



Federation Council Standard Drawing Index

Series 400 - Driveway Access

SD 400 - Private Access Installation

SD 401 - Headwall - Major Roads - High Speed, High Volume $\geq 80\text{km/h}$

SD 402 - Headwall - Urban & Rural Roads - Within 6m Offset

SD 403 - Headwall - Precast High Profile - Urban, Rural, greater than 6.0m offset

SD 404 - Vehicle Crossing at Culvert - High Speed, High Volume $\geq 80\text{km/h}$

SD 405 - Vehicle Crossing at Culvert - Urban, Rural, greater than 6.0m offset

SD 406 - Vehicle Crossing at Culvert - within 6.0m offset

SD 407 - Concrete Vehicle Crossing - Residential Elevation Limits

SD 408 - Concrete Layback Driveway - Residential Barrier Kerb

SD 409 - Concrete Layback Driveway - Industrial & Commercial

HEADWALL SELECTION MATRIX

| | >6m OFFSET | <6m OFFSET |
|---------|-------------|-------------|
| >80km/h | REFER SD403 | REFER SD402 |
| <80km/h | REFER SD403 | REFER SD401 |

SPECIFICATIONS

Council's basic requirements for the private installation of access structures will include the following: clause 1, 2 and 3 are applicable to both concrete layback driveways and access culverts.

1. Fee's to be paid and a Road Opening Permit must be submitted for Council's consideration before works may be undertaken subject to the following specifications.
2. Traffic control shall be in accordance with the RMS guide "Traffic control at work sites".
3. Insurance indemnifying Council will be required by any individual wishing to carry out work on a Council road. The public liability insurance shall have a minimum cover of \$20 million, and a copy of the completed policy or cover note is to be provided to Council prior to any approval being granted.
4. The minimum diameter shall be 300mm in urban areas & 375mm in rural areas subject to Council approval
5. The materials for the pipe culvert shall be minimum Class 2 reinforced concrete.
6. Minimum length for culverts installed for access off Council's roads will be 4.88 meters (2 lengths of pipe) This length is suitable for the turning of light short wheeled based motor vehicles only. For long wheeled based vehicles additional length as specified by Council will be required.
7. Alignment of the culvert shall be determined by Council or approved by Council following design by a competent Civil Engineer or Surveyor.
8. The culvert shall be bedded on DGB20 roadbase or clean sharp sand, and the entire culvert shall be backfilled and covered with DGB20 roadbase. Compaction of the backfilling material shall be a minimum of 95% MMDD. Minimum cover over the concrete culvert shall be 150mm unless otherwise approved by council.
9. The property owner is responsible for maintaining the driveway & associated drainage from edge of road to property boundary.
10. Any culvert installed contrary to the above specifications the bond from the road opening permit will be forfeited and Council may seek additional cost for reinstallation.
11. Driveways must be kept at least 1.0m away from all communications, electricity & gas infrastructure where possible. Where conflict arises council is to be notified.
12. Driveways shall be constructed square to the road alignment. Maximum of 8m gap between existing driveways on the same lot. Driveways must be minimum 1.0m offset from property boundary.
13. All driveways culverts to have headwalls installed in accordance with Council Standard Drawings SD401, 402, 403.



Standard Drawing

LAST UPDATED: 07/12/18

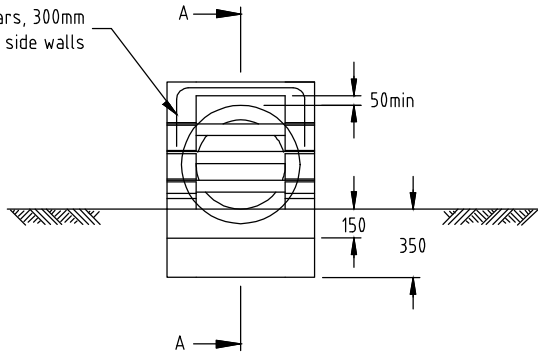
FILE PATH: A4
N:_Design Manual\Federation Council Standard Drawings & Development Guidelines\Standard Drawings\400 SERIES - DRIVEWAY ACCESS\400 SERIES.dwg

