Vehicle Crossing Infrastructure Index

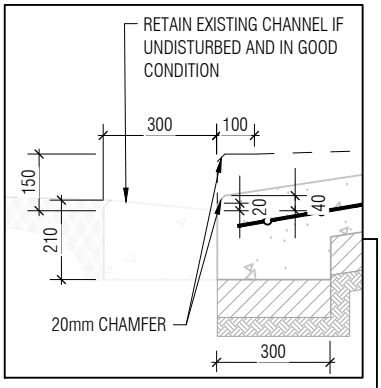
SED_NO	SED_Version	Title	Last Published	Comments
VX0000	D	Vehicle Crossing Index	11/04/2022	Minor changes
VX0101	A	Residential Vehicle Crossing (Sheet 1 of 4)	11/04/2022	No changes
VX0102	E	Residential Vehicle Crossing (Sheet 2 of 4)	11/04/2022	Minor changes
VX0103	E	Residential Vehicle Crossing (Sheet 3 of 4)	11/04/2022	Minor changes
VX0104	E	Residential Vehicle Crossing (Sheet 4 of 4)	11/04/2022	Minor changes
VX0105	B	Typical driveway crossing through a swale	11/04/2022	No changes
VX0201	A	Commercial Vehicle Crossing (Sheet 1 of 4)	11/04/2022	No changes
VX0202	D	Commercial Vehicle Crossing (Sheet 2 of 4)	11/04/2022	Minor changes
VX0203	D	Commercial Vehicle Crossing (Sheet 3 of 4)	11/04/2022	Minor changes
VX0204	D	Commercial Vehicle Crossing (Sheet 4 of 4)	11/04/2022	Minor changes
VX0205	B	Typical commercial driveway crossing through a swale	11/04/2022	No changes
VX0301	A	Rural Vehicle Crossing	11/04/2022	No changes
VX0302	C	Rural Vehicle Crossing (Zone Speed=50km/hr)	11/04/2022	No changes
VX0303	C	Rural Vehicle Crossing (Zone Speed > 60km/hr)	11/04/2022	No changes
VX0304	A	Asphalt Vehicle Crossing	11/04/2022	No changes
VX0401	B	Concrete Walkway	11/04/2022	No changes

