
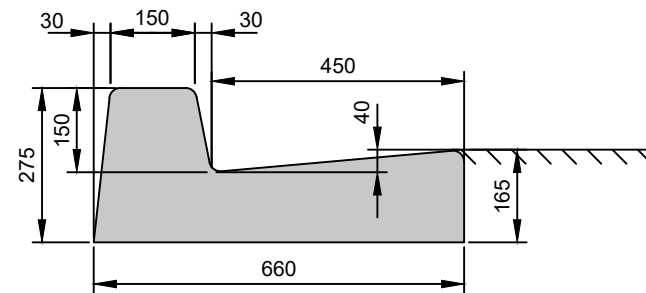


DRAWING SCHEDULE		
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SCSD-101-1	SCSD-101-Kerb Profiles and Dimensions.V1 - Sheet 1	1
SCSD-201-1	SCSD-201-Driveway & Laybacks.V1 - Layout 1	1
SCSD-201-2	SCSD-201-Driveway & Laybacks.V1 - Layout 2	1
SCSD-202-1	SCSD-202-Driveway Profiles.V1 - Layout1	1
SCSD-202-2	SCSD-202-Driveway Profiles.V1 - Layout2	1
SCSD-202-3	SCSD-202-Driveway Profiles.V1 - Layout3	1
SCSD-203-1	SCSD-203-Rural Driveway.V1 - Layout 1	1
SCSD-301-1	SCSD-301-Concrete Foot Paving.V1 - Layout 1	1
SCSD-301-2	SCSD-301-Concrete Foot Paving.V1 - Layout 2	1
SCSD-302-1	SCSD-302-Pathway Barriers - Bollards.V1 - Layout1	1
SCSD-303-1	SCSD-303-Kerb Ramps.V1 - Sheet 1	1
SCSD-303-2	SCSD-303-Kerb Ramps.V1 - Sheet 2	1
SCSD-304-1	SCSD-304-Footpath Chicane.V1 - Layout1	1
SCSD-305-1	SCSD-305-Kerb Ramps Construction Details.V1 - Layout 1	1
SCSD-401-1	SCSD-401-Grated Gully Pit with Extended Kerb Inlet.V1 - Layout1	1
SCSD-401-2	SCSD-401-Grated Gully Pit with Extended Kerb Inlet.V1 - Layout2	1
SCSD-402-1	SCSD-402-Drainage Swale.V1 - Layout1	1
SCSD-403-1	SCSD-403-Raised Grated Letterbox or Junction Pit.V1 - Layout1	1
SCSD-404-1	SCSD-404-Kerb Stormwater Outlet and Kerb Adaptor.V1 - Layout1	1
SCSD-405-1	SCSD-405-Overland Flow Path - Cross Section.V1 - Layout1	1
SCSD-406-1	SCSD-406-Onsite Stormwater Detention.V1 - Layout1	1
SCSD-406-2	SCSD-406-Onsite Stormwater Detention.V1 - Layout2	1
SCSD-407-1	SCSD-407-Onsite Stormwater Disposal Trench.V1 - Layout1	1
SCSD-408-1	SCSD-408-Median Kerb Inlet Pit.V1 - Layout1	1
SCSD-409-1	SCSD-409-Inter Allotment Drainage Pit.V1 - Layout1	1
SCSD-410-1	SCSD-410-Porous Paving.V1 - Layout	1
SCSD-411-1	SCSD-411-Grassed Swale - Type 1.V1 - Layout	1
SCSD-412-1	SCSD-412-Grassed Swale - Type 2.V1 - Layout	1
SCSD-413-1	SCSD-413-Sediment Basin.V1 - Layout	1
SCSD-414-1	SCSD-414-Bioretenction Tree Pit.V1 - Layout	1
SCSD-415-1	SCSD-415-Streetscape Bioretenction.V1 - Layout	1
SCSD-416-1	SCSD-416-Bioretenction Swale.V1 - Layout	1

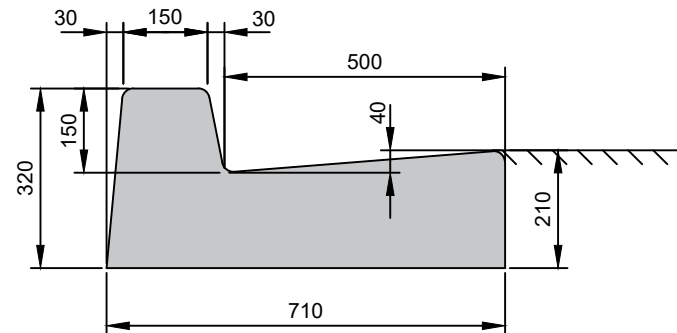
DRAWING SCHEDULE		
Sheet Number	Sheet Title	Revision
SCSD-417-1	SCSD-417-Bioretenction Basin.V1 - Layout	1
SCSD-418-1	SCSD-418-Constructed Wetland.V1 - Layout 1	1
SCSD-419-1	SCSD-419-High Flow Weir.V1 - Layout 1	1
SCSD-420-1	SCSD-420-Low Flow Riser Outlet.V1 - Layout 1	1
SCSD-421-1	SCSD-421-Small Sed Forebay.V1 - Layout 1	1
SCSD-422-1	SCSD-422-Large Sed Forebay.V1 - Layout 1	1
SCSD-423-1	SCSD-423-Maintenance Access - GPT Underground.V1 - Layout 1	1
SCSD-424-1	SCSD-424-Maintenance Access - GPT Aboveground.V1 - Layout 1	1
SCSD-425-1	SCSD-425-Sediment Basin Inlet Detail.V1 - Layout 1	1
SCSD-426-1	SCSD-426-Bedding Methods for Drainage Pipes.V1 - Layout 1	1
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SCSD-428-1	SCSD-428-Headwall Scour Protection.V1 - Layout 1	1
SCSD-429-1	SCSD-429-Stormwater Concrete Headwalls.V1 - Layout 1	1
SCSD-430-1	SCSD-430-Flood Warning Signage.V1 - Layout 1	1
SCSD-431-1	SCSD-431-Level Spreader Detail.V1 - Layout 1	1
SCSD-701-1	SCSD-701-Turning Area for Cul De Sacs.V1 - Layout1	1
SCSD-702-1	SCSD-702-Street and Road Standards.V1 - Layout 1	1
SCSD-703-1	SCSD-703-Concrete Dish Crossing at Intersection.V1 - Layout 1	1

				<b>Notes</b> 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED. 2. DRAWING IS NOT TO SCALE, WORK TO STATED DIMENSIONS. 3. DO NOT RELY ON THESE STANDARD DRAWINGS AS THE EQUIVALENT OF, OR SUBSTITUTE FOR, PROJECT SPECIFIC DESIGN AND ASSESSMENT BY A QUALIFIED PROFESSIONAL.	Singleton Council Civic Centre, PO Box 314 Singleton, NSW, 2330  Phone: (02) 6578 7290 Fax: (02) 6572 4197 <a href="http://www.singleton.nsw.gov.au">www.singleton.nsw.gov.au</a>	Drawing Title CONTENTS PAGE		
	1	ORIGINAL VERSION	12/09/2023			Sheet 1 OF 1		A3
	Ver	Comments	Date			Drawing No. SCSD-100		Version 1

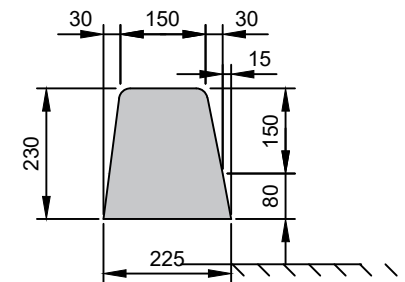
**SA (MODIFIED)**  
STANDARD  
KERB & GUTTER



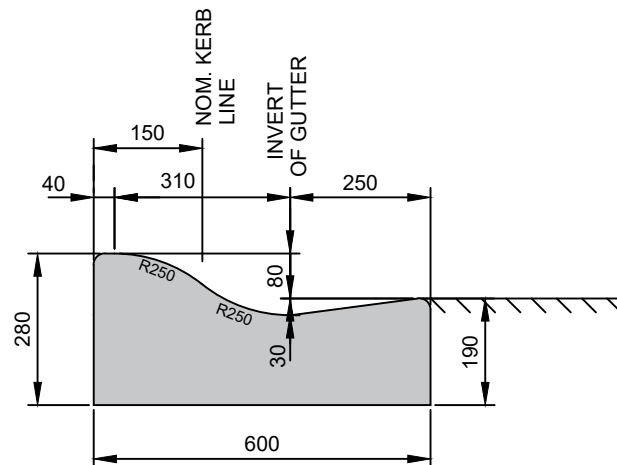
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TfNSW STANDARD  
KERB & GUTTER



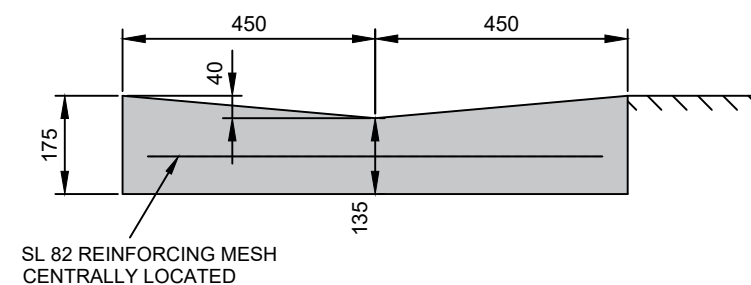
**SM**  
BARRIER KERB AT  
TRAFFIC ISLANDS



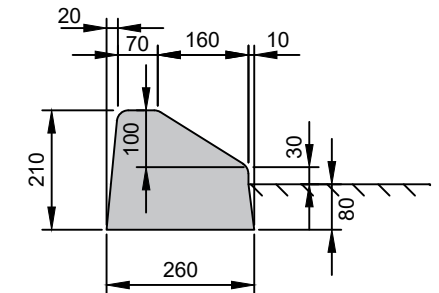
**RT (MODIFIED)**  
ROLL TOP KERB  
URBAN, ALLOWS  
VERGE/FOOTWAY  
PARKING



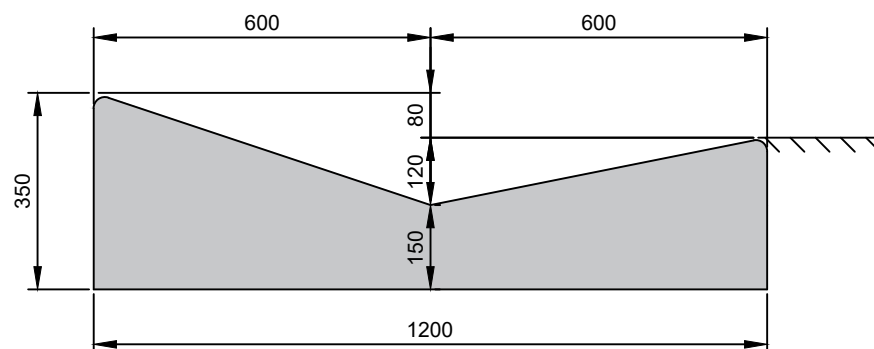
**SB**  
DISHED  
CROSSING



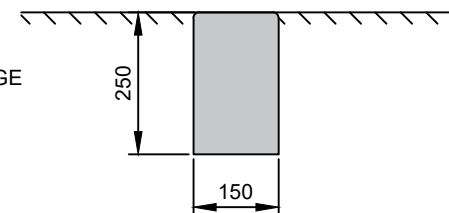
**SF**  
RAISED MEDIANS &  
TRAFFIC ISLANDS



**SK**  
CHANNEL  
ADJACENT TO  
SHOULDERS IN  
CUTTING



CONCRETE EDGE



**NOTES:**

1. ALL EXPOSED EDGES TO BE ROUNDED TO 20mm RADIUS
2. ALL KERBS TO BE CONSTRUCTED WITH 25MPa CONCRETE
3. CONTROL JOINTS TO BE PROVIDED EVERY 2.5-3m
4. EXPANSION JOINTS EVERY 15m AND AT EVERY LAYBACK, LINTEL AND PRAM RAMP
5. ADMIXTURE TO BE USED FOR FINISHING SURFACES

1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

**Notes**

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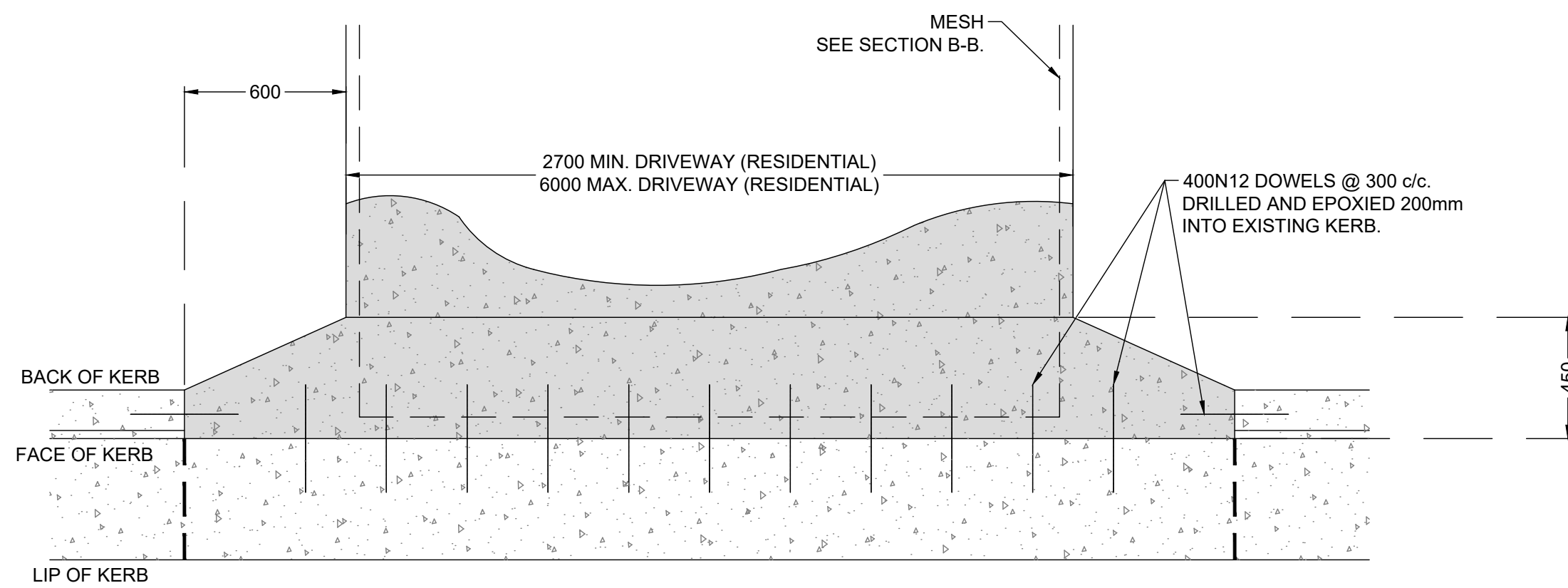
Drawing Title  
KERB PROFILES AND DIMENSIONS

Sheet 1 OF 1

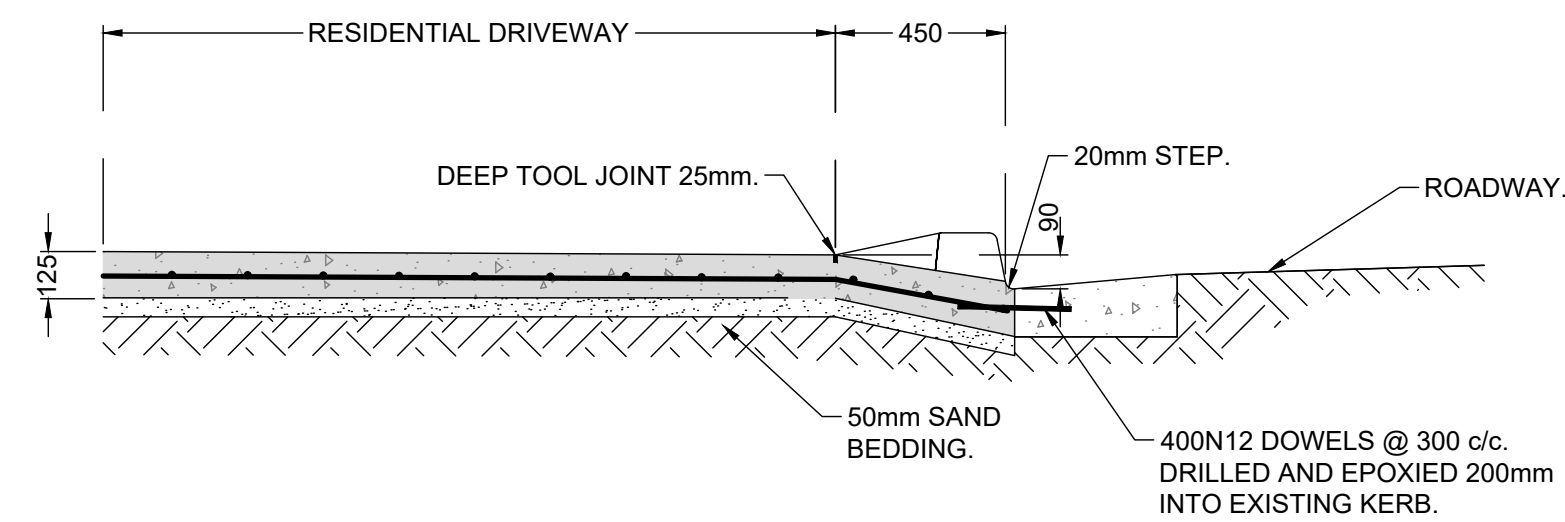
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Version 1

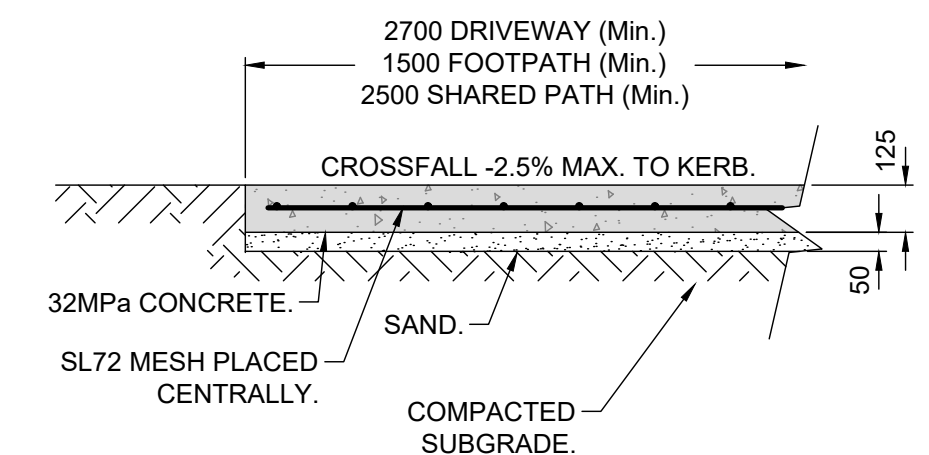
**A3**



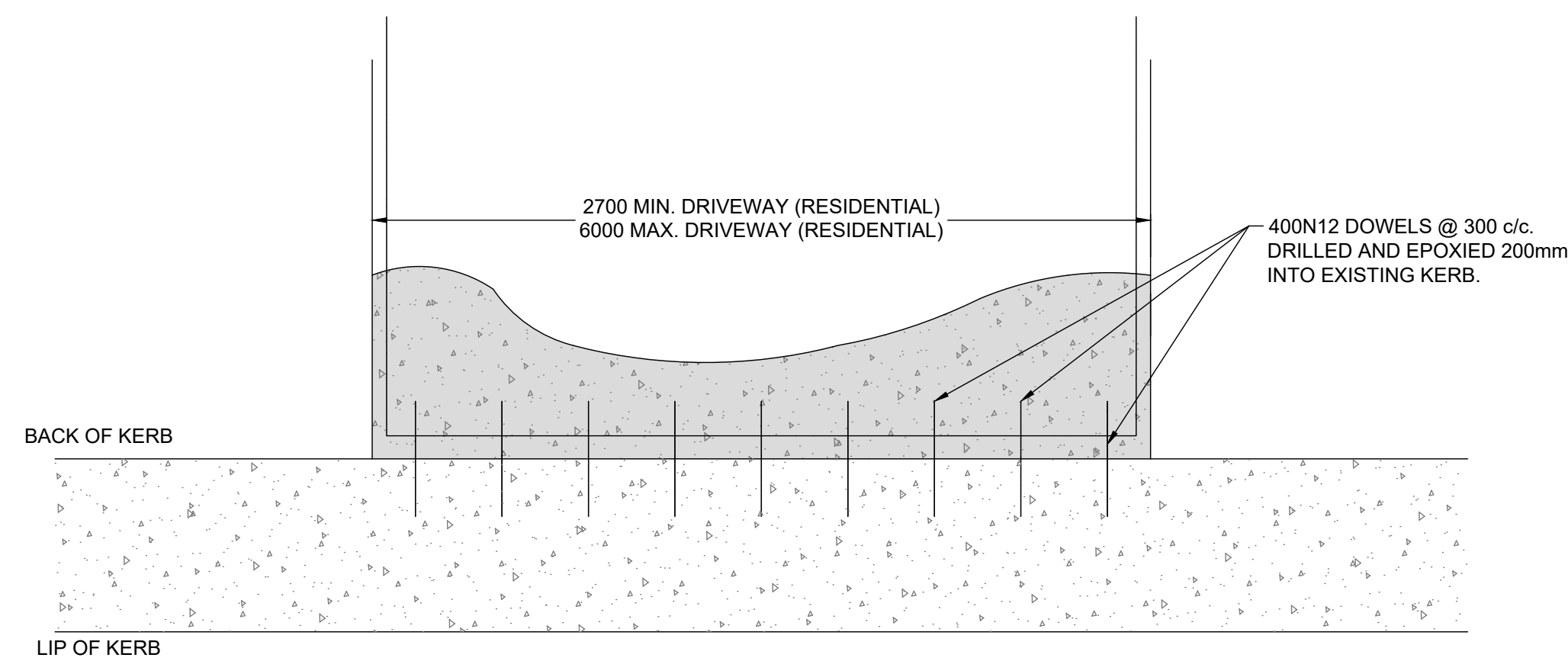
PLAN - UPRIGHT 'SA' KERB  
FOR RESIDENTIAL AND COMMERCIAL  
NTS



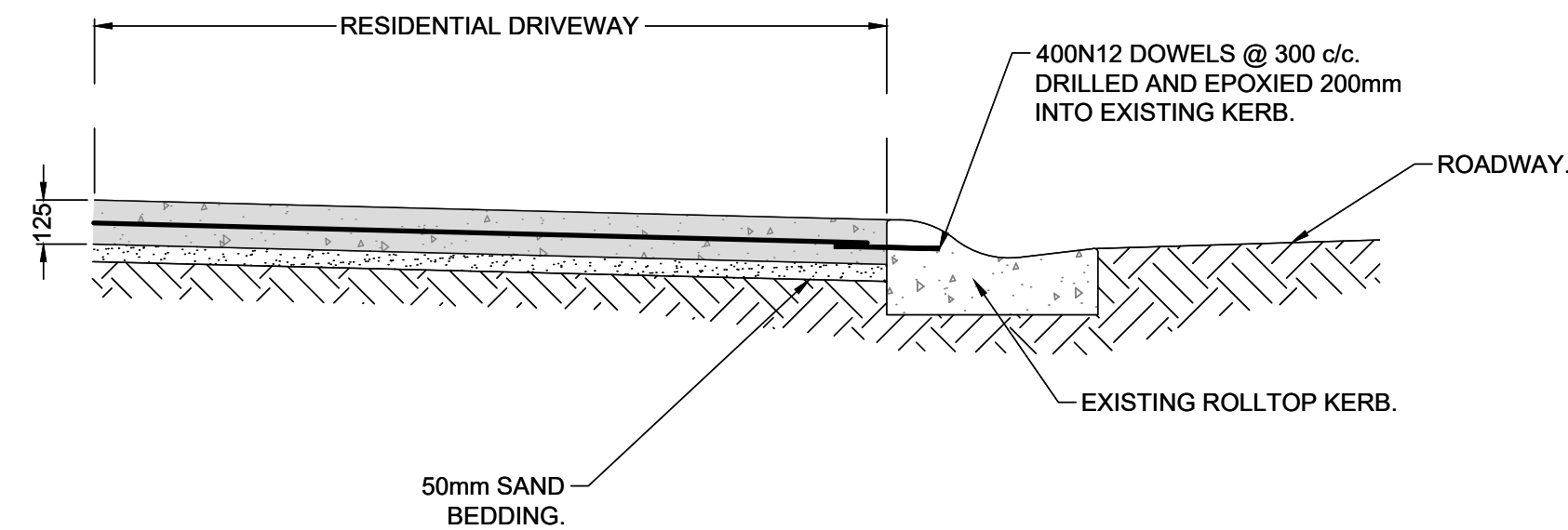
TYPICAL SECTION - UPRIGHT 'SA' KERB RESIDENTIAL  
NTS



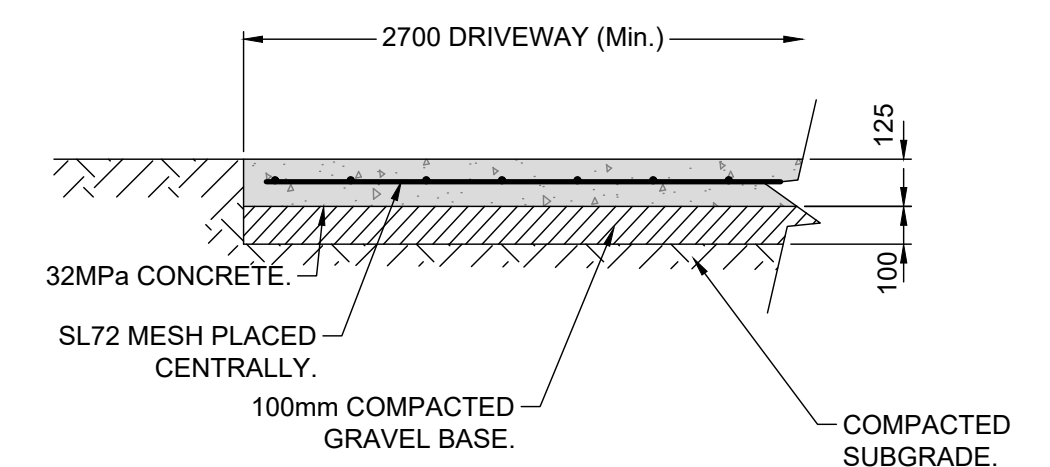
RESIDENTIAL DRIVEWAYS, CYCLEWAYS & FOOTPATHS  
NTS



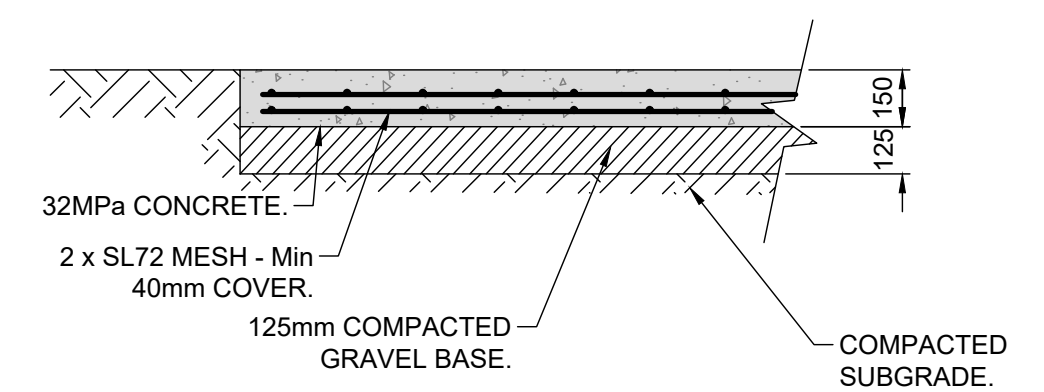
PLAN - UPRIGHT 'SA' KERB  
FOR RESIDENTIAL AND COMMERCIAL  
NTS



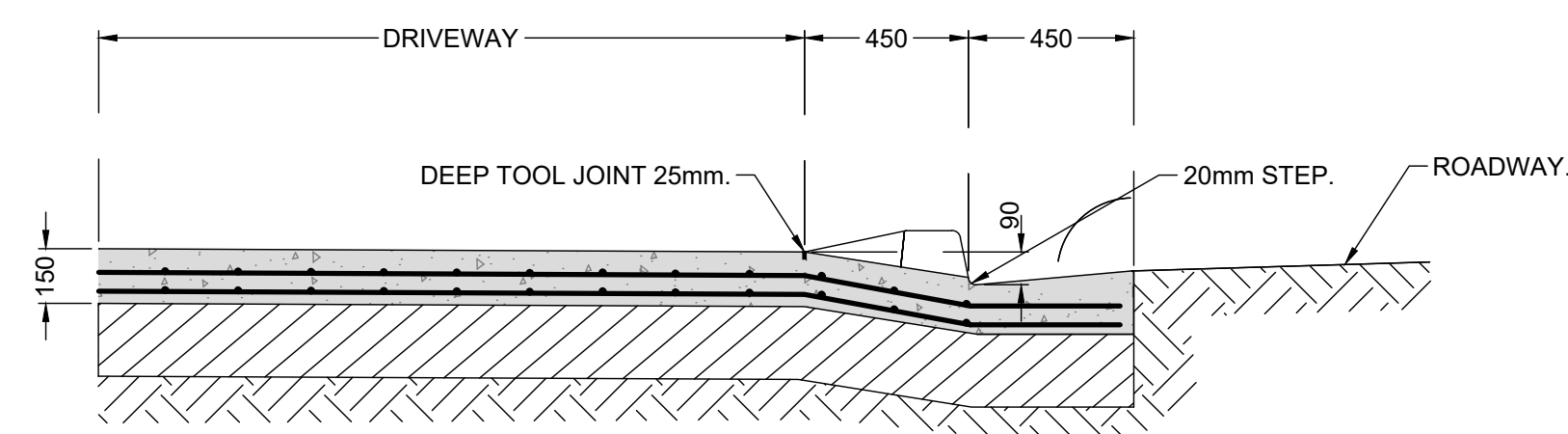
TYPICAL SECTION - ROLL 'RT' KERB RESIDENTIAL  
NTS



SHARED DRIVEWAYS & ACCESSWAYS INCLUDING  
MAINTENANCE VEHICLE ACCESS  
NTS



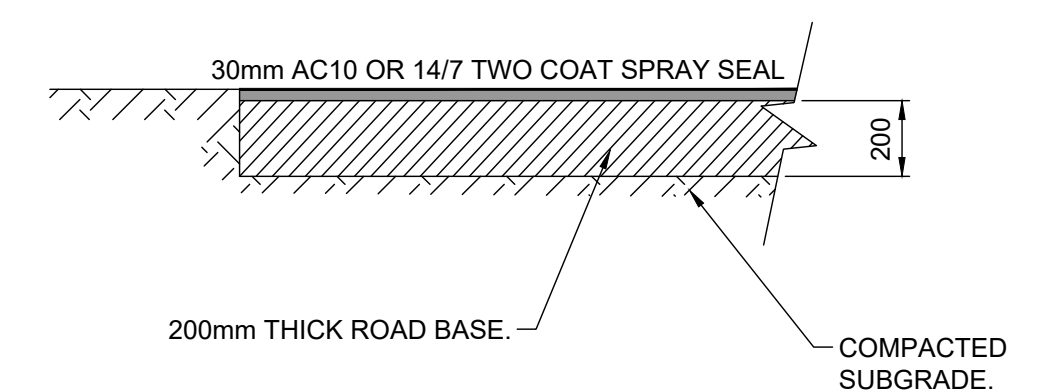
COMMERCIAL / INDUSTRIAL DRIVEWAY  
NTS



TYPICAL SECTION - UPRIGHT 'SA' KERB  
COMMERCIAL / INDUSTRIAL  
NTS

#### NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. PROVIDE TRANSVERSE EXPANSION JOINTS AT 8.0m INTERVALS WITH R12 DOWELS, 300mm LONG AT 300mm CENTRES.
3. PROVIDE TOOLED DUMMY JOINTS AT 2.0m INTERVALS FOR PAVEMENTS LESS THAN 2.0m WIDE AND AT 4.0m INTERVALS FOR PAVEMENTS UP TO 3.0m WIDE. CUT EVERY 2nd BAR AT JOINT JOINTS WITH EXISTING CONCRETE FOOTPATHS TO BE DOWELLED WITH R12 DOWELS, 300mm LONG AT 300mm CENTRES.
4. ALL DISTURBED EARTH OR GRASSED AREAS TO BE TURFED.
5. FOOTPATH WIDTHS TO SCSD-704.
6. RURAL DRIVEWAY TO SCSD-203.
7. KERB RAMP CONNECTIONS TO SCSD-103.
8. CYCLEWAY AND FOOTPATH FINISH TO BE "LIGHT BROOM".
9. ALL CONCRETE TO BE 32MPa.
10. PROVIDE FULL DEPTH EXPANSION JOINT AT BOUNDARY LINE.
11. SAWCUT AND BREAKOUT LINE TO MINIMUM DEPTH OF 75mm (NO MASTIC JOINTS PERMITTED).
12. FOR COMMERCIAL AND INDUSTRIAL ACCESSSES - WIDTH AND LAYOUT ARE SIZED TO SUIT TURNING MOVEMENTS OF DESIGN VEHICLES.



RURAL DRIVEWAY  
NTS



1	ORIGINAL VERSION	22/03/2023	
Ver	Comments	Date	

#### Notes

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Drawing Title  
DRIVEWAYS AND KERB LAYBACKS

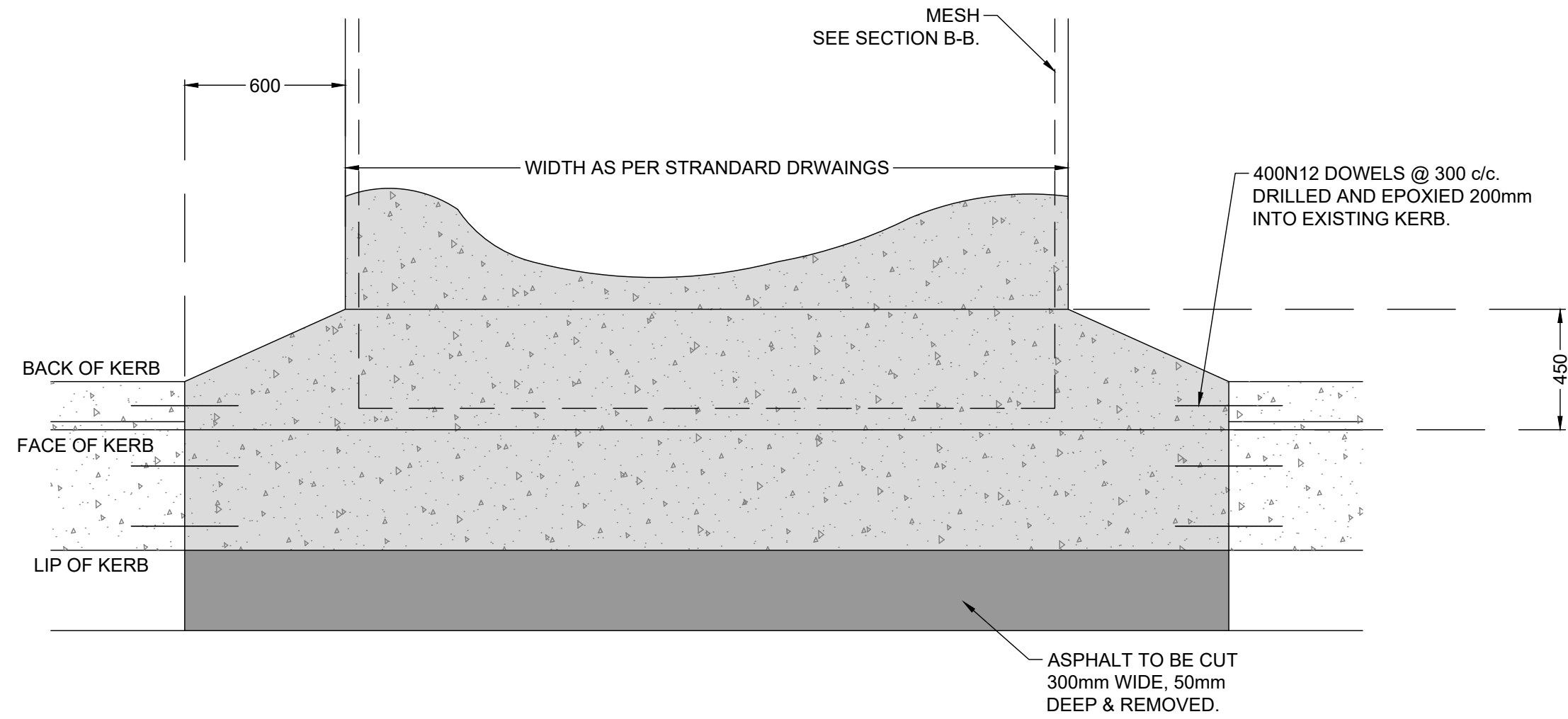
Sheet 1 OF 2

Drawing No. SCSD-201

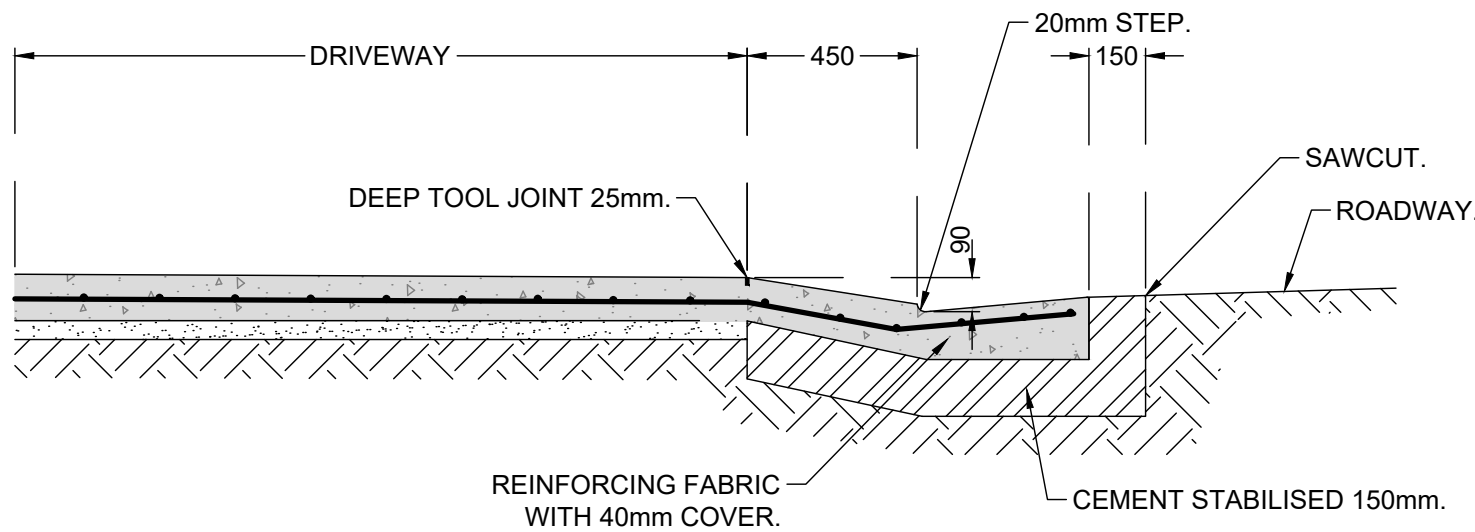
Version 1

A1





PLAN - FULL LAYBACK CONSTRUCTION  
FOR RESIDENTIAL AND COMMERCIAL  
NTS



TYPICAL SECTION - LAYBACK  
NTS

LAYBACK		
LAYBACK & VEHICULAR CROSSINGS STANDARD	LAYBACK THICKNESS	REINFORCING FABRIC
LIGHT DUTY (RESIDENTIAL DWELLINGS)	150	SL72
MEDIUM DUTY (RESIDENTIAL TOWN HOUSES & HOME UNITS)	150	2 x SL72
HEAVY DUTY (INDUSTRIAL & COMMERCIAL)	200	2 x SL72

1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

**Notes**

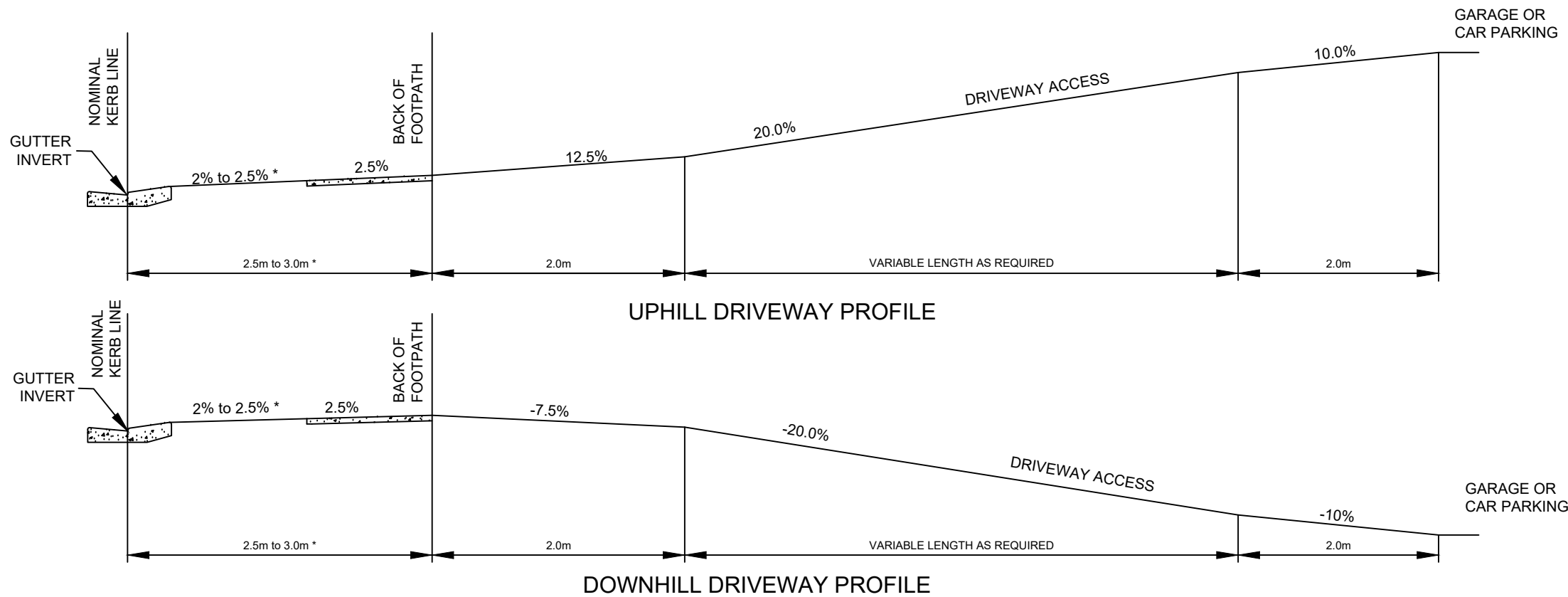
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Drawing Title  
DRIVEWAYS AND KERB LAYBACKS

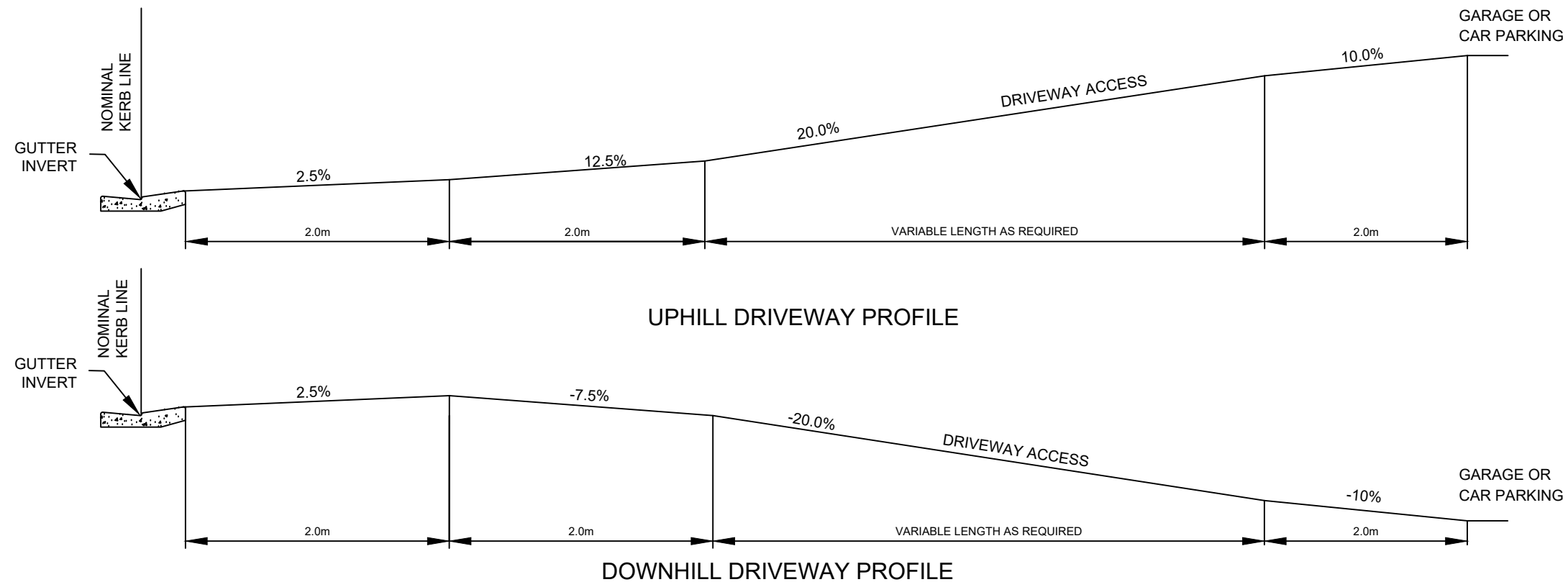
Sheet	2 OF 2	A1
Drawing No.	SCSD-201	Version 1



\* depending on footway width (SCSD-303)

- NOTES:
1. GRADING AND DIMENSIONS SHOWN SATISFY REQUIREMENTS OF AS/NZS 2890.1:2004 FOR B85 VEHICLES.
  2. THE RECOMMENDED MAXIMUM CHANGE IN GRADE ACROSS A HINGE POINT SHOULD BE LIMITED TO 12.5% FOR A CONVEX TRANSITION OR 15% FOR A CONCAVE TRANSITION.
  3. THE MAXIMUM GRADIENT OF A DOMESTIC DRIVE WAY WITHIN THE PROPERTY SHALL BE 1 in 5 (20%). WHERE EXISTING TOPOGRAPHY EXCEEDS 1 IN 5, THEN A MAXIMUM GRADE OF 1 IN 4 (25%) MAY BE USED WITH COUNCIL APPROVAL.
  4. A 2.0m TRANSITION IS REQUIRED TO ANY PARKING AREA OR GARAGE AT A GRADE OF 10%.
  5. WHERE AN ACCESS DRIVEWAY IS PROPOSED WITHIN AN OLDER DEVELOPED AREA AND WHERE A LARGE DIFFERENCE IN LEVEL BETWEEN THE EXISTING ROADWAY AND THE PROPERTY BOUNDARY OCCURS, THEN A SITE SPECIFIC DESIGN MAY BE REQUIRED WHICH MAY INCLUDE LOWERING THE EXISTING FOOTPATH. THESE ARE NON-STANDARD TREATMENTS AND WILL REQUIRE DESIGN BY A SUITABLY QUALIFIED PROFESSIONAL.
  6. THE GRADES INDICATED WILL PROVIDE SATISFACTORY VEHICULAR ACCESS FOR MOST STANDARD VEHICLES. PROPERTY OWNERS SHOULD BE AWARE THAT SOME DIFFICULTIES WITH ACCESS MAY STILL OCCUR WITH MODIFIED VEHICLES, EXOTIC SPORTS CARS, AND TRAILERS INCLUDING CARAVANS AND BOAT TRAILERS.
  7. ANY PROFILE EXCEEDING ANY OF THESE MAXIMUM SLOPES WILL REQUIRE COUNCIL APPROVAL.

