Specifications for the Construction of a Standard Vehicle Crossover

Shire of Murray

General

a) This specification is made pursuant to the provisions of Section 357 and Section 358 of the Local Government Act 1995 and as may be amended.
b) The construction of vehicle crossovers shall be executed under the supervision of and to the direction of the Director Infrastructure Services or his authorised representative.
c) All materials used in the construction of vehicle crossovers shall be in accordance with the standard specification of the Shire and any materials used which are inferior to those specified, or as directed by the Director Infrastructure Services, shall be liable to rejection and replacement without any payment of compensation being made to the contractor for the supply, delivery, laying, placing, finishing, removal or disposal of anything rejected, as directed by the Director Infrastructure Services. **Note:** The contractor shall be known as the person responsible for the construction of the vehicle crossover.
d) Protection of the works and the public shall be provided and maintained by the contractor who shall supply and keep supplied as directed all the necessary signs, barricades, rod warning lamps, temporary bridges or any other thing necessary, or as may be directed by the Director Infrastructure Services, to provide for the safety of the public generally and to protect the works from damage for the minimum period of three days following completion of the works. Failure to provide or keep provided shall render the contractor liable under Section 377 of the Local Government Act 1995 or as amended. All such protective equipment shall comply with the relevant Standards Association of Australia (SAA) code.
e) Any damage which may occur to any Shire's facilities or private property or the vehicle crossover itself during the course of the works, or which may subsequently become evident from the operation thereof, shall be the sole responsibility of the contractor who shall be held responsible for the repair, replacement, legal claims, liability or any other thing which may arise from the carrying out of any such works.

Location

a) The vehicle crossover shall be positioned as directed by the Director Infrastructure Services. The vehicle crossover shall be located in such a position as to not cause interference with public utilities.
b) All crossovers shall be at right angles (90 degrees) to the carriageway kerb.
c) Crossovers shall be no closer than 1500mm from the side boundary.
d) No crossover shall be constructed closer than 6.5m from the property line intersection point at a corner site, nor shall it infringe upon any part of a truncation corner cut off.
e) Where two residential vehicle crossovers abut one to another, they may be combined, subject to the Director Infrastructure Services written approval and subject to the

combined width not exceeding 8.0m. The two crossovers shall be separated by a pedestrian refuge of 3.0m minimum width unless specifically approved by the Director Infrastructure Services.

f) All commercial vehicle crossovers shall be separated one from another by a pedestrian refuge of 3.0m minimum width except for service stations which shall have a pedestrian refuge of 4.5m minimum width or as designed by the Director Infrastructure Services.

Alignment and Profile

a) The turn-out radii shall be not less than 1500mm and no portion of the radius is to extend beyond the frontage limits of the property it serves.
b) The vehicle crossover finished level at the property line boundary is to be a minimum of 100mm above the crown of the road or 75mm above the top of the kerb. Any variation to these heights to be determined by the Director Infrastructure Services.
c) Where kerbing exists, the level of the vehicle crossover, at a distance of 1500mm behind the kerb, shall be at the same level as the top of the kerb, or 125mm above the road gutter, whichever is greater.
d) Where barrier or semi-barrier kerbing is in place at the vehicle crossover, the length of kerbing equal to the appropriate entrance width of the vehicle crossover shall be removed in all cases. The existing in-situ kerbing shall be cut with a concrete cutting saw or existing pre-cast kerbing should be removed without damage to pavement or remaining kerbing.
e) Where mountable kerbing is in place at the vehicle crossover, the length of kerbing equal to the appropriate entrance width of the vehicle crossover shall be removed only if:
    i. The mountable kerbing is cracked in one or more places.
    ii. The average depth between the road surface and the front of the existing kerbing exceeds 25mm, where the final hot mix surface has been placed.
    iii. It is a commercial crossover.

Brick/Block Construction

a) Preparation
The existing ground shall be boxed out and shaped to the required dimensions and levels. Compaction of the sub-grade shall be carried out using overlapping passes of a vibrating plate compactor. The excavation shall be made to provide a firm base, free from depressions or soft spots or any deleterious material.
b) Edge Restraint
A firm edge restraint preventing lateral movement of paving units at the edges is required. The edge restraint must be in the form of pre-cast or in-situ concrete, or a timber strip.
c) Sand Bedding
The bedding material must be a well graded concreting bricklayer's sand which when compacted will have a uniform thickness of 50mm.
d) Bricks / Blocks Construction – Residential
All paving bricks / blocks used should have a minimum thickness of 65mm and be full depth homogenous units of solid construction or alternatively be of non-solid construction with a minimum characteristic breaking load of 5kn. Bricks / blocks used shall be full depth units of solid construction, i.e. no block 'splits.

e) Bricks / Block Construction – Commercial
Commercial vehicle crossovers should have a minimum thickness of 80mm high performance pavers laid in a herringbone pattern on a 150mm compacted bed of gravel, limestone or road base, with a 20mm layer of sand and then the pavers.

f) Laying of Bricks/Blocks
Paving bricks / blocks should be placed with 2 – 4mm gaps between adjacent units, maintaining correct jointing alignment but without pre-compaction of the sand bedding layer. Gaps at the pavement edge adjacent to the edge restraints are to be neatly filled by cutting bricks / blocks to size with a guillotine or bolster for concrete units, or a diamond saw for clay bricks / blocks.

g) Compaction and Joint Filling
After laying, the paving units are to be immediately compacted and brought to level by three passes of a vibrating plate compactor. Prior to compaction the sand for joint filling is to be broomed over the surface and into the joints. Excess sand is to be removed. (Washed single sized sand is required).

h) Kerbing
When in-situ mountable kerbing is provided paving bricks / blocks are to be laid level with the top of such kerb.

Concrete Construction

a) Preparation
The existing ground shall be boxed out and shaped to the required dimensions and levels. Compaction of the sub-grade shall be carried out using overlapping passes of a vibrating plate compactor. The excavation shall be made to provide a firm base, free from depressions or soft spots or any deleterious material.

b) Steel Reinforcement
   i. Residential vehicle crossovers – F42 steel mesh
   ii. Commercial vehicle crossovers – F62 steel mesh

c) Concrete
All concrete used in works shall develop a minimum compressive strength of 20Mpa at 28 days and shall be composed of a mixture of screenings, sand and cement with a maximum slump of 80mm. Please note: minimum allowable aggregate size for crossovers is 10mm. All concrete shall have an approved high early strength additive to give rapid hardening where directed by the Director Infrastructure Services.

d) Excavation
The excavation for the crossover bed shall be taken out to the lines, levels and grades set by the Director Infrastructure Services and all excavation shall be executed cleanly and efficiently to provide for a consolidated sound base free from depressions and/or any deleterious material to give a minimum 100mm depth of concrete pavement for residential vehicle crossovers or a minimum depth of 150mm for commercial vehicle crossovers.

e) Placing Concrete
The base shall be thoroughly and evenly moistened prior to placing concrete. Concrete shall be evenly placed to a depth specified and shovelled into position continuously and spaded especially at all edges to give maximum density. No break in operations shall be permitted from time of placing to finishing except as authorised by the Director Infrastructure Services.

Note: The contractor shall notify the Director Infrastructure Services 24 hours before pouring of concrete. No concrete is to be poured until the excavation has been inspected and approved.

f) Finishing

The finishing shall be obtained by screeding to the correct levels and broom or wood float finished to match any existing concrete finish and to provide a no-slip dense surface free of any depressions, marks, honeycomb sections or accumulation of fine dust accretions liable to cause excessive wear. The final surface finish shall be to the entire satisfaction of the Director Infrastructure Services who shall reserve the right to require the removal of or the correction of any surface deficiencies or finish.

Note: A street trowel finish is not permitted on any surface of a vehicle crossover.

g) Jointing

Construction joints shall be made in the form of plain dummy joints and finished with an approved jointing tool and in the positions as shown on the plan. The distance whether laterally or longitudinally between contraction joints shall not exceed 2m. Expansion joints shall be full depth joints 14mm wide and shall be filled with bitumen impregnate caneite or similar approved material and located at the property line and at junctions where kerbing has been removed.

h) Tolerances

Thickness	100mm + 25mm
Width	+/- 10mm
Surface	+ 5mm
Alignment	+ 50mm

Construction – Other Materials

Construction of crossovers from other materials shall only be considered for commercial properties.

Opening for Traffic

The crossover can be opened for traffic:

i. Brick paving – as soon as the concrete forming the edge restraints is set.
ii. Concrete – after 24 hours.

General

Reinstatement of Footpaths

Where concrete in-situ paths are removed to permit the construction of a crossover, they shall be cut with a concrete saw and if necessary removed to the contraction or expansion joint nearest to the crossover. The footpath shall be ‘tied’ into the crossover by filling with concrete to a minimum thickness of 100mm. The reinstated footpath and the vehicle crossover shall be separated by an expansion joint as specified.