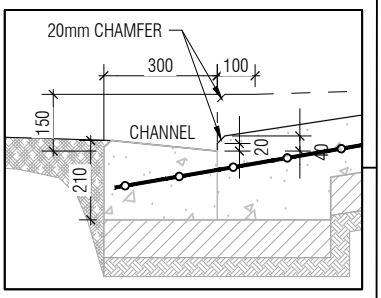
VEHICLE CROSSING FOOTPATH NEXT TO KERB

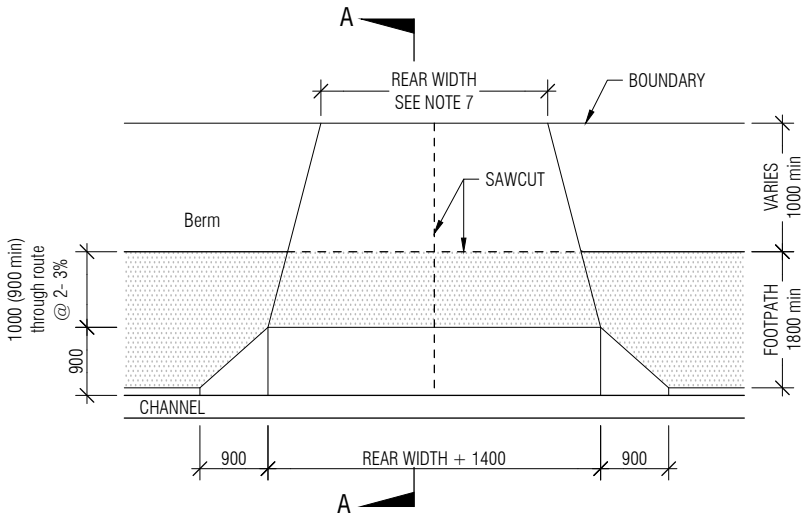
VEHICLE CROSSING FOOTPATH SEPARATED FROM KERB

VEHICLE CROSSING WITH FOOTPATH <1.8m

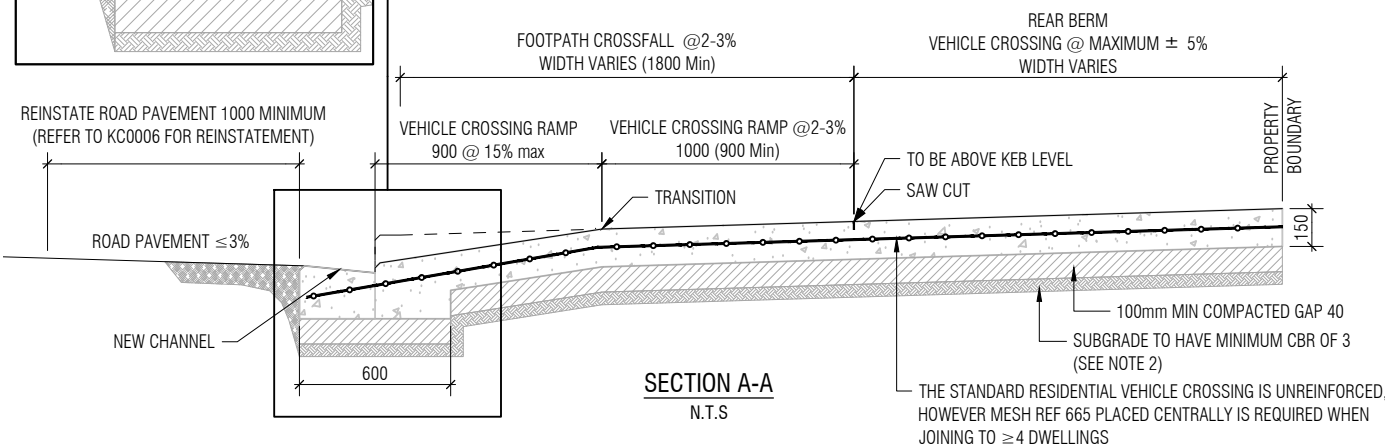
PERSPECTIVE VIEW
N.T.S







VEHICLE CROSSING
FOOTPATH NEXT TO KERB
N.T.S

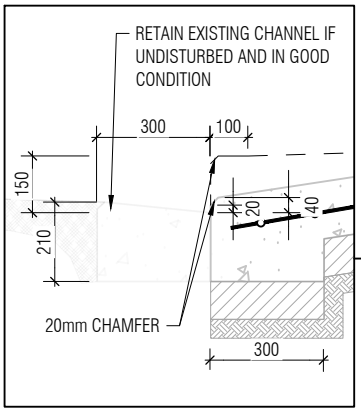


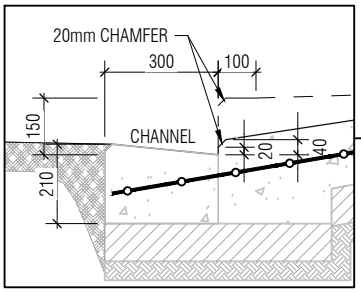
SECTION A-A
N.T.S

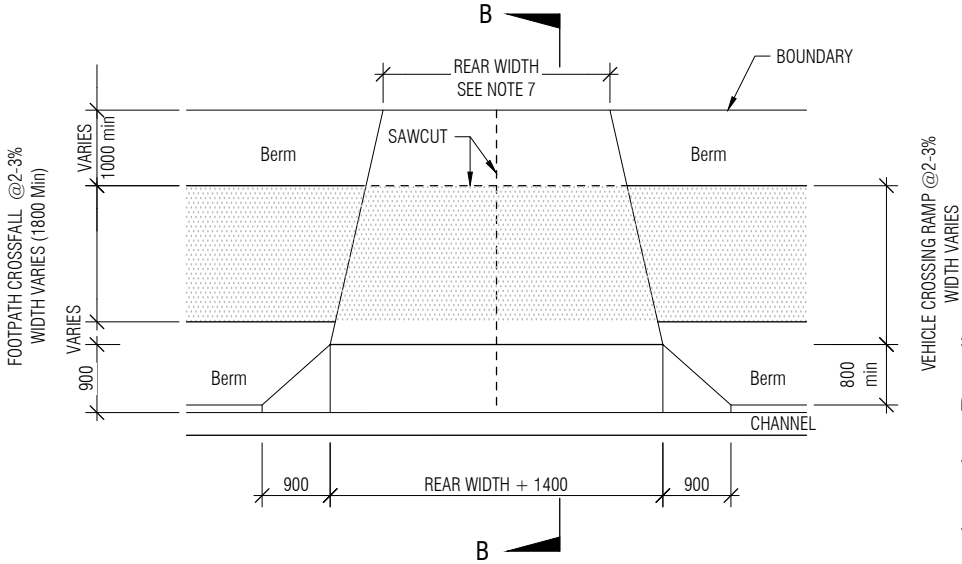
Notes:

1. All dimensions are in millimetres unless noted otherwise.
2. If CBR of existing Subgrade is <3, Pavement Design should be provided and approved by Auckland Transport.
3. All concrete to be 20 MPa and constructed in accordance with NZS 3109 with a broom or exposed aggregate finish and contain upto 4Kg/m^3 black oxide.
4. Saw cut expansion joints at 4m centres maximum each way in addition to saw cuts shown on dwg.
5. Any existing infrastructure within the crossing may require specific design approval for relocation.
6. Construct in same material and finish as surrounding footpath.
7. Rear Width to be as permitted under Auckland unitary Plan;
   2750-3000 - Single vehicle crossing
   5500-6000 - Two-Way Shared Access
   3000-3500 - One-Way Shared Access
8. Commercial crossing standards for 10 and more houses and multi-story apartments.
9. Formwork shall be full depth of concrete and straight.