				<b>Notes</b> 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED. 2. DRAWING IS NOT TO SCALE, WORK TO STATED DIMENSIONS. 3. DO NOT RELY ON THESE STANDARD DRAWINGS AS THE EQUIVALENT OF, OR SUBSTITUTE FOR, PROJECT SPECIFIC DESIGN AND ASSESSMENT BY A QUALIFIED PROFESSIONAL.	Singleton Council Civic Centre, PO Box 314 Singleton, NSW, 2330  Phone: (02) 6578 7290 Fax: (02) 6572 4197 <a href="http://www.singleton.nsw.gov.au">www.singleton.nsw.gov.au</a>	<b>Drawing Title</b> DRIVEWAY PROFILES - MAXIMUM GRADES WITH FOOTPATH			<b>A3</b>						
	1	ORIGINAL VERSION	22/03/2023												
	Ver	Comments	Date			Sheet 1 OF 3									
										Drawing No. SCSD-202			Version 1		



**NOTES:**

1. GRADING AND DIMENSIONS SHOWN SATISFY REQUIREMENTS OF AS/NZS 2890.1:2004 FOR B85 VEHICLES.
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4. A 2.0m TRANSITION IS REQUIRED TO ANY PARKING AREA OR GARAGE AT A GRADE OF 10%.
5. WHERE AN ACCESS DRIVEWAY IS PROPOSED WITHIN AN OLDER DEVELOPED AREA AND WHERE A LARGE DIFFERENCE IN LEVEL BETWEEN THE EXISTING ROADWAY AND THE PROPERTY BOUNDARY OCCURS, THEN A SITE SPECIFIC DESIGN MAY BE REQUIRED WHICH MAY INCLUDE LOWERING THE EXISTING FOOTPATH. THESE ARE NON-STANDARD TREATMENTS AND WILL REQUIRE DESIGN BY A SUITABLY QUALIFIED PROFESSIONAL.
6. THE GRADES INDICATED WILL PROVIDE SATISFACTORY VEHICULAR ACCESS FOR MOST STANDARD VEHICLES. PROPERTY OWNERS SHOULD BE AWARE THAT SOME DIFFICULTIES WITH ACCESS MAY STILL OCCUR WITH MODIFIED VEHICLES, EXOTIC SPORTS CARS, AND TRAILERS INCLUDING CARAVANS AND BOAT TRAILERS.
7. ANY PROFILE EXCEEDING ANY OF THESE MAXIMUM SLOPES WILL REQUIRE COUNCIL APPROVAL.

1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

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Drawing Title  
**DRIVEWAY PROFILES - MAXIMUM GRADES  
WITHOUT FOOTPATH**

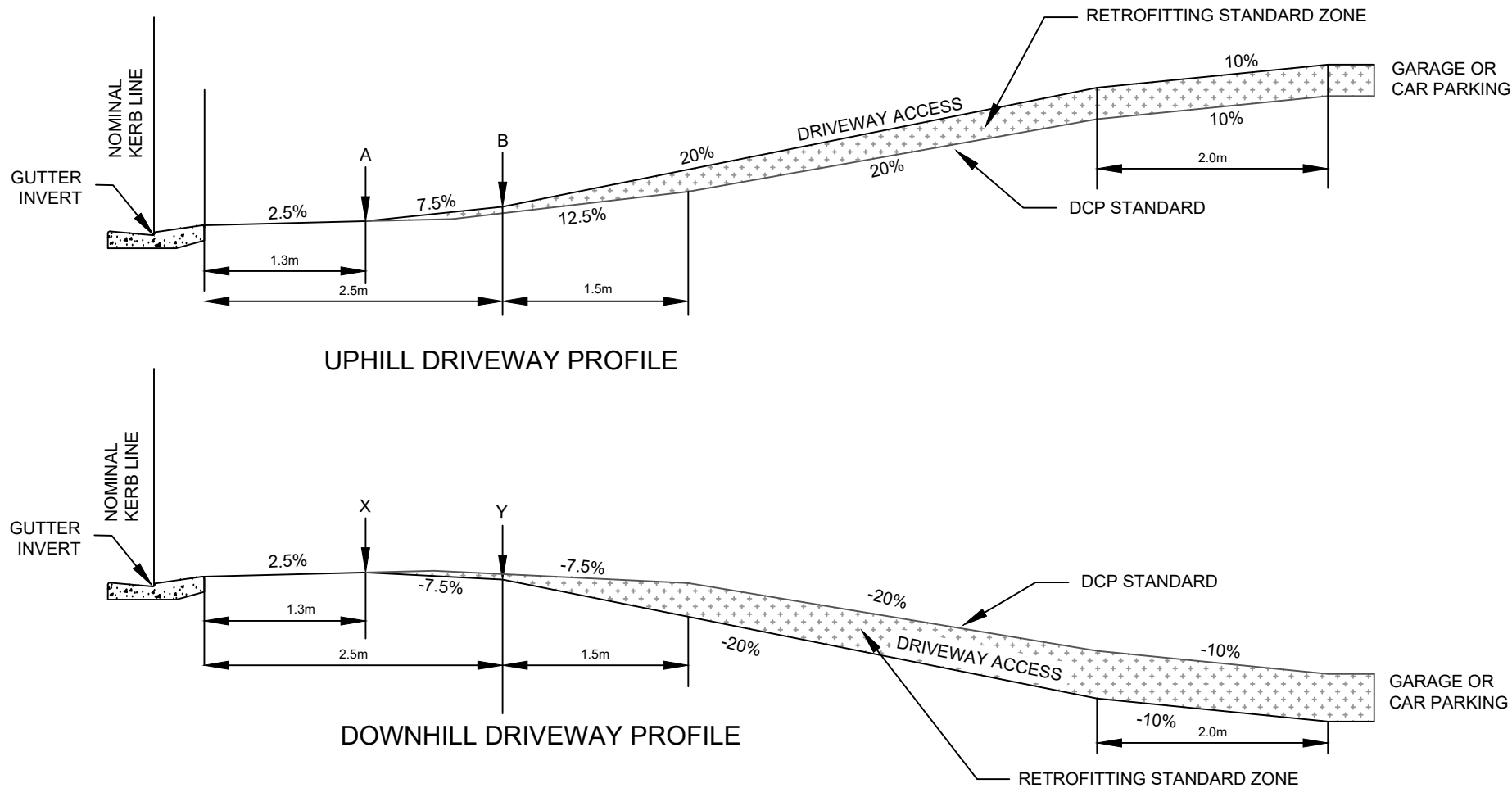
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Version 1

**A3**

- POINT A 1.3m BEHIND & 30mm ABOVE TOP OF LAYBACK
- POINT B 2.5m BEHIND & 120mm ABOVE TOP OF LAYBACK
- POINT X 1.3m BEHIND & 30mm ABOVE TOP OF LAYBACK
- POINT Y 2.5m BEHIND & 60mm BELOW TOP OF LAYBACK



NOTES:

1. GRADING AND DIMENSIONS SHOWN SATISFY REQUIREMENTS OF AS/NZS 2890.1:2004 FOR B85 VEHICLES.
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4. A 2.0m TRANSITION IS REQUIRED TO ANY PARKING AREA OR GARAGE AT A GRADE OF 10%.
5. WHERE AN ACCESS DRIVEWAY IS PROPOSED WITHIN AN OLDER DEVELOPED AREA AND WHERE A LARGE DIFFERENCE IN LEVEL BETWEEN THE EXISTING ROADWAY AND THE PROPERTY BOUNDARY OCCURS, THEN A SITE SPECIFIC DESIGN MAY BE REQUIRED WHICH MAY INCLUDE LOWERING THE EXISTING FOOTPATH. THESE ARE NON-STANDARD TREATMENTS AND WILL REQUIRE DESIGN BY A SUITABLY QUALIFIED PROFESSIONAL.
6. THE GRADES INDICATED WILL PROVIDE SATISFACTORY VEHICULAR ACCESS FOR MOST STANDARD VEHICLES. PROPERTY OWNERS SHOULD BE AWARE THAT SOME DIFFICULTIES WITH ACCESS MAY STILL OCCUR WITH MODIFIED VEHICLES, EXOTIC SPORTS CARS, AND TRAILERS INCLUDING CARAVANS AND BOAT TRAILERS.
7. ANY PROFILE EXCEEDING ANY OF THESE MAXIMUM SLOPES WILL REQUIRE COUNCIL APPROVAL.
8. ALL DESIGNS WITHIN THE RETROFITTING STANDARD ZONE ARE ACCEPTABLE.

1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

Notes

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Drawing Title  
DRIVEWAY PROFILES - NON STANDARD  
SOLUTION WITHOUT FOOTPATH

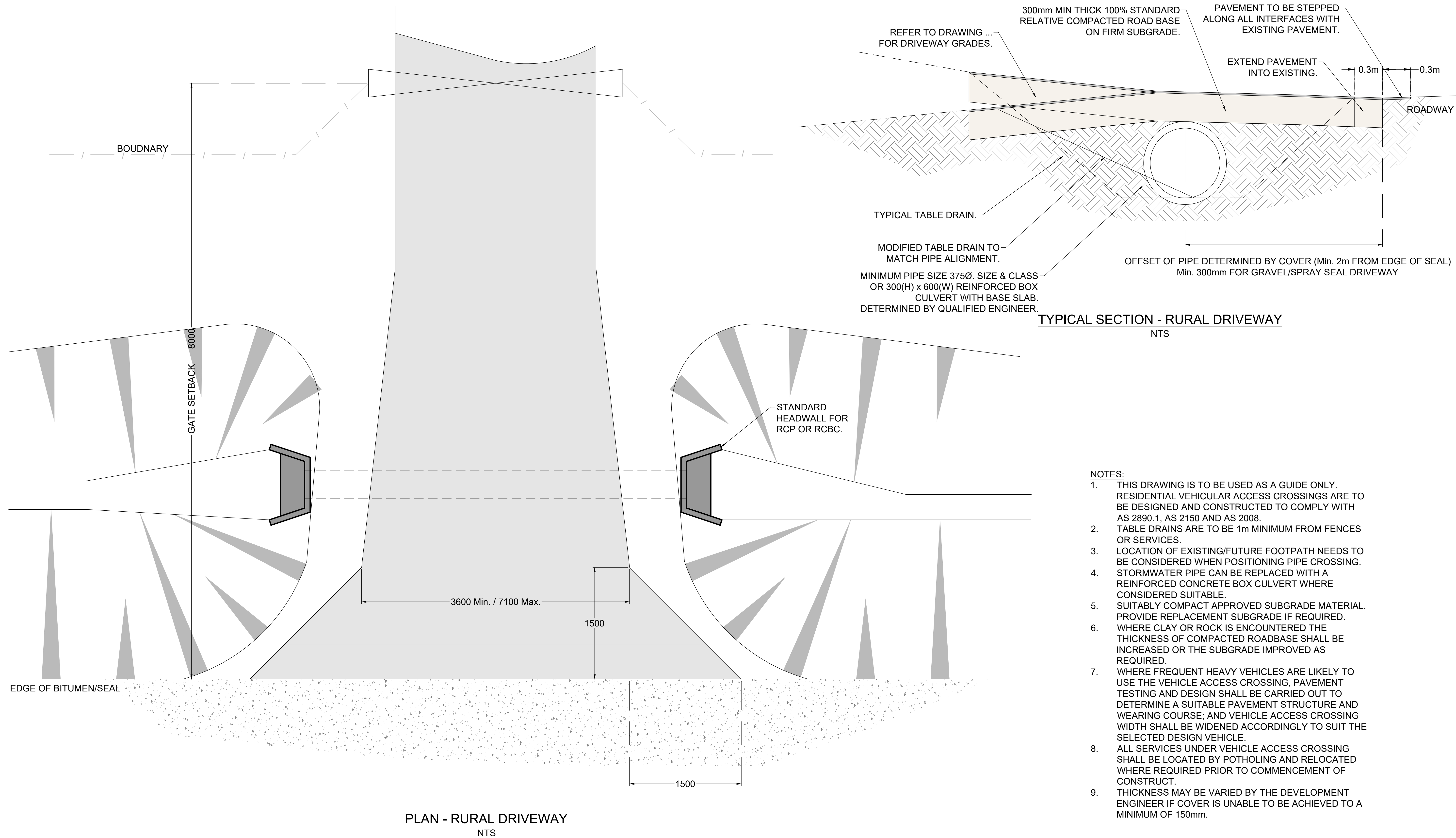
Sheet 3 OF 3

Drawing No. SCSD-202

Version 1

A3





- NOTES:
- THIS DRAWING IS TO BE USED AS A GUIDE ONLY. RESIDENTIAL VEHICULAR ACCESS CROSSINGS ARE TO BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AS 2890.1, AS 2150 AND AS 2008.
  - TABLE DRAINS ARE TO BE 1m MINIMUM FROM FENCES OR SERVICES.
  - LOCATION OF EXISTING/FUTURE FOOTPATH NEEDS TO BE CONSIDERED WHEN POSITIONING PIPE CROSSING.
  - STORMWATER PIPE CAN BE REPLACED WITH A REINFORCED CONCRETE BOX CULVERT WHERE CONSIDERED SUITABLE.
  - SUITABLY COMPACT APPROVED SUBGRADE MATERIAL. PROVIDE REPLACEMENT SUBGRADE IF REQUIRED.
  - WHERE CLAY OR ROCK IS ENCOUNTERED THE THICKNESS OF COMPACTED ROADBASE SHALL BE INCREASED OR THE SUBGRADE IMPROVED AS REQUIRED.
  - WHERE FREQUENT HEAVY VEHICLES ARE LIKELY TO USE THE VEHICLE ACCESS CROSSING, PAVEMENT TESTING AND DESIGN SHALL BE CARRIED OUT TO DETERMINE A SUITABLE PAVEMENT STRUCTURE AND WEARING COURSE; AND VEHICLE ACCESS CROSSING WIDTH SHALL BE WIDENED ACCORDINGLY TO SUIT THE SELECTED DESIGN VEHICLE.
  - ALL SERVICES UNDER VEHICLE ACCESS CROSSING SHALL BE LOCATED BY POTHOLING AND RELOCATED WHERE REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCT.
  - THICKNESS MAY BE VARIED BY THE DEVELOPMENT ENGINEER IF COVER IS UNABLE TO BE ACHIEVED TO A MINIMUM OF 150mm.

1	ORIGINAL VERSION	22/03/2023	
Ver	Comments	Date	

Notes

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Drawing Title  
**RURAL DRIVEWAYS  
PIPED CROSSING**

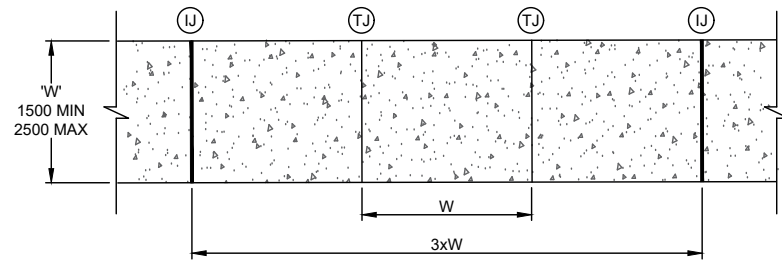
Sheet 1 OF 1

Drawing No. SCSD-203

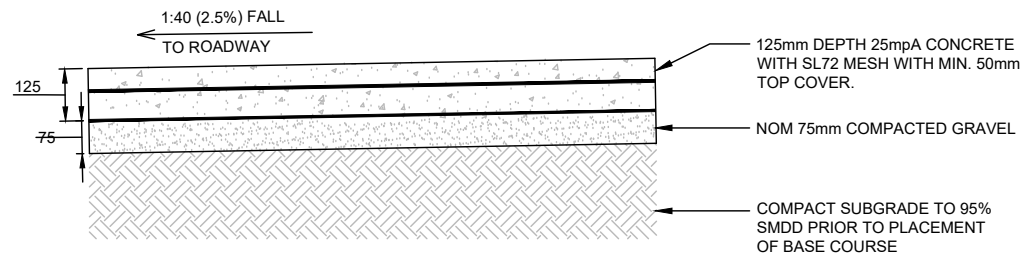
Version 1

**A1**

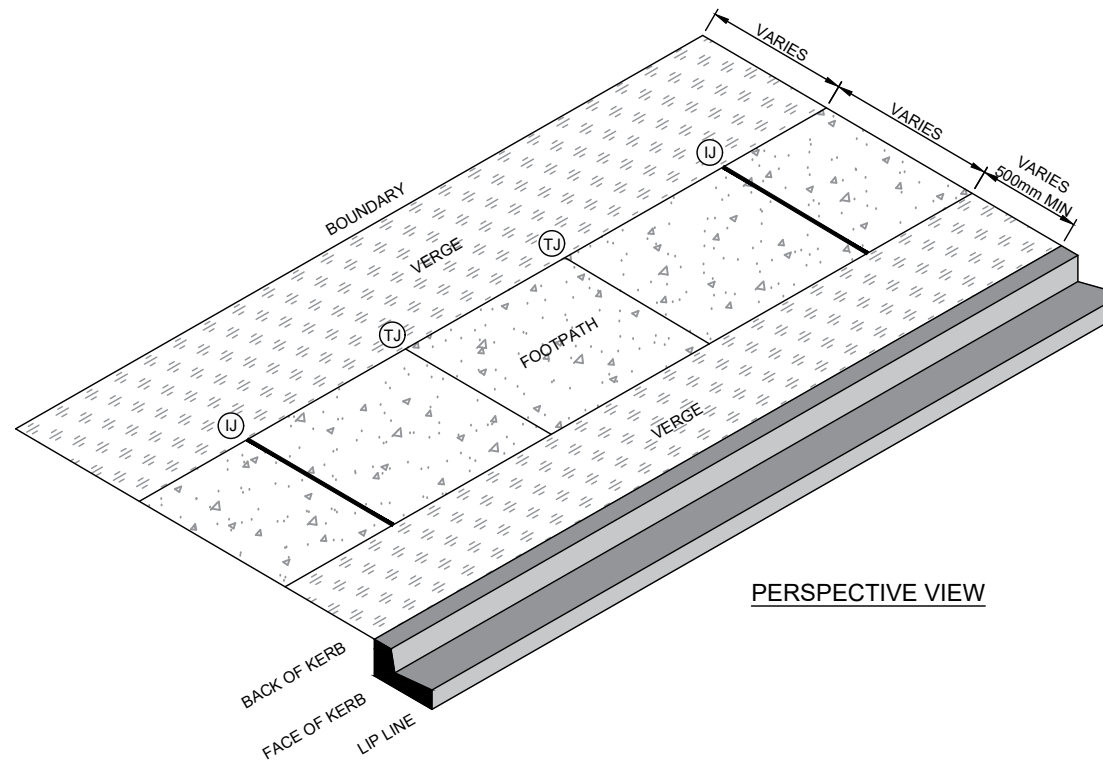




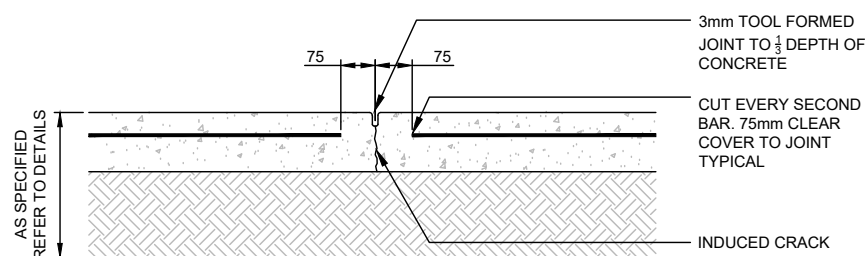
TYPICAL PEDESTRIAN FOOTPATH PLAN



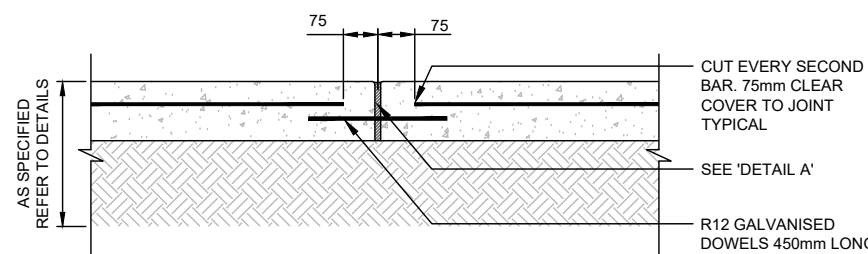
TYPICAL CROSS SECTION



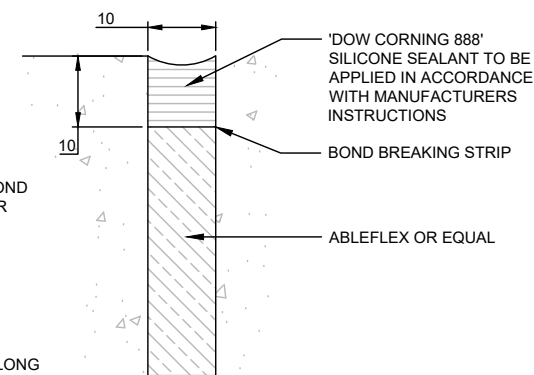
PERSPECTIVE VIEW



TOOLED JOINT (TJ)



ISOLATION JOINT (IJ)



DETAIL A

NOTES:

- STANDARDS SHOWN ARE THE MINIMUM REQUIREMENTS ONLY.
- ALIGNMENT OF PATHS ARE TO BE IN ACCORDANCE WITH APPROVED PLANS OR AS NOMINATED BY COUNCIL.
- ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH CURRENT AUSTRALIAN STANDARDS, IN PARTICULAR AS3600 AND AS3727 AS WELL AS ANY COUNCIL REQUIREMENTS.
- MAXIMUM CROSS FALL IS TO BE 1:40 (2.5%) IN ACCORDANCE WITH AS1429 REQUIREMENTS.
- SUB BASE TO BE LAID ON APPROVED COMPACTED NATURAL SUB-GRADE. UNSUITABLE SUB-GRADE IS TO BE REMOVED AND REPLACED WITH A MINIMUM OF 75mm COMPACTED 10mm SIZE CLASS 3 FCR OR SAND.
- JOINTS ARE TO BE SMOOTH WITH MINIMAL IRREGULARITIES. CONCRETE TO BE FINISHED FLUSH WITH THE TOP OF EACH JOINT SECTION.
- DOWELS ARE TO BE ALIGNED PARALLEL TO THE SURFACE AND THE PAVEMENT CENTRELINE. ALL DOWELS AND JOINT FORMERS ARE TO BE GALVANISED.
- FINISHED LEVEL OF ANY PATH ABUTTING A WALL MUST BE BELOW THE DAMP PROOF COURSE AND MUST NOT OBSCURE ANY WEEP HOLES OR DRAINAGE OPENINGS.
- BROOM FINISH TO BE PROVIDED TRANSVERSE TO THE PAVEMENT WITH A 75mm EDGE TOOLING OF ALL JOINTS AND EDGES. BROOM FINISH IS TO EXTEND TO EDGE OF SLAB OVER EDGE TOOLING TYPICAL TO ALL JOINTS AND EDGES TO MEET AS4586 & AS3661.1.
- CONCRETE TO BE CURED BY USE OF PLASTIC SHEETING, DAMP SAND OR COMMERCIAL CURING COMPOUNDS.
- DISTURBED AREAS ARE TO BE MADE GOOD AND SEEDED OR TURFED AS REQUIRED.
- EXCAVATED MATERIALS SHALL BE REMOVED FROM SITE WHEN EXCAVATED.
- TOLERANCES:
  - CHANGE IN HEIGHT EACH SIDE OF JOINT = 3mm
  - THICKNESS +20mm/-0mm
  - UNDULATION IN ALL DIRECTIONS: 1mm OVER 250mm, 5mm OVER 1.5m, 10mm OVER 3m OR JOINT TO JOINT (WHICHEVER IS GREATER)

1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

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Drawing Title  
CONCRETE FOOTPATH

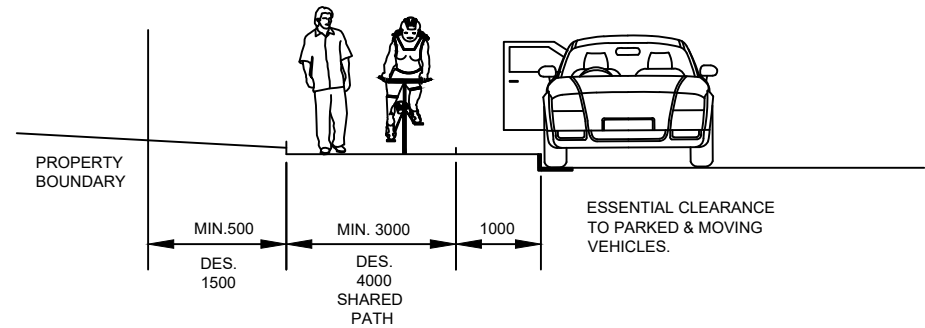
Sheet 1 OF 2

Drawing No. SCSD-301

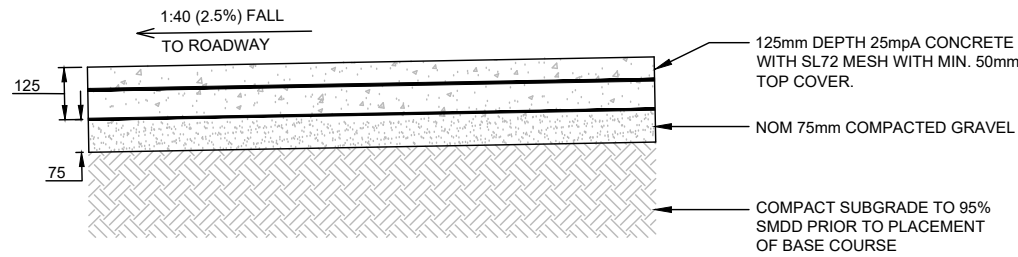
Version 1

A3

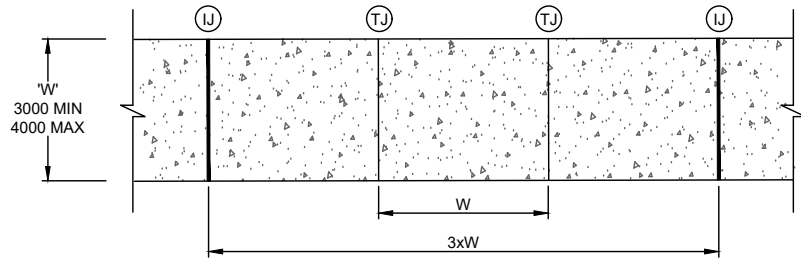
★ DES = DESIRABLE



DESIRABLE CLEARANCE OF  
SHARED PATH TO ROAD

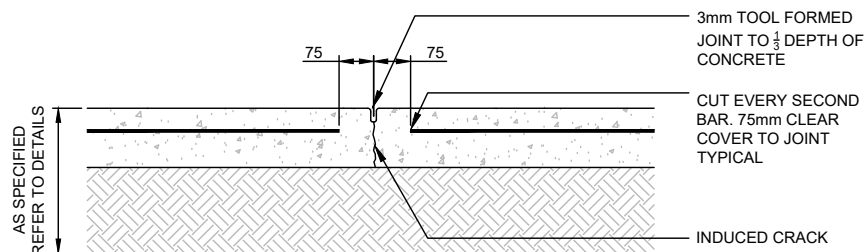


TYPICAL CROSS SECTION

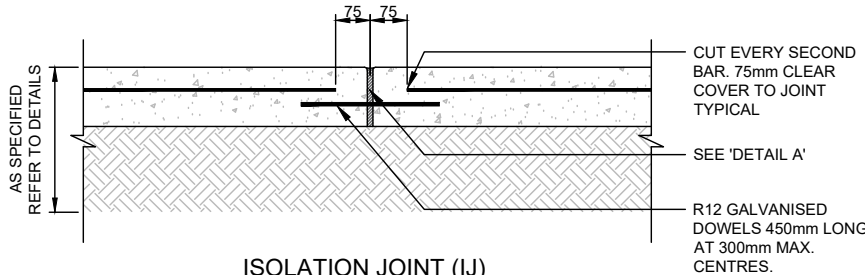


TYPICAL SHARED PATH PLAN

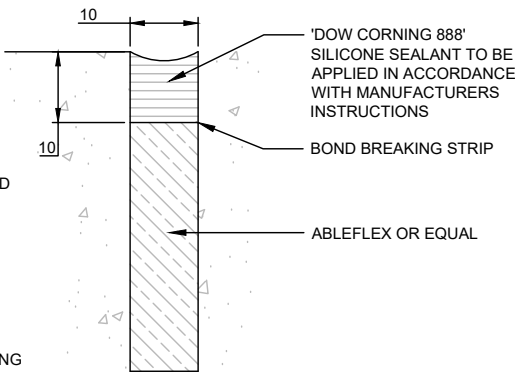
NOTES:



TOOLED JOINT (TJ)



ISOLATION JOINT (IJ)



DETAIL A

NOTES:

1. STANDARDS SHOWN ARE THE MINIMUM REQUIREMENTS ONLY.
2. SHARED PATHS SIGNAGE SHALL BE PROVIDED AND LOCATED GENERALLY IN ACCORDANCE WITH AUSTRROADS AND RMS STANDARDS.
3. ALIGNMENT OF PATHS ARE TO BE IN ACCORDANCE WITH APPROVED PLANS OR AS NOMINATED BY COUNCIL.
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5. MAXIMUM CROSS FALL IS TO BE 1:40 (2.5%) IN ACCORDANCE WITH AS1429 REQUIREMENTS.
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7. JOINTS ARE TO BE SMOOTH WITH MINIMAL IRREGULARITIES. CONCRETE TO BE FINISHED FLUSH WITH THE TOP OF EACH JOINT SECTION.
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9. FINISHED LEVEL OF ANY PATH ABUTTING A WALL MUST BE BELOW THE DAMP PROOF COURSE AND MUST NOT OBSCURE ANY WEEP HOLES OR DRAINAGE OPENINGS.
10. BROOM FINISH TO BE PROVIDED TRANSVERSE TO THE PAVEMENT WITH A 75mm EDGE TOOLING OF ALL JOINTS AND EDGES. BROOM FINISH IS TO EXTEND TO EDGE OF SLAB OVER EDGE TOOLING TYPICAL TO ALL JOINTS AND EDGES TO MEET AS4586 & AS3661.1.
11. CONCRETE TO BE CURED BY USE OF PLASTIC SHEETING, DAMP SAND OR COMMERCIAL CURING COMPOUNDS.
12. DISTURBED AREAS ARE TO BE MADE GOOD AND SEEDED OR TURFED AS REQUIRED.
13. EXCAVATED MATERIALS SHALL BE REMOVED FROM SITE WHEN EXCAVATED.
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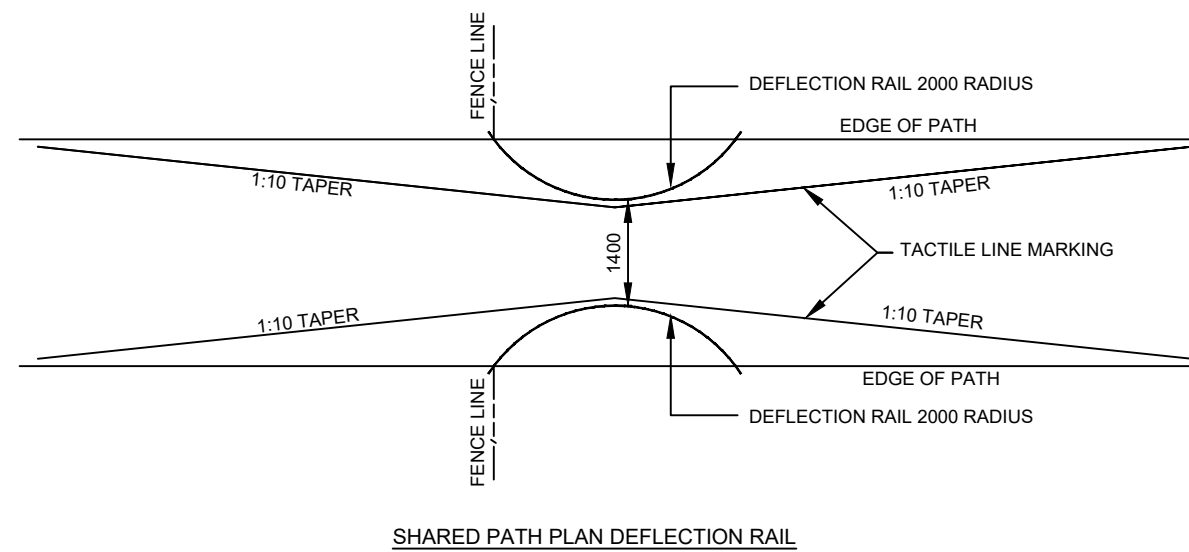
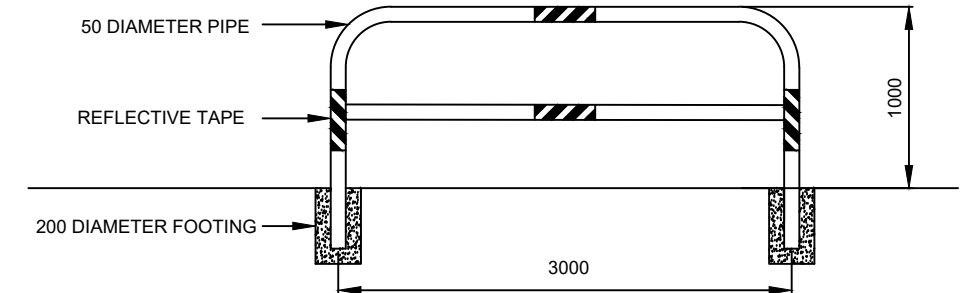
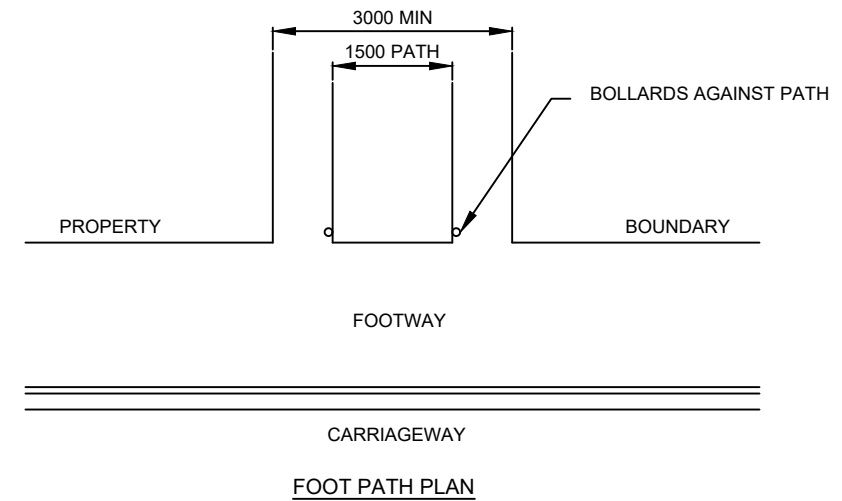
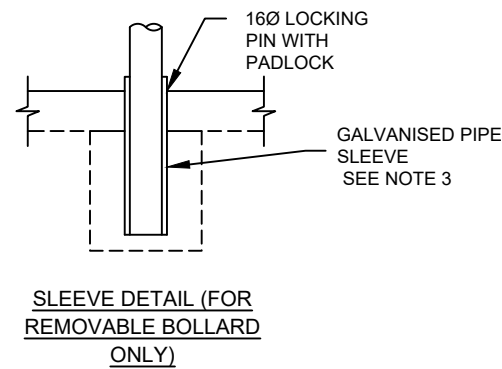
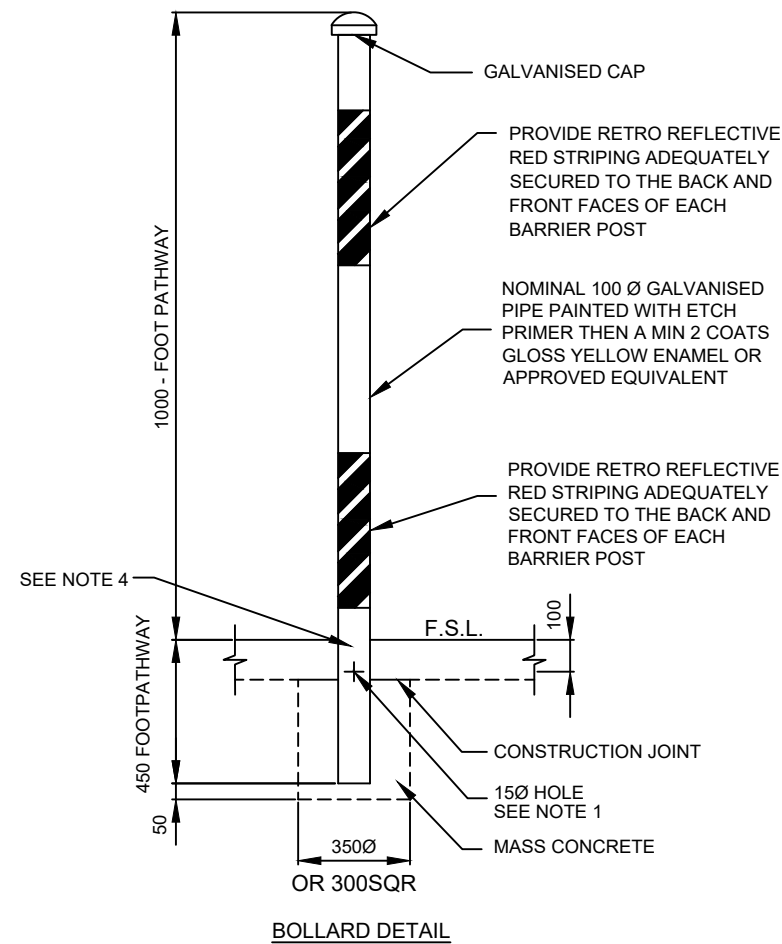
Drawing Title  
CONCRETE SHARED PATH

Sheet 2 OF 2

Drawing No. SCSD-301

Version 1

A3



- NOTES:
1. PLACE 150mm N12 BAR IN HOLE BEFORE FIXING INTO PLACE.
  2. ALL STEEL TO BE HOT DIPPED GALVANISED OR APPROVED EQUIVALENT.
  3. WHERE PATHWAYS ARE USED FOR MAINTENANCE OR EMERGENCY VEHICLE ACCESS, BOLLARDS AT ONE END OF THE PATH ARE TO BE REMOVABLE WITH LOCKING PIN.
  4. CONSIDERATION TO BE GIVEN TO 1800mm HIGH BOLLARDS AND 600mm DEEP FOOTINGS FOR SHARED PATHWAYS.

1	ORIGINAL VERSION	22/03/2023
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Drawing Title  
PATHWAY BARRIERS - BOLLARDS

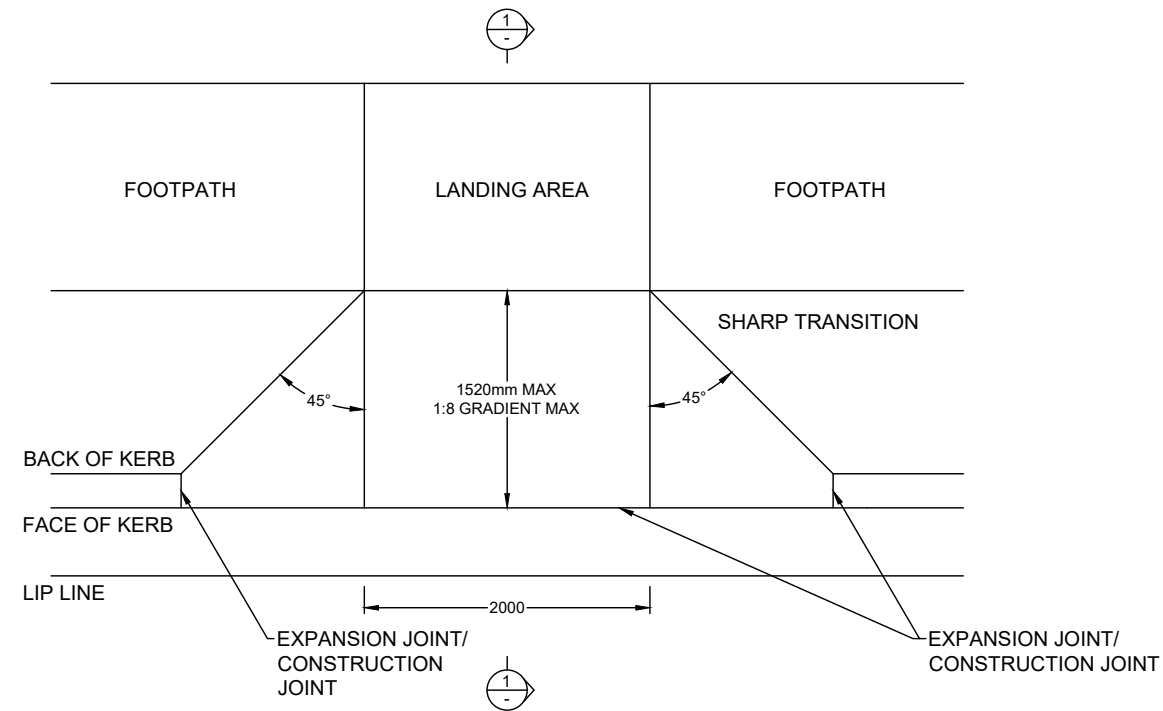
Sheet 1 OF 1

Drawing No. SCSD-302

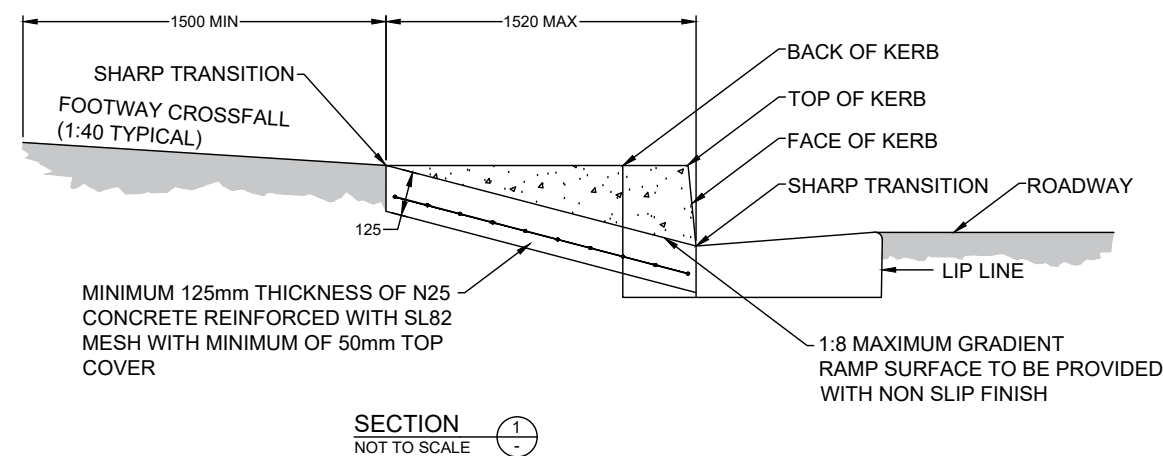
Version 1

A3





KERB RAMP CROSSING WITH GUTTER  
PLAN VIEW



SECTION  
NOT TO SCALE

NOTE:  
REFER TO SCSD-305 FOR ADDITIONAL SECTIONS.

#### NOTES:

TOP OF RAMP: THERE SHALL BE A MINIMUM OBSTRUCTION FREE WHEELCHAIR TURNAROUND DISTANCE OF 1500mm BEYOND THE TOP OF THE RAMP. THE SHARP TRANSITION AT THE TOP AND BOTTOM OF THE RAMP SHALL BE PERPENDICULAR TO THE DIRECTION OF TRAVEL.

RAMP: MAXIMUM RAMP SLOPE FOR WHEELCHAIR ACCESS IS 1:8. A SHARP TRANSITION (NO ROUNDING) IS TO BE MAINTAINED AT THE INTERSECTION OF GRADED PLANE SURFACES (TOP AND BOTTOM OF RAMP AND INTERSECTION OF RAMP AND WINGS). THE INTERSECTION OF THE RAMP AND WINGS SHOULD BE A TOOLED JOINT.

RAMP ALIGNMENT: RAMPS SHALL BE ALIGNED PARALLEL TO THE PEDESTRIAN DIRECTION OF TRAVEL. RAMPS ON BOTH SIDES OF A ROADWAY SHALL BE ALIGNED WITH ONE ANOTHER AND THE DIRECTION OF TRAVEL.

