGE DESIGN AND VICROADS SPECIFICATION 705 DRAINAGE PITS MAY BE USED.
6. PITS TO BE FITTED WITH STEP IRONS.
7. PIT COVER LEVEL TO MATCH FINISHED SURFACE LEVEL.
8. PIT COVERS TO BE IMPRINTED WITH THE CLASS OF THE COVER AND WEIGHT.
9. FIBRE GLASS PIT COVERS TO BE FITTED WITH AN APPROVED LOCKING DEVICE AND INSTALLED TO OPEN TO THE VERGE SIDE OF THE ROAD.
10. FIBRE GLASS PIT COVERS TO BE ATTACHED WITH 4 N° - 10mm DIA. 75mm LONG MASONRY ANCHORS OR AS PER MANUFACTURERS DETAILS.
11. FIBRE GLASS PIT COVERS TO HAVE A CLEAR OPENING OF 900mm X 600mm.
12. PITS GREATER THAN 1200 DEPTH TO BE REINFORCED
13. CONCRETE PIT COVERS TO BE INSTALLED ON A 5mm BED OF MORTAR.
14. FABRIC IN SHAFT TO HAVE MAIN BARS HORIZONTAL.
15. CLEAR COVER TO REINFORCEMENT NOT LESS THAN 50mm.
16. RETURN REINFORCEMENT BARS TO BE FABRIC OR EQUIVALENT BARS.
17. CONCRETE STRENGTH 32 MPa AT 28 DAYS.
18. NOT APPLICABLE TO MELBOURNE WATER CORPORATION DRAINAGE ASSETS. FOR MWC WORKS REFER TO MWC LAND DEVELOPMENT MANUAL.

MUNICIPALITIES	CARDINIA CASEY MELTON MITCHELL WHITTLESEA	HUME	WYNDHAM
LOCATION OF PIT			
RESERVES	CLASS B - FIBRE GLASS	CLASS B - CONCRETE	CLASS B - CONCRETE
EASEMENTS	CLASS B - FIBRE GLASS	CLASS B - CONCRETE OR FIBRE GLASS	CLASS B - CONCRETE
NATURESTRIPS	CLASS B - FIBRE GLASS	CLASS B - CONCRETE OR FIBRE GLASS	CLASS B - CONCRETE
WITHIN 0.75m OF A VEHICLE CROSSING	CLASS D - CAST IRON	CLASS D - CAST IRON	CLASS D - CAST IRON
WITHIN A VEHICLE CROSSING	CLASS D - CAST IRON	CLASS D - CAST IRON	CLASS D - CAST IRON
ROAD PAVEMENT	CLASS D - CAST IRON	CLASS D - CAST IRON	CLASS D - CAST IRON

PIT COVER SCHEDULE

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Checked	Approved	Date
0	FINAL ISSUE		DG	MM	-	16.11.15

Plot Date: 16 November 2015 - 3:46 PM Plotted by: Kerry Walton Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 606.dwg

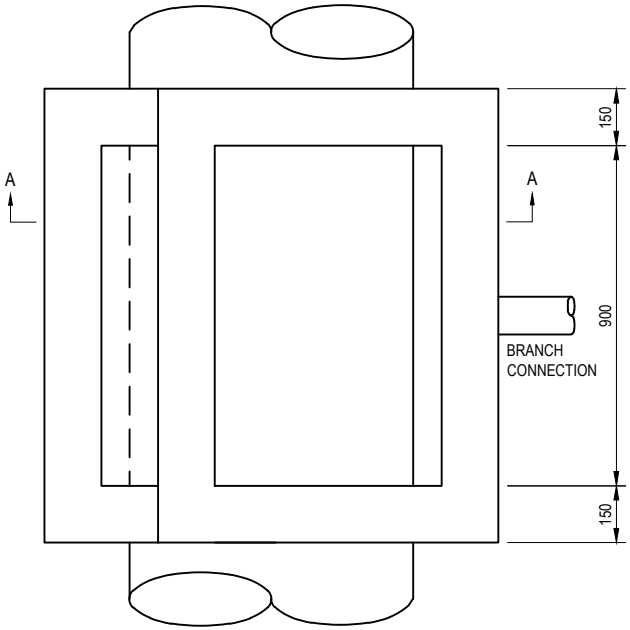
STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

900mm X 600mm JUNCTION PITS
3601mm TO 10800mm DEPTH

Revision 0

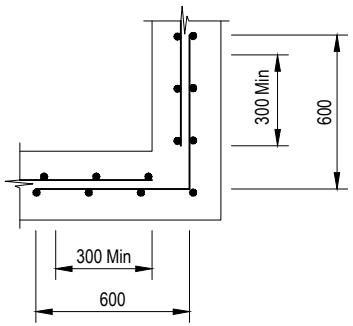
Date DEC 2015

EDCM 606



PLAN VIEW

NOT TO SCALE

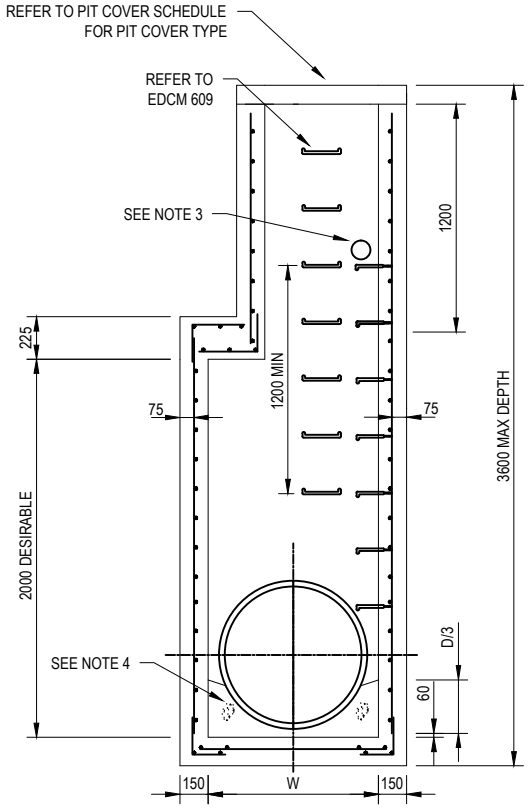


CORNER REINFORCEMENT LAP DETAIL

NOT TO SCALE

PIT WIDTH "W"	REINFORCEMENT
UP TO 1200	SL92
1201 - 1800	RL918
1801 - 2400	RL1218

REINFORCEMENT DETAILS



SECTION A - A

NOT TO SCALE

NOTES:

1. PIPE CENTRE LINE TO BE DIAMETER OF PIPE / 2 + 200mm BEHIND BACK OF KERB.
2. PIT TO BE HAUNCHED WHERE THE PIPE DIAMETER PLUS 75 IS GREATER THAN THE WIDTH OF THE PIT.
3. INSTALL 100mm DIAMETER PENETRATION FOR SUBSURFACE DRAINAGE.
4. FLOOR OF PIT TO BE SHAPED ON COMPLETION OF PIT WITH NO SLUMP CONCRETE.
5. SUBJECT TO COUNCIL APPROVAL PRECAST PITS COMPLYING WITH AS 5100 BRIDGE DESIGN AND VICROADS SPECIFICATION 705 DRAINAGE PITS MAY BE USED.
6. PITS TO BE FITTED WITH STEP IRONS.
7. PIT COVER LEVEL TO MATCH FINISHED SURFACE LEVEL.
8. PIT COVERS TO BE IMPRINTED WITH THE CLASS OF THE COVER AND WEIGHT.
9. FIBRE GLASS PIT COVERS TO BE FITTED WITH AN APPROVED LOCKING DEVICE AND INSTALLED TO OPEN TO THE VERGE SIDE OF THE ROAD.
10. FIBRE GLASS PIT COVERS TO BE ATTACHED WITH 4 N° - 10mm DIA. 75mm LONG MASONRY ANCHORS OR AS PER MANUFACTURERS DETAILS.
11. FIBRE GLASS PIT COVERS TO HAVE A CLEAR OPENING OF 900mm X 600mm.
12. PITS GREATER THAN 1200 DEPTH TO BE REINFORCED
13. CONCRETE PIT COVERS TO BE INSTALLED ON A 5mm BED OF MORTAR.
14. FABRIC IN SHAFT TO HAVE MAIN BARS HORIZONTAL.
15. CLEAR COVER TO REINFORCEMENT NOT LESS THAN 50mm.
16. RETURN REINFORCEMENT BARS TO BE FABRIC OR EQUIVALENT BARS.
17. CONCRETE STRENGTH 32 MPa AT 28 DAYS.
18. NOT APPLICABLE TO MELBOURNE WATER CORPORATION DRAINAGE ASSETS. FOR MWC WORKS REFER TO MWC LAND DEVELOPMENT MANUAL.

MUNICIPALITIES	CARDINIA CASEY MELTON MITCHELL WHITTLESEA	HUME	WYNDHAM
LOCATION OF PIT			
RESERVES	CLASS B - FIBRE GLASS	CLASS B - CONCRETE	CLASS B - CONCRETE
EASEMENTS	CLASS B - FIBRE GLASS	CLASS B - CONCRETE OR FIBRE GLASS	CLASS B - CONCRETE
NATURESTRIPS	CLASS B - FIBRE GLASS	CLASS B - CONCRETE OR FIBRE GLASS	CLASS B - CONCRETE
WITHIN 0.75m OF A VEHICLE CROSSING	CLASS D - CAST IRON	CLASS D - CAST IRON	CLASS D - CAST IRON
WITHIN A VEHICLE CROSSING	CLASS D - CAST IRON	CLASS D - CAST IRON	CLASS D - CAST IRON
NATURESTRIPS	CLASS D - CAST IRON	CLASS D - CAST IRON	CLASS D - CAST IRON

PIT COVER SCHEDULE

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Checked	Approved	Date
0	FINAL ISSUE		DG	MM	-	16.11.15

Plot Date: 16 November 2015 - 3:47 PM Plotted by: Kerry Walton Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 607.dwg

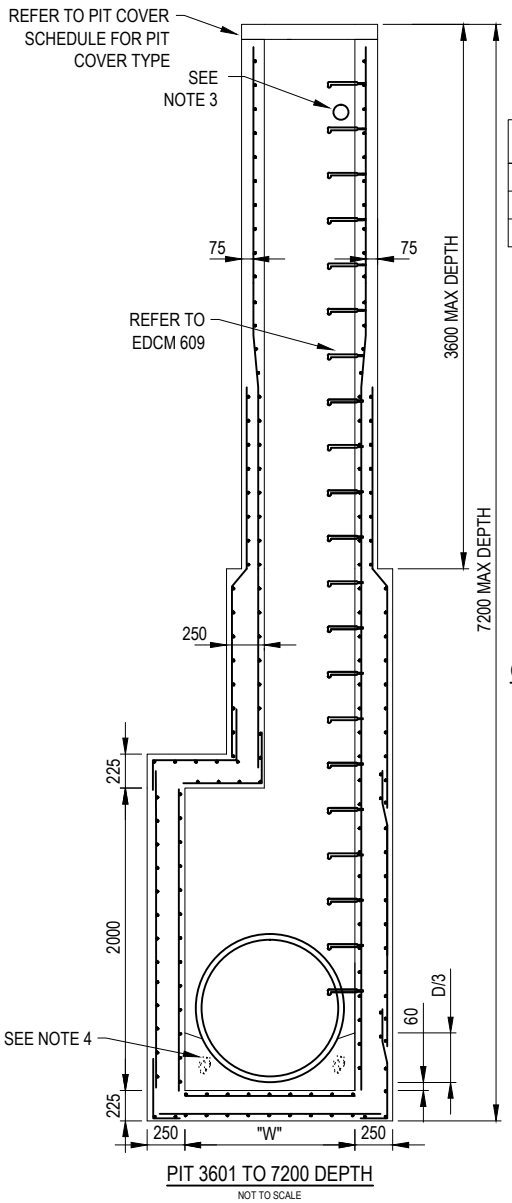
STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