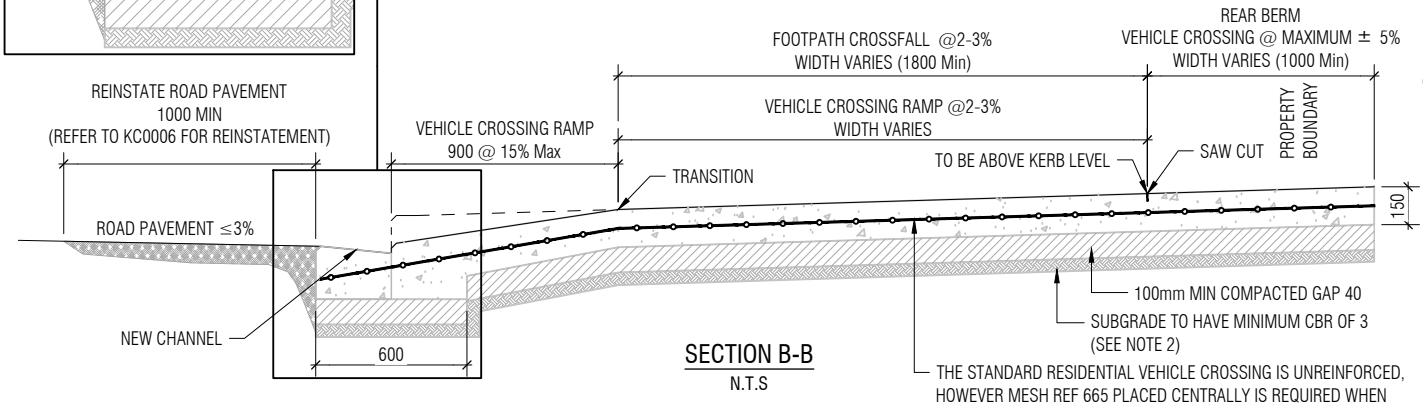
PERSPECTIVE VIEW
N.T.S







VEHICLE CROSSING
FOOTPATH SEPARATED FROM KERB
N.T.S

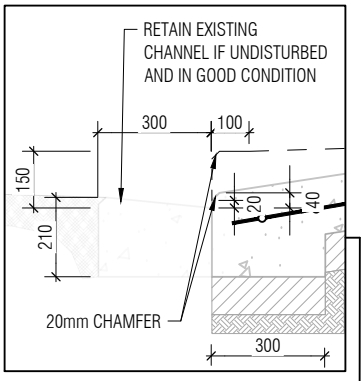


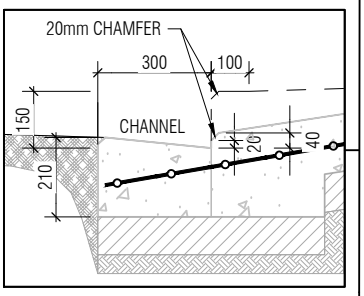
SECTION B-B
N.T.S

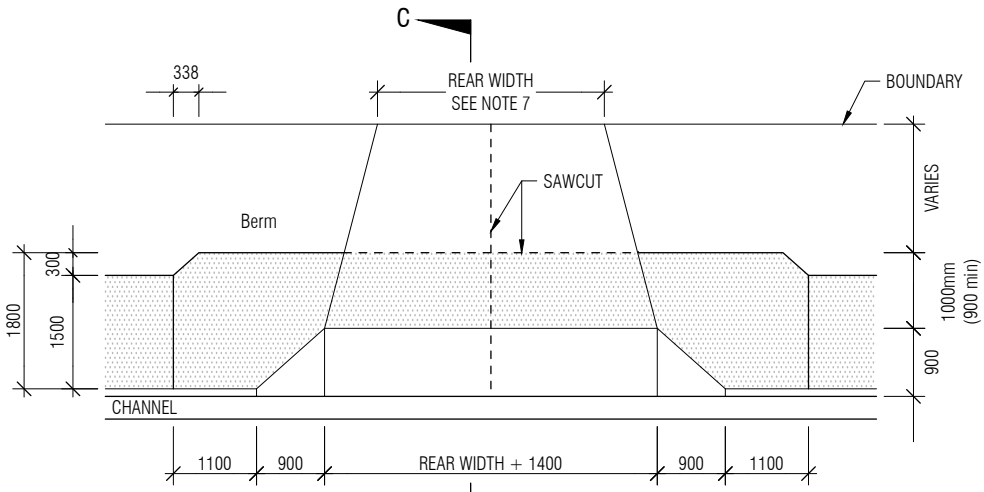
Notes:

1. All dimensions are in millimetres unless noted otherwise.
2. If CBR of existing Subgrade is <3, Pavement Design should be provided and approved by Auckland Transport.
3. All concrete to be 20 MPa and constructed in accordance with NZS 3109 with a broom or exposed aggregate finish and contain upto 4Kg/m^3 black oxide.
4. Saw cut expansion joints at 4m centres maximum each way in addition to saw cuts shown on dwg.
5. Any existing infrastructure within the crossing may require specific design approval for relocation.
6. Construct in same material and finish as surrounding footpath.
7. Rear Width to be as permitted under Auckland unitary Plan;
   2750-3000 - Single vehicle crossing
   5500-6000 - Two-Way Shared Access
   3000-3500 - One-Way Shared Access
8. Commercial crossing standards for 10 and more houses and multi-story apartments.
9. Formwork shall be full depth of concrete and straight.