KERB RAMP WINGS: THE REQUIRED WING ANGLE IS 45° SUBJECT TO APPROVAL, WINGS MAY BE ANGLED AT LESS THAN 45° IF THE WING IS REQUIRED TO BE CLEAR OF TRAFFIC SIGNAL HARDWARE, OTHER WINGS OR UTILITY PITS/MANHOLES. WING ANGLE MAY ALSO BE REDUCED AT OBTUSE ANGLED INTERSECTIONS. A SLOPE NO STEEPER THAN 1:4 IS TO BE MAINTAINED ON THE WINGS.

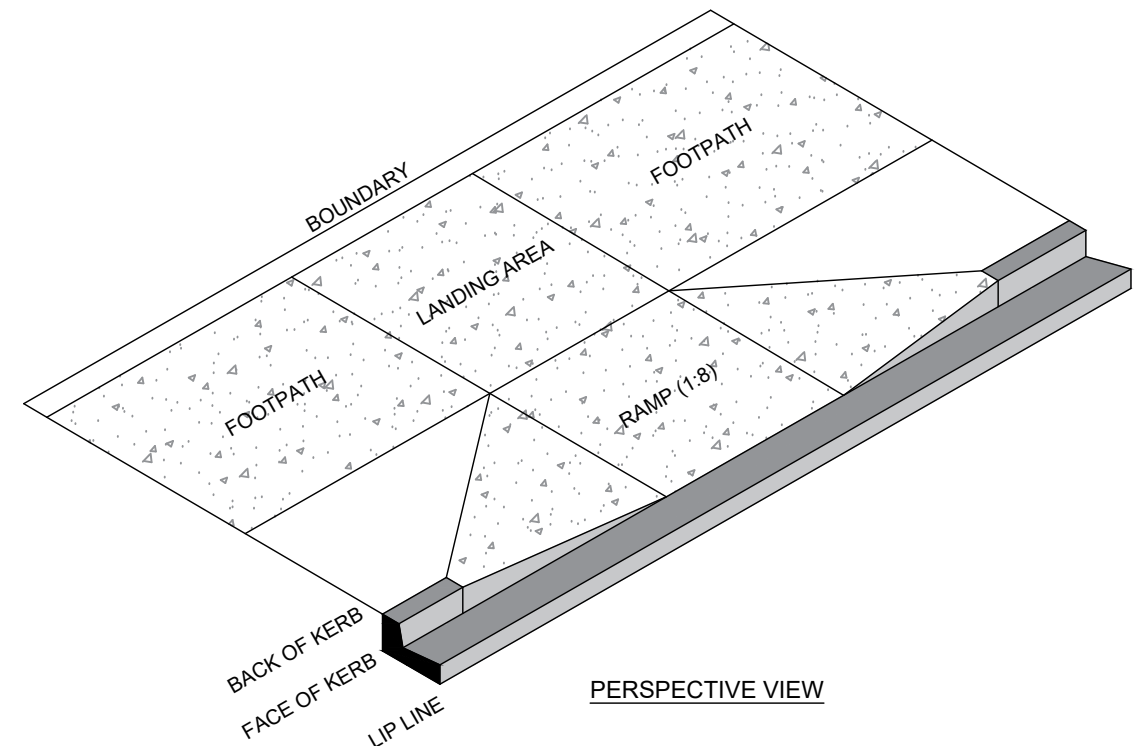
SURFACE OF RAMP AND SLOPING SIDES SHALL BE SLIP RESISTANT AS SPECIFIED IN AS1428.1

KERB RAMPS ARE TO BE ALIGNED WITH THE DESIRED DIRECTION OF PEDESTRIAN TRAVEL. THE DIRECTION OF A KERB RAMP MUST BE ALIGNED TO THE CORRESPONDING RAMP ON THE OTHER SIDE OF THE ROAD.

SEPARATE KERB RAMPS MUST BE CONSTRUCTED FOR EACH DIRECTION OF PEDESTRIAN TRAVEL AND 1.0m CLEARANCE PROVIDED BETWEEN RAMPS.

CONCRETE TO BE 25MPa. RAMP TO BE CAST MONOLITHICALLY WITH THE CHANNEL OR TRAY.

EXCAVATED MATERIALS SHALL BE REMOVED FROM SITE WHEN EXCAVATED.



PERSPECTIVE VIEW

1	ORIGINAL VERSION	22/03/2023
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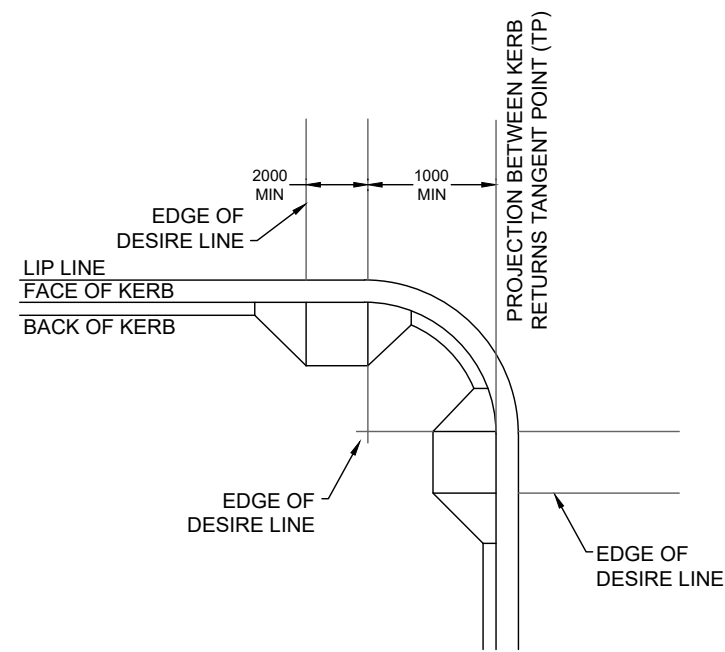
Drawing Title  
KERB RAMPS

Sheet 1 OF 2

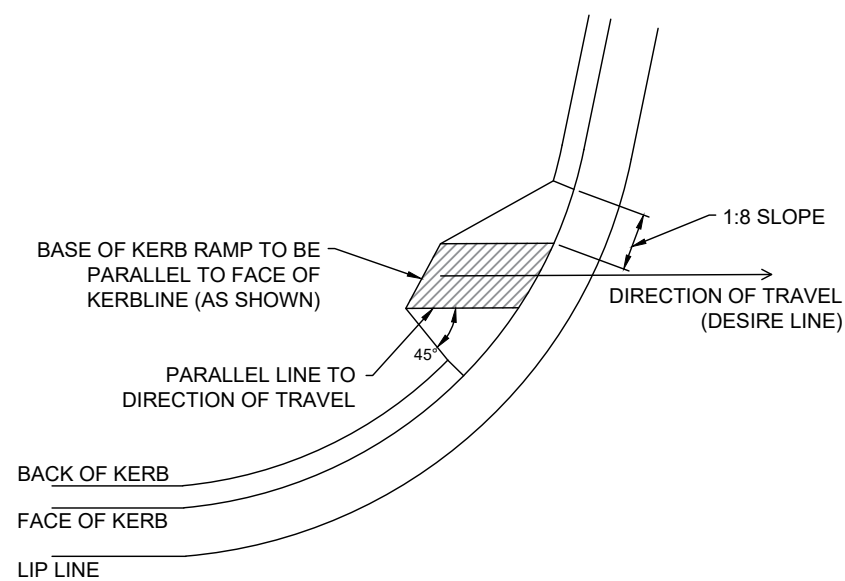
Drawing No. SCSD-303

Version 1

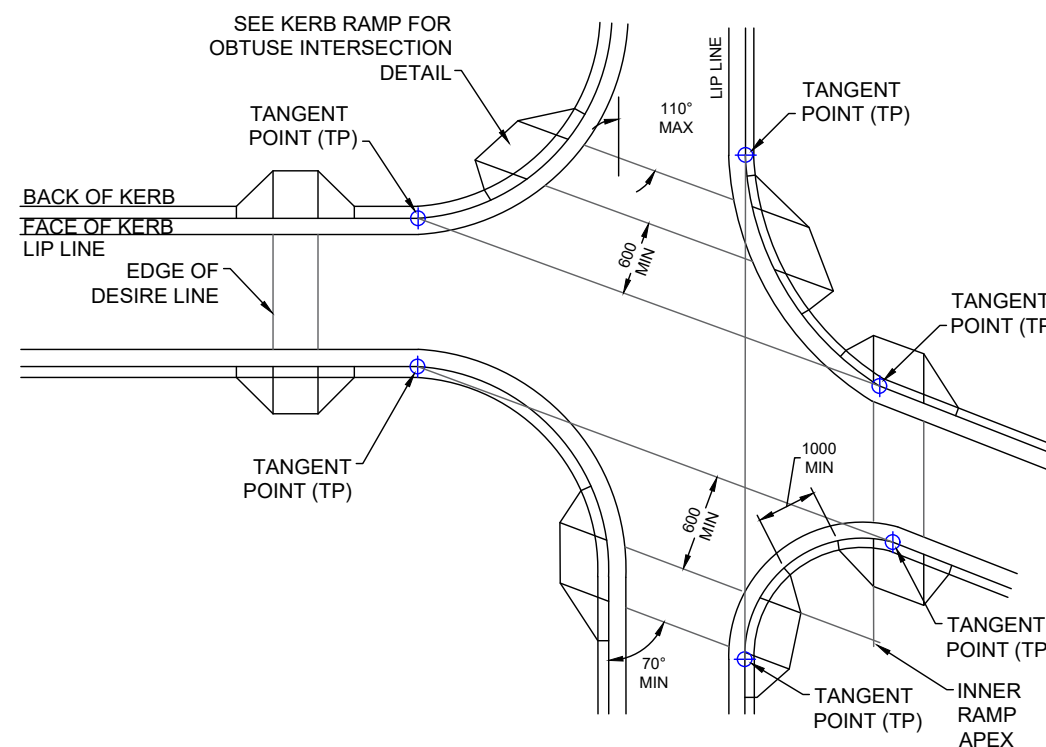
A3



PRAM RAMPS WITH ADJACENT CROSSINGS



KERB RAMP FOR OBTUSE INTERSECTION



ALIGNED KERB RAMPS

1	ORIGINAL VERSION	22/03/2023
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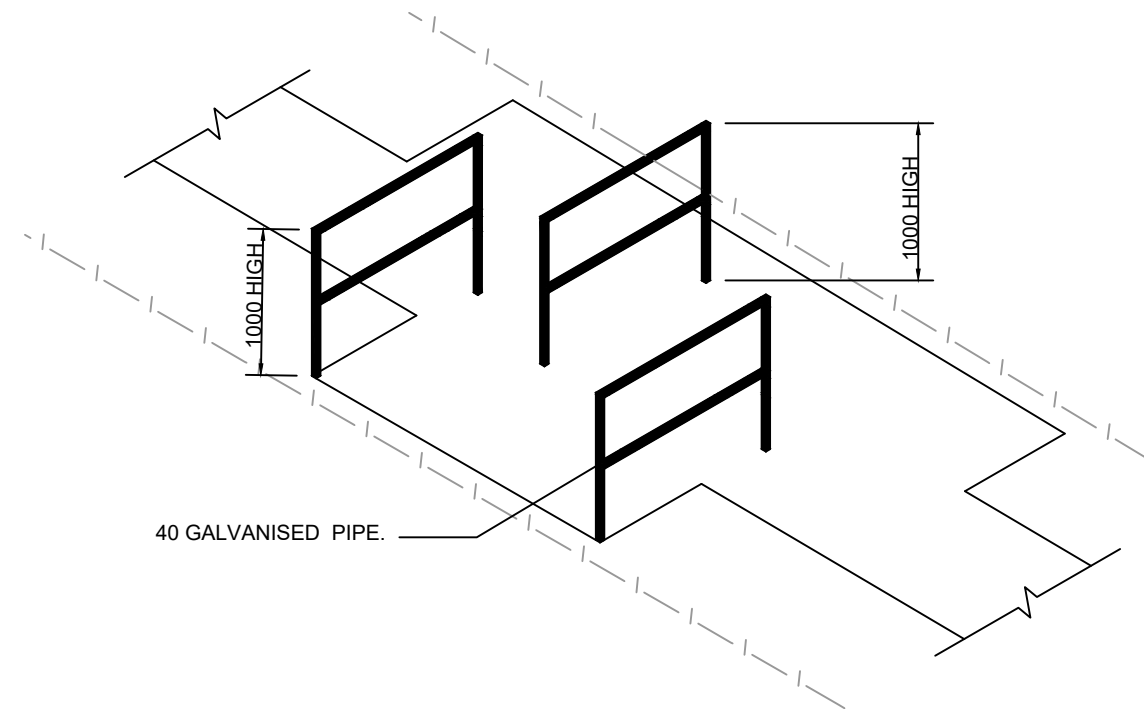
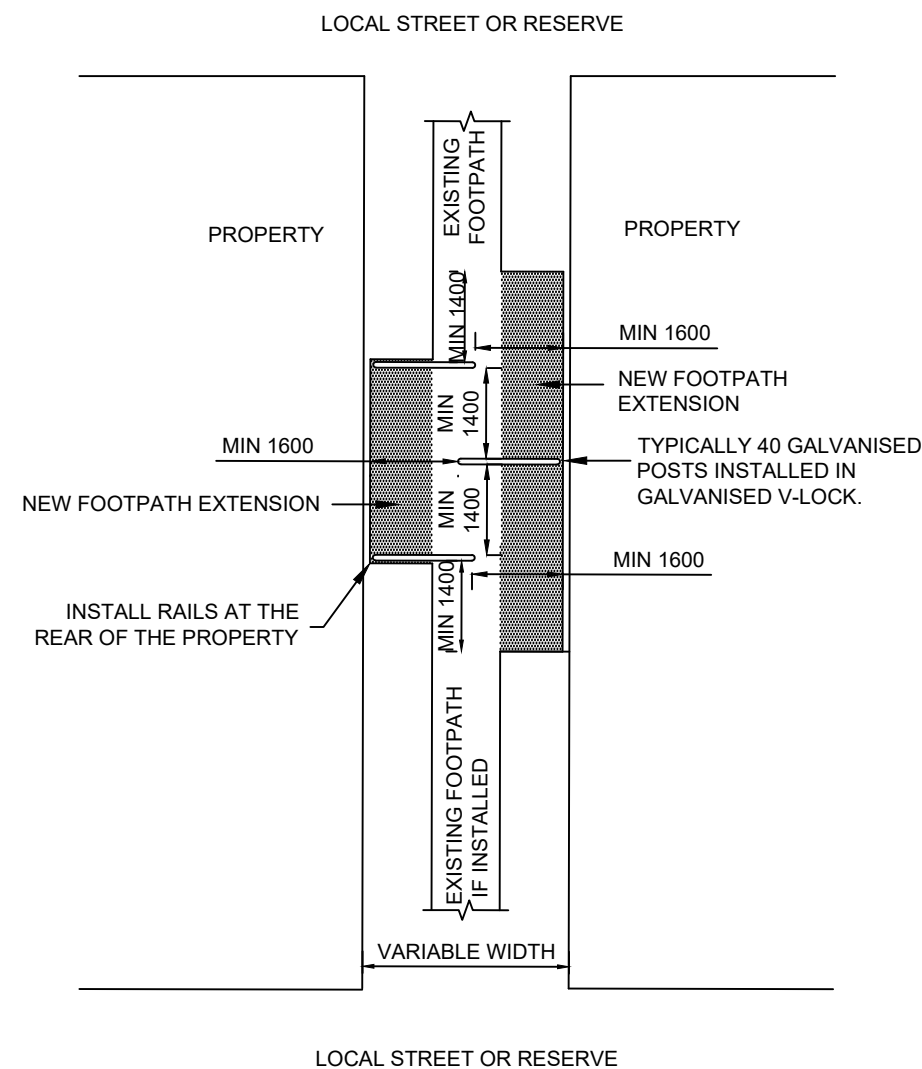
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Drawing Title  
KERB RAMPS

Sheet 2 OF 2  
Drawing No. SCSD-303

Version 1



NOTES:

1. VERIFY PUBLIC UTILITY LOCATIONS BEFORE ANY EXCAVATION
2. IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE SINGLETON COUNCIL ENGINEERING GUIDELINES
3. READ IN CONJUNCTION WITH THE SINGLETON COUNCIL ENGINEERING GUIDELINES
4. WIDEN SECTIONS OF FOOTPATH, MAXIMUM SLOPE TO EXISTING FOOTPATH 1 IN 40
5. PEDESTRIAN RAILS WILL BE VARIABLE WIDTH DEPENDING ON SITE CONDITIONS, ALL RAILS ARE TO BE 1000mm HIGH, SET INTO V-LOCKS
6. REFLECTOR TAPE TO BE INSTALLED AT ALL CORNERS AND IN THE MIDDLE OF THE HORIZONTAL RAILS

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Drawing Title  
FOOTPATH CHICANE

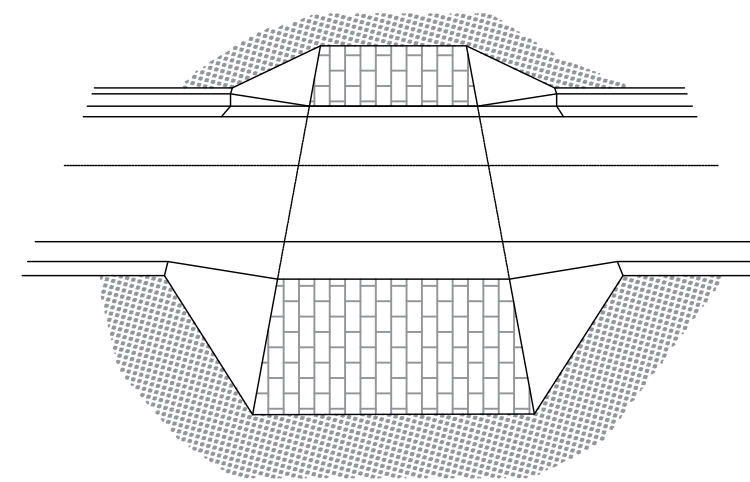
Sheet 1 OF 1  
Drawing No. SCSD-304

Version 1





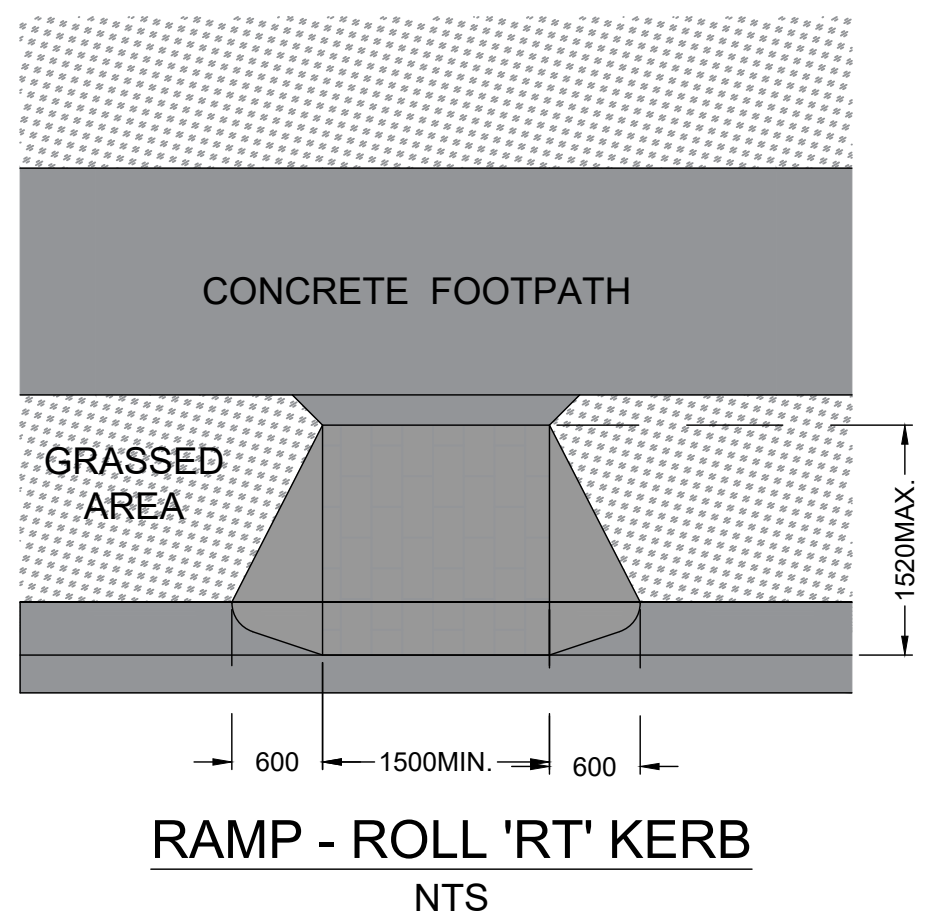
1. PROVIDE TRANSVERSE EXPANSION JOINTS EVERY 8.0m WITH 300R12 DOWELS @ 300 c/c
2. PROVIDE TOOLED DUMMY JOINTS EVERY 2.0m FOR PAVEMENT LESS THAN 2.0m WIDE & 4.0 m FOR PAVEMENTS OVER 2.0m WIDE
3. FINISH TO BE 'LIGHT BROOM'. BROOM OVER JOINTS




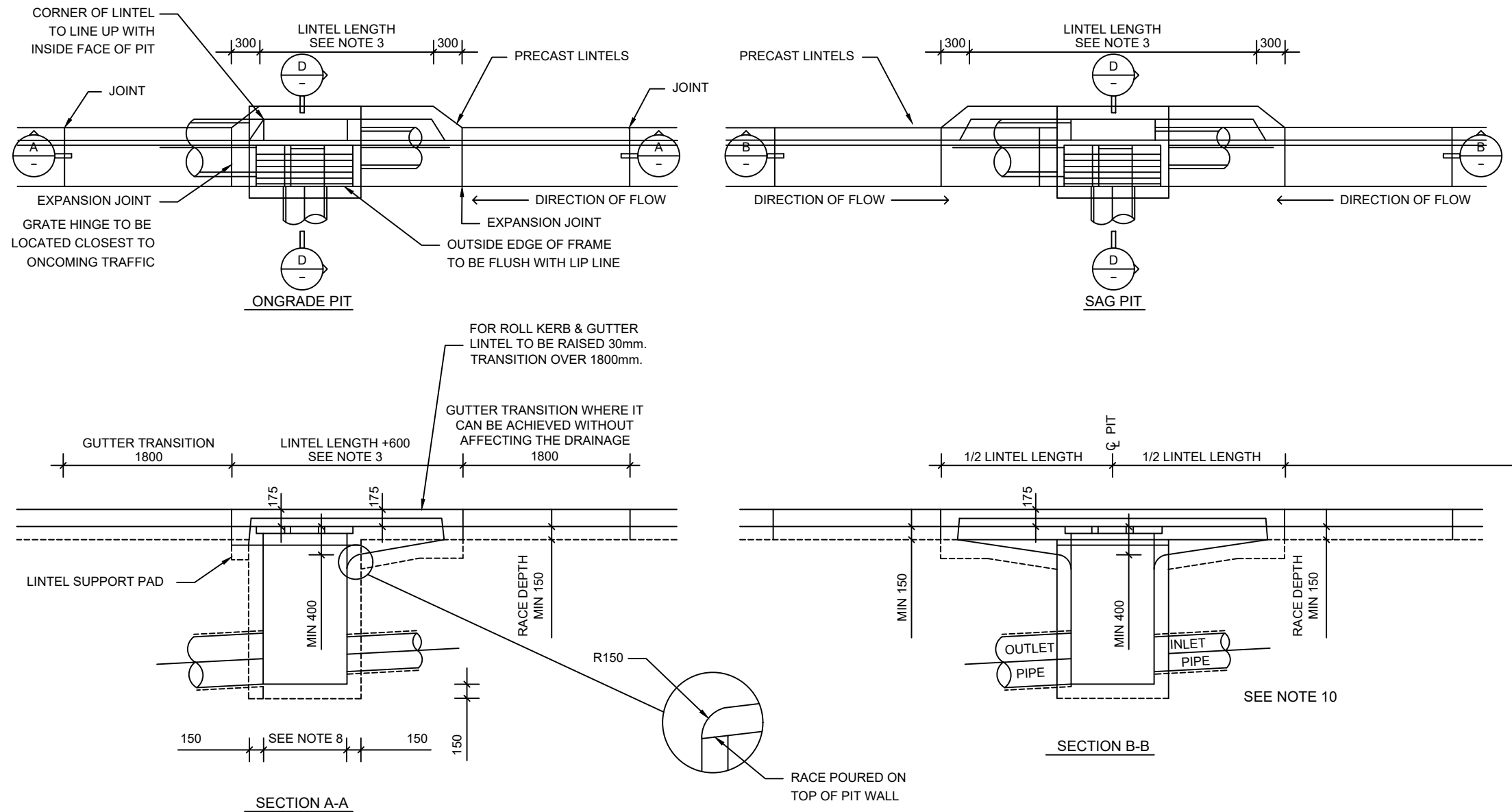
## ALIGN RAMPS & PATTERNS TO OPPOSITE RAMP

NOTES:

1. JOINTS TO EXISTING PAVEMENTS TO BE DOWELLED WITH 300R12 DOWELS @ 300c/c
2. ALL DISTURBED EARTH OR GRASSED AREAS TO BE TURFED
3. NEW SECTIONS OF FOOTPATH TO BE CONSTRUCTED IN ACCORDANCE WITH SCSD - 201



 <div>SINGLETON COUNCIL</div>				<b>Notes</b>  1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.  2. DRAWING IS NOT TO SCALE, WORK TO STATED DIMENSIONS.  3. DO NOT RELY ON THESE STANDARD DRAWINGS AS THE EQUIVALENT OF, OR SUBSTITUTE FOR, PROJECT SPECIFIC DESIGN AND ASSESSMENT BY A QUALIFIED PROFESSIONAL.	Singleton Council Civic Centre, PO Box 314 Singleton, NSW, 2330  Phone: (02) 6578 7290 Fax: (02) 6572 4197 <a href="http://www.singleton.nsw.gov.au">www.singleton.nsw.gov.au</a>	<b>Drawing Title</b> KERB RAMPS CONSTRUCTION DETAILS			
	1	ORIGINAL VERSION	22/03/2023						
	Ver	Comments	Date			Sheet	1 OF 1	A1	
						Drawing No.	SCSD-305	Version	1



Ver	Comments	Date
1	ORIGINAL VERSION	22/03/23

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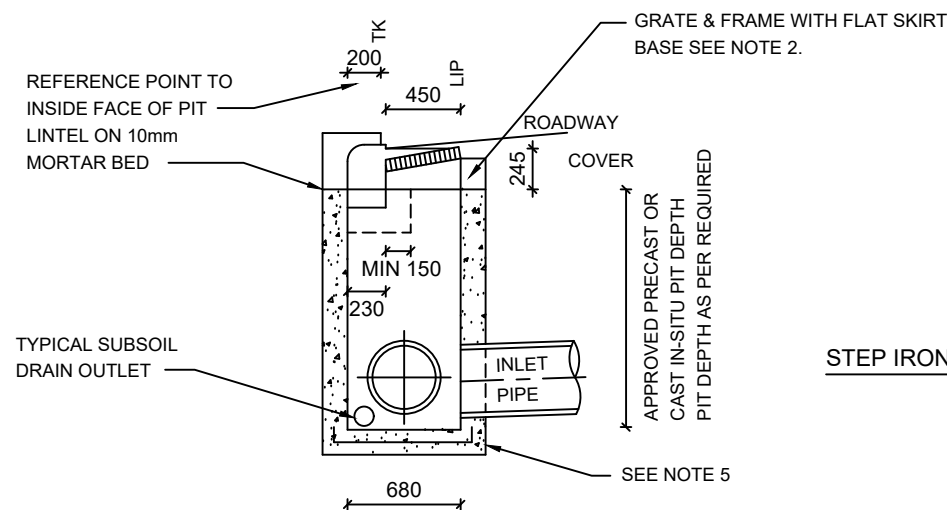
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Drawing Title  
**GRATED GULLY PIT WITH  
EXTENDED KERB INLET**

Sheet 1 OF 2  
Drawing No. SCSD-401

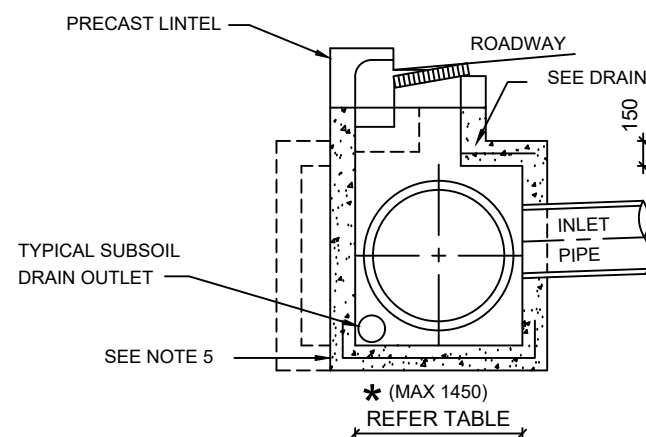
Version 1

**A3**



SECTION D-D (UP TO Ø525mm)

MAY VARY SLIGHTLY BETWEEN MANUFACTURERS



SECTION D-D (ABOVE Ø525mm & MULTIPLE)

* PIT WIDTH REQUIRED	PIPE DIAMETER RANGE
900	600mm TO 750mm INCL
1200	825mm TO 900mm INCL
(MAX 1450)	SEE NOTE 8
D+250	FOR PIPES>900mm
ND+[(N-1)x250]+250	FORMULTIPLE PIPES

(WHERE N=NUMBER OF LINES)

CLEARANCE TO TOP OF HIGHEST PIPE

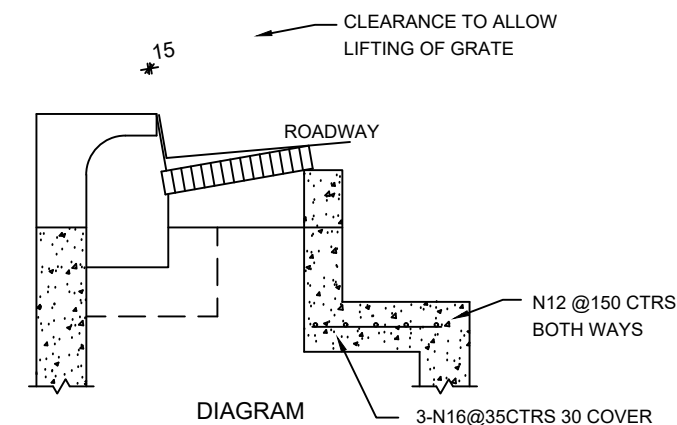
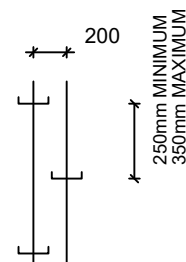
200

PRECAST PIT DEPTH AS REQUIRED.

CAST INSITU PIT DEPTH AS REQUIRED.

ALL PRECAST PIT CHAMBER COMPONENTS TO BE APPROVED BY THE ENGINEER PRIOR TO USE.

STEP IRON PLACEMENT DIAGRAM



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. GRATE AND FRAME TO BE HOT DIP GALVANISED 80-85 MICRONS THICK. ALL GRATES TO BE PROVIDED WITH HINGE PINS.
3. ALL LINTELS TO BE APPROVED PRECAST TYPE. DIMENSIONS SHOWN ON PLAN TO DENOTE CLEAR OPENINGS. MIN SIZE 1.2m DIMENSIONS MAY VARY BETWEEN MANUFACTURERS.
4. PROVIDE STEP IRONS FOR PITS DEEPER THAN 1.2m.
5. MINIMUM THICKNESS OF WALLS AND BASE TO BE 150mm.
6. ALL PITS TO HAVE A MINIMUM OF SL82 MESH IN BASE AND N12 "L" STARTER BARS (450 LEGS) @ 400 CTRS.
7. PITS BETWEEN 1.5m & 2.5m DEEP TO HAVE SL82 MESH CENTRALLY PLACED IN WALLS FOR FULL DEPTH WITH N12 "L" CORNER BARS (450 LEGS) @400 CTRS.
8. PITS DEEPER THAN 2.5m OR LONGER THAN 900 OR 1450 WIDE SHALL BE DESIGNED BY A QUALIFIED ENGINEER.
9. PITS POURED IN MULTIPLE HEIGHT SECTIONS SHALL INLCUDE SL82 MESH OR N12 STARTER BARS (400 LONG) @300 CTRS.
- 10 COMPRESSIVE STRENGTH (F ' C) FOR CAST INSITU CONCRETE SHALL BE A MINIMUM 25 MPa@ 28 DAYS.
11. NO RENDERING PERMITTED IN STRUCTURAL COMPONENTS.
12. THIS STANDARD REFERS TO PITS CONSTRUCTED ADJACENT TO FLEXIBLE PAVEMENTS. TOTAL ISOLATION OF PITS IS REQUIRED ADJACENT TO RIGID PAVEMENTS.
13. ALL PITS TO BE ADEQUATELY STREAMLINED AND BENCHED.
14. WHERE A LINTEL IS REPLACED BY A DRIVEWAY ACCESS, A QUALIFIED ENGINEER IS TO CERTIFY THAT THERE IS NO LOSS OF CAPACITY IN THE DRAINAGE STRUCTURE.

STEP IRON NOTES:

1. STEP IRONS TO COMPLY TO AS 1657-1992

1	ORIGINAL VERSION	22/03/23
Ver	Comments	Date

Notes

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Drawing Title  
**GRATED GULLY PIT WITH  
EXTENDED KERB INLET**

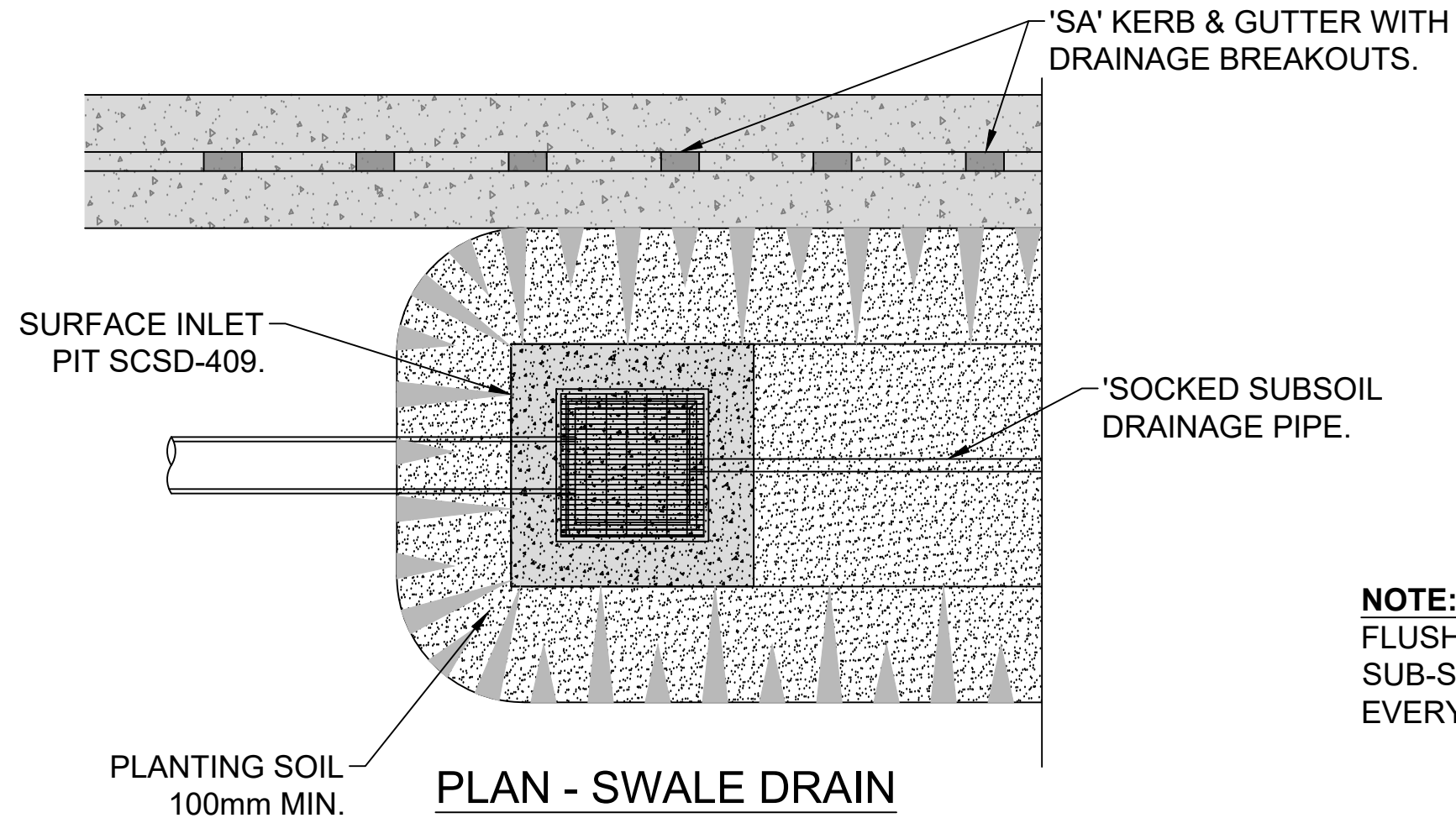
Sheet 2 OF 2

Drawing No. SCSD-401

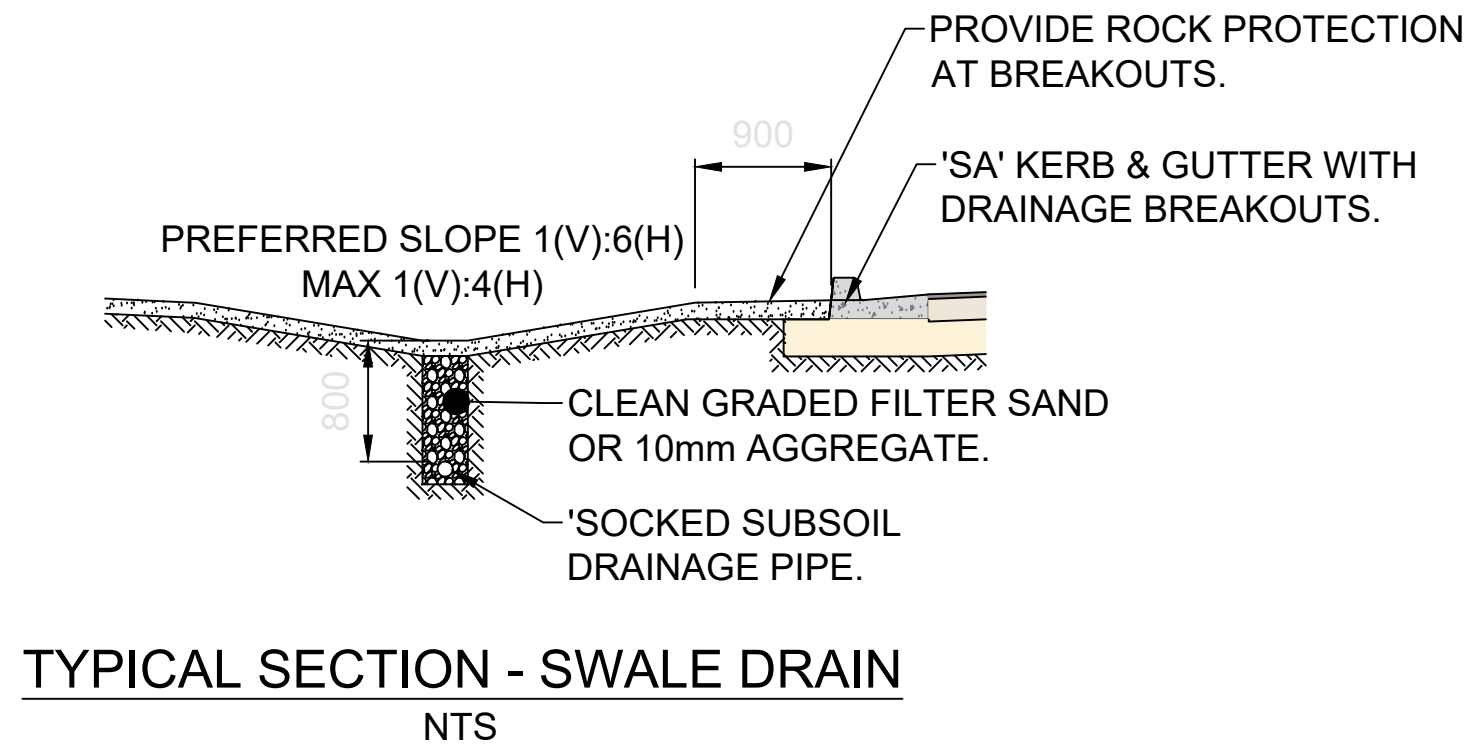
Version 1

**A3**





**NOTE:**  
FLUSH POINTS TO BE PROVIDED IN THE SUB-SOIL DRAIN AT UPSTREAM ENDS & EVERY 60.0m.



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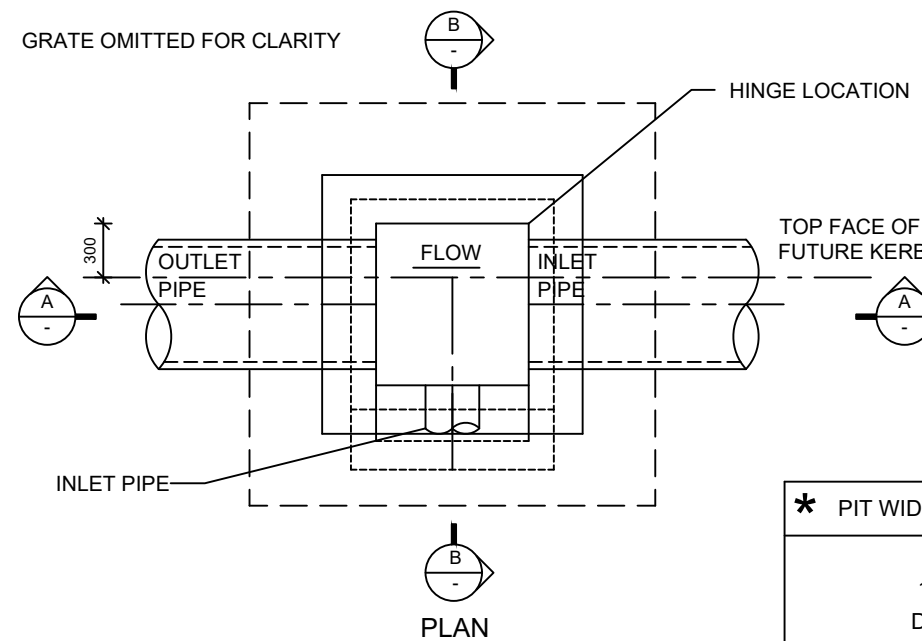
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Drawing Title  
DRAINAGE SWALE

Sheet 1 OF 1  
Drawing No. SCSD-402

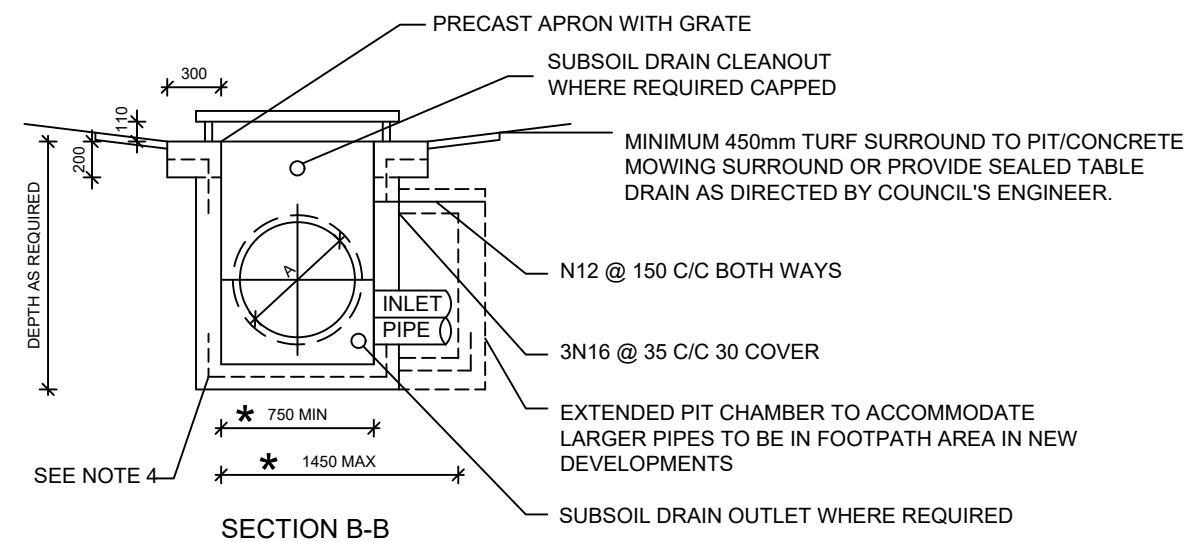
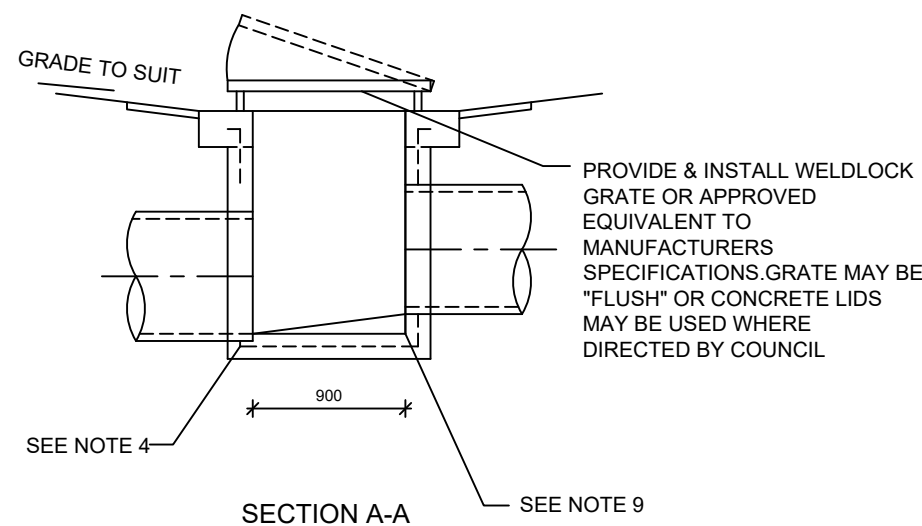
Version 1

**A3**



* PIT WIDTH REQUIRED	PIPE DIAMETER RANGE
900	600mm TO 750mm INCL.
1200	825mm TO 900mm INCL.
D+250	FOR PIPES > 900mm
ND+[250(N-1)+250	FOR MULTIPLE PIPES

(WHERE N=NUMBER OF LINES)



#### NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. WELDLOCK GRATE SHOWN OR APPROVED EQUIVALENT TO BE USED. GRATE AND FRAME TO BE HOT DIP GALVANISED 80-85 MICRONS THICK. ALL GRATES TO BE PROVIDED WITH HINGE PINS & LOCKING BOLTS.
3. PROVIDE STEP IRONS FOR PITS DEEPER THAN 1.2m.
4. MINIMUM THICKNESS OF WALLS AND BASE TO BE 150mm.
5. ALL PITS TO HAVE A MINIMUM OF SL82 MESH IN BASE AND N12 "L" STARTER BARS (450 LEGS) @400 CTRS.
6. PITS BETWEEN 1.5m & 2.5m DEEP TO HAVE SL82 MESH CENTRALLY PLACED IN WALLS FOR FULL DEPTH WITH N12 "L" CORNER BARS (450 LEGS) @400 CTRS.
7. PITS DEEPER THAN 2.5m OR LONGER THAN 900 OR 1450 WIDE SHALL BE DESIGNED BY A QUALIFIED ENGINEER.
8. PITS POURED IN MULTIPLE HEIGHT SECTIONS SHALL INCLUDE SL82 MESH OR N12 STARTER BARS (400 LONG) @300 CTRS.
9. COMPRESSIVE STRENGTH (FC) FOR CAST INSITU CONCRETE SHALL BE A MINIMUM 25 MPa @ 28 DAYS.
10. NO RENDERING PERMITTED IN STRUCTURAL COMPONENTS.
11. ALL PITS TO BE ADEQUATELY STREAMLINED AND BENCHED.
12. 100Ø SOCKED SUBSOIL DRAINAGE PIPE 3m LONG TO BE PROVIDED ADJACENT TO INLET PIPES.
13. WHERE NOMINATED BY THE ENGINEER PROVIDE MINIMUM 2 WHITE REFLECTORISED GUIDE POSTS EITHER SIDE OF PIT.
14. PITS TO BE LOCATED OUTSIDE CLEAR ZONE (REFER RTA GUIDELINES) UNLESS DIRECTED OTHERWISE.

