

**MCC-001**

Date: June 2021

**INDEX OF ENGINEERING STANDARD DRAWINGS**

Revision: 02

Drawing No.	Drawing Title	Latest Revision	Revision Date
<b>General</b>			
MCC-001	Index of Engineering Standard Drawings	02	Jun-2021
MCC-002	Standard Construction Notes	00	Oct-2020
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MCC-102	Road Pavement - Widening	00	Oct-2020
MCC-103	Subsurface Drainage - At Edge of Road Pavement	00	Oct-2020
MCC-104	Subsurface Drainage - Flushout Riser	00	Oct-2020
MCC-105	Reinstatement of Drainage Pipe Trenches	00	Oct-2020
MCC-106	Reinstatement of Utility Service Trenches in Roads	00	Oct-2020
MCC-107	Kerb Profiles	00	Oct-2020
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MCC-202	Drainage - Step Irons	00	Oct-2020
MCC-203	Drainage - Side Entry Pit - Drainage Pipe Within Nature Strip	00	Oct-2020
MCC-204	Drainage - Double Side Entry Pit - Drainage Pipe Within Nature Strip	00	Oct-2020
MCC-205	Drainage - Existing Side Entry Pit - Conversion to Grated Side Entry Pit	01	Dec-2020
MCC-206	Drainage - Existing Side Entry Pit - Conversion to Grated Pit at Vehicle Crossing	01	Dec-2020
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MCC-402	Footpath Pavement Details - Asphalt	00	Oct-2020
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MCC-501	Vehicle Crossing - Standard	00	Oct-2020
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MCC-602	Road Hump (Watts Profile)	00	Oct-2020
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<b>Street Furniture</b>			
MCC-701	Street Name Blade & Sign Assembly - Maroondah City Council	01	Jun-2021
MCC-702	Street Name Blade & Sign Assembly - Private Common Property	01	Jun-2021

## GENERAL NOTES

1. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWINGS AND SPECIFICATIONS UNLESS SPECIFIED OTHERWISE.
2. WHERE WORKS ARE IN THE VICINITY OF EXISTING SERVICES, THE CONTRACTOR SHALL VERIFY ALL LOCATIONS AND DEPTHS PRIOR TO THE COMMENCEMENT OF WORKS. THE CONTRACTOR SHALL ADVISE THE SUPERINTENDENT OF ANY REQUIRED ALTERATIONS.
3. ALL WORK PRACTICES SHALL COMPLY WITH THE OCCUPATIONAL HEALTH & SAFETY ACT AND ALL RELEVANT REGULATIONS AND CODES OF PRACTICE (IN PARTICULAR, THE CODE OF PRACTICE FOR SAFETY PRECAUTIONS IN TRENCHING OPERATIONS).
4. WORKSAFE VICTORIA IS TO BE INFORMED FOR TRENCHING OPERATIONS WHERE THE DEPTH IS GREATER THAN 1.5m.
5. THE CONTRACTOR SHALL STRICTLY COMPLY WITH "NO GO ZONE" CLEARANCE REQUIREMENTS WHEN WORKING WITHIN THE VICINITY OF OVERHEAD ELECTRICAL ASSETS/CABLES. FOR ANY OPERATION WHICH ENCROACHES ON THE 3.0m "NO GO ZONE", THE CONTRACTOR SHALL OBTAIN A WRITTEN PERMIT TO WORK FROM WORKSAFE. CONTRACTORS SHALL ALSO COMPLY WITH RELEVANT WORKING CLEARANCES FOR OTHER UNDERGROUND UTILITIES AS SPECIFIED BY THE UTILITY OWNERS, INCLUDING BUT NOT LIMITED TO UNDERGROUND GAS & ELECTRICAL SERVICES. FURTHER INFORMATION ON "NO GO ZONE" CLEARANCE REQUIREMENTS, REFER TO CURRENT WORKSAFE VICTORIA PUBLICATIONS (WWW.WORKSAFE.VIC.GOV.AU).
6. ALL CONCRETE SHALL BE SAWCUT TO THE NEAREST JOINT UNLESS SPECIFIED OTHERWISE.
7. ALL SERVICE COVERS WITHIN THE LIMIT OF WORKS SHALL BE ADJUSTED TO MATCH PROPOSED FINISHED SURFACE LEVELS.
8. NO TREES OR VEGETATION SHALL BE REMOVED UNLESS AUTHORISED BY MAROONDAH CITY COUNCIL.
9. ALL DISTURBED AREAS SHALL BE TOPSOILED AND SEEDED TO A MINIMUM DEPTH OF 100mm. NATURE STRIPS SHALL BE GRADED EVENLY FROM THE TOP OF KERB TO THE FRONT OF PATH OR AS DIRECTED.
10. SITE EROSION CONTROL AND MINIMISATION MEASURES SHALL BE ADOPTED AT ALL TIMES IN ACCORDANCE WITH THE ENVIRONMENTAL PROTECTION AUTHORITY'S ENVIRONMENTAL GUIDELINES FOR MAJOR CONSTRUCTION SITES.
11. TRAFFIC MANAGEMENT IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE ROAD MANAGEMENT ACT 2004 AND AS1742.3. ALL SIGNAGE (TEMPORARY AND PERMANENT) SHALL BE CLASS 1 REFLECTIVE GRADE.
12. ALL CONCRETE TO HAVE COMPRESSIVE STRENGTH AT 28 DAYS NOT LESS THAN 25 MPa UNLESS SPECIFIED OTHERWISE.
13. ALL CRUSHED ROCK TO BE CURRENT VICROADS REGISTERED MIXES.
14. CLASS 3 CRUSHED ROCK & CEMENT TREATED CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.
15. ALL LINE MARKING TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 1742.1 AND TO BE LONG LIFE THERMOPLASTIC IN ACCORDANCE WITH VICROADS SECTION 724 OR AS DIRECTED BY SUPERVISING ENGINEER.
16. WHERE PRODUCTS HAVE RECOMMENDED SUPPLIERS, ALTERNATIVES MAY BE CONSIDERED, HOWEVER MUST BE ACCEPTED BY COUNCIL IN WRITING.
17. A VEHICLE CROSSING PERMIT MUST BE OBTAINED FROM COUNCIL BEFORE UNDERTAKING ANY CONCRETE WORKS TO COUNCIL ASSETS, INCLUDING FOOTPATH AND VEHICLE CROSSING CONSTRUCTION.
18. A ROAD/ASSET OPENING PERMIT MUST BE OBTAINED FROM COUNCIL BEFORE UNDERTAKING ANY EXCAVATION IN THE ROAD RESERVE OR CONNECTING TO A COUNCIL DRAINAGE ASSET IN THE ROAD RESERVE OR EASEMENT.

## DRAINAGE NOTES

1. NO INTERNAL DIMENSION OF JUNCTION PITS SHALL BE LESS THAN PIPE DIAMETER PLUS 150mm.
2. WHERE PIT DEPTH EXCEEDS 1000mm, STEP IRONS ARE TO BE INSTALLED IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-202.
3. WHERE PIT DEPTH EXCEEDS 1500mm, PIT WALLS ARE TO BE REINFORCED WITH SL72 MESH CENTRALLY PLACED.
4. WHERE PIT DEPTH EXCEEDS 1800mm AND/OR PIPE DIAMETER EXCEEDS 450mm, PIT WALLS ARE TO BE 200mm THICK CONCRETE.
5. WHERE PIT DEPTH EXCEEDS 3600mm, PIT IS TO BE DESIGNED IN ACCORDANCE WITH VICROADS STANDARD DRAWING SD 1011.
6. PRECAST PITS MAY BE USED AS JUNCTION PITS SUBJECT TO COUNCIL APPROVAL IN WRITING.
7. WITHIN NON-TRAFFICABLE AREAS, ALL PIT LIDS ARE TO BE MINIMUM CLASS B, LIGHTWEIGHT & LOCKABLE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
8. WITHIN TRAFFICABLE AREAS, ALL PIT LIDS ARE TO BE MINIMUM CLASS D, HEAVY DUTY IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
9. ALL GRATED PIT LIDS ARE TO BE BICYCLE SAFE & INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.



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## STANDARD CONSTRUCTION NOTES

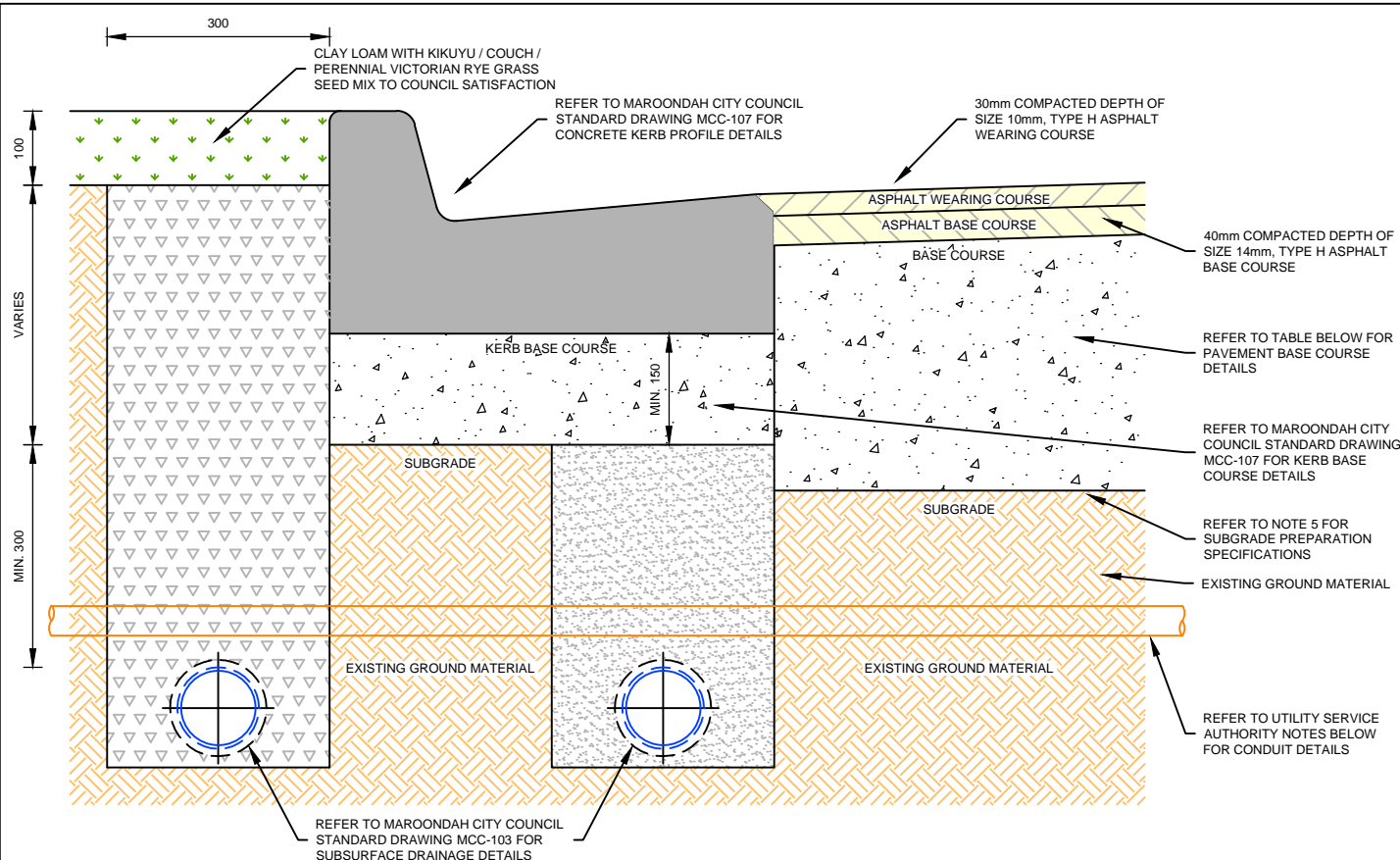
Revision: 00

Date: October 2020

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Standard Drawing Number:

**MCC-002**



## KERB AND ROAD PAVEMENT DETAIL

SCALE 1:10 @ A4

### NOTES:

- ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
- CRUSHED ROCK BASE PAVEMENT TO BE LAID AND COMPACTED IN LAYERS NOT EXCEEDING 150mm TO ACHIEVE A MINIMUM OF 98% MAXIMUM DRY DENSITY.
- CRUSHED ROCK BASE PAVEMENT TO BE TEST ROLLED TO ACHIEVE NON-DEFORMATION UNDER LOADING. TESTING & COMPACTION TO BE IN ACCORDANCE WITH VICROADS SPECIFICATIONS.
- COMPACTION & MATERIALS TESTING REPORT MUST BE PROVIDED TO COUNCIL'S ENGINEERS IMMEDIATELY FOLLOWING COMPACTION OF BASE.
- SUBGRADE UNDER ROAD PAVEMENT TO ACHIEVE CALIFORNIA BEARING RATIO (CBR) OF MINIMUM 10, OTHERWISE PAVEMENT DESIGN MUST BE PROVIDED TO COUNCIL'S ENGINEERS.

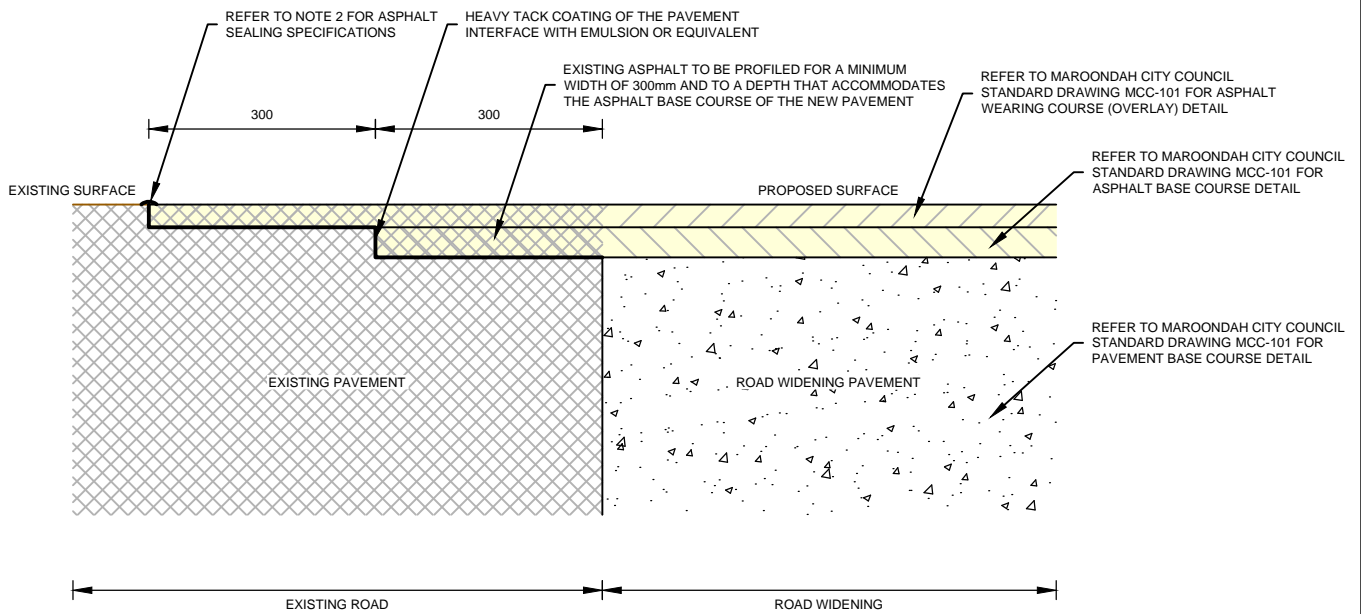
### UTILITY SERVICE AUTHORITY CONDUIT NOTES:

- CONDUITS - DEPTH AND LOCATION AS SPECIFIED BY UTILITY SERVICE AUTHORITY IN CONJUNCTION WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-106.
- CONDUIT POSITION TO BE MARKED ON BOTH KERB FACES  
WATER: W  
GAS: G  
ELECTRICITY: E  
TELECOMMUNICATIONS: T
- DEPTH OF CONDUIT TO BE MINIMUM 100mm BELOW PREPARED PAVEMENT MATERIAL.
- IF SUBGRADE IS TO BE STABILISED, CONDUITS SHALL BE PLACED BELOW THE STABILISED LAYER DEPTH BEFORE STABILISING IS CARRIED OUT.

ROAD HIERARCHY	DESIGN LIFE (EQUIVALENT STANDARD AXLES)	BASE MATERIAL DEPTH
LINK ROAD	>10 <sup>6</sup> 7	350mm COMPACTED DEPTH, 20mm CLASS 2 CRUSHED ROCK IN 3 LAYERS
COLLECTOR ROAD	10 <sup>6</sup> 6 - 10 <sup>6</sup> 7	300mm COMPACTED DEPTH, 20mm CLASS 2 CRUSHED ROCK IN 2 LAYERS
LOCAL ACCESS ROAD	10 <sup>6</sup> 5 - 10 <sup>6</sup> 6	250mm COMPACTED DEPTH, 20mm CLASS 2 CRUSHED ROCK IN 2 LAYERS
ANCILLARY ROAD (CAR PARK)	<10 <sup>6</sup> 5	200mm COMPACTED DEPTH, 20mm CLASS 2 CRUSHED ROCK IN 2 LAYERS

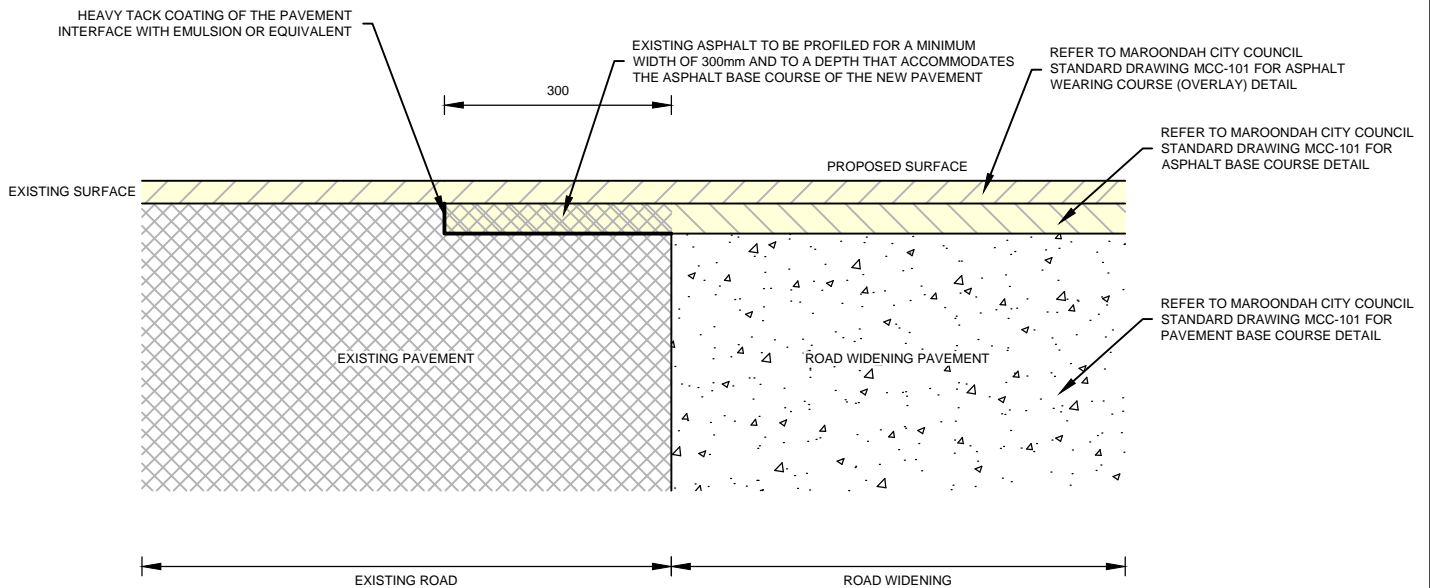
### PAVEMENT BASE COURSE DEPTH TABLE

 <p>Engineering &amp; Building Services Ph: (03) 9298 4292 www.maroondah.vic.gov.au</p>	<p>Title:</p> <h1>ROAD PAVEMENT - COMPOSITION</h1>	<p>Revision: 00</p>
		<p>Date: October 2020</p> <p>Sheet: 1 of 1</p> <p>Standard Drawing Number: MCC-101</p>



### ROAD WIDENING WITHOUT OVERLAY

SCALE 1:10 @ A4



### ROAD WIDENING WITH FULL WIDTH ASPHALT OVERLAY

SCALE 1:10 @ A4

#### NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. ALL JOINTS BETWEEN OLD AND NEW ASPHALT SURFACES TO BE SEALED WITH AN ASPHALT CRACK & JOINT SEALANT APPROVED BY MAROONDAH CITY COUNCIL.



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## ROAD PAVEMENT - WIDENING

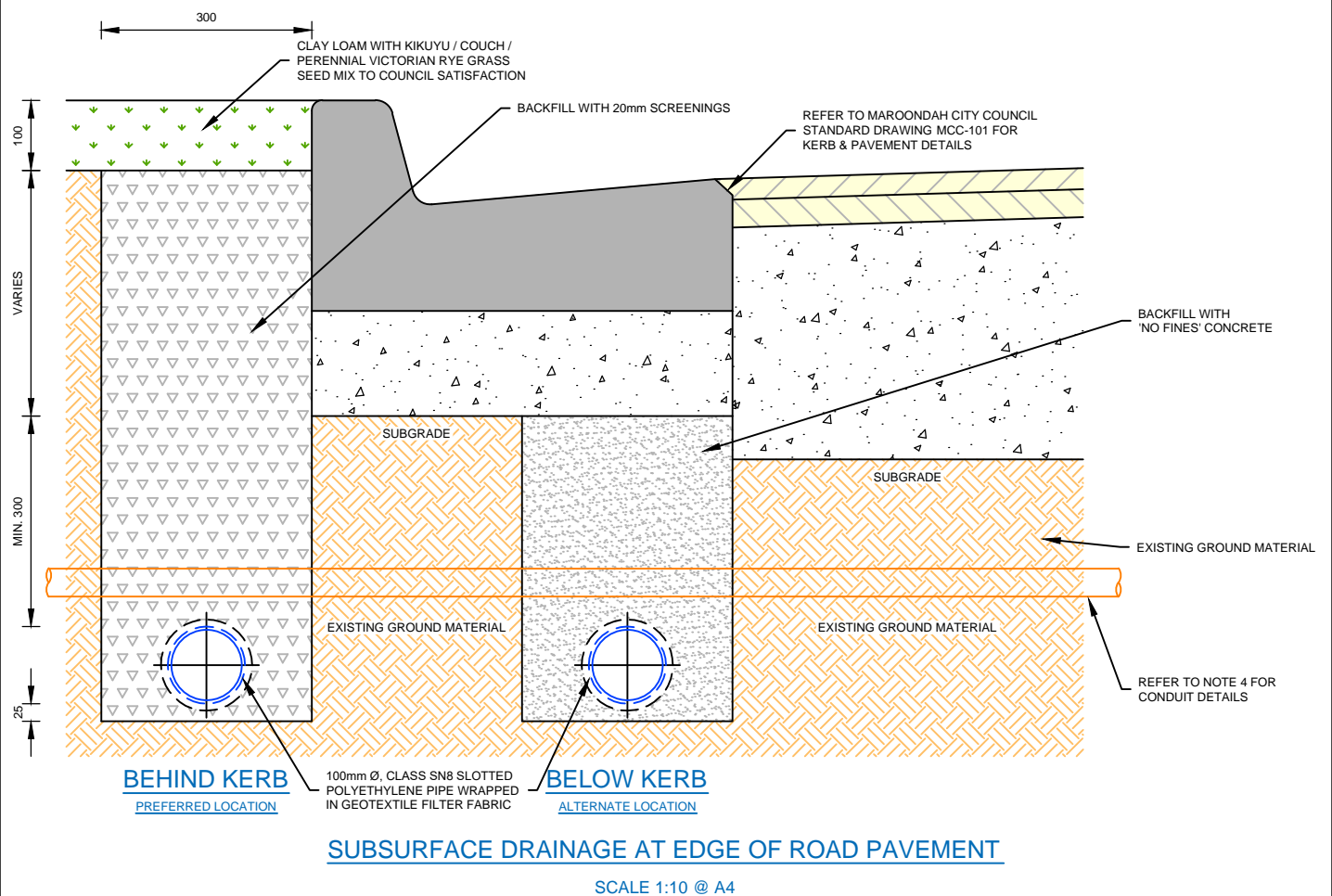
Revision: 00

Date: October 2020

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Standard Drawing Number:

**MCC-102**



#### NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. SUBSURFACE DRAINAGE TO BE CLASS SN8 IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS/NZS 2439:2007.
3. SUBSURFACE DRAINAGE TO BE LAID BELOW KERB, BACKFILLED WITH 'NO FINES' CONCRETE, IF EXISTING CONSTRAINTS PREVENT PLACEMENT BEHIND KERB AT COUNCIL ENGINEER'S DIRECTION.
4. SUBSURFACE DRAINAGE TO BE INSTALLED BELOW SERVICE CONDUITS.
5. SUBSURFACE DRAINAGE TO BE LAID AT A MINIMUM GRADE OF 1 in 200.
6. FLUSHOUT RISERS TO BE INSTALLED EVERY 120m IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-104, IF NO DRAINAGE PITS ARE AVAILABLE.



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## SUBSURFACE DRAINAGE - AT EDGE OF ROAD PAVEMENT

Revision: 00

Date: October 2020

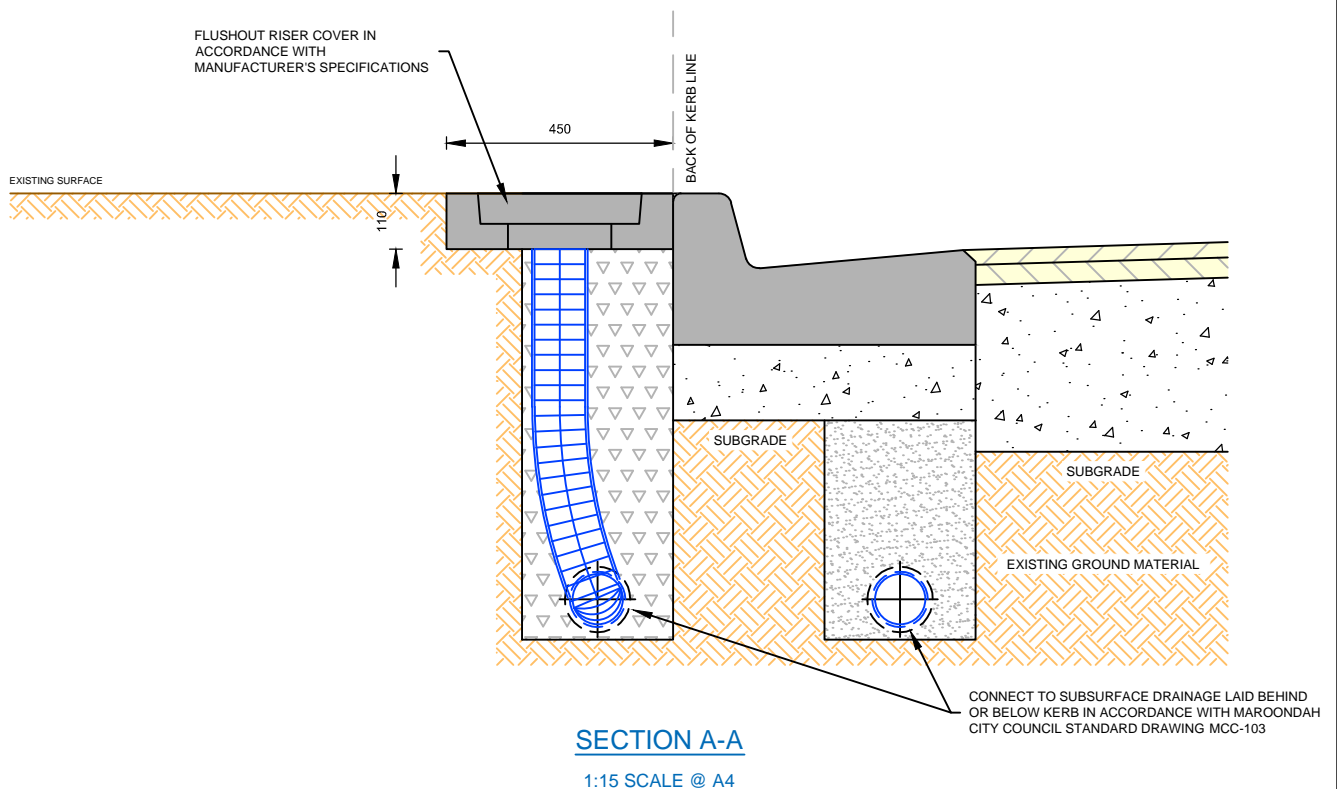
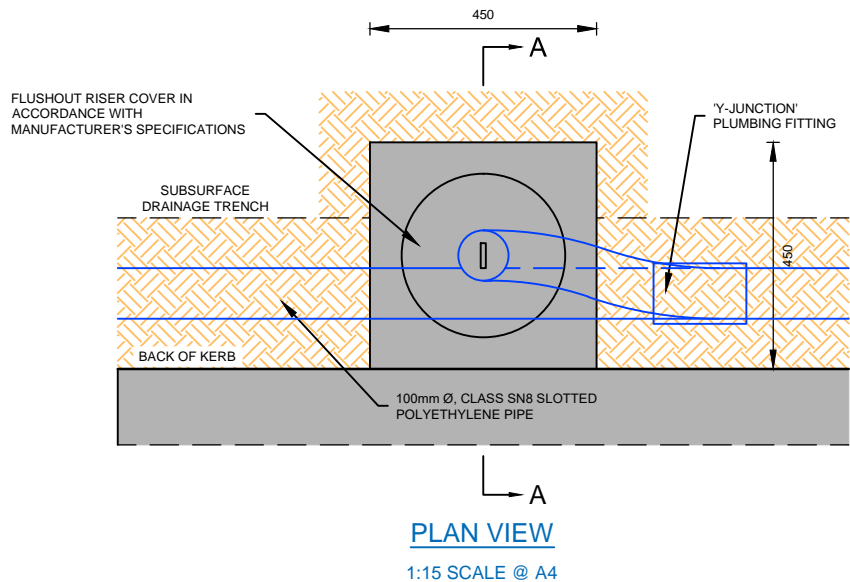
Sheet: 1 of 1

Standard Drawing Number:

**MCC-103**

NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. SUBSURFACE DRAINAGE TO BE CLASS SN8 IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS/NZS 2439:2007.
3. SUBSURFACE DRAINAGE TO BE LAID IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-103.
4. FLUSHOUT RISERS TO BE INSTALLED EVERY 120m UNLESS DRAINAGE PIT IS AVAILABLE.