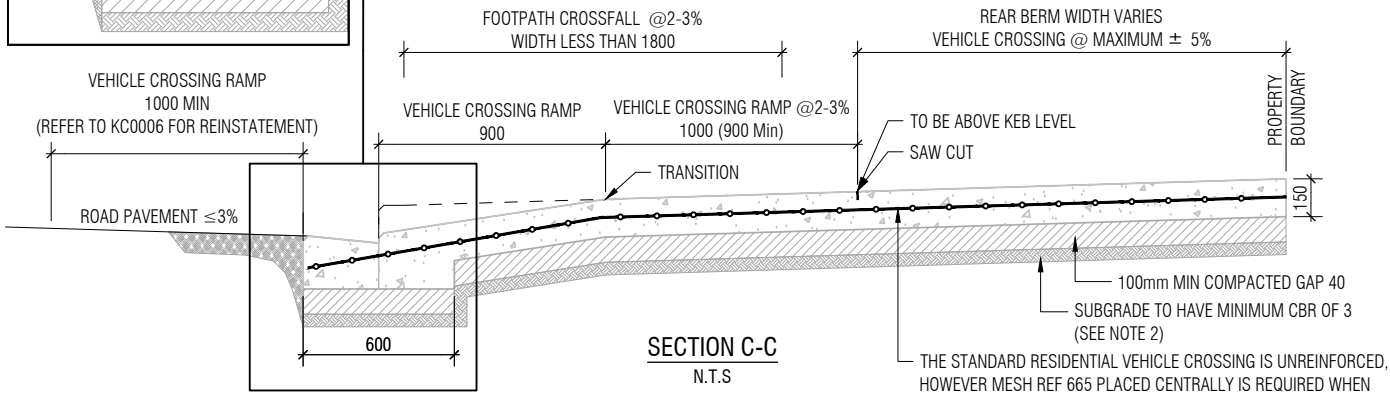
PERSPECTIVE VIEW
N.T.S







VEHICLE CROSSING
WITH FOOTPATH <1.8m
N.T.S



SECTION C-C
N.T.S

Notes:

1. All dimensions are in millimetres unless noted otherwise.
2. If CBR of existing Subgrade is <3, Pavement Design should be provided and approved by Auckland Transport.
3. All concrete to be 20 MPa and constructed in accordance with NZS 3109 with a broom or exposed aggregate finish and contain upto 4Kg/m^3 black oxide.
4. Saw cut expansion joints at 4m centres maximum each way in addition to saw cuts shown on dwg.
5. Any existing infrastructure within the crossing may require specific design approval for relocation..
6. Construct in same material and finish as surrounding footpath.
7. Rear Width to be as permitted under Auckland unitary Plan;
   2750-3000 - Single vehicle crossing
   5500-6000 - Two-Way Shared Access
   3000-3500 - One-Way Shared Access
8. Commercial crossing standards for 10 and more houses and multi-story apartments.
9. Formwork shall be full depth of concrete and straight.

CHIEF ENGINEER APPROVED

TDM TECHNICAL STANDARDS

Residential Vehicle Crossing (Sheet 4 of 4)