PRIVATE ACCESS INSTALLATION

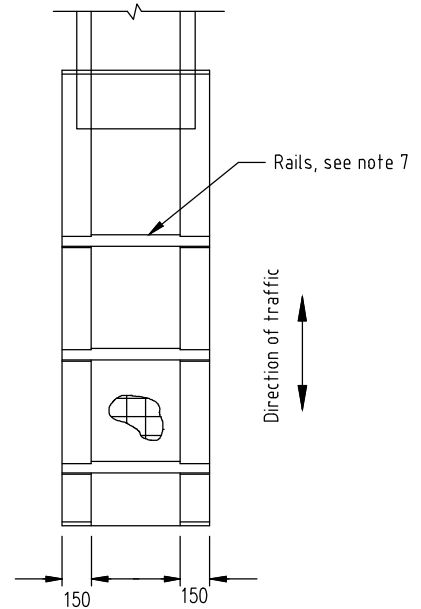
SD400

| |
|-----|
| REV |
| A |

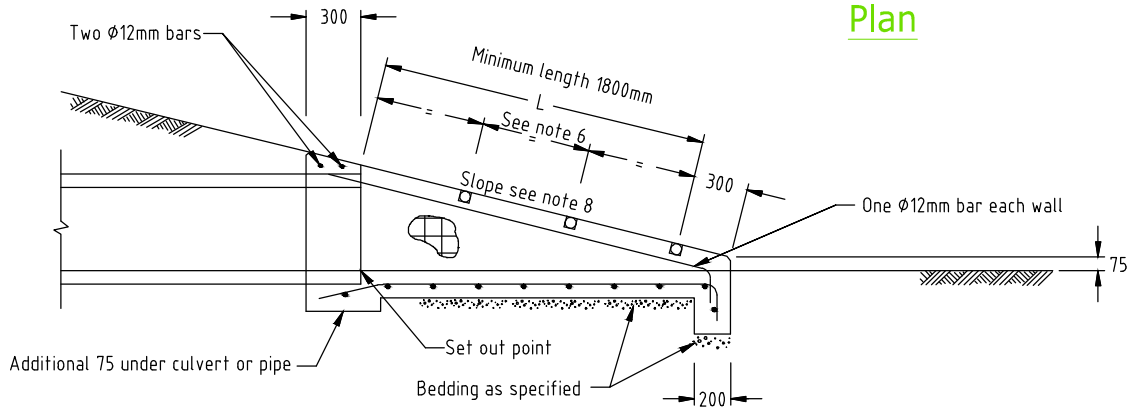
Two $\phi 12$ mm bars, 300mm embedment into side walls



End Elevation



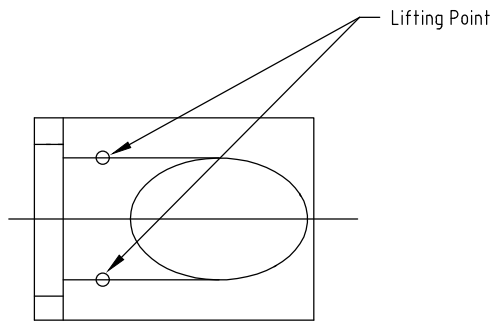
Plan



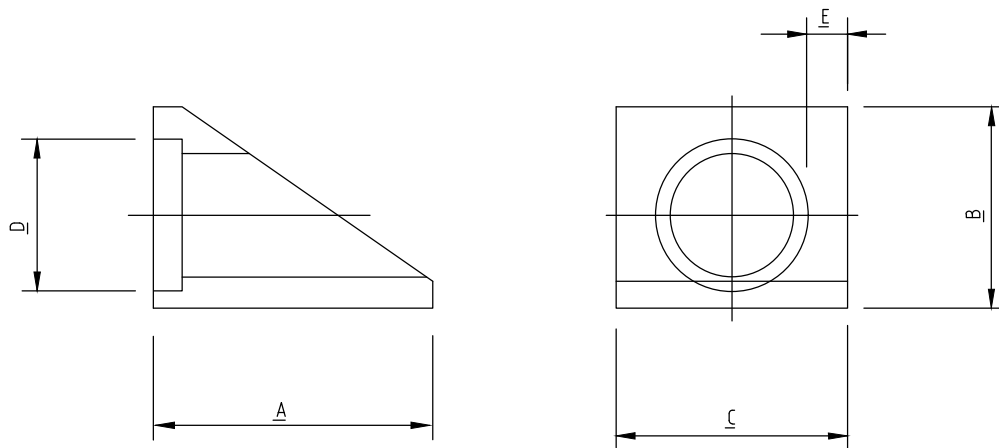
Section A-A

NOTES:

1. Headwalls are designed for use in high speed, high volume rural, state and regional roads.
2. Reinforcement, SL81 unless otherwise specified, shall be continuous around corners and located as shown. Clear cover 50min laps. Fabrics 300min, bars 25 x bar diameter min.
3. Distribution bars 12dia at 200 centres.
4. Concrete shall be normal - class N32 standard strength grade or higher, complying with the requirements of AS1379. Exposure classifications up to and including B1.
5. Exposure edges shall have 20 x 20 chamfers.
6. Rails within section "L" shall be evenly spaced. The maximum spacing shall not exceed 450mm.
7. Rails are 60.3mm diameter galvanised tubes, 5.4mm thick. These are to be grouted into the slots in the walls.
8. Slope of the headwall to match batter slope. Maximum slop - 4:1.
9. Headwalls shall be constructed in accordance with the relevant provisions of AS3600.
10. Headwall to be utilised where a minimum buffer of 6m from edge of seal is not achievable.