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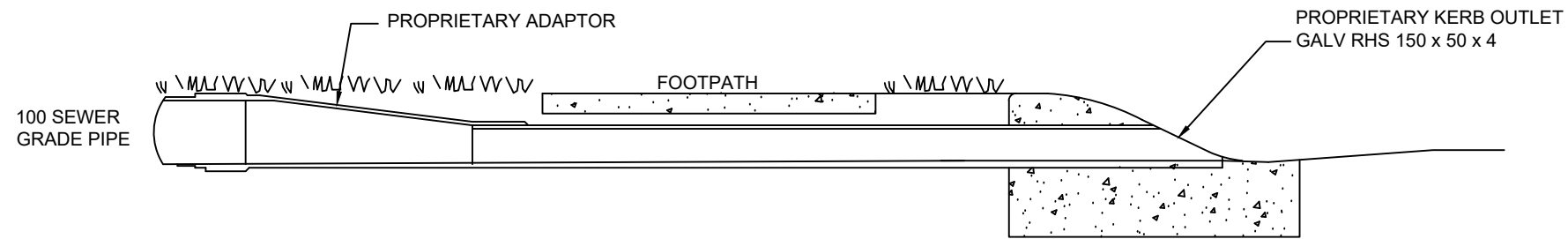
Drawing Title  
**RAISED GRATED "LETTERBOX"  
OR "JUNCTION" PIT**

Sheet 1 OF 1

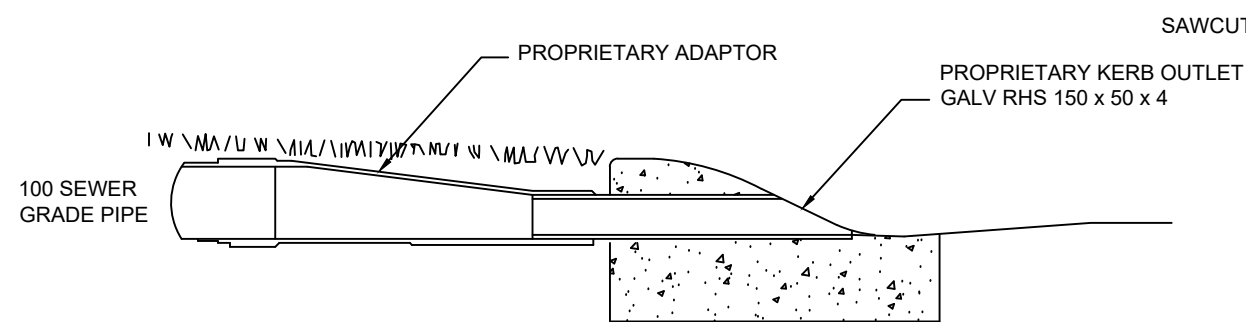
Drawing No. SCSD-403

Version 1

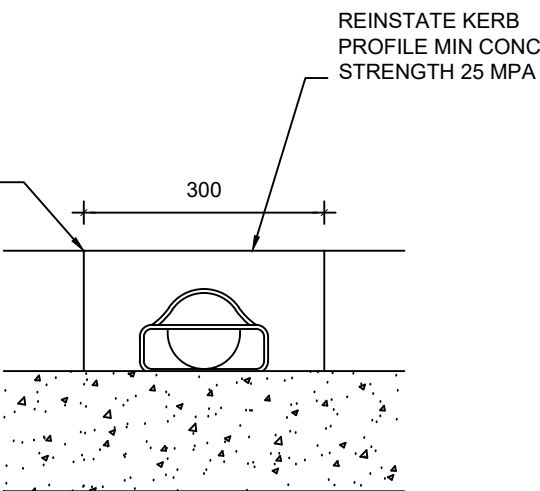
**A3**



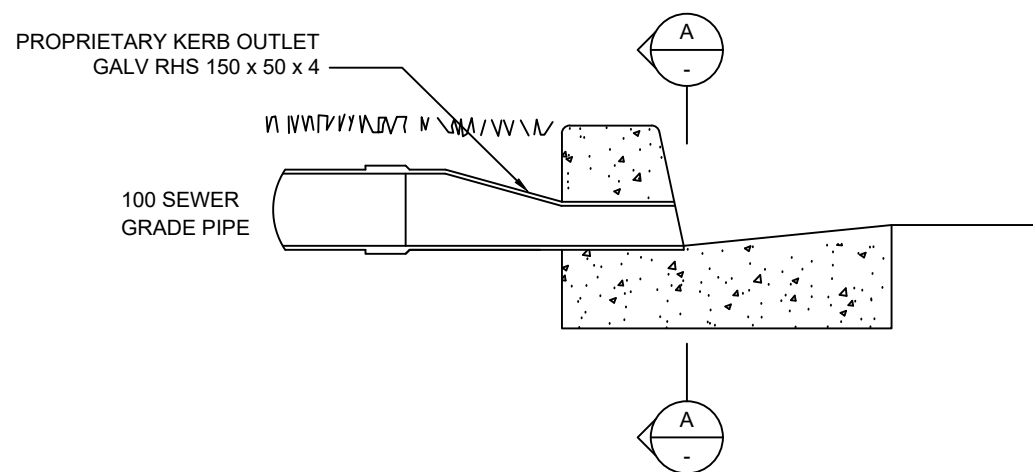
STORMWATER - SF (ROLL TOP) KERB WITH FOOTPATH



STORMWATER - SF (ROLL TOP) KERB



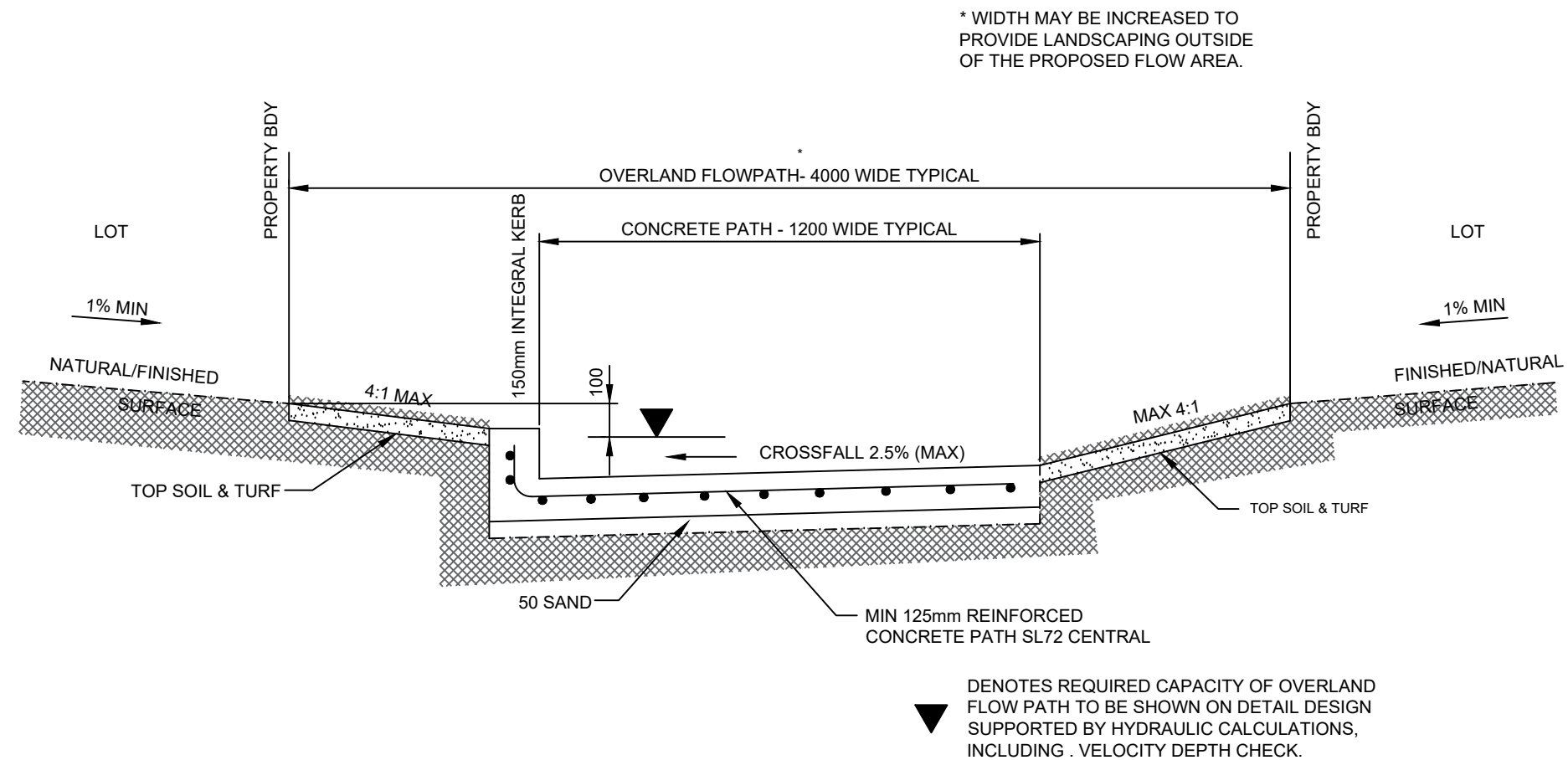
SECTION A-A  
SA KERB



STORMWATER OUTLET - SA (UPRIGHT) KERB

- NOTES:
- 1. KERB OUTLET CONFIGURATION TO BE APPROVED BY COUNCIL PRIOR TO INSTALLATION AND INSTALLED TO MANUFACTURER'S INSTRUCTIONS
  - 2. SEWER GRADE 100 DIA. PVC PIPE OR GALV.150X50 RHS WHERE COVER IS MINIMAL
  - 3. ALL CONNECTIONS TO BE SEALED WITH SILICON BASED SEALANT
  - 4. OUTLET SHALL BE PROVIDED ON THE LOW SIDE OF EACH LOT WITHIN 1000 FROM THE SIDE BOUNDARY ALIGNMENT OR OTHER APPROVED LOCATION
  - 5. IN NEW CONSTRUCTION INVOLVING A CONCRETE FOOTPATH GALVANISED RHS 150x50x4 TO BE INSTALLED UNDER THE CONCRETE FOOTPATH AS WELL AS THROUGH KERB
  - 6. ALL DIMENSIONS ARE IN MILLIMETRES





1	ORIGINAL VERSION	22/03/2023
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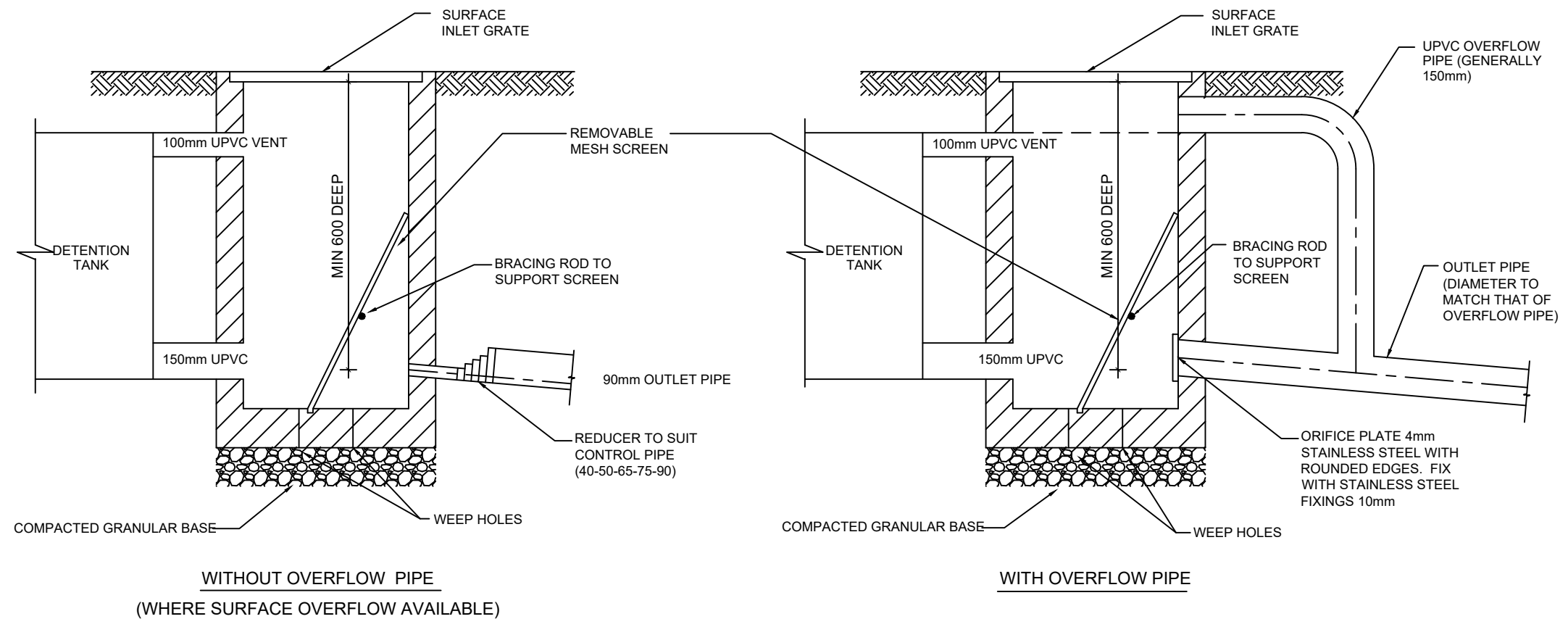
Drawing Title  
 OVERLAND FLOWPATH  
 CROSS SECTION

Sheet 1 OF 1

Drawing No. SCSD-405

Version 1

A3



**NOTES:**

1. STORMWATER PIPES TO BE SEWER GRADE ACROSS PUBLIC FOOTWAY.
2. ALL DIMENSIONS ARE IN MILLIMETRES U.N.O.
3. CONCRETE COMPRESSIVE STRENGTH Fc25MPa.
4. SIDE WALLS OF ALL PITS DEEPER THAN 1500mm ARE TO BE REINFORCED WITH ONE LAYER OF SL82 MESH RETURNED 300mm INTO BASE. WHERE REQUIRED INCREASE CONCRETE STRENGTH TO Fc32MPa.
5. DEPTH OF PIT NO TO EXCEED 2000mm.
6. PROVIDE STEP IRONS FOR PITS DEEPER THAN 1.2m.
7. ALL EXPOSED EDGES TO BE ROUNDED WITH 20 RADIUS U.N.O.

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Drawing Title  
**ONSITE STORMWATER DETENTION  
TANK AND CONTROL PIT**

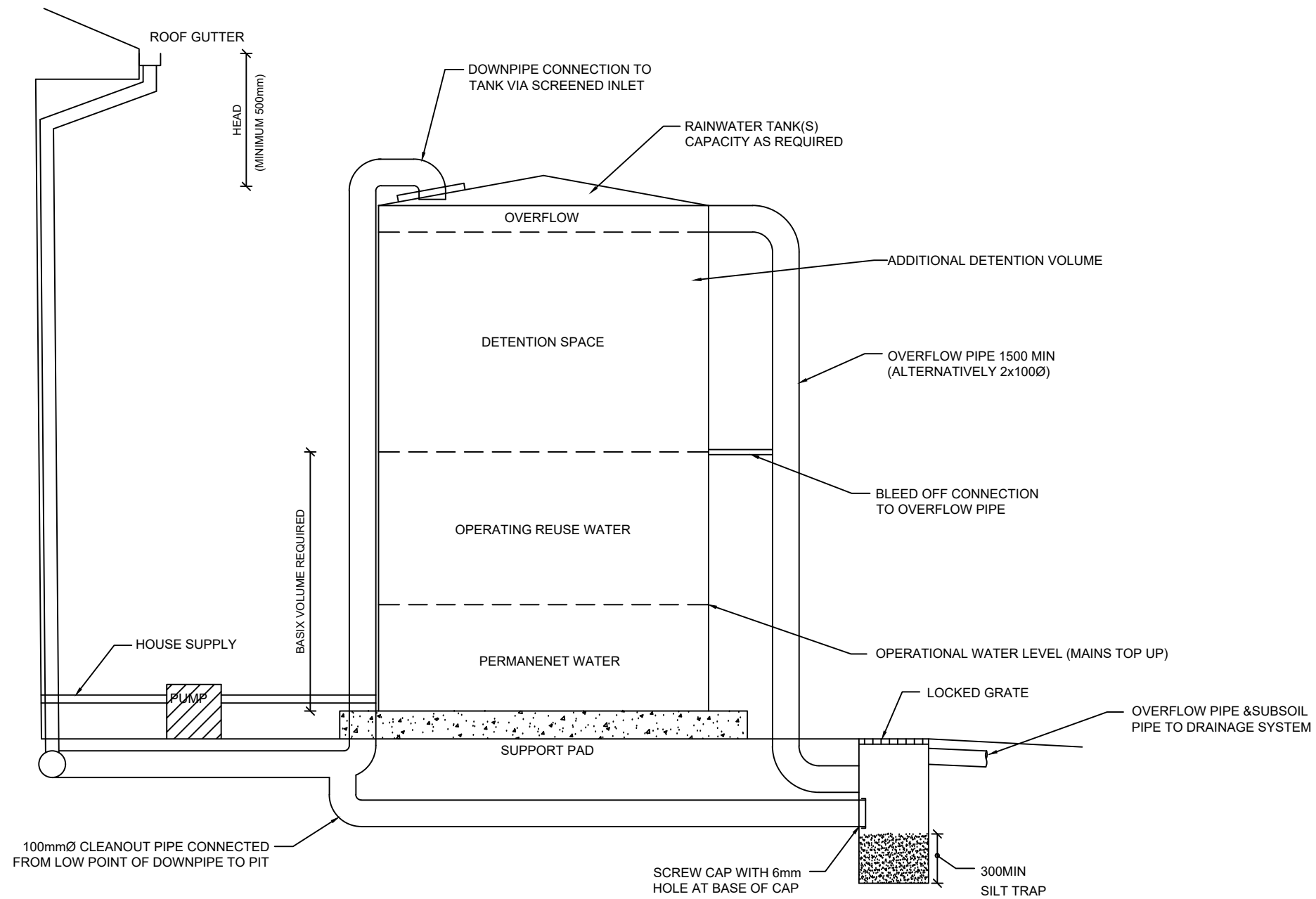
Sheet 1 OF 2

Drawing No. SCSD-406

Version 1

**A3**

1. FIRST FLUSH DEVICE SHALL BE INSTALLED TO SATISFY THE BUILDING CODE OF AUSTRALIA & TO ENSURE MINIMUM "HEAD" IS MAINTAINED.



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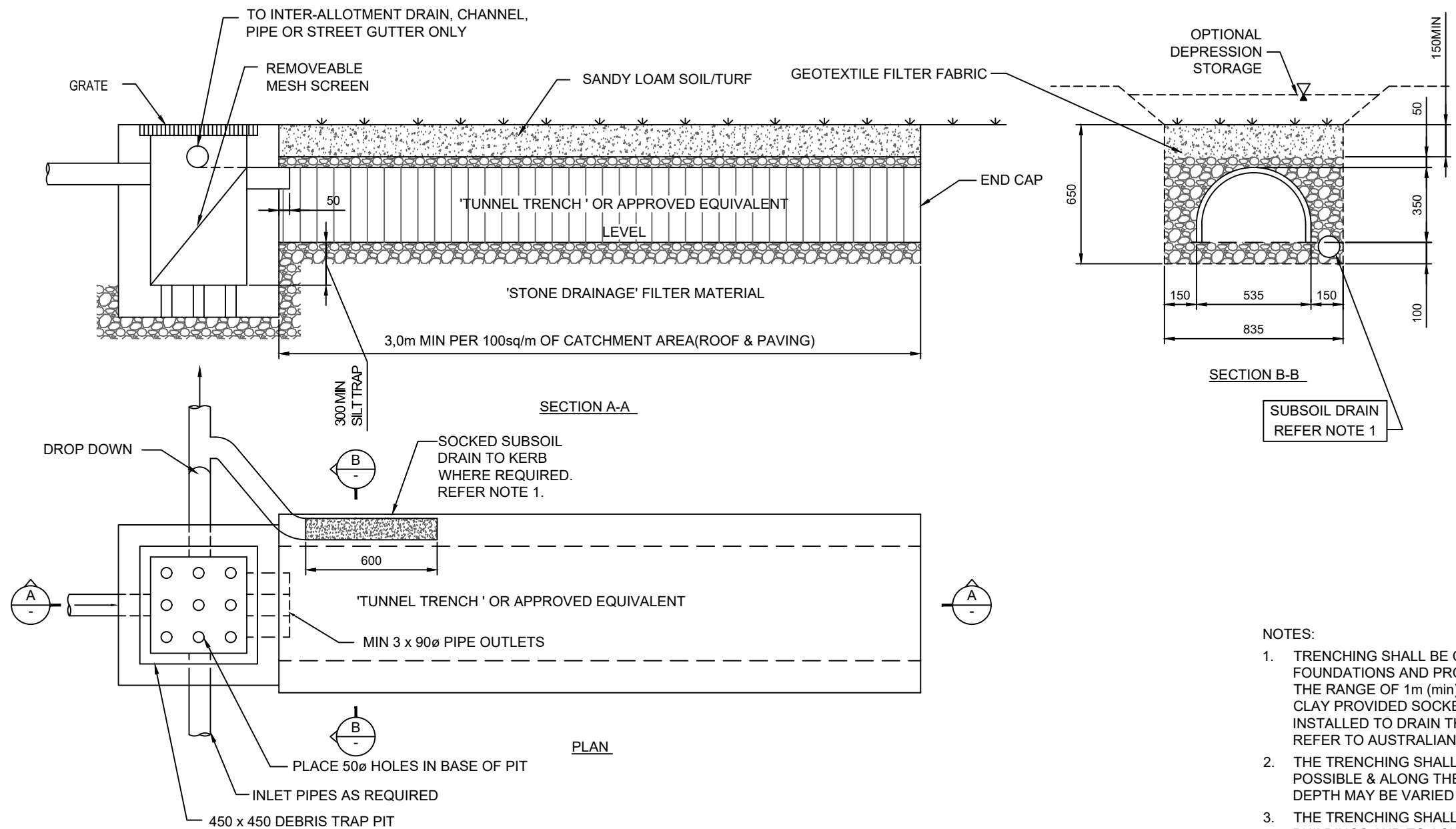
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Drawing Title	RAINWATER REUSE/DETENTION TANK
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Sheet	2 OF 2	A3
Drawing No.	SCSD-406	Version 1

A3

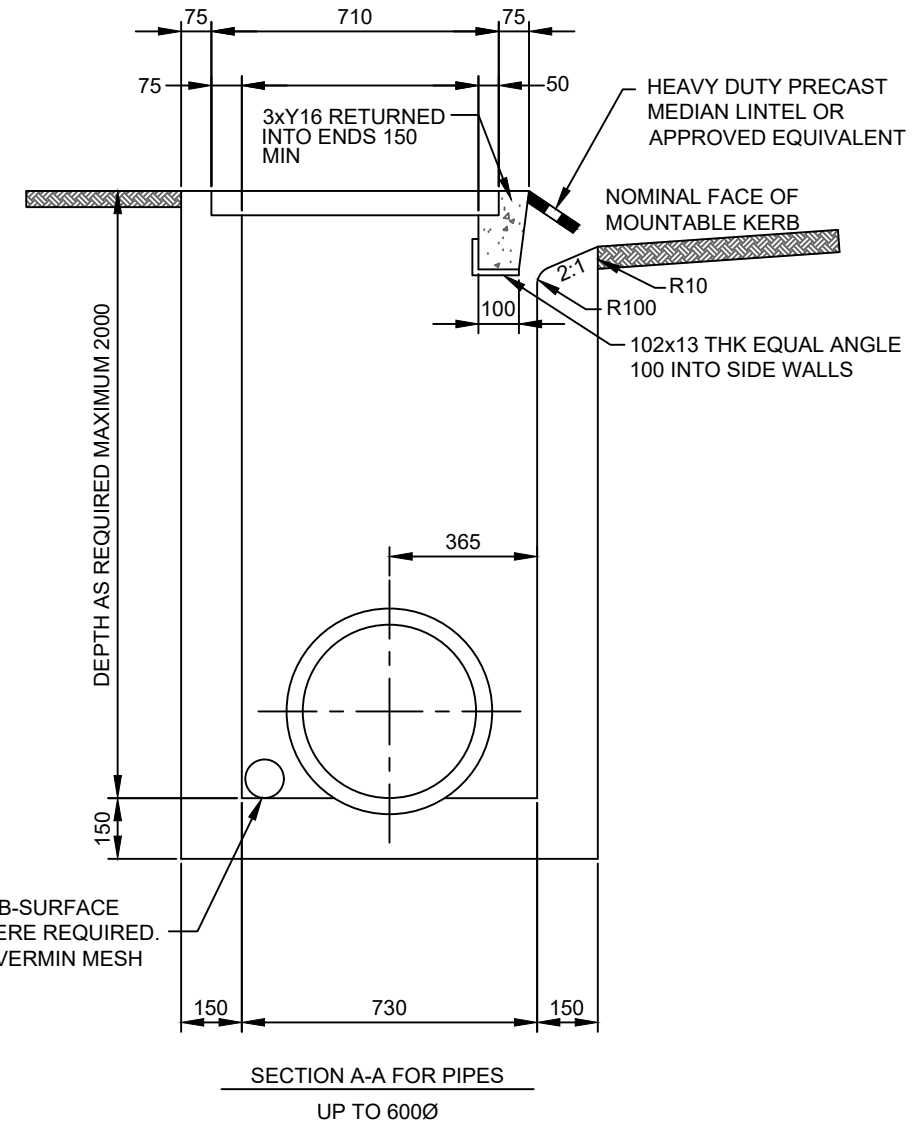
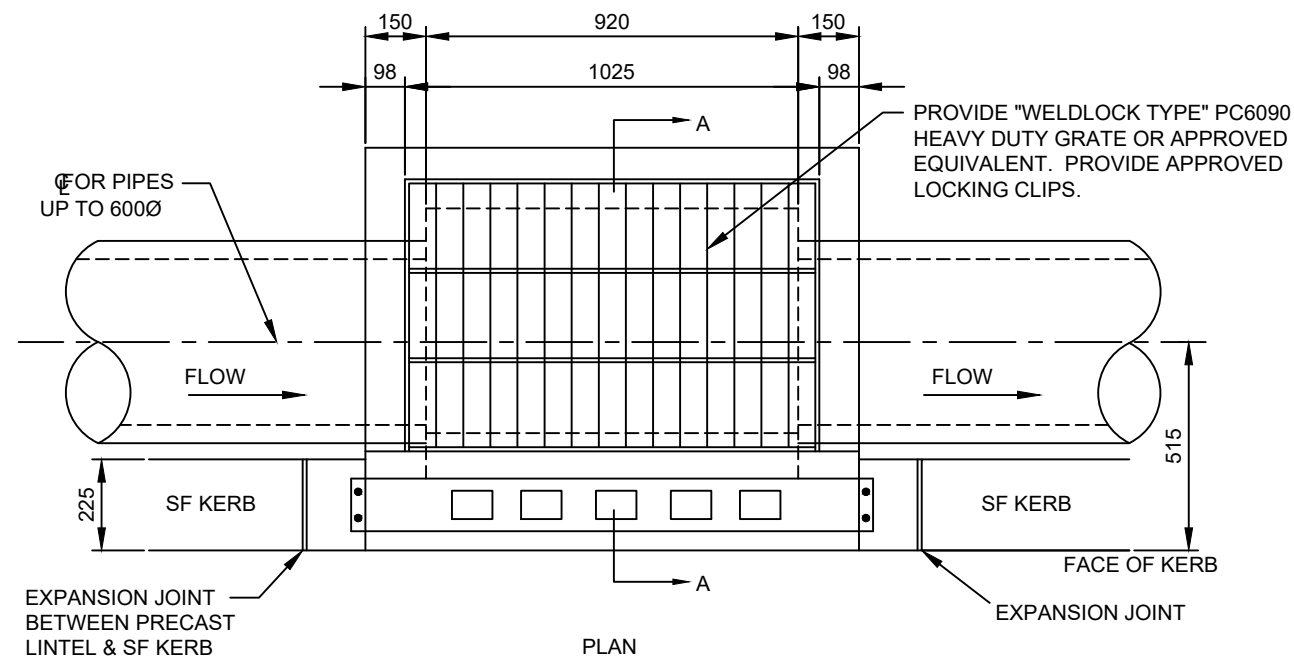
Version 1



- NOTES:
1. TRENCHING SHALL BE CLEAR OF STRUCTURAL FOUNDATIONS AND PROPERTY BOUNDARIES WITHIN THE RANGE OF 1m (min) IN CLEAN SAND & 3m (min) IN CLAY PROVIDED SOCKED SUBSOIL DRAINAGE IS INSTALLED TO DRAIN THE TRENCH. IN CLAY SOIL, REFER TO AUSTRALIAN RUNOFF QUALITY SECTION 11.
  2. THE TRENCHING SHALL BE PLACED LEVEL. WHERE POSSIBLE & ALONG THE CONTOUR OF THE LAND. DEPTH MAY BE VARIED TO SUIT.
  3. THE TRENCHING SHALL BE PLACED DOWNHILL OF BUILDINGS AND TO ACHIEVE MAXIMUM AREA, SLOPING AWAY FROM THE TRENCH, FOR DISPERSAL OF WATER.
  4. THE DISPERSAL AREA SHOULD BE CHOSEN TO AVOID OVERFLOW TOWARD A BUILDING OR ONTO ADJOINING PROPERTIES.
  5. IT IS THE OWNERS RESPONSIBILITY TO REGULARLY CLEAN THE PIT & MAINTAIN THE SYSTEM.

				<b>Notes</b> 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED. 2. DRAWING IS NOT TO SCALE, WORK TO STATED DIMENSIONS. 3. DO NOT RELY ON THESE STANDARD DRAWINGS AS THE EQUIVALENT OF, OR SUBSTITUTE FOR, PROJECT SPECIFIC DESIGN AND ASSESSMENT BY A QUALIFIED PROFESSIONAL.	Singleton Council Civic Centre, PO Box 314 Singleton, NSW, 2330  Phone: (02) 6578 7290 Fax: (02) 6572 4197 <a href="http://www.singleton.nsw.gov.au">www.singleton.nsw.gov.au</a>	<b>Drawing Title</b> ONSITE STORM WATER DISPOSAL TRENCH	
	Ver	Comments	Date				
	1	ORIGINAL VERSION	22/03/2023			<b>Sheet</b> 1 OF 1	
						<b>Drawing No.</b> SCSD-407	
						<b>Version</b> 1	





# NOTES:

1. GRATE, ANGLE & LINTEL PLATE TO BE HOT DIPPED GALVANISED.
2. PROVIDE STEP IRONS FOR PITS DEEPER THAN 1.2m.
3. MINIMUM THICKNESS OF WALLS AND BASE TO BE 150mm.
4. ALL PITS TO HAVE A MINIMUM OF SL82 MESH IN BASE AND N12 "L" STARTER BARS (450 LEGS)@400 CTRS.
5. PITS DEEPER THAN 1.5m TO HAVE SL82 MESH CENTRALLY PLACED IN WALLS FOR FULL DEPTH WITH N12 "L" CORNER BARS (450 LEGS) @ 100 CTRS.
6. DEPTH OF PIT NOT TO EXCEED 2000.
7. PITS POURED IN MULTIPLE HEIGHT SECTIONS SHALL INCLUDE SL82 MESH OR N12 STARTER BARS (400 LONG)@300 CTRS.
8. COMPRESSIVE STRENGTH (FC) FOR CAST INSITU CONCRETE SHALL BE A MINIMUM 25 MPa @ 28 DAYS.
9. NO RENDERING PERMITTED IN STRUCTURAL COMPONENTS.
10. ALL PITS TO BE ADEQUATELY STREAMLINED AND BENCHED.
11. ALL DIMENSIONS ARE IN MILLIMETRES.

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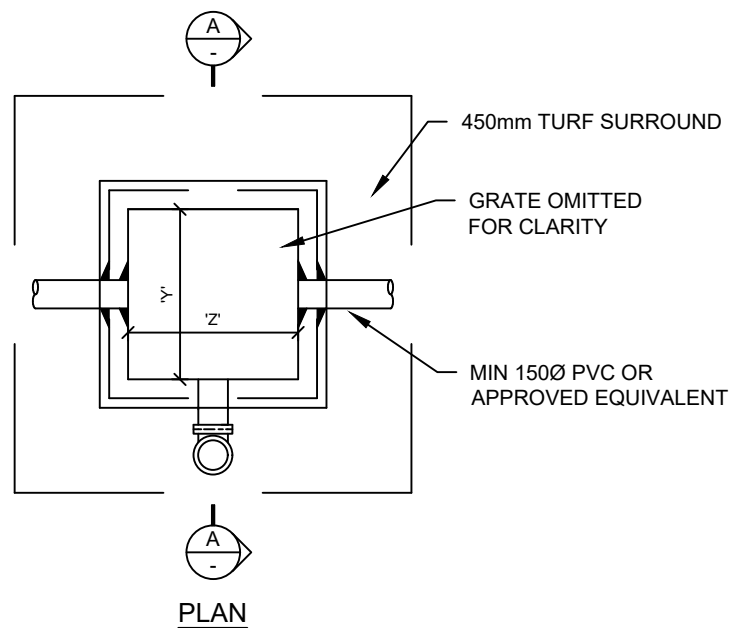
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Drawing Title  
**MEDIAN KERB INLET PIT  
 DISPOSAL TRENCH**

Sheet 1 OF 1  
 Drawing No. SCSD-408

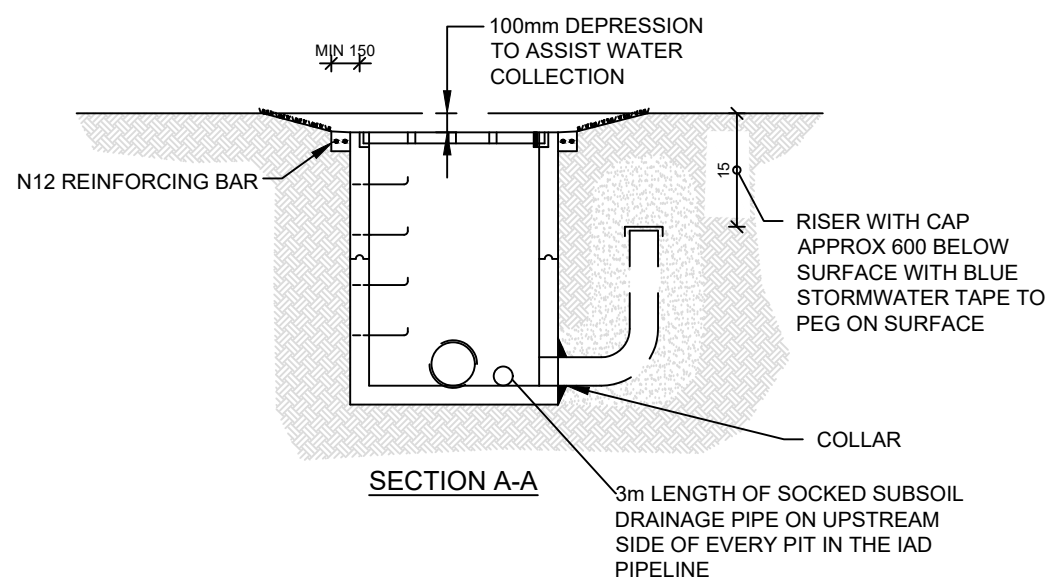
Version 1

**A3**



**MINIMUM PIT DIMENSIONS**

PIT DEPTH	< 450	450 - 900	900 - 1200	1200 - 1800	> 1800
'Y'	450	600	900	900	900
'Z'	450	600	600	600	900



**NOTES:**

1. INTER ALLOTMENT DRAINAGE PITS SHALL BE PROVIDED TO THE LOW CORNER OF EACH LOT UNLESS OTHERWISE PROVIDED.
2. PITS WILL ALSO BE PROVIDED AT CHANGES OF PIPE SIZE, CHANGES IN GRADE, CHANGED IN PIPE TYPE OR CLASS AND CHANGES IN DIRECTION OF 45° OR GREATER. SUCH PITS ARE TO BE A MINIMUM INTERNAL SIZE OF 600 x 600 APPROVED PRECAST OR CAST INSITU.
3. PITS SHALL BE COVERED BY AN APPROVED GRATE TO PROVIDE AN ADEQUATE SURFACE WATER INLET. ALL GRATES ARE TO BE PROVIDED WITH EITHER "J" BOLTS OR PINS TO PREVENT REMOVAL. PITS SURROUNDS WILL BE TURFED AND PEGGED OR NETTED TO A MINIMUM WIDTH OF 450mm.
4. PIT INLET GRATES SHALL BE DEPRESSED 100mm BELOW SURROUNDING GROUND LEVEL TO ASSIST SURFACE WATER COLLECTION.
5. PROVIDE STEP IRONS FOR PITS DEEPER THAN 1.2m. REFER TO EGSD-401. SUCH PITS ARE TO HAVE A MINIMUM INTERNAL SIZE OF 900 x 600mm.
6. CONNECTION FOR ROOF WATER FOR SINGLE RESIDENTIAL DWELLINGS SHALL BE PROVIDED VIA A MINIMUM 100mm DIA STUB INTO THE SIDE OF THE PIT.
7. PIPE CONNECTION TO PIT TO BE SEALED WITH MINIMUM 100mm MORTAR COLLAR FOR SEAL AND SUPPORT.
8. PIPE FOR INTERALLOTMENT DRAINAGE IS TO BE FIBRE REINFORCED CONCRETE, PRECAST CONCRETE OR SEWER GRADE SN4 PVC.

3	ORIGINAL VERSION	22/03/2023
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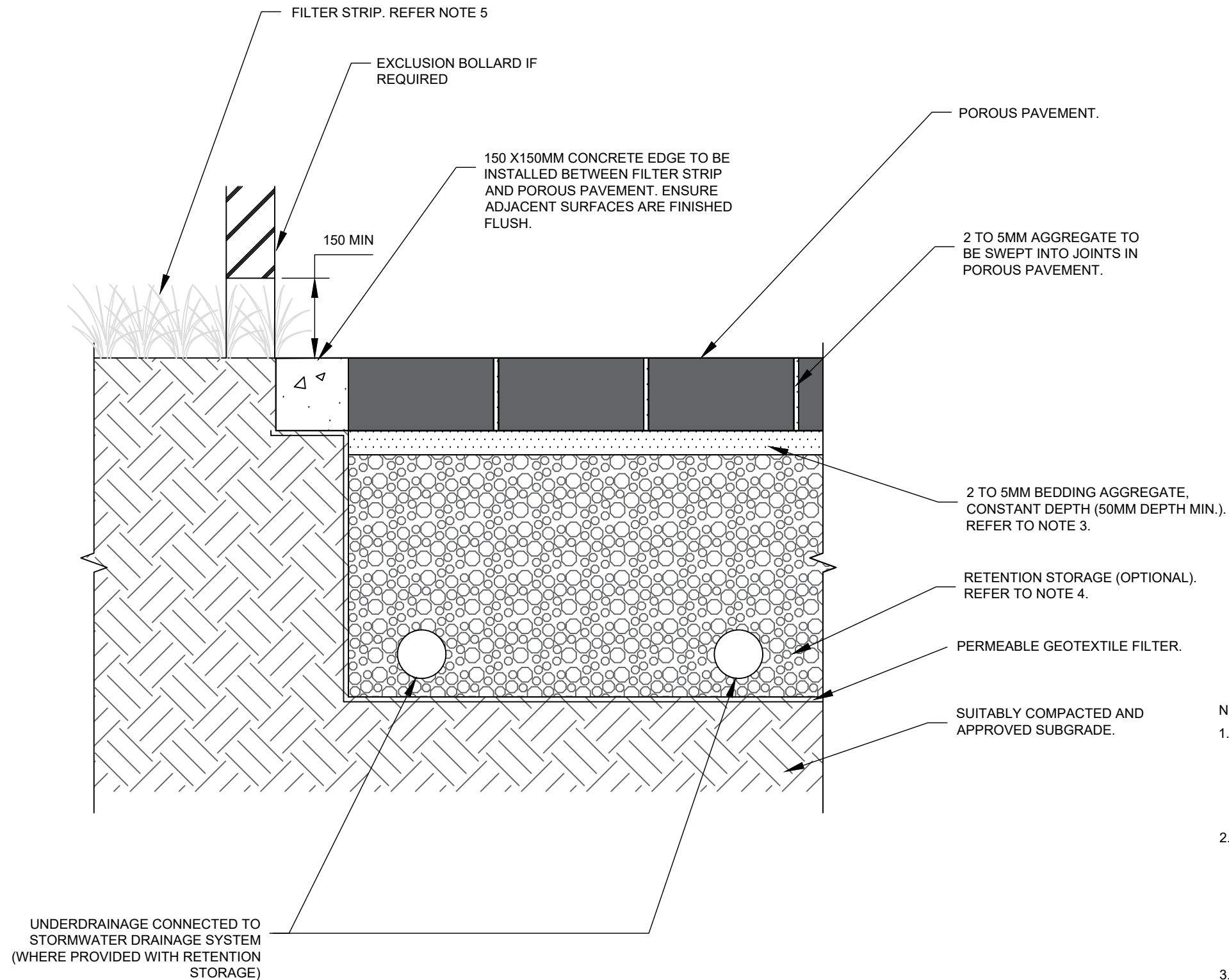
Drawing Title  
INTER ALLOTMENT DRAINAGE PIT

Sheet 1 OF 1

Drawing No. SCSD-409

Version 1

**A3**



POROUS PAVING TYPICAL SECTION

- NOTES:
- 1. BEDDING AGGREGATE MATERIAL SHALL MEET MATERIAL AND GRADING COMPATIBILITY CRITERIA IN TECHNICAL SPECIFICATION FOR THE WORKS AND/ OR THE PAVEMENT MANUFACTURER'S TECHNICAL SPECIFICATIONS.
  - 2. THE RETENTION STORAGE MEDIA SHALL COMPRISE COARSE, SOUND, CLEAN STONE OR ROCK OF GENERALLY UNIFORM PARTICLE SIZE (TYPICALLY 10 TO 63 MM SIZE) AND FREE FROM SILT/CLAY FINES OR OTHER DELETERIOUS MATTER, OR AS SPECIFIED IN THE PAVEMENT MANUFACTURE'S TECHNICAL SPECIFICATION.
  - 3. FILTER STRIPS SHOULD BE TURF OR PLANTED - IF PLANTED, VEHICLE EXCLUSION BOLLARDS MAY BE REQUIRED.
  - 4. REFER TO MANUFACTURE'S SPECIFICATION FOR MAXIMUM TRAFFIC LOADING.
  - 5. FILTER STRIPS TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LANDSCAPE DESIGN GUIDELINES.