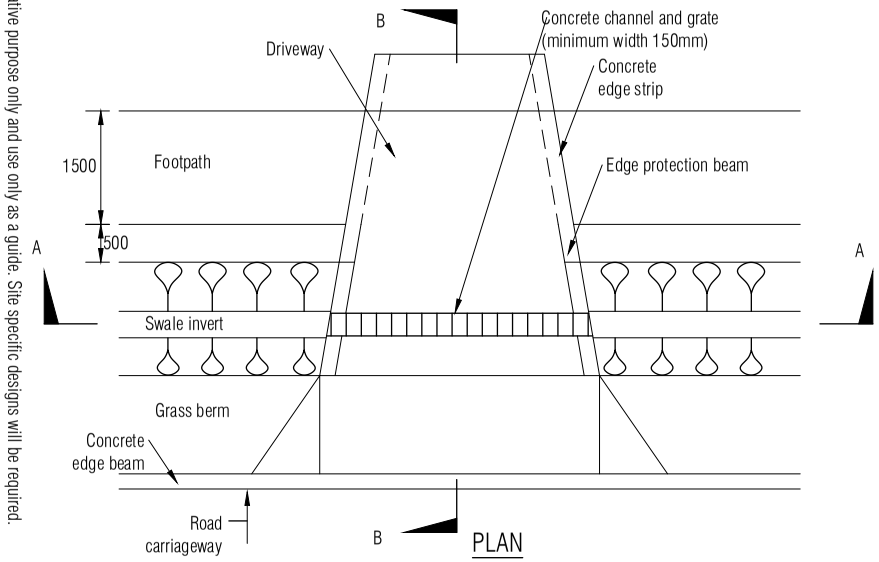
Date: 23/01/2025

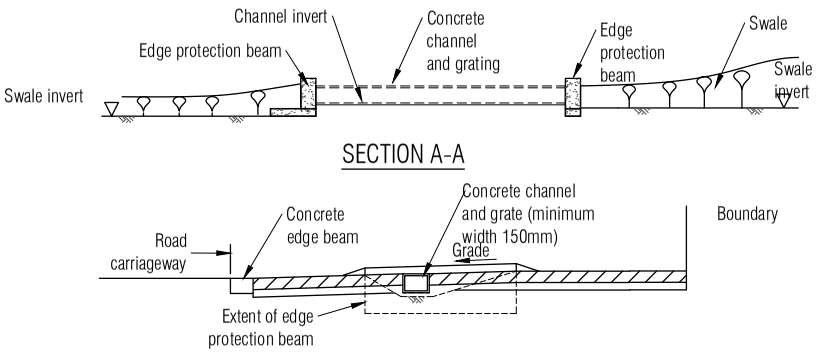
SED No. VX0104

Version E

NOTES:

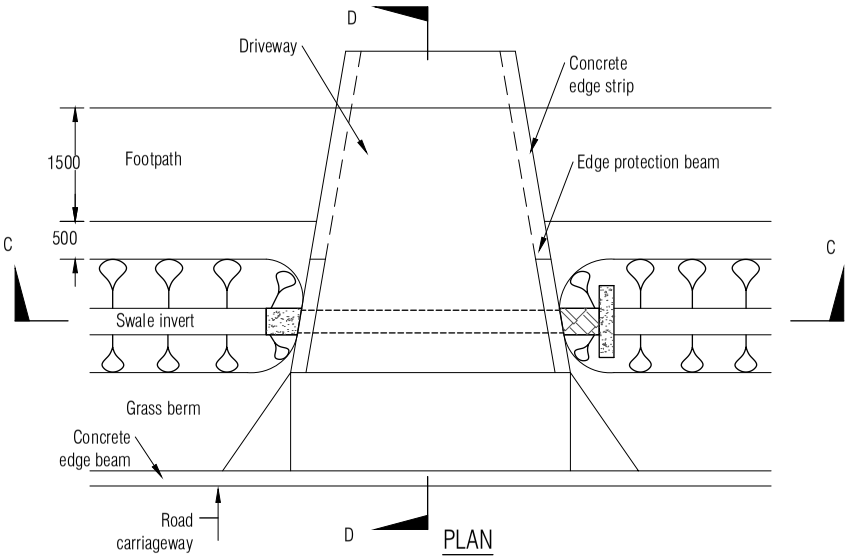
1. This drawing is for indicative purpose only and use only as a guide. Site specific designs will be required.
2. A swale is a shallow stormwater treatment device. For table drains and land drains, use VX0301 - VX0303.