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## SUBSURFACE DRAINAGE - FLUSHOUT RISER

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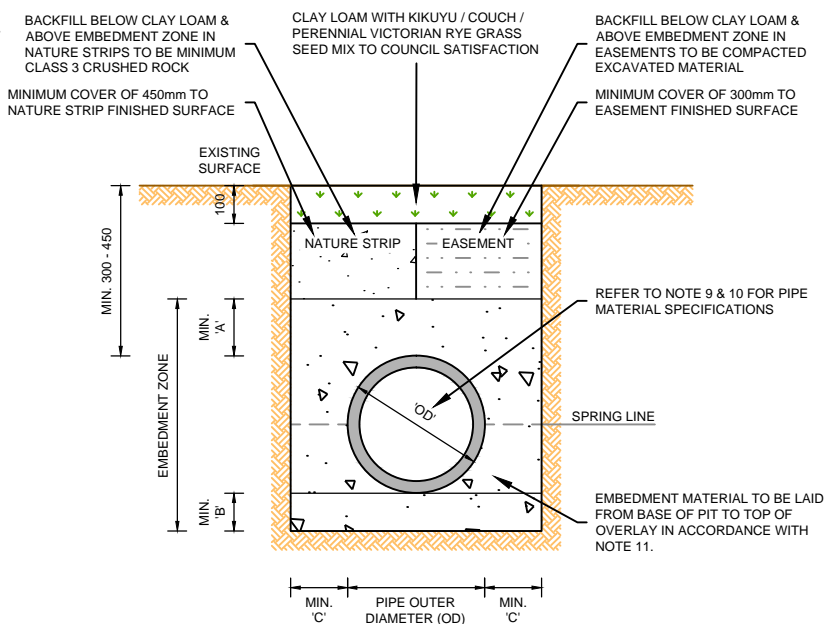
Standard Drawing Number:

**MCC-104**



## GENERAL NOTES:

- ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
- CRUSHED ROCK BACKFILL TO BE LAID AND COMPACTED IN LAYERS NOT EXCEEDING 150mm TO ACHIEVE A MINIMUM OF 98% MAXIMUM DRY DENSITY.
- ALL CRUSHED ROCK TO BE CURRENT VICROADS REGISTERED MIXES.
- CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.
- CONTRACTORS WORKING IN TRENCHES WITH A DEPTH EQUAL TO OR GREATER THAN 1.5m MUST PROVIDE APPROVED TRENCH SHORING FOR THE DURATION OF THE WORKS.
- ALL JOINTS BETWEEN OLD AND NEW ASPHALT SURFACES TO BE SEALED WITH AN ASPHALT CRACK & JOINT SEALANT APPROVED BY MAROONDAH CITY COUNCIL.
- THIS STANDARD IS TO BE READ IN CONJUNCTION WITH MANUFACTURER'S PIPE INSTALLATION SPECIFICATIONS.
- ALTERNATIVE DRAINAGE PIPE SPECIFICATIONS, REINSTATEMENT MATERIAL AND/OR TRENCH DIMENSIONS MAY BE PERMITTED SUBJECT TO COMPLIANCE WITH RELEVANT AUSTRALIAN STANDARDS, MANUFACTURER'S SPECIFICATIONS, AND MAROONDAH CITY COUNCIL APPROVAL.



## TRENCH WITHIN NATURE STRIP / EASEMENT

1:20 SCALE @ A4

## PIPE & TRENCH NOTES:

- PIPE SPECIFICATION WITHIN ROAD RESERVE (ROAD PAVEMENT & NATURE STRIP) TO BE AT MINIMUM:
  - 375mm SN8 CORRUGATED POLYPROPYLENE PIPE SUCH AS 'STORMPRO' OR 'BLACKMAX'
  - 375mm SN8 SOLVENT WELDED uPVC PIPE
  - 375mm CLASS 4 REINFORCED CONCRETE PIPE (RCP)
- PIPE SPECIFICATION WITHIN EASEMENTS TO BE AT MINIMUM:
  - 300mm SN8 CORRUGATED POLYPROPYLENE PIPE SUCH AS 'STORMPRO' OR 'BLACKMAX'
  - 300mm SN8 SOLVENT WELDED uPVC PIPE
  - 300mm CLASS 3 REINFORCED CONCRETE PIPE (RCP)

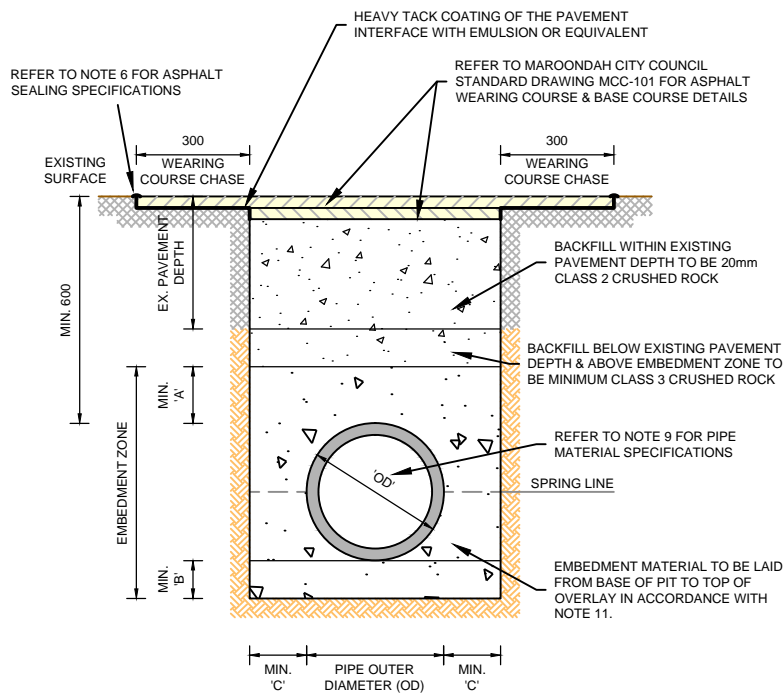
ALL PIPES ARE TO BE RUBBER RING JOINTED UNLESS SPECIFIED OTHERWISE.

- PIPE EMBEDMENT MATERIAL TO BE:
  - POLYPROPYLENE - 5-7mm CLASS 3 CRUSHED ROCK
  - uPVC - 14mm CLASS 3 CRUSHED ROCK
  - RCP - 20mm CLASS 3 CRUSHED ROCK
- TRENCH EMBEDMENT DIMENSIONS TO BE CALCULATED RELATIVE TO THE OUTER DIAMETER (OD) OF DRAINAGE PIPE IN ACCORDANCE WITH EMBEDMENT ZONE TABLE BELOW.

PIPE OUTER DIAMETER (mm)	OVERLAY 'A' (mm)		BEDDING 'B' (mm)		CLEARANCE 'C' (mm)	
	POLY/uPVC PIPE	CONCRETE PIPE	POLY/uPVC PIPE	CONCRETE PIPE	POLY/uPVC PIPE	CONCRETE PIPE
300 TO ≤450	150	150	100	100	200	150
450 TO ≤900	150	150	150	100	300	150

\* FOR PIPES WITH OUTER DIAMETER GREATER THAN 900mm, REFER TO PLUMBING & DRAINAGE AUSTRALIAN STANDARDS AS/NZS 3500.1:2018  
\* REFER TO NOTES FOR ADDITIONAL PIT SPECIFICATIONS

## EMBEDMENT ZONE TABLE



## TRENCH WITHIN ROAD PAVEMENT

1:20 SCALE @ A4



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## REINSTATEMENT OF DRAINAGE PIPE TRENCHES

Revision: 00

Date: October 2020

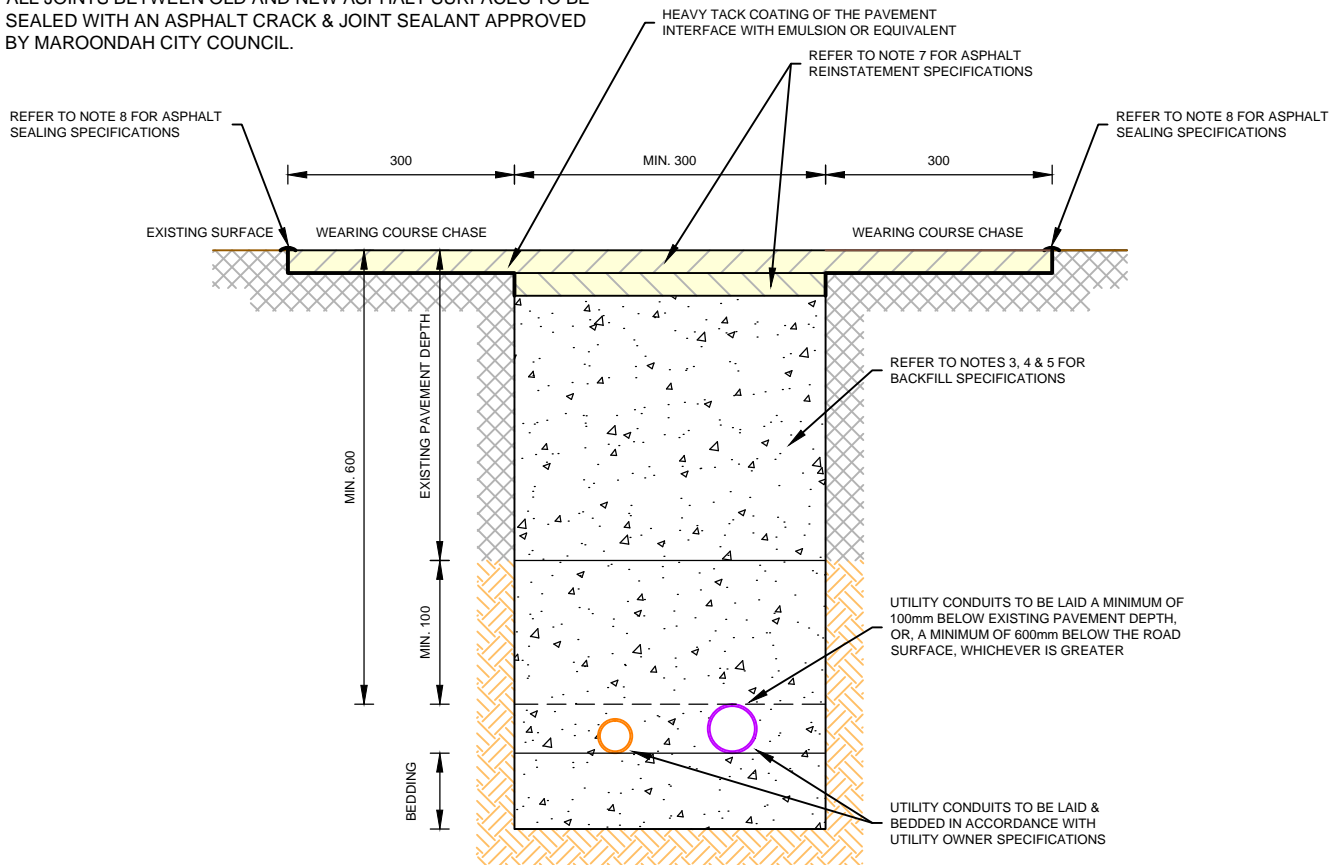
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MCC-105

NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. CONTRACTORS WORKING IN TRENCHES WITH A DEPTH EQUAL TO OR GREATER THAN 1.5m MUST PROVIDE APPROVED TRENCH SHORING FOR THE DURATION OF THE WORKS.
3. BACKFILL WITHIN EXISTING PAVEMENT DEPTH TO BE MINIMUM 20mm CLASS 2 CRUSHED ROCK COMPACTED IN LAYERS NOT EXCEEDING 150mm.
4. BACKFILL BELOW EXISTING PAVEMENT DEPTH TO BE MINIMUM 20mm CLASS 3 CRUSHED ROCK COMPACTED IN LAYERS NOT EXCEEDING 150mm.
5. BACKFILL WITHIN NATURE STRIPS TO BE MINIMUM 20mm CLASS 3 CRUSHED ROCK COMPACTED IN LAYERS NOT EXCEEDING 150mm. SURFACE LEVEL TO BE REINSTATED WITH 100mm THICK CLAY LOAM WITH KIKUYU / COUCH / PERENNIAL VICTORIAN RYE GRASS SEED MIX TO COUNCIL SATISFACTION.
6. CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.
7. ASPHALT ROAD SURFACE DEPTH TO BE REINSTATED IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-101, OR, EXISTING ROAD PAVEMENT DEPTH, WHICHEVER IS GREATER.
8. ALL JOINTS BETWEEN OLD AND NEW ASPHALT SURFACES TO BE SEALED WITH AN ASPHALT CRACK & JOINT SEALANT APPROVED BY MAROONDAH CITY COUNCIL.



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## REINSTATEMENT OF UTILITY SERVICE TRENCHES IN ROADS

Revision: 00

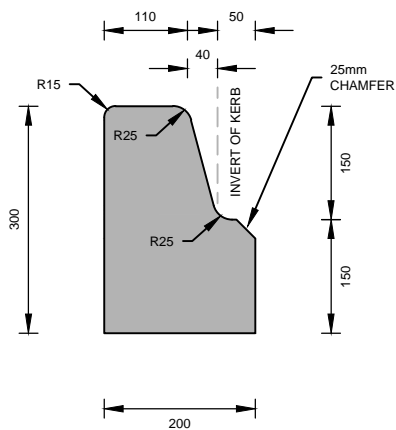
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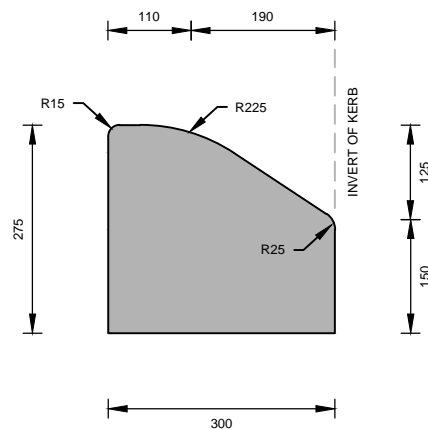
**MCC-106**





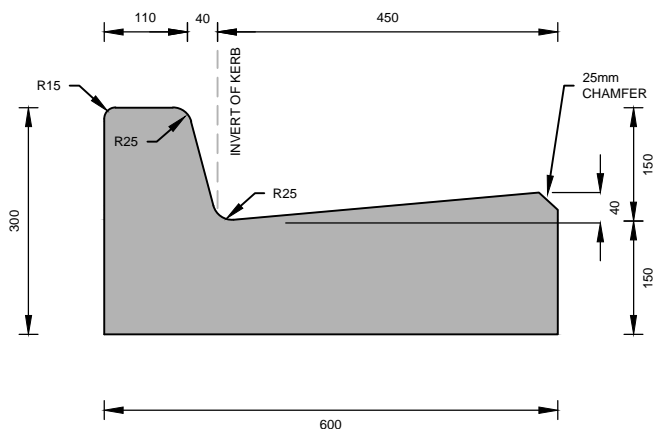
**B1 - BARRIER KERB**

SCALE 1:10 @ A4



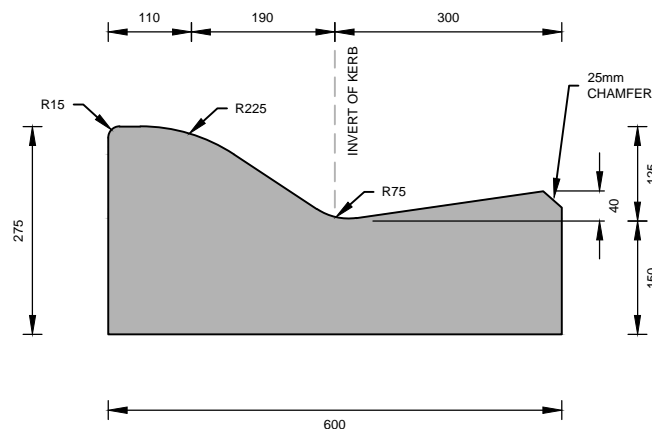
**SM1 - SEMI-MOUNTABLE KERB**

SCALE 1:10 @ A4



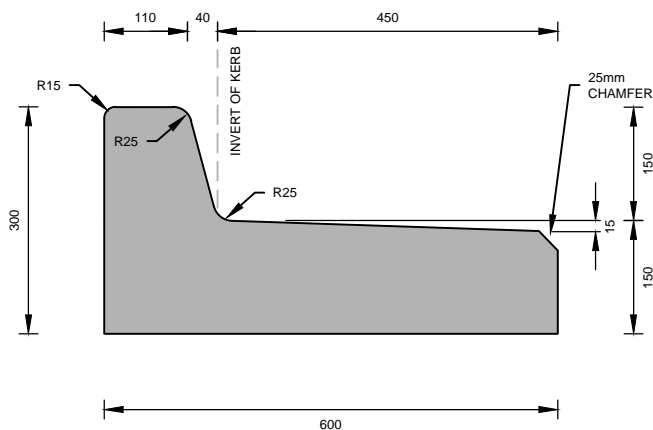
**B2 - BARRIER KERB & CHANNEL**

SCALE 1:10 @ A4



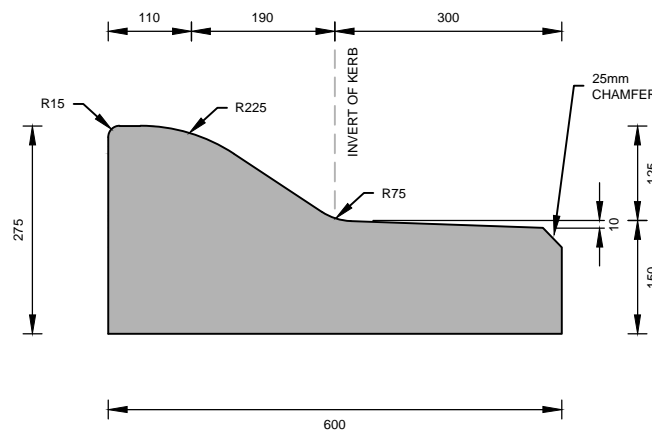
**SM2 - SEMI-MOUNTABLE KERB & CHANNEL**

SCALE 1:10 @ A4



**B3 - BARRIER KERB & OUTFALL TRAY**

SCALE 1:10 @ A4



**SM3 - SEMI-MOUNTABLE KERB & OUTFALL TRAY**

SCALE 1:10 @ A4

**NOTES:**

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. ALL KERBS TO BE CONSTRUCTED FROM 25MPa 'KERB MIX' CONCRETE ON A MINIMUM 150mm COMPACTED DEPTH, 20mm CLASS 3 CRUSHED ROCK IN ACCORDANCE WITH VICROADS STANDARD DOCUMENT SECTION 703.
3. CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.
4. CONSTRUCTION JOINTS AT MAXIMUM 2.5m INTERVALS.
5. TRANSITION FROM ONE KERB PROFILE TO ANOTHER SHOULD TAKE PLACE OVER ONE 2.5m LENGTH.



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**KERB PROFILES**

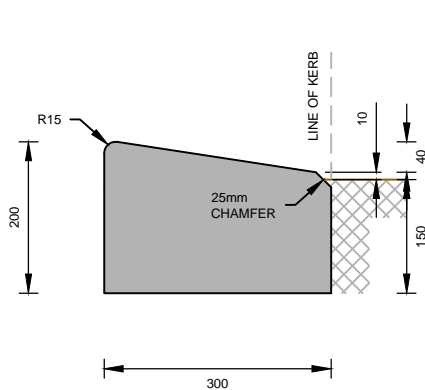
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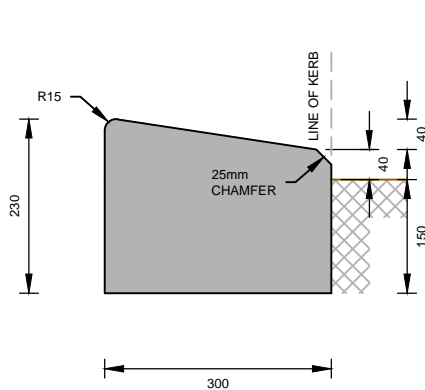
Standard Drawing Number:

**MCC-107**



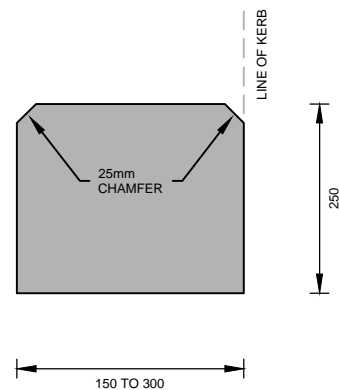
**M1 - MOUNTABLE KERB**

SCALE 1:10 @ A4



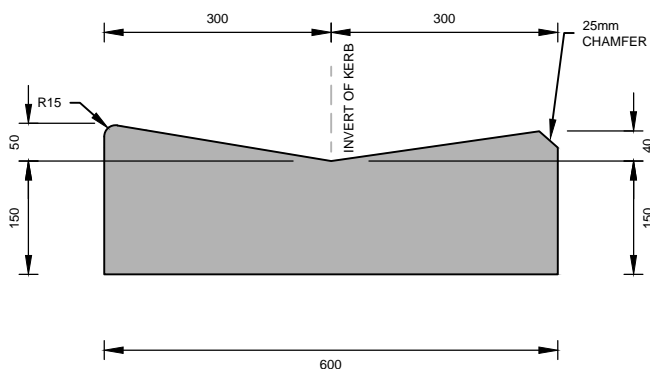
**M4 - MOUNTABLE KERB**

SCALE 1:10 @ A4



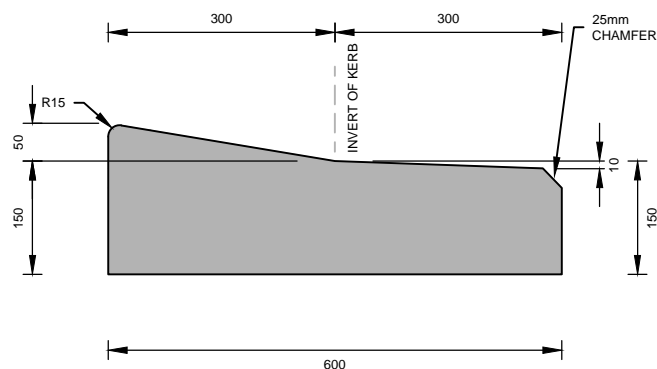
**EDGE STRIP**

SCALE 1:10 @ A4



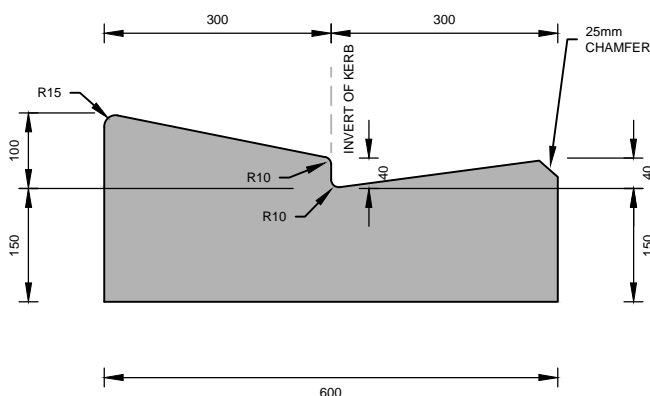
**M2 - MOUNTABLE KERB & CHANNEL**

SCALE 1:10 @ A4



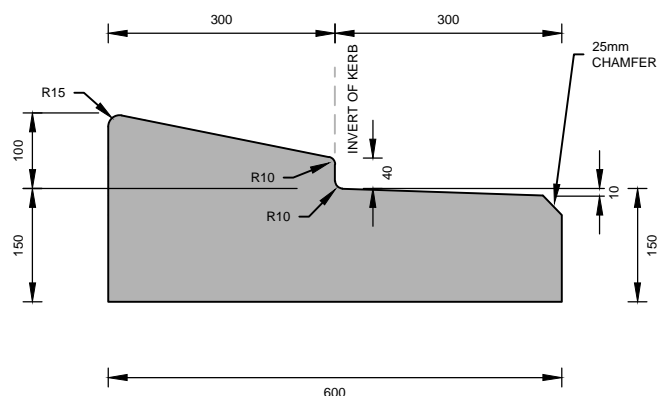
**M3 - MOUNTABLE KERB & OUTFALL TRAY**

SCALE 1:10 @ A4



**M5 - MOUNTABLE KERB & CHANNEL**

SCALE 1:10 @ A4



**M6 - MOUNTABLE KERB & OUTFALL TRAY**

SCALE 1:10 @ A4

**NOTES:**

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. ALL KERBS TO BE CONSTRUCTED FROM 25MPa 'KERB MIX' CONCRETE ON A MINIMUM 150mm COMPACTED DEPTH, 20mm CLASS 3 CRUSHED ROCK IN ACCORDANCE WITH VICROADS STANDARD DOCUMENT SECTION 703.
3. CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.
4. CONSTRUCTION JOINTS AT MAXIMUM 2.5m INTERVALS.
5. TRANSITION FROM ONE KERB PROFILE TO ANOTHER SHOULD TAKE PLACE OVER ONE 2.5m LENGTH.



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**KERB PROFILES**

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Standard Drawing Number:

**MCC-107**

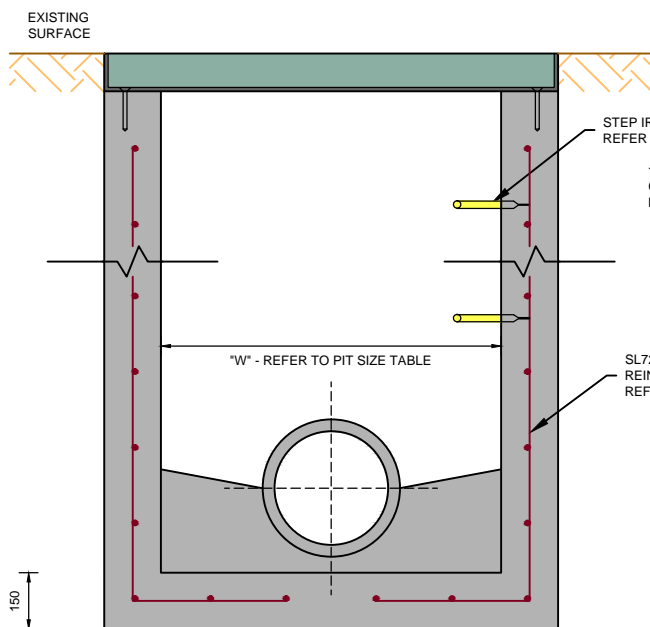
# NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. NO INTERNAL DIMENSION OF JUNCTION PITS SHALL BE LESS THAN PIPE DIAMETER PLUS 150mm.
3. WHERE PIT DEPTH EXCEEDS 1000mm, STEP IRONS ARE TO BE INSTALLED IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-202.
4. WHERE PIT DEPTH EXCEEDS 1500mm, PIT WALLS ARE TO BE REINFORCED WITH SL72 MESH CENTRALLY PLACED.
5. WHERE PIT DEPTH EXCEEDS 1800mm AND/OR PIPE DIAMETER EXCEEDS 450mm, PIT WALLS ARE TO BE 200mm THICK CONCRETE.
6. WHERE PIT DEPTH EXCEEDS 3600mm, PIT IS TO BE DESIGNED IN ACCORDANCE WITH VICROADS STANDARD DRAWING SD 1011.
7. PRECAST PITS MAY BE USED AS JUNCTION PITS SUBJECT TO COUNCIL APPROVAL IN WRITING.
8. WITHIN NON-TRAFFICABLE AREAS, ALL SOLID PIT LIDS ARE TO BE MINIMUM CLASS B, LIGHTWEIGHT & LOCKABLE., IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
9. WITHIN TRAFFICABLE AREAS, ALL PIT LIDS ARE TO BE MINIMUM CLASS D, HEAVY DUTY, IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
10. ALL GRATED PIT LIDS ARE TO BE BICYCLE SAFE & INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

INTERNAL DIMENSIONS OF PIT (mm)					
PIPE SIZE (mm)	D	L	W	STEP IRON	PIT COVER SIZE
LESS THAN 450 DIA	<1000	900	600	NO	TO SUIT
	>1000	900	900	YES	
GREATER THAN 450 DIA	<1000	900	DIA + 150	NO	
	>1000	900	900 (OR DIA + 150, IF DIA > 750)	YES	

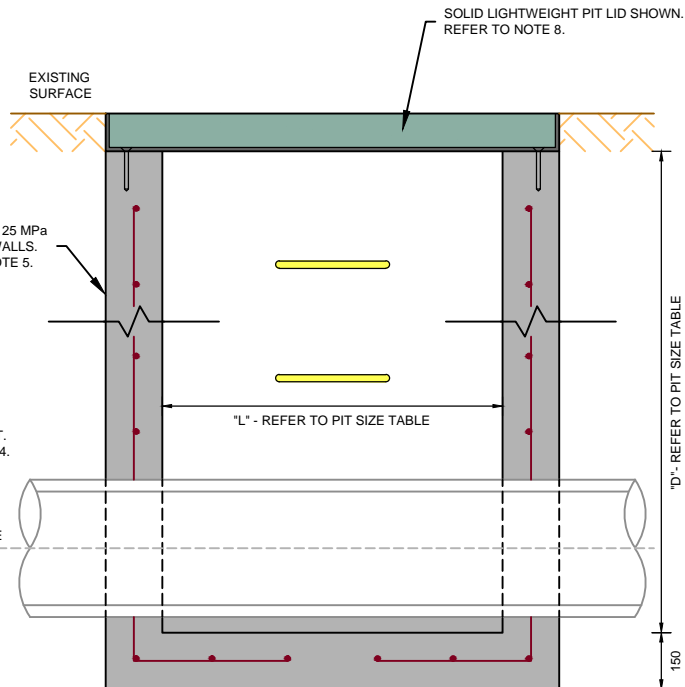
\* REFER TO NOTES FOR ADDITIONAL PIT SPECIFICATIONS

## MINIMUM INTERNAL PIT SIZE TABLE



### SECTION B-B

1:20 SCALE @ A4



### SECTION A-A

1:20 SCALE @ A4

BASE OF PIT TO BE FOUNDED ON FIRM NATURAL GROUND TO COUNCIL SATISFACTION



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Title:

## DRAINAGE - JUNCTION PIT

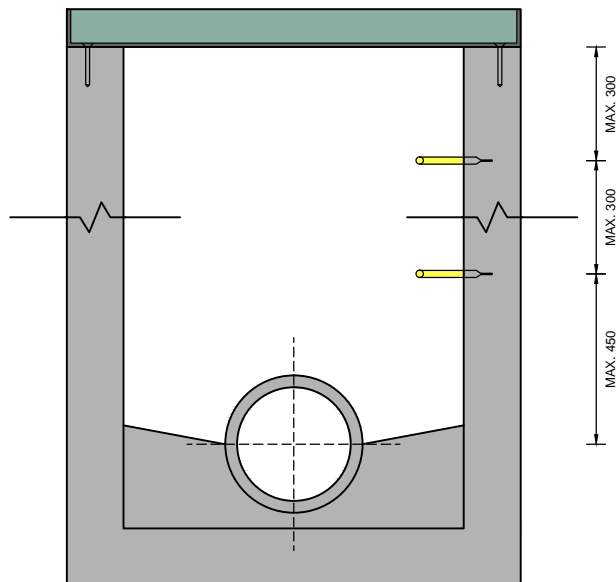
Revision: 00

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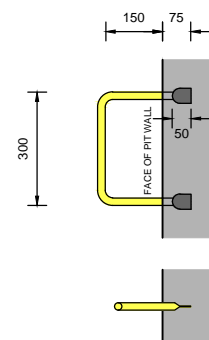
Standard Drawing Number:

MCC-201



SIDE VIEW

1:20 SCALE @ A4



STEP IRON DETAIL

1:20 SCALE @ A4

NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. STEP IRONS SHALL BE USED IN PITS EXCEEDING 1m IN DEPTH.
3. STEP IRONS SHALL COMMENCE 450mm FROM BOTTOM OF PIT WITH MAXIMUM 300mm SPACING TO WITHIN 300mm OF THE TOP.
4. STEP IRONS SHALL BE PLACED CENTRALLY WITH PIT COVER OPENING.
5. STEP IRONS SHALL BE PLASTIC COATED GALVANISED STEEL.
6. STEEL FOR STEP IRONS SHALL BE STRUCTURAL GRADE 250 IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS/NZS 3679.1:2016.
7. STEP IRONS SHALL HAVE SHARP EDGES ROUNDED AND HOT DIP GALVANISED AFTER FABRICATION IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS/NZS 4680:2006.
8. STEP IRONS INSTALLED IN PRECAST PITS SHALL BE LOAD TESTED TO AUSTRALIAN STANDARDS AS 4198:1994.