Reinstatement of Verge

It shall be the contractor's responsibility to backfill any excavation or depression in the adjacent verge with clean sand free of any stone or other deleterious material.

Contractor's Responsibilities

The contractor shall be responsible for, but not limited to, the following:

i. Removal and disposal of all surplus material from the site of the works and leaving the site in a clean, tidy and safe condition at all times.
ii. Removal of formwork without damage to concrete or pavement or existing kerbing.
iii. The repair to any damage to public utilities, services or any other thing damaged during the course of the works.
iv. Liaison with ratepayers to provide access and notification of intention to commence works.
v. The protection of concrete surface from rain, pedestrian and vehicular traffic etc.
vi. To give at least 23 hours' notice to the Infrastructure Service Department so that a form work inspection can be undertaken.

Completion

On completion the site is to be left in a clean, tidy condition to the satisfaction of the Director Infrastructure Services.

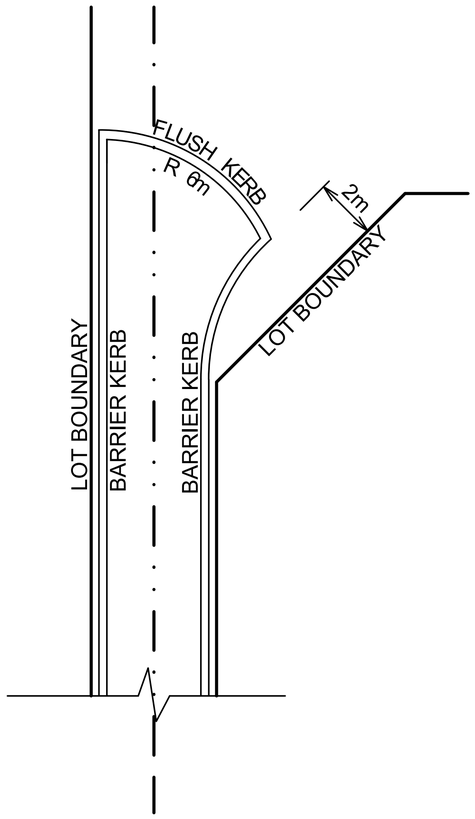
Reinstatement must be made to kerbing, footpaths or bitumous road surfaces damaged during the crossover construction. Any concrete must be removed from the road surface.

The area must be cleared of debris, bitumen and concrete products etc on completion of the works.

Any special requirements placed on the construction or location of a crossover by the Director Infrastructure Services or authorised deputy must be adhered to.

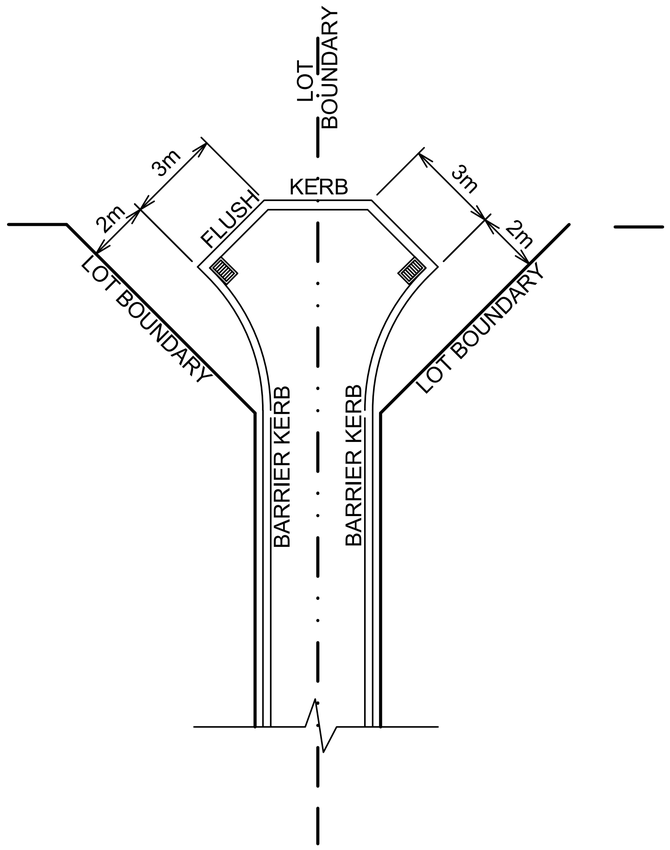
Council Contribution

a) On completion of a crossover, a written application on the appropriate form should be made to the Shire of Murray for a contribution and a final inspection. A delivery docket or supply docket stating strength and quantity of materials used must be attached to the application. The contribution of Council shall be 50% of a standard single vehicle crossover constructed in concrete. The subsidy will only be made to vehicle crossovers that conform to Shire's specifications or are previously approved in writing otherwise.
b) This application should be made as soon as possible after construction of the crossover.
c) Only one crossover per lot will be contributed to by the Shire.
d) Where crossovers are constructed all repairs and maintenance shall be the responsibility of the property owner excluding reinstatement after any road upgrading by Council.
e) If your vehicle crossover cannot meet these specifications please contact the discuss alternatives before



SINGLE BATTLEAXE PLAN

SCALE 1 : 200



DUAL BATTLEAXE PLAN

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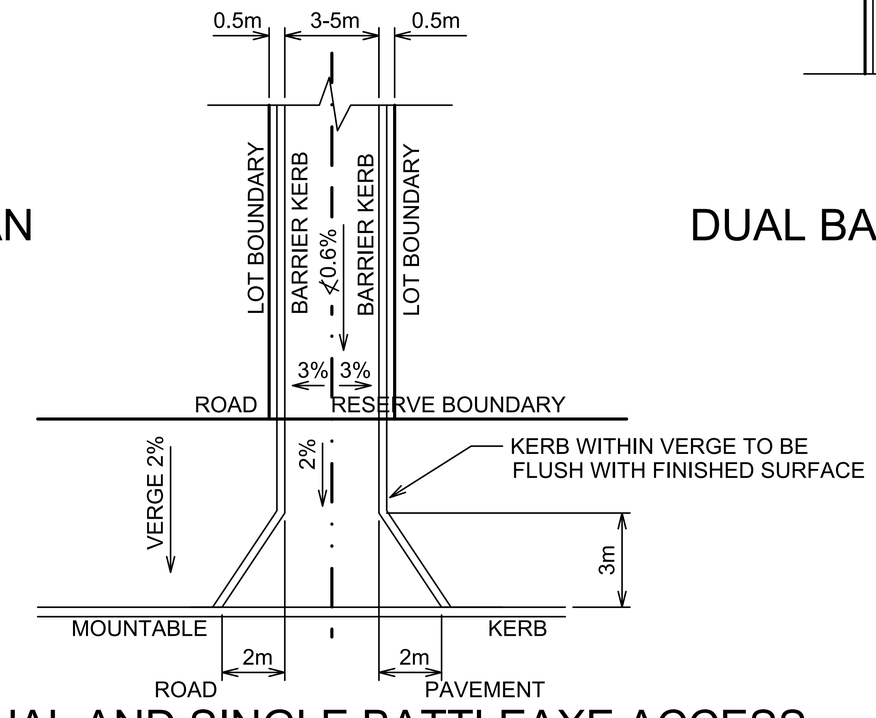


DUAL AND SINGLE BATTLEAXE ACCESS

SCALE 1 : 200

NOTES

BATTLEAXES TO BE CONSTRUCTED IN ACCORDANCE WITH

SHIRE OF MURRAY.
SPECIFICATIONS FOR THE CONSTRUCTION
OF STANDARD TYPE CONCRETE OR BITUMEN PAVED VEHICLE CROSSINGS
AND
SPECIFICATIONS FOR THE CONSTRUCTION
OF STANDARD TYPE BRICK PAVED VEHICLE CROSSINGS.

No.	DATE	REVISION	BY	CHKD	APPR'D	DATE

C.A.D.D. File Nos.

MICROSTATION	CIVILCAD
SURVEYED BY DATE	DATUM

NOT TO BE USED FOR CONSTRUCTION UNTIL SIGNED APPROVED.

APPROVED .....

POSITION .....

DATE .....