Plan View



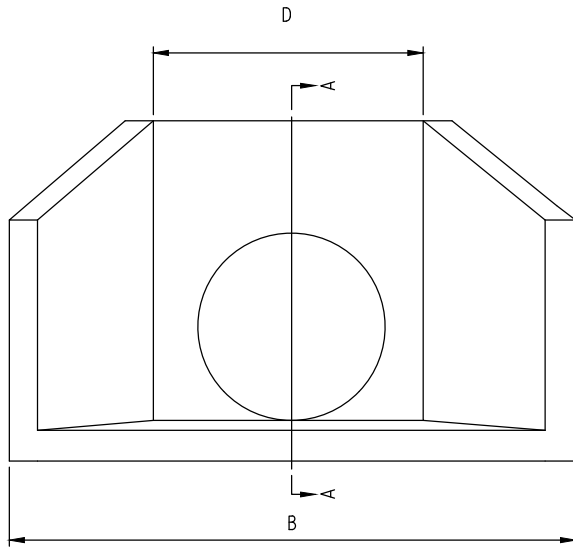
Section

Front View

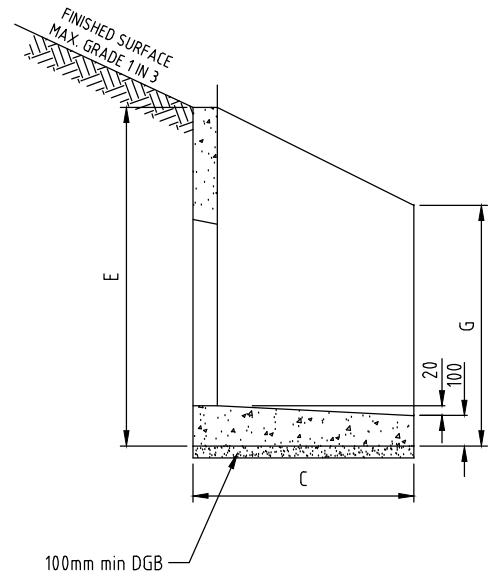
NOTES:

1. Headwalls are designed for use in urban & low traffic rural roads.
2. Concrete shall be class N32 standard strength grade or higher complying with the requirements of AS 1379. Exposure classifications up to & including B1.
3. Headwalls shall be installed in accordance with manufacturers guidelines.

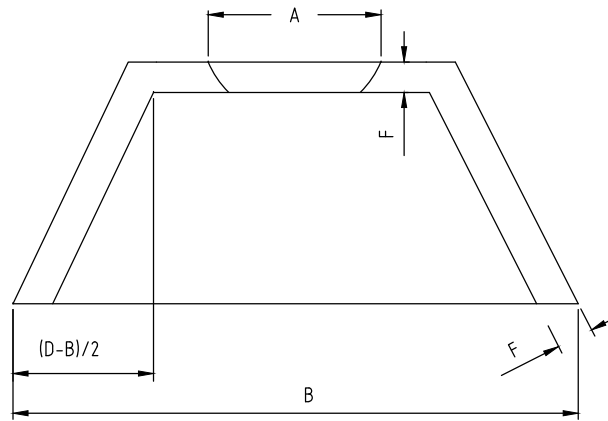
| Pipe Size | Length A | Height B | Width C | Hole Size D | Side Width E |
|-----------|----------|----------|---------|-------------|--------------|
| 300 | 1250 | 860 | 840 | Ø460 | 60 |
| 375 | 1250 | 860 | 840 | Ø460 | 60 |
| 450 | 1250 | 860 | 840 | Ø543 | 60 |
| 525 | 1500 | 980 | 900 | Ø720 | 50 |
| 600 | 1500 | 980 | 900 | Ø720 | 50 |



Front Elevation



Section A-A



Plan

| NOM. PIPE SIZE | NOMINAL DIMENSIONS IN MM | | | | | | |
|----------------|--------------------------|------|------|------|------|----|------|
| | A | B | C | D | E | F | G |
| 300 | 385 | 1575 | 660 | 740 | 900 | 80 | 700 |
| 375 | 470 | 1575 | 660 | 740 | 900 | 80 | 700 |
| 450 | 555 | 1575 | 660 | 740 | 900 | 80 | 700 |
| 525 | 640 | 1670 | 700 | 800 | 1040 | 90 | 780 |
| 600 | 725 | 1670 | 700 | 800 | 1040 | 90 | 780 |
| 675 | 805 | 2020 | 1010 | 1200 | 1410 | 90 | 1100 |
| 750 | 925 | 2020 | 1010 | 1200 | 1410 | 90 | 1100 |
| 825 | 970 | 2020 | 1010 | 1200 | 1410 | 90 | 1100 |
| 900 | 1090 | 2020 | 1010 | 1200 | 1410 | 90 | 1100 |