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Title:

## DRAINAGE - STEP IRONS

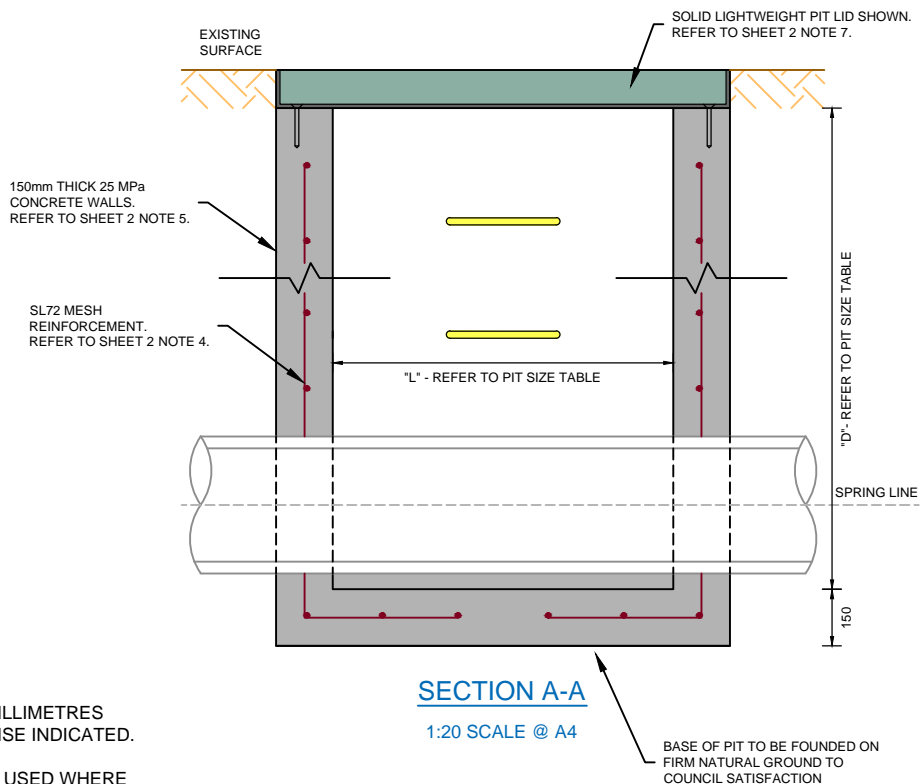
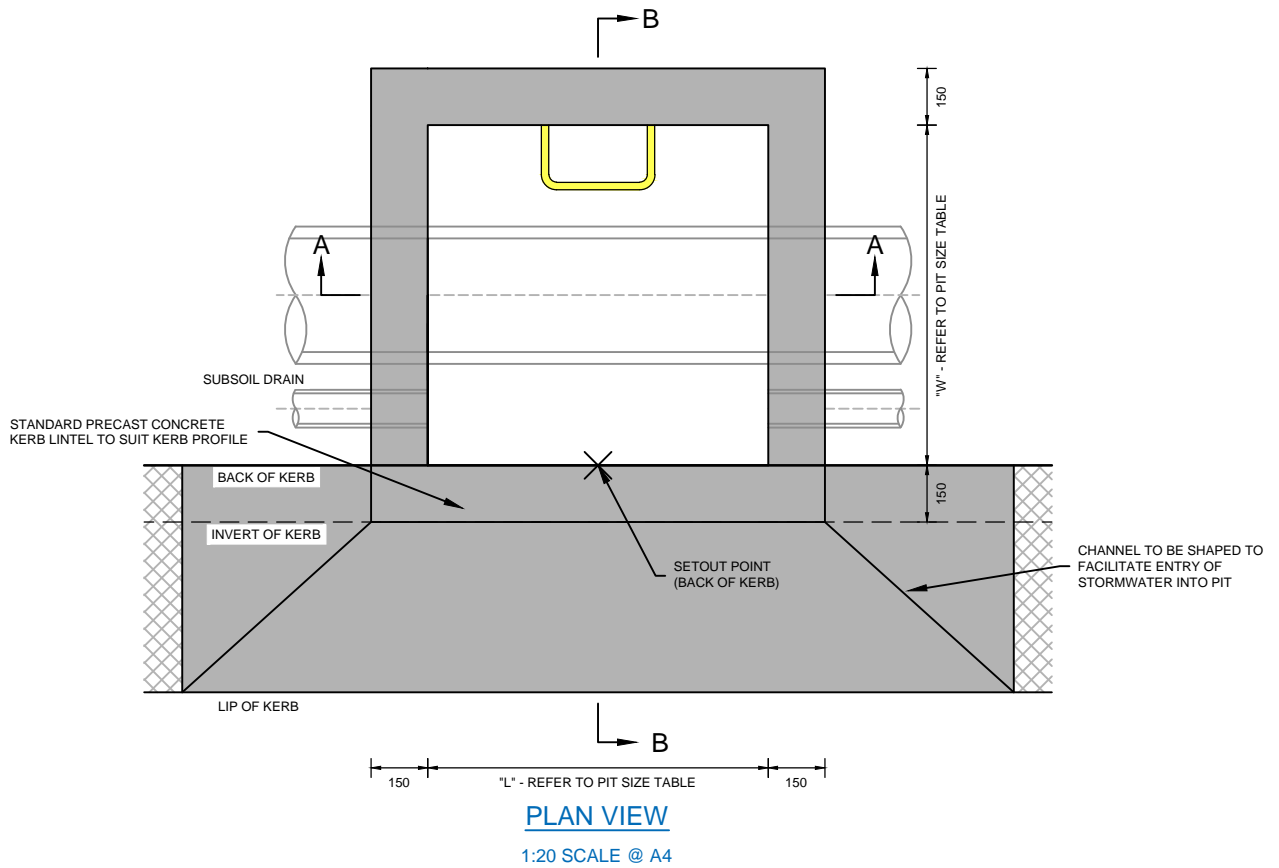
Revision: 00

Date: October 2020

Sheet: 1 of 1

Standard Drawing Number:

**MCC-202**



NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. STANDARD TO BE USED WHERE STORMWATER DRAINAGE PIPE IS WITHIN THE NATURE STRIP.
3. REFER TO SHEET 2 FOR ADDITIONAL PIT CONSTRUCTION NOTES.



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Title:

# DRAINAGE - SIDE ENTRY PIT - DRAINAGE PIPE WITHIN NATURE STRIP

Revision: 00

Date: October 2020

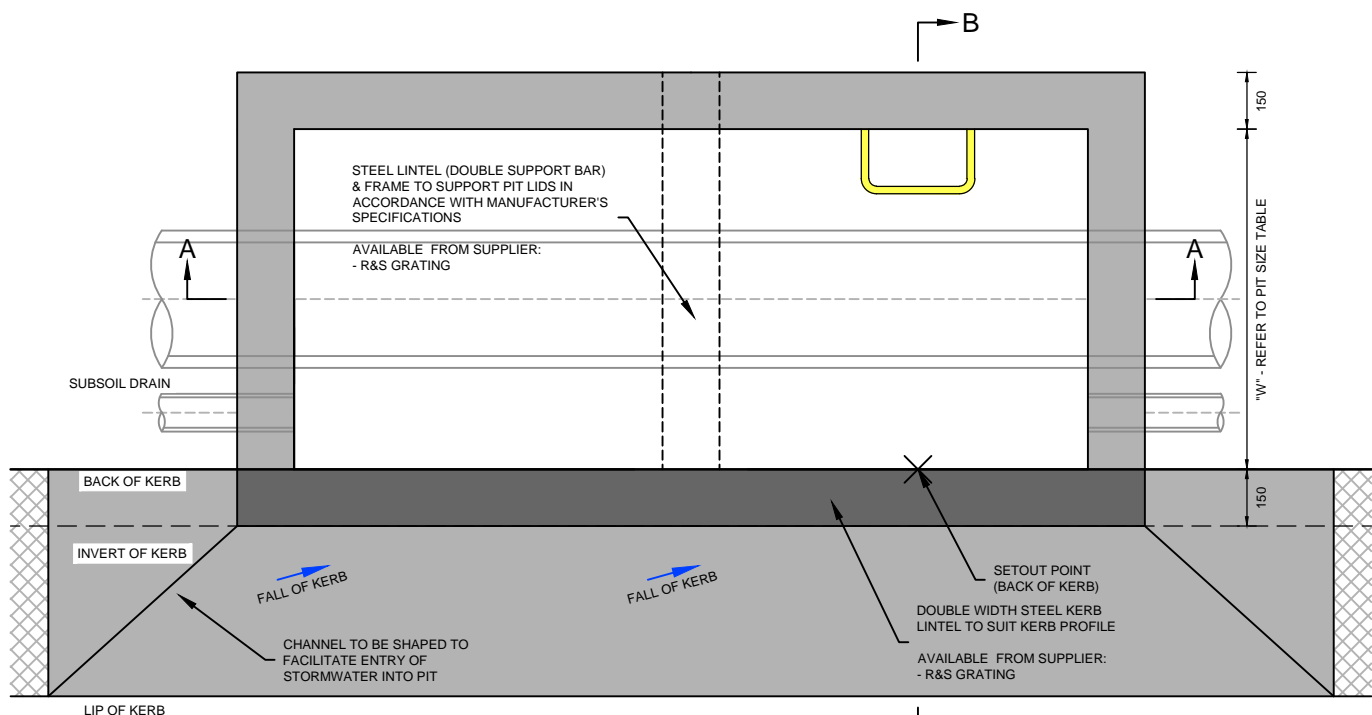
Sheet: 1 of 2

Standard Drawing Number:

MCC-203

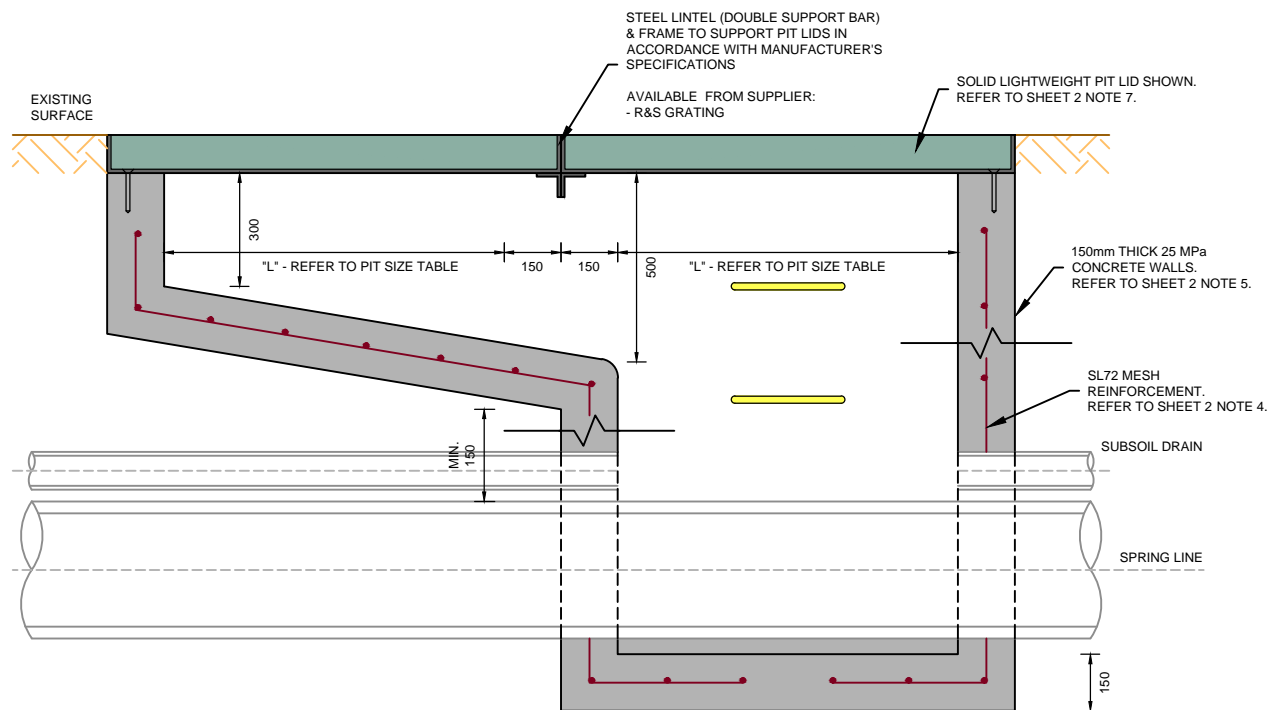






### PLAN VIEW

1:20 SCALE @ A4



### SECTION A-A

1:20 SCALE @ A4

#### NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. STANDARD TO BE USED WHERE STORMWATER DRAINAGE PIPE IS WITHIN THE NATURE STRIP.
3. REFER TO SHEET 2 FOR ADDITIONAL PIT CONSTRUCTION NOTES.



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Title:

## DRAINAGE - DOUBLE SIDE ENTRY PIT DRAINAGE PIPE WITHIN NATURE STRIP

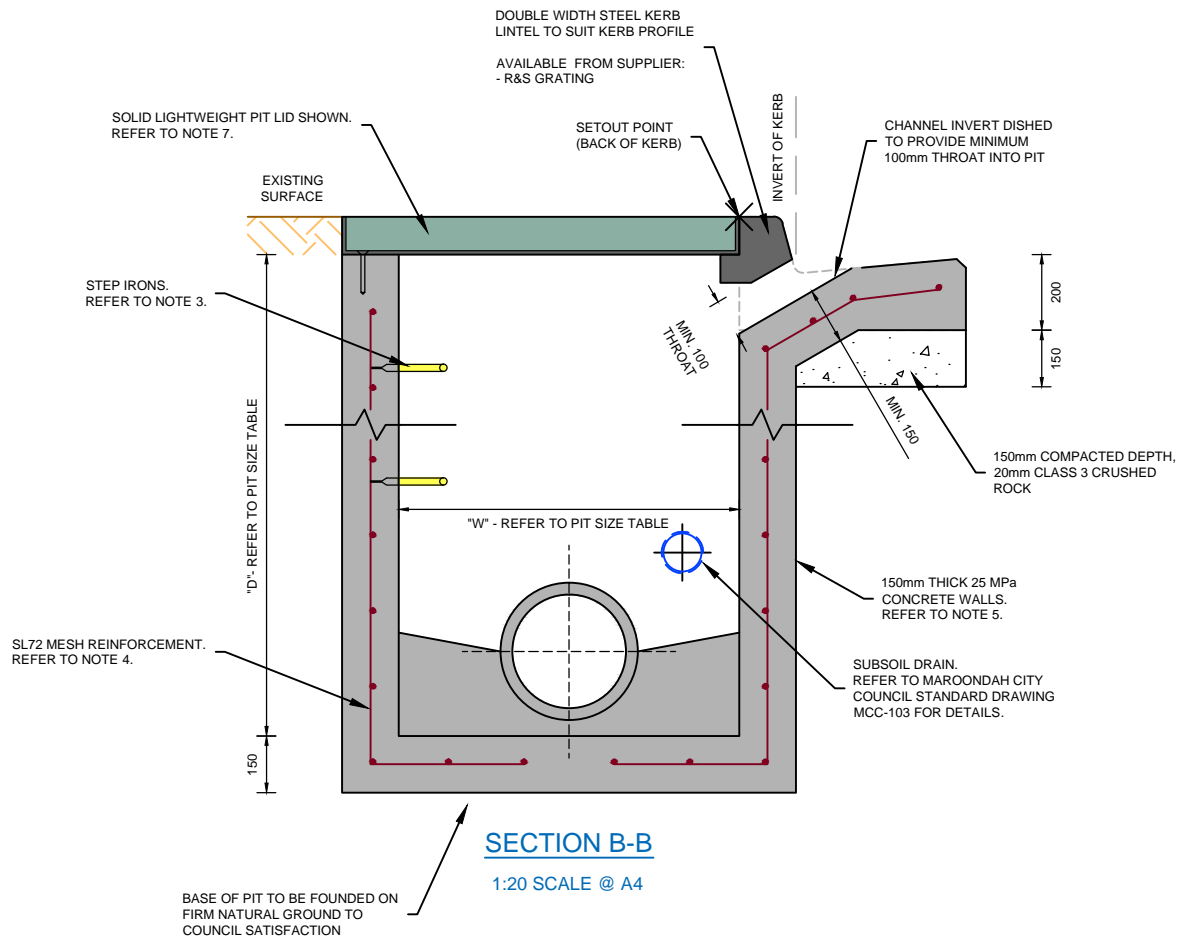
Revision: 00

Date: October 2020

Sheet: 1 of 2

Standard Drawing Number:

**MCC-204**



#### NOTES:

- DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
- NO INTERNAL DIMENSION OF JUNCTION PITS SHALL BE LESS THAN PIPE DIAMETER PLUS 150mm.
- WHERE PIT DEPTH EXCEEDS 1000mm, STEP IRONS ARE TO BE INSTALLED IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-202.
- WHERE PIT DEPTH EXCEEDS 1500mm, PIT WALLS ARE TO BE REINFORCED WITH SL72 MESH CENTRALLY PLACED.
- WHERE PIT DEPTH EXCEEDS 1800mm AND/OR PIPE DIAMETER EXCEEDS 450mm, PIT WALLS ARE TO BE 200mm THICK CONCRETE.
- WHERE PIT DEPTH EXCEEDS 3600mm, PIT IS TO BE DESIGNED IN ACCORDANCE WITH VICROADS STANDARD DRAWING SD 1011.
- SOLID LIGHTWEIGHT PIT LID IS TO BE MINIMUM CLASS B & LOCKABLE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.

PIPE SIZE (mm)	INTERNAL DIMENSIONS OF PIT (mm)			STEP IRON	PIT COVER SIZE
	D	L	W		
LESS THAN 450 DIA	<1000	900	600	NO	TO SUIT
	>1000	900	900	YES	
GREATER THAN 450 DIA	<1000	900	DIA + 150	NO	
	>1000	900	900 (OR DIA + 150, IF DIA > 750)	YES	

\* REFER TO NOTES FOR ADDITIONAL PIT SPECIFICATIONS

#### MINIMUM INTERNAL PIT SIZE TABLE



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Title:

## DRAINAGE - DOUBLE SIDE ENTRY PIT DRAINAGE PIPE WITHIN NATURE STRIP

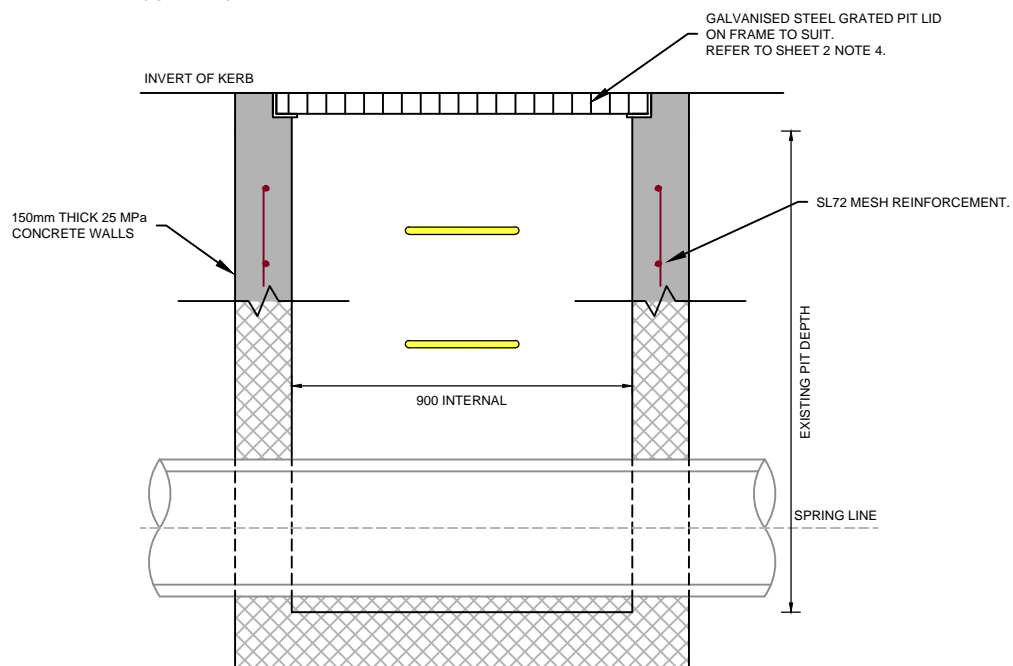
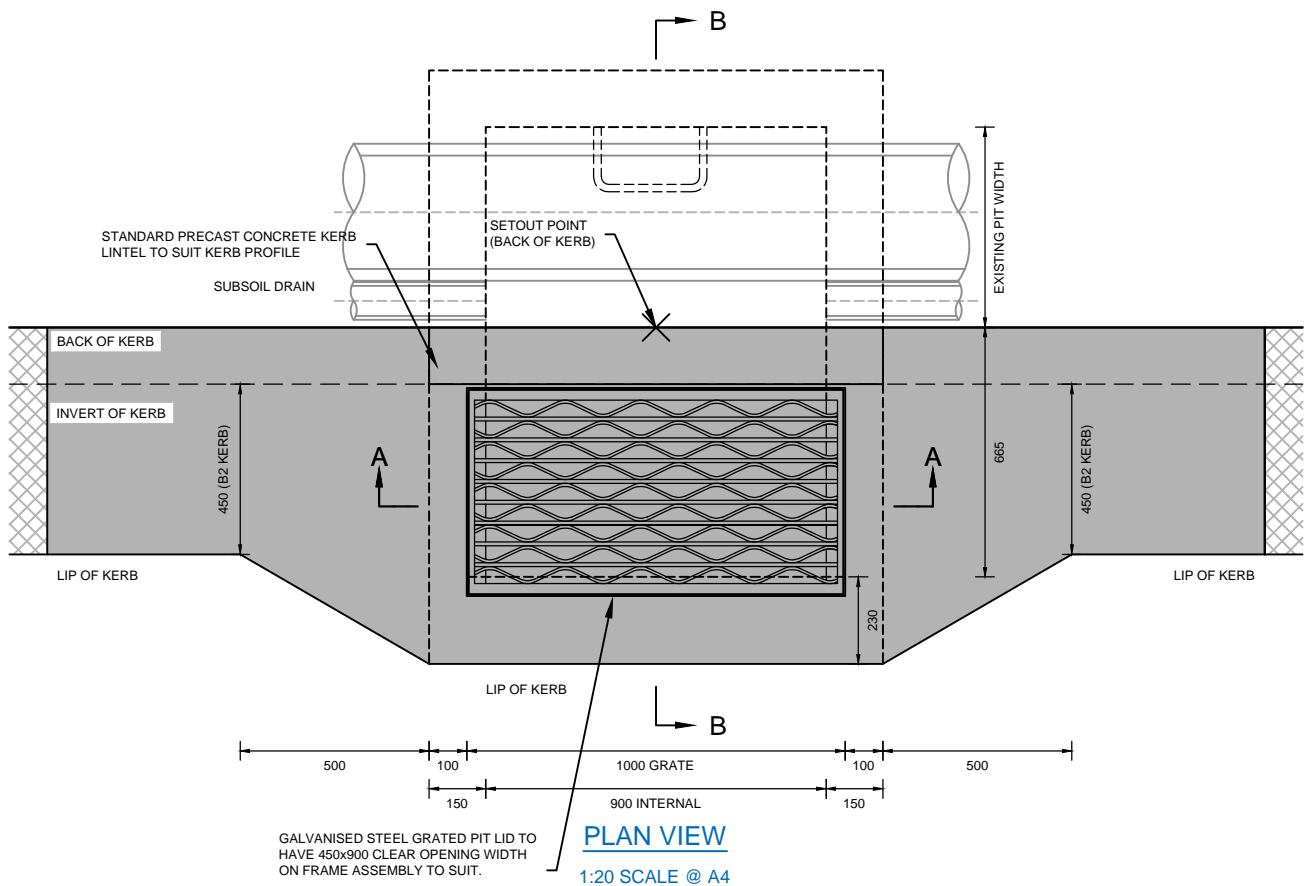
Revision: 00

Date: October 2020

Sheet: 2 of 2

Standard Drawing Number:

**MCC-204**



NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. STANDARD TO BE USED WHERE AN EXISTING DRAINAGE PIT EXISTS BEHIND BACK OF KERB, AND IS TO BE MODIFIED TO IMPROVE INLET CAPACITY.
3. REFER TO SHEET 2 FOR ADDITIONAL PIT CONSTRUCTION NOTES.



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Title:

# DRAINAGE - EXISTING SIDE ENTRY PIT - CONVERSION TO GRATED SIDE ENTRY PIT

Revision:

01

Date:

December 2020

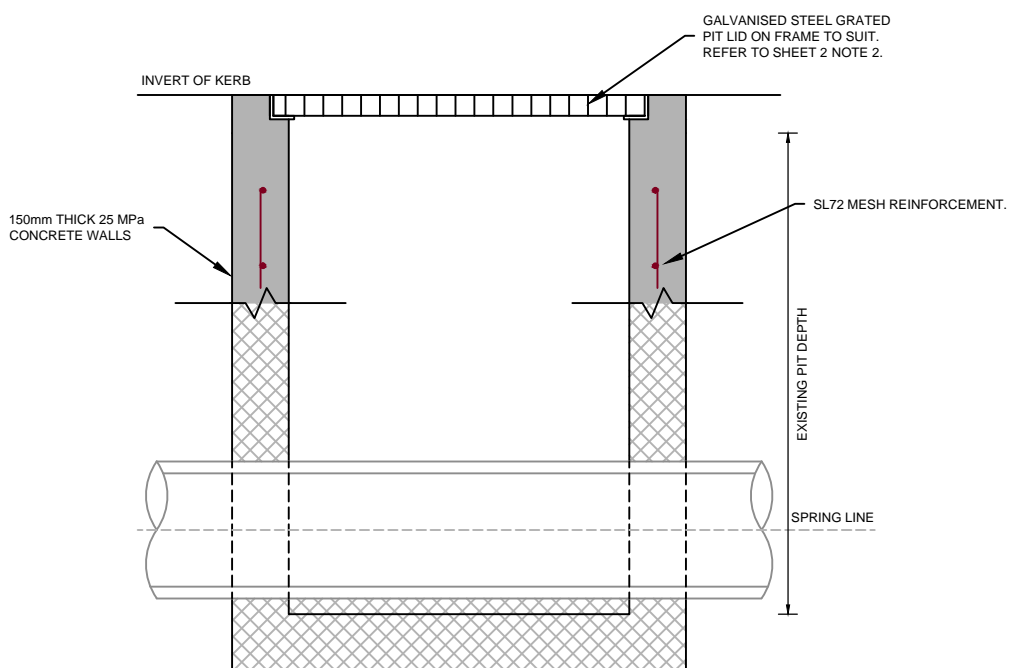
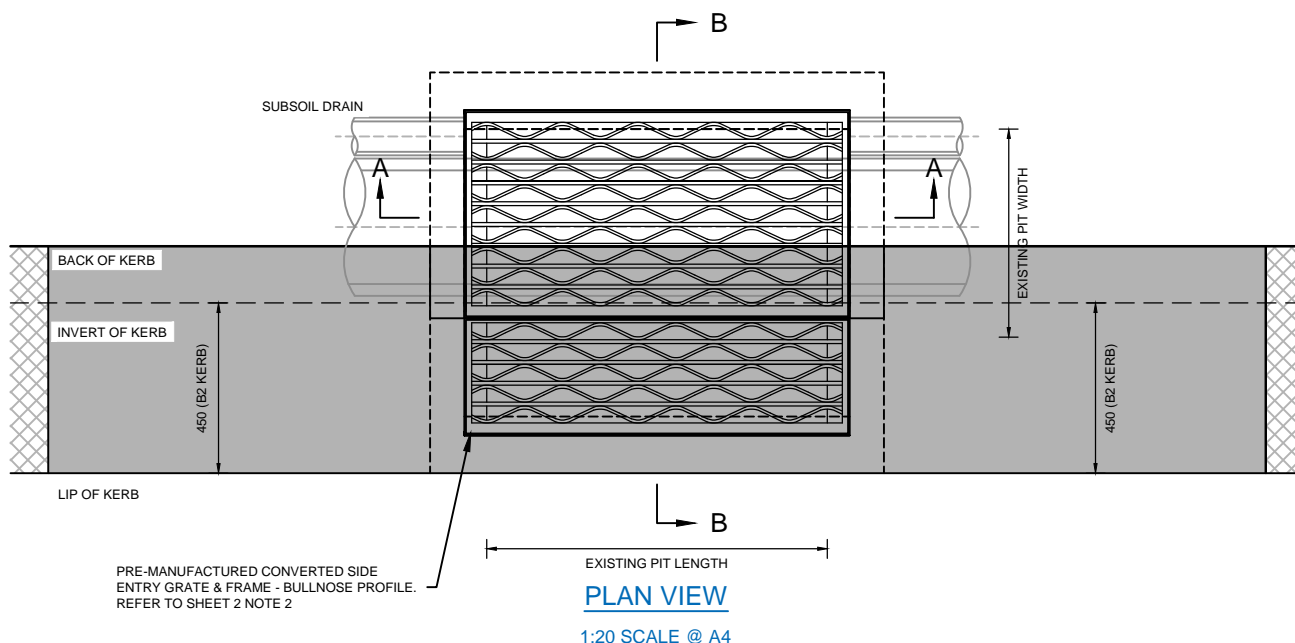
Sheet:

1 of 2

Standard Drawing Number:

**MCC-205**

MCC-205



#### NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. STANDARD TO BE USED WHERE AN EXISTING SIDE ENTRY PIT IS TO BE CONVERTED INTO A GRATED SIDE ENTRY PIT WITHIN A VEHICLE CROSSING LAYBACK
3. REFER TO SHEET 2 FOR ADDITIONAL PIT CONSTRUCTION NOTES.