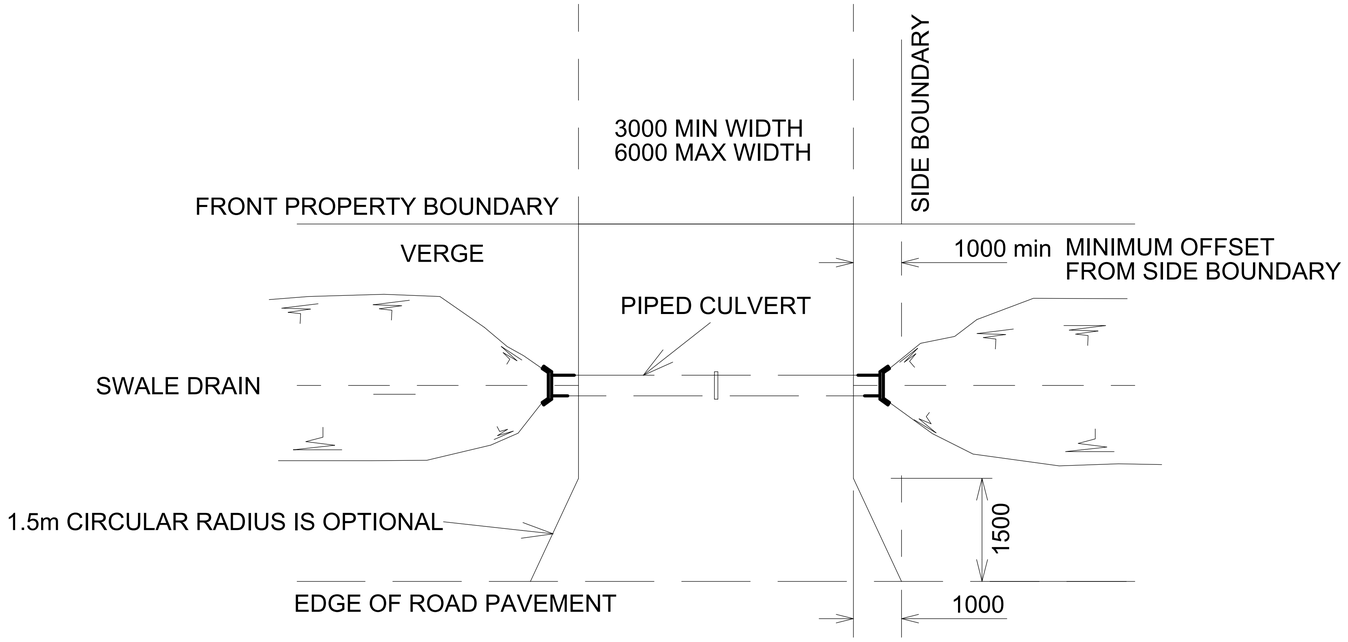
DESIGNER TO COMPLETE

	Date
DESIGNED	
DRAWN	
DRAFT CHECK	
DESIGN CHECK	

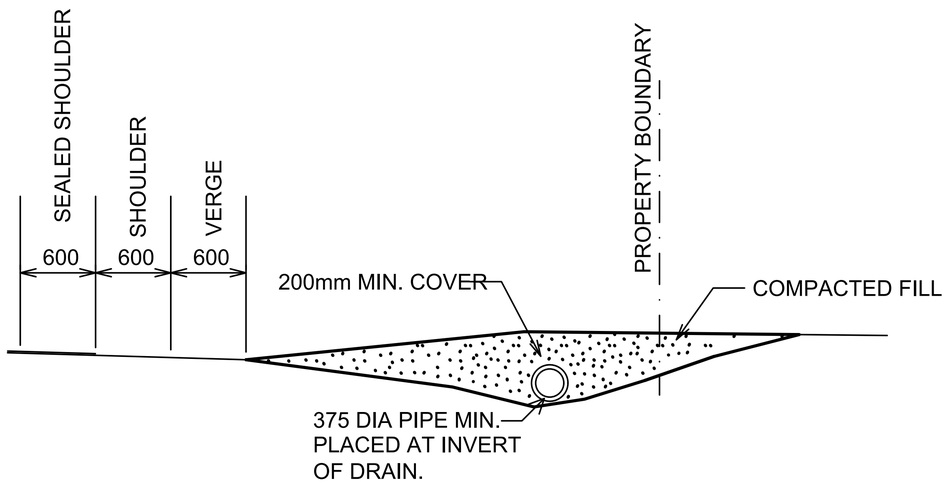
Shire of Murray

STANDARD DETAIL BATTLEAXE ACCESS

JOB No.	SCALE		DWG No.
	1:200	A3	STD D01



RURAL CROSSOVER



SECTION THROUGH DRIVEWAY CROSSING - PIPE
STANDARD RURAL

NOTE

THIS DOES NOT APPLY TO CROSSOVERS CONSTRUCTED AT SUBDIVISION STAGE.
CULVERT DESIGN MUST BE SIZED IN ACCORDANCE WITH DESIGN SWALE CAPACITY.

No.	DATE	REVISION	BY	CHKD	APPR'D	DATE

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MICROSTATION	CIVILCAD
SURVEYED BY DATE	DATUM

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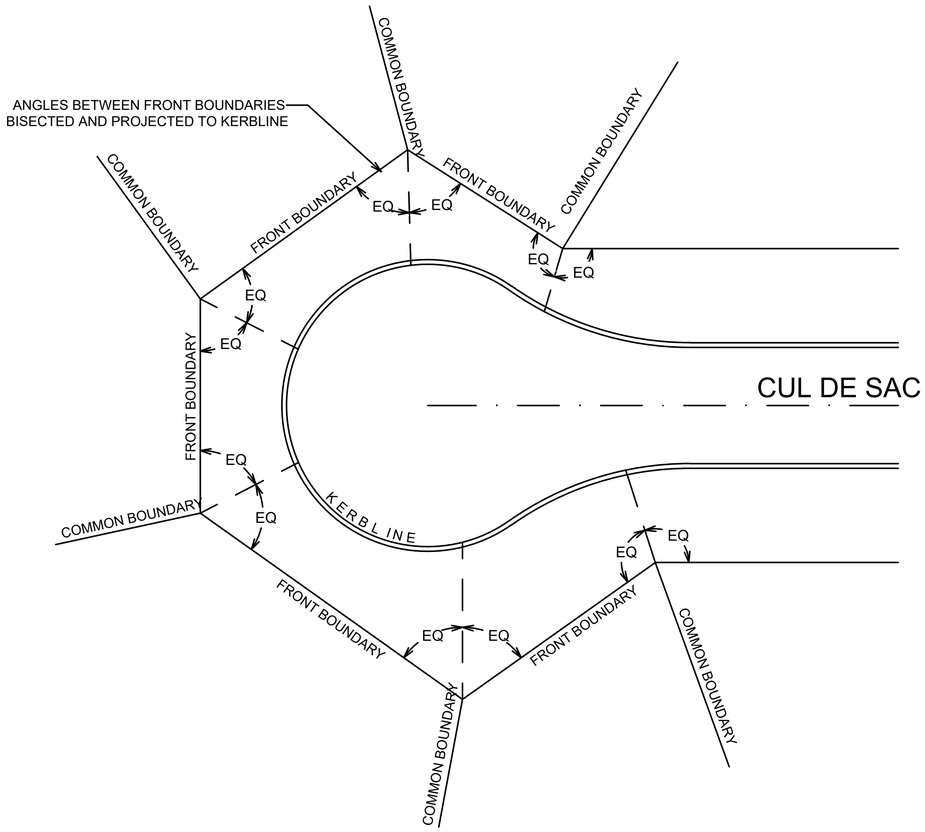
POSITION .....
DATE .....

DESIGNER TO COMPLETE	Date
DESIGNED	
DRAWN	
DRAFT CHECK	
DESIGN CHECK	

Shire of Murray

STANDARD DETAIL
TYPICAL CROSSOVER
STANDARD RESIDENTIAL

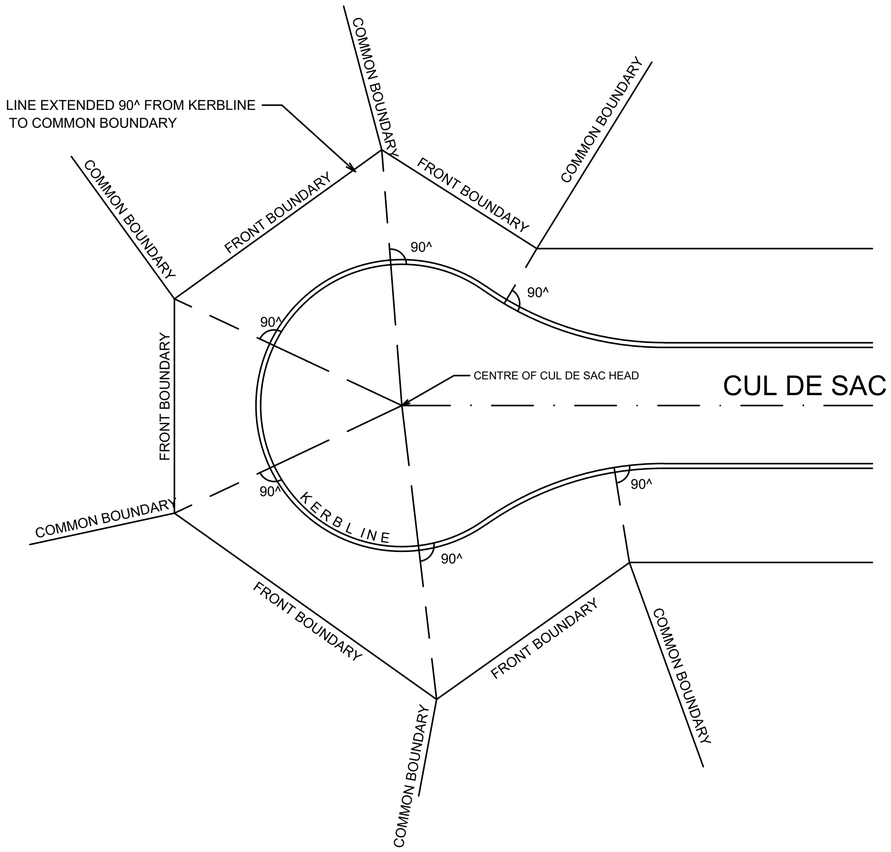
JOB No.	SCALE	A3	DWG No. STD D02



METHOD 1 - BISECTING ANGLE

METHOD 1 TO BE USED IN CONSULTATION WITH THE ADJOINING NEIGHBOURS

N.T.S.