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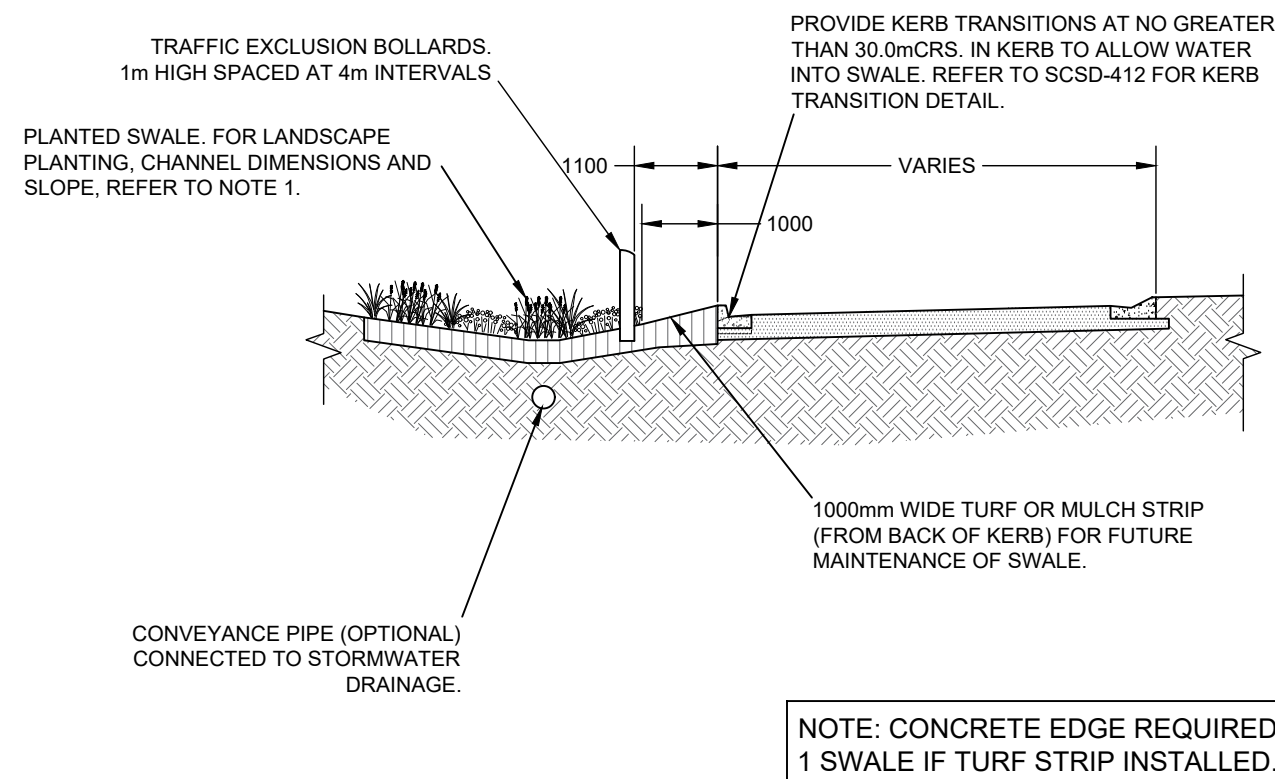
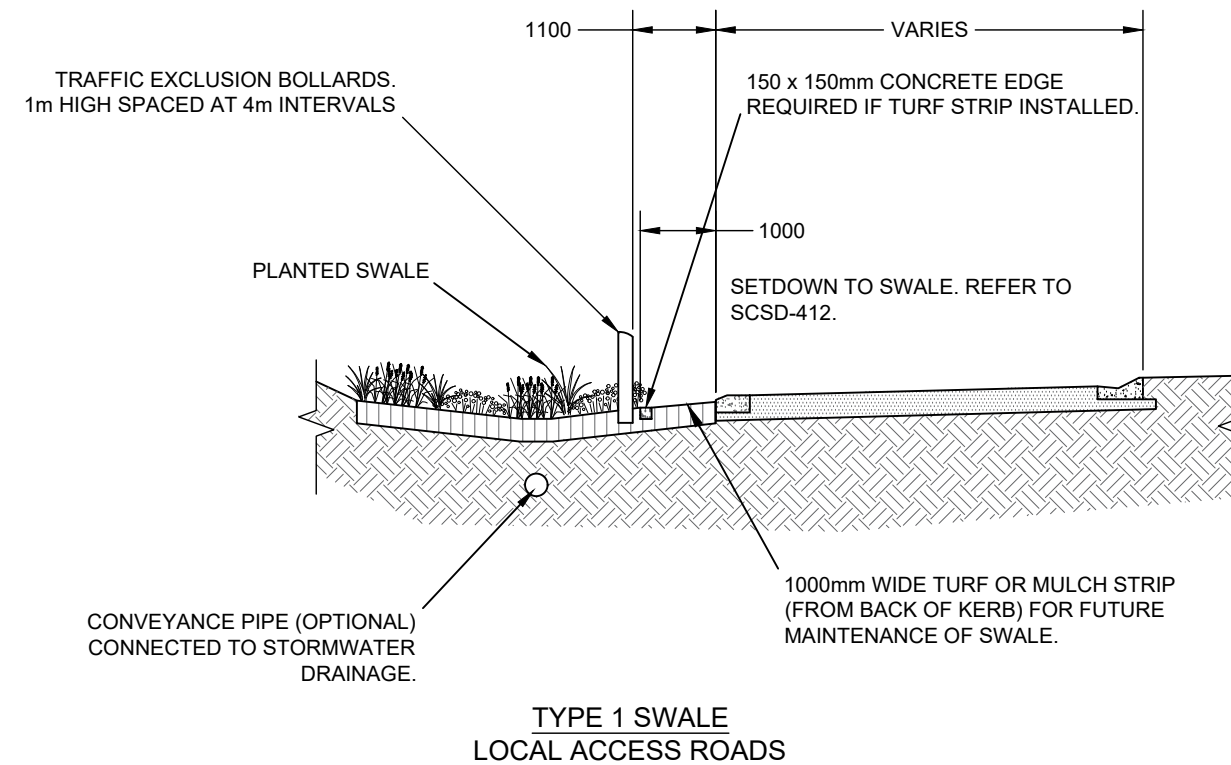
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Drawing Title  
POROUS PAVING - TYPICAL  
SECTION

Sheet 1 OF 1  
Drawing No. SCSD-410

Version 1



#### NOTES

- ENGINEERING WORKS TO BE DESIGNED IN ACCORDANCE WITH COUNCIL'S ENGINEERING GUIDELINES.

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Drawing Title  
GRASSED SWALE - TYPE 1

Sheet 1 OF 1

Drawing No. SCSD-411

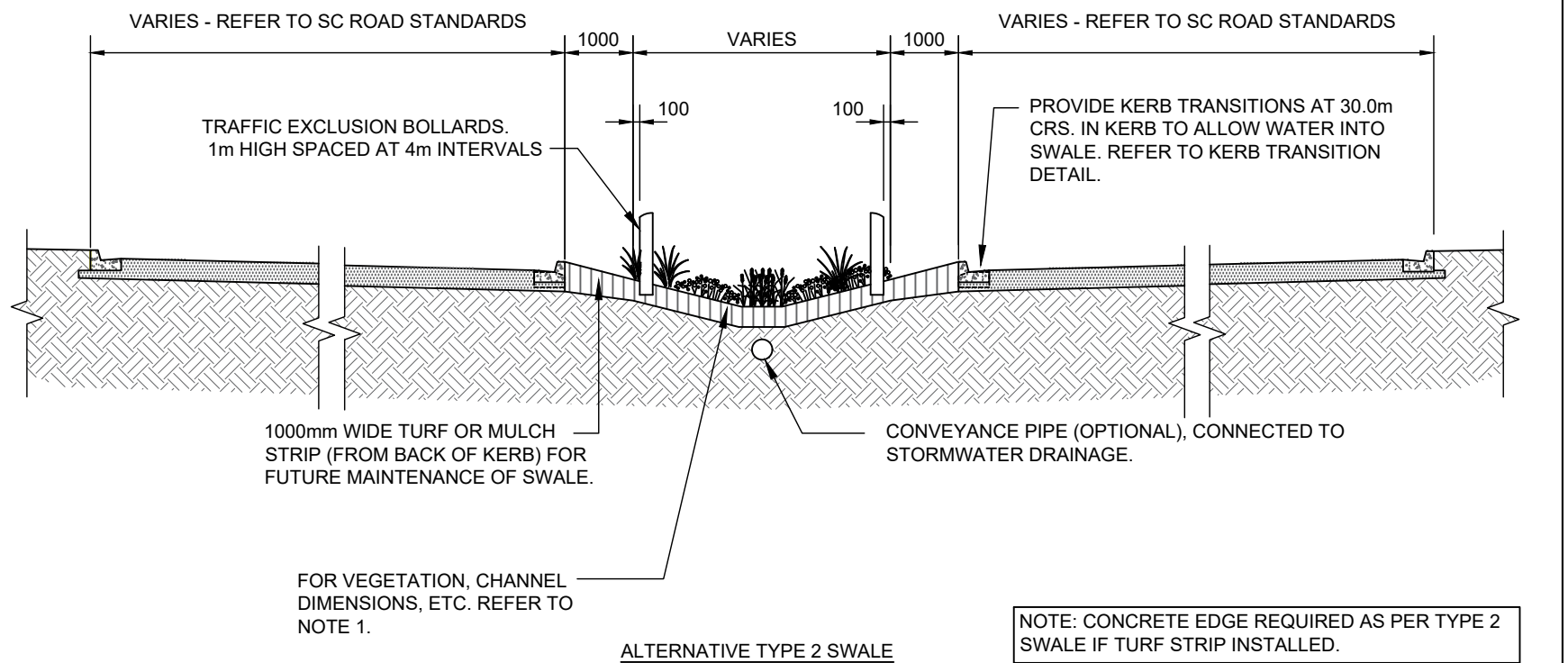
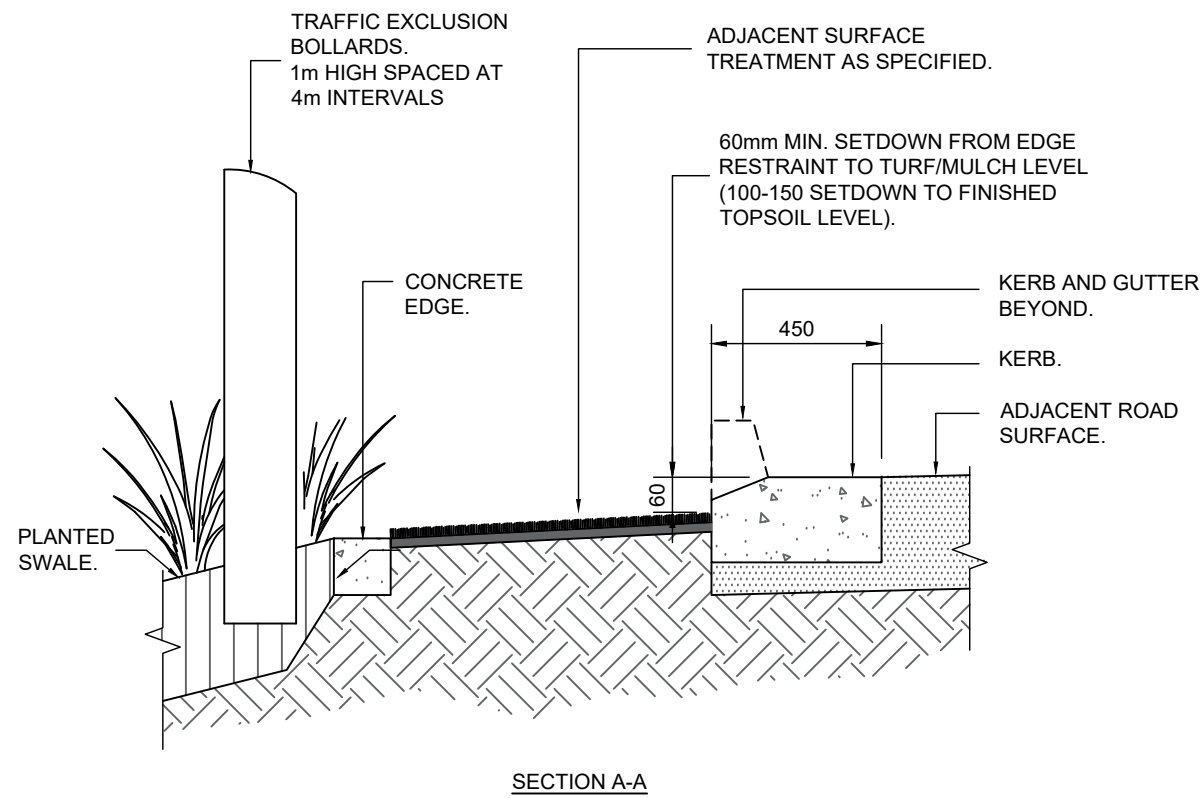
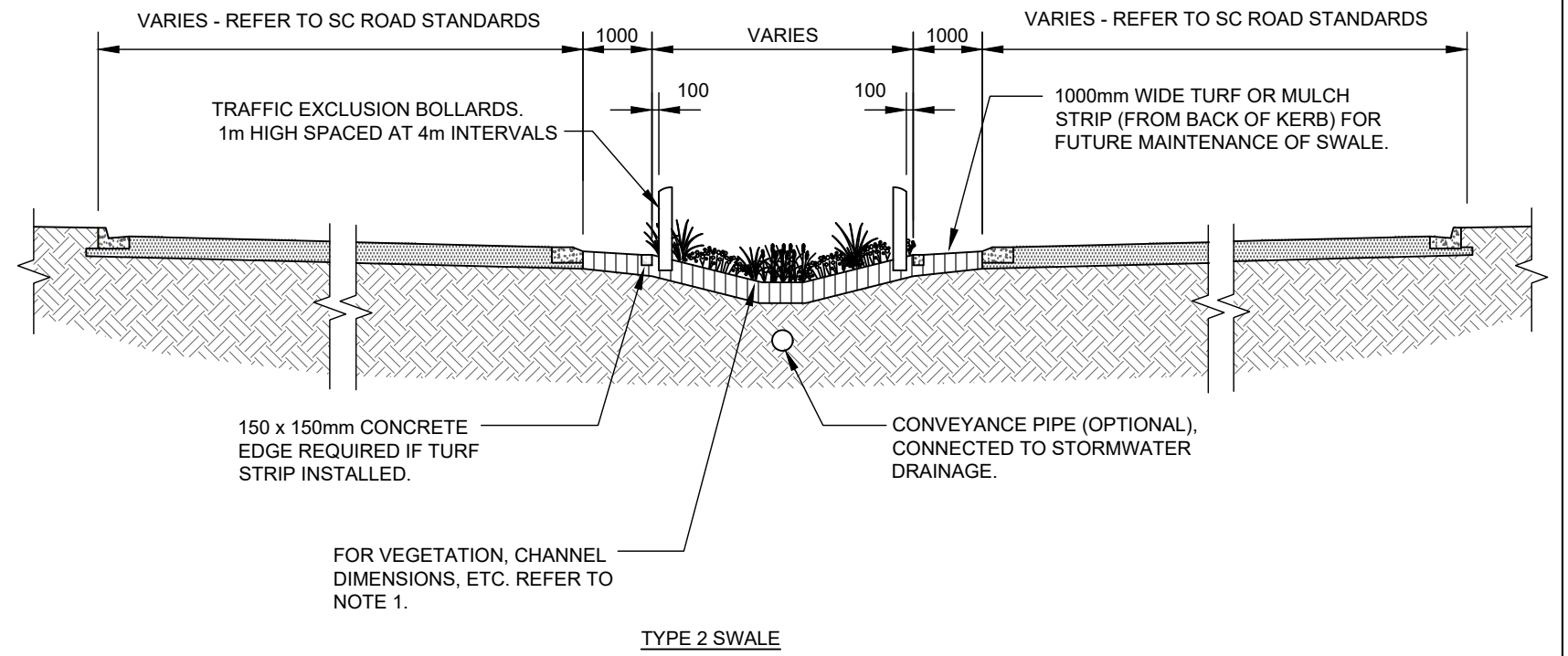
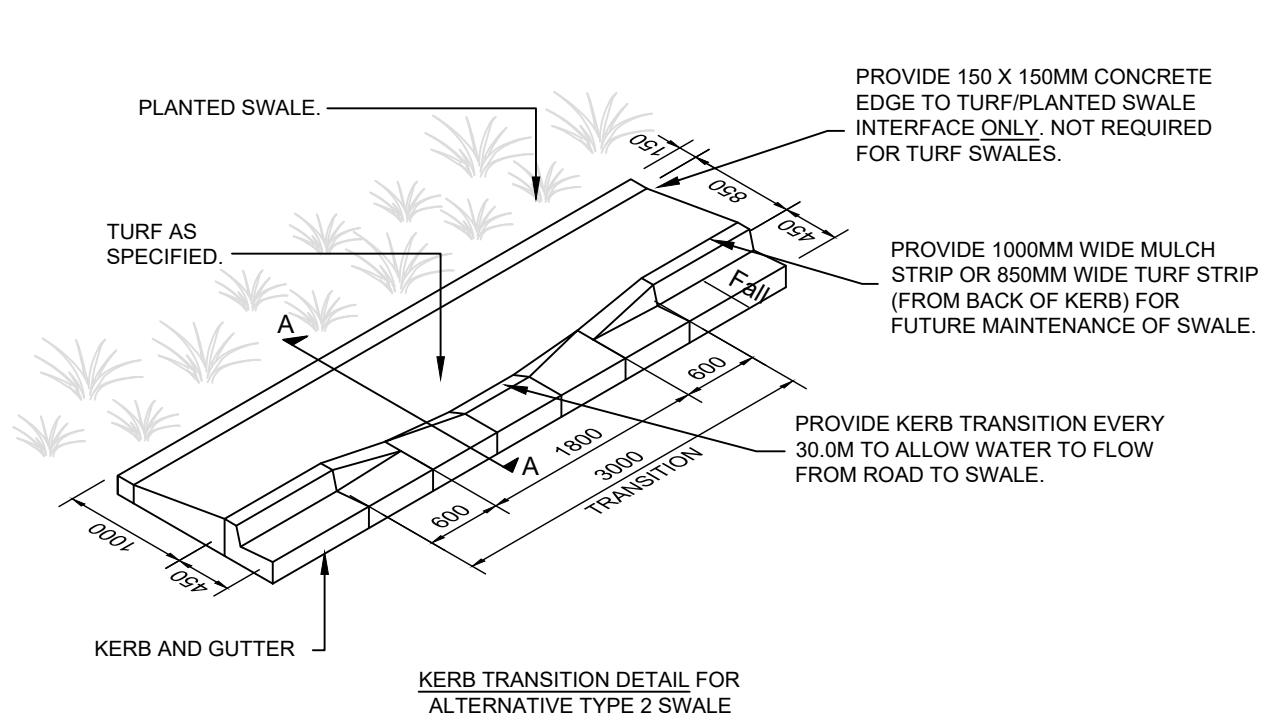
Version 1

**A3**



NOTES:

1. ENGINEERING WORKS TO BE DESIGNED IN ACCORDANCE WITH COUNCIL'S ENGINEERING GUIDELINES.



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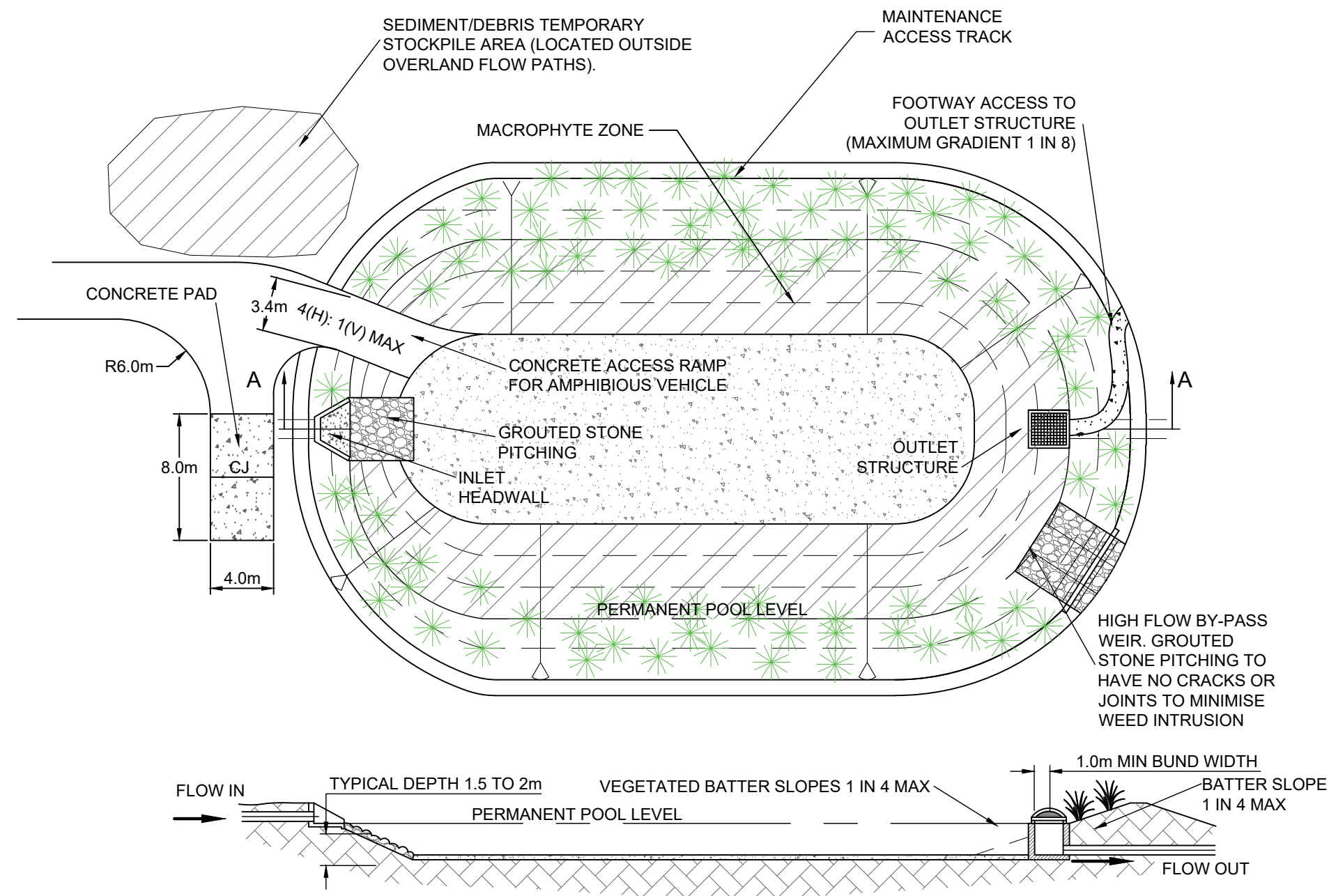
Drawing Title  
GRASSED SWALE - TYPE 2

Sheet 1 OF 1

Drawing No. SCSD-412

Version 1

A3



# NOTES

- ENGINEERING WORKS TO BE DESIGNED IN ACCORDANCE WITH COUNCIL'S ENGINEERING DESIGN GUIDELINES.
- SEDIMENTATION BASIN SHALL BE CONSTRUCTED WITH A HARD BASE TO ASSIST WITH MAINTENANCE. THE BASE MUST HAVE A BEARING CAPACITY TO SUPPORT MAINTENANCE MACHINERY WHEN ACCESS IS REQUIRED INTO THE BASIN.
- AQUATIC VEGETATION IS REQUIRED IN THE MACROPHYTE ZONE TO MINIMISE ALGAL BLOOMS AND EUTROPHICATION.
- CONCRETE RAMP AND PAD TO BE 32MPA WITH SL82 REINFORCING STEEL AND 150mm MIN THICKNESS, SUB-BASE TO BE FOR COMPACTED 95% AND 100mm MIN THICKNESS.
- MAINTENANCE ACCESS TRACK TO BE 2% STABILISED GRAVEL 3m WIDE AND 150mm MIN THICKNESS.
- FOOTWAY ACCESS TO OUTLET STRUCTURE TO BE NO FINES CONCRETE, 1m WIDE AND 125mm MIN THICKNESS.
- CONCRETE BY-PASS WEIR AND INLET TO BE 25MPA WITH SL82 REINFORCING STEEL AND 150mm MIN THICKNESS.
- ROCK FOR BY-PASS WEIR AND INLET STONE PITCHING TO BE 250-300mm HARD DURABLE ROCK

1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

## Notes

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
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- DO NOT RELY ON THESE STANDARD DRAWINGS AS THE EQUIVALENT OF, OR SUBSTITUTE FOR, PROJECT SPECIFIC DESIGN AND ASSESSMENT BY A QUALIFIED PROFESSIONAL.

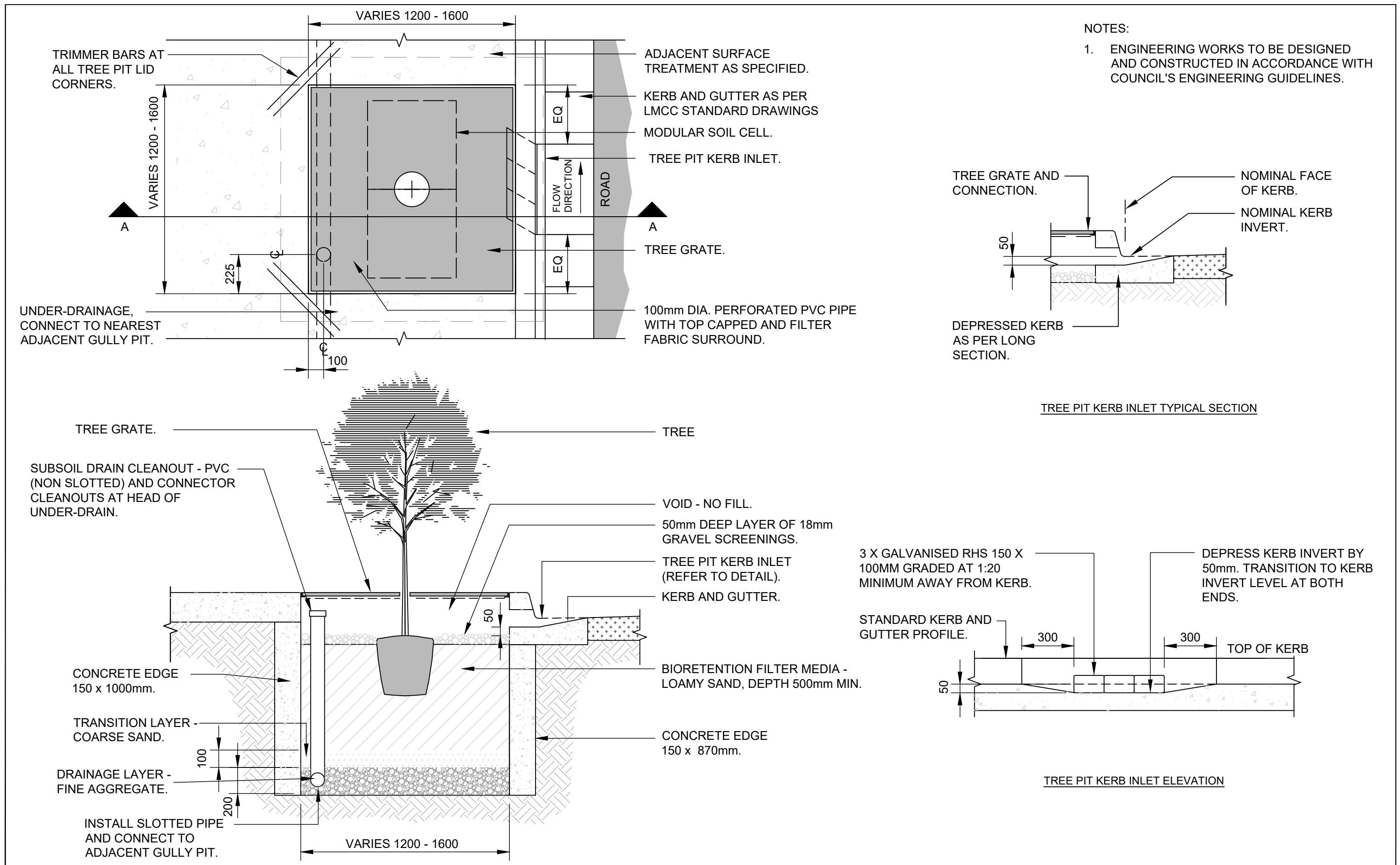
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Drawing Title  
**SEDIMENT BASIN**  
 TYPICAL PLAN AND SECTION

Sheet 1 OF 1  
 Drawing No. SCSD-413

Version 1

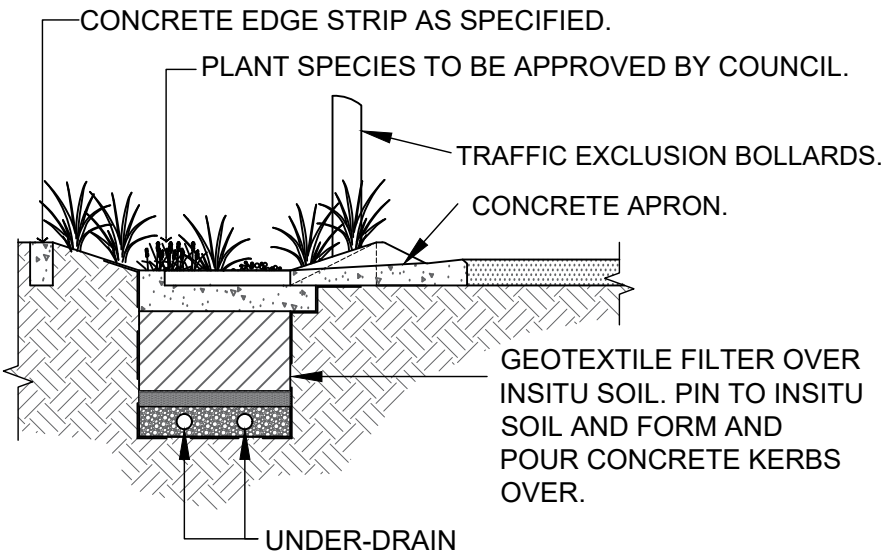
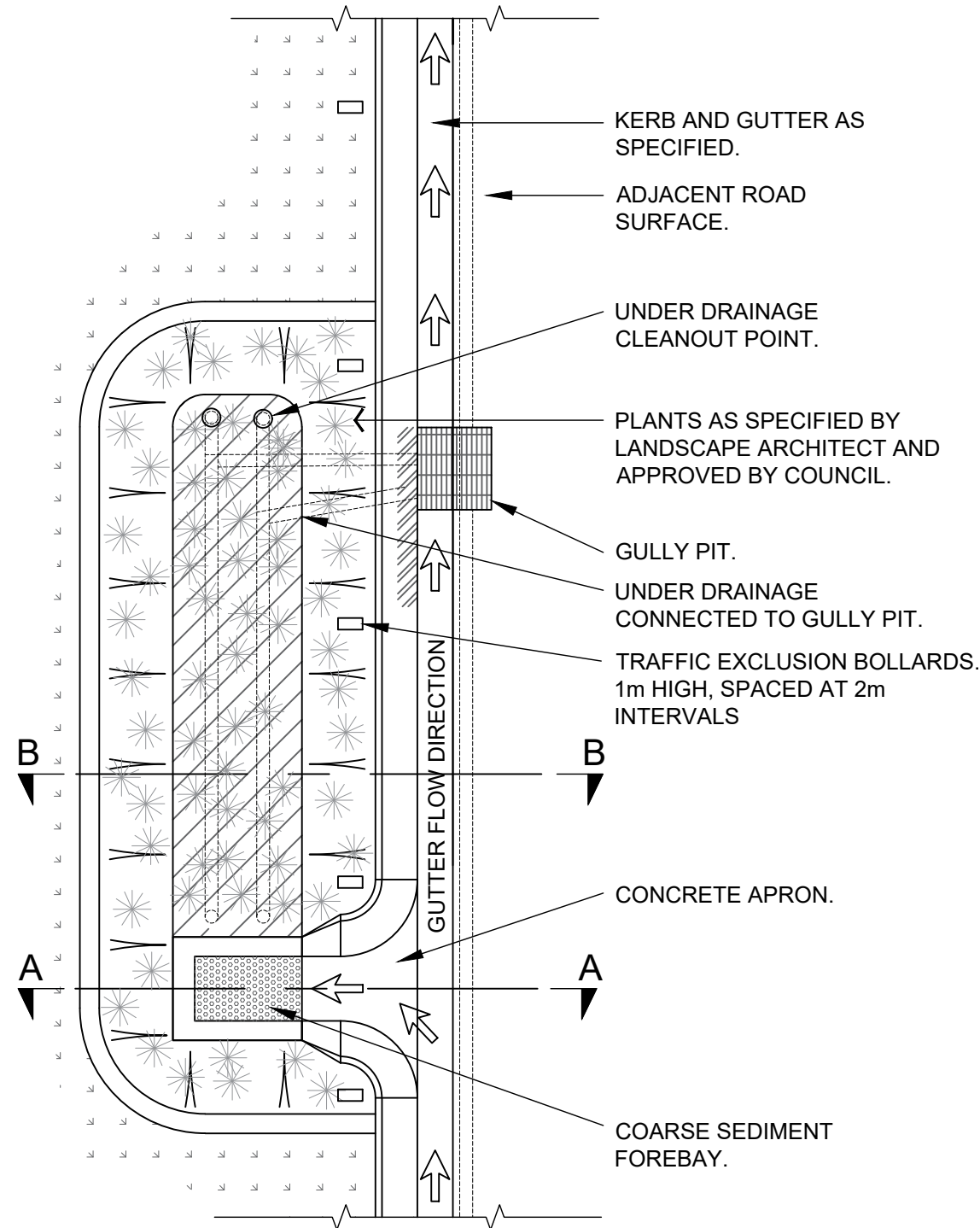


				<b>Notes</b> 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED. 2. DRAWING IS NOT TO SCALE, WORK TO STATED DIMENSIONS. 3. DO NOT RELY ON THESE STANDARD DRAWINGS AS THE EQUIVALENT OF, OR SUBSTITUTE FOR, PROJECT SPECIFIC DESIGN AND ASSESSMENT BY A QUALIFIED PROFESSIONAL.	Singleton Council Civic Centre, PO Box 314 Singleton, NSW, 2330  Phone: (02) 6578 7290 Fax: (02) 6572 4197 <a href="http://www.singleton.nsw.gov.au">www.singleton.nsw.gov.au</a>	Drawing Title BIORETENTION TREE PIT	
	1	ORIGINAL VERSION	22/03/2023			Sheet	1 OF 1
	Ver	Comments	Date			Drawing No.	SCSD-414
						Version	1

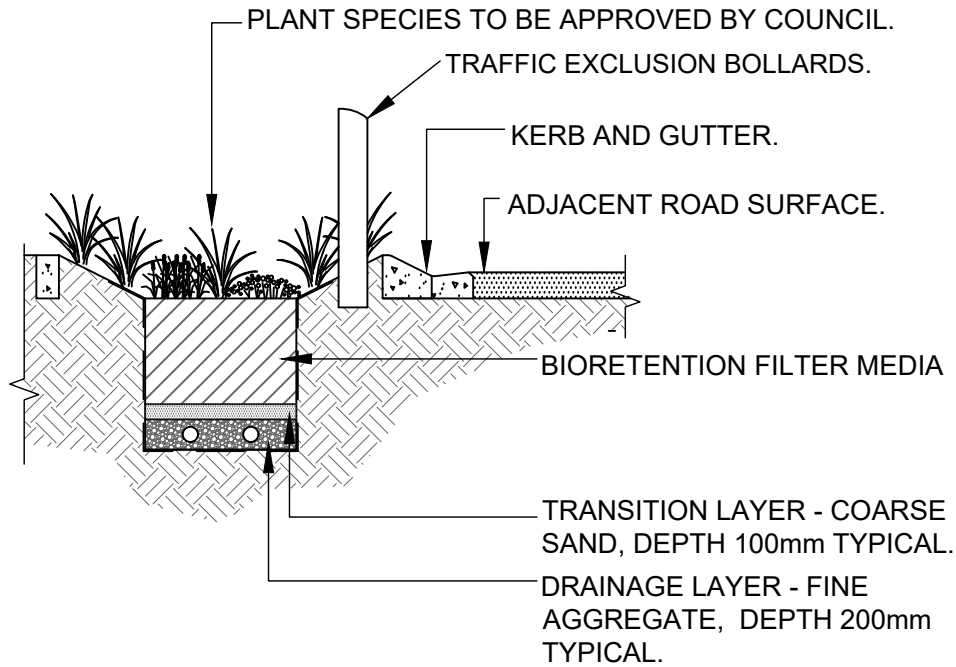


NOTES

- ENGINEERING WORKS TO BE DESIGNED IN ACCORDANCE WITH COUNCIL'S ENGINEERING GUIDELINES.
- BIORETENTION FILTER MEDIA: SPECIFICATION AND HYDRAULIC CONDUCTIVITY SHALL BE IN ACCORDANCE WITH THE FACILITY FOR ADVANCING WATER BIOFILTRATION (FAWB) (2009) "ADOPTION GUIDELINES FOR STORMWATER BIOFILTRATION SYSTEMS".



SECTION A-A



SECTION B-B

1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

Notes

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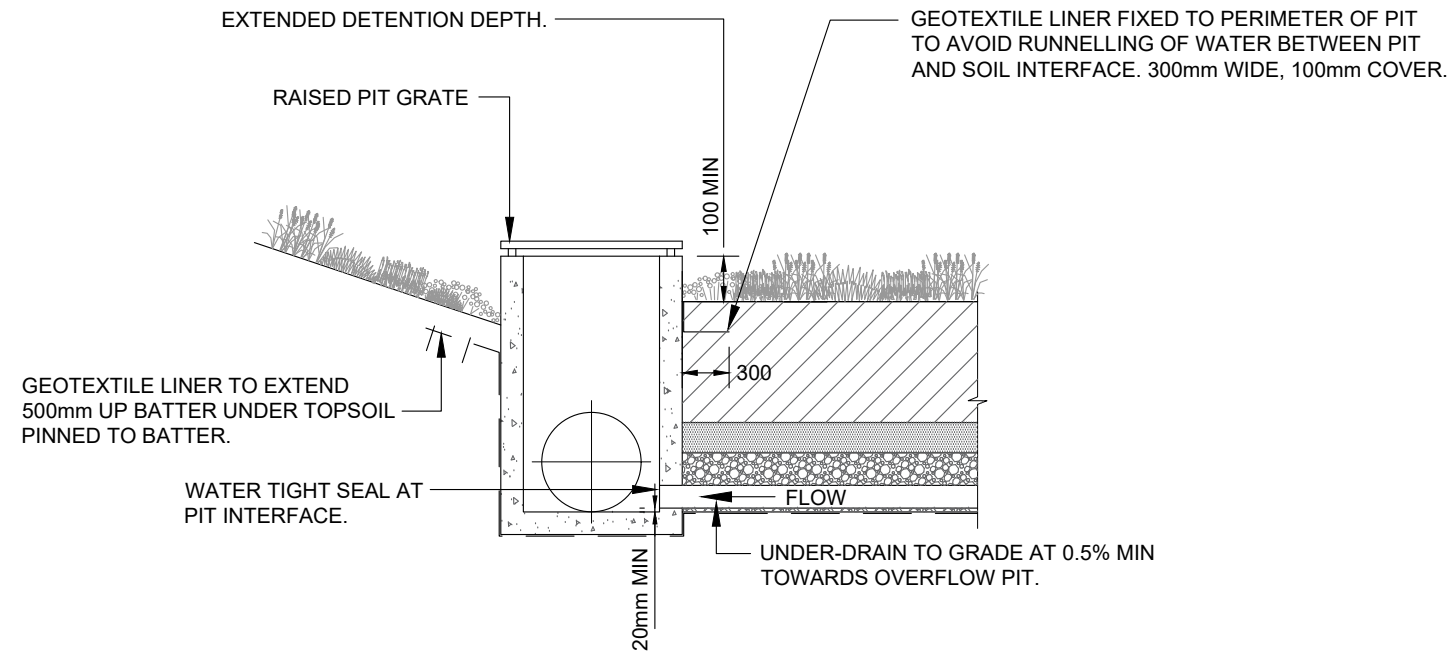
Drawing Title  
STREETSCAPE BIORETENTION

Sheet 1 OF 1  
Drawing No. SCSD-415

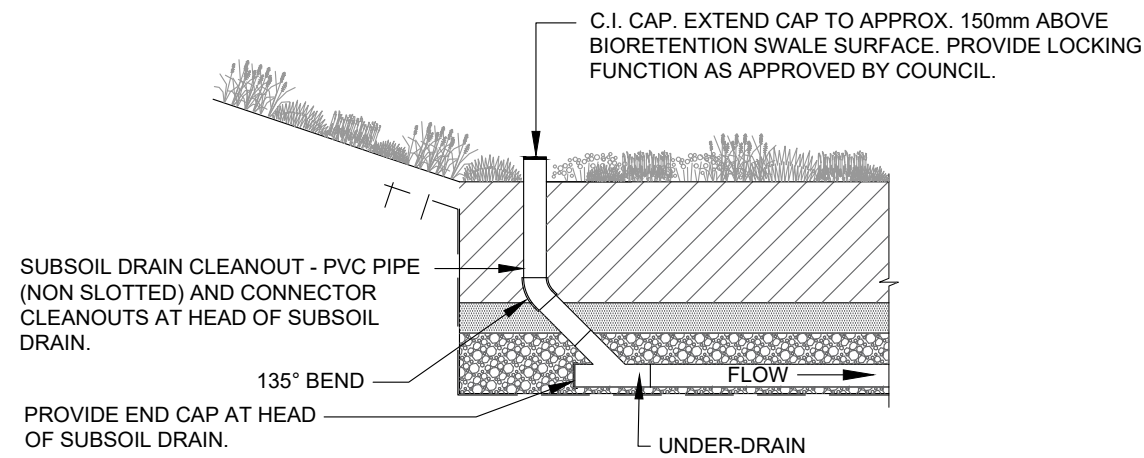
Version 1

A3

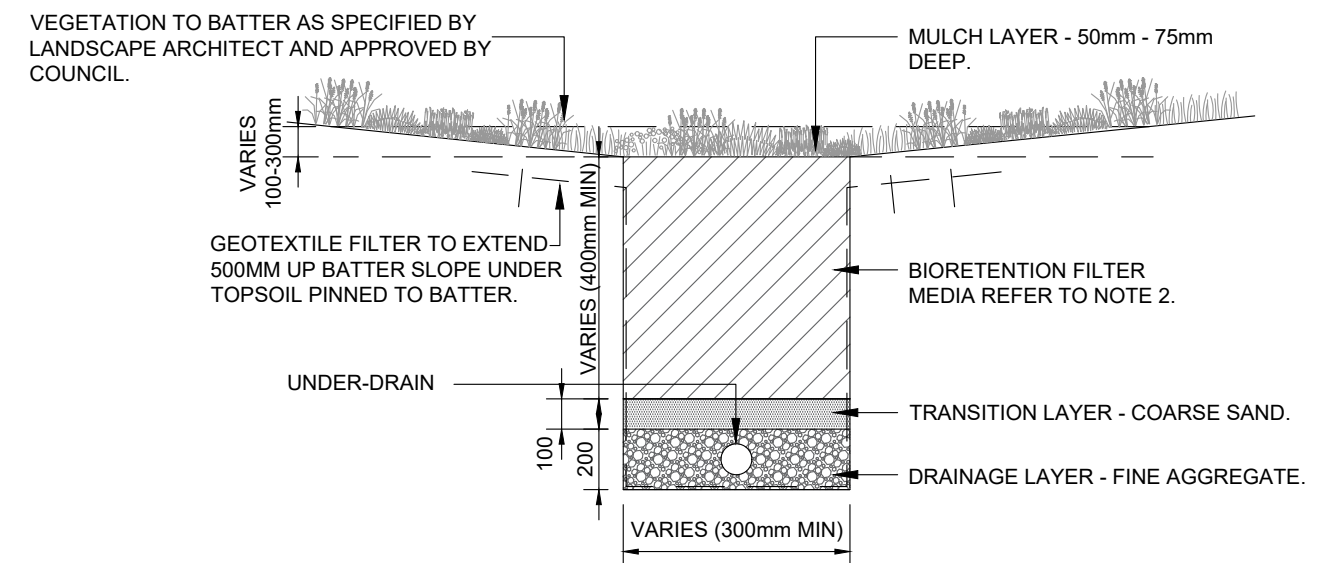




BIORETENTION OVERFLOW PIT - TYPICAL SECTION



BIORETENTION UNDER-DRAIN CLEANOUT - TYPICAL SECTION



BIORETENTION SWALE - TYPICAL SECTION

## NOTES

- ENGINEERING WORKS TO BE DESIGNED IN ACCORDANCE WITH COUNCIL'S ENGINEERING GUIDELINES.
- BIORETENTION FILTER MEDIA: SPECIFICATION AND HYDRAULIC CONDUCTIVITY SHALL BE IN ACCORDANCE WITH THE FACILITY FOR ADVANCING WATER BIOFILTRATION (FAWB) (2009) "ADOPTION GUIDELINES FOR STORMWATER BIOFILTRATION SYSTEMS".