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Title:

## DRAINAGE - EXISTING SIDE ENTRY PIT - CONVERSION TO GRATED PIT AT VEHICLE CROSSING

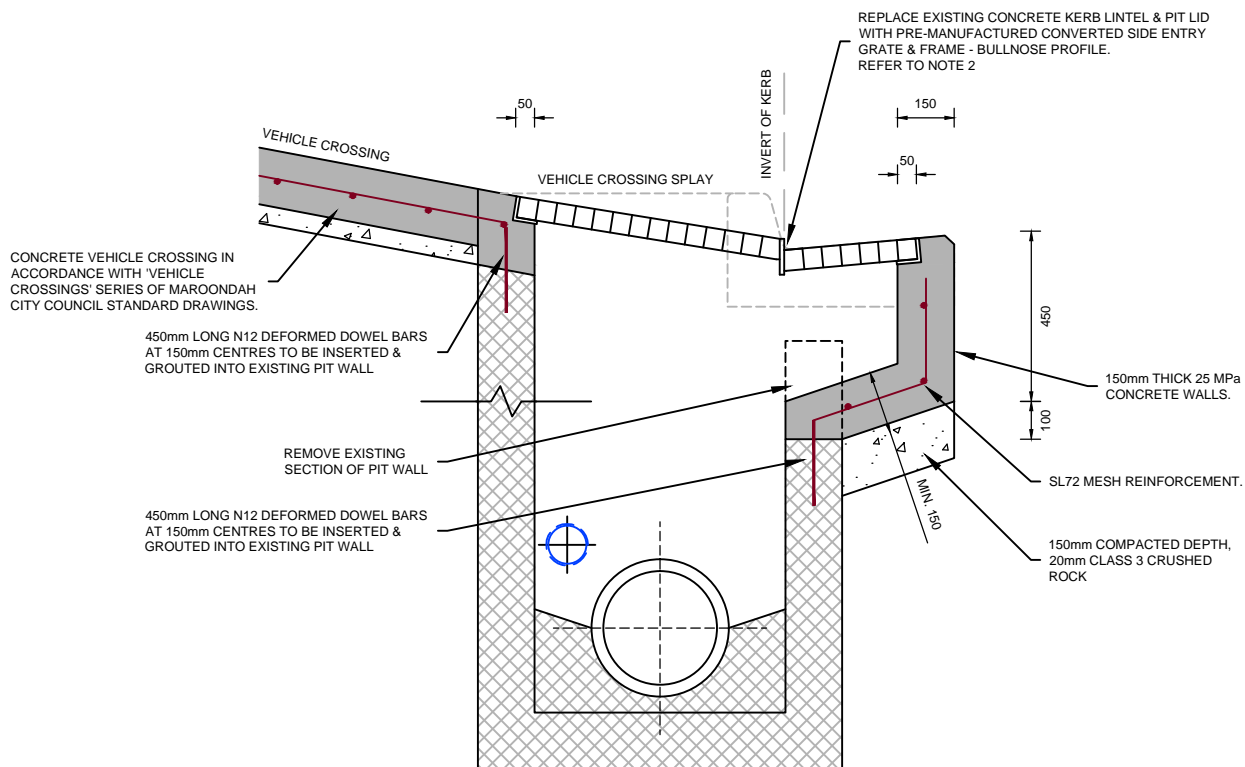
Revision: 01

Date: December 2020

Sheet: 1 of 2

Standard Drawing Number:

**MCC-206**



### SECTION B-B

1:20 SCALE @ A4

#### NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. GRATED PIT LID TO BE MINIMUM CLASS D, HEAVY DUTY & BICYCLE SAFE, IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.
4. CONVERTED GRATED PIT AVAILABLE AT SUPPLIERS: 'R&S GRATING' & 'SVC'



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Title:

## DRAINAGE - EXISTING SIDE ENTRY PIT - CONVERSION TO GRATED PIT AT VEHICLE CROSSING

Revision: 01

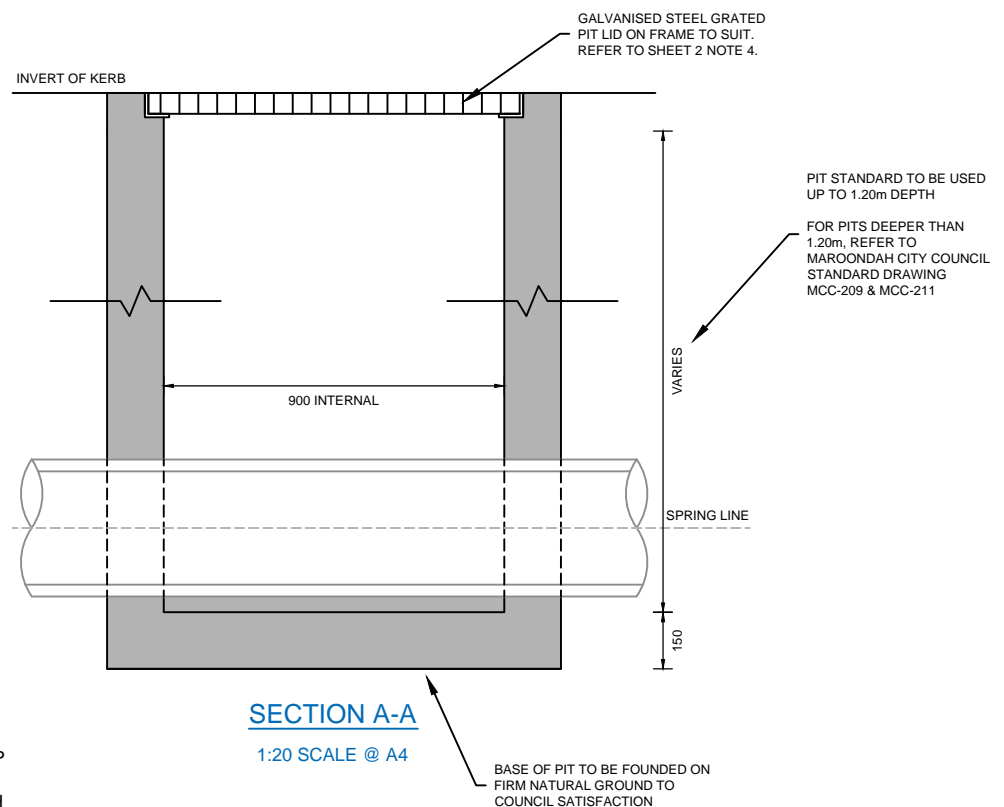
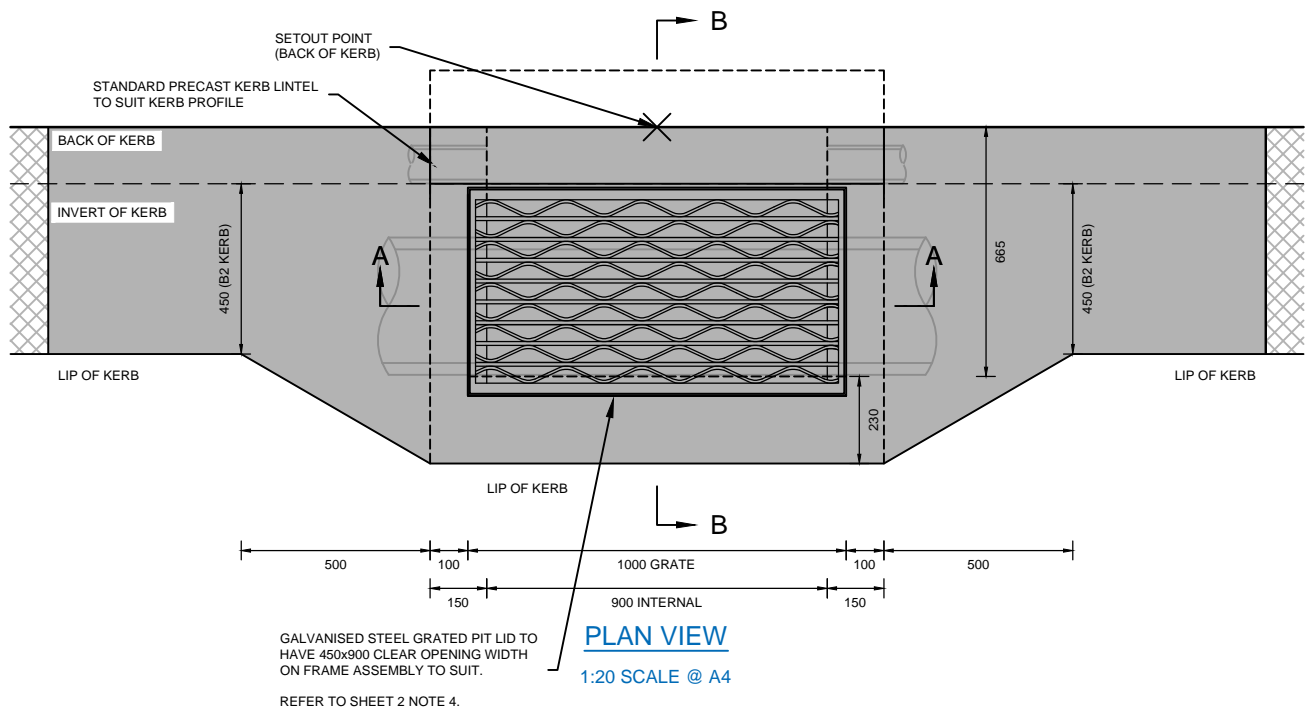
Date: December 2020

Sheet: 2 of 2

Standard Drawing Number:

**MCC-206**





#### NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. STANDARD TO BE USED WHERE STORMWATER DRAINAGE PIPE CANNOT BE CONSTRUCTED WITHIN NATURE STRIP & PIT ACCESS MUST BE WITHIN THE ROADWAY.
3. STANDARD TO BE USED FOR PITS UP TO 1.20m DEPTH. FOR PITS DEEPER THAN 1.20m, REFER TO MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-209 & MCC-211.
4. REFER TO SHEET 2 FOR ADDITIONAL PIT CONSTRUCTION NOTES.



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Title:

## DRAINAGE - GRATED SIDE ENTRY PIT - DRAINAGE PIPE WITHIN ROADWAY

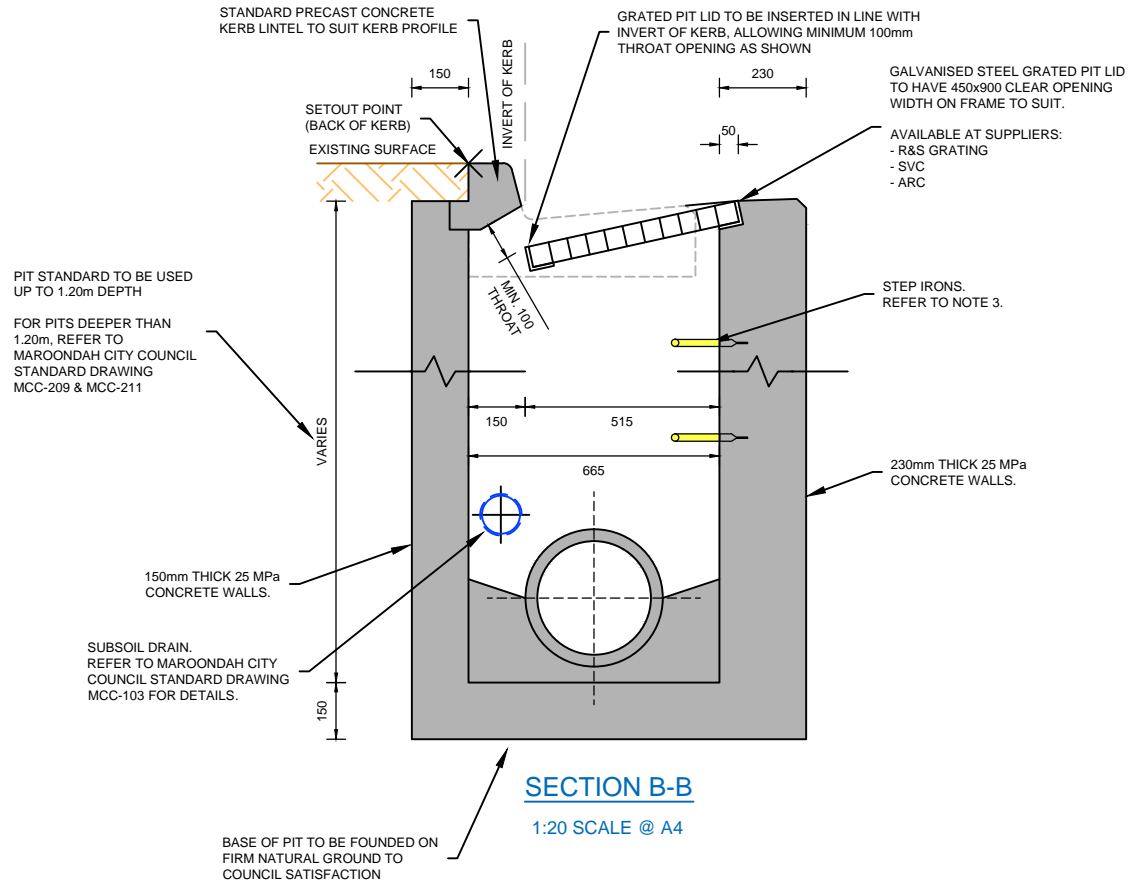
Revision: 02

Date: June 2021

Sheet: 1 of 2

Standard Drawing Number:

**MCC-207**



#### NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. NO INTERNAL DIMENSION OF GRATED PIT SHALL BE LESS THAN PIPE DIAMETER PLUS 150mm.
3. WHERE PIT DEPTH EXCEEDS 1000mm, STEP IRONS ARE TO BE INSTALLED IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-202.
4. GRATED PIT LID IS TO BE MINIMUM CLASS D, HEAVY DUTY & BICYCLE SAFE, IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.



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Title:

## DRAINAGE - GRATED SIDE ENTRY PIT - DRAINAGE PIPE WITHIN ROADWAY

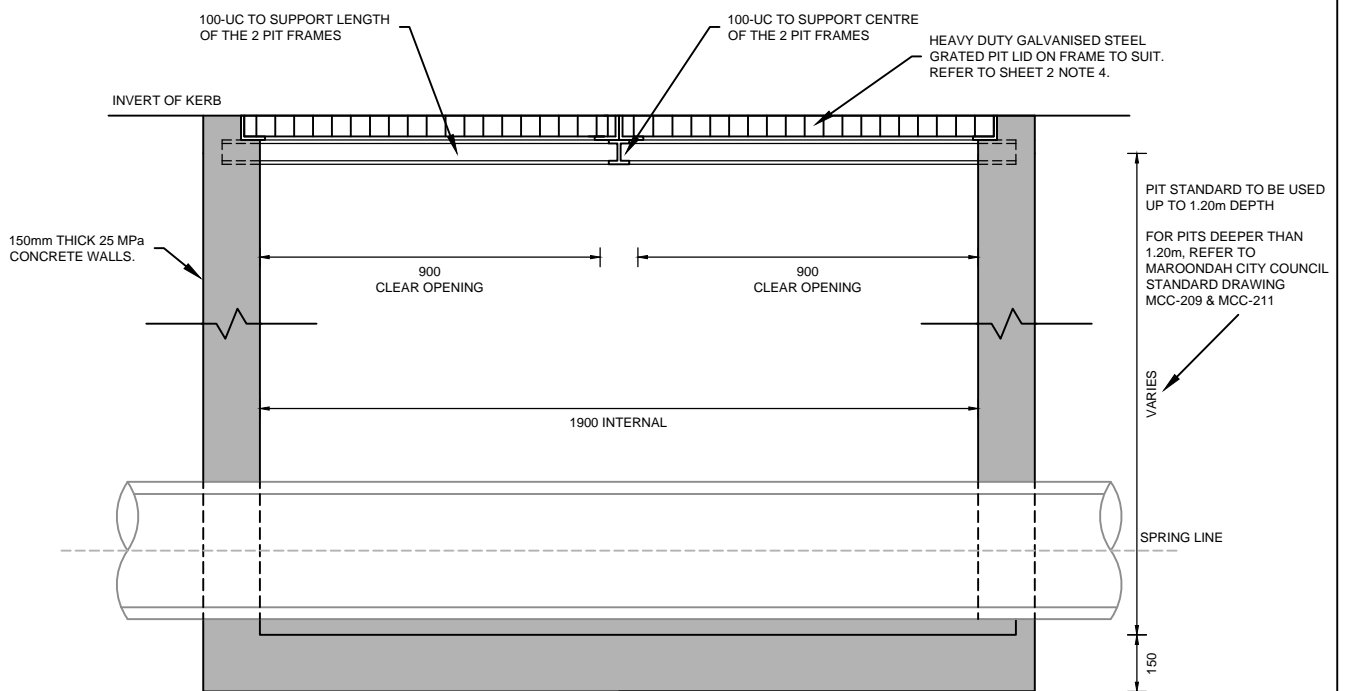
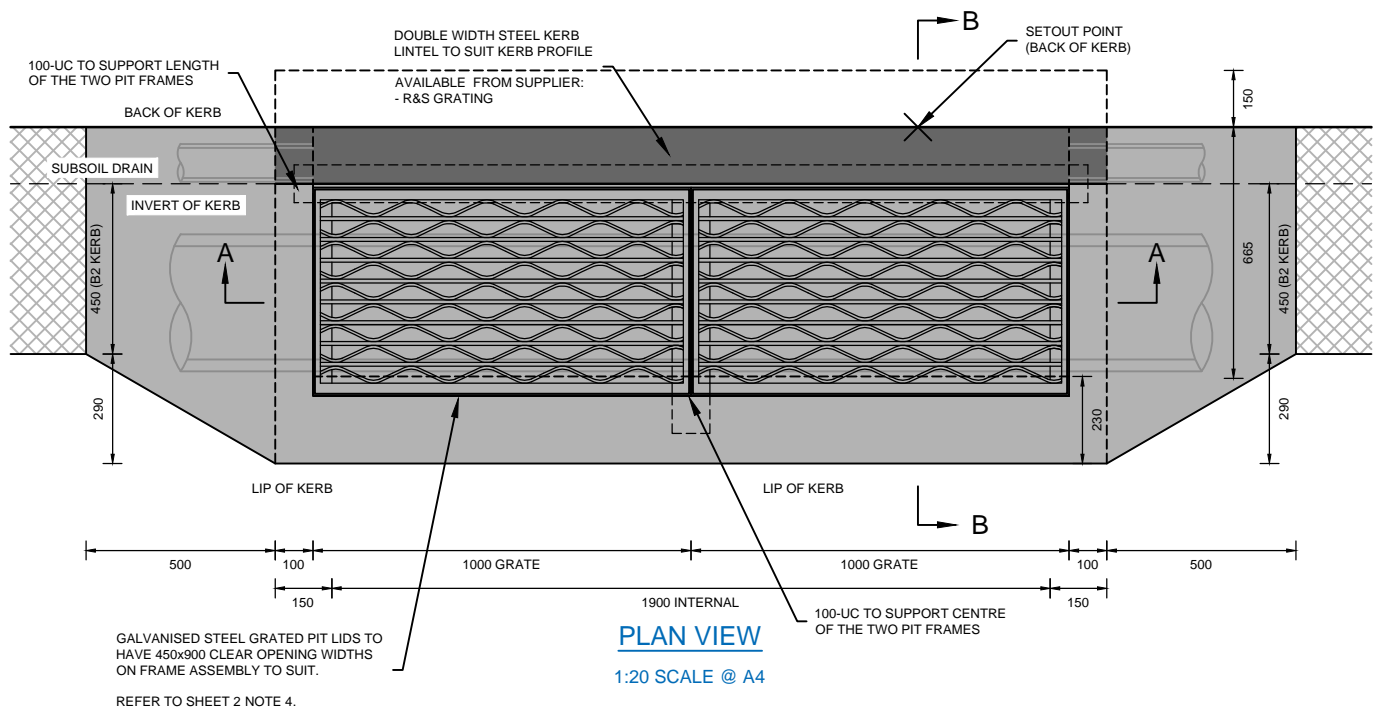
Revision: 02

Date: June 2021

Sheet: 2 of 2

Standard Drawing Number:

**MCC-207**



**NOTES:**

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. STANDARD TO BE USED WHERE STORMWATER DRAINAGE PIPE CANNOT BE CONSTRUCTED WITHIN NATURE STRIP & PIT ACCESS MUST BE WITHIN THE ROADWAY.
3. STANDARD TO BE USED WHERE ADDITIONAL INLET CAPACITY AND/OR STORAGE IS REQUIRED.
4. STANDARD TO BE USED FOR PITS UP TO 1.20m DEPTH. FOR PITS DEEPER THAN 1.20m, REFER TO MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-209 & MCC-211.
5. REFER TO SHEET 2 FOR ADDITIONAL PIT CONSTRUCTION NOTES.



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Title:

## DRAINAGE - DOUBLE GRATED SIDE ENTRY PIT - DRAINAGE PIPE WITHIN ROADWAY

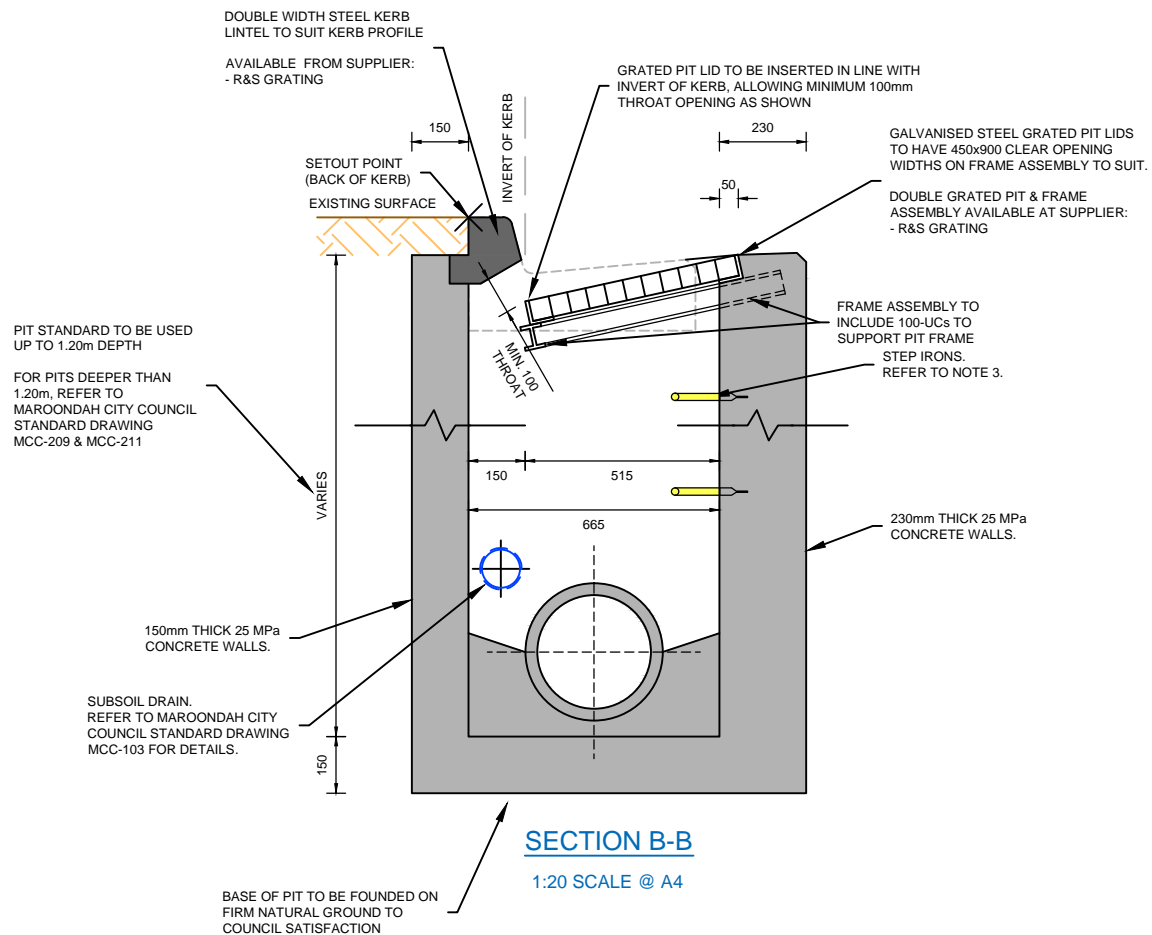
Revision: 02

Date: June 2021

Sheet: 1 of 2

Standard Drawing Number:

MCC-208



#### NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. NO INTERNAL DIMENSION OF GRATED PIT SHALL BE LESS THAN PIPE DIAMETER PLUS 150mm.
3. WHERE PIT DEPTH EXCEEDS 1000mm, STEP IRONS ARE TO BE INSTALLED IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-202.
4. GRATED PIT LID IS TO BE MINIMUM CLASS D, HEAVY DUTY & BICYCLE SAFE, IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.



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Title:

## DRAINAGE - DOUBLE GRATED SIDE ENTRY PIT - DRAINAGE PIPE WITHIN ROADWAY

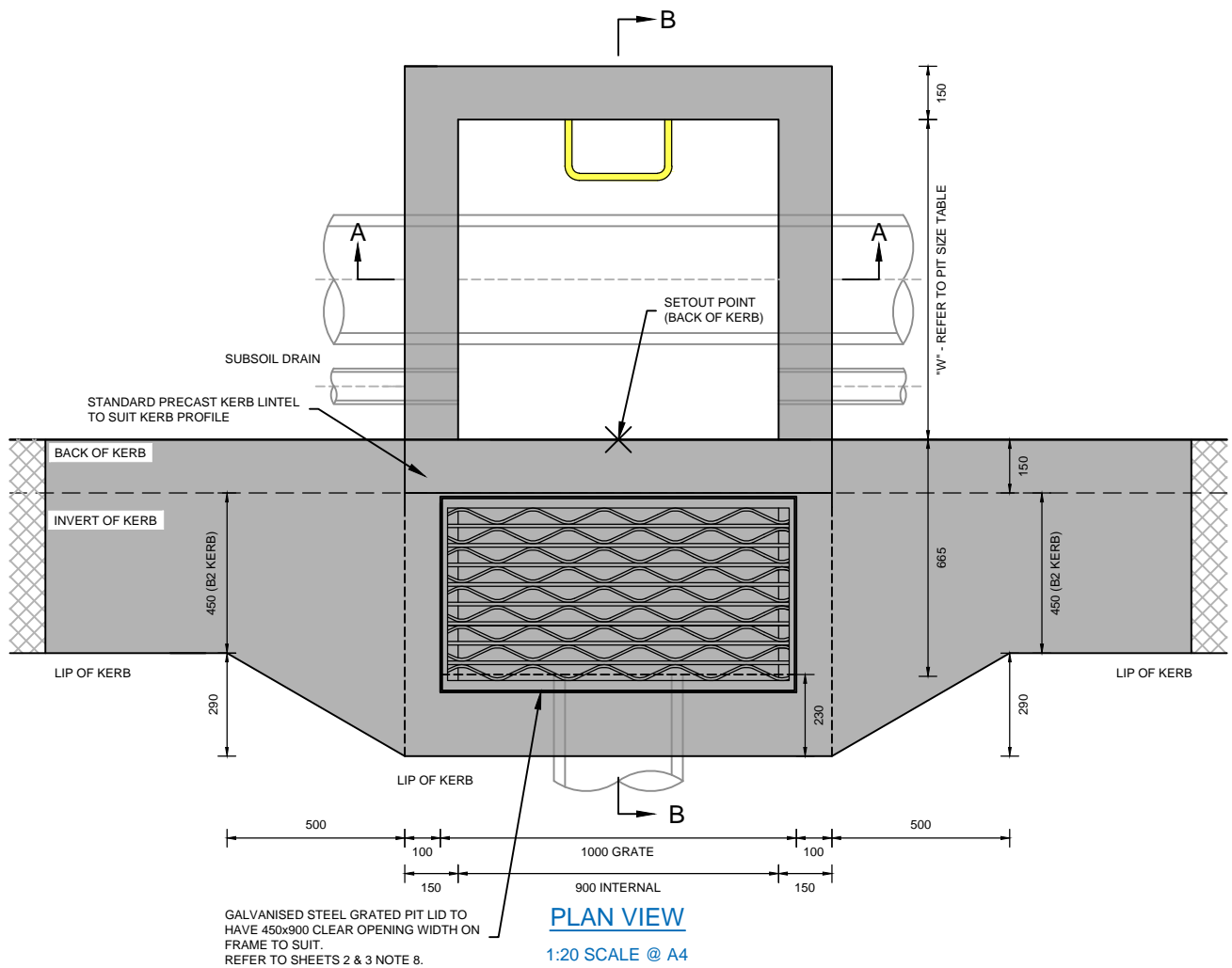
Revision: 02

Date: June 2021

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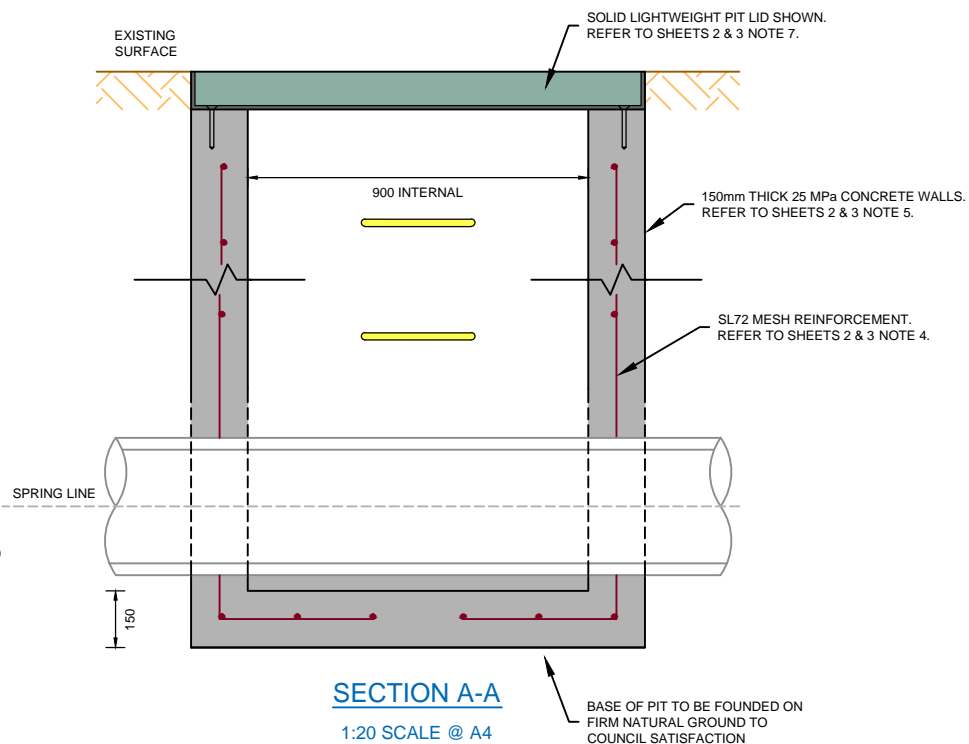
Standard Drawing Number:

**MCC-208**



#### NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. STANDARD TO BE USED WHERE STORMWATER DRAINAGE PIPE IS WITHIN THE NATURE STRIP.
3. STANDARD TO BE USED WHERE ADDITIONAL INLET CAPACITY AND/OR STORAGE IS REQUIRED.
4. REFER TO SHEETS 2 & 3 TO DETERMINE APPROPRIATE PIT PROFILE UNDERNEATH GRATED PIT LID.
5. REFER TO SHEETS 2 & 3 FOR ADDITIONAL PIT CONSTRUCTION NOTES.



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Title:

## DRAINAGE - GRATED SIDE ENTRY PIT - DRAINAGE PIPE WITHIN NATURE STRIP

Revision:

01

Date:

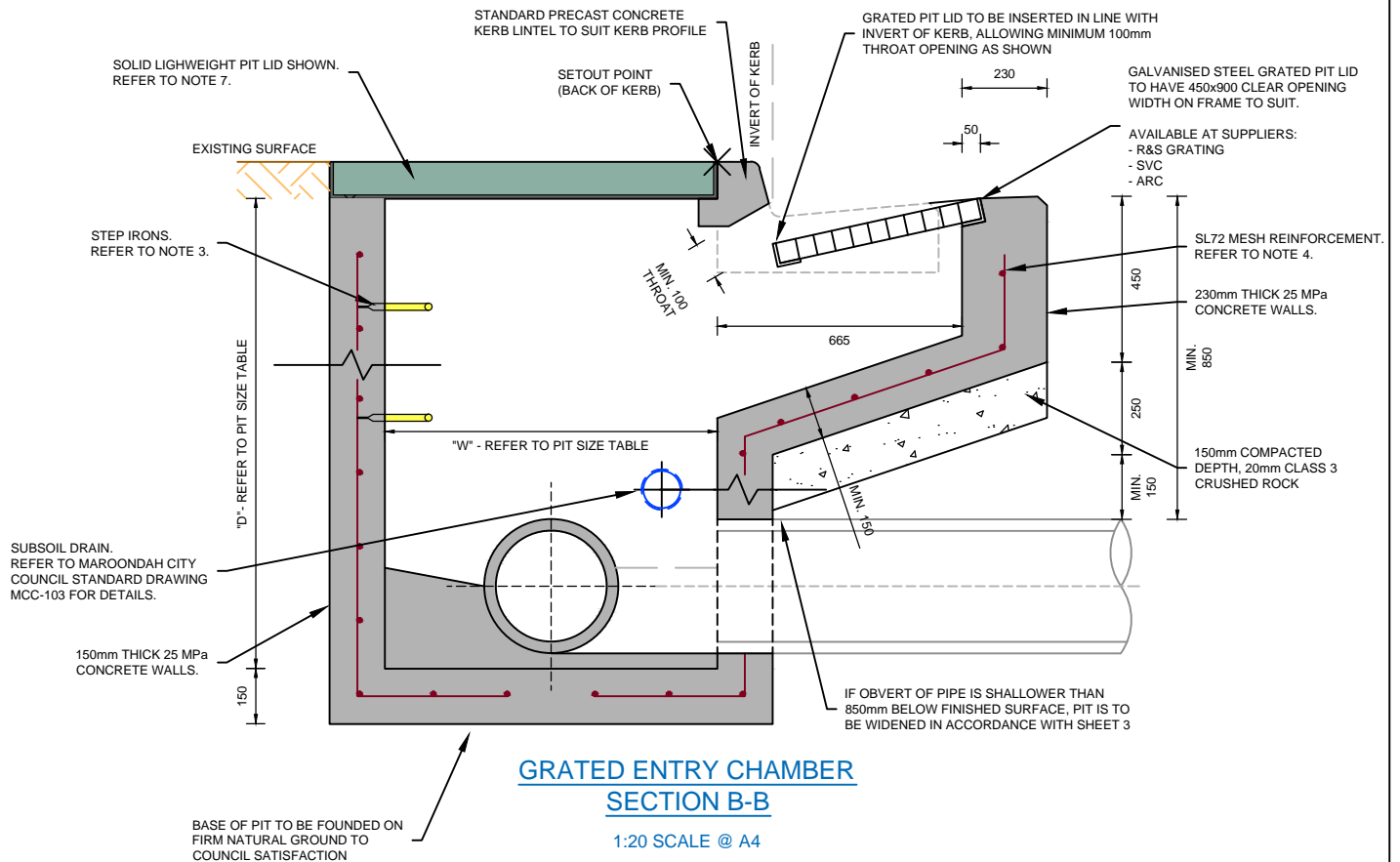
December 2020

Sheet:

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Standard Drawing Number:

**MCC-209**



#### NOTES:

- DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
- NO INTERNAL DIMENSION OF GRATED PIT SHALL BE LESS THAN PIPE DIAMETER PLUS 150mm.
- WHERE PIT DEPTH EXCEEDS 1000mm, STEP IRONS ARE TO BE INSTALLED IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-202.
- WHERE PIT DEPTH EXCEEDS 1500mm, PIT WALLS ARE TO BE REINFORCED WITH SL72 MESH CENTRALLY PLACED.
- WHERE PIT DEPTH EXCEEDS 1800mm AND/OR PIPE DIAMETER EXCEEDS 450mm, PIT WALLS ARE TO BE 200mm THICK CONCRETE.
- WHERE PIT DEPTH EXCEEDS 3600mm, PIT IS TO BE DESIGNED IN ACCORDANCE WITH VICROADS STANDARD DRAWING SD 1011.
- SOLID LIGHTWEIGHT PIT LID IS TO BE MINIMUM CLASS B & LOCKABLE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- GRATED PIT LID IS TO BE MINIMUM CLASS D, HEAVY DUTY & BICYCLE SAFE, IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.