METHOD 2 - PERPENDICULAR (90^) FROM KERBLINE

METHOD 2 TO BE USED WHERE METHOD 1 WILL NOT ACCOMMODATE CROSSOVERS

AND IS TO BE USED ONLY IN CONSULTATION WITH THE ADJOINING NEIGHBOURS AND COUNCIL.

N.T.S.

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DRAFT CHECK	
DESIGN CHECK	

Shire of Murray

STANDARD DETAIL CUL-DE-SAC HEADS AND EYEBROWS

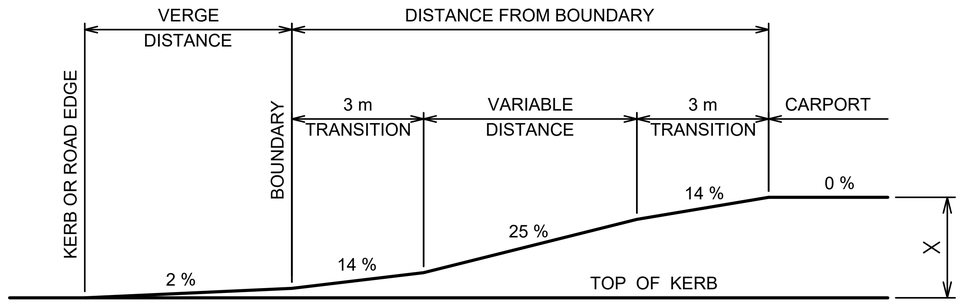
JOB No.

SCALE N.T.S.

A3

DWG No. STD D03

SETBACK FROM BOUNDARY	VERGE LENGTH 3	4	5	6	7	8	9	10	11	12	13
3.2	.51	.53	.55	.57	.59	.61	.63	.65	.67	.69	.71
3.6	.56	.58	.60	.62	.64	.66	.68	.70	.72	.74	.76
4.0	.62	.64	.66	.68	.70	.72	.74	.76	.78	.80	.82
4.4	.68	.70	.72	.74	.76	.78	.80	.82	.84	.86	.88
4.8	.73	.75	.77	.79	.81	.83	.85	.87	.89	.91	.93
5.2	.79	.81	.83	.85	.87	.89	.91	.93	.95	.97	.99
5.6	.84	.86	.88	.90	.92	.94	.96	.98	1.00	1.02	1.04
6.0	.90	.92	.94	.96	.98	1.00	1.02	1.04	1.06	1.08	1.10
6.4	1.00	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.18	1.20
6.8	1.10	1.12	1.14	1.16	1.18	1.20	1.22	1.24	1.26	1.28	1.30
7.2	1.20	1.22	1.24	1.26	1.28	1.30	1.32	1.34	1.36	1.38	1.40
7.6	1.30	1.32	1.34	1.36	1.38	1.40	1.42	1.44	1.46	1.48	1.50
8.0	1.40	1.42	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58	1.60
8.4	1.50	1.52	1.54	1.56	1.58	1.60	1.62	1.64	1.66	1.68	1.70
8.8	1.60	1.62	1.64	1.66	1.68	1.70	1.72	1.74	1.76	1.78	1.80
9.2	1.70	1.72	1.74	1.76	1.78	1.80	1.82	1.84	1.86	1.88	1.90
9.6	1.80	1.82	1.84	1.86	1.88	1.90	1.92	1.94	1.96	1.98	2.00
10.0	1.90	1.92	1.94	1.96	1.98	2.00	2.02	2.04	2.06	2.08	2.10
10.4	2.00	2.02	2.04	2.06	2.08	2.10	2.12	2.14	2.16	2.18	2.20
10.8	2.10	2.12	2.14	2.16	2.18	2.20	2.22	2.24	2.26	2.28	2.30
11.2	2.20	2.22	2.24	2.26	2.28	2.30	2.32	2.34	2.36	2.38	2.40
11.6	2.30	2.32	2.34	2.36	2.38	2.40	2.42	2.44	2.46	2.48	2.50
12.0	2.40	2.42	2.44	2.46	2.48	2.50	2.52	2.54	2.56	2.58	2.60
12.4	2.50	2.52	2.54	2.56	2.58	2.60	2.62	2.64	2.66	2.68	2.70
12.8	2.60	2.62	2.64	2.66	2.68	2.70	2.72	2.74	2.76	2.78	2.80
13.2	2.70	2.72	2.74	2.76	2.78	2.80	2.82	2.84	2.86	2.88	2.90
13.6	2.80	2.82	2.84	2.86	2.88	2.90	2.92	2.94	2.96	2.98	3.00



FIGURES INSIDE THE CHART ARE THE MAXIMUM HEIGHT DIFFERENCE (X) BETWEEN THE TOP OF KERB AND CARPORT FLOOR LEVEL

No.	DATE	REVISION	BY	CHKD	APPR'D	DATE

C.A.D.D. File Nos.

MICROSTATION	CIVILCAD
SURVEYED BY DATE	DATUM

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Shire of Murray

STANDARD DETAIL MAXIMUM CARPORT LEVEL AND DRIVEWAY FOR VERGES AT 2% GRADIENT

JOB No.

SCALE N.T.S.

A3

DWG No. STD D04

VERGE LENGTH

SETBACK FROM BOUNDARY	3	4	5	6	7	8	9	10	11	12	13
3.2	.52	.62	.72	.82	.92	1.02	1.12	1.22	1.32	1.42	1.52
3.6	.61	.71	.81	.91	1.01	1.11	1.21	1.31	1.41	1.51	1.61
4.0	.70	.80	.90	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70
4.4	.79	.89	.99	1.09	1.19	1.29	1.39	1.49	1.59	1.69	1.79
4.8	.88	.98	1.08	1.18	1.28	1.38	1.48	1.58	1.68	1.78	1.88
5.2	.96	1.06	1.16	1.26	1.36	1.46	1.56	1.66	1.76	1.86	1.96
5.6	1.05	1.15	1.25	1.35	1.45	1.55	1.65	1.75	1.85	1.95	2.05
6.0	1.14	1.24	1.34	1.44	1.54	1.64	1.74	1.84	1.94	2.04	2.14
6.4	1.24	1.34	1.44	1.54	1.64	1.74	1.84	1.94	2.04	2.14	2.24
6.8	1.34	1.44	1.54	1.64	1.74	1.84	1.94	2.04	2.14	2.24	2.34
7.2	1.44	1.54	1.64	1.74	1.84	1.94	2.04	2.14	2.24	2.34	2.44
7.6	1.54	1.64	1.74	1.84	1.94	2.04	2.14	2.24	2.34	2.44	2.54
8.0	1.64	1.74	1.84	1.94	2.04	2.14	2.24	2.34	2.44	2.54	2.64
8.4	1.74	1.84	1.94	2.04	2.14	2.24	2.34	2.44	2.54	2.64	2.74
8.8	1.84	1.94	2.04	2.14	2.24	2.34	2.44	2.54	2.64	2.74	2.84
9.2	1.94	2.04	2.14	2.24	2.34	2.44	2.54	2.64	2.74	2.84	2.94
9.6	2.04	2.14	2.24	2.34	2.44	2.54	2.64	2.74	2.84	2.94	3.04
10.0	2.14	2.24	2.34	2.44	2.54	2.64	2.74	2.84	2.94	3.04	3.14
10.4	2.24	2.34	2.44	2.54	2.64	2.74	2.84	2.94	3.04	3.14	3.24
10.8	2.34	2.44	2.54	2.64	2.74	2.84	2.94	3.04	3.14	3.24	3.34
11.2	2.44	2.54	2.64	2.74	2.84	2.94	3.04	3.14	3.24	3.34	3.44
11.6	2.54	2.64	2.74	2.84	2.94	3.04	3.14	3.24	3.34	3.44	3.54
12.0	2.64	2.74	2.84	2.94	3.04	3.14	3.24	3.34	3.44	3.54	3.64
12.4	2.74	2.84	2.94	3.04	3.14	3.24	3.34	3.44	3.54	3.64	3.74
12.8	2.84	2.94	3.04	3.14	3.24	3.34	3.44	3.54	3.64	3.74	3.84
13.2	2.94	3.04	3.14	3.24	3.34	3.44	3.54	3.64	3.74	3.84	3.94
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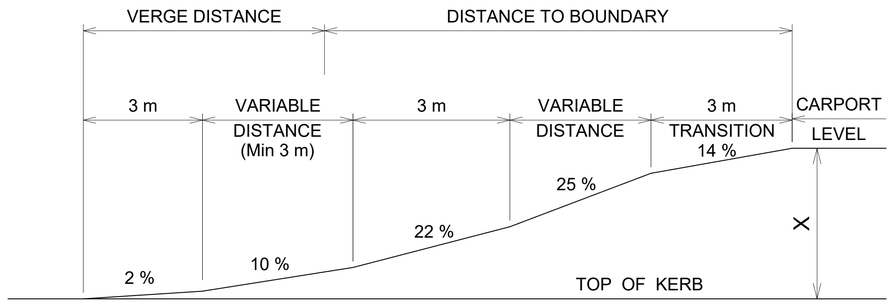