Ver	Comments	Date
1	ORIGINAL VERSION	22/03/2023

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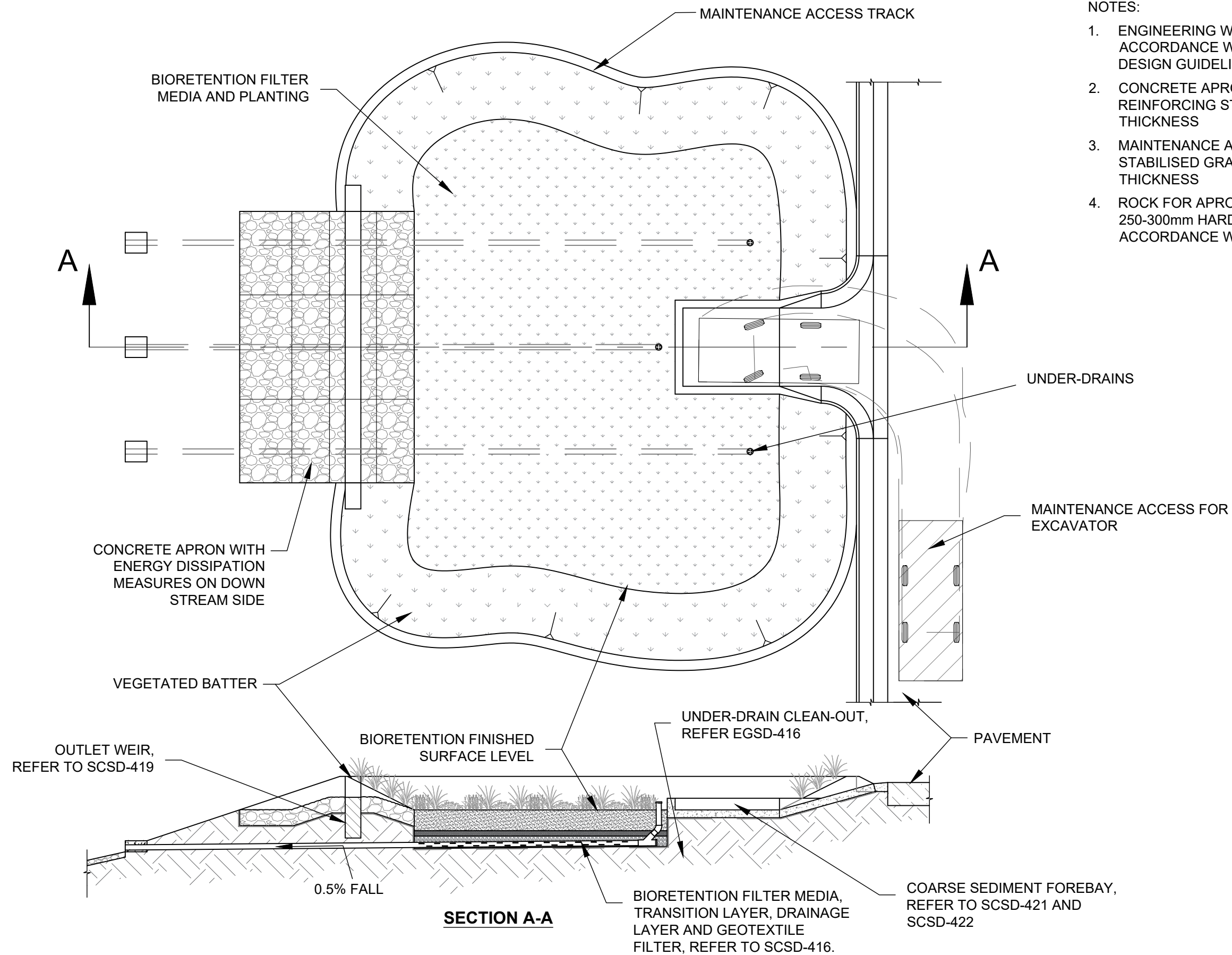
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Drawing Title  
BIORETENTION SWALE

Sheet 1 OF 1  
Drawing No. SCSD-416

Version 1



NOTES:

1. ENGINEERING WORKS TO BE DESIGNED IN ACCORDANCE WITH COUNCIL'S ENGINEERING DESIGN GUIDELINES
2. CONCRETE APRON TO BE 25MPA WITH SL82 REINFORCING STEEL AND 150mm MINIMUM THICKNESS
3. MAINTENANCE ACCESS TRACK TO BE 2% STABILISED GRAVEL 3m WIDE AND 150mm MIN THICKNESS
4. ROCK FOR APRON STONE PITCHING TO BE 250-300mm HARD DURABLE ROCK IN ACCORDANCE WITH ENGINEERING GUIDELINES

SECTION A-A

1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

Notes

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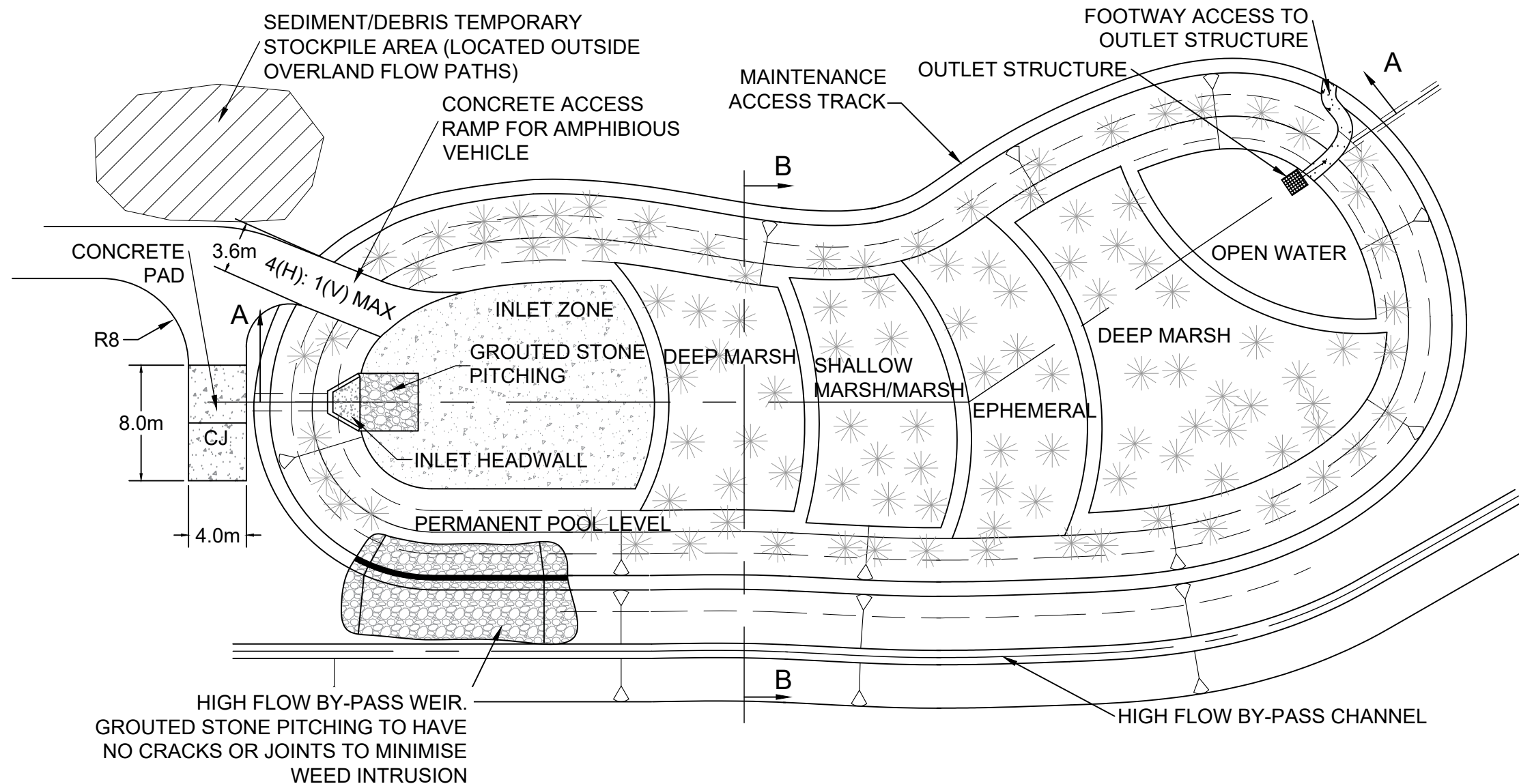
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Drawing Title  
BIORETENTION BASIN

Sheet 1 OF 1  
Drawing No. SCSD-417

Version 1

A3



## NOTES

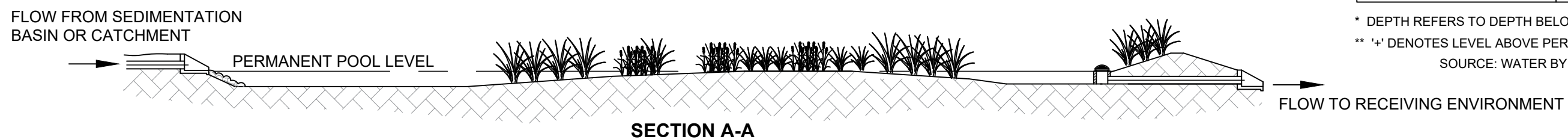
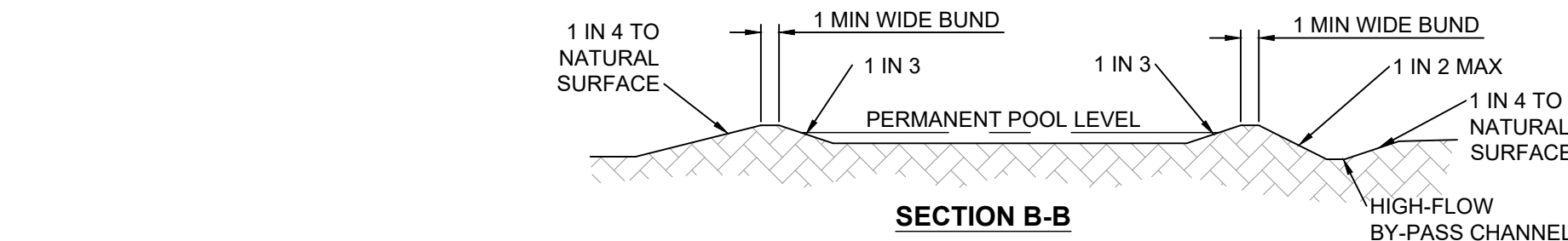
- ENGINEERING WORKS TO BE DESIGNED IN ACCORDANCE WITH COUNCIL'S ENGINEERING DESIGN GUIDELINES
- WETLAND INLET ZONE SHALL BE CONSTRUCTED WITH A HARD BASE TO ENABLE MAINTENANCE. THE BASE MUST HAVE A BEARING CAPACITY TO SUPPORT MAINTENANCE MACHINERY WHEN ACCESS IS REQUIRED INTO THE BASIN
- CONCRETE RAMP AND PAD TO BE 32MPA WITH SL82 REINFORCING STEEL AND 150mm MIN THICKNESS, SUB-BASE TO BE FOR COMPACTED 95% AND 100mm MIN THICKNESS.
- MAINTENANCE ACCESS TRACK TO BE 2% STABILISED GRAVEL 3m WIDE AND 150mm MIN THICKNESS.
- FOOTWAY ACCESS TO OUTLET STRUCTURE TO BE NO FINES CONCRETE, 1m WIDE AND 125mm MIN THICKNESS.
- CONCRETE BY-PASS WEIR AND INLET TO BE 25MPA WITH SL82 REINFORCING STEEL AND 150mm MIN THICKNESS.
- ROCK FOR BY-PASS WEIR AND INLET STONE PITCHING TO BE 250-300mm HARD DURABLE ROCK IN ACCORDANCE WITH ENGINEERING GUIDELINES.

ZONE	DEPTH* (m)
INLET ZONE/OPEN WATER	0.5 to 1.5
DEEP MARSH	0.35 to 0.5
MARSH	0.2 TO 0.35
SHALLOW MARSH	0.0 to 0.2
EPHEMERAL	0.0 to +0.2**

\* DEPTH REFERS TO DEPTH BELOW PERMANENT POOL LEVEL.

\*\* '+' DENOTES LEVEL ABOVE PERMANENT POOL LEVEL.

SOURCE: WATER BY DESIGN GUIDELINES



Ver	Comments	Date
1	ORIGINAL VERSION	22/03/2023

## Notes

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Drawing Title  
CONSTRUCTED WETLAND  
TYPICAL PLAN AND SECTIONS

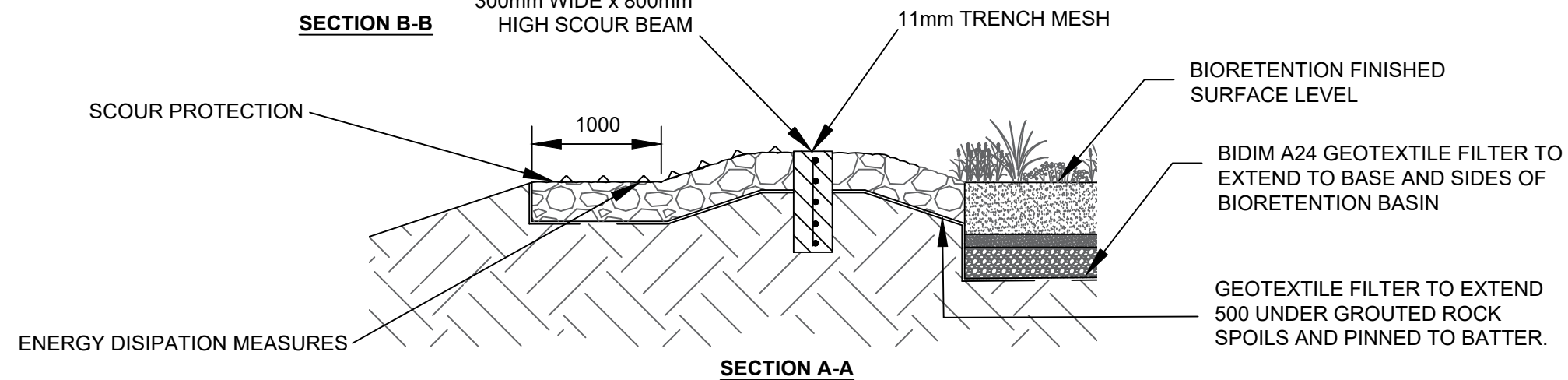
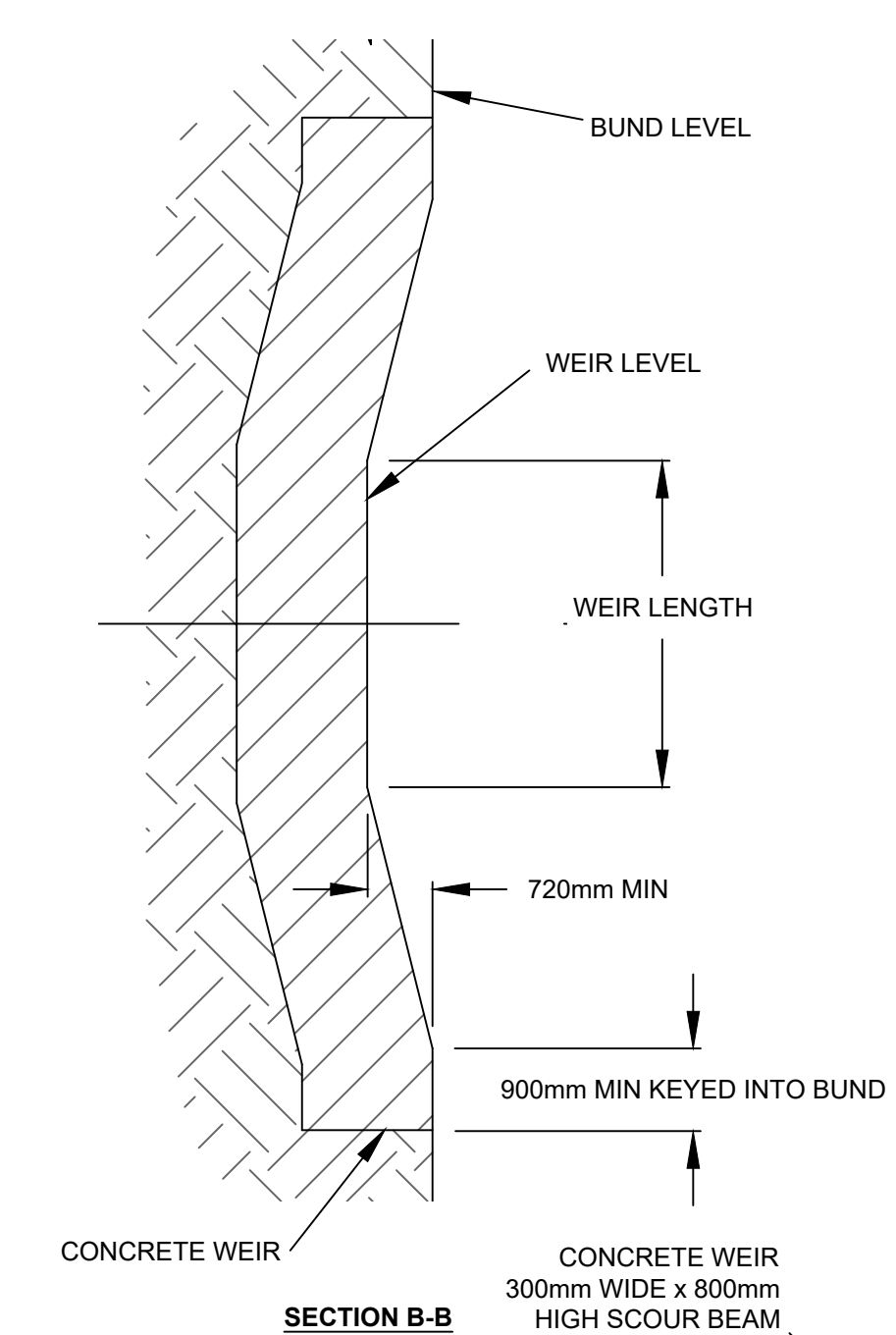
Sheet 1 OF 1

Drawing No. SCSD-418

Version 1

A3





#### NOTES

- ENGINEERING WORKS TO BE DESIGNED IN ACCORDANCE WITH COUNCIL'S ENGINEERING DESIGN GUIDELINES
- CONCRETE APRON TO BE 25MPa WITH SL82 REINFORCING STEEL AND 150mm MINIMUM THICKNESS
- ROCK FOR APRON STONE PITCHING TO BE 250-300mm HARD DURABLE ROCK IN ACCORDANCE WITH ENGINEERING GUIDELINES

CONCRETE APRON WITH  
DISSIPATION MEASURES  
ON DOWNSTREAM SIDE

1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

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Drawing Title  
HIGH FLOW WEIR DETAILS

Sheet 1 OF 1

Drawing No. SCSD-419

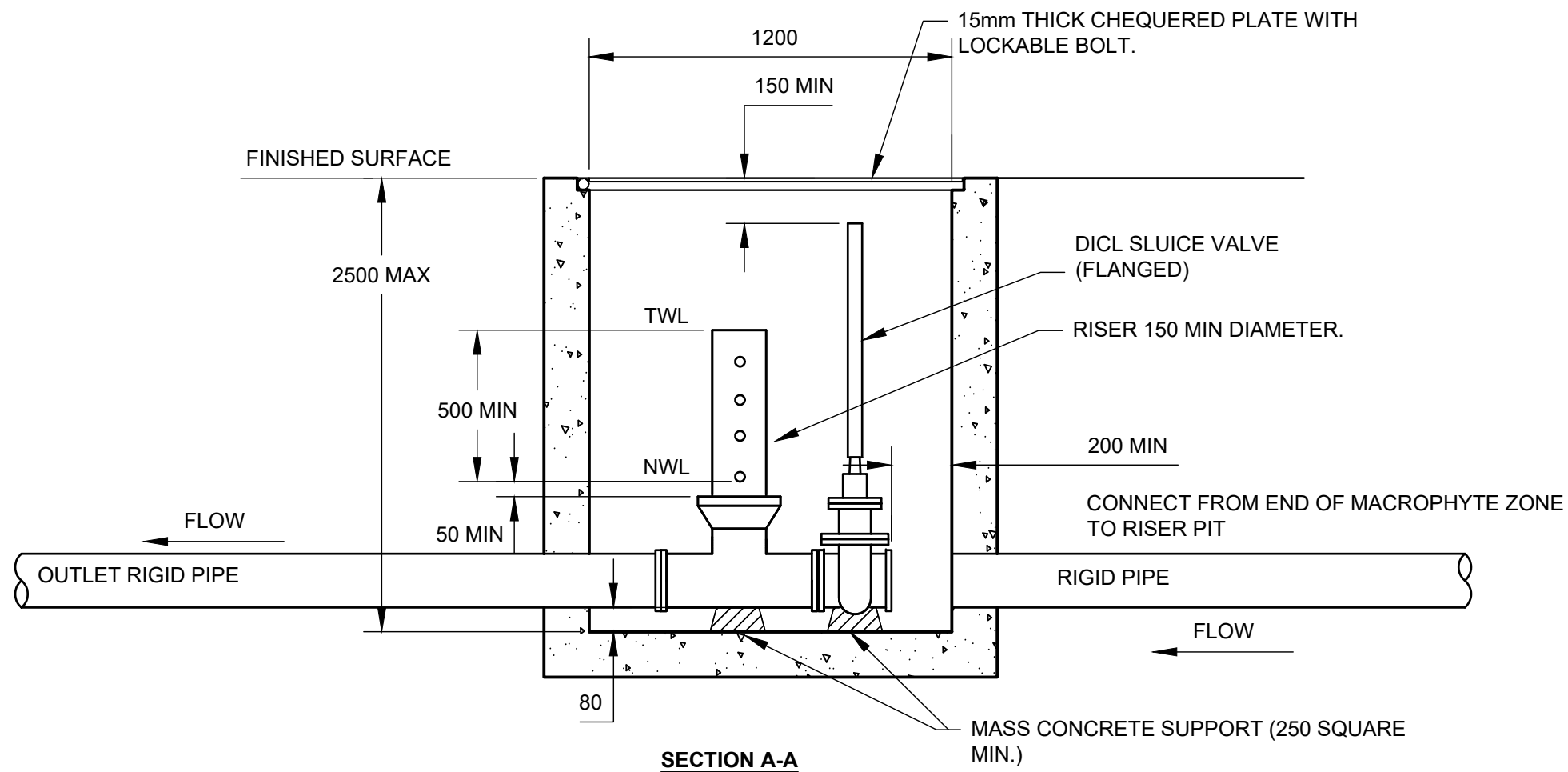
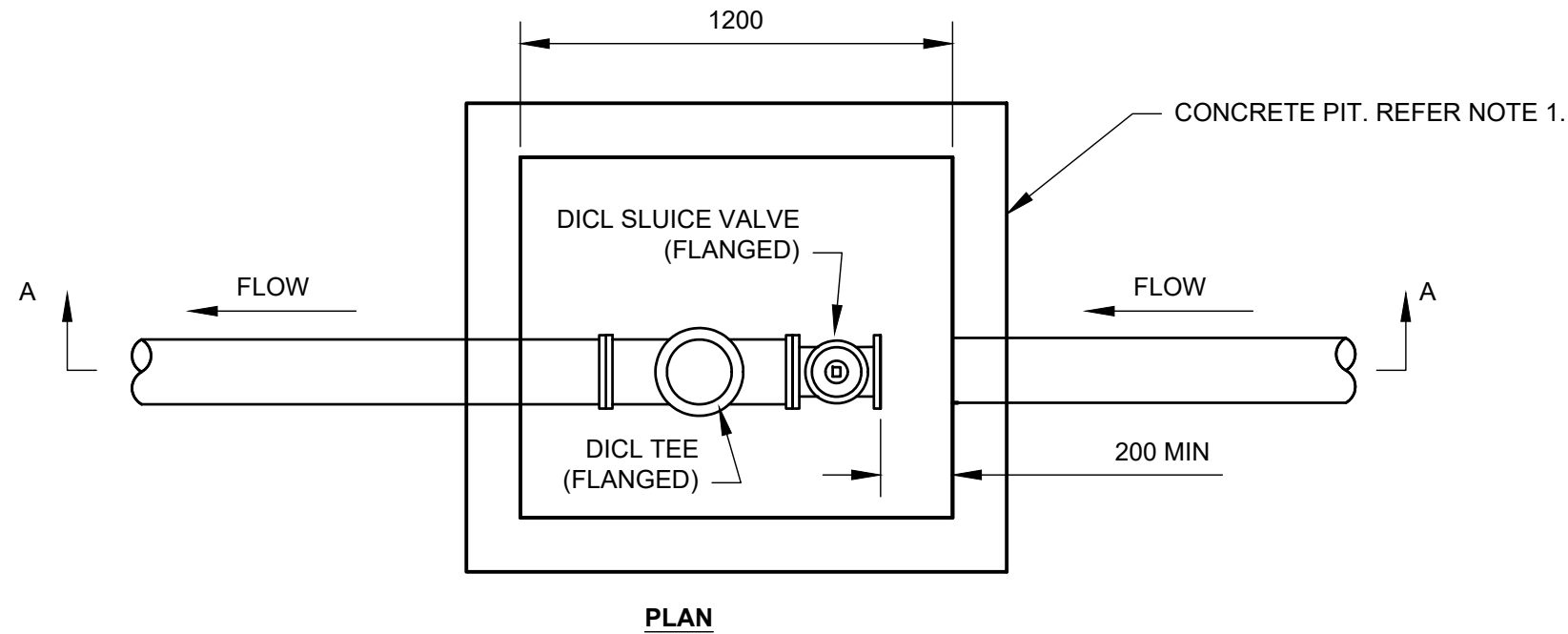
Version 1

**A3**



NOTES:

- ENGINEERING WORKS TO BE DESIGNED IN ACCORDANCE WITH COUNCIL'S ENGINEERING GUIDELINES.



1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

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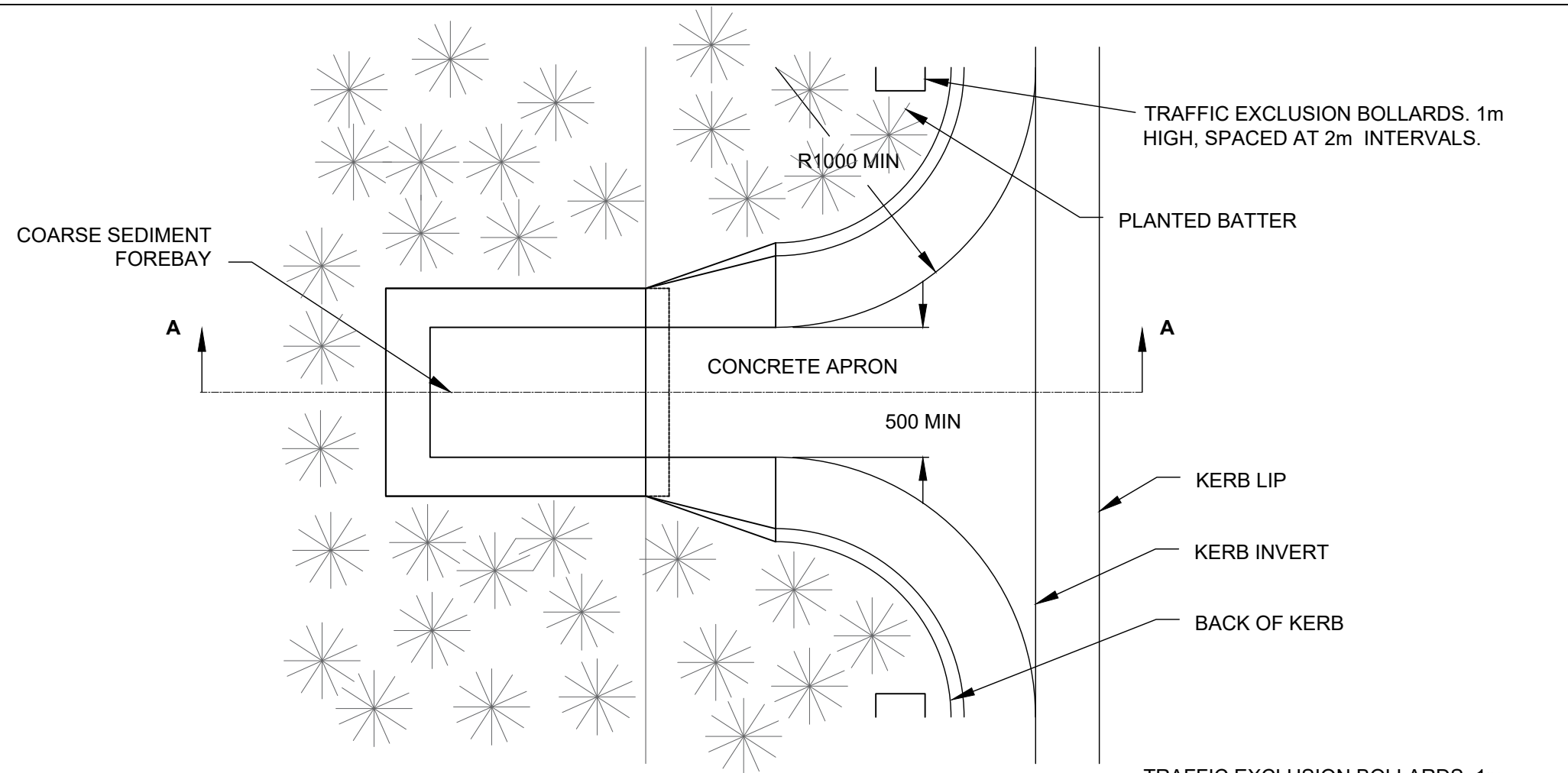
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Drawing Title  
LOW FLOW RISER OUTLET

Sheet 1 OF 1  
Drawing No. SCSD-420

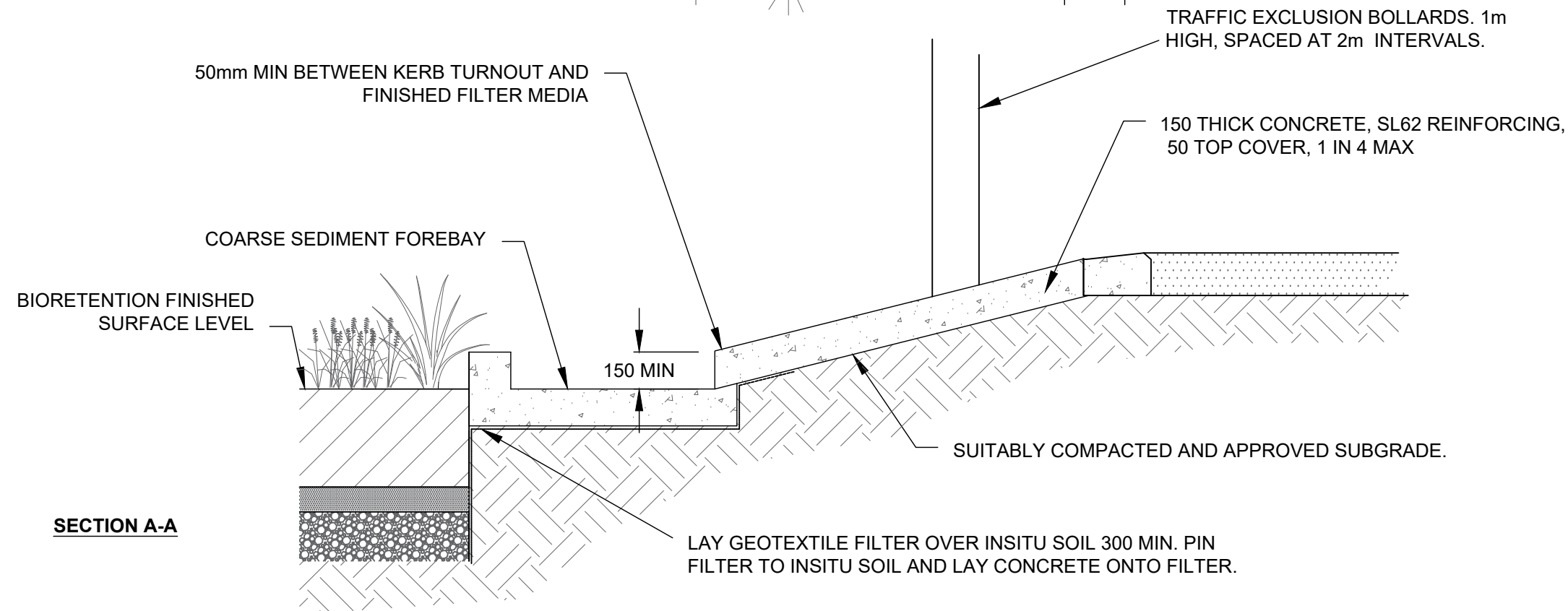
Version 1

**A3**



NOTES:

1. ENGINEERING WORKS TO BE DESIGNED IN ACCORDANCE WITH COUNCIL'S ENGINEERING GUIDELINES.

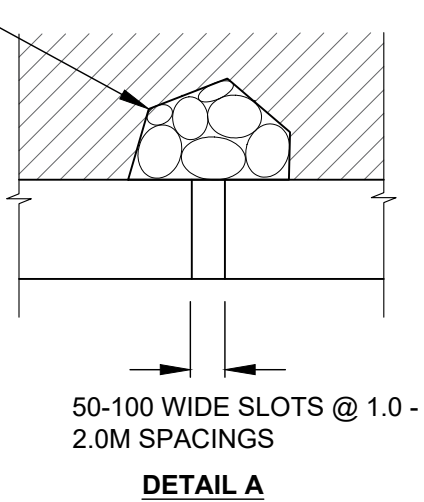
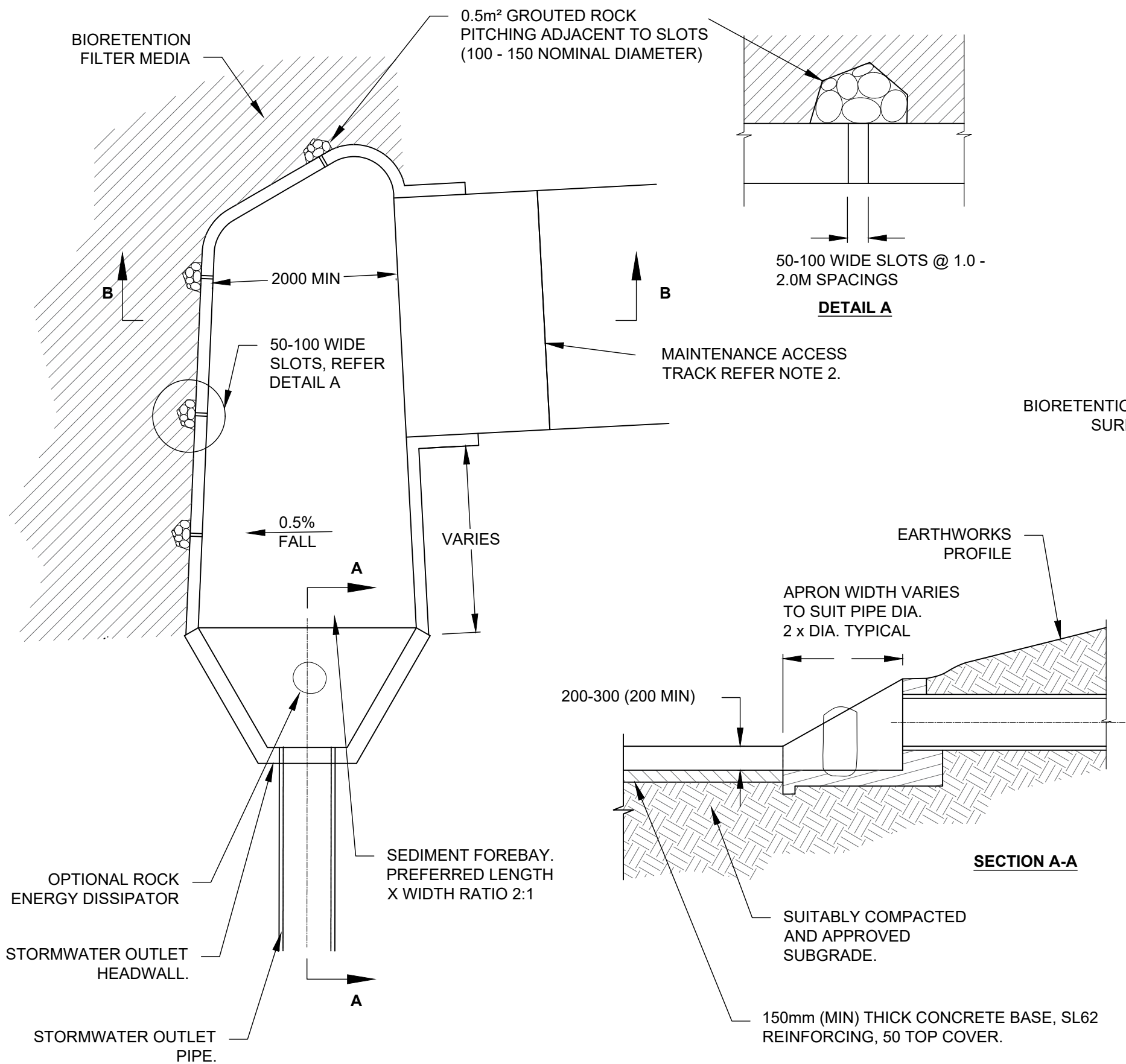


1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

<b>Notes</b>
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Drawing Title SMALL SEDIMENT FOREBAY (KERB CUTOUT)	
Sheet 1 OF 1	A3
Drawing No. SCSD-421	Version 1

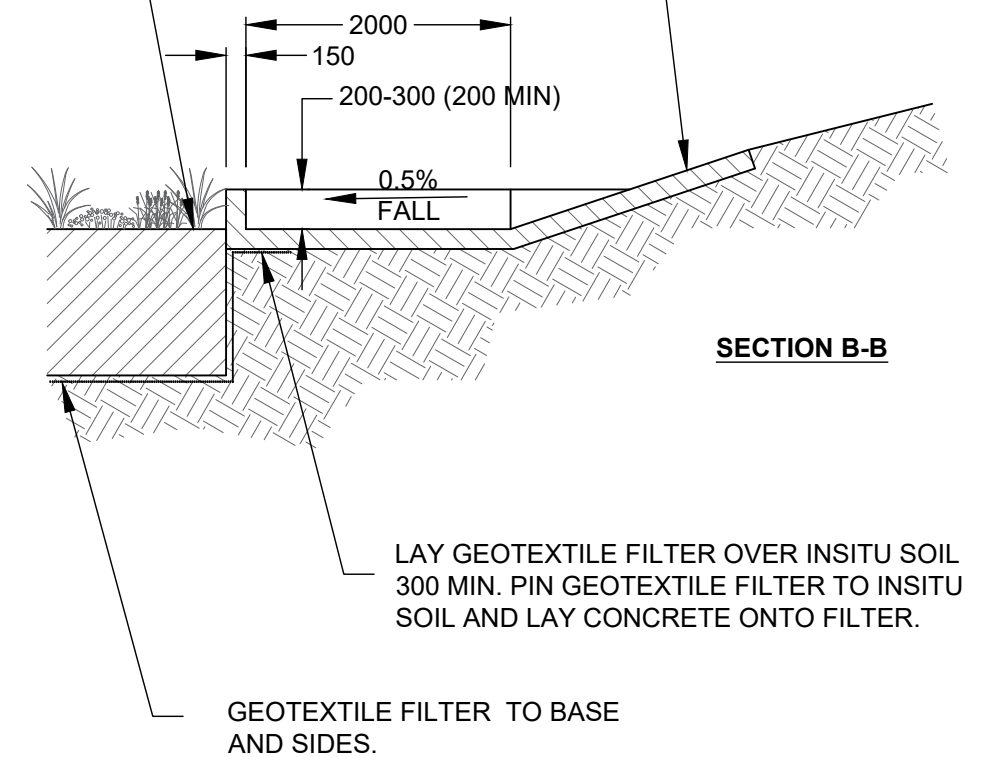


**NOTES:**

- ENGINEERING WORKS TO BE DESIGNED IN ACCORDANCE WITH COUNCIL'S ENGINEERING GUIDELINES.
- MAINTENANCE ACCESS TRACK MINIMUM WIDTH 3000mm, MAX GRADIENT 1(V) IN 4(H).

MAINTENANCE ACCESS TRACK. 150mm (MIN) THICK CONCRETE, SL62 REINFORCING, 50 TOP COVER.

BIORETENTION FINISHED SURFACE LEVEL



1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

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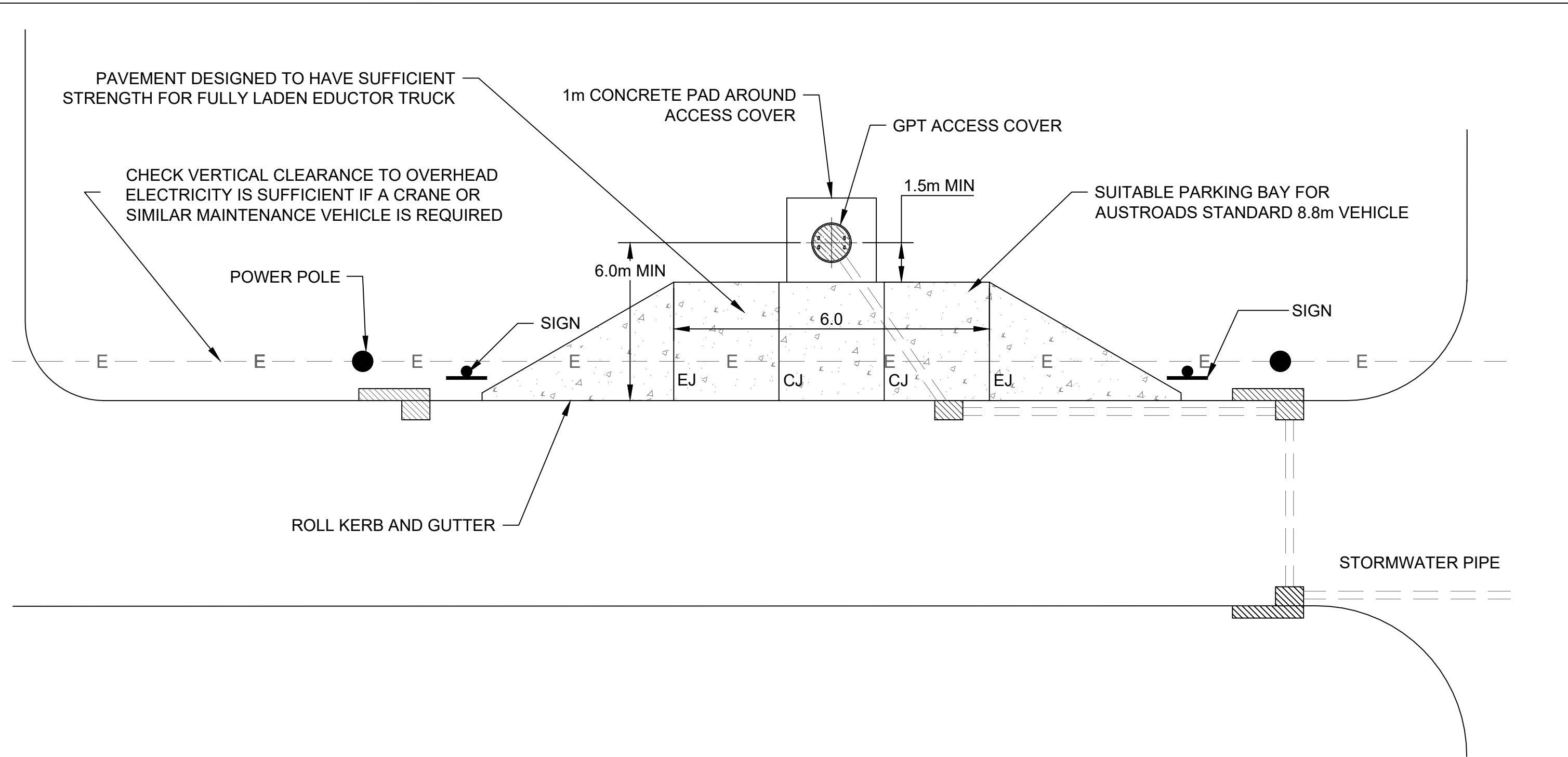
Drawing Title  
**LARGE SEDIMENT FOREBAY**

Sheet 1 OF 1


Drawing No. SCSD-422

Version 1

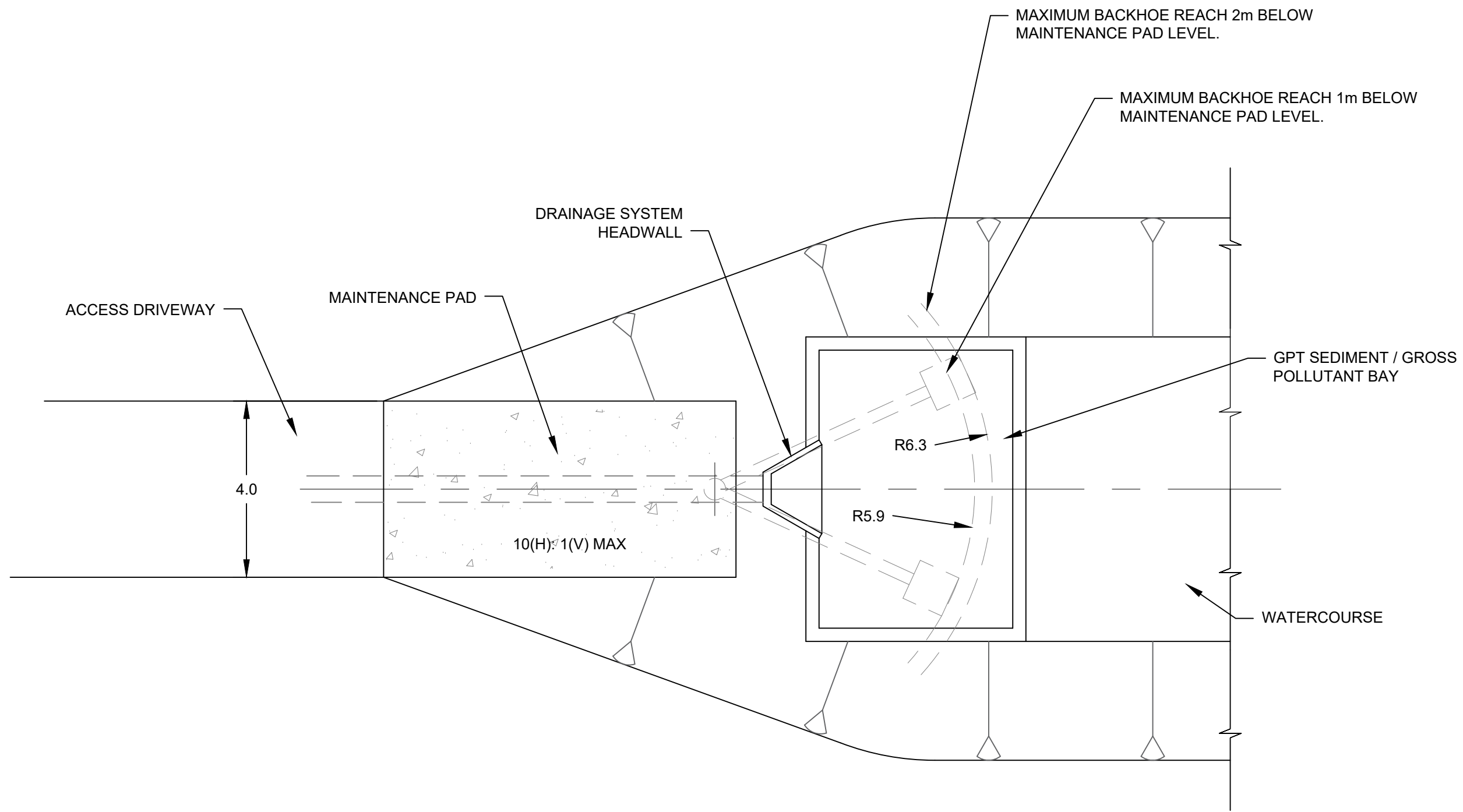
**A3**



- NOTES:
- 1. PROVIDE SUFFICIENT HORIZONTAL AND VERTICAL CLEARANCES TO STREET FURNITURE AND SERVICES. REFER TO RTA ROAD DESIGN GUIDELINES AND SERVICE AUTHORITY STANDARDS
  - 2. PAVEMENT TO BE CONCRETE 25MPA WITH SL72 REINFORCING STEEL AND 150mm MIN THICKNESS, SUB-BASE TO BE FCR COMPACTED 95% AND 100mm MIN THICKNESS
  - 3. PROVIDE CONCRETE ACCESS TO ALL ACCESS COVERS
  - 4. SIGNS - R5-40 (NO PARKING) 7AM TO 5PM MON-FRI

				<b>Notes</b> 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED. 2. DRAWING IS NOT TO SCALE, WORK TO STATED DIMENSIONS. 3. DO NOT RELY ON THESE STANDARD DRAWINGS AS THE EQUIVALENT OF, OR SUBSTITUTE FOR, PROJECT SPECIFIC DESIGN AND ASSESSMENT BY A QUALIFIED PROFESSIONAL.	Singleton Council Civic Centre, PO Box 314 Singleton, NSW, 2330  Phone: (02) 6578 7290 Fax: (02) 6572 4197 <a href="http://www.singleton.nsw.gov.au">www.singleton.nsw.gov.au</a>	Drawing Title MAINTENANCE ACCESS UNDERGROUND GPT		
	1	ORIGINAL VERSION	22/03/2023					
	Ver	Comments	Date			Sheet 1 OF 1		A3
						Drawing No. SCSD-423		Version 1





1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

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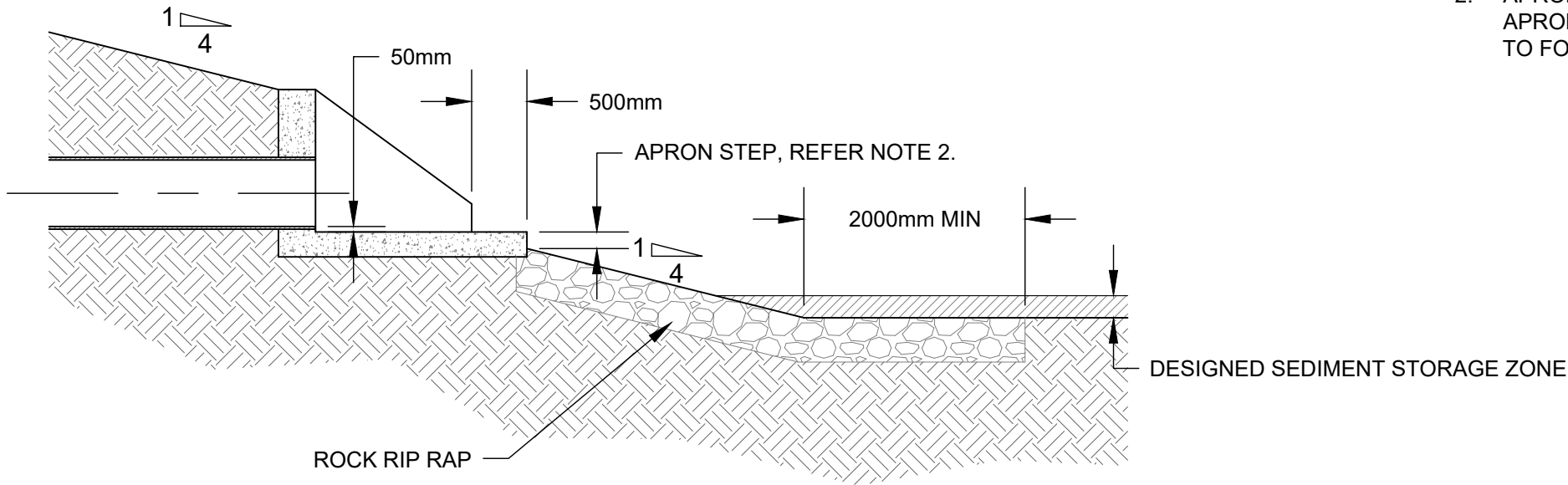
Drawing Title  
MAINTENANCE ACCESS - GPT ABOVE GROUND

Sheet 1 OF 1  
Drawing No. SCSD-424

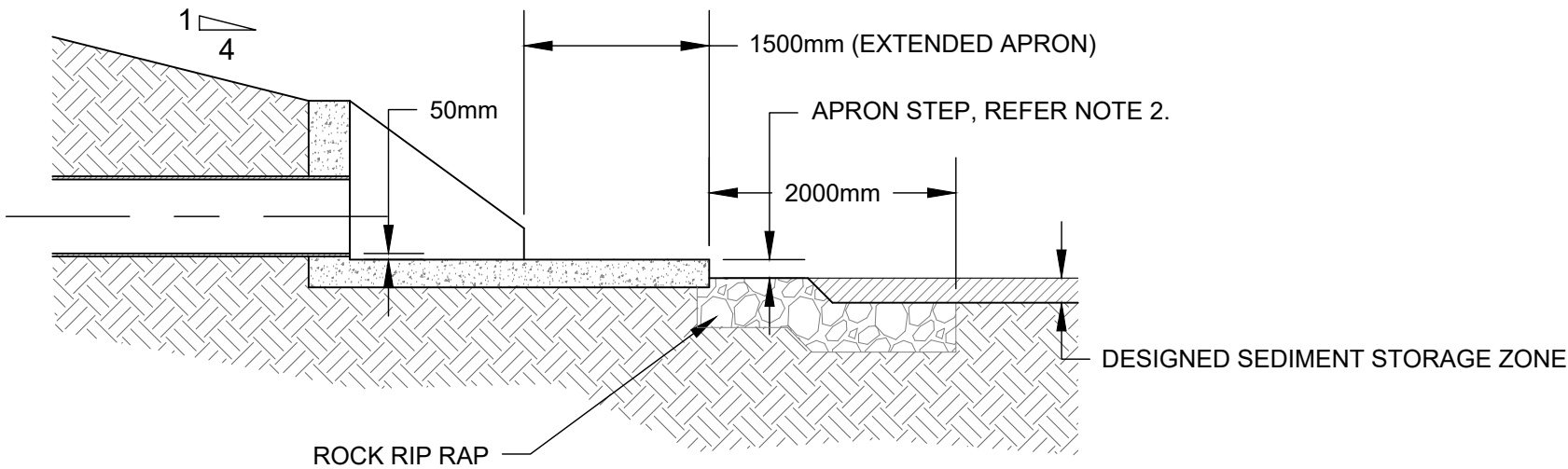
Version 1

**A3**


- NOTES:
- ENGINEERING WORKS TO BE DESIGNED IN ACCORDANCE WITH COUNCIL'S ENGINEERING GUIDELINES.
  - APRON STEP TO BE 100mm ON EACH SIDE OF THE APRON AND 150mm AT THE CENTRE OF THE APRON TO FORM A 'V' SHAPED ROCK RIP RAP.