PIPE SIZE (mm)	INTERNAL DIMENSIONS OF PIT (mm)			STEP IRON	PIT COVER SIZE
	D	L	W		
LESS THAN 450 DIA	<1000	900	600	NO	TO SUIT
	>1000	900	900	YES	
GREATER THAN 450 DIA	<1000	900	DIA + 150	NO	
	>1000	900	900 (OR DIA + 150, IF DIA > 750)	YES	

\* REFER TO NOTES FOR ADDITIONAL PIT SPECIFICATIONS

#### MINIMUM INTERNAL PIT SIZE TABLE



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Title:

## DRAINAGE - GRATED SIDE ENTRY PIT - DRAINAGE PIPE WITHIN NATURE STRIP

Revision: 01

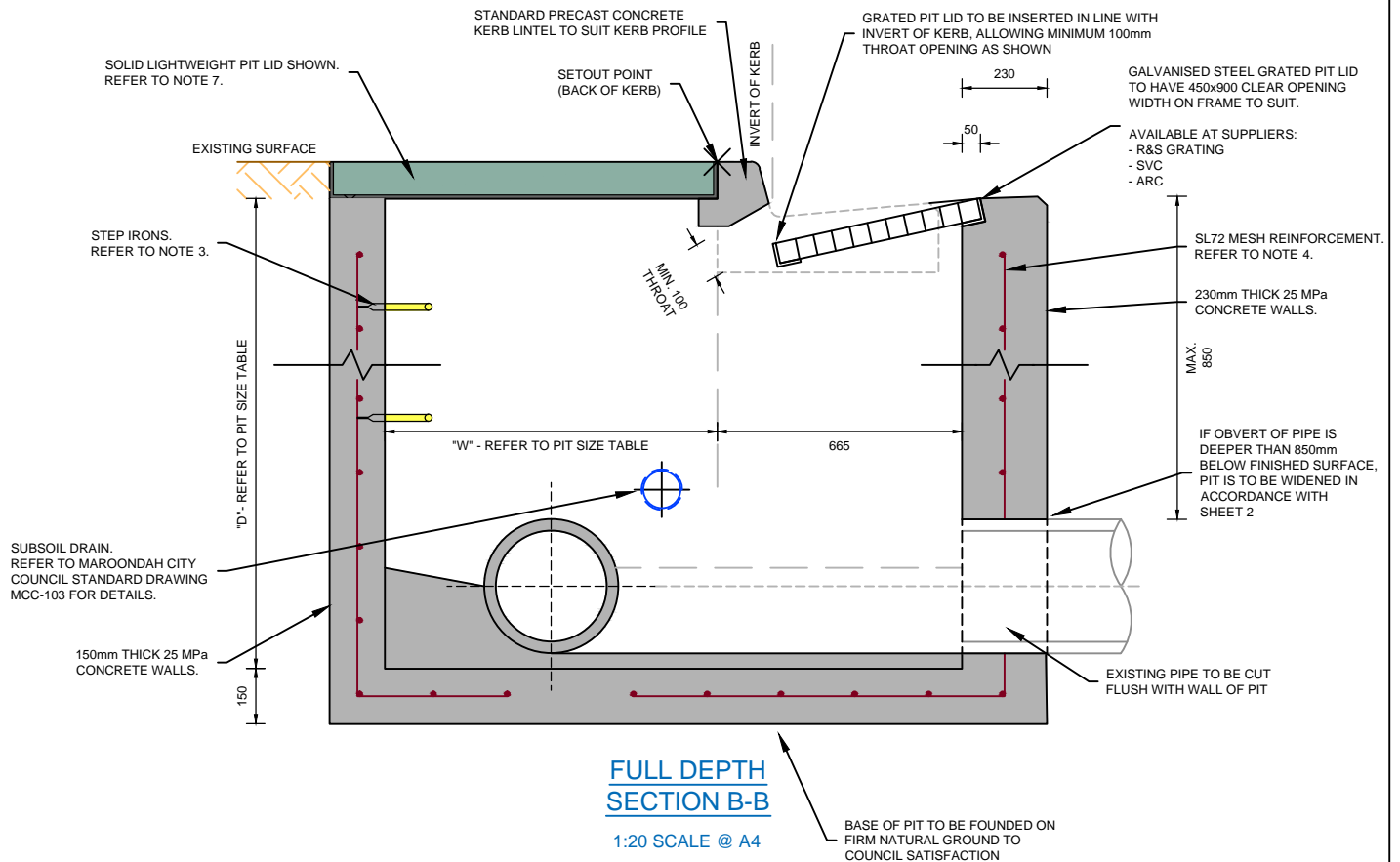
Date: December 2020

Sheet: 2 of 3

Standard Drawing Number:

**MCC-209**





#### NOTES:

- DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
- NO INTERNAL DIMENSION OF GRATED PIT SHALL BE LESS THAN PIPE DIAMETER PLUS 150mm.
- WHERE PIT DEPTH EXCEEDS 1000mm, STEP IRONS ARE TO BE INSTALLED IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-202.
- WHERE PIT DEPTH EXCEEDS 1500mm, PIT WALLS ARE TO BE REINFORCED WITH SL72 MESH CENTRALLY PLACED.
- WHERE PIT DEPTH EXCEEDS 1800mm AND/OR PIPE DIAMETER EXCEEDS 450mm, PIT WALLS ARE TO BE 200mm THICK CONCRETE.
- WHERE PIT DEPTH EXCEEDS 3600mm, PIT IS TO BE DESIGNED IN ACCORDANCE WITH VICROADS STANDARD DRAWING SD 1011.
- SOLID LIGHTWEIGHT PIT LID IS TO BE MINIMUM CLASS B & LOCKABLE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- GRATED PIT LID IS TO BE MINIMUM CLASS D, HEAVY DUTY & BICYCLE SAFE, IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.

PIPE SIZE (mm)	INTERNAL DIMENSIONS OF PIT (mm)			STEP IRON	PIT COVER SIZE
	D	L	W		
LESS THAN 450 DIA	<1000	900	600	NO	TO SUIT
	>1000	900	900	YES	
GREATER THAN 450 DIA	<1000	900	DIA + 150	NO	
	>1000	900	900 (OR DIA + 150, IF DIA > 750)	YES	

\* REFER TO NOTES FOR ADDITIONAL PIT SPECIFICATIONS

#### MINIMUM INTERNAL PIT SIZE TABLE



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Title:

## DRAINAGE - GRATED SIDE ENTRY PIT - DRAINAGE PIPE WITHIN NATURE STRIP

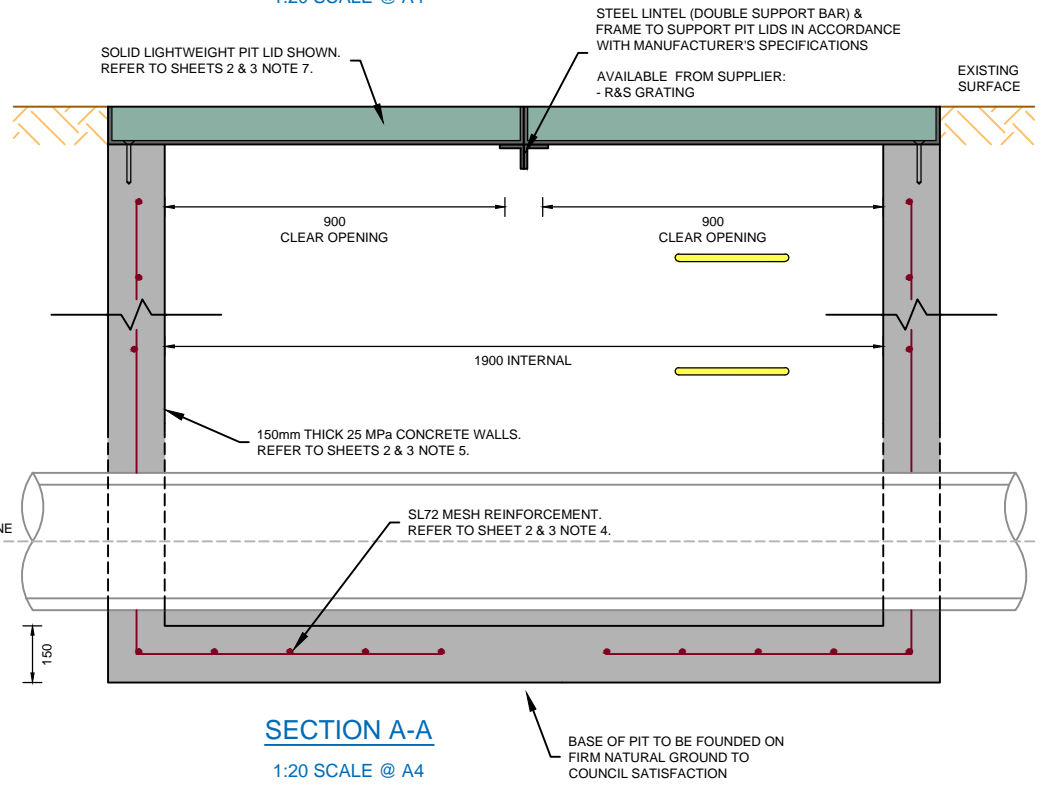
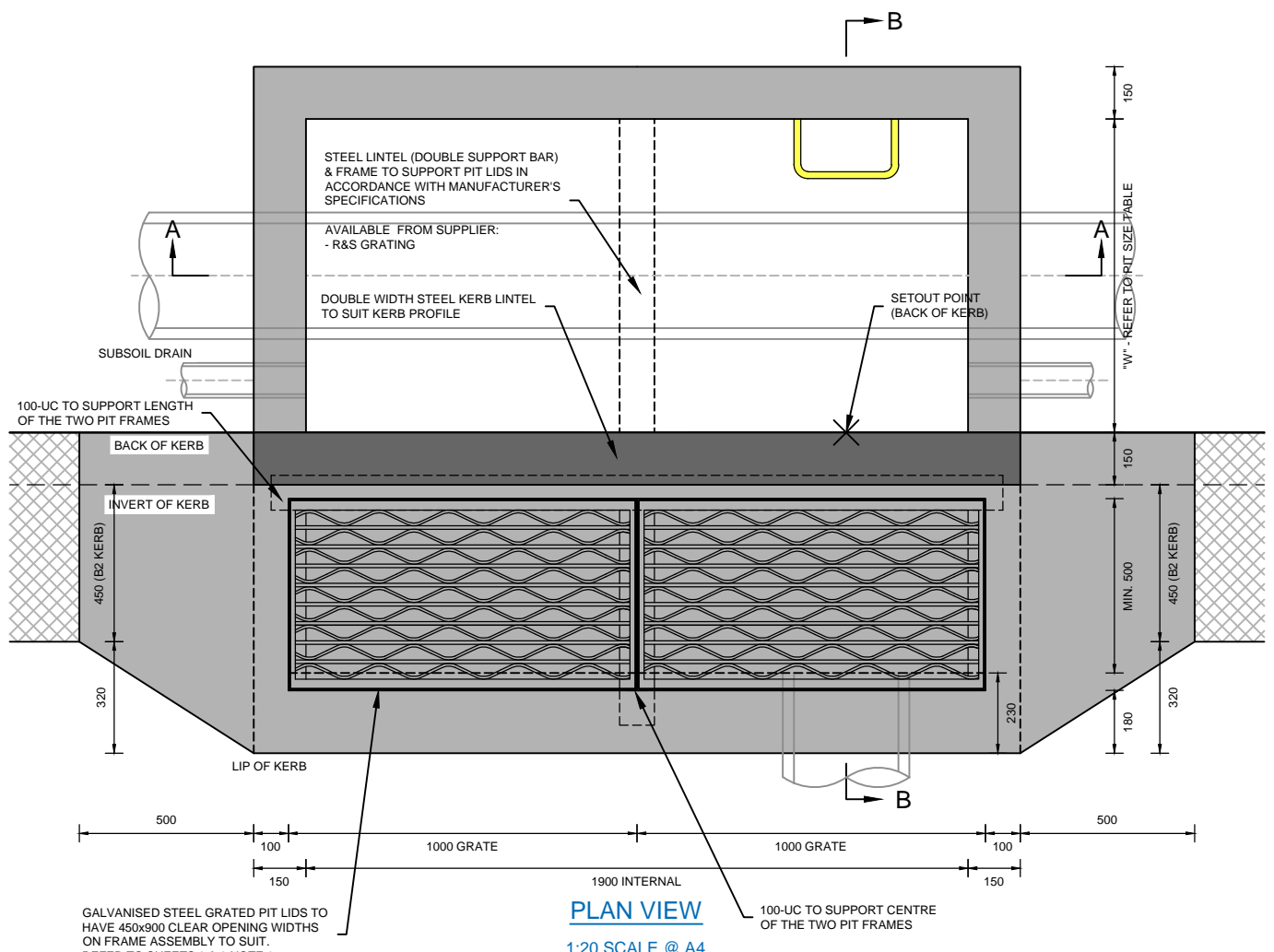
Revision: 01

Date: December 2020

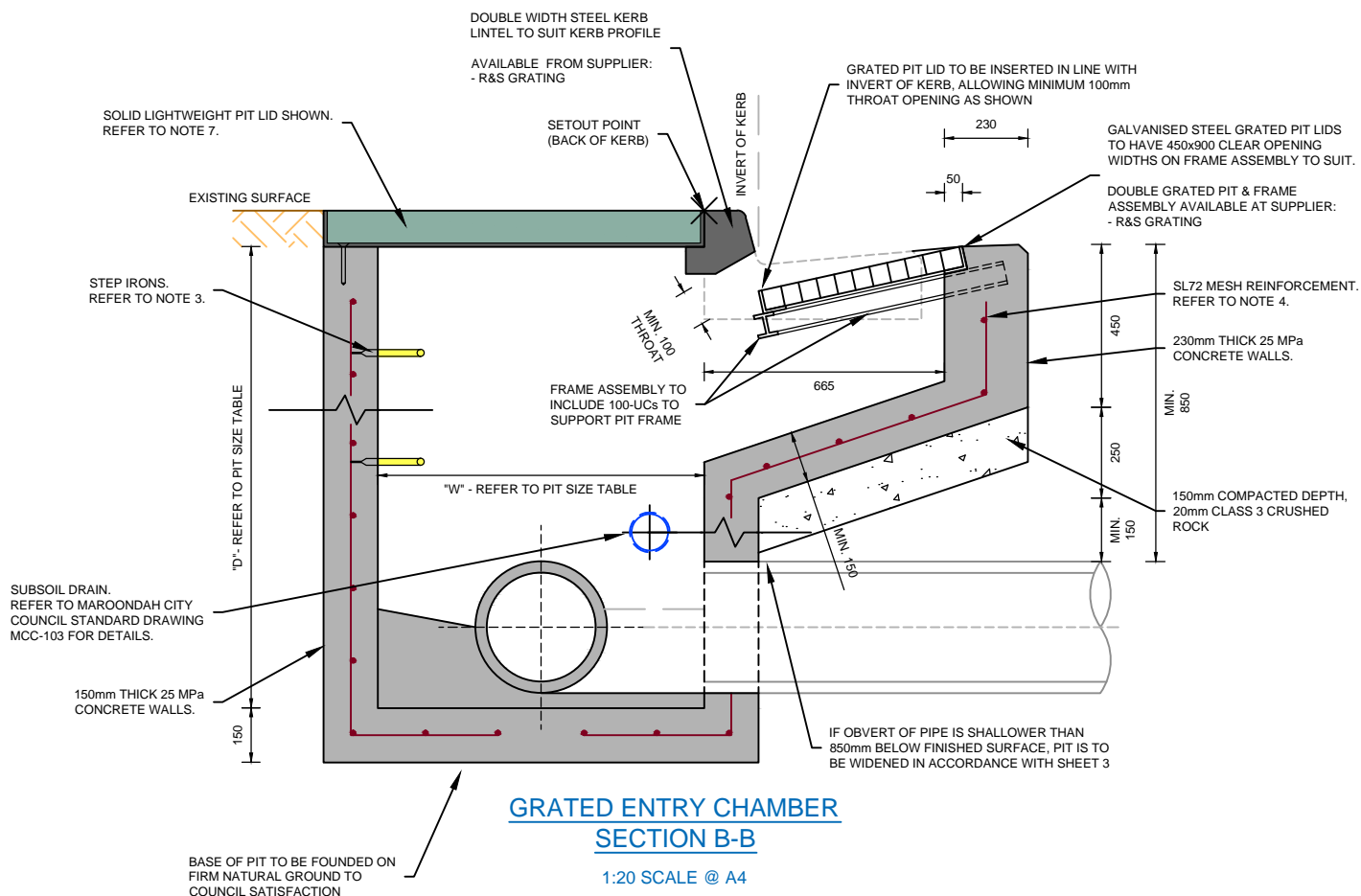
Sheet: 3 of 3

Standard Drawing Number:

**MCC-209**



- NOTES:
1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
  2. STANDARD TO BE USED WHERE STORMWATER DRAINAGE PIPE IS WITHIN THE NATURE STRIP.
  3. STANDARD TO BE USED WHERE ADDITIONAL INLET CAPACITY AND/OR STORAGE IS REQUIRED.
  4. REFER TO SHEETS 2 & 3 TO DETERMINE APPROPRIATE PIT PROFILE UNDERNEATH GRATED PIT LID.
  5. REFER TO SHEETS 2 & 3 FOR ADDITIONAL PIT CONSTRUCTION NOTES.



#### NOTES:

- DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
- NO INTERNAL DIMENSION OF GRATED PIT SHALL BE LESS THAN PIPE DIAMETER PLUS 150mm.
- WHERE PIT DEPTH EXCEEDS 1000mm, STEP IRONS ARE TO BE INSTALLED IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-202.
- WHERE PIT DEPTH EXCEEDS 1500mm, PIT WALLS ARE TO BE REINFORCED WITH SL72 MESH CENTRALLY PLACED.
- WHERE PIT DEPTH EXCEEDS 1800mm AND/OR PIPE DIAMETER EXCEEDS 450mm, PIT WALLS ARE TO BE 200mm THICK CONCRETE.
- WHERE PIT DEPTH EXCEEDS 3600mm, PIT IS TO BE DESIGNED IN ACCORDANCE WITH VICROADS STANDARD DRAWING SD 1011.
- SOLID LIGHTWEIGHT PIT LID IS TO BE MINIMUM CLASS B & LOCKABLE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- GRATED PIT LID IS TO BE MINIMUM CLASS D, HEAVY DUTY & BICYCLE SAFE, IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.

PIPE SIZE (mm)	INTERNAL DIMENSIONS OF PIT (mm)			STEP IRON	PIT COVER SIZE
	D	L	W		
LESS THAN 450 DIA	<1000	900	600	NO	TO SUIT
	>1000	900	900	YES	
GREATER THAN 450 DIA	<1000	900	DIA + 150	NO	
	>1000	900	900 (OR DIA + 150, IF DIA > 750)	YES	

\* REFER TO NOTES FOR ADDITIONAL PIT SPECIFICATIONS

#### MINIMUM INTERNAL PIT SIZE TABLE



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Title:

## DRAINAGE - DOUBLE GRATED SIDE ENTRY PIT - DRAINAGE PIPE WITHIN NATURE STRIP

Revision: 01

Date: December 2020

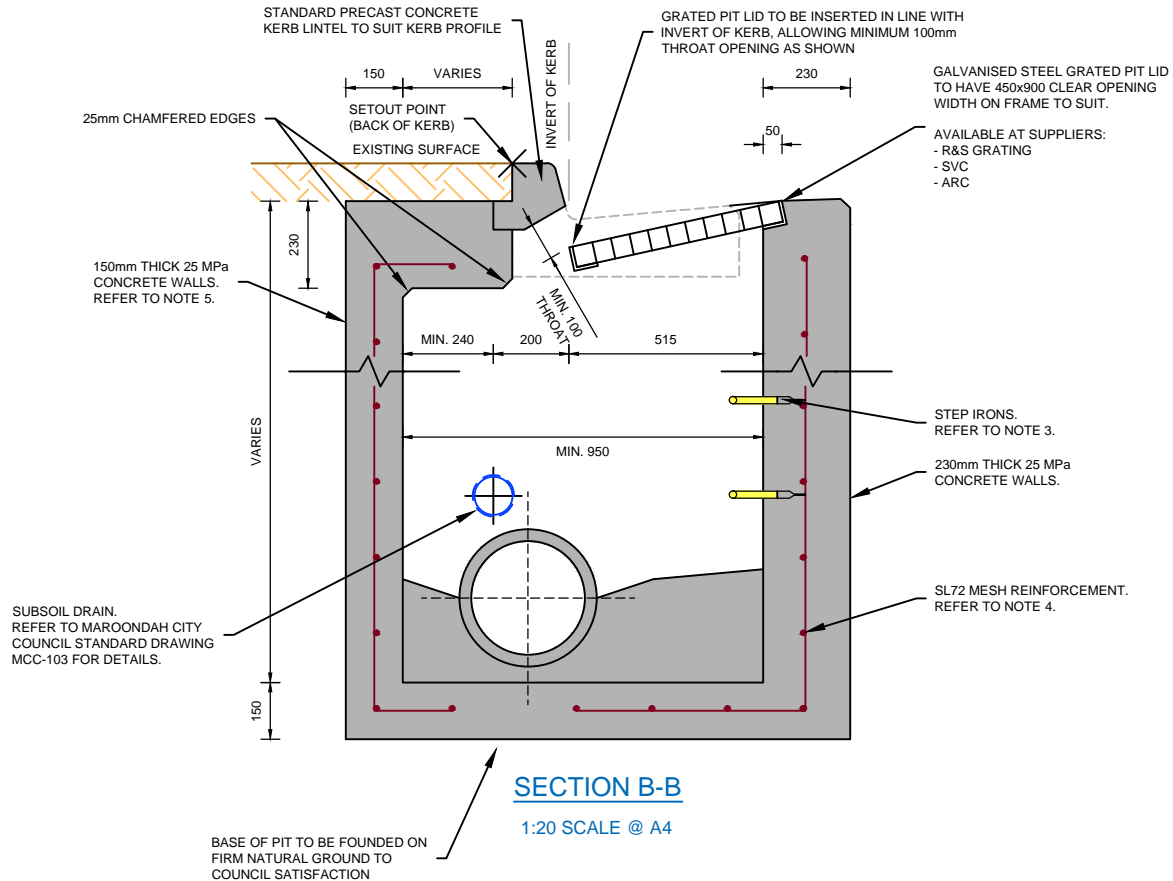
Sheet: 2 of 3

Standard Drawing Number:

**MCC-210**







#### NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. NO INTERNAL DIMENSION OF GRATED PIT SHALL BE LESS THAN PIPE DIAMETER PLUS 150mm.
3. WHERE PIT DEPTH EXCEEDS 1000mm, STEP IRONS ARE TO BE INSTALLED IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-202.
4. WHERE PIT DEPTH EXCEEDS 1500mm, PIT WALLS ARE TO BE REINFORCED WITH SL72 MESH CENTRALLY PLACED.
5. WHERE PIT DEPTH EXCEEDS 1800mm AND/OR PIPE DIAMETER EXCEEDS 450mm, PIT WALLS ARE TO BE 200mm THICK CONCRETE.
6. WHERE PIT DEPTH EXCEEDS 3600mm, PIT IS TO BE DESIGNED IN ACCORDANCE WITH VICROADS STANDARD DRAWING SD 1011.
7. GRATED PIT LID IS TO BE MINIMUM CLASS D, HEAVY DUTY & BICYCLE SAFE, IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.



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Title:

## DRAINAGE - GRATED SIDE ENTRY PIT - DRAINAGE PIPE UNDERNEATH KERB

Revision: 01

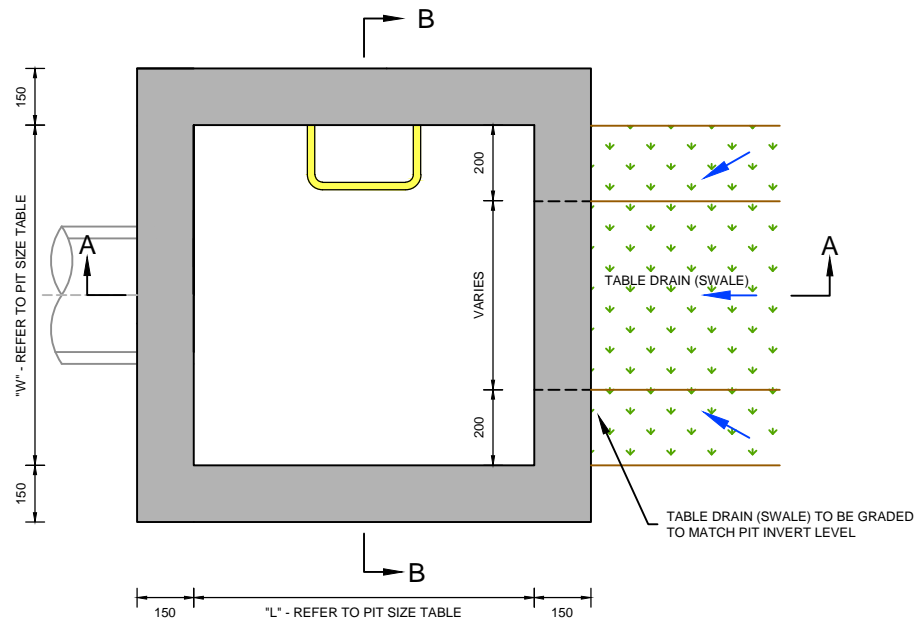
Date: December 2020

Sheet: 2 of 2

Standard Drawing Number:

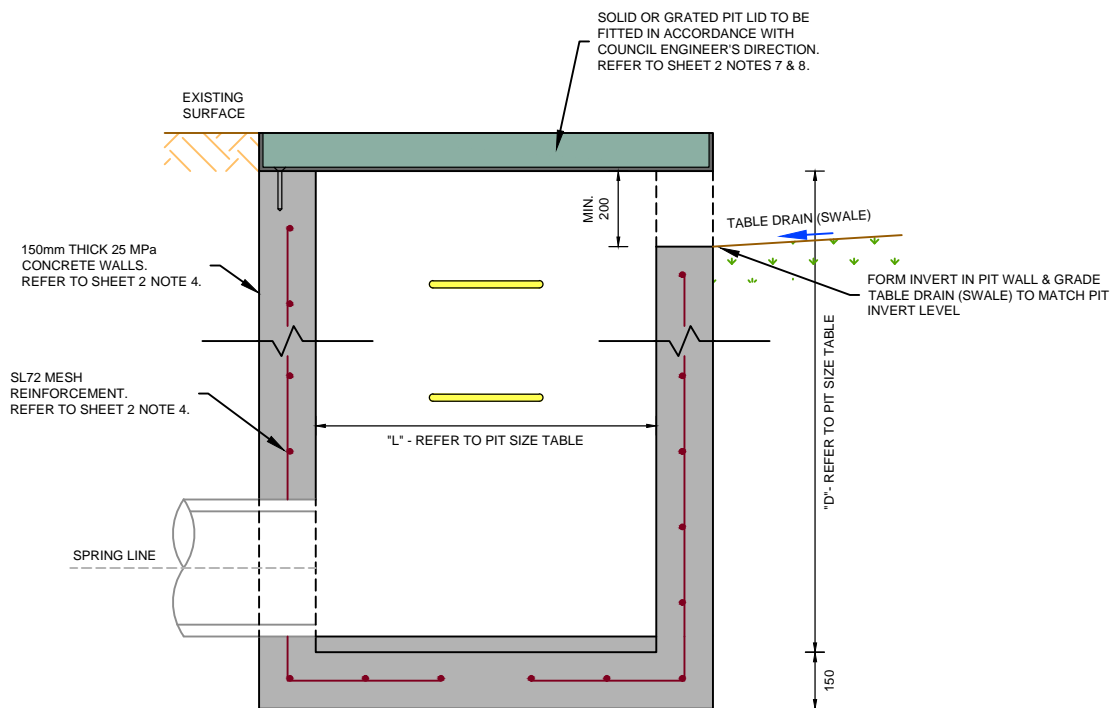
**MCC-211**





**PLAN VIEW**

1:20 SCALE @ A4



**SECTION A-A**

1:20 SCALE @ A4

**NOTES:**

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. STANDARD TO BE USED WHERE STORMWATER CHanneled INTO A TABLE DRAIN IS TO BE COLLECTED.
3. REFER TO SHEET 2 FOR ADDITIONAL PIT CONSTRUCTION NOTES.



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Title:

**DRAINAGE -  
TABLE DRAIN INLET PIT  
(V-NOTCH PIT)**

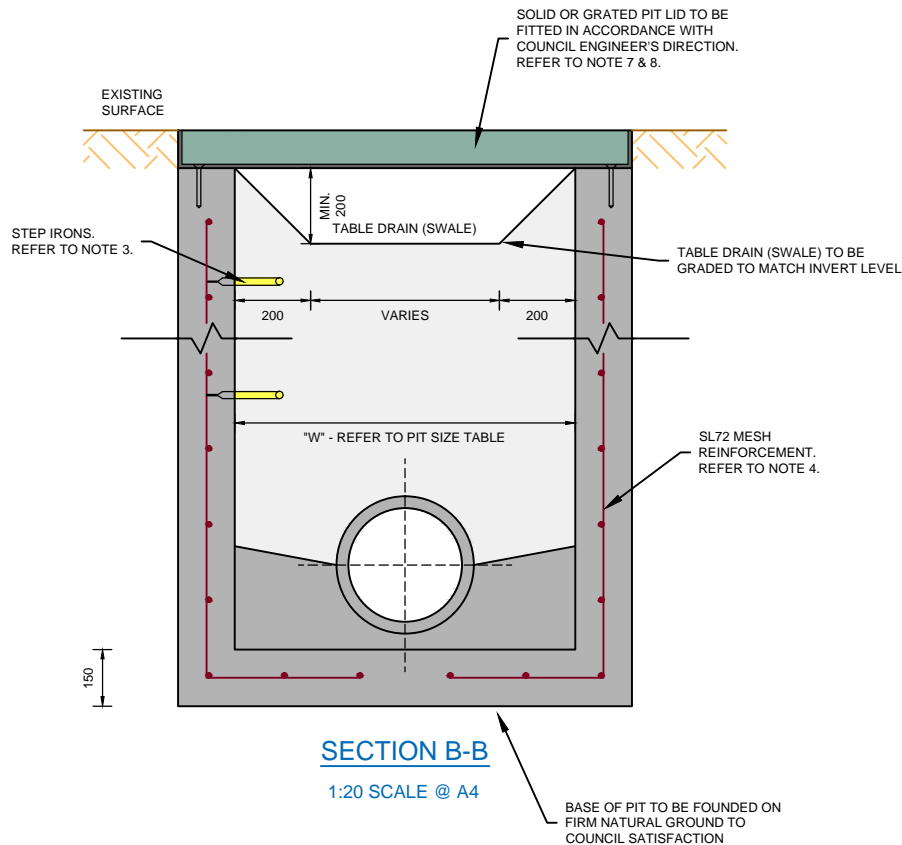
Revision: 00

Date: October 2020

Sheet: 1 of 2

Standard Drawing Number:

**MCC-212**



#### NOTES:

- DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
- NO INTERNAL DIMENSION OF JUNCTION PITS SHALL BE LESS THAN PIPE DIAMETER PLUS 150mm.
- WHERE PIT DEPTH EXCEEDS 1000mm, STEP IRONS ARE TO BE INSTALLED IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-202.
- WHERE PIT DEPTH EXCEEDS 1500mm, PIT WALLS ARE TO BE REINFORCED WITH SL72 MESH CENTRALLY PLACED.
- WHERE PIT DEPTH EXCEEDS 1800mm AND/OR PIPE DIAMETER EXCEEDS 450mm, PIT WALLS ARE TO BE 200mm THICK CONCRETE.
- WHERE PIT DEPTH EXCEEDS 3600mm, PIT IS TO BE DESIGNED IN ACCORDANCE WITH VICROADS STANDARD DRAWING SD 1011.
- SOLID LIGHTWEIGHT PIT LID IS TO BE MINIMUM CLASS B & LOCKABLE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- GRATED PIT LID IS TO BE MINIMUM CLASS B & BICYCLE SAFE, IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.