Standard Drawing

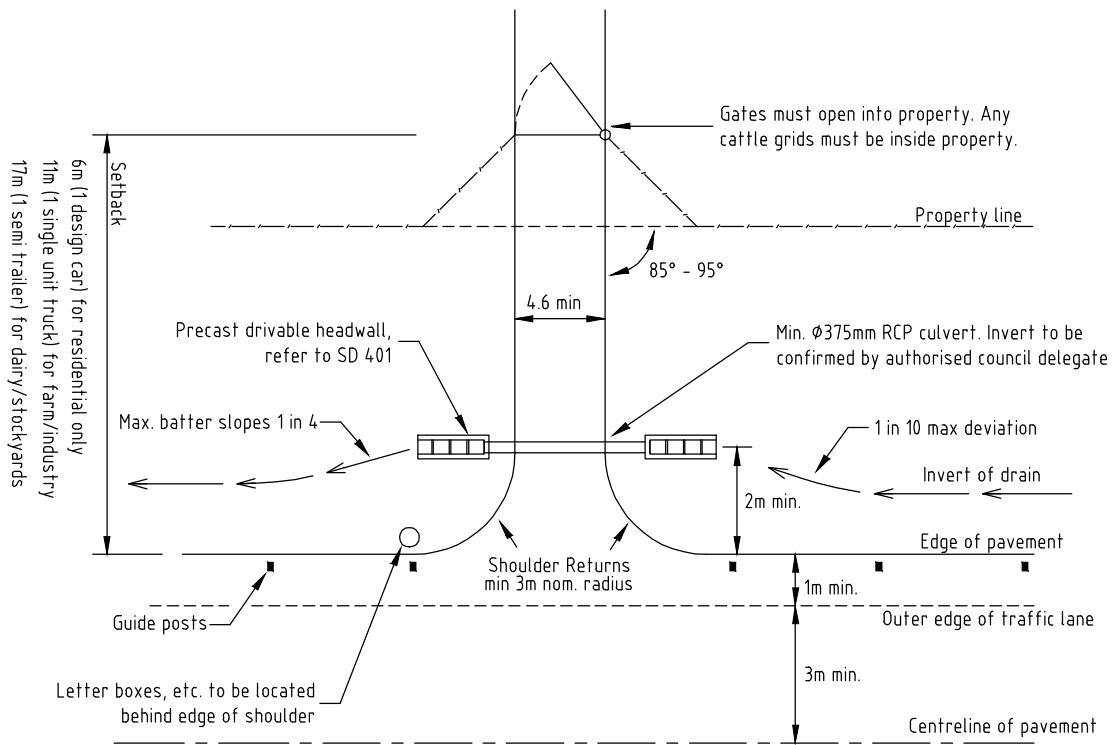
LAST UPDATED: 07/12/18

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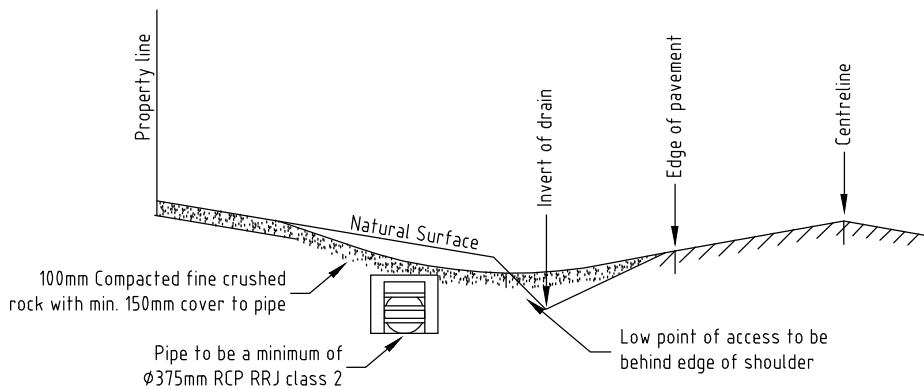
HEADWALL - PRECAST HIGH PROFILE
 URBAN, RURAL, GREATER THAN 6.0m OFFSET

SD403

REV
 A



Plan



Cross Section

NOTES:

1. Sloping headwalls or standard headwalls shall be used where the speed limit is 60km/hr or less, or where the culvert is offset more than 6 metres from the edge of the traffic lane.
2. Vehicle crossings must be located where minimum stopping sight distances for through traffic can be applied or warning signs must be erected.
3. SD401 - Driveable headwalls. 3.



Standard Drawing

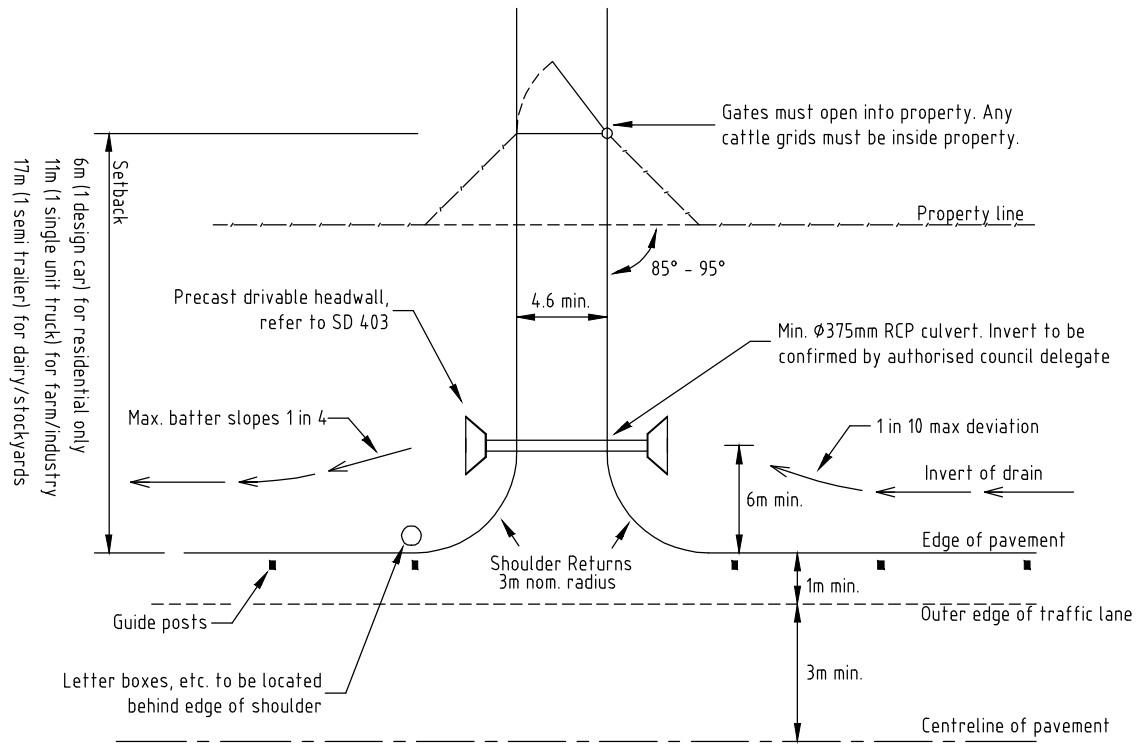
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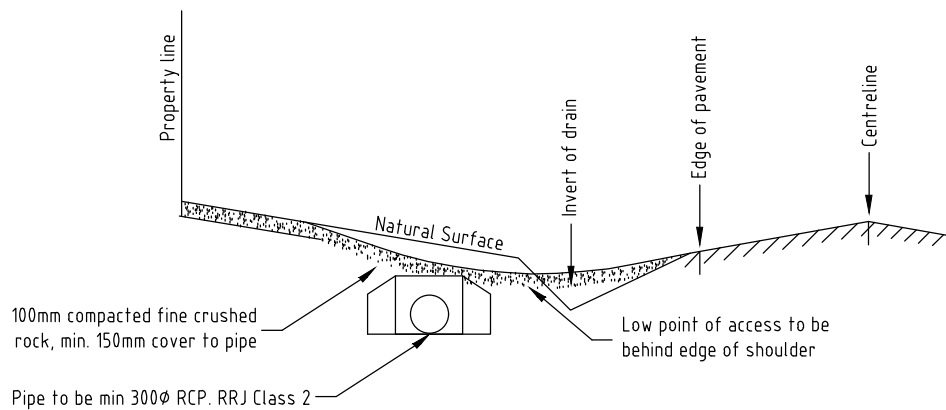
VEHICLE CROSSING AT CULVERT
 HIGH SPEED, HIGH VOLUME $\geq 80\text{km/hr}$