HAUNCHED JUNCTION PIT UP TO 3600mm DEPTH

Revision 0

Date DEC 2015

EDCM 607

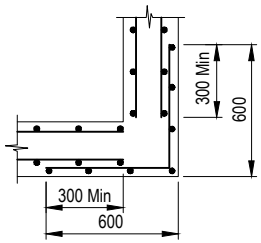


PIT 3601 TO 7200 DEPTH

NOT TO SCALE

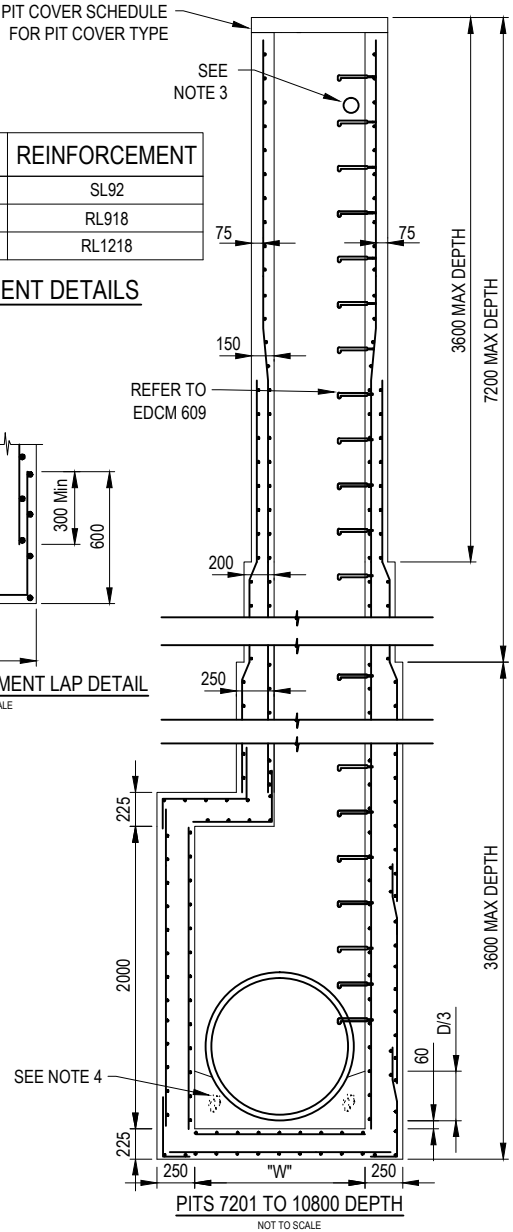
PIT WIDTH "W"	REINFORCEMENT
UP TO 1200	SL92
1201 - 1800	RL918
1801 - 2400	RL1218

REINFORCEMENT DETAILS



CORNER REINFORCEMENT LAP DETAIL

NOT TO SCALE



PITS 7201 TO 10800 DEPTH

NOT TO SCALE

NOTES:

1. PIPE CENTRE LINE TO BE DIAMETER OF PIPE / 2 + 200mm BEHIND BACK OF KERB.
2. PIT TO BE HAUNCHED WHERE THE PIPE DIAMETER PLUS 75 IS GREATER THAN THE WIDTH OF THE PIT.
3. INSTALL 100mm DIAMETER PENETRATION FOR SUBSURFACE DRAINAGE.
4. FLOOR OF PIT TO BE SHAPED ON COMPLETION OF PIT WITH NO SLUMP CONCRETE.
5. SUBJECT TO COUNCIL APPROVAL PRECAST PITS COMPLYING WITH AS 5100 BRIDGE DESIGN AND VICROADS SPECIFICATION 705 DRAINAGE PITS MAY BE USED.
6. PITS TO BE FITTED WITH STEP IRONS.
7. PIT COVER LEVEL TO MATCH FINISHED SURFACE LEVEL.
8. PIT COVERS TO BE IMPRINTED WITH THE CLASS OF THE COVER AND WEIGHT.
9. FIBRE GLASS PIT COVERS TO BE FITTED WITH AN APPROVED LOCKING DEVICE AND INSTALLED TO OPEN TO THE VERGE SIDE OF THE ROAD.
10. FIBRE GLASS PIT COVERS TO BE ATTACHED WITH 4 N° - 10mm DIA. 75mm LONG MASONRY ANCHORS OR AS PER MANUFACTURERS DETAILS.
11. FIBRE GLASS PIT COVERS TO HAVE A CLEAR OPENING OF 900mm X 600mm.
12. PITS GREATER THAN 1200 DEPTH TO BE REINFORCED
13. CONCRETE PIT COVERS TO BE INSTALLED ON A 5mm BED OF MORTAR.
14. FABRIC IN SHAFT TO HAVE MAIN BARS HORIZONTAL.
15. CLEAR COVER TO REINFORCEMENT NOT LESS THAN 50mm.
16. RETURN REINFORCEMENT BARS TO BE FABRIC OR EQUIVALENT BARS.
17. CONCRETE STRENGTH 32 MPa AT 28 DAYS.
18. NOT APPLICABLE TO MELBOURNE WATER CORPORATION DRAINAGE ASSETS. FOR MWC WORKS REFER TO MWC LAND DEVELOPMENT MANUAL.