FIGURES INSIDE THE CHART ARE THE MAXIMUM HEIGHT DIFFERENCE (X) BETWEEN THE TOP OF KERB AND CARPORT FLOOR LEVEL

No.	DATE	REVISION	BY	CHKD	APPR'D	DATE

C.A.D.D. File Nos.

MICROSTATION | CIVILCAD

SURVEYED | DATUM

BY

DATE

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DRAWN	
DRAFT CHECK	
DESIGN CHECK	

Shire of Murray

STANDARD DETAIL
ABOVE CARPORT LEVEL AND DRIVEWAY VERGES EXCEEDING 2% GRADIENT

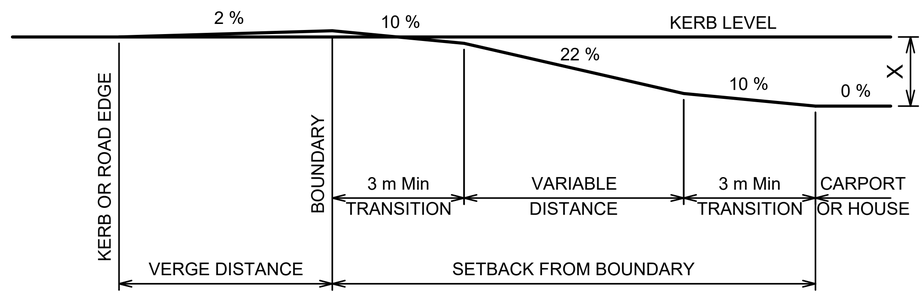
JOB No.

SCALE N.T.S.

A3

DWG No. STD D05

SETBACK FROM BOUNDARY	VERGE LENGTH 3	4	5	6	7	8	9	10	11	12	13
3.2	.26	.24	.22	.20	.18	.16	.14	.12	.10	.08	.06
3.6	.30	.28	.26	.24	.22	.20	.18	.16	.14	.12	.10
4.0	.34	.32	.30	.28	.26	.24	.22	.20	.18	.16	.14
4.4	.38	.36	.34	.32	.30	.28	.26	.24	.22	.20	.18
4.8	.42	.40	.38	.36	.34	.32	.30	.28	.26	.24	.22
5.2	.46	.44	.42	.40	.38	.36	.34	.32	.30	.28	.26
5.6	.50	.48	.46	.44	.42	.40	.38	.36	.34	.32	.30
6.0	.54	.52	.50	.48	.46	.44	.42	.40	.38	.36	.34
6.4	.63	.61	.59	.57	.55	.53	.51	.49	.47	.45	.43
6.8	.72	.70	.68	.66	.64	.62	.60	.58	.56	.54	.52
7.2	.80	.78	.76	.74	.72	.70	.68	.66	.64	.62	.60
7.6	.89	.87	.85	.83	.81	.79	.77	.75	.73	.71	.69
8.0	.98	.96	.94	.92	.90	.88	.86	.84	.82	.80	.78
8.4	1.07	1.05	1.03	1.01	.99	.97	.95	.93	.91	.89	.87
8.8	1.16	1.14	1.12	1.10	1.08	1.06	1.04	1.02	1.00	.98	.96
9.2	1.24	1.22	1.20	1.18	1.16	1.14	1.12	1.10	1.08	1.06	1.04
9.6	1.33	1.31	1.29	1.27	1.25	1.23	1.21	1.19	1.17	1.15	1.13
10.0	1.42	1.40	1.38	1.36	1.34	1.32	1.30	1.28	1.26	1.24	1.22
10.4	1.51	1.49	1.47	1.45	1.43	1.41	1.39	1.37	1.35	1.33	1.31
10.8	1.60	1.58	1.56	1.54	1.52	1.50	1.48	1.46	1.44	1.42	1.40
11.2	1.68	1.66	1.64	1.62	1.60	1.58	1.56	1.54	1.52	1.50	1.48
11.6	1.77	1.75	1.73	1.71	1.69	1.67	1.65	1.63	1.61	1.59	1.57
12.0	1.86	1.84	1.82	1.80	1.78	1.76	1.74	1.72	1.70	1.68	1.66
12.4	1.95	1.93	1.91	1.89	1.87	1.85	1.83	1.81	1.79	1.77	1.75
12.8	2.04	2.02	2.00	1.98	1.96	1.94	1.92	1.90	1.88	1.86	1.84
13.2	2.12	2.10	2.08	2.06	2.04	2.02	2.00	1.98	1.96	1.94	1.92
13.6	2.21	2.19	2.17	2.15	2.13	2.11	2.09	2.07	2.05	2.03	2.01



FIGURES INSIDE THE CHART ARE THE MAXIMUM HEIGHT DIFFERENCE (X)
BETWEEN THE TOP OF KERB AND CARPORT FLOOR LEVEL

No.	DATE	REVISION	BY	CHKD	APPR'D	DATE

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DRAWN	
DRAFT CHECK	
DESIGN CHECK	