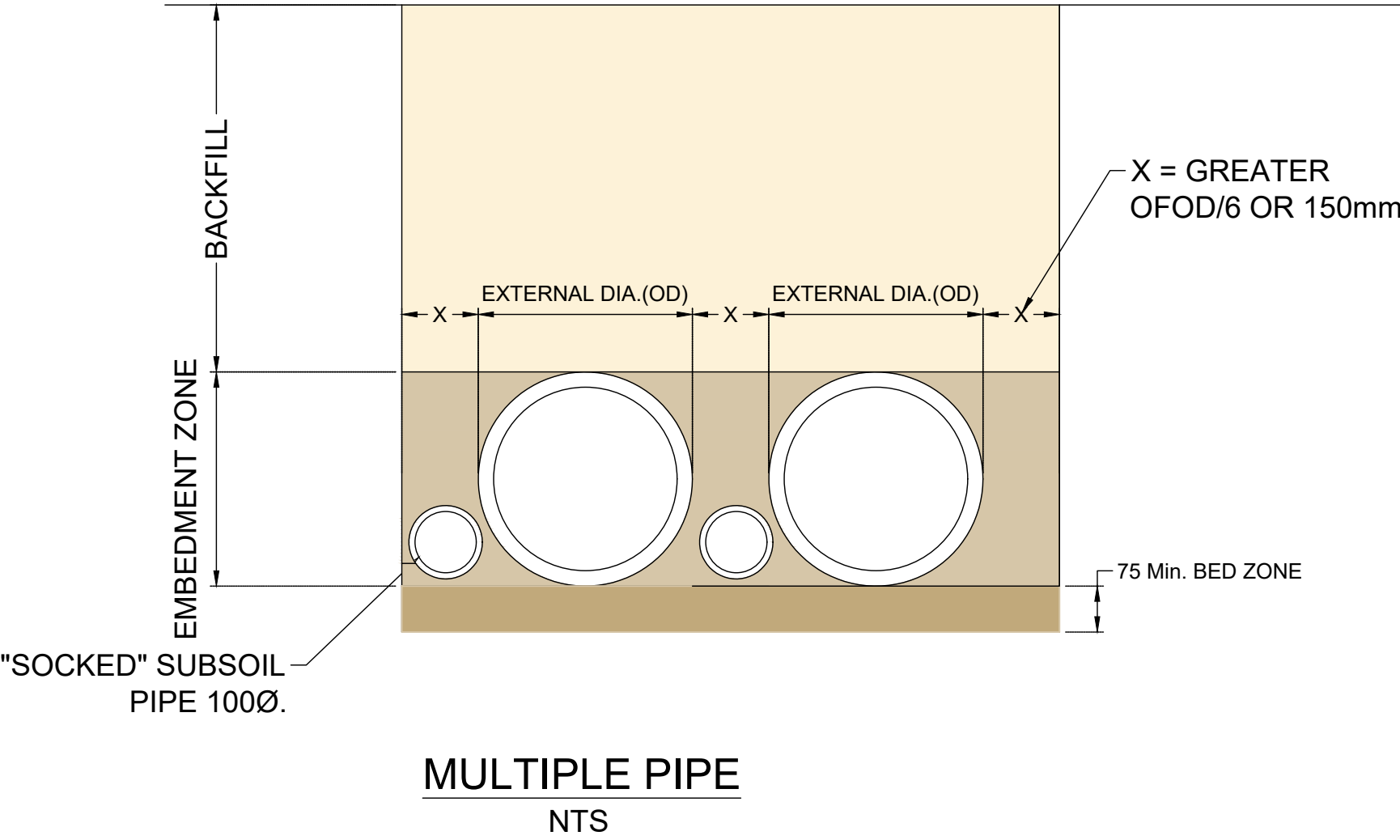
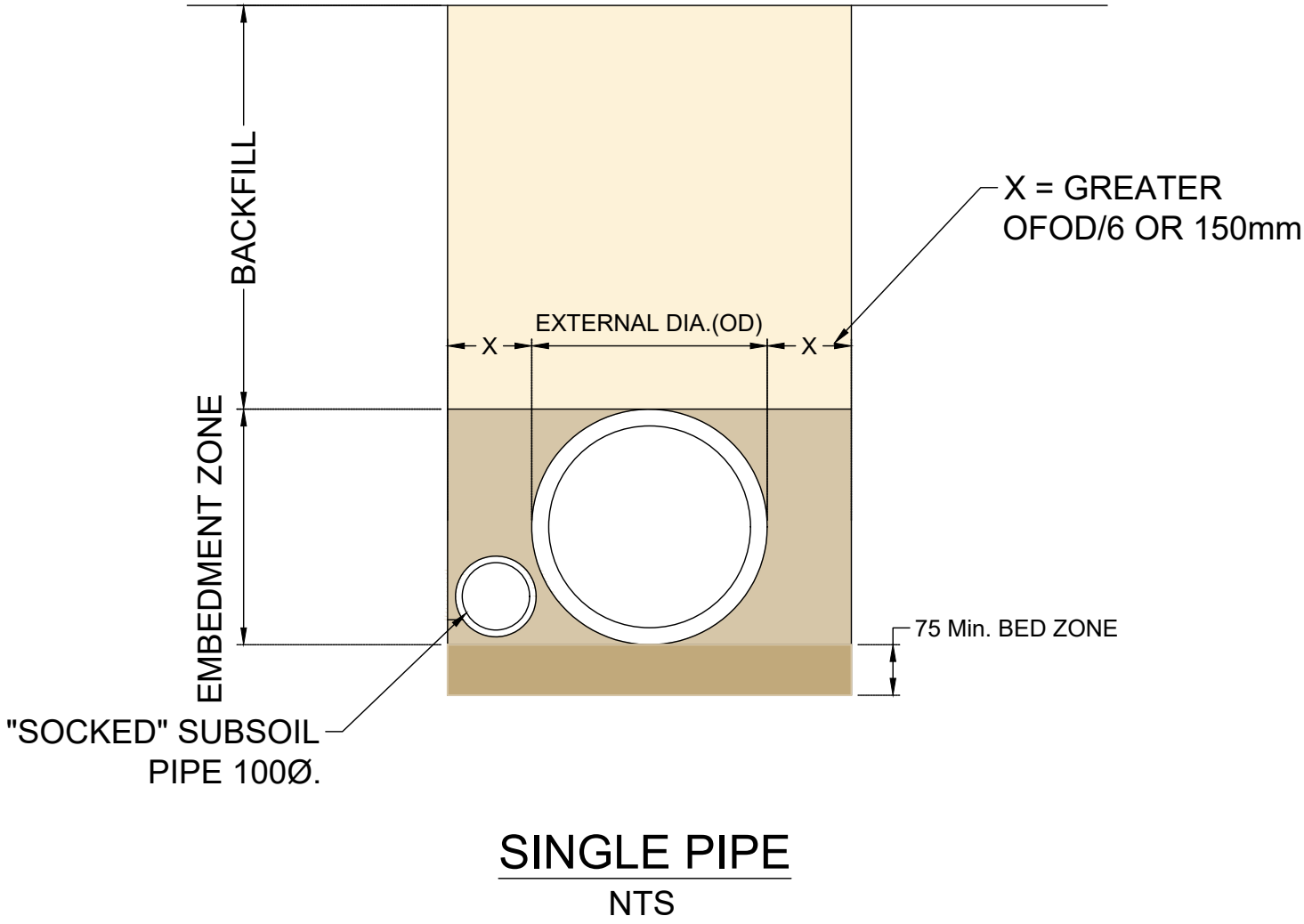


WET SEDIMENT BASIN INLET

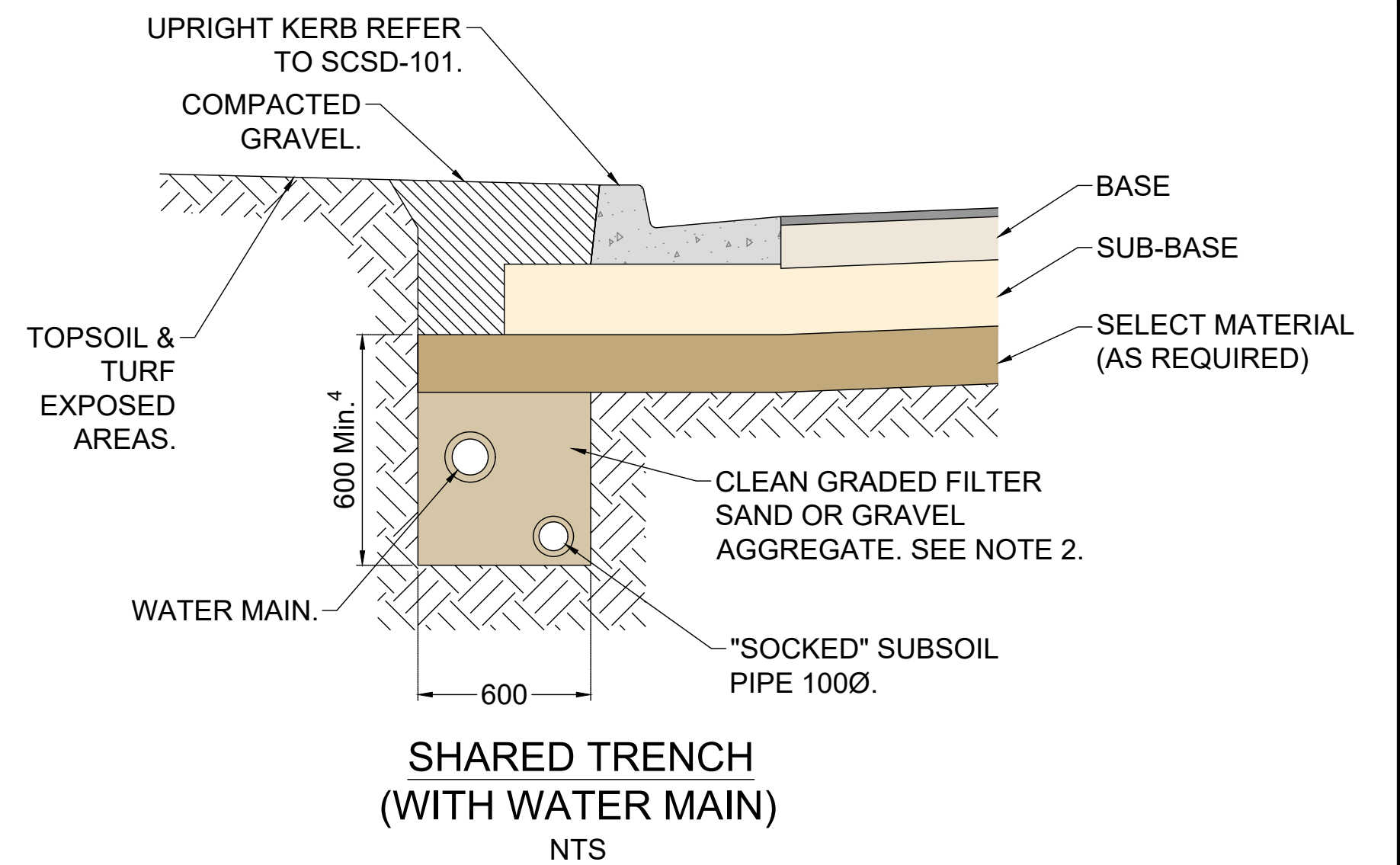
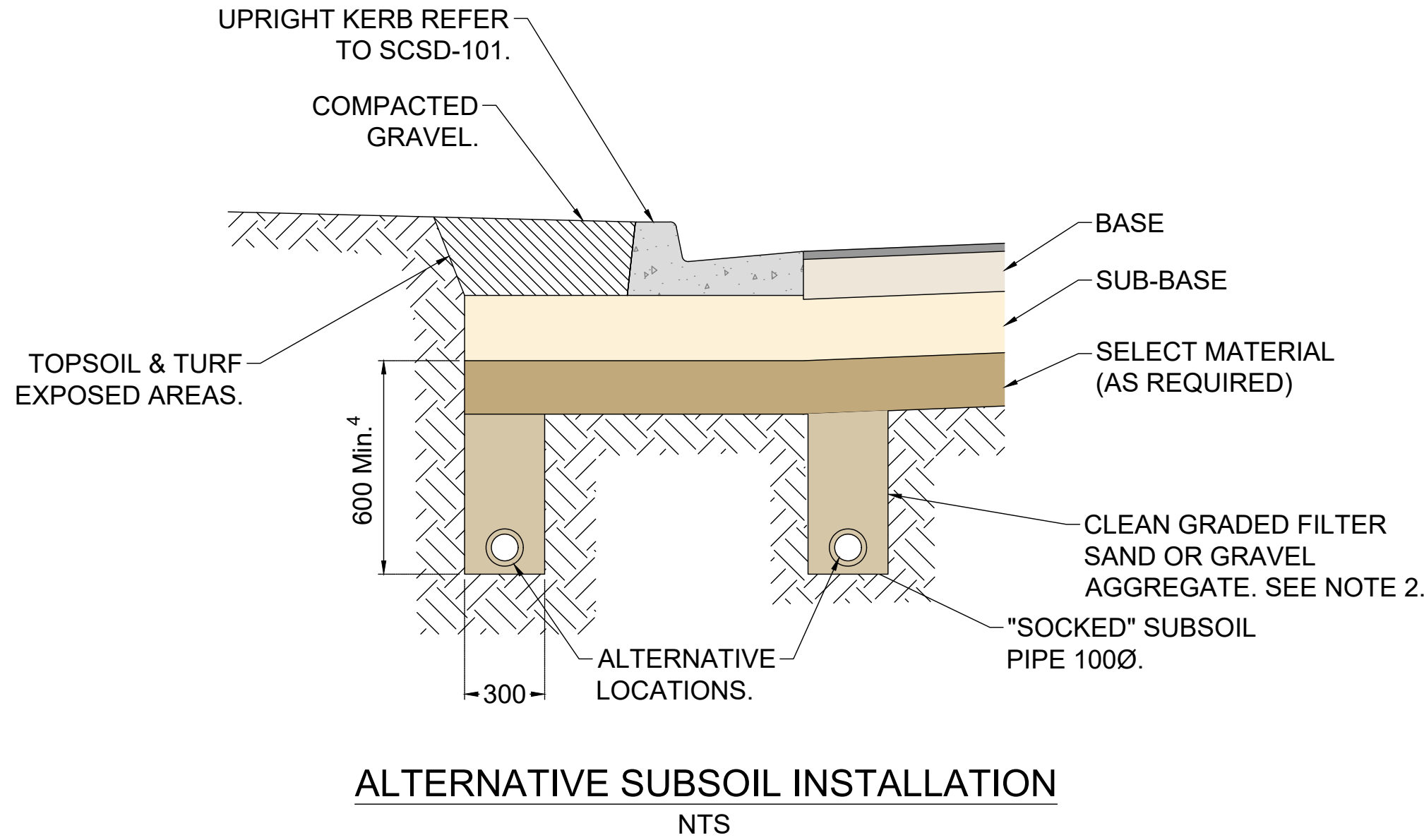
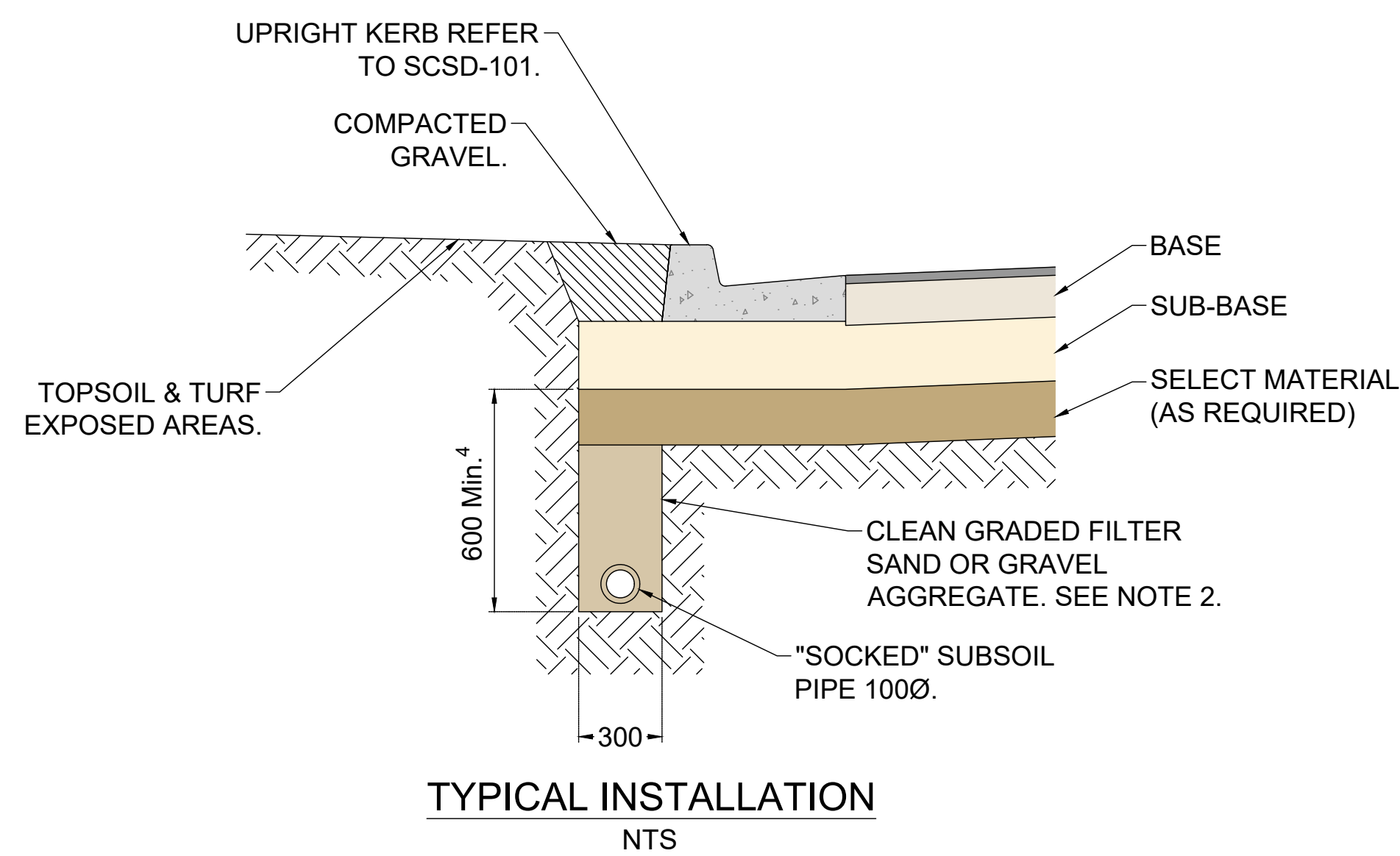


DRY SEDIMENT BASIN INLET

				<b>Notes</b> 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED. 2. DRAWING IS NOT TO SCALE, WORK TO STATED DIMENSIONS. 3. DO NOT RELY ON THESE STANDARD DRAWINGS AS THE EQUIVALENT OF, OR SUBSTITUTE FOR, PROJECT SPECIFIC DESIGN AND ASSESSMENT BY A QUALIFIED PROFESSIONAL.	Singleton Council Civic Centre, PO Box 314 Singleton, NSW, 2330  Phone: (02) 6578 7290 Fax: (02) 6572 4197 <a href="http://www.singleton.nsw.gov.au">www.singleton.nsw.gov.au</a>	Drawing Title SEDIMENT BASIN INLET DETAIL DRY AND WET BASINS	
	1	ORIGINAL VERSION	22/03/2023			Sheet	1 OF 1
	Ver	Comments	Date			Drawing No.	SCSD-425
						Version	1

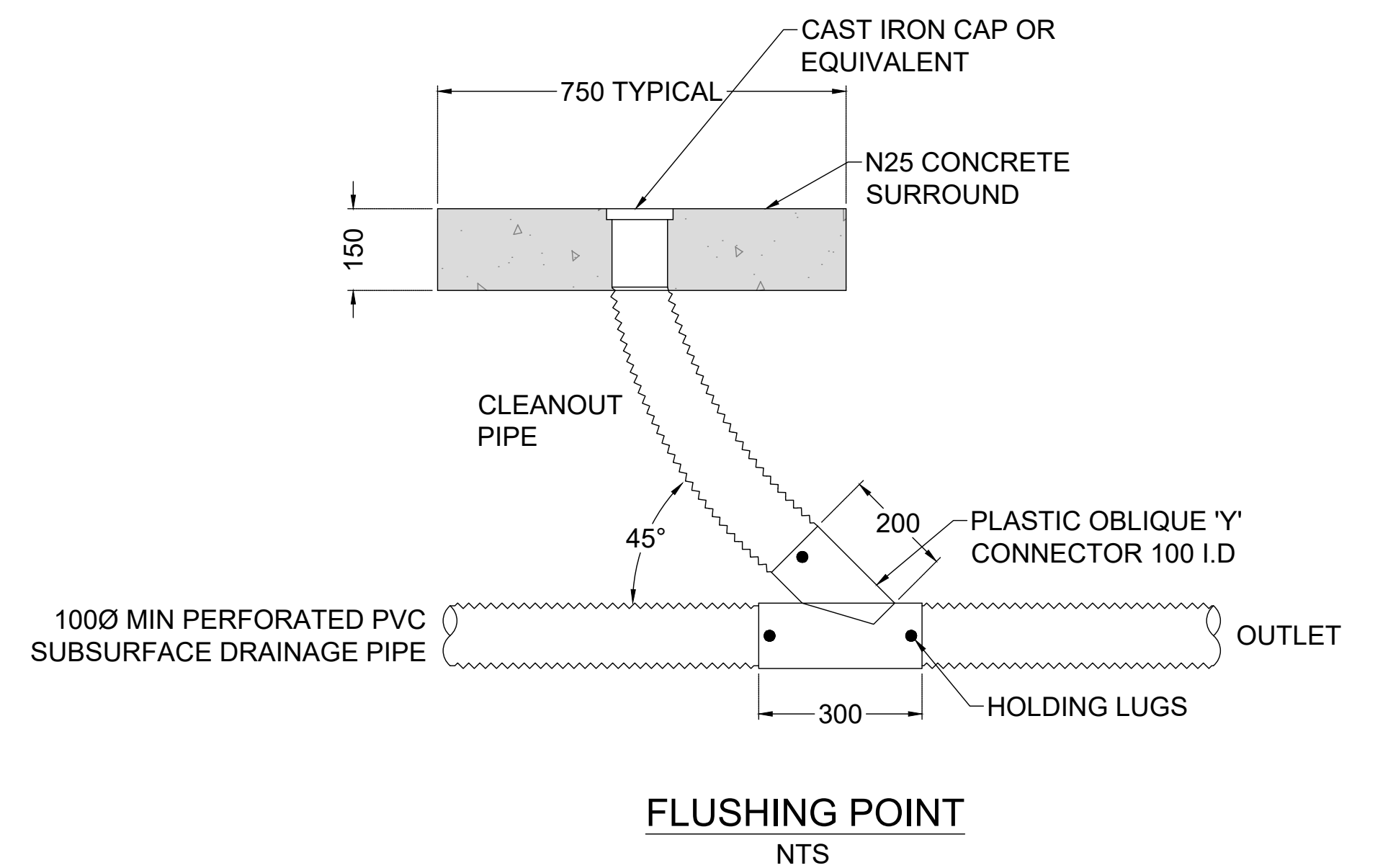
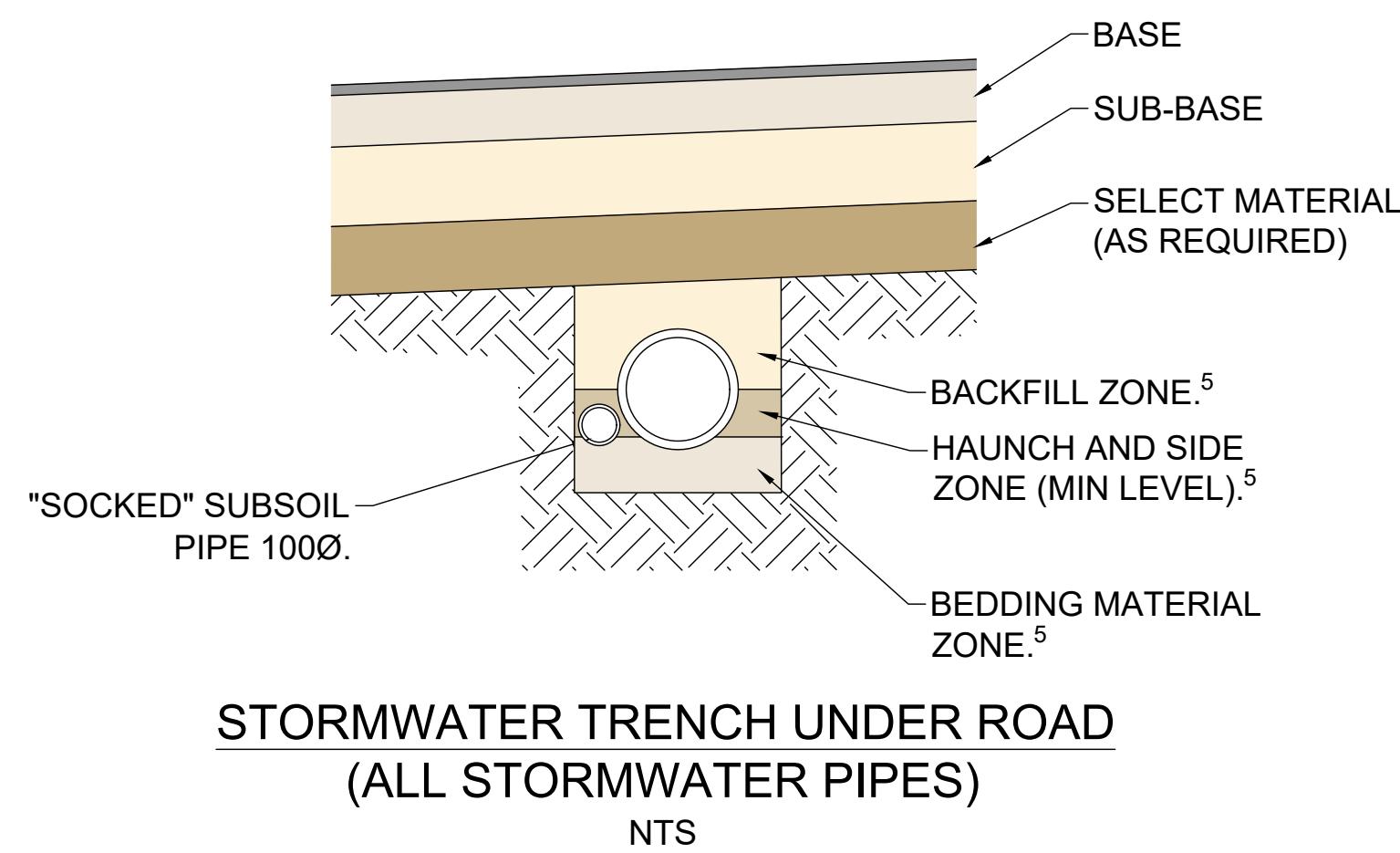
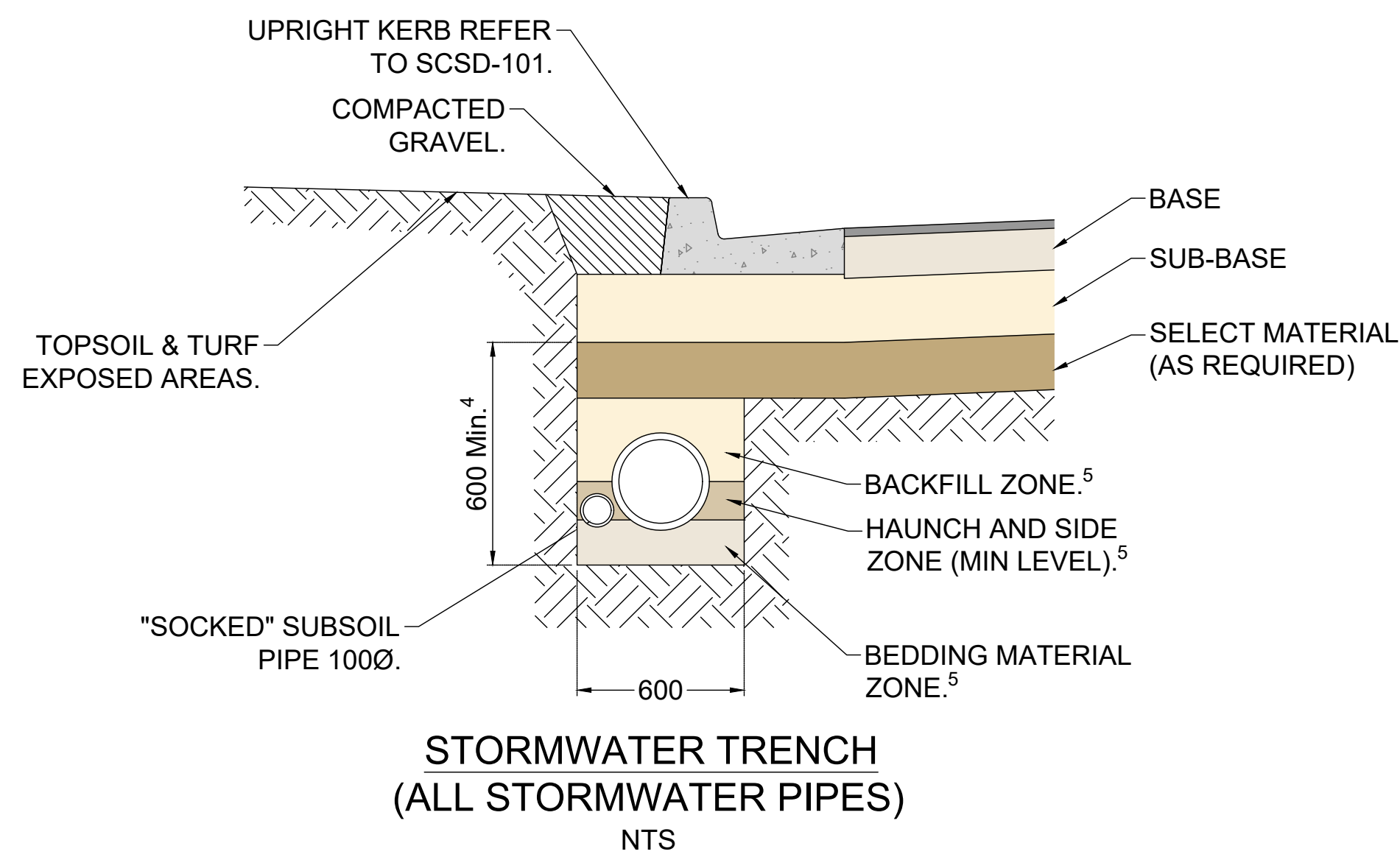


- NOTES:
- BED ZONE MATERIAL 5mm OR 10mm SCREENINGS OR ALTERNATIVELY WASHED SCREENED BEDDING SAND TO BE GRADING SPECIFIED BELOW TO BED ZONE  
SIEVE SIZE (mm)      PASSING (% BY WEIGHT)  
9.5      100  
4.75      95-100  
2.36      75-90  
1.18      15-25  
0.60      10-20  
0.30      5-10  
0.15      0-5
  - EMBEDMENT ZONE MATERIAL: 5mm OR 10mm SCREENINGS
  - COMPACTED BACKFILL UNDER ROADS: GRANULAR FILL COMPRISING CRUSHED ROCK (40mm MAXIMUM SIZE, NON PLASTIC OPEN GRADED MATERIAL) OR CRUSHER RUN RECYCLED CONCRETE. WHERE APPROVED UNDER SPECIAL CIRCUMSTANCES, STABILISED SAND (1 PART CEMENT TO 12 PARTS SAND BY VOLUME) OR CONTROLLED LOW STRENGTH MATERIAL OR LEAN MIX CONCRETE OR CLASS 3 MATERIAL MAY BE PERMITTED
  - COMPACTED BACKFILL UNDER FOOTPATHS AND BIKEWAYS: EXCAVATED MATERIALS PROVIDED ADEQUATE COMPACTION CAN BE OBTAINED. ALTERNATIVELY USE GRANULAR FILL OR SAND
  - INCREASE EXCAVATION LOCALLY AT SPIGOT AND SOCKET JOINTS (RIGID PIPES) TO ENSURE MINIMUM BOTTOM COVER AS SHOWN.
  - SUBSOIL DRAINAGE TO BE 100mm DIA SOCKED PERFORATED POLYETHYLENE PIPES AND CLASS 1000.
  - ALL DIMENSIONS ARE IN MILLIMETRES



NOTES:

1. TYPE, LOCATION AND EXTENT OF ADDITIONAL SUBSOIL DRAINAGE SHALL BE IN ACCORDANCE WITH A GEOTECHNICAL CONSULTANT'S ASSESSMENT.
2. A NOMINAL SIZE AGGREGATE (10mm MAXIMUM) MAY BE SUBSTITUTED FOR THE FILTER SAND
3. FLUSH POINTS SHALL BE PROVIDED AT UPSTREAM DEAD ENDS & CRESTS & AT MAXIMUM OF 60m CTRS.
4. DEPTH MAY BE VARIED IN A ROCK SUBGRADE.
5. SEE THE CONSTRUCTION SECTION OF THE MANUAL OF ENGINEERING STANDARDS FOR TRENCH MATERIAL SPECIFICATION. EACH ZONE MAY BE ONE HOMOGENEOUS APPROVED MATERIAL.
6. SUBSOIL DRAINAGE FILTER DESIGN SHALL BE BASED ON THE DESIGN METHOD IN A.R.R.B. (AUSTRALIAN ROAD RESEARCH BOARD) PUBLICATION TITLED SUBSURFACE DRAINAGE OF ROAD STRUCTURES - REPORT No. 35.



1	ORIGINAL VERSION	22/03/2023	
Ver	Comments	Date	

Notes

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3. DO NOT RELY ON THESE STANDARD DRAWINGS AS THE EQUIVALENT OF, OR SUBSTITUTE FOR, PROJECT SPECIFIC DESIGN AND ASSESSMENT BY A QUALIFIED PROFESSIONAL.

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Drawing Title  
SUBSOIL DRAINAGE & SERVICE TRENCH

Sheet 2 OF 2

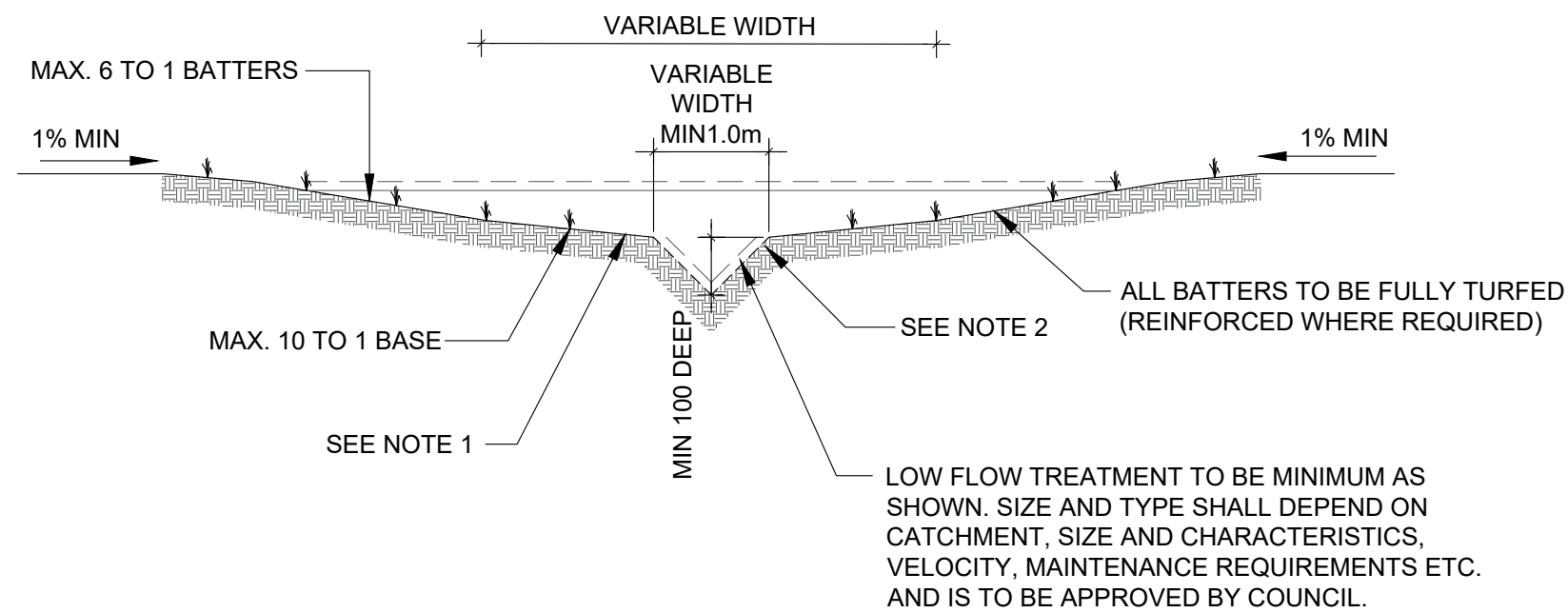
Drawing No. SCSD-426


Version 1

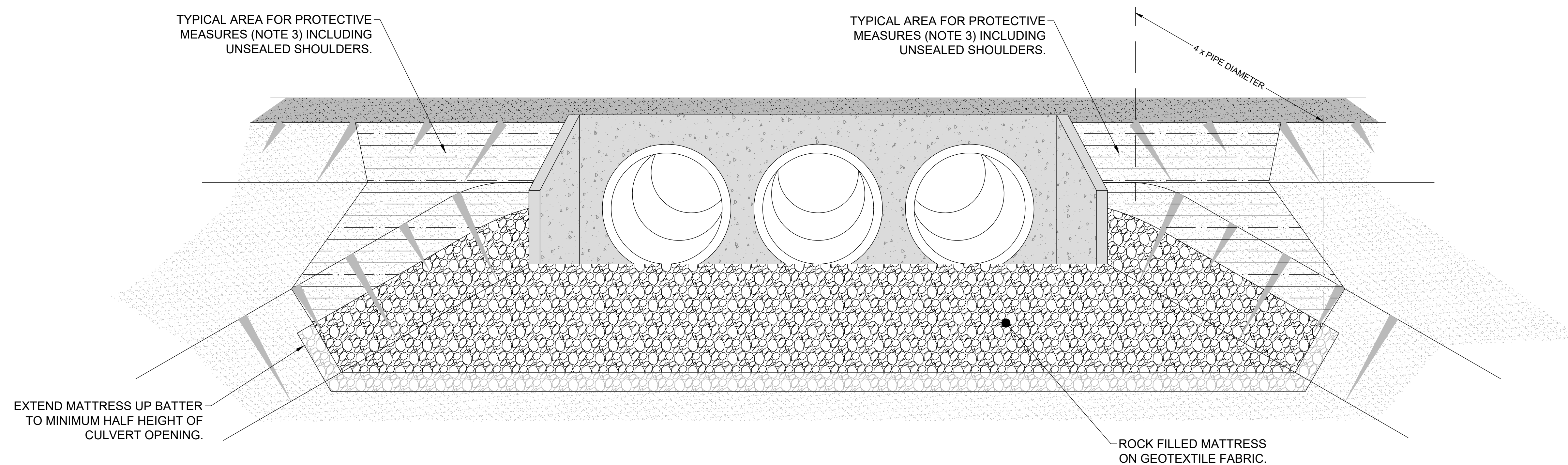
A1



- NOTES:
- 1. ADEQUATE SCOUR PROTECTION/VEGETATION STABILISING TREATMENT ADJACENT TO CONCRETE LOW FLOW.
  - 2. SUBSOIL DRAINAGE FOR CHANNEL BASE AND ADJACENT TO DROP STRUCTURES MAY BE REQUIRED.
  - 3. TO BE USED AS A GUIDE ONLY FOR THE PREPARATION OF DETAIL DESIGNS.
  - 4. GENERALLY LOW FLOW PIPELINES WILL NOT BE PERMITTED.



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	1	ORIGINAL VERSION	22/03/2023			Sheet	1 OF 1
	Ver	Comments	Date			Drawing No.	SCSD-427
						Version	1
						A3	



**HEADWALL SCOUR PROTECTION  
TYPICAL TREATMENT**  
NTS

- NOTES:**
1. SAFETY FENCING SHALL BE PROVIDED ABOVE HEADWALL SUBJECT TO PROXIMITY OF PEDESTRIANS.
  2. ENERGY DISSIPATERS SHALL BE INCLUDED IN THE DESIGN AS REQUIRED.
  3. WHERE THERE IS A POSSIBILITY OF OVERFLOW OF THE ROAD, SCOUR PROTECTION MEASURES ARE TO BE IMPLEMENTED ON SHOULDERS AND BATTERS.