MUNICIPALITIES	CARDINIA CASEY MELTON MITCHELL WHITTLESEA	HUME	WYNDHAM
LOCATION OF PIT			
RESERVES	CLASS B - FIBRE GLASS	CLASS B - CONCRETE	CLASS B - CONCRETE
EASEMENTS	CLASS B - FIBRE GLASS	CLASS B - CONCRETE OR FIBRE GLASS	CLASS B - CONCRETE
NATURESTRIPS	CLASS B - FIBRE GLASS	CLASS B - CONCRETE OR FIBRE GLASS	CLASS B - CONCRETE
WITHIN 0.75m OF A VEHICLE CROSSING	CLASS D - CAST IRON	CLASS D - CAST IRON	CLASS D - CAST IRON
WITHIN A VEHICLE CROSSING	CLASS D - CAST IRON	CLASS D - CAST IRON	CLASS D - CAST IRON
ROAD PAVEMENT	CLASS D - CAST IRON	CLASS D - CAST IRON	CLASS D - CAST IRON

PIT COVER SCHEDULE

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

Plot Date: 16 November 2015 - 3:48 PM Plotted by: Kerry Walton

Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 608.dwg

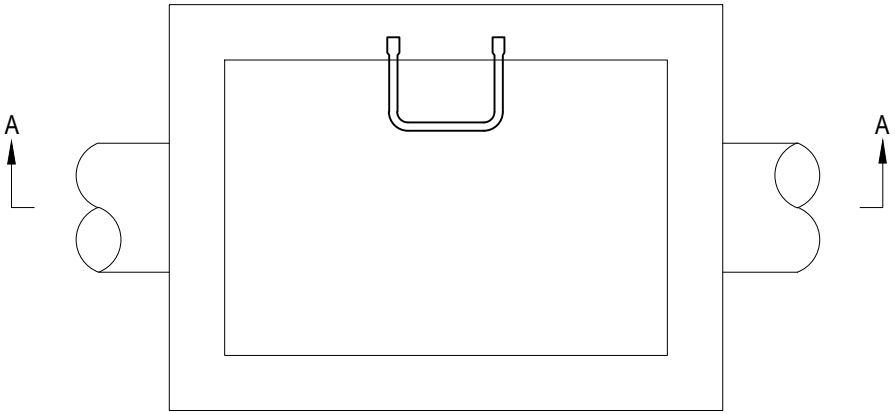
STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

HAUNCHED JUNCTION PITS 3601mm TO 10800mm DEPTH

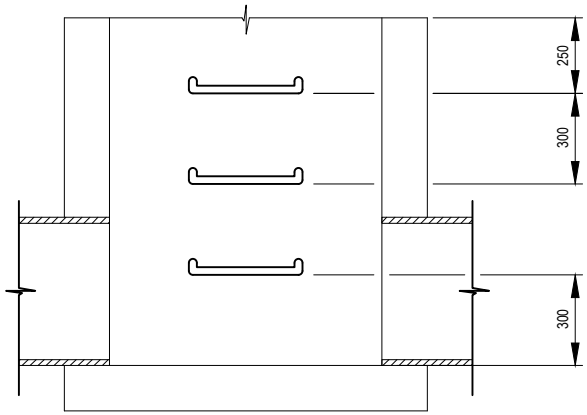
Revision 0

Date DEC 2015

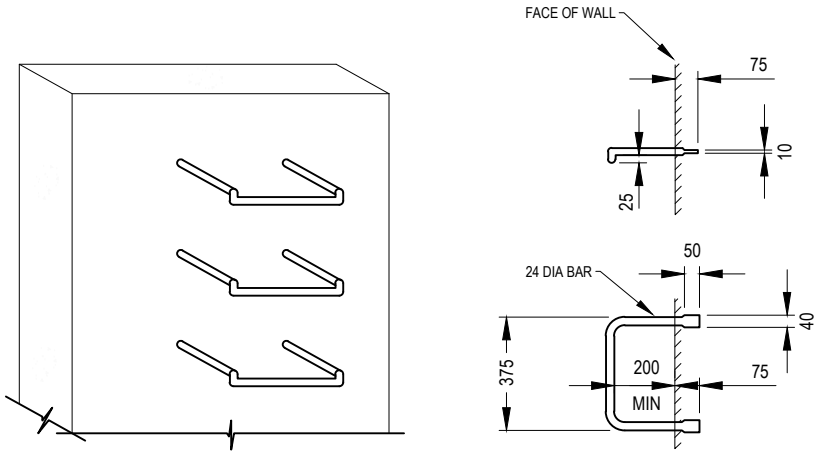
EDCM 608



PLAN
NOT TO SCALE



SECTION A - A
NOT TO SCALE



STEP IRON DETAILS
NOT TO SCALE

NOTES:

1. PITS DEEPER THAN 1000 TO BE FITTED WITH STEP IRONS.
2. STEP IRONS SHALL BE LOCATED DIRECTLY BELOW THE OPENING IN THE COVER AND DESIRABLY ON A WALL WITHOUT PIPE OPENINGS.
3. WHERE STEP IRON LADDER CHANGES FROM ONE WALL TO THE ADJACENT WALL, STEP IRON LADDERS TO OVERLAP BY 1200mm MINIMUM.
4. STEEL FOR STEP-IRONS SHALL BE STRUCTURAL GRADE 250 TO AS3679 PART 1.
5. STEP IRONS SHALL HAVE SHARP EDGES ROUNDED AND HOT DIP GALVANISED AFTER FABRICATION TO AS/NZS 4680.
6. PROPRIETARY POLYPROPYLENE STEP IRONS (OR APPROVED ALTERNATIVE) MAY BE USED. THESE SHALL BE INSTALLED ACCORDING TO THE MANUFACTURERS INSTRUCTIONS.
7. FOR PRECAST PITS, STEP IRONS SHALL BE LOAD TESTED TO AS4198/1994.
8. FOR REINFORCEMENT DETAILS REFER TO EDCM 605-608.