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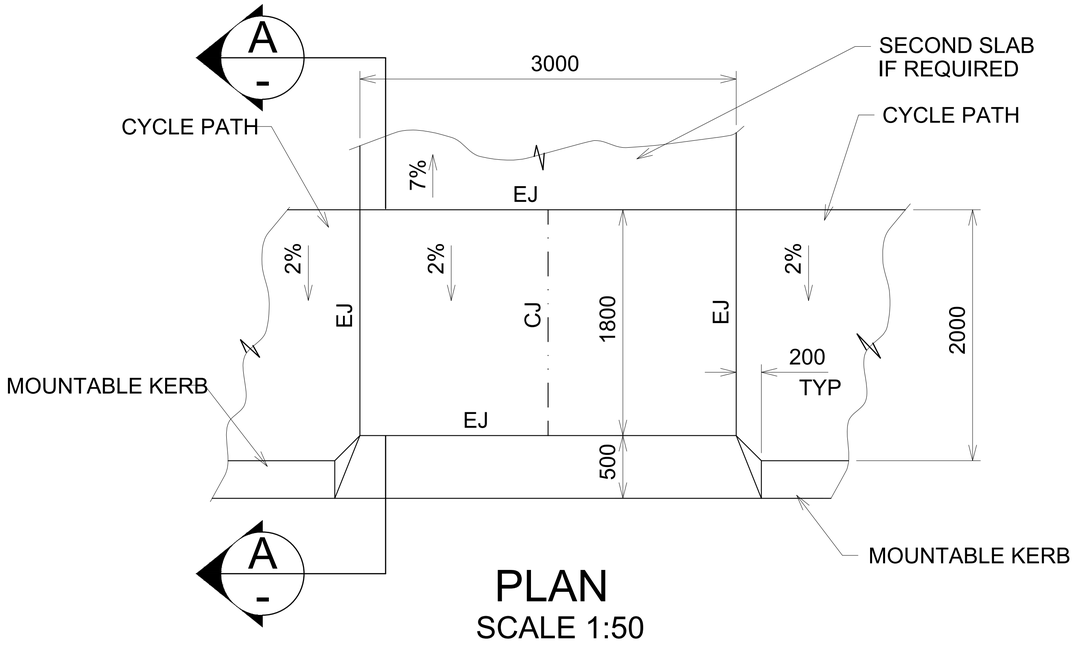
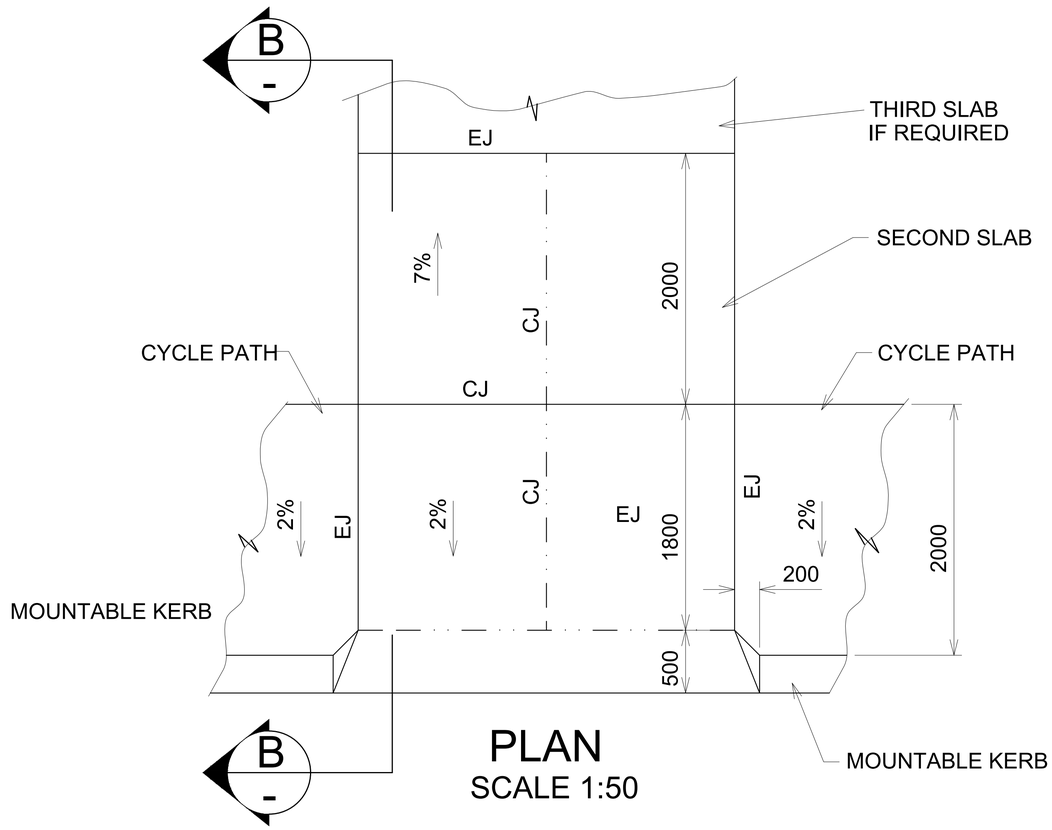
STANDARD DETAIL
BELOW CARPORT LEVEL AND DRIVEWAY VERGES EXCEEDING 2% GRADIENT

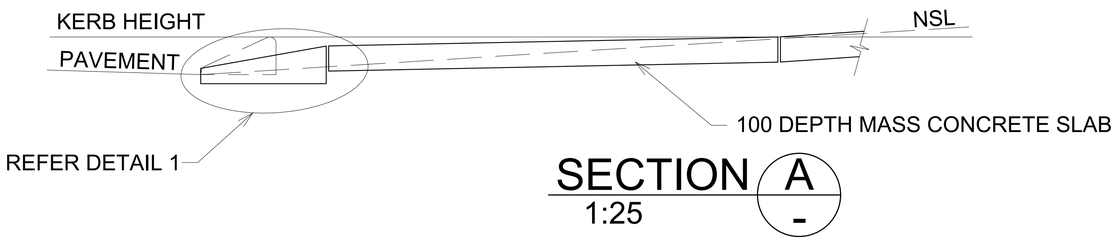
JOB No.	SCALE		DWG No.
	N.T.S.	A3	STD D06



PLAN
SCALE 1:50



PLAN
SCALE 1:50

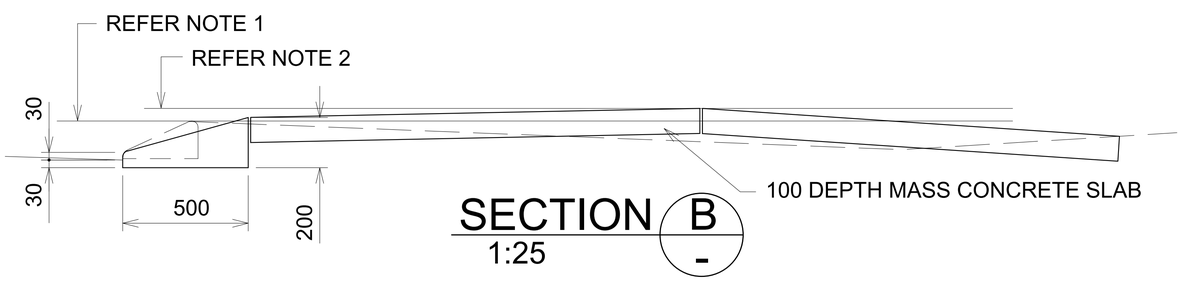


SECTION A
1:25

TO SUIT TOP OF KERB

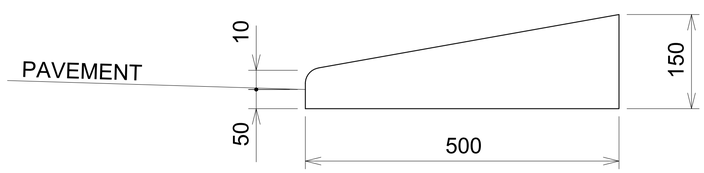
NOTES:

1. WHERE CROSSOVER LEVEL IS LEVEL WITH TOP OF KERB AT 2.0m BEHIND BACK OF KERB THIS IS AN ABSOLUTE MINIMUM REQUIREMENT
2. WHERE CROSSOVER LEVEL IS 50mm ABOVE TOP OF KERB AT 2.0m BEHIND BACK OF KERB THIS IS A PREFERRED DESIGN TO COPE WITH 100Yr ARI



SECTION B
1:25

TO SUIT 50mm ABOVE TOP OF KERB



DETAIL 1
1:10

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DATE .....

DESIGNER TO COMPLETE	Date
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DRAWN	
DRAFT CHECK	
DESIGN CHECK	

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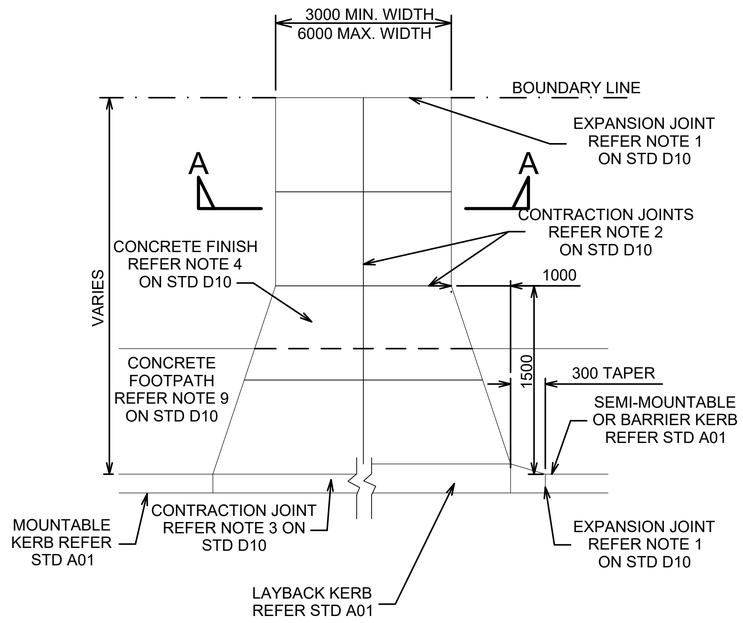
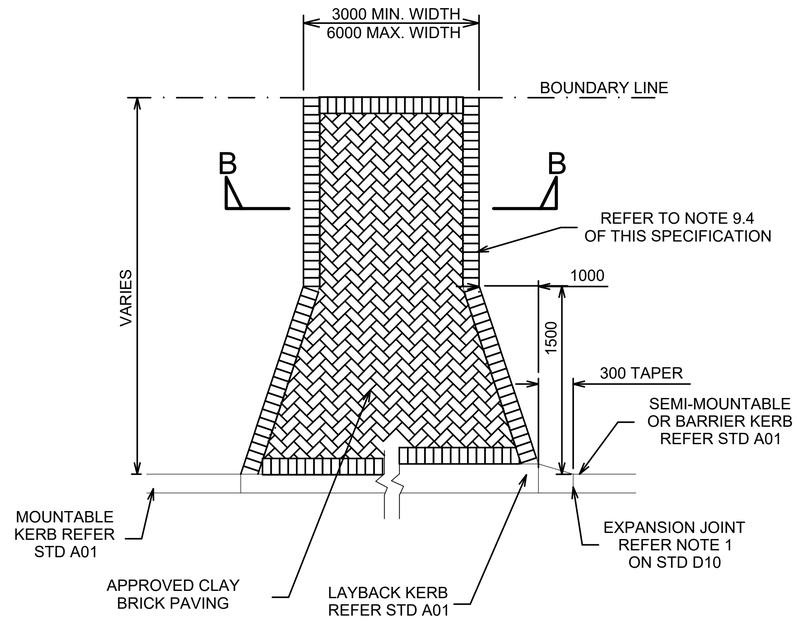
STANDARD DETAIL CROSSOVER AND SHARED PATH