SD404

REV
 A



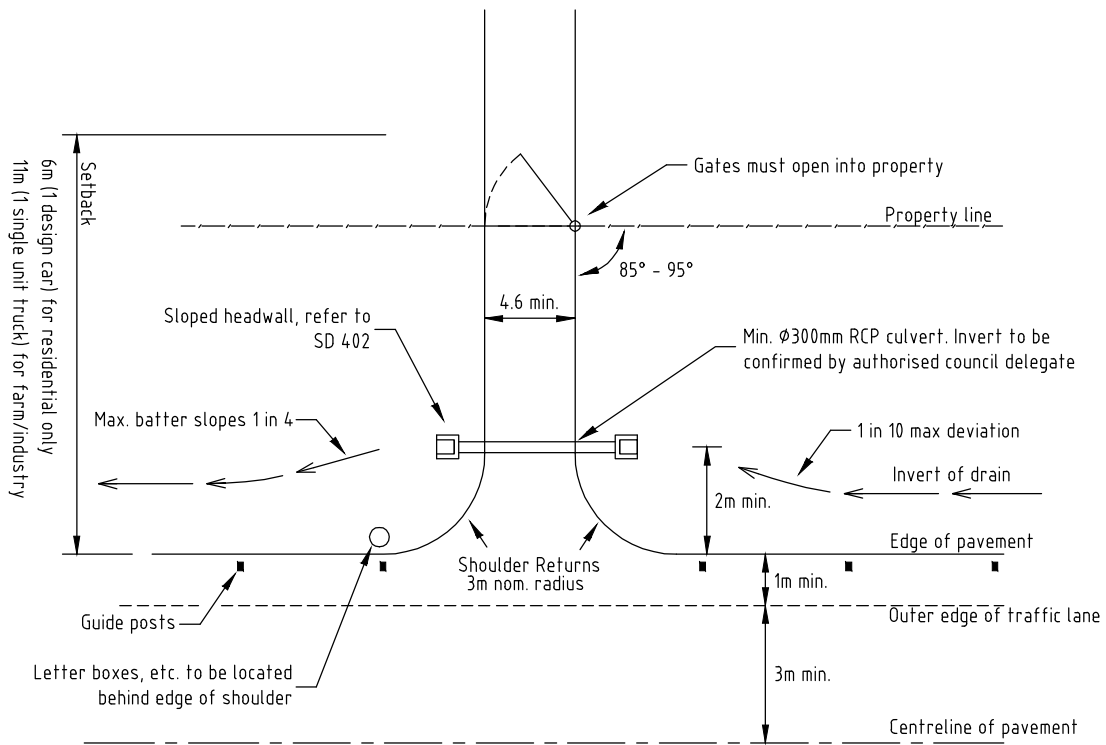
Plan



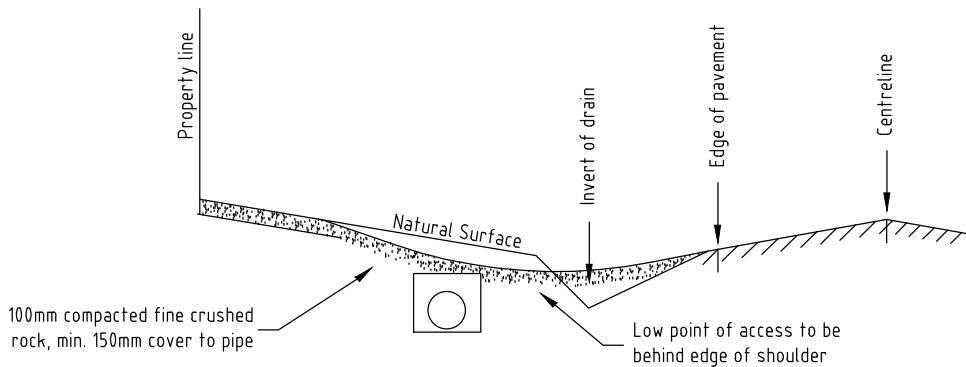
Cross Section - Driveway

NOTES:

1. Shall only be used where the speed limit is 60km/h or less, or where the culvert is offset more than 6m from the edge of the traffic lane.
2. Vehicle crossings must be located where minimum stopping sight distances for through traffic can be applied or warning signs must be erected.
3. SD402 - sloping headwalls.