1	ORIGINAL VERSION	12/09/2023
Ver	Comments	Date

**Notes**

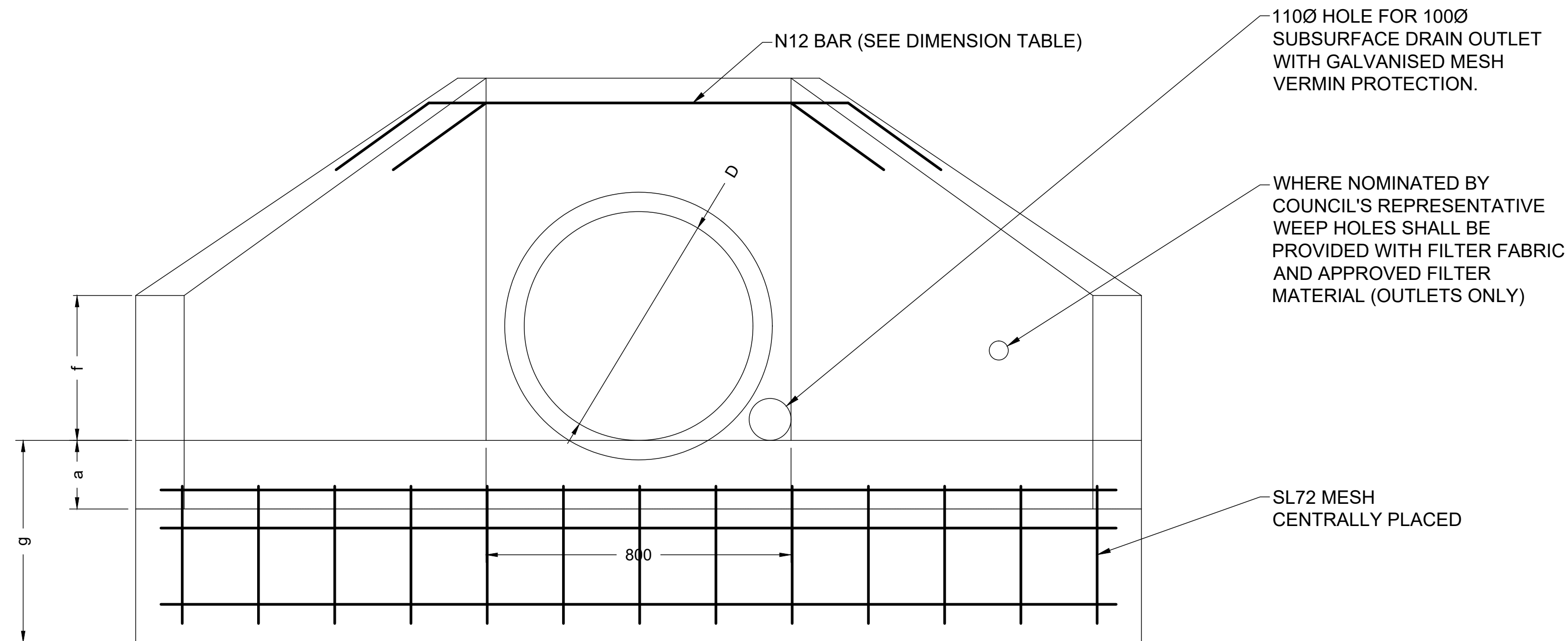
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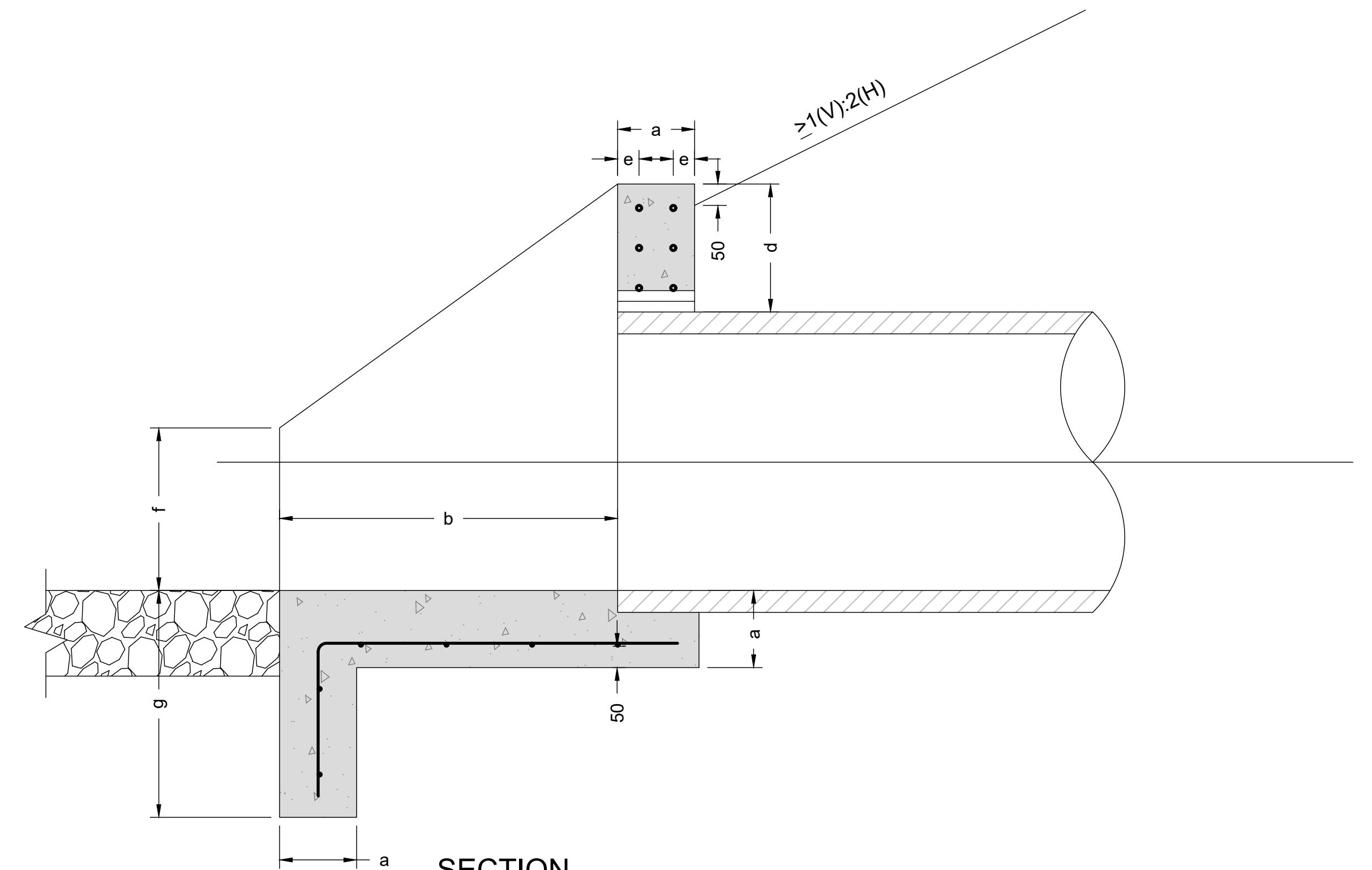
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Drawing Title HEADWALL SCOUR PROTECTION TYPICAL TREATMENT		
Sheet	1 OF 1	<b>A1</b>
Drawing No.	SCSD-428	Version 1

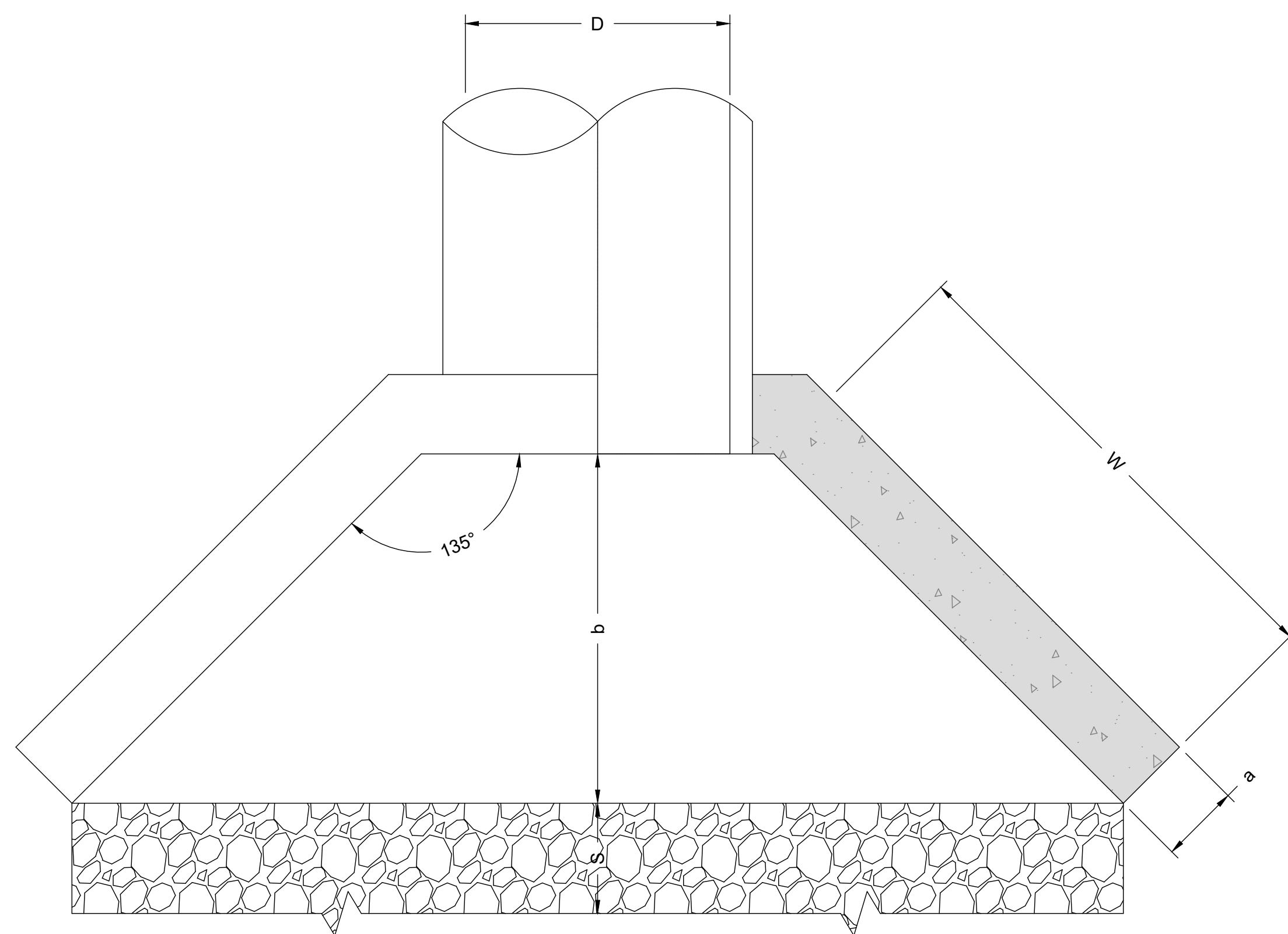




**ELEVATION**  
SCALE: 1:10



**SECTION**  
SCALE: 1:10



**PLAN/SECTION**  
SCALE: 1:10

**NOTES:**

1. USE OF PRECAST HEADWALL PREFERRED.
2. PROVIDE 25mm CHAMFER ON ALL EXPOSED SURFACES.
3. CONCRETE STRENGTH GRADE SHALL BE N32 MINIMUM.
4. HEADWALL WITH INTEGRAL ENERGY DISSIPATORS IN LIEU OF STANDARD HEADWALL SHALL BE PROVIDED WHERE CALCULATED VELOCITY EXCEEDS 2.0m/s.
5. WHERE ADDITIONAL HEIGHT TO RETAIN FILL IS REQUIRED KERB HEIGHT 'd', WINGWALL HEIGHT 'f' AND KERB WIDTH 'a' SHALL BE ADJUSTED WITH THE PROVISION OF ADDITIONAL REINFORCING.
6. WHERE NOMINATED BY COUNCIL'S REPRESENTATIVE OR SHOWN ON THE APPROVED PLANS, THE MATTRESS LENGTH SHALL BE ADJUSTED.
7. SAFETY FENCING SHALL BE PROVIDED AROUND THE HEADWALL WHERE DETERMINED BY COUNCIL'S REPRESENTATIVE.
8. REFER TO TNSW STANDARD DRAWINGS FOR PIPE SIZES LARGER THAN 900Ø.
9. REFER TO TNSW STANDARD DRAWINGS FOR LARGER PIPE DIAMETERS, MULTIPLE PIPES AND BOX CULVERTS.

D	Nominal pipe diameter	375	450	525	600	675	750	900
a	Apron, cut-off wall, kerb and wingwall	150	150	150	180	190	205	230
b	Apron length	490	590	700	790	910	1025	1260
v	Face of Headwall width	600	700	750	800	850	900	1050
d	Kerb Height	230	230	230	300	300	300	300
e	Kerb reinforcement cover	40	40	40	50	50	50	50
f	Wingwall Height	300	300	300	380	380	380	380
g	Cut-off wall depth	450	450	450	530	530	600	600
W	Wingwall	690	840	990	1120	1290	1450	1780
S	Mattress Length (See note 6)	1800	2000	2000	2400	2400	3000	3000
E1	L1	840	915	990	1100	1175	1250	1400
	L2	200	200	200	600	600	600	600
	Reinforcement diameter	12	12	12	12	12	12	12

1	ORIGINAL VERSION	12/09/2023	
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**Notes**

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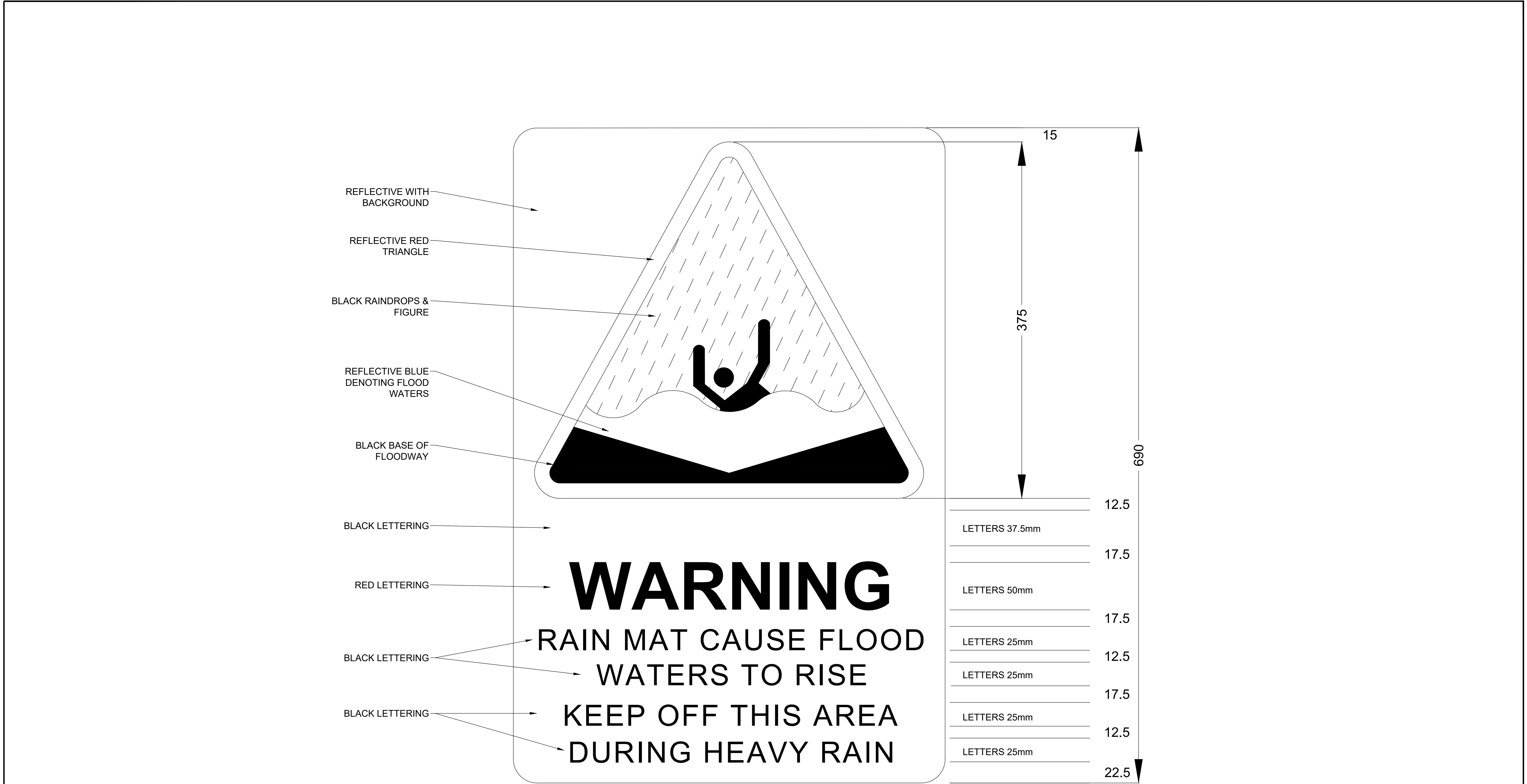
Drawing Title  
**STORMWATER DRAINAGE SERIES**  
**CONCRETE HEADWALL 375Ø TO 900Ø PIPES**

Sheet 1 OF 1


**A1**

Drawing No. SCSD-429

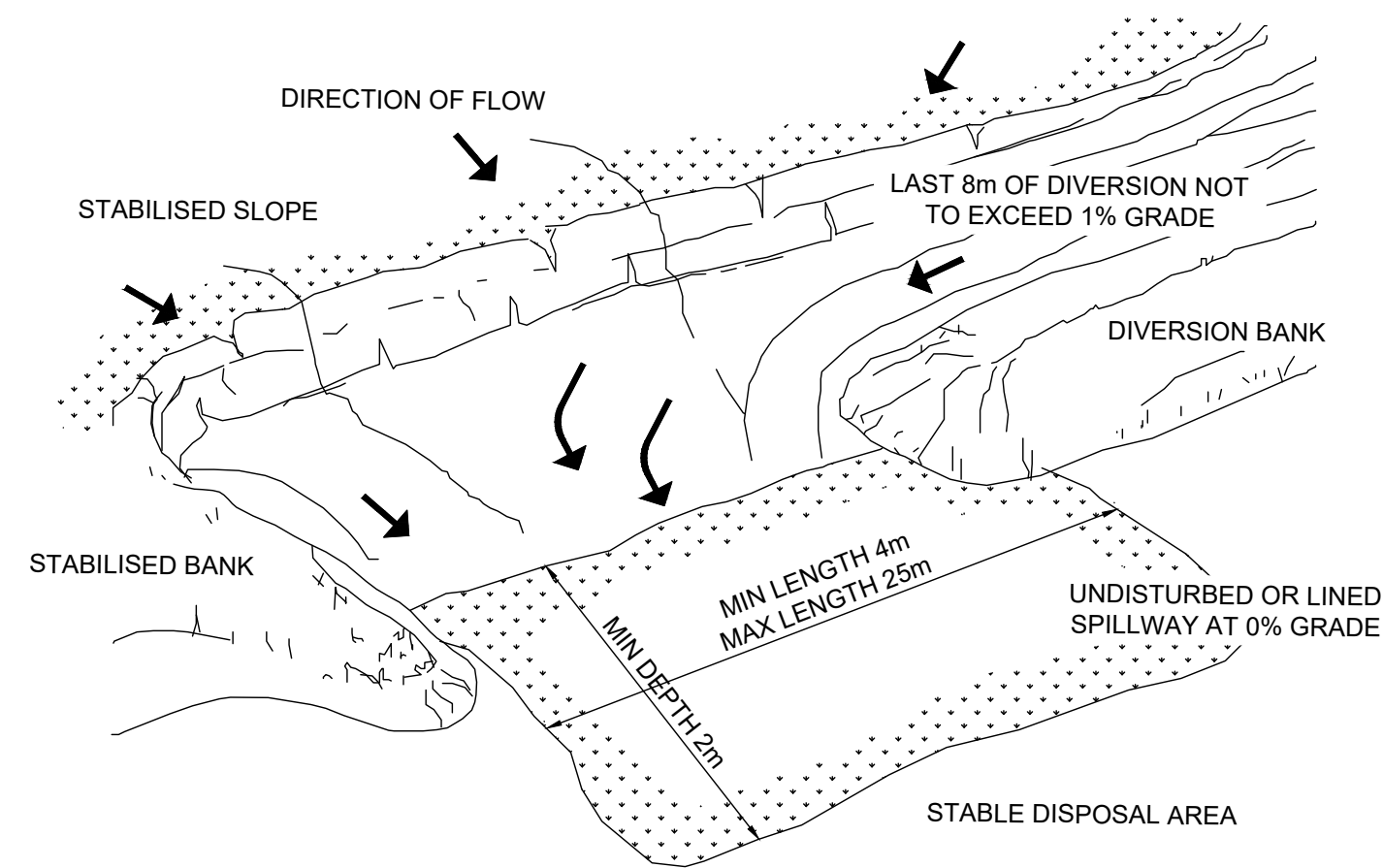
Version 1



NOTE: ALL LETTERING TO BE "E" SERIES

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	1	ORIGINAL VERSION	06/03/2023			Sheet	1 OF 1
	Ver	Comments	Date			Drawing No. SCSD-430	
						Version 1	
						A1	





**LEVEL SPREADER DETAIL**  
NTS

1	ORIGINAL VERSION	22/03/2023	
Ver	Comments	Date	

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Drawing Title  
**LEVEL SPREADER DETAIL**

Sheet	1 OF 1	<b>A1</b>
Drawing No.	SCSD-431	Version 1

1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

Notes

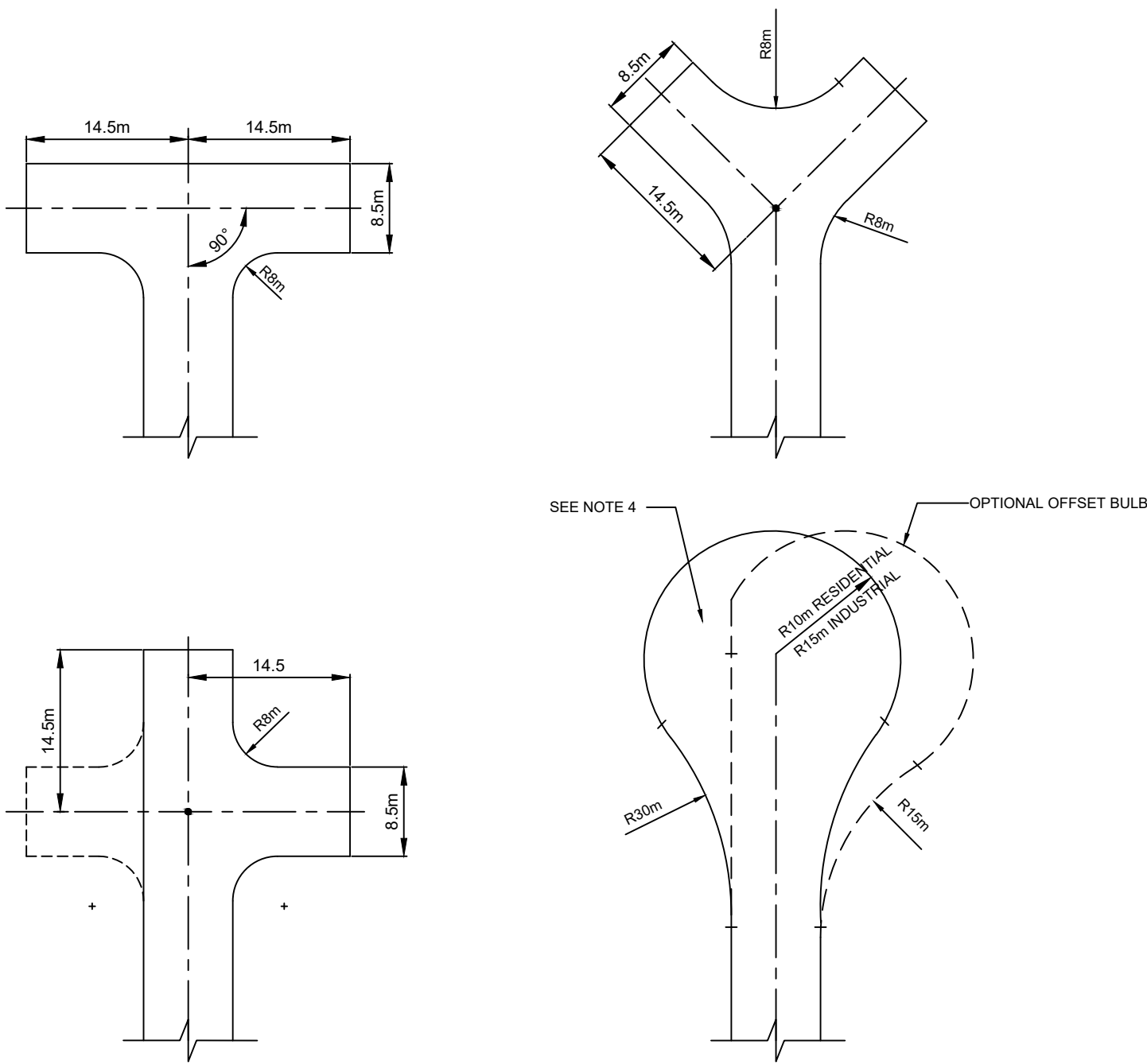
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
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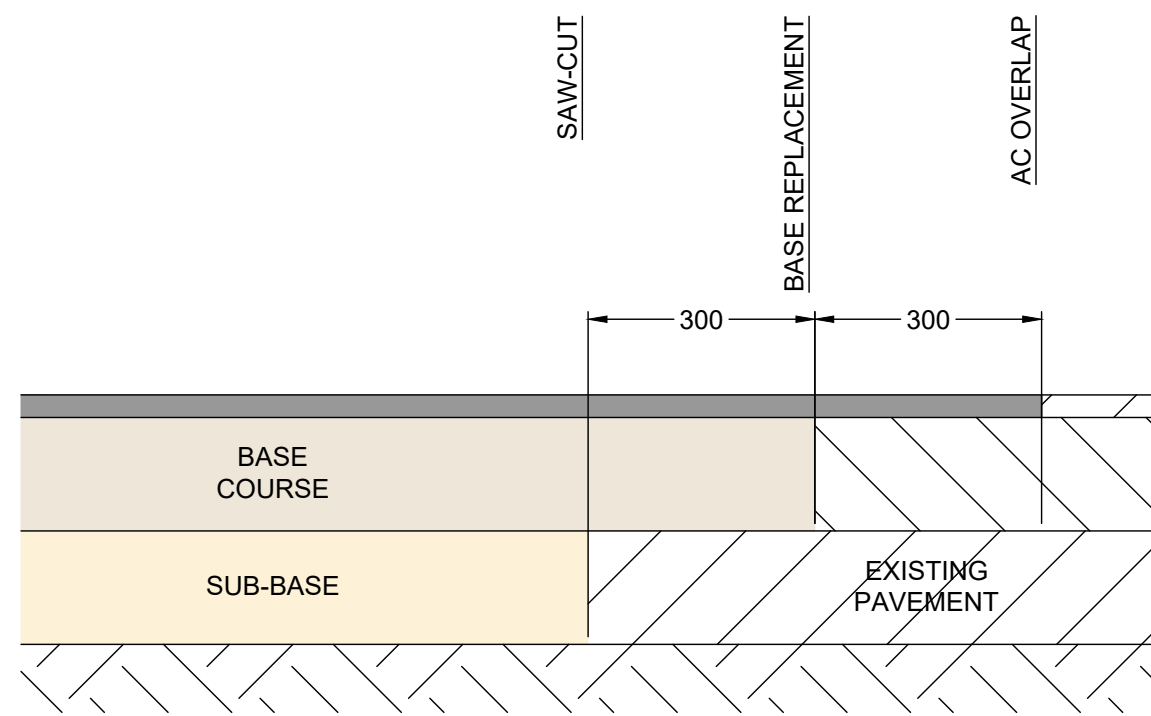
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Drawing Title  
TURNING AREAS FOR CUL-DE-SACS

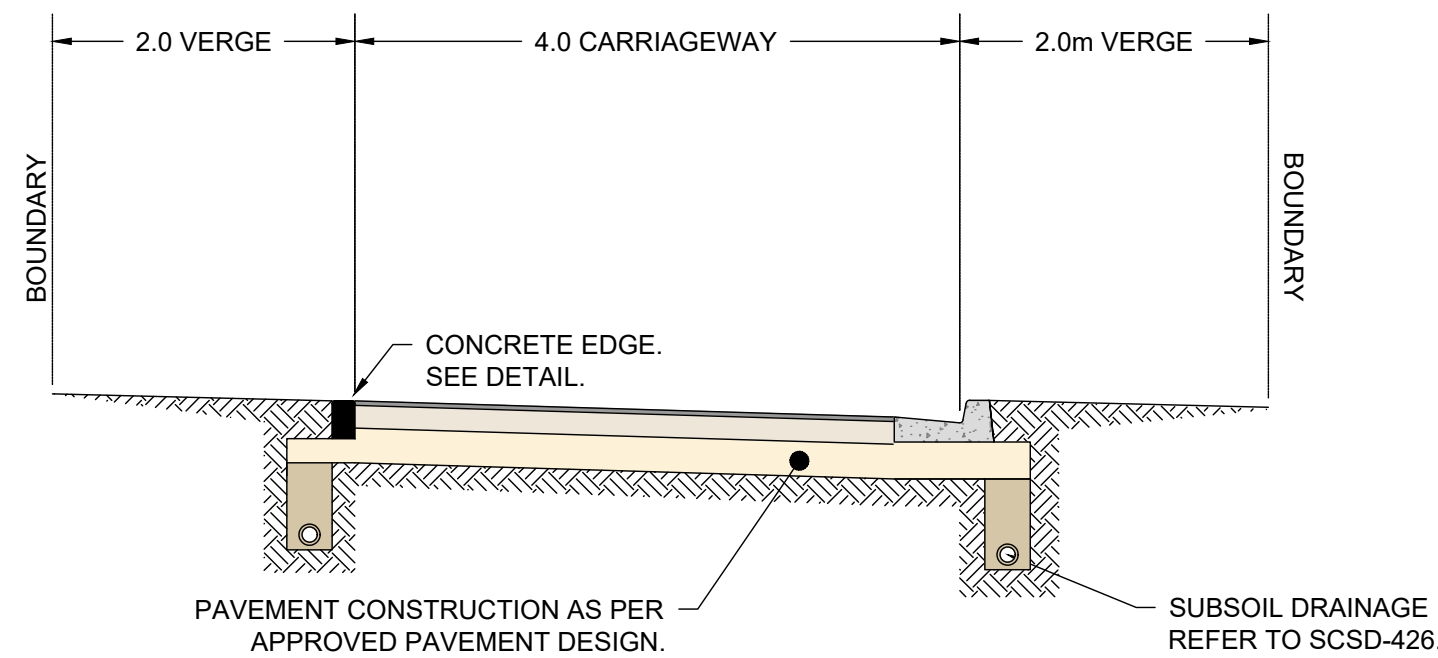
Sheet	1 OF 1	<b>A3</b>
Drawing No.	SCSD-701	Version 1



- NOTES:
- INCOMING WIDTHS TO SUIT ROAD CATEGORIES
  - NOTWITHSTANDING THE ABOVE DIMENSIONING, AUSTRALIAN STANDARD HB 72-1195 FOR HEAVY RIGID VEHICLES (HRV) SHALL BE USED TO VERIFY ADEQUATE MANOEUVERING AREA
  - VARIATIONS TO THESE MAY BE CONSIDERED DEPENDING ON CIRCUMSTANCES
  - TEMPORARY BULB TO BE MIN. 9.7m RADIUS. ONE COAT SEAL ON APPROVED PAVEMENT



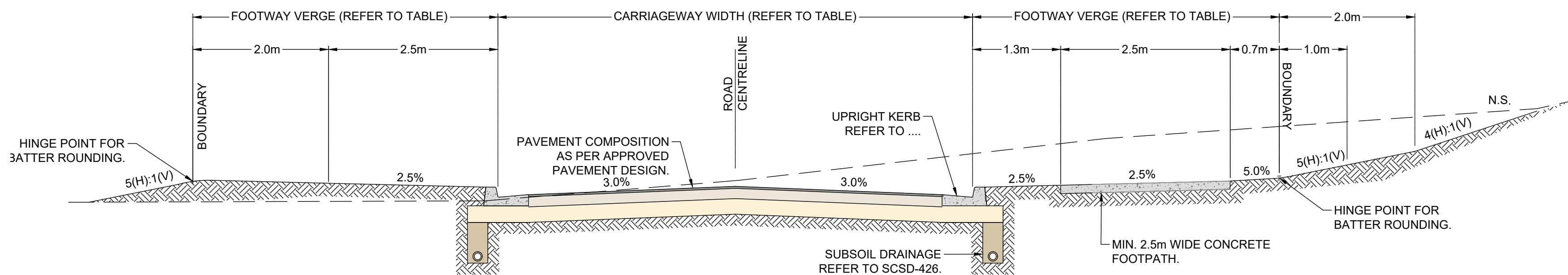
TYPICAL PAVEMENT CONNECTION DETAIL  
NTS



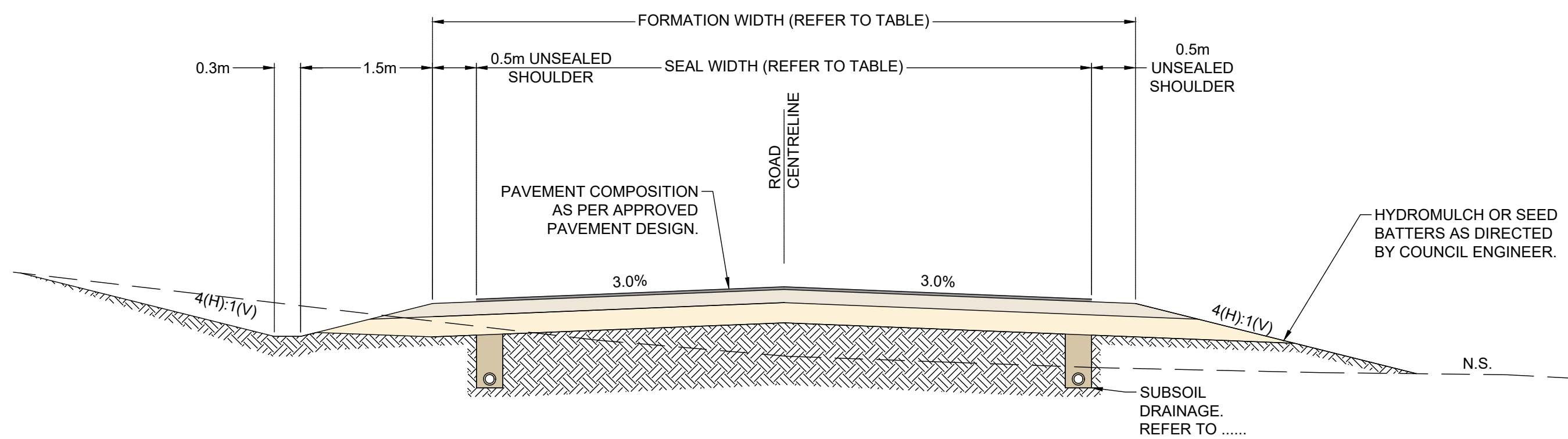
TYPICAL SECTION - LANEWAY  
NTS

NOTES:

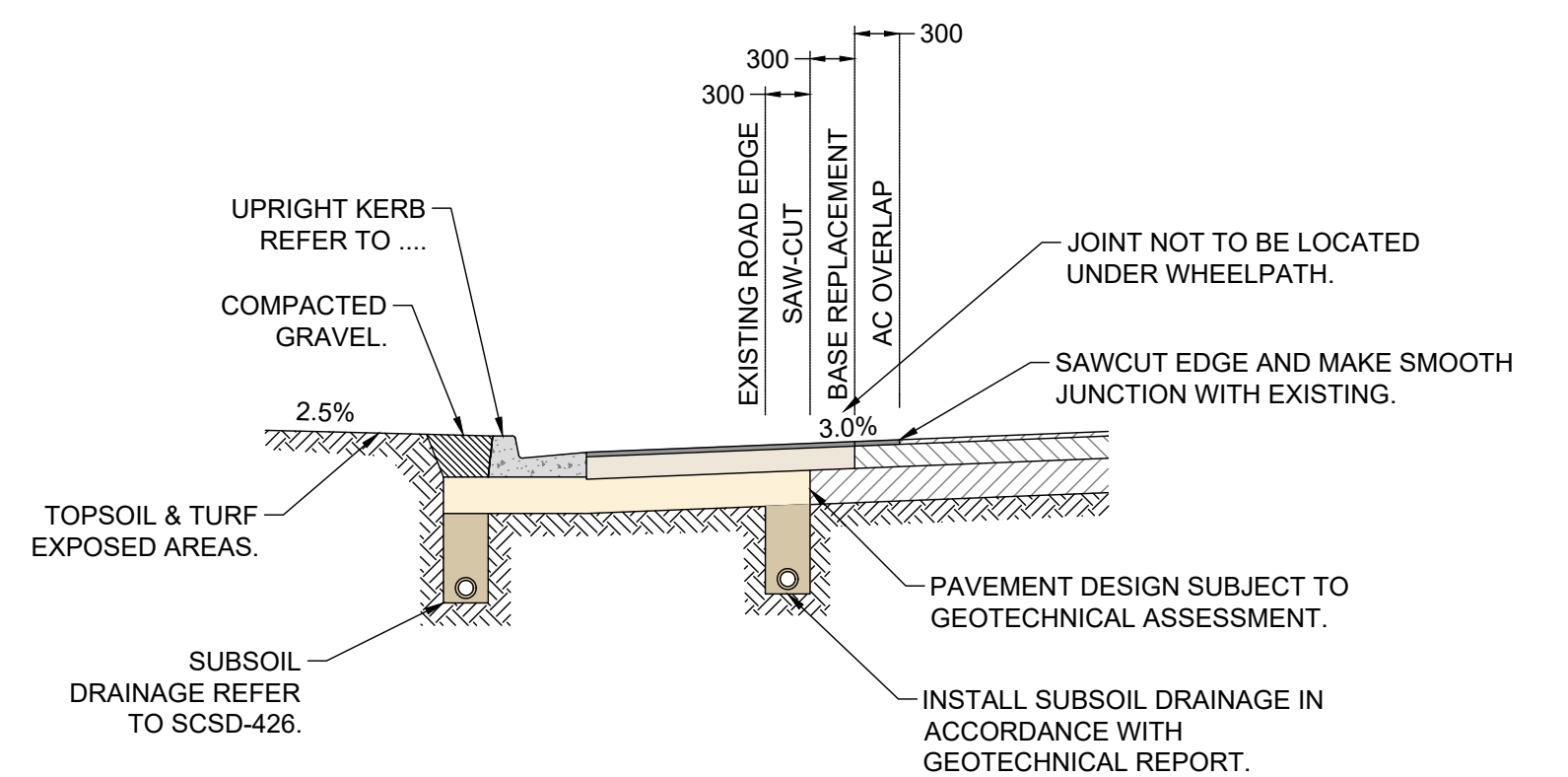
1. FOR CARRIAGEWAY, FOOTWAY & FOOTPATH WIDTHS SEE ROAD DESIGN SECTION OF "MANUAL OF ENGINEERING STANDARDS"
2. TYPICAL CROSSFALL ON CARRIAGEWAY TO BE -3% FROM CENTRELINE
3. TYPICAL CROSSFALL ON FOOTWAY TO BE +4.0% (25:1) FROM TOP OF KERB TO BOUNDARY
4. FOR PUBLIC UTILITY ALLOCATIONS IN FOOTWAYS SEE SD001
5. FOOTPATH WARRANT - SEE ROAD DESIGN SECTION OF "MANUAL OF ENGINEERING STANDARDS" MINIMUM FOOTPATH WIDTH 1.5m, CROSSFALL TO BE +2.5% MAXIMUM WITH DESIGN TO SCSD - 201 & SCSD - 102.



TYPICAL SECTION - FULL ROAD CONSTRUCTION  
(NEW SUBDIVISIONS)  
NTS



TYPICAL SECTION - RURAL ROAD CONSTRUCTION  
NTS



TYPICAL SECTION - ROAD WIDENING  
NTS

Road Types and Dimensions										
Road Type	Maximum traffic volume (vpd)	Max No. Lots	Reserve Width (m)	Carriageway / Kerb-Kerb (m)	Formation width (m)	Footway Verge (m)	Kerb Type	Footpath (2.5m Wide) (1)	Minimum Design ESA (4)	Maximum Longitudinal Gradient (%)
Urban Local 3 (Laneway) (2)	20	-	8	4	-	2	Upright one side	As Required	1 x 105	15
Urban Local 2	300	50	17	8	-	4.5	Upright	One Side	2 x 105	15
Urban Local 1	2500	100	18	9	-	4.5	Upright	One Side	5 x 105	15
Urban Collector	6000	600	20	11	-	4.5	Upright	One Side	5 x 106	12
Urban Sub-Arterial	>6000	3500	22	13	-	4.5	Upright	Both Sides	1 x 107 min	10
Industrial - Secondary	60	-	20	11	-	4.5	Upright	As Required	5 x 106	6
Industrial - Primary	>60	-	22	13	-	4.5	Upright	As Required	1 x 107	6
RURAL ROADS										
Road Type	Maximum traffic volume (vpd)	Min Lot Area	Reserve Width (m)	Minimum Pavement/Seal Width (m)	Formation width (m)	Footway Verge (m)	Kerb Type	Footpath (2.5m Wide)	Design ESA	Maximum Longitudinal Gradient (%)
Rural Local 3 / Cul-de-Sac	150	40Ha	20	4	6	8	As Required	As Required	1 x 105 min	15
Rural Local 2	250	20000	20	6	7	7	As Required	As Required	Per 'lots' above	15
Rural Local 1	1000	10000	20	7	8	6.5	As Required	As Required	Per 'lots' above	15
Rural Collector	2000	5000	20	8	10	6	As Required	As Required	Per 'lots' above	10
Rural Sub-Arterial	>2000	2000	20	11	12	4.5	As Required	As Required	Per 'lots' above	8

NOTES:  
REFER TO ENGINEERING GUIDELINES FOR SPECIFIC NOTES.

1	ORIGINAL VERSION	22/03/2023	
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Notes

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Drawing Title  
TYPICAL URBAN AND RURAL ROADS

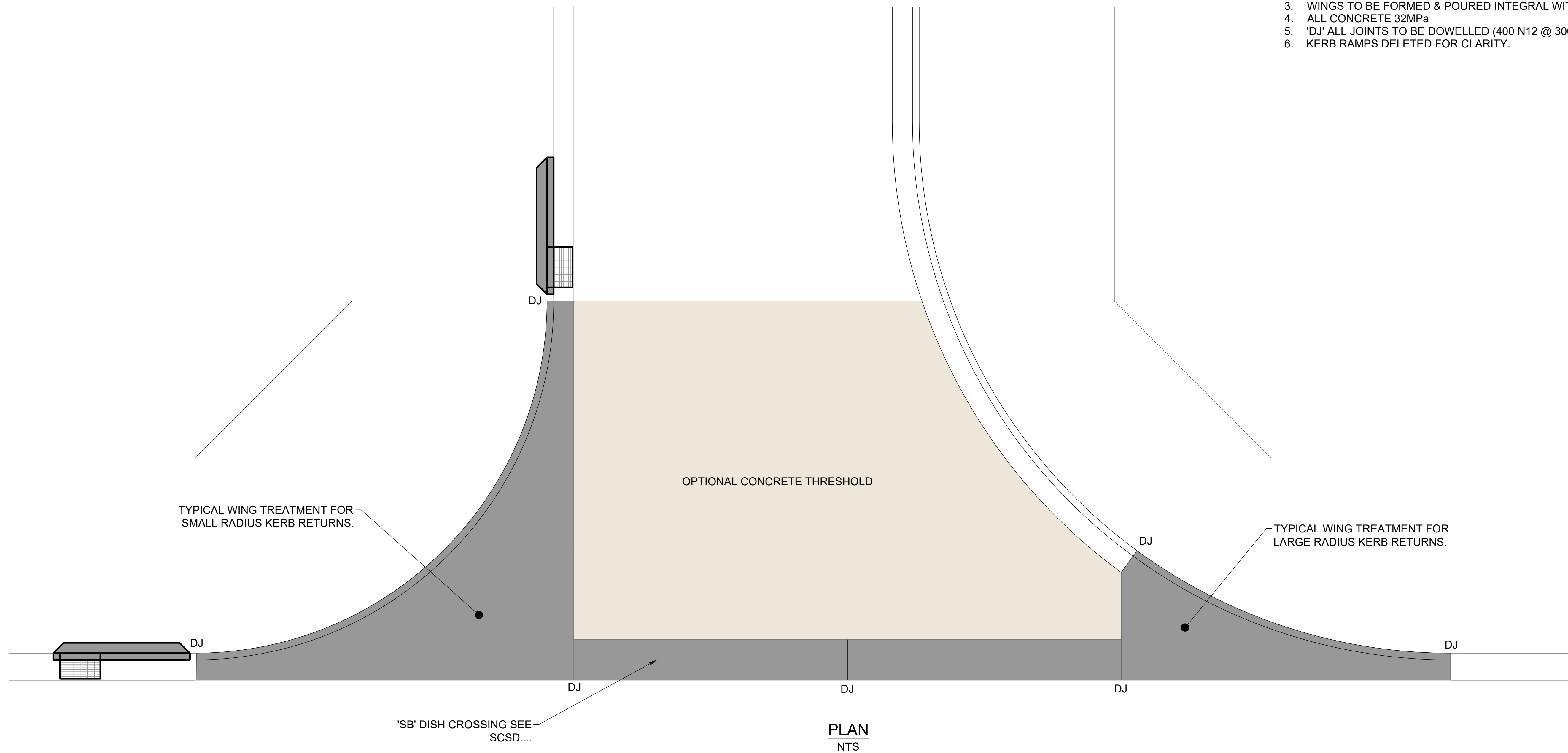
Sheet 1 OF 1

Drawing No. SCSD-702

Version 1

A1

- NOTES:
- 1. ALL DIMENSIONS IN MILLIMETRES
  - 2. DISH DRAIN TO BE MINIMUM 150mm THICK, REINFORCED WITH SL72 MESH PLACED CENTRALLY
  - 3. WINGS TO BE FORMED & POURED INTEGRAL WITH KERB
  - 4. ALL CONCRETE 32MPa
  - 5. 'DJ' ALL JOINTS TO BE DOWELLED (400 N12 @ 300c/c)
  - 6. KERB RAMPS DELETED FOR CLARITY.



1	ORIGINAL VERSION	22/03/2023
Ver	Comments	Date

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Drawing Title  
CONCRETE DISH CROSSING AT INTERSECTIONS

Sheet	1 OF 1	A1
Drawing No.	SCSD-703	Version 1