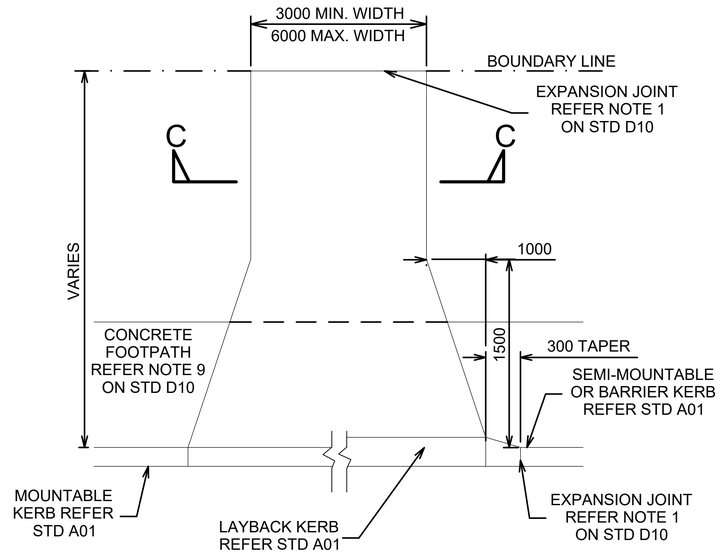
JOB No.	SCALE		DWG No.
	1:50	A3	STD D07



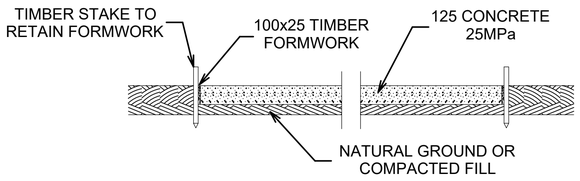
RESIDENTIAL CONCRETE CROSSOVER PLAN



RESIDENTIAL BRICK PAVED CROSSOVER PLAN

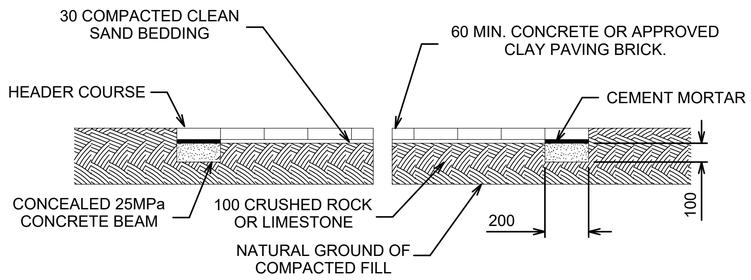


RESIDENTIAL BITUMEN CROSSOVER PLAN

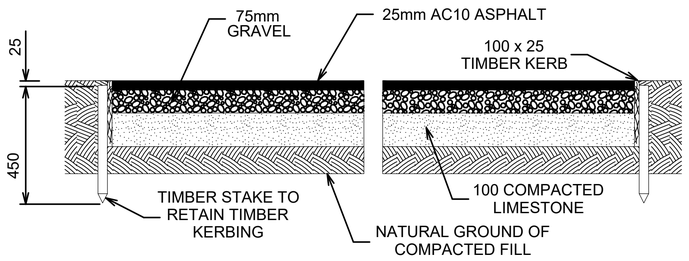


RESIDENTIAL CONCRETE CROSSOVER SECTION A-A

NOTE: IN CLAY SOILS 50mm COMPACTED SAND BEDDING IS REQUIRED.



RESIDENTIAL BRICK PAVED CROSSOVER SECTION B-B



RESIDENTIAL BITUMEN CROSSOVER SECTION C-C

NOTE:
WHERE FUTURE PATH CONSTRUCTION IS UNDERTAKEN BY THE SHIRE, IT IS COUNCIL POLICY TO REMOVE ALTERNATIVE PAVING MATERIALS OTHER THAN PLAIN GREY CONCRETE ACROSS THE CROSS OVER AT THE WIDTH OF THE PATH, TO ENSURE UNIFORMITY OF THE PATH. ie BRICKPAVING, ASPHALT & COLOURED CONCRETE FOR EXAMPLE WILL BE REMOVED.

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C.A.D.D. File Nos.

MICROSTATION | CIVILCAD

SURVEYED | DATUM

BY

DATE

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	Date
DESIGNED	
DRAWN	
DRAFT CHECK	
DESIGN CHECK	

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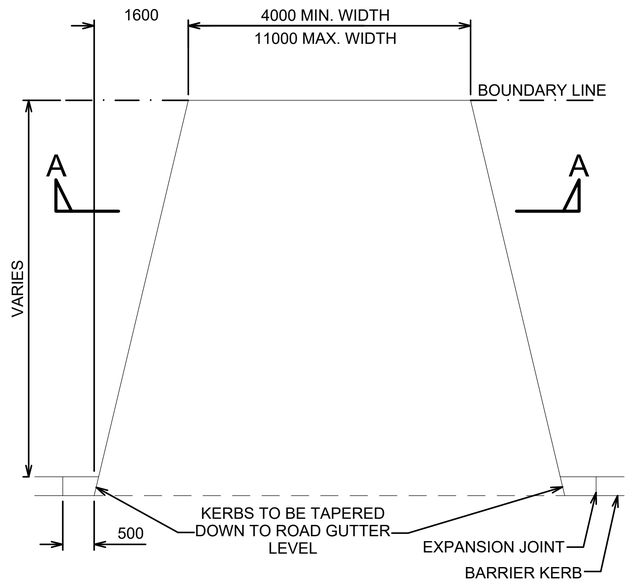
STANDARD DETAILS RESIDENTIAL CROSSOVERS

JOB No.

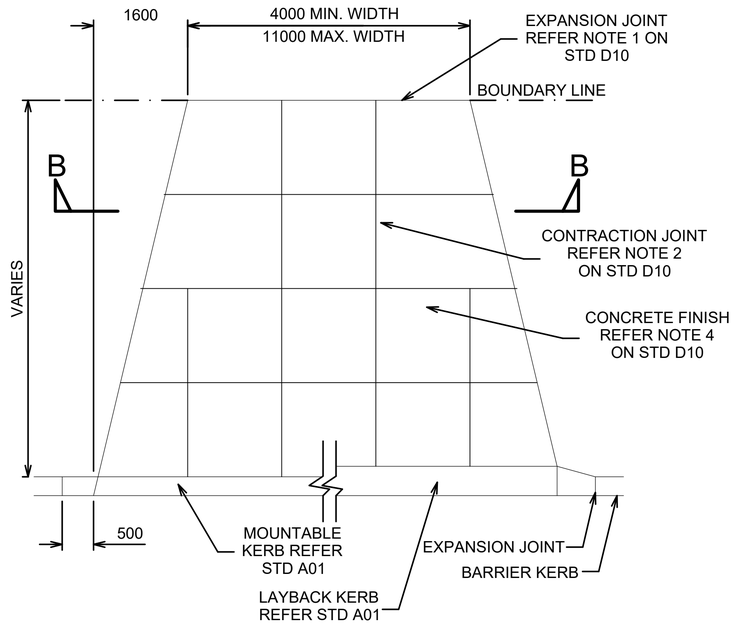
SCALE N.T.S.

A3

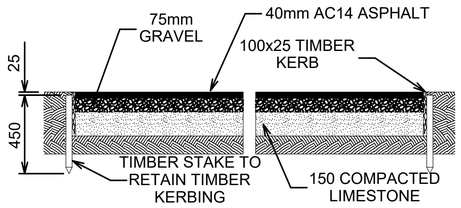
DWG No. STD D08



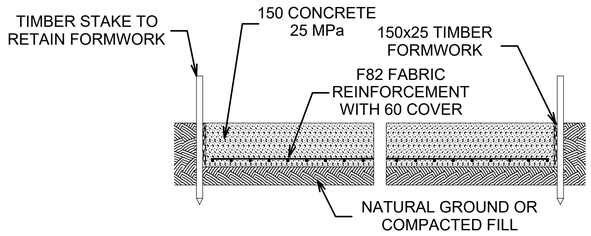
INDUSTRIAL BITUMEN CROSSOVER PLAN



COMMERCIAL OR LIGHT INDUSTRIAL CONCRETE CROSSOVER PLAN



INDUSTRIAL BITUMEN CROSSOVER SECTION A-A



COMMERCIAL OR LIGHT INDUSTRIAL CONCRETE CROSSOVER SECTION B-B

No.	DATE	REVISION	BY	CHKD	APPR'D	DATE

C.A.D.D. File Nos.