Plan



Cross Section - Driveway

NOTES:

1. Standard headwalls shall be used where the speed limit is 60km/hr or less, or where the culvert is offset more than 6 metres from the edge of the traffic lane.
2. Vehicle crossings must be located where minimum stopping sight distances for through traffic can be applied or warning signs must be erected.
3. SD403 - Precast headwall (high profile)



Standard Drawing

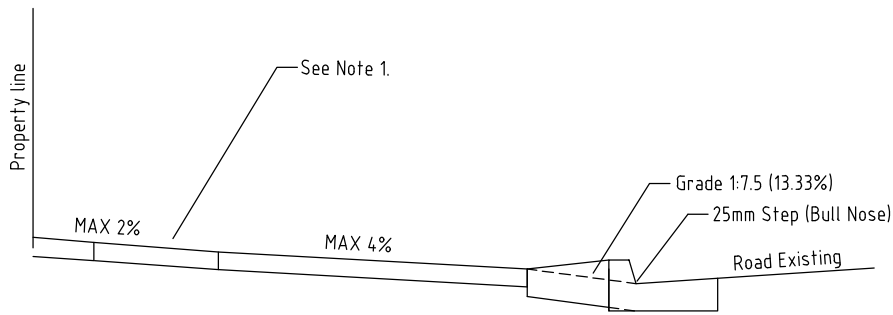
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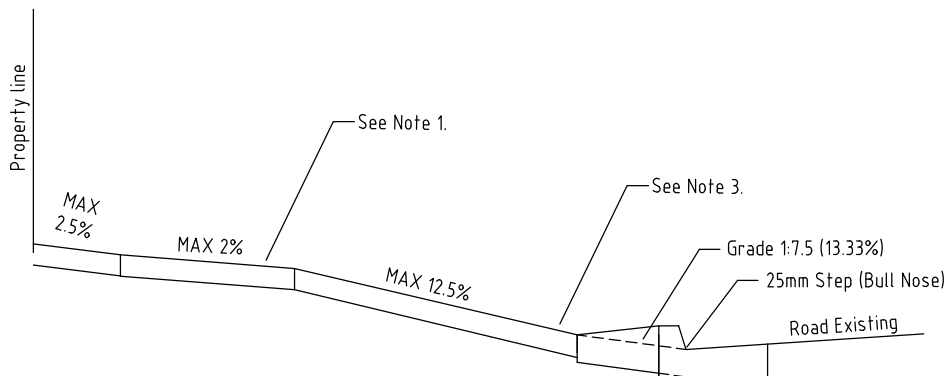
VEHICLE CROSSING AT CULVERT WITHIN 6.0m OFFSET

SD406

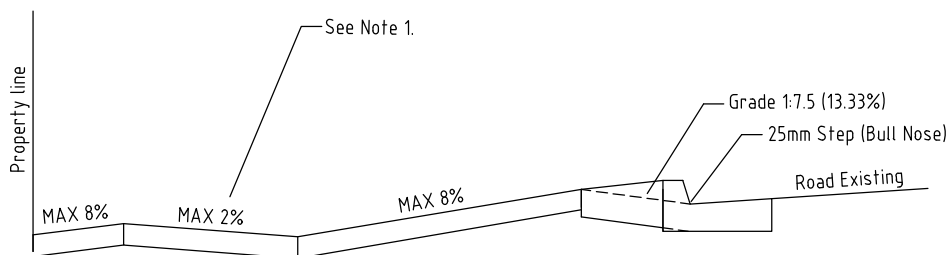
REV
 A



Normal



High Level



Low Level

NOTES:

1. Footpath shall be 150mm thick 25MPa concrete reinforced with two layers of SL72 mesh at driveway.
2. Industrial & commercial vehicle crossing shall be 175mm thick, 40MPa concrete with two layers of F72 mesh across the whole length of the crossing.
3. Maximum change of grade between bitumen & the first 3 metres of the driveway shall be no more than 16% (to avoid scraping of vehicle extremities).
4. This drawing is to be read in conjunction with Corowa Shire Standard Drawing - SD301, SD406, SD407, & SD902.