PIPE SIZE (mm)	INTERNAL DIMENSIONS OF PIT (mm)			STEP IRON	PIT COVER SIZE
	D	L	W		
LESS THAN 450 DIA	<1000	900	600	NO	TO SUIT
	>1000	900	900	YES	
GREATER THAN 450 DIA	<1000	900	DIA + 150	NO	
	>1000	900	900 (OR DIA + 150, IF DIA > 750)	YES	

\* REFER TO NOTES FOR ADDITIONAL PIT SPECIFICATIONS

#### MINIMUM INTERNAL PIT SIZE TABLE



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Title:

## DRAINAGE - TABLE DRAIN INLET PIT (V-NOTCH PIT)

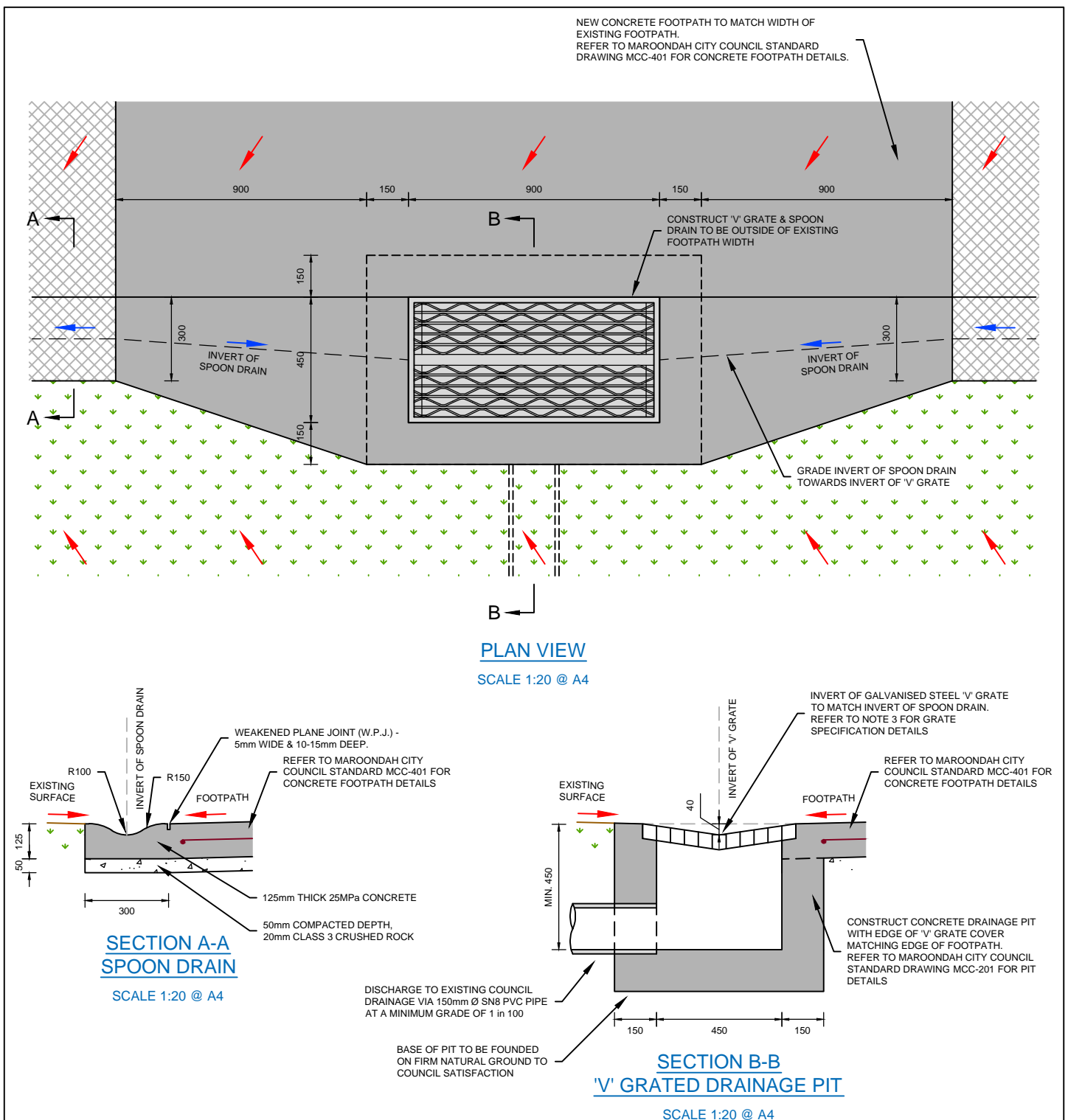
Revision: 00

Date: October 2020

Sheet: 2 of 2

Standard Drawing Number:

**MCC-212**



NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. CONCRETE 'V' DRAINAGE PIT SURROUNDS & CONCRETE FOOTPATH TO BE POURED AS ONE.
3. 'V' GRATED PIT LID IS TO BE MINIMUM CLASS B & BICYCLE SAFE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996:2019, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
4. CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.



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Title:

## FOOTPATH WITH CONCRETE SPOON DRAIN & 'V' GRATED DRAINAGE PIT

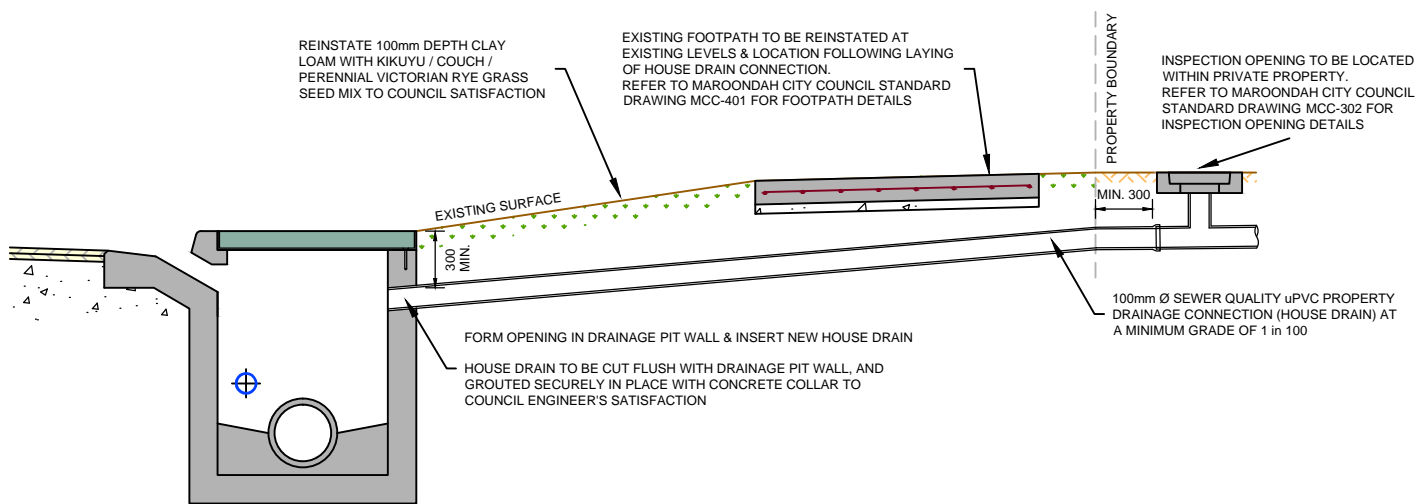
Revision: 01

Date: June 2021

Sheet: 1 of 1

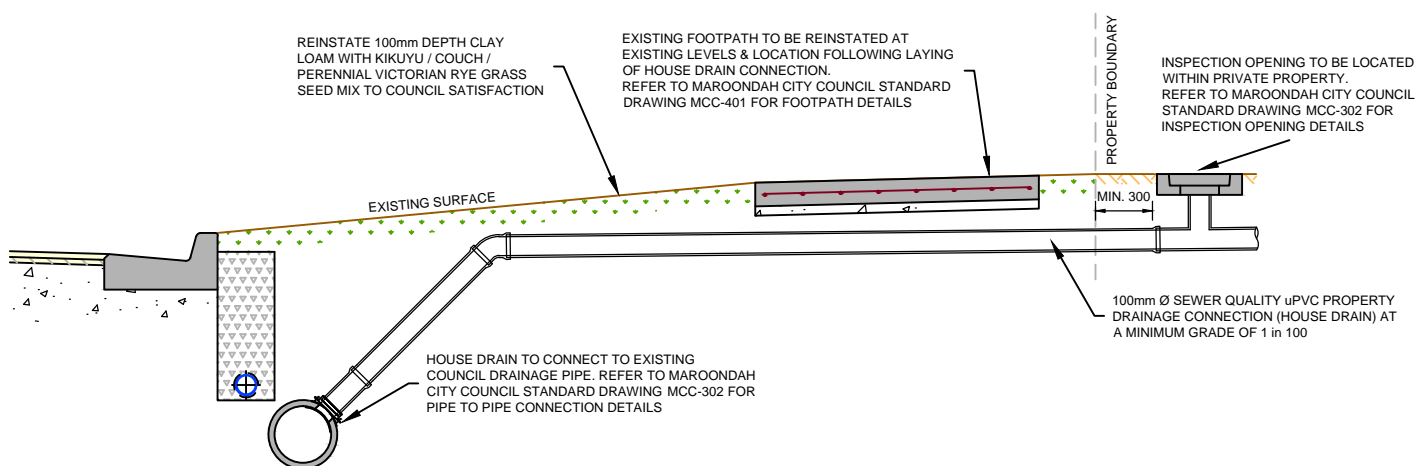
Standard Drawing Number:

**MCC-213**



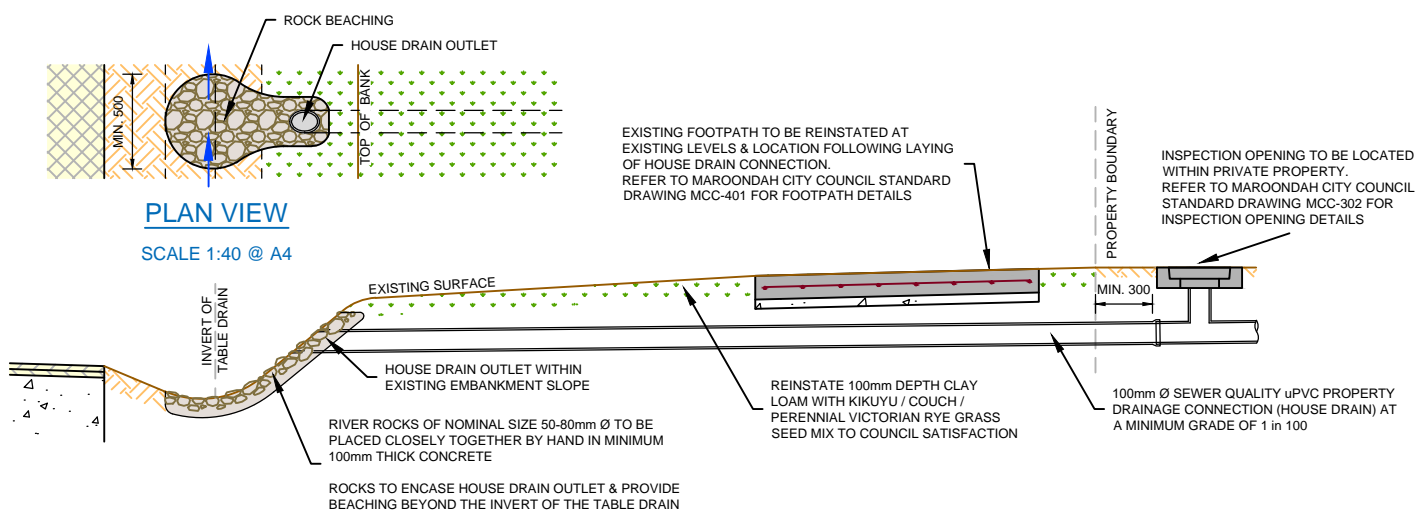
### HOUSE DRAIN - PIT CONNECTION

SCALE 1:40 @ A4



### HOUSE DRAIN - PIPE CONNECTION

SCALE 1:40 @ A4



### PLAN VIEW

SCALE 1:40 @ A4

### HOUSE DRAIN - TABLE DRAIN CONNECTION

SCALE 1:40 @ A4



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Title:

## PROPERTY DRAINAGE CONNECTIONS - WITHIN ROAD RESERVE

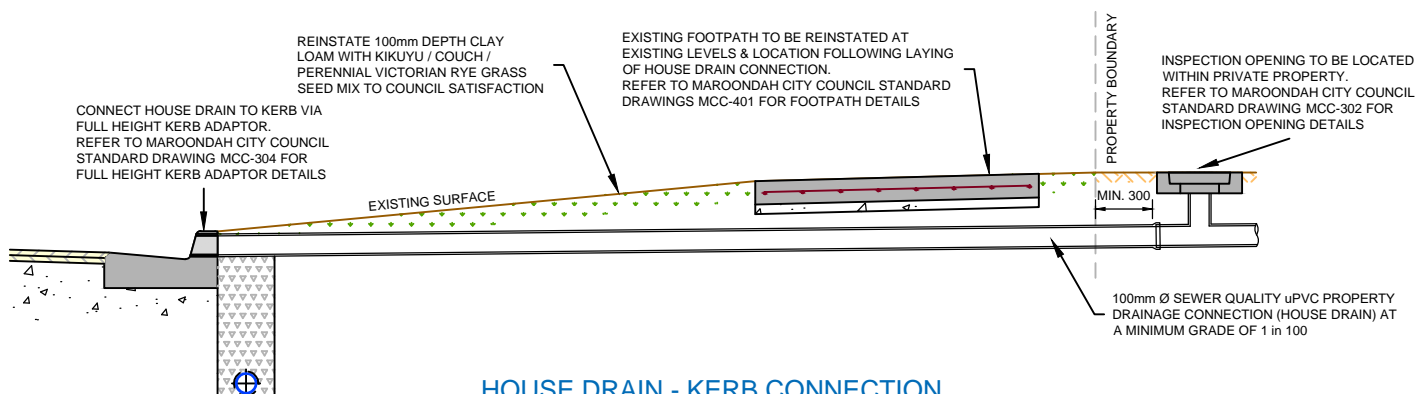
Revision: 01

Date: June 2021

Sheet: 1 of 2

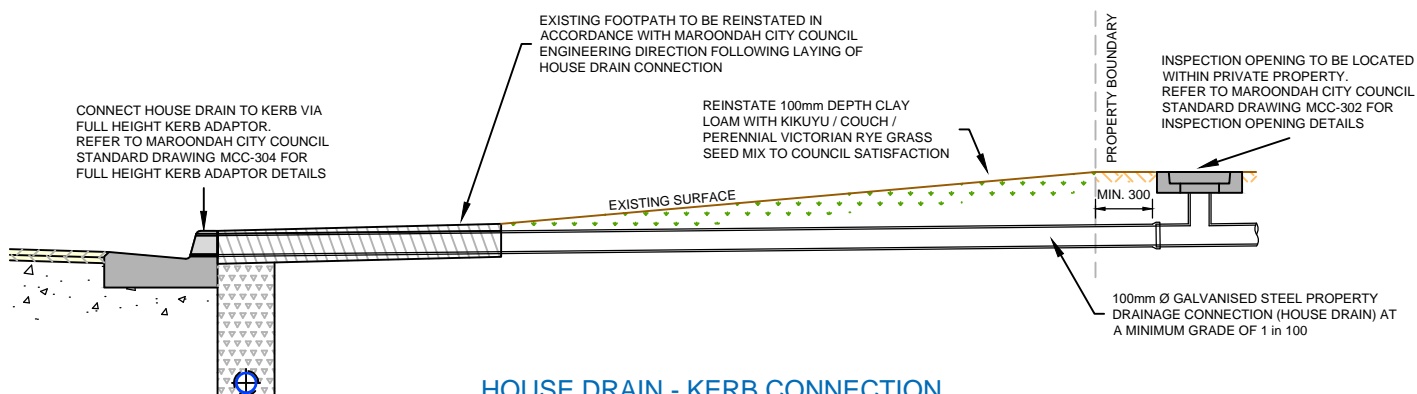
Standard Drawing Number:

**MCC-301**



### HOUSE DRAIN - KERB CONNECTION (FOOTPATH AT PROPERTY BOUNDARY)

SCALE 1:40 @ A4



### HOUSE DRAIN - KERB CONNECTION (FOOTPATH AT BACK OF KERB)

SCALE 1:40 @ A4



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Title:

## PROPERTY DRAINAGE CONNECTIONS - WITHIN ROAD RESERVE

Revision: 01

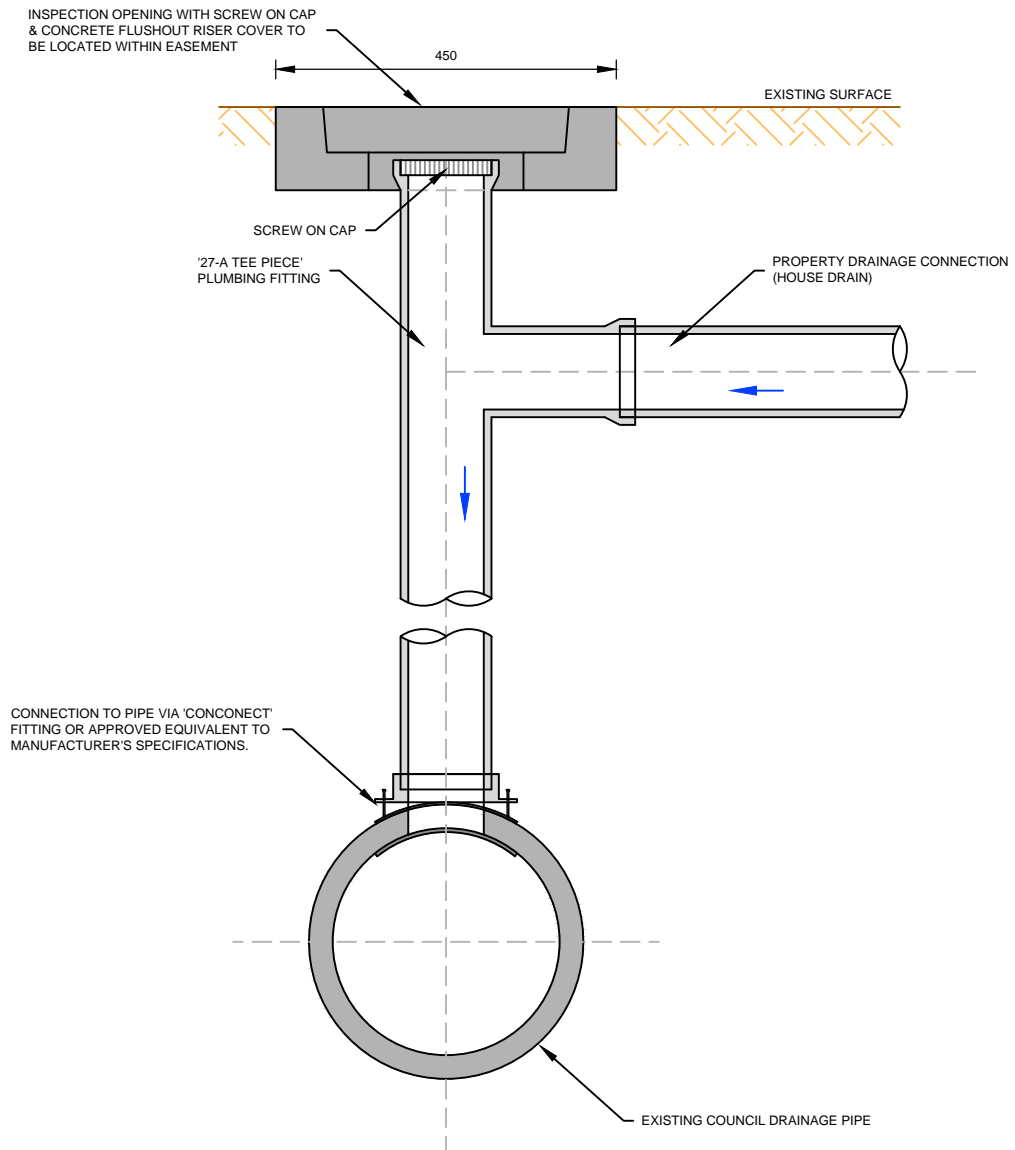
Date: June 2021

Sheet: 2 of 2

Standard Drawing Number:

**MCC-301**





### PIPE TO PIPE CONNECTION

SCALE 1:10 @ A4

1. PROPERTY DRAINAGE PIPES AND FITTINGS SHALL BE EITHER 100Ø OR 150Ø SEWER QUALITY uPVC AT A MINIMUM GRADE OF 1 in 100.
2. FOR A DIRECT PIPE TO PIPE CONNECTION, THE PROPERTY DRAINAGE PIPE IS TO BE LESS THAN OR EQUAL TO 1/3 THE DIAMETER OF THE COUNCIL DRAINAGE PIPE, OTHERWISE A PIT CONNECTION WILL BE REQUIRED.
3. 'CONCONNECT' FITTING - AVAILABLE AT 'R&S GRATING' OR 'REECE'.



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Title:

## PROPERTY DRAINAGE CONNECTION - COUNCIL DRAINAGE PIPE IN EASEMENT

Revision:

00

Date:

October 2020

Sheet:

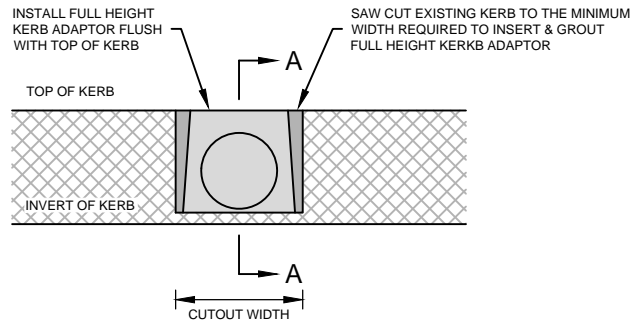
1 of 1

Standard Drawing Number:

**MCC-303**

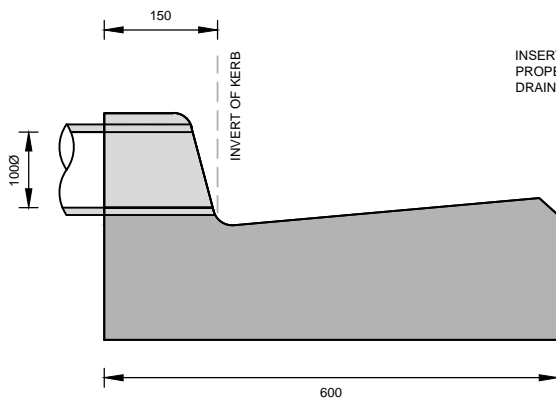
NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. FULL HEIGHT KERB ADAPTOR TO BE uPVC OR RECYCLED RUBBER, TO MATCH EXISTING KERB PROFILE & FITTED TO MANUFACTURER'S SPECIFICATIONS.
3. FULL HEIGHT KERB ADAPTOR TO BE PROPRIETARY PRODUCT FROM BELOW SUPPLIERS OR APPROVED EQUIVALENT
  - 3.1. RECYCLED RUBBER - AVAILABLE AT 'R&S GRATING'
  - 3.2. uPVC - C&E ENTERPRISES 'C4' - AVAILABLE AT 'REECE'



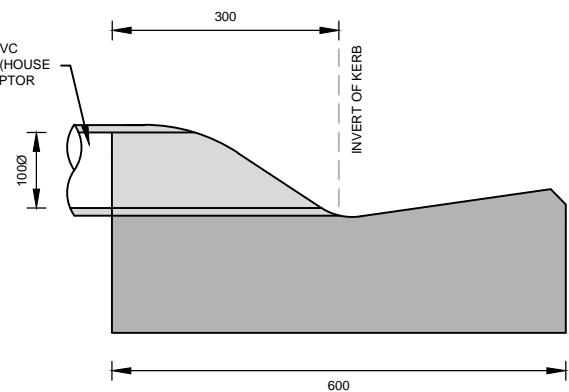
**FRONT VIEW**

SCALE 1:10 @ A4



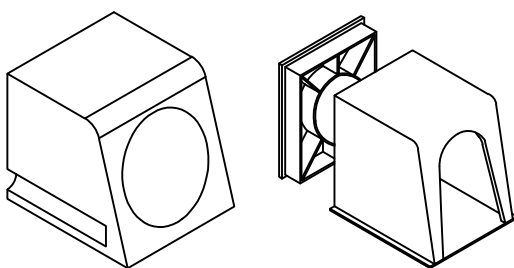
**SECTION A-A  
BARRIER KERB & CHANNEL**

SCALE 1:10 @ A4



**SECTION A-A  
SEMI-MOUNTABLE KERB & CHANNEL**

SCALE 1:10 @ A4

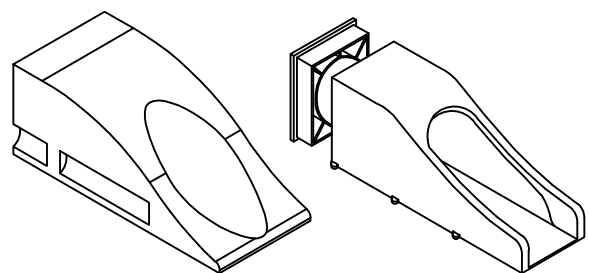


**RUBBER**

**uPVC**

**BARRIER KERB ADAPTORS  
ISOMETRIC VIEW**

NOT TO SCALE



**RUBBER**

**uPVC**

**SEMI-MOUNTABLE KERB ADAPTORS  
ISOMETRIC VIEW**

NOT TO SCALE



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Title:

**FULL HEIGHT KERB ADAPTOR**

Revision: 00

Date: October 2020

Sheet: 1 of 1

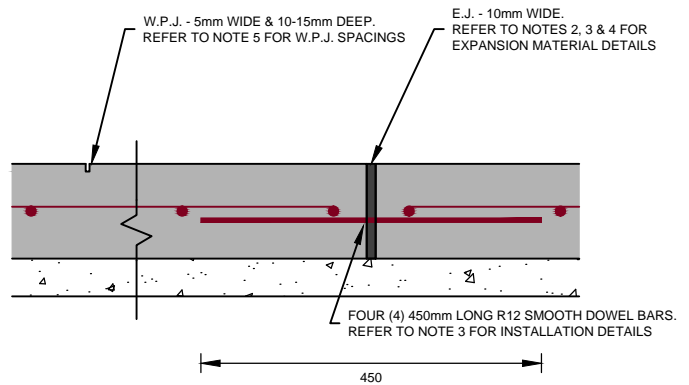
Standard Drawing Number:

**MCC-304**



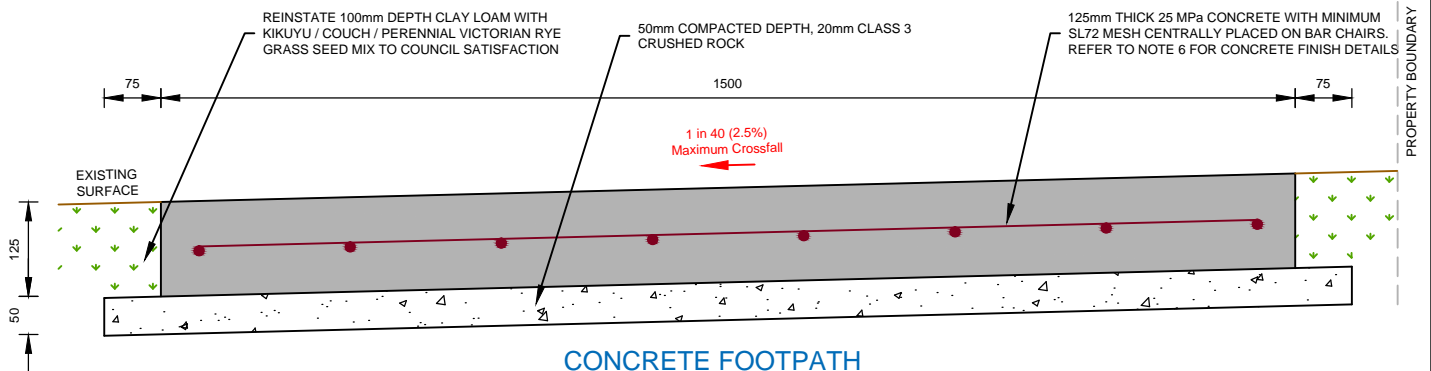
NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. EXPANSION JOINTS (E.J.) TO BE 'CONNOLLY EXPANSION JOINT' OR APPROVED EQUIVALENT TO MATCH FULL DEPTH OF CONCRETE.
3. EXPANSION JOINTS TO HAVE FOUR (4) 450mm LONG R12 SMOOTH GALVANISED DOWEL BARS INSTALLED AT MAXIMUM 300mm CENTRES COMMENCING 150mm FROM EDGE, ONE SIDE INSTALLED IN SLEEVES, WITH 10mm THICK POLYETHYLENE EXPANSION FOAM IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
4. EXPANSION JOINTS (E.J.) AT MAXIMUM 18m CENTRES AND AT THE START AND END OF NEWLY CONSTRUCTED FOOTPATH SECTIONS.
5. WEAKENED PLANE JOINTS (W.P.J.) IN CONCRETE FOOTPATH TO BE INSTALLED AT 1.5m INTERVALS AND MADE WITH A 'T' IRON AT TIME OF CONSTRUCTION.
6. CONCRETE FOOTPATH TO HAVE STIPPLE FINISH WITH NO HIGHLIGHTS.
7. FOOTPATH PANELS ADJACENT VEHICLE CROSSINGS ARE TO BE THICKENED IN ACCORDANCE WITH THE APPROPRIATE VEHICLE CROSSING STANDARD DRAWING. REFER TO 'VEHICLE CROSSINGS' SERIES OF MAROONDAH CITY COUNCIL STANDARD DRAWINGS.
8. CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS .
9. FORM WORK TIMBER TO BE A MINIMUM OF 90mm DEEP.
10. FOOTPATH TO HAVE A MAXIMUM CROSSFALL GRADE OF 1 in 40 (2.5%).
11. FOOTPATHS CONSTRUCTED TO FALL TOWARDS PRIVATE PROPERTY ('REVERSE FALL') TO INCLUDE SPOON DRAIN IN ACCORDANCE WITH MAROONDAH CITY COUNCIL STANDARD DRAWING MCC- 213, UNLESS OTHERWISE DIRECTED BY COUNCIL.