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

Plot Date: 16 November 2015 - 3:51 PM Plotted by: Kerry Walton

Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 609.dwg

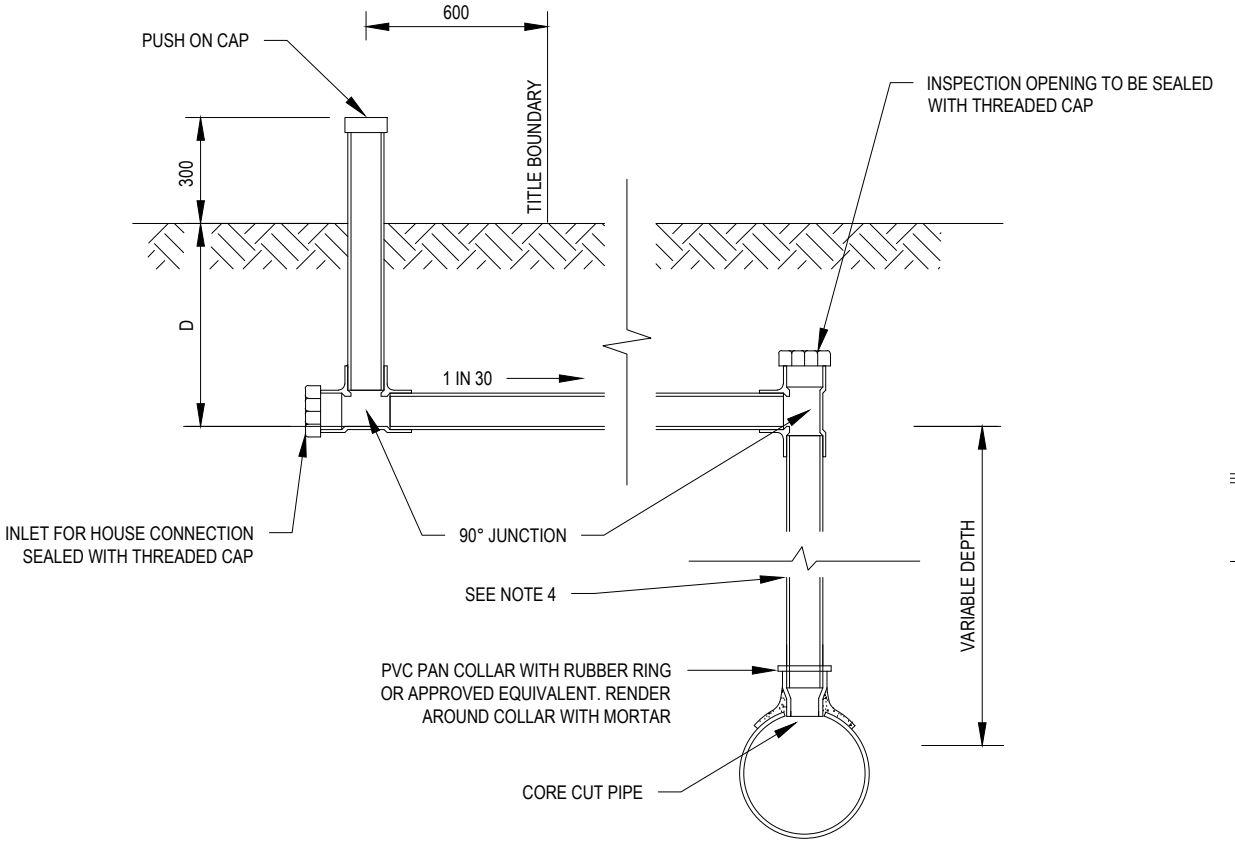
STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

STEP IRONS

Revision 0

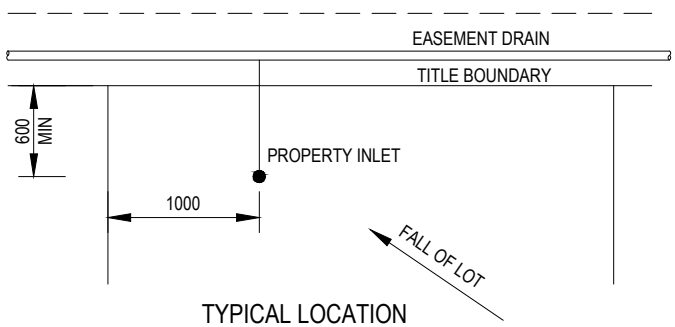
Date DEC 2015

EDCM 609



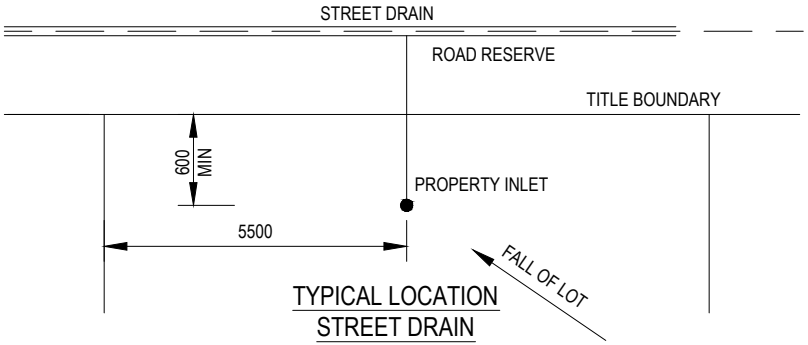
ELEVATION

NOT TO SCALE



TYPICAL LOCATION
EASEMENT DRAIN

NOT TO SCALE



TYPICAL LOCATION
STREET DRAIN

NOT TO SCALE

NOTES:

1. ALL PROPERTY CONNECTION PIPES AND FITTINGS TO BE OF 100mm PVC SEWER CLASS SN6, REFER AS 1260.
2. ALL PVC JOINTS TO BE SEALED WITH SOLVENT CEMENT OR RUBBER RING JOINTS.
3. DEPTH 'D' = 400mm MINIMUM UNLESS APPROVED BY COUNCIL.
4. BACKFILL AROUND RISER PIPE WITH CLASS 3 CRUSHED ROCK OR CLASS 3 CRUSHED CONCRETE.
5. BED PROPERTY CONNECTION PIPE ON 50mm COMPACTED 20mm CLASS 3 CRUSHED ROCK OR CLASS 3 CRUSHED CONCRETE.
6. BACKFILL TRENCH WITH CLASS 3 20mm CRUSHED ROCK OR CLASS 3 20mm CRUSHED CONCRETE TO 100mm ABOVE THE PROPERTY CONNECTION IN EASEMENTS AND UNPAVED AREAS AND TO SUBGRADE LEVEL UNDER FOOTPATHS AND PAVED AREAS.
7. ALL DIMENSIONS IN MILLIMETRES.
8. NOT APPLICABLE TO MELBOURNE WATER CORPORATION DRAINAGE ASSETS. FOR MWC WORKS REFER TO MWC LAND DEVELOPMENT MANUAL.

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

Plot Date: 16 November 2015 - 3:55 PM Plotted by: Kerry Walton

Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 701.dwg

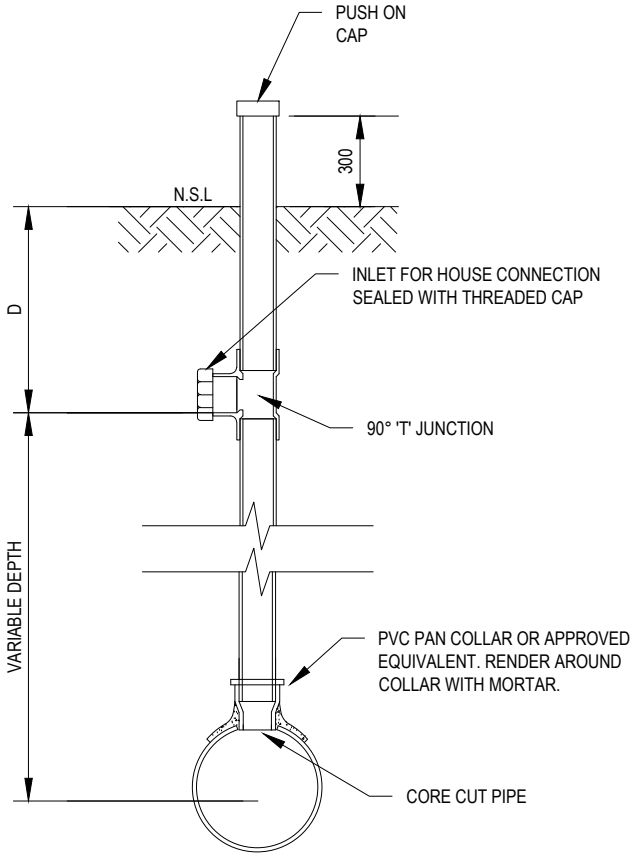
STANDARD DRAWINGS FOR SUBDIVISIONS IN GROWTH AREAS

PROPERTY INLET TYPE A

Revision 0

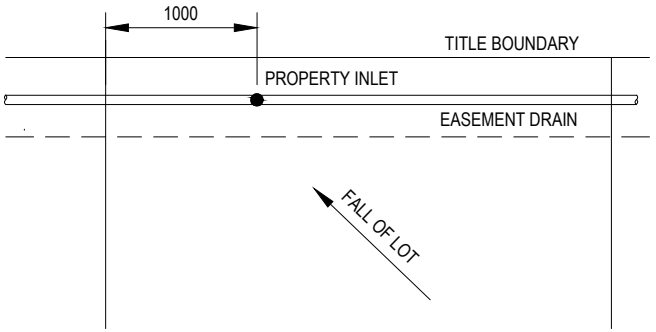
Date DEC 2015

EDCM 701



ELEVATION

NOT TO SCALE



TYPICAL LOCATION

NOT TO SCALE

NOTES:

1. ALL PROPERTY CONNECTION PIPES AND FITTINGS TO BE OF 100mm PVC SEWER CLASS SN6, REFER AS 1260.
2. ALL PVC JOINTS TO BE SEALED WITH SOLVENT CEMENT OR RUBBER RING JOINTS.
3. DEPTH 'D' = 400mm MINIMUM UNLESS APPROVED BY COUNCIL.
4. BACKFILL AROUND RISER PIPE WITH CLASS 3 CRUSHED ROCK OR CLASS 3 CRUSHED CONCRETE.
5. BED PROPERTY CONNECTION PIPE ON 50mm COMPACTED 20mm CLASS 3 CRUSHED ROCK OR CLASS 3 CRUSHED CONCRETE.
6. ALL DIMENSIONS IN MILLIMETRES OR AS NOTED OTHERWISE.
7. NOT APPLICABLE TO MELBOURNE WATER CORPORATION DRAINAGE ASSETS. FOR MWC WORKS REFER TO MWC LAND DEVELOPMENT MANUAL.