Standard Drawing

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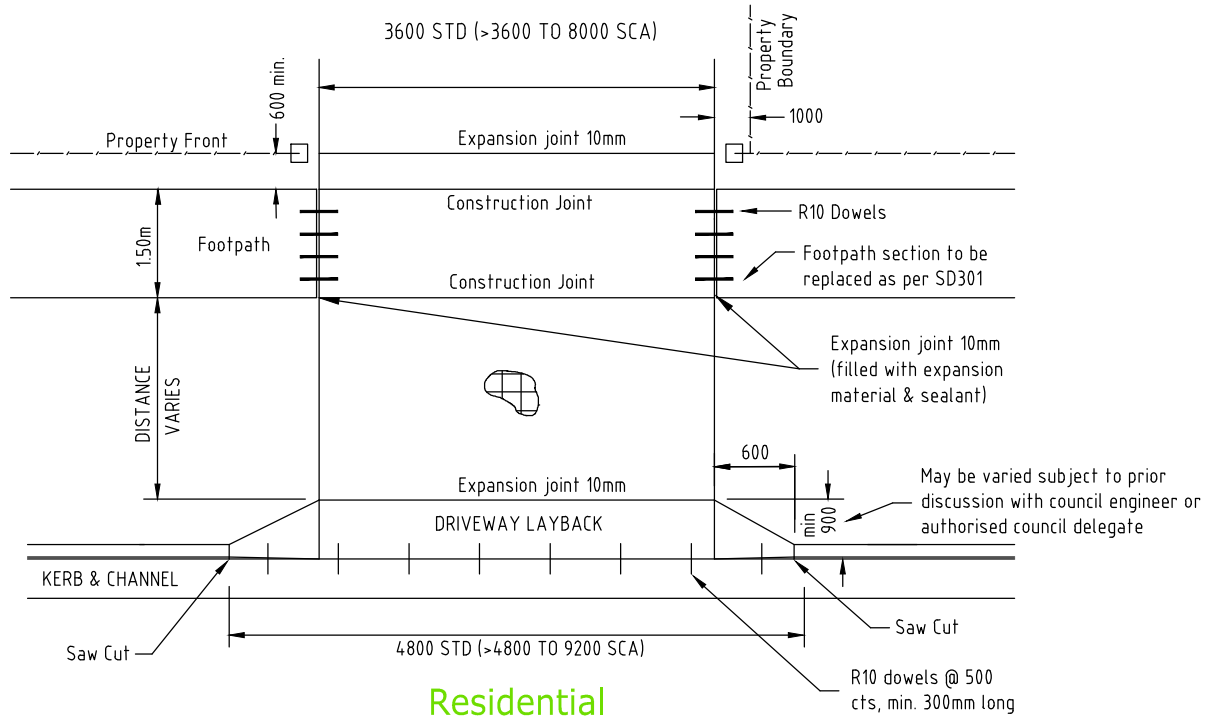
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CONCRETE VEHICLE CROSSING