**CONCRETE FOOTPATH JOINT DETAILS**

SCALE 1:10 @ A4



**CONCRETE FOOTPATH**

SCALE 1:10 @ A4



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Title:

**FOOTPATH PAVEMENT DETAILS -  
CONCRETE**

Revision: 00

Date: October 2020

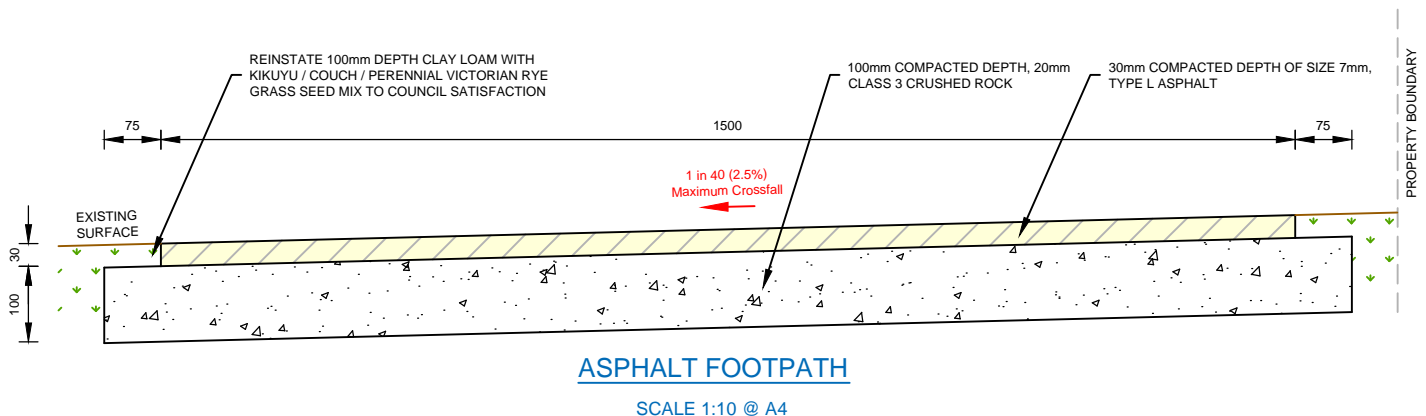
Sheet: 1 of 1

Standard Drawing Number:

**MCC-401**

NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. ASPHALT FOOTPATH IS TO BE USED ON A SITE SPECIFIC BASIS SUBJECT TO COUNCIL APPROVAL.
3. CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.
4. FOOTPATH TO HAVE A MAXIMUM CROSSFALL GRADE OF 1 in 40 (2.5%).



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Title:

## FOOTPATH PAVEMENT DETAILS - ASPHALT

Revision: 00

Date: October 2020

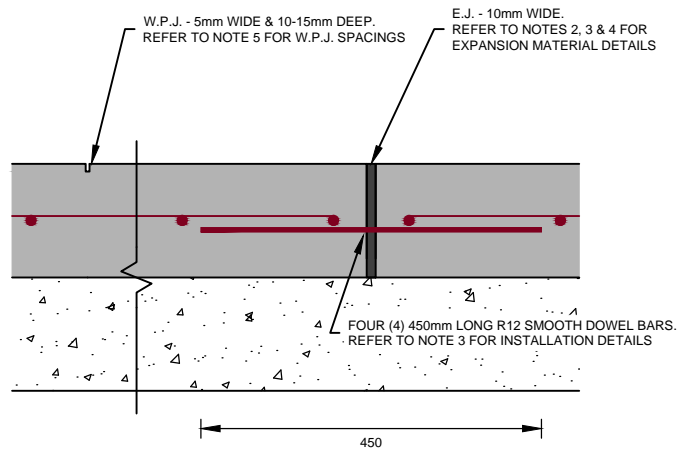
Sheet: 1 of 1

Standard Drawing Number:

**MCC-402**

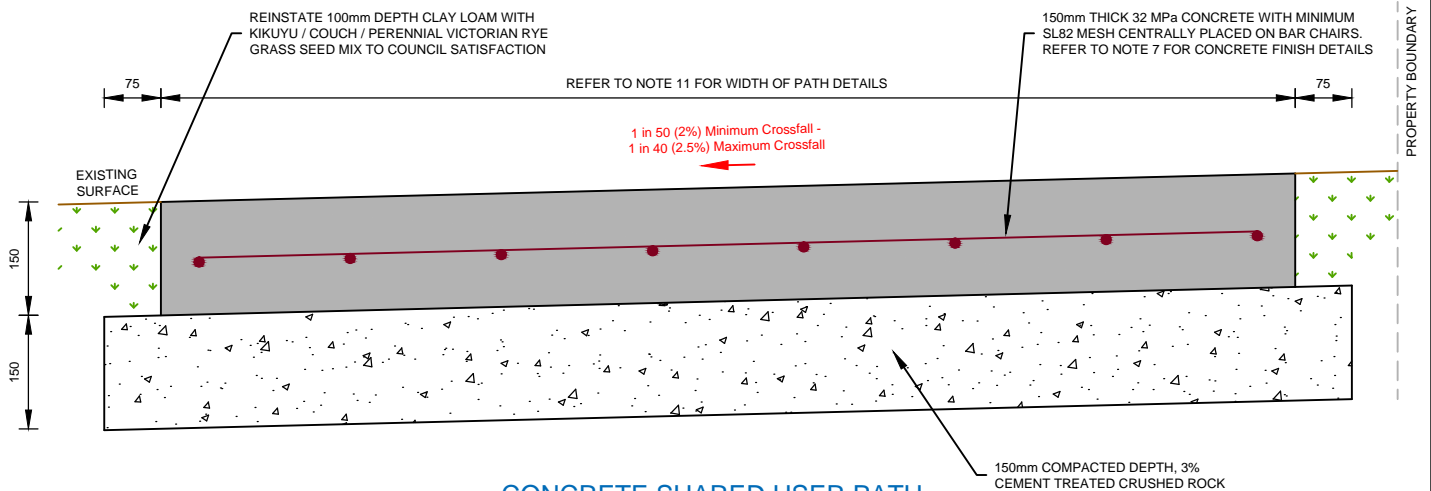
NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. EXPANSION JOINTS (E.J.) TO BE 'CONNOLLY EXPANSION JOINT' OR APPROVED EQUIVALENT TO MATCH FULL DEPTH OF CONCRETE.
3. EXPANSION JOINTS TO HAVE FOUR (4) 450mm LONG R12 SMOOTH GALVANISED DOWEL BARS INSTALLED AT MAXIMUM 300mm CENTRES COMMENCING 150mm FROM EDGE, ONE SIDE INSTALLED IN SLEEVES, WITH 10mm THICK POLYETHYLENE EXPANSION FOAM IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
4. EXPANSION JOINTS (E.J.) AT MAXIMUM 18m CENTRES AND AT THE START AND END OF NEWLY CONSTRUCTED FOOTPATH SECTIONS.
5. WEAKENED PLANE JOINTS (W.P.J.) IN CONCRETE FOOTPATH TO BE INSTALLED AT 2.5m INTERVALS AND MADE WITH A SAW CUT AFTER CONCRETE HAS BEEN POURED.
6. CONCRETE COLOUR TO TO BE 4% CHARCOAL.
7. CONCRETE SHARED USER PATH TO HAVE STIPPLE FINISH WITH NO HIGHLIGHTS.
8. SHARED USER PATH PANELS ADJACENT VEHICLE CROSSINGS ARE TO BE THICKENED IN ACCORDANCE WITH THE APPROPRIATE VEHICLE CROSSING STANDARD DRAWING. REFER TO 'VEHICLE CROSSINGS' SERIES OF MAROONDAH CITY COUNCIL STANDARD DRAWINGS.
9. CLASS 3 CEMENT TREATED CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS .
10. FORM WORK TIMBER TO BE A MINIMUM OF 140mm DEEP.
11. WIDTH OF SHARED USER PATH (2.5m TO 3.0m) TO BE DIRECTED BY COUNCIL.
12. SHARED USER PATH TO HAVE A MINIMUM CROSSFALL GRADE OF 1 in 50 (2%) AND A MAXIMUM CROSSFALL GRADE OF 1 in 40 (2.5%).



### CONCRETE SHARED USER PATH JOINT DETAILS

SCALE 1:10 @ A4



### CONCRETE SHARED USER PATH

SCALE 1:10 @ A4



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Title:

## SHARED USER PATH PAVEMENT DETAILS - CONCRETE

Revision: 00

Date: October 2020

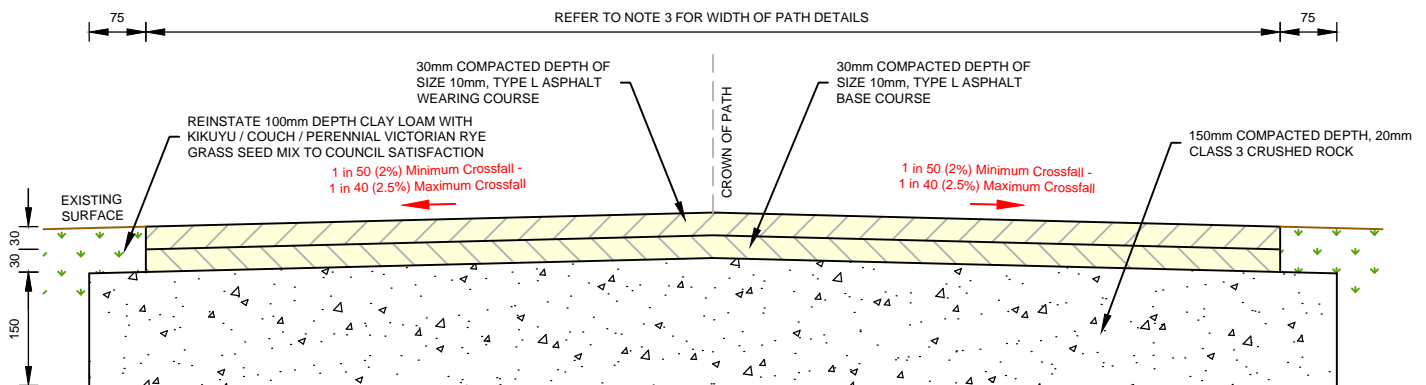
Sheet: 1 of 1

Standard Drawing Number:

**MCC-403**

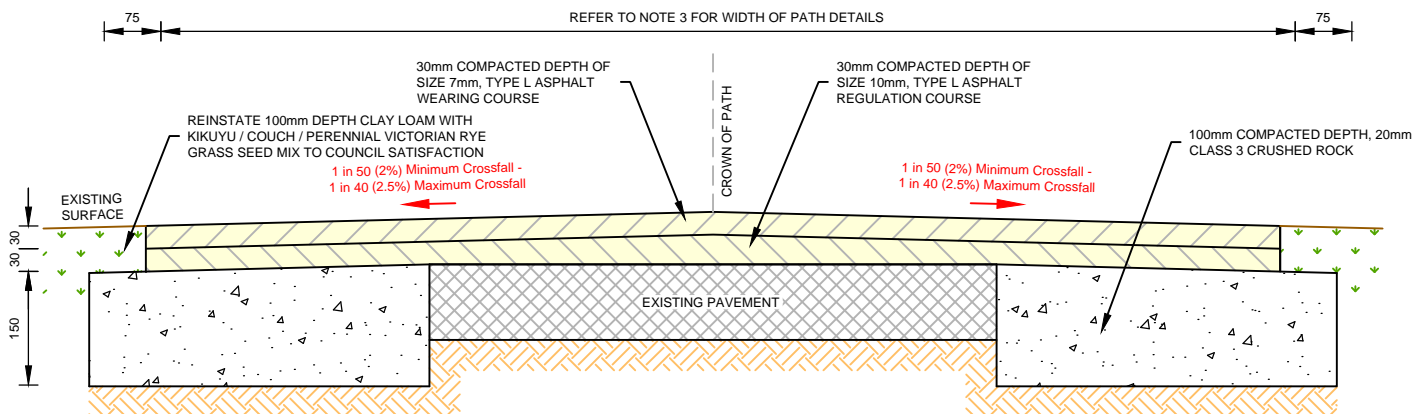
NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.
3. WIDTH OF SHARED USER PATH (2.5m TO 3.0m) TO BE DIRECTED BY COUNCIL.
4. SHARED USER PATH TO HAVE A MINIMUM CROSSFALL GRADE OF 1 in 50 (2%) AND A MAXIMUM CROSSFALL GRADE OF 1 in 40 (2.5%).



**NEW ASPHALT SHARED USER PATH**

SCALE 1:10 @ A4



**ASPHALT SHARED USER PATH WIDENING**

SCALE 1:10 @ A4



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Title:

**SHARED USER PATH  
PAVEMENT DETAILS - ASPHALT**

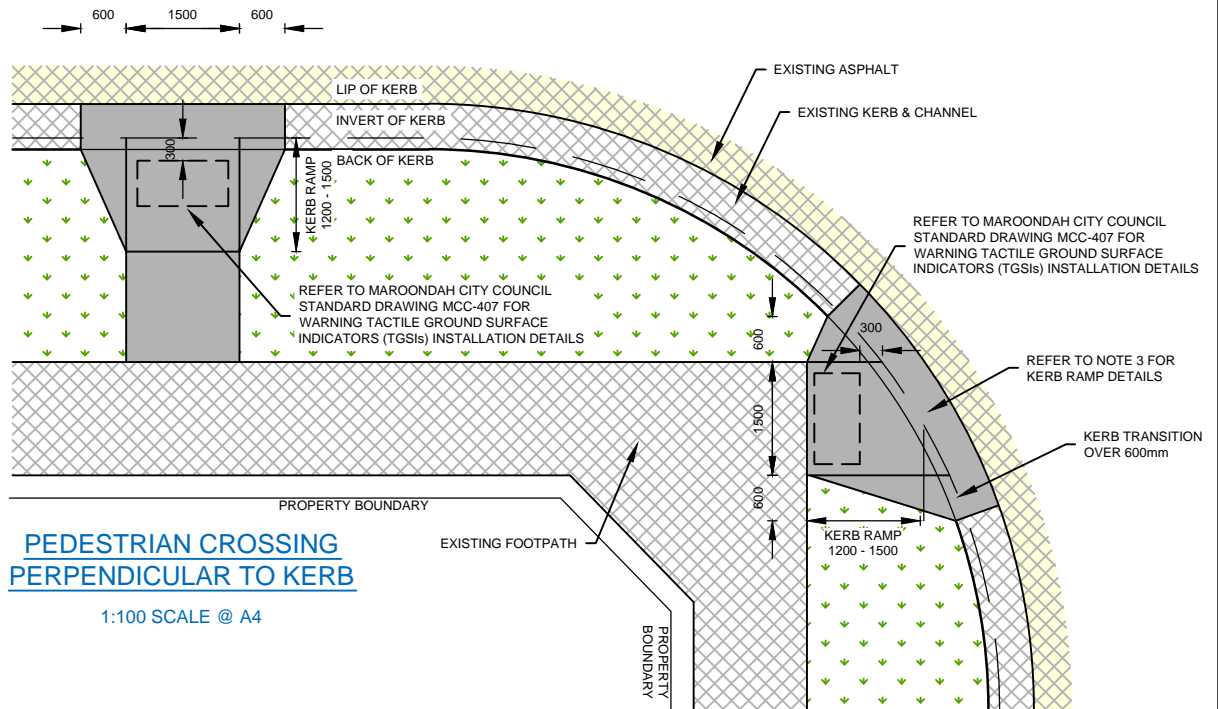
Revision: 00

Date: October 2020

Sheet: 1 of 1

Standard Drawing Number:

**MCC-404**



#### NOTES:

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. LOCATION & ALIGNMENT OF PEDESTRIAN CROSSING TO BE CONFIRMED WITH COUNCIL'S ENGINEERS PRIOR TO CONSTRUCTION.
3. KERB RAMP LENGTH TO BE MEASURED FROM THE INVERT OF KERB THROUGH THE CENTRE OF THE PEDESTRIAN CROSSING.
4. REFER TO MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-406 FOR PEDESTRIAN CROSSING CONSTRUCTION DETAILS.
5. TACTILE GROUND SURFACE INDICATORS (TGSIs) ARE TO BE INSTALLED ON A SITE SPECIFIC BASIS SUBJECT TO COUNCIL APPROVAL. REFER TO MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-407 FOR INSTALLATION DETAILS.



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Title:

## PEDESTRIAN CROSSING - LOCATIONS

Revision: 00

Date: October 2020

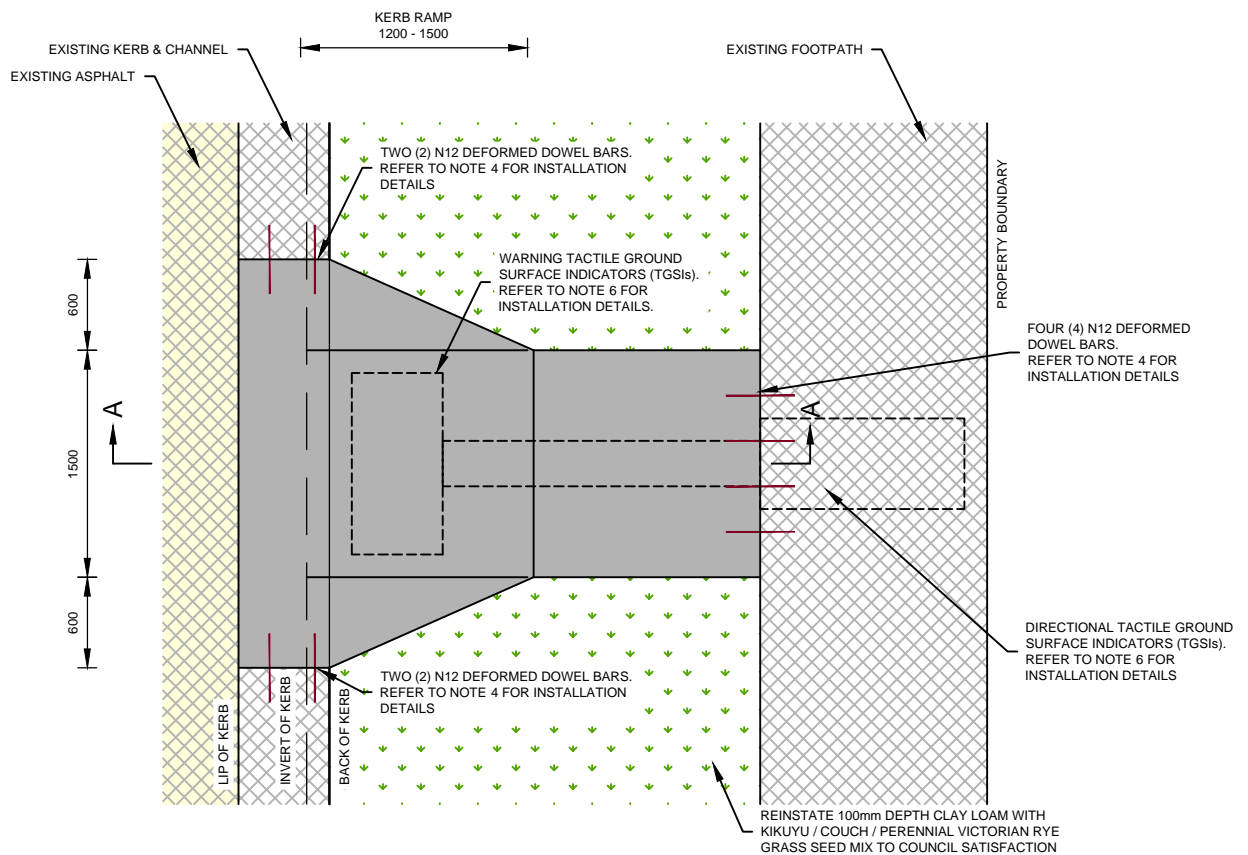
Sheet: 1 of 1

Standard Drawing Number:

**MCC-405**

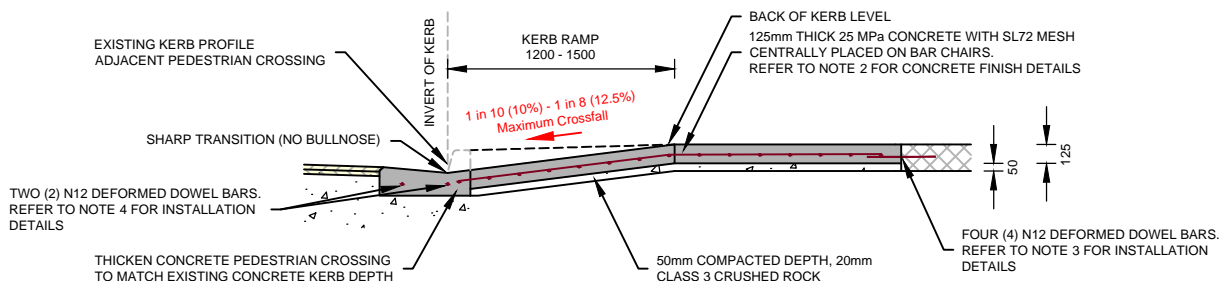
# NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. CONCRETE PEDESTRIAN CROSSING TO HAVE STIPPLE FINISH WITH NO HIGHLIGHTS.
3. CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.
4. AT ALL EXISTING CONCRETE TO NEW CONCRETE INTERFACES, 450mm LONG N12 DEFORMED DOWEL BARS ARE TO BE INSTALLED AT MAXIMUM 300mm CENTRES COMMENCING A MINIMUM OF 150mm FROM EDGE OF CONCRETE.
5. FORM WORK TIMBER TO BE A MINIMUM OF 90mm DEEP.
6. TACTILE GROUND SURFACE INDICATORS (TGSIs) ARE TO BE INSTALLED ON A SITE SPECIFIC BASIS SUBJECT TO COUNCIL APPROVAL. REFER TO MAROONDAH CITY COUNCIL STANDARD MCC-407 FOR INSTALLATION DETAILS.



## PLAN VIEW

1:50 SCALE @ A4



## SECTION A-A

1:50 SCALE @ A4



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## PEDESTRIAN CROSSING - LAYOUT DETAILS

Revision: 00

Date: October 2020

Sheet: 1 of 1

Standard Drawing Number:

MCC-406

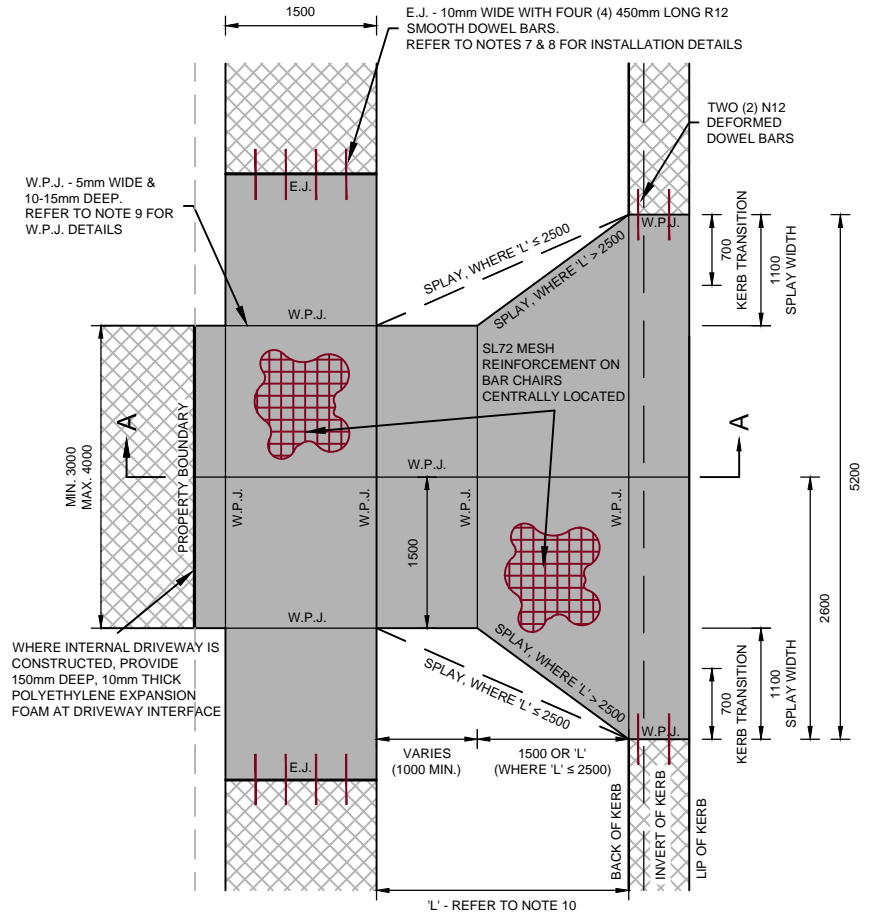
1. ALL DIMENSIONS GIVEN IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. INSTALLATION & LAYOUT OF TACTILE GROUND SURFACE INDICATORS (TGSIs) IS TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 1428.4.1 AND TO THE SATISFACTION OF COUNCIL'S ENGINEERS.
3. PLAN VIEW SHOWS LAYOUT OF TGSIs FOR THE FOLLOWING SITE CONDITIONS:
  - RIGHT ANGLE MID-BLOCK CROSSING
  - KERB RAMP CROSSFALL OF 1 in 8 (12.5%)
  - TOP OF KERB RAMP IS >3m FROM THE BUILDING LINEREFER TO AUSTRALIAN STANDARDS AS 1428.4.1 FOR TGSi LAYOUTS WITH DIFFERENT SITE CONDITIONS.
4. TGSi PRODUCT & MANUFACTURER TO BE APPROVED BY COUNCIL'S ENGINEERS PRIOR TO INSTALLATION.
5. TGSIs TO BE YELLOW UNLESS OTHERWISE INDICATED.





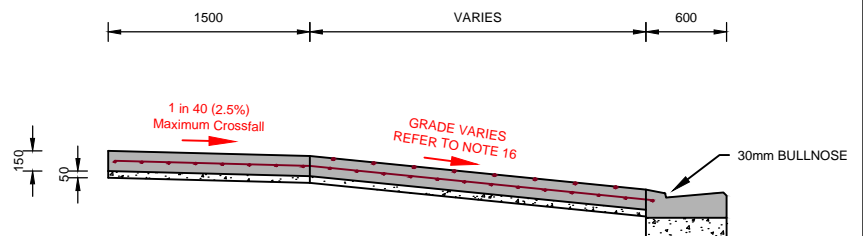
NOTES:

- ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
- CONCRETE SPECIFICATION: MINIMUM 150mm THICK, 25MPa CONCRETE WITH SL72 CENTRALLY LOCATED ON 50mm COMPACTED THICKNESS, 20mm CLASS 3 CRUSHED ROCK.
- CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.
- NO PATTERN-PAVE FINISH, EXPOSED AGGREGATE OR COLOURED CONCRETE.
- CROSSING TO HAVE STIPPLE FINISH WITH NO HIGHLIGHTS.
- FOOTPATH PANELS IMMEDIATELY ADJACENT TO CROSSING TO BE CONSTRUCTED TO ABOVE CONCRETE SPECIFICATION.
- EXPANSION JOINTS (E.J.) TO BE 'CONNOLLY EXPANSION JOINT' OR APPROVED EQUIVALENT TO MATCH FULL DEPTH OF CONCRETE.
- EXPANSION JOINTS TO HAVE FOUR (4) 450mm LONG R12 SMOOTH GALVANISED DOWEL BARS INSTALLED AT MAXIMUM 300mm CENTRES COMMENCING 150mm FROM EDGE, ONE SIDE INSTALLED IN SLEEVES, WITH 10mm THICK POLYETHYLENE EXPANSION FOAM IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- WEAKENED PLANE JOINTS (W.P.J.) SHALL BE LOCATED AS SHOWN ON PLAN AND MADE WITH A 'T' IRON AT TIME OF CONSTRUCTION.
- IF DISTANCE BETWEEN BACK OF KERB & FOOTPATH, 'L', IS LESS THAN 2500mm, CONTINUE SPLAY FROM KERB TO FOOTPATH, OTHERWISE, CONSTRUCT 1500mm LENGTH SPLAY.
- SAW CUTTING TO BE USED ON ALL CONCRETE TO CONCRETE AND CONCRETE TO ASPHALT INTERFACES WHERE EXISTING CONCRETE IS TO BE REMOVED.
- FORMWORK TIMBER TO BE MINIMUM 140mm.
- IF THE EXISTING KERB IS TO BE RETAINED (AT COUNCIL'S DISCRETION), N12 DEFORMED BARS 450mm LONG AT 600mm CENTRES ARE TO BE PLACED CENTRALLY PERPENDICULAR TO BACK OF KERB.
- IF ASPHALT ROAD IS DAMAGED DURING CONSTRUCTION, A MINIMUM 300mm WIDE, 30mm DEEP ROAD REPAIR MUST BE UNDERTAKEN USING 10mm TYPE H HOT MIX ASPHALT TO COUNCIL'S SATISFACTION.
- ALL JOINTS BETWEEN OLD & NEW ASPHALT SURFACES TO BE SEALED WITH AN ASPHALT CRACK & JOINT SEALANT APPROVED BY MAROONDAH CITY COUNCIL.
- THE PROPERTY OWNER IS REQUIRED TO ENSURE VEHICLES DO NOT SCRAPE. IF REQUIRED, A VEHICLE CLEARANCE ASSESSMENT FOR A 'B85' VEHICLE SHOULD BE UNDERTAKEN IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS/NZS 2890.1:2004.



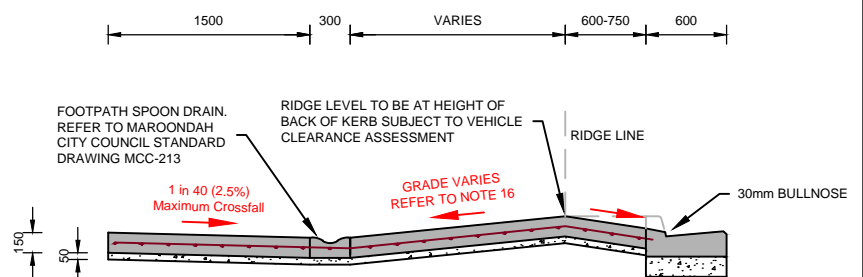
PLAN VIEW

1:75 SCALE @ A4



SECTION A-A

1:50 SCALE @ A4



SECTION A-A - REVERSE FALL

1:50 SCALE @ A4



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## VEHICLE CROSSING - STANDARD

Revision: 00

Date: October 2020

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Standard Drawing Number:

MCC-501



1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. CONCRETE SPECIFICATION: MINIMUM 200mm THICK, 32MPa CONCRETE WITH SL82 CENTRALLY LOCATED ON 75mm COMPACTED THICKNESS, 20mm CLASS 3 CRUSHED ROCK.
3. CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.
4. NO PATTERN-PAVE FINISH, EXPOSED AGGREGATE OR COLOURED CONCRETE.
5. CROSSING TO HAVE STIPPLE FINISH WITH NO HIGHLIGHTS.
6. FOOTPATH PANELS IMMEDIATELY ADJACENT TO CROSSING TO BE CONSTRUCTED TO ABOVE CONCRETE SPECIFICATION.
7. EXPANSION JOINTS (E.J.) TO BE 'CONNOLLY EXPANSION JOINT' OR APPROVED EQUIVALENT TO MATCH FULL DEPTH OF CONCRETE.
8. EXPANSION JOINTS TO HAVE FOUR (4) 450mm LONG R12 SMOOTH GALVANISED DOWEL BARS INSTALLED AT MAXIMUM 300mm CENTRES COMMENCING 150mm FROM EDGE, ONE SIDE INSTALLED IN SLEEVES, WITH 10mm THICK POLYETHYLENE EXPANSION FOAM IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
9. WEAKENED PLANE JOINTS (W.P.J) SHALL BE LOCATED AS SHOWN ON PLAN AND MADE WITH A 'T' IRON AT TIME OF CONSTRUCTION.
10. IF DISTANCE BETWEEN BACK OF KERB & FOOTPATH, 'L', IS LESS THAN 2500mm, CONTINUE SPLAY FROM KERB TO FOOTPATH, OTHERWISE, CONSTRUCT 1500mm LENGTH SPLAY.
11. SAW CUTTING TO BE USED ON ALL CONCRETE TO CONCRETE AND CONCRETE TO ASPHALT INTERFACES WHERE EXISTING CONCRETE IS TO BE REMOVED.
12. FORMWORK TIMBER TO BE MINIMUM 140mm.
13. IF THE EXISTING KERB IS TO BE RETAINED (AT COUNCIL'S DISCRETION), N12 DEFORMED BARS 450mm LONG AT 600mm CENTRES ARE TO BE PLACED CENTRALLY PERPENDICULAR TO BACK OF KERB.
14. IF ASPHALT ROAD IS DAMAGED DURING CONSTRUCTION, A MINIMUM 300mm WIDE, 30mm DEEP ROAD REPAIR MUST BE UNDERTAKEN USING 10mm TYPE H HOT MIX ASPHALT TO COUNCIL'S SATISFACTION.
15. ALL JOINTS BETWEEN OLD & NEW ASPHALT SURFACES TO BE SEALED WITH AN ASPHALT CRACK & JOINT SEALANT APPROVED BY MAROONDAH CITY COUNCIL.
16. THE PROPERTY OWNER IS REQUIRED TO ENSURE VEHICLES DO NOT SCRAPE. IF REQUIRED, A VEHICLE CLEARANCE ASSESSMENT FOR A 'B85' VEHICLE SHOULD BE UNDERTAKEN IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS/NZS 2890.1:2004.