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

Plot Date: 16 November 2015 - 3:54 PM Plotted by: Kerry Walton

Cad File No: Q:\Infrastructure Planning\MPA standard drawings\20150506 EDCM DRAWINGS (NEW)\28082015 Drawings\ECDM - 702.dwg

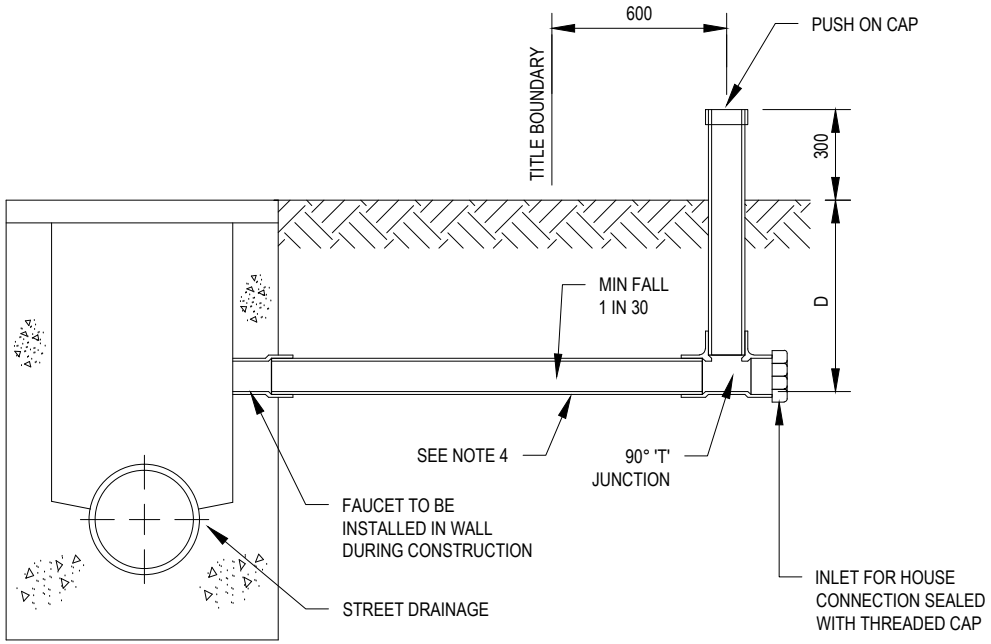
STANDARD DRAWINGS FOR
SUBDIVISIONS IN GROWTH AREAS

PROPERTY INLET
TYPE B

Revision 0

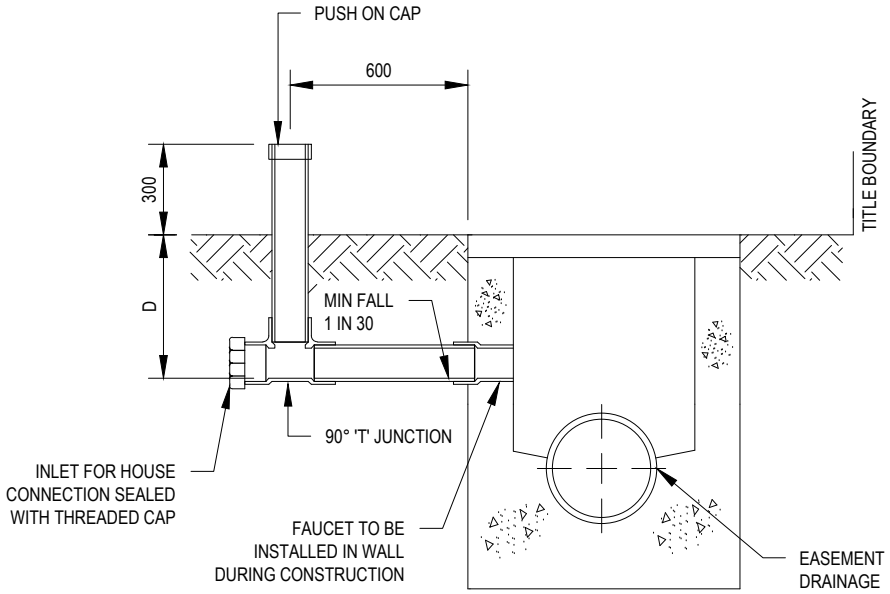
Date DEC 2015

EDCM 702



STREET DRAINAGE ELEVATION

NOT TO SCALE



EASEMENT DRAINAGE ELEVATION

NOT TO SCALE

NOTES:

1. ALL PIPES AND FITTINGS TO BE OF 100mm PVC CLASS SN6, REFER AS 1260.
2. ALL PVC JOINTS TO BE SEALED WITH SOLVENT CEMENT OR RUBBER RING JOINTS.
3. DEPTH 'D' = 400mm MINIMUM UNLESS APPROVED BY COUNCIL.
4. BED PROPERTY CONNECTION PIPE ON 50MM COMPACTED 20mm CLASS 3 CRUSHED ROCK OR CLASS 3 CRUSHED CONCRETE.
5. BACKFILL TRENCH WITH CLASS 3 20mm CRUSHED ROCK OR CLASS 3 20mm CRUSHED CONCRETE TO 100mm ABOVE THE PROPERTY CONNECTION PIPE IN EASEMENTS AND UNPAVED AREAS AND TO SUBGRADE LEVEL UNDER FOOTPATHS AND PAVED AREAS.
6. TRENCH UNDER FOOTPATH TO BE BACKFILLED WITH COMPACTED 20MM CLASS 3 CRUSHED ROCK.
7. IF THE HOLE IN THE PIT WALL FOR THE PIPE IS NOT AVAILABLE, A HOLE IS TO BE CORE DRILLED.
8. ALL DIMENSIONS IN MILLIMETRES OR AS NOTED OTHERWISE.
9. REFER TO EDCM 605-609 FOR PIT DETAILS.