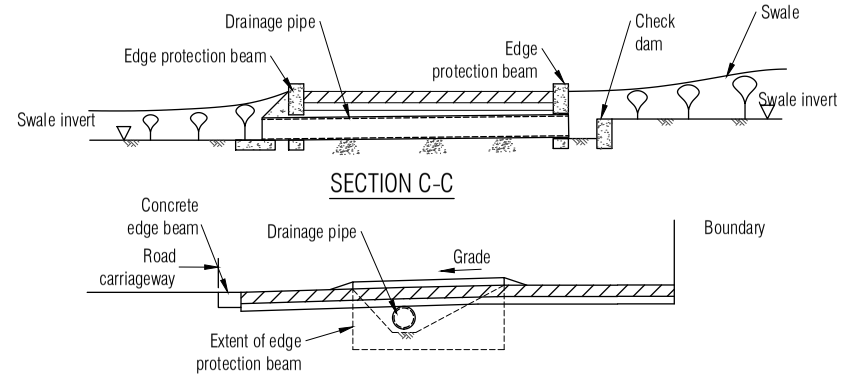




SECTION B-B

DRIVEWAY CROSSING USING GRATED CHANNEL





SECTION D-D

DRIVEWAY CROSSING USING DRAINAGE PIPE

APPROVED ENGINEER

TDM TECHNICAL STANDARDS

Typical driveway crossing through a swale

SED No. VX0105

Date: 23/01/2025

Version B

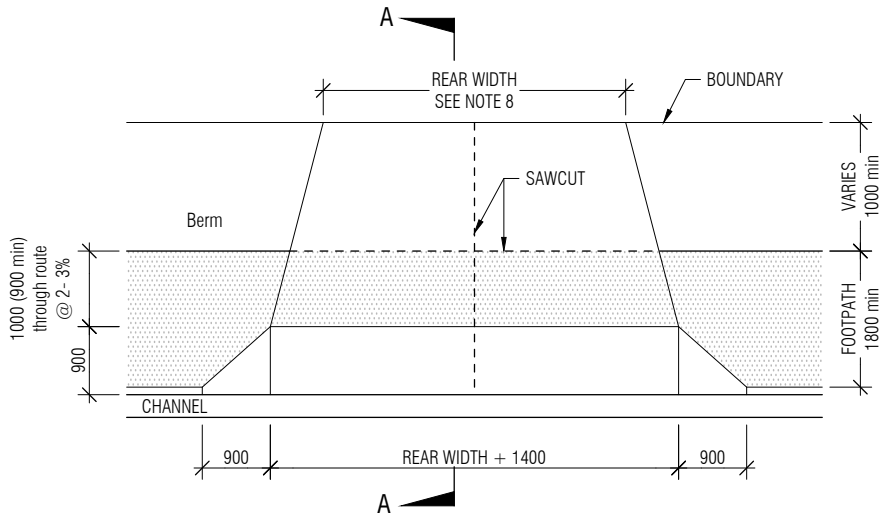
VX0105

VEHICLE CROSSING FOOTPATH NEXT TO KERB