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DATE .....

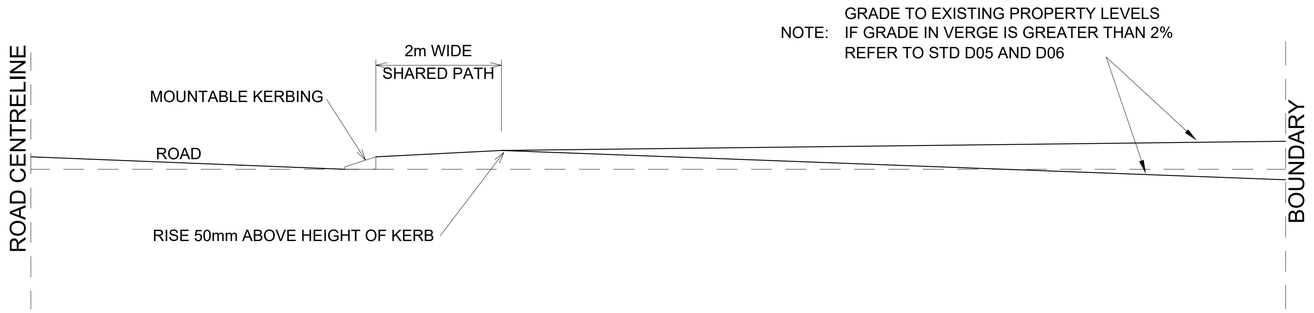
DESIGNER TO COMPLETE

	Date
DESIGNED	
DRAWN	
DRAFT CHECK	
DESIGN CHECK	

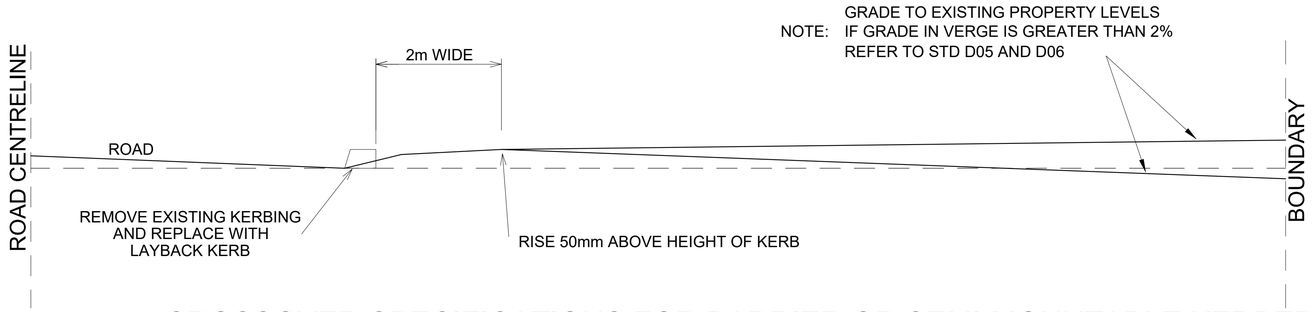
Shire of Murray

STANDARD DETAILS INDUSTRIAL BITUMEN AND CONCRETE CROSSOVER

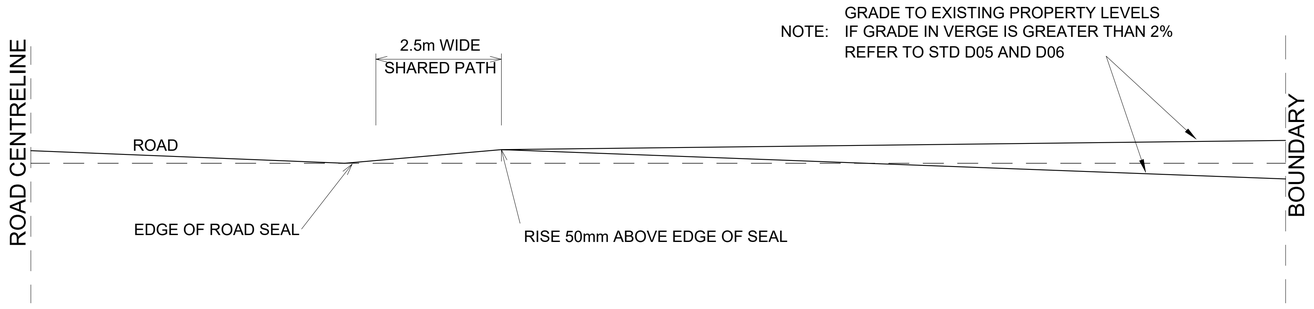
JOB No.	SCALE		DWG No.
	N.T.S.	A3	STD D09



CROSSOVER SPECIFICATIONS FOR MOUNTABLE KERBED ROADS



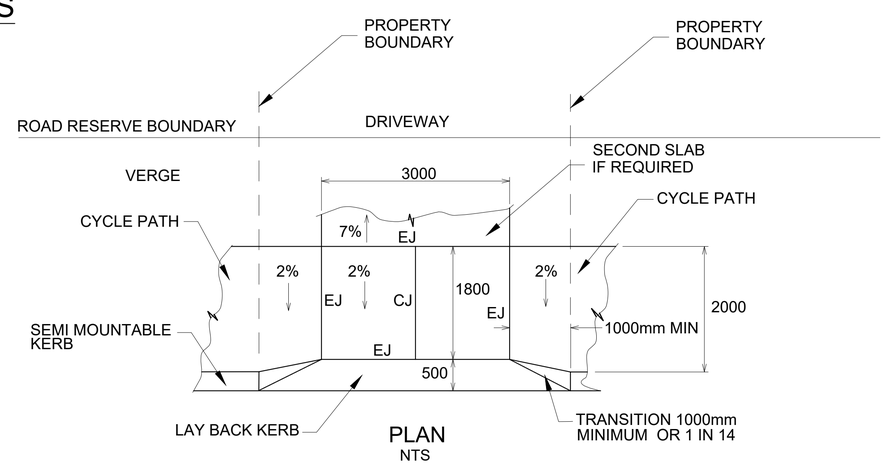
CROSSOVER SPECIFICATIONS FOR BARRIER OR SEMI-MOUNTABLE KERBED ROADS



CROSSOVER SPECIFICATIONS FOR UNKERBED ROADS

NOTES

1. 12mm EXPANSION JOINTS TO BE PROVIDED AS SHOWN. A 12mm THICK POLYETHYLENE FOAM PACKER SHALL BE POSITIONED IN EACH EXPANSION JOINT.
2. 5mm CONTRACTION JOINTS TO BE PROVIDED AT A MAXIMUM SPACING OF 1.50m.
3. WHERE MOUNTABLE KERB EXISTS A 12mm EXPANSION JOINT IS TO BE PROVIDED BETWEEN THE BACK OF KERB AND THE CROSSOVER.
4. CONCRETE CROSSOVER TO HAVE A BROOM FINISH WITH JOINTS AND EDGES HIGHLIGHTED. KERB TO HAVE SMOOTH FINISH.
5. i) PRIVATELY CONSTRUCTED CONCRETE CROSSOVERS MUST BE INSPECTED PRIOR TO POURING CONCRETE.
   ii) BRICK PAVED CROSSOVERS MUST BE INSPECTED AFTER LIMESTONE BUT PRIOR TO LAYING BRICKS.
6. ALL MEASUREMENTS IN MILLIMETRES.
7. SHOULD ANY TREE, POWER POLE, STREETLIGHT POLE, SIGN, PIT, MANHOLE OR ANY OTHER OBSTRUCTION BE LOCATED ON THE PROPOSED ALIGNMENT OF THE CROSSING THE APPLICANT SHALL BE LIABLE FOR THE COSTS ASSOCIATED WITH THE REMOVAL OR ALTERATION OF SAME.
8. TRENCH GRATING SHALL BE CONSTRUCTED BY THE APPLICANT IF CONSIDERED NECESSARY TO CUT OFF WATER ENTERING THE PROPERTY, OR ENTERING THE ROAD FROM INTERNAL DRIVEWAYS.
9. WHERE THE EXISTING CONCRETE FOOTPATH/SHARED PATH IS ONLY 75mmTHICK IT MUST BE REMOVED AND REINSTATED AT MINIMUM 100mm THICK CONCRETE. AN EXPANSION JOINT IS TO BE PLACED AT EACH INTERFACE BETWEEN THE FOOTPATH AND CROSSOVER.



PLAN
NTS

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DRAFT CHECK	
DESIGN CHECK	

Shire of Murray

STANDARD DETAILS CROSSOVER SPECIFICATIONS

JOB No.

SCALE N.T.S.

A3

DWG No. STD D10