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

Note: * indicates signatures on original issue of drawing or last revision of drawing

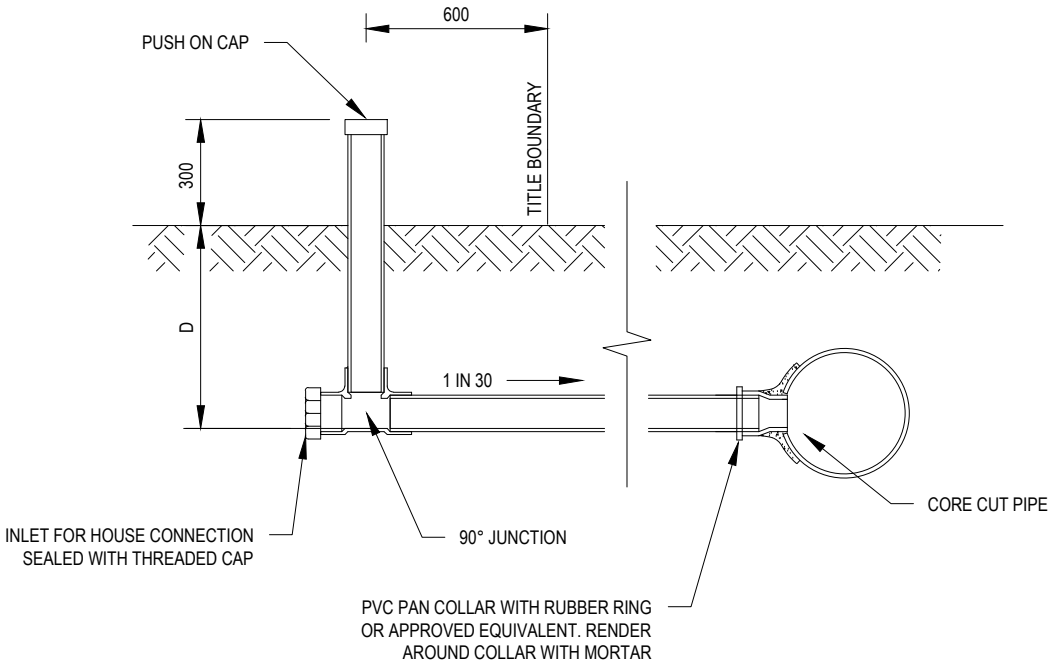
Plot Date: 16 November 2015 - 4:20 PM Plotted by: Kerry Walton Cad File No: Q:\Infrastructure Planning\EDCM Standard Drawings\ECDM - 703.dwg

STANDARD DRAWINGS FOR
SUBDIVISIONS IN GROWTH AREAS

PROPERTY INLET
TYPE C

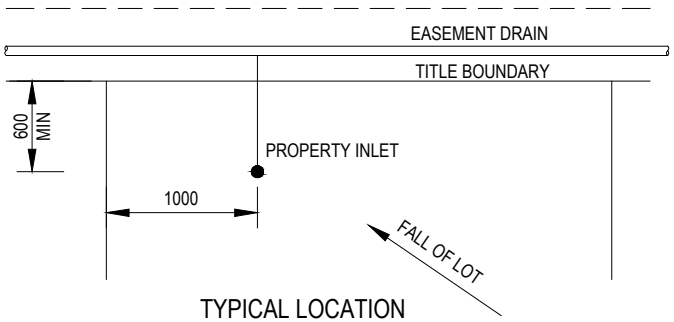
Revision 0
Date DEC 2015

EDCM 703



ELEVATION

NOT TO SCALE



TYPICAL LOCATION
EASEMENT DRAIN

NOT TO SCALE

NOTES:

1. TYPE D PROPERTY CONNECTION, ONLY APPLICABLE WHERE PIPE HAS LESS THAN 750mm COVER.
2. ALL PROPERTY CONNECTION PIPES AND FITTINGS TO BE OF 100mm PVC SEWER CLASS SN6, REFER AS 1260.
3. ALL PVC JOINTS TO BE SEALED WITH SOLVENT CEMENT OR RUBBER RING JOINTS.
4. DEPTH 'D' = 400mm MINIMUM UNLESS APPROVED BY COUNCIL.
5. BED PROPERTY CONNECTION PIPE ON 50mm COMPACTED 20mm CLASS 3 CRUSHED ROCK OR CLASS 3 CRUSHED CONCRETE. BACKFILL TO 100mm ABOVE PIPE WITH 20mm CLASS 3 CRUSHED ROCK OR CLASS 3 CRUSHED CONCRETE.
6. BACKFILL TRENCH WITH CLASS 3 20mm CRUSHED ROCK OR CLASS 3 20mm CRUSHED CONCRETE TO 100mm ABOVE THE PROPERTY BOUNDARY CONNECTION IN EASEMENTS AND UNPAVED AREAS AND TO SUBGRADE LEVEL UNDER FOOTPATHS OF UNPAVED AREAS
7. ALL DIMENSIONS IN MILLIMETRES.
8. NOT APPLICABLE TO MELBOURNE WATER CORPORATION DRAINAGE ASSETS. FOR MWC WORKS REFER TO MWC LAND DEVELOPMENT MANUAL.

No	Revision	Drawn	Checked	Approved	Date
0	FINAL ISSUE	DG	MM	-	16.11.15

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STANDARD DRAWINGS FOR
SUBDIVISIONS IN GROWTH AREAS

PROPERTY INLET
TYPE D

Revision 0
Date DEC 2015

EDCM 704