1:75 SCALE @ A4



1:50 SCALE @ A4



1:50 SCALE @ A4



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## VEHICLE CROSSING - INDUSTRIAL & HEAVY USE

Revision: 00

Date: October 2020

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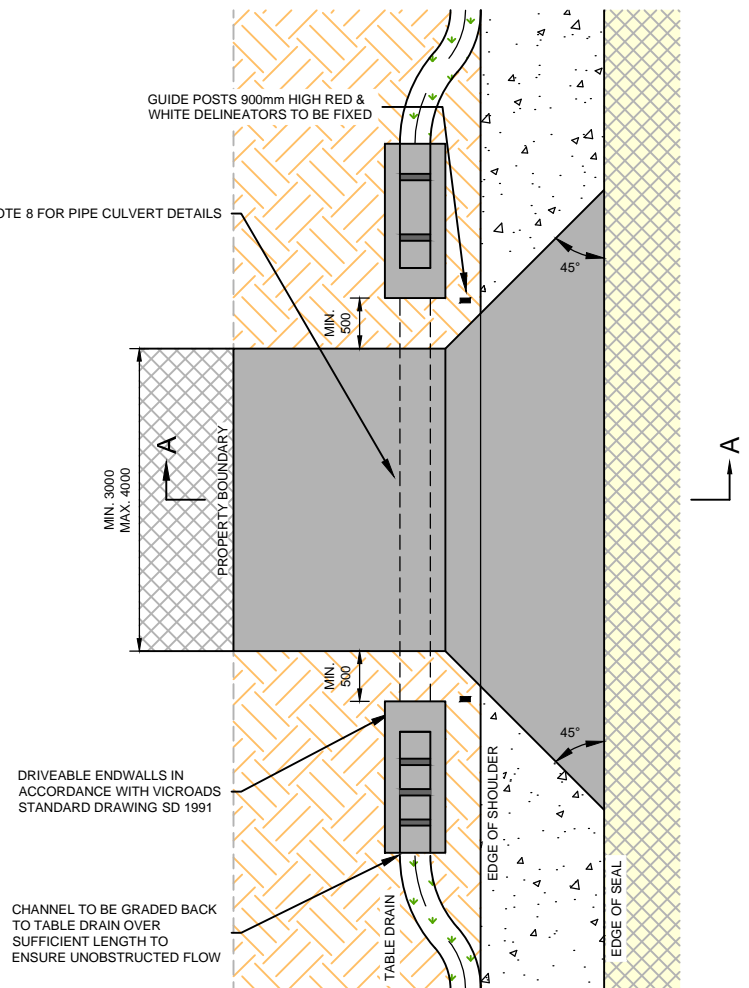
Standard Drawing Number:

MCC-502

# NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. STANDARD TO BE USED WHERE TABLE DRAINS ARE PRESENT ON A PARTIALLY CONSTRUCTED OR UNCONSTRUCTED ROAD.
3. RESIDENTIAL VEHICLE CROSSING MAY BE CONSTRUCTED WITH ASPHALT OR CONCRETE. REFER TO PAVEMENT MAKEUP INSET.
4. CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.
5. FOR INDUSTRIAL OR HEAVY USE, VEHICLE CROSSING IS TO BE CONSTRUCTED IN CONCRETE ONLY TO INDUSTRIAL & HEAVY USE CONCRETE DETAIL IN PAVEMENT MAKEUP INSET.
6. VEHICLE CROSSING MUST BE SEALED FROM THE PROPERTY LINE UP TO THE EDGE OF THE ROAD PAVEMENT.
7. WINGED ENDWALLS OR OTHER SUITABLE PRODUCTS MAY BE ALLOWED IF SPACE IS LIMITED. COUNCIL APPROVAL MUST BE OBTAINED IN WRITING.
8. 375mm Ø SN8 uPVC PIPE TO BE LAID ON MINIMUM 50mm CLASS 2 CRUSHED ROCK BEDDING. IF 375mm Ø CANNOT BE ACHIEVED, 300mm Ø PIPE TO BE USED.
9. THE PROPERTY OWNER IS REQUIRED TO ENSURE VEHICLES DO NOT SCRAPE. IF REQUIRED, A VEHICLE CLEARANCE ASSESSMENT FOR A 'B85' VEHICLE SHOULD BE UNDERTAKEN IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS/NZS 2890.1:2004.

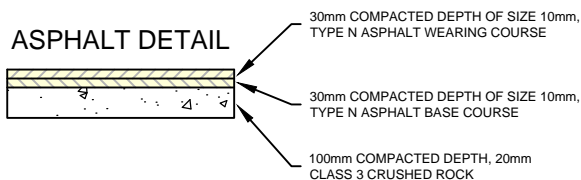
REFER TO NOTE 8 FOR PIPE CULVERT DETAILS



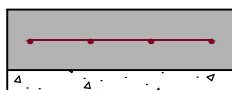
## PLAN VIEW

1:75 SCALE @ A4

### ASPHALT DETAIL

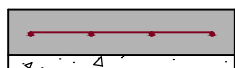


### INDUSTRIAL & HEAVY USE CONCRETE DETAIL



REFER TO MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-502

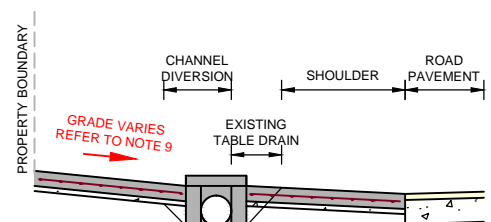
### STANDARD CONCRETE DETAIL



REFER TO MAROONDAH CITY COUNCIL STANDARD DRAWING MCC-501

## PAVEMENT MAKEUP

NOT TO SCALE



## SECTION A-A

1:75 SCALE @ A4



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## VEHICLE CROSSING - RURAL WITH CULVERT

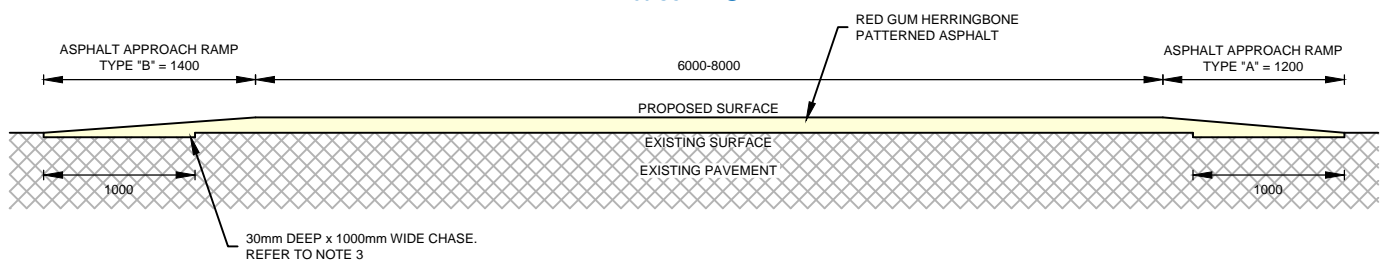
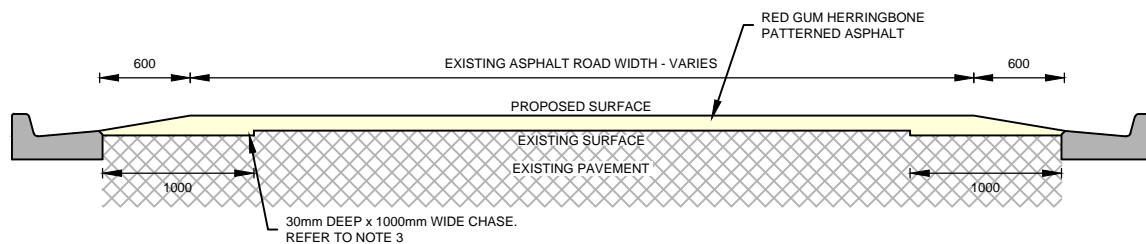
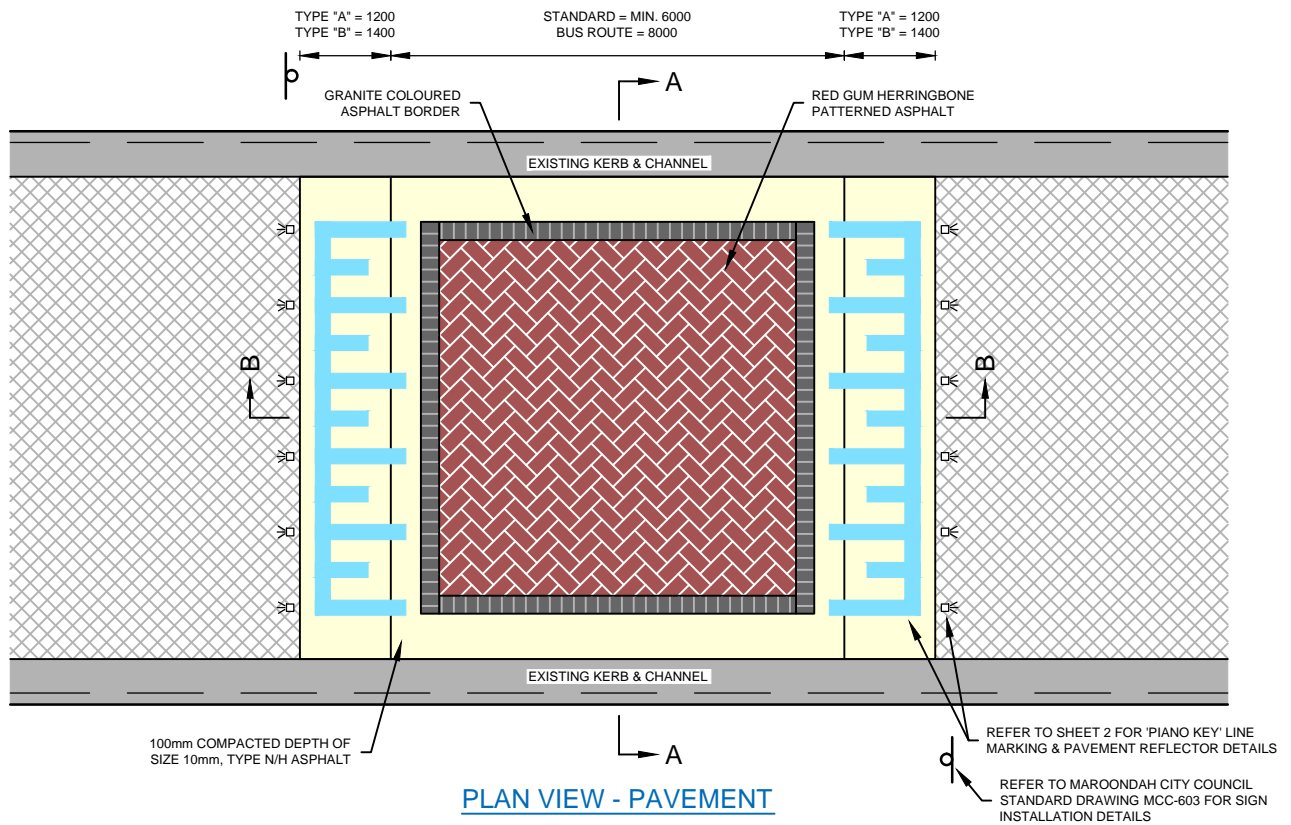
Revision: 00

Date: October 2020

Sheet: 1 of 1

Standard Drawing Number:

**MCC-503**



**NOTES:**

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. TYPE & LENGTH OF RAISED PAVEMENT TO BE CONFIRMED WITH COUNCIL'S ENGINEERS PRIOR TO CONSTRUCTION.
3. EXISTING ASPHALT TO BE PROFILED BY A DEPTH OF 30mm & WIDTH OF 1000mm 'CHASE' WITHIN EDGE OF RAISED PAVEMENT TO ALLOW FEATHERING OF NEW ASPHALT TO EXISTING.



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**RAISED PAVEMENT**

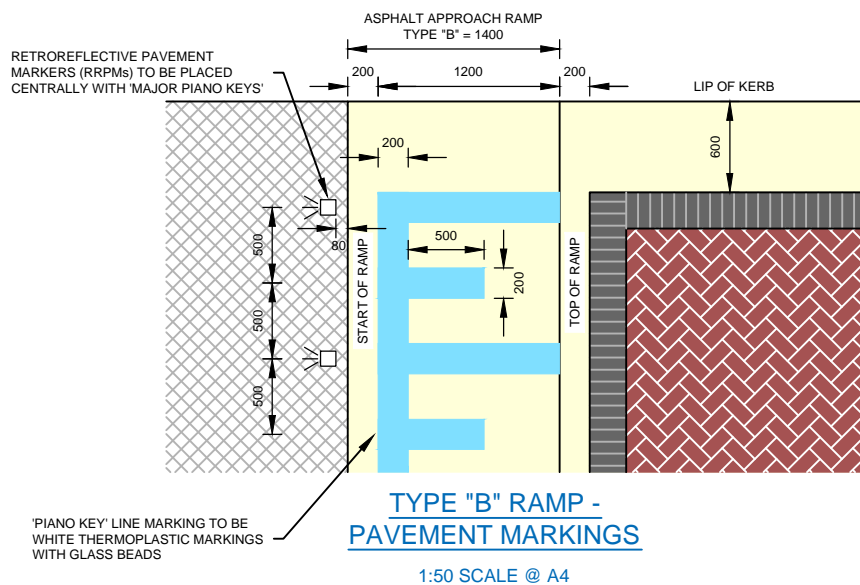
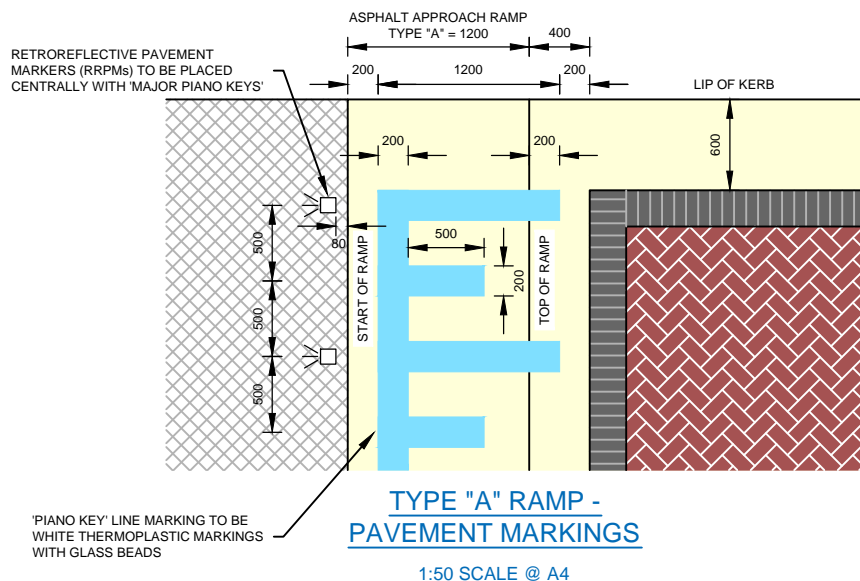
Revision: 01

Date: June 2021

Sheet: 1 of 2

Standard Drawing Number:

**MCC-601**



NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. PIANO KEY LINE MARKING TO BE CENTRED WITH THE RAISED PAVEMENT WITH MAJOR PIANO KEYS AT BOTH ENDS.



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## RAISED PAVEMENT

Revision: 01

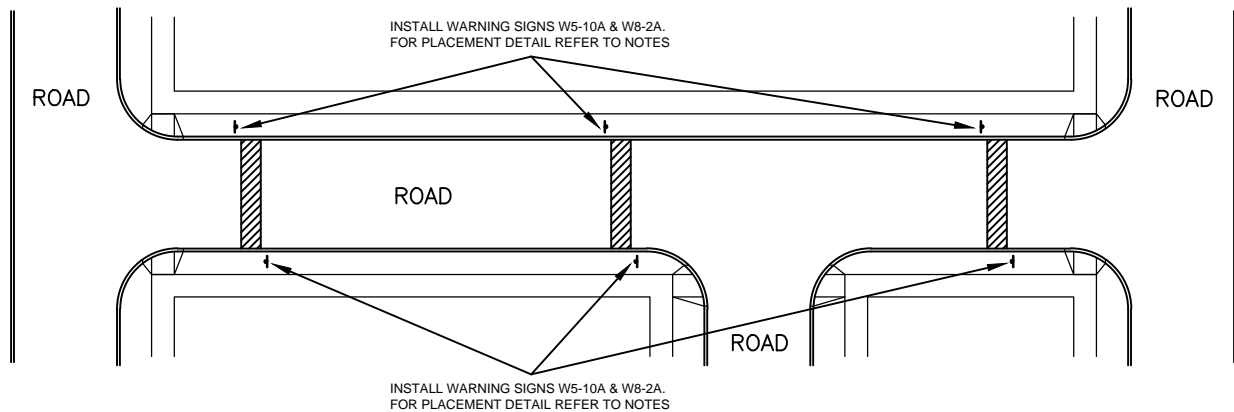
Date: June 2021

Sheet: 2 of 2

Standard Drawing Number:

**MCC-601**





### ADVANCE WARNING SIGN LOCATIONS

NOT TO SCALE



W5-10A



W8-2A

### ADVANCE WARNING SIGNS

NOT TO SCALE

#### NOTES:

1. SIGNS TO BE INSTALLED AT BASE OF EVERY ROAD HUMP/RAISED PAVEMENT UNLESS DIRECTED OTHERWISE BY COUNCIL ENGINEERS.
2. IN ACCORDANCE WITH COUNCIL ENGINEER DIRECTION, SIGNS MAY BE INSTALLED UP TO 10m IN ADVANCE OF A ROAD HUMP/RAISED PAVEMENT & CLEAR OF OBSTRUCTIONS.
3. SIGNS TO BE INSTALLED AT A MINIMUM HEIGHT OF 2m ABOVE TOP OF KERB IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 1742.2:2009, APPENDIX D.



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## ROAD HUMP & RAISED PAVEMENT - WARNING SIGN INSTALLATION

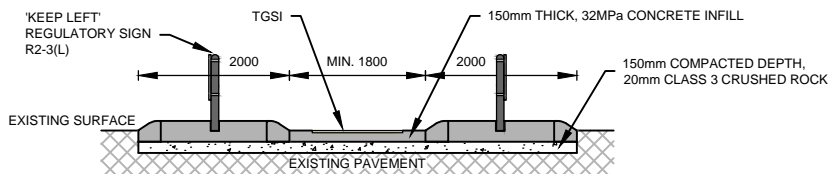
Revision: 00

Date: October 2020

Sheet: 1 of 1

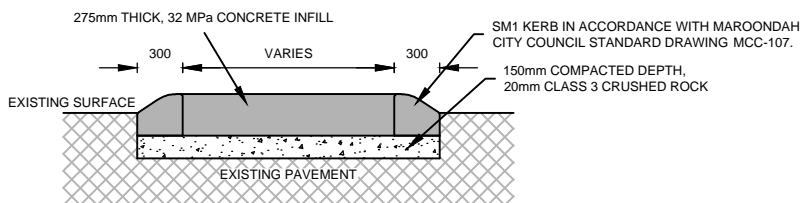
Standard Drawing Number:

**MCC-603**



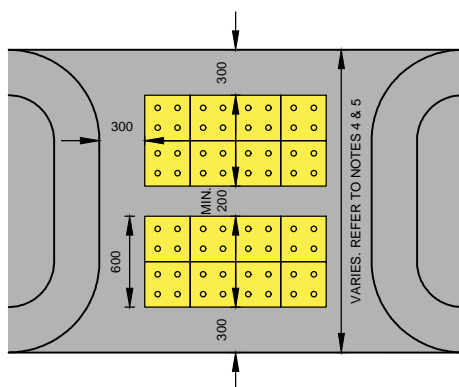
**SECTION A-A**

1:100 SCALE @ A4



**SECTION B-B**

1:50 SCALE @ A4



**PEDESTRIAN ISLAND DETAIL**

1:50 SCALE @ A4



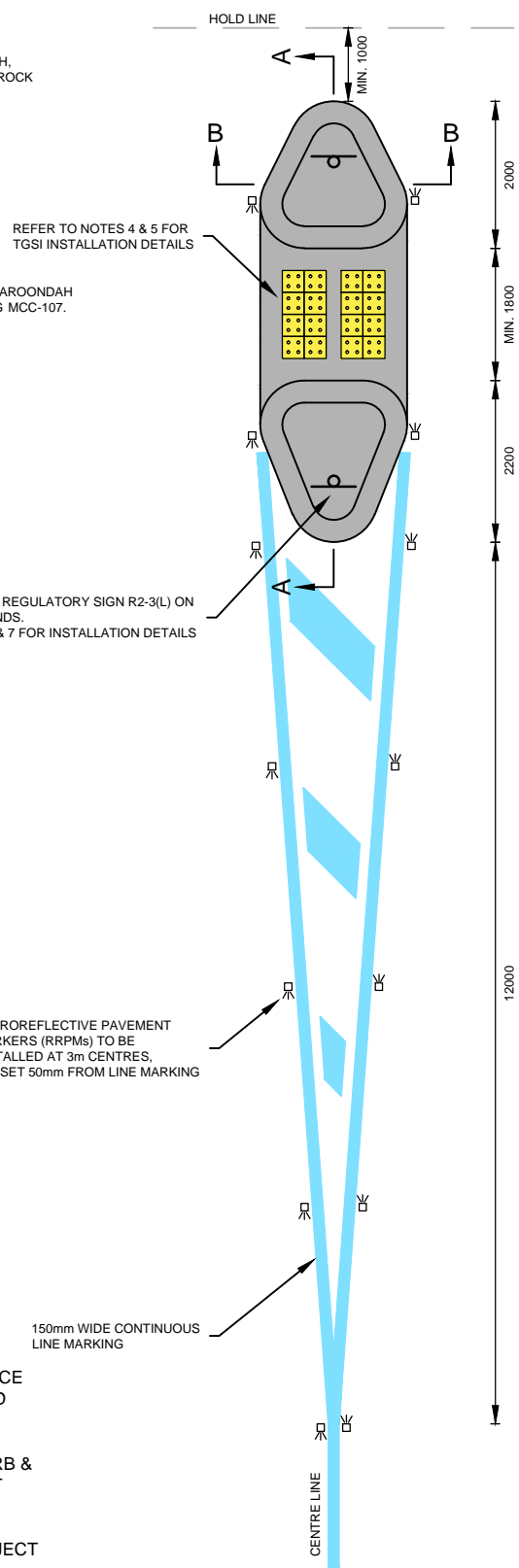
R2-3(L)

**'KEEP LEFT' REGULATORY SIGN**

**NOTES:**

NOT TO SCALE

1. DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
2. CLASS 3 CRUSHED ROCK MAY CONTAIN 100% CRUSHED CONCRETE IN ACCORDANCE WITH VICROADS TECHNICAL NOTE TN 107 - USE OF RECYCLED MATERIALS IN ROAD PAVEMENTS.
3. IF TRAFFIC ISLAND NECESSITATES PEDESTRIAN REFUGE, THEN DEPRESS SM1 KERB & CONCRETE INFILL AT PEDESTRIAN CROSSING TO BE 5mm ABOVE ROAD PAVEMENT SURFACE (MAINTAIN 150mm MINIMUM DEPTH CONCRETE PAVING).
4. TACTILE GROUND SURFACE INDICATORS (TGSIs) ARE TO BE INSTALLED ON A PROJECT SPECIFIC BASIS SUBJECT TO COUNCIL APPROVAL.
5. IF MINIMUM WIDTH OF REFUGE IS LESS THAN 900mm, TGSIs ARE NOT TO BE INSTALLED.
6. REGULATORY SIGN TO BE INSTALLED WITH FLEXIBLE POLES WITHIN A GALVANISED SLEEVE CAST INTO CONCRETE & FINISHED FLUSH WITH TOP OF ISLAND. TOP OF SIGN TO BE NO HIGHER THAN 1.0m FROM ROAD LEVEL.
7. REGULATORY SIGN NOT TO BE INSTALLED WHERE LARGE VEHICLES TURNING MOVEMENTS REQUIRE MOUNTING THE SPLITTER ISLAND.



**PLAN VIEW**

1:100 SCALE @ A4

Title:

**SPLITTER ISLAND WITH PEDESTRIAN REFUGE**

Revision:

01

Date:

June 2021

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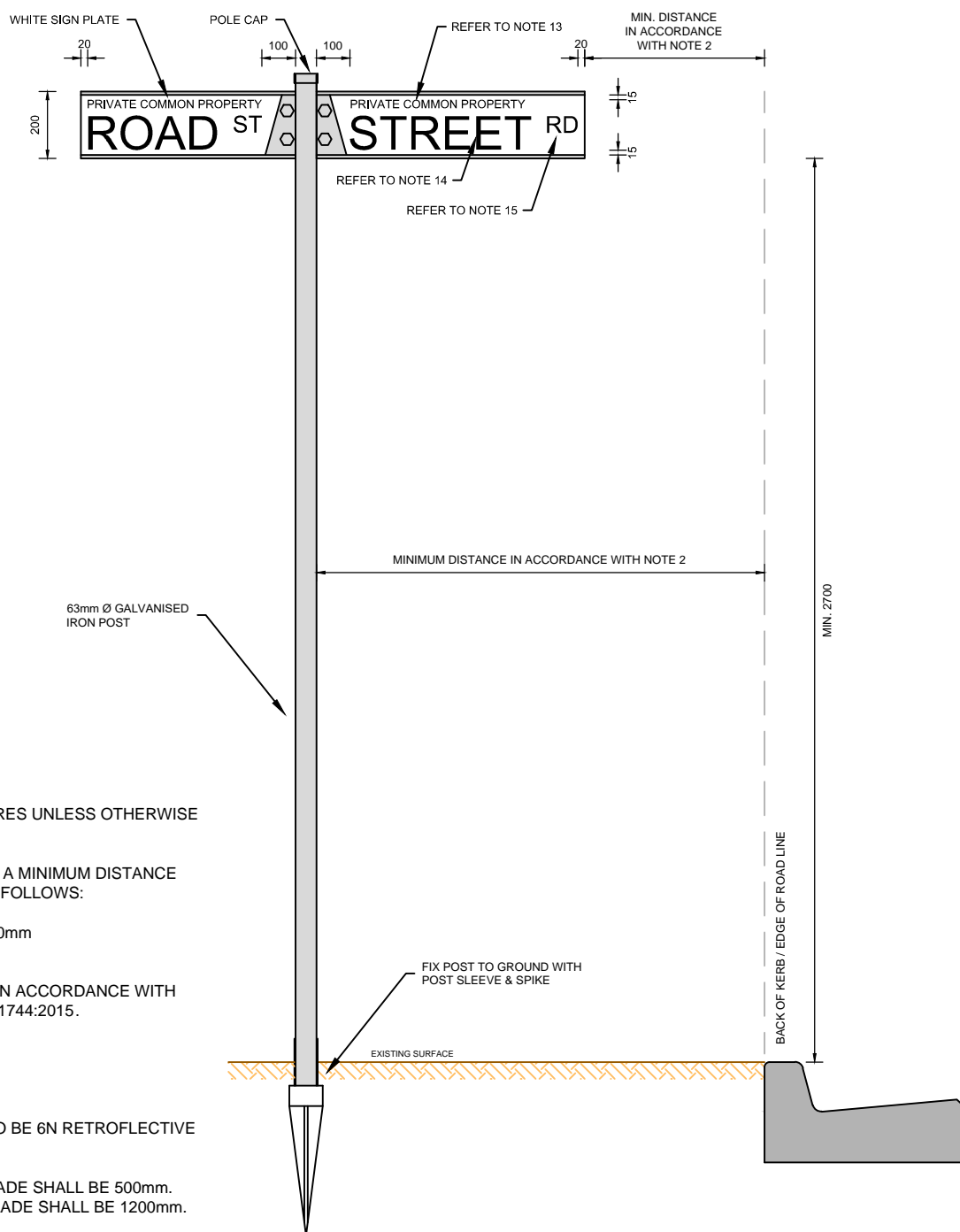
Standard Drawing Number:

**MCC-604**









#### SIGN BLADE NOTES:

- ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE INDICATED.
- SIGN & POST SHALL MAINTAIN A MINIMUM DISTANCE FROM THE EDGE OF ROAD AS FOLLOWS:  
BARRIER KERB - 300mm  
SEMI-MOUNTABLE KERB - 500mm  
NO KERB - 600mm
- SIGN TO BE MANUFACTURED IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 1744:2015.
- SIGN BLADE TO BE WHITE.
- ALL LETTERS TO BE BLACK.
- ALL LETTERS & LOGOS ARE TO BE 6N RETROFLECTIVE GROUND.
- MINIMUM LENGTH OF SIGN BLADE SHALL BE 500mm.  
MAXIMUM LENGTH OF SIGN BLADE SHALL BE 1200mm.
- AS SPECIFIED IN AUSTRALIAN STANDARDS AS 1744:2015, ALL LETTERS SHALL BE SERIES 'D' EXCEPT WHERE THIS WOULD OTHERWISE RESULT IN AN OVER-LENGTH SIGN. WHERE THIS OCCURS, LETTERS SHALL NOT BE NARROWER THAN SERIES 'C'.
- ABBREVIATIONS MUST BE IN ACCORDANCE WITH APPENDIX D OF AUSTRALIAN STANDARDS AS 1742:2017 OR ANY RELEVANT SUCCESSOR.
- A MINIMUM OF 20mm SPACING SHALL BE BETWEEN THE STREET NAME & STREET TYPE.
- PROPERTY NUMBERS CAN BE INSTALLED UNDER STREET TYPE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 1742.5, FIGURE 2.1, SUBJECT TO COUNCIL APPROVAL.

#### SIGN ASSEMBLY

1:20 SCALE @ A4

#### LETTER HEIGHT NOTES:

- LETTER HEIGHTS SHALL DIFFER FOR ROADS WITH <80km/hr SPEED LIMITS & ≥80km/hr SPEED LIMITS.
- COMMON PROPERTY HEADER LETTER HEIGHT SHALL BE:  
<80km/hr - 25mm  
≥80km/hr - DO NOT DISPLAY
- STREET NAME LETTER HEIGHT SHALL BE:  
<80km/hr - 100mm  
≥80km/hr - 130mm
- STREET TYPE ABBREVIATION LETTER HEIGHT SHALL BE:  
<80km/hr - 50mm  
≥80 km/hr - 65mm



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## STREET NAME BLADE & SIGN ASSEMBLY - PRIVATE COMMON PROPERTY

Revision: 01

Date: June 2021

Sheet: 1 of 1

Standard Drawing Number:

**MCC-702**