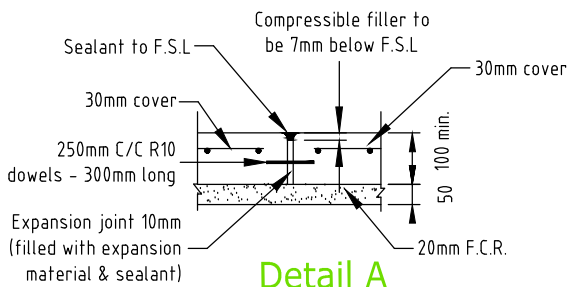
RESIDENTIAL ELEVATION LIMITS

SD407

REV
A

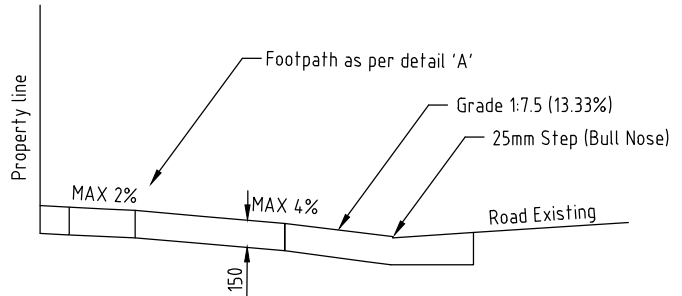


Residential

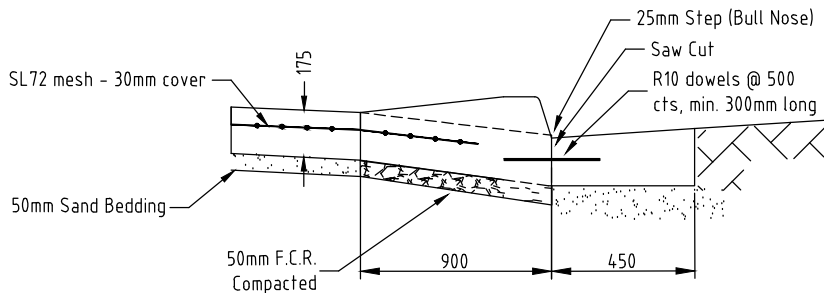


Detail A

Footpath-Residential Crossing



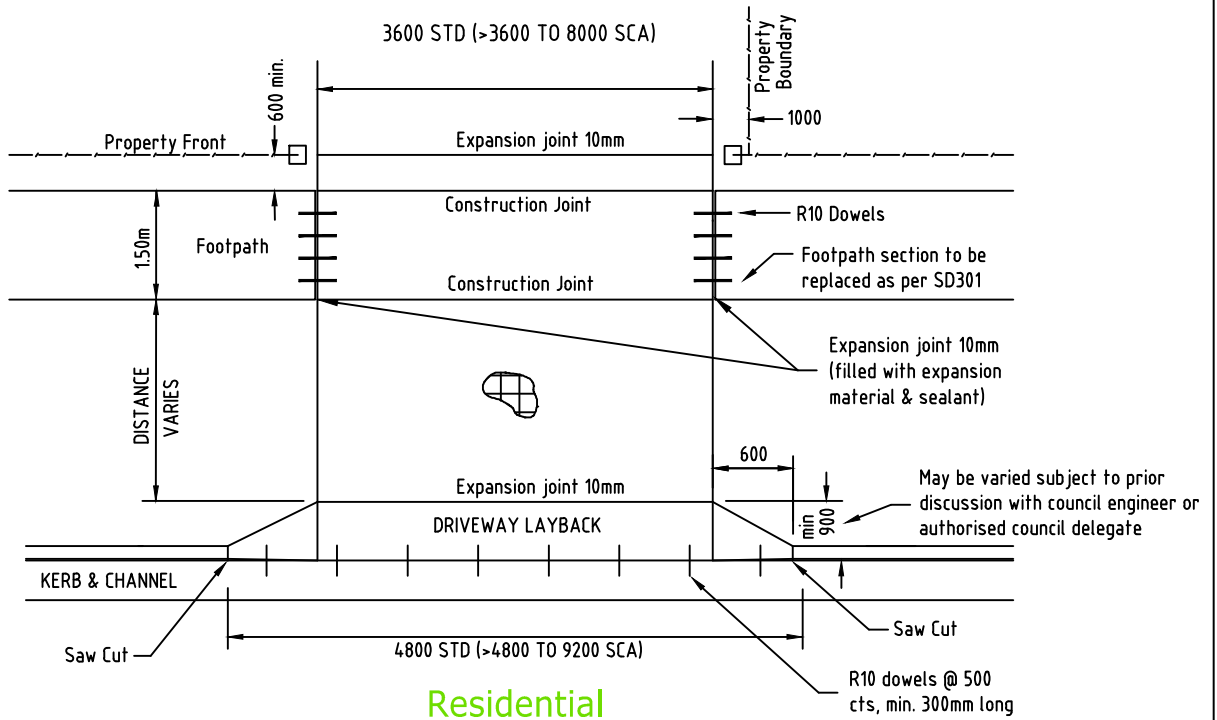
Elevation (Normal Grade)



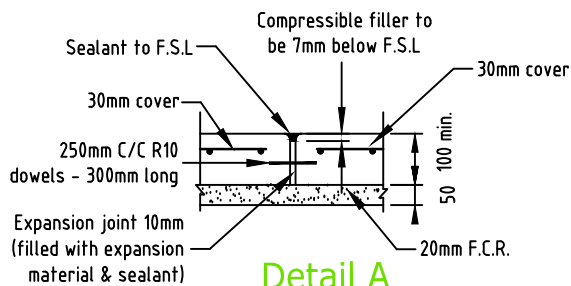
Detail

NOTES

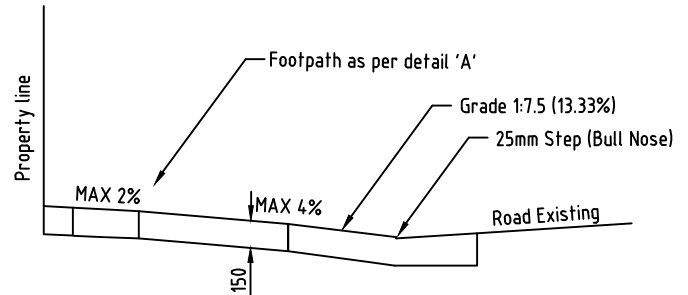
1. Road opening permit shall be obtained from Federation Council prior to commencing works.
2. Vehicle crossings (driveway layback) shall be square to the road, otherwise alignment is to be approved by council prior to commencement of works.
3. All vehicle crossings shall be inspected by council representative after formwork & mesh are in place and prior to pouring concrete.
4. Light industrial & commercial crossings to be 175mm thick, 30MPa concrete with two layers of SL72 mesh.
5. SCA - indicates 'subject to council approval'.
6. Contractor to ensure pedestrian safety is addressed during works.
7. Contractor to ensure 'dial before you dig' information is obtained & services are identified.
8. All measurements are in millimetres.
9. Concrete paths as per standard drawing - SD301.
10. Driveways to be 1m from all existing services & infrastructure unless otherwise consulted with council.



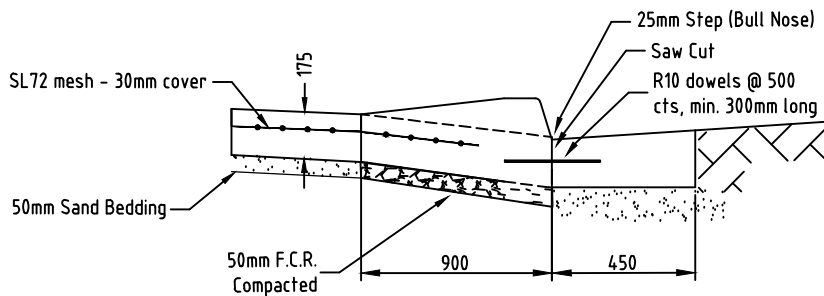
Residential



Detail A
Footpath-Residential Crossing



Elevation (Normal Grade)



Detail

NOTES

- Road opening permit shall be obtained from Federation Council prior to commencing works.
- Vehicle crossings (driveway layback) shall be square to the road, otherwise alignment is to be approved by council prior to commencement of works.
- All vehicle crossings shall be inspected by council representative after formwork & mesh are in place and prior to pouring concrete.
- Light industrial & commercial crossings to be 175mm thick, 30MPa concrete with two layers of SL72 mesh.
- SCA - indicates 'subject to council approval'.
- Contractor to ensure pedestrian safety is addressed during works.
- Contractor to ensure 'dial before you dig' information is obtained & services are identified.
- All measurements are in millimetres.
- Concrete paths as per standard drawing - SD301.
- Driveways to be 1m from all existing services & infrastructure unless otherwise consulted with council.