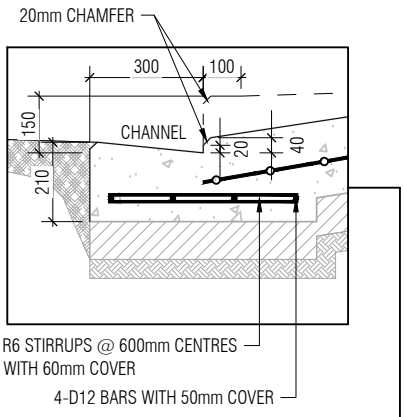
VEHICLE CROSSING FOOTPATH SEPARATED FROM KERB

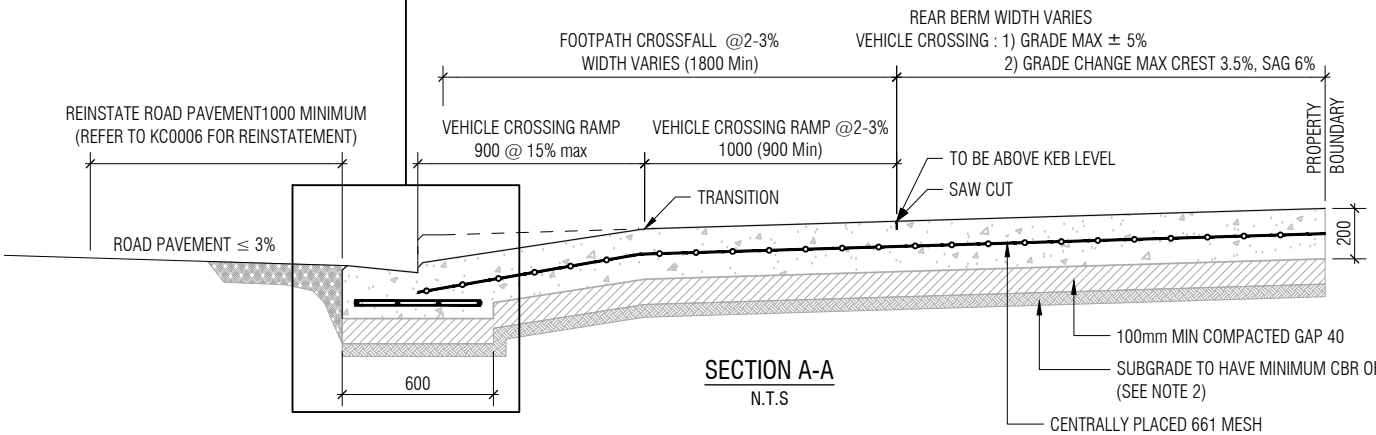
VEHICLE CROSSING WITH FOOTPATH <1.8m

PERSPECTIVE VIEW
N.T.S



VEHICLE CROSSING
FOOTPATH NEXT TO KERB
N.T.S



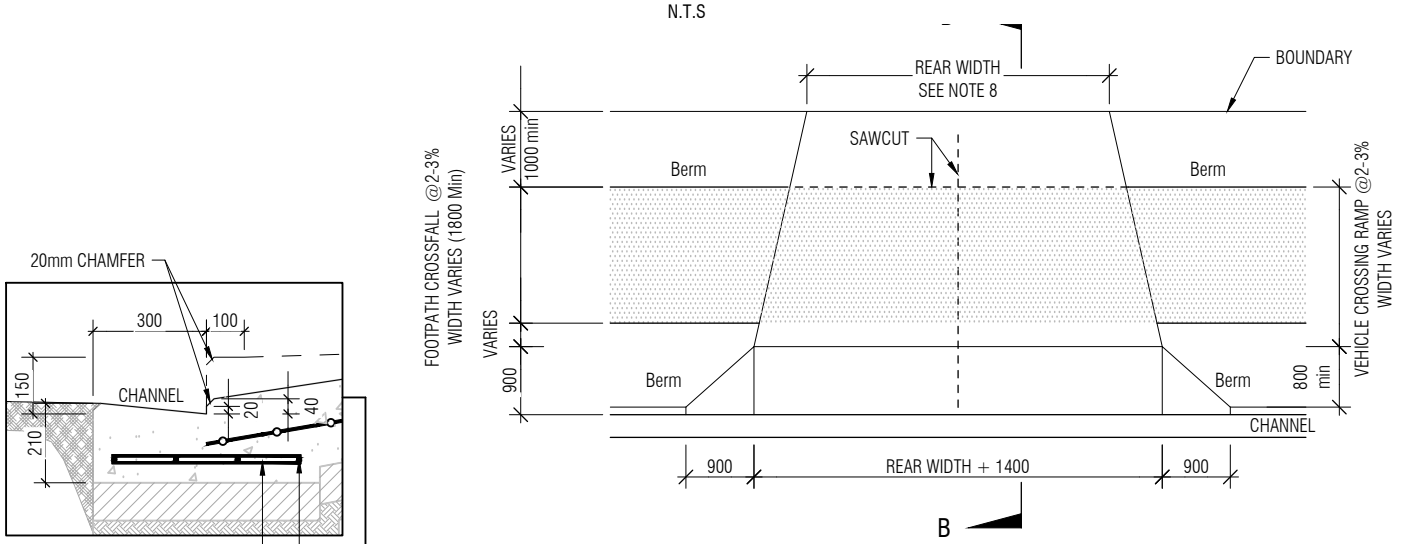


SECTION A-A
N.T.S

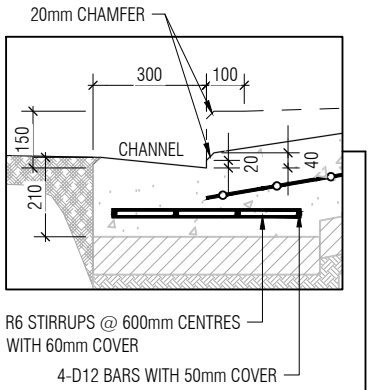
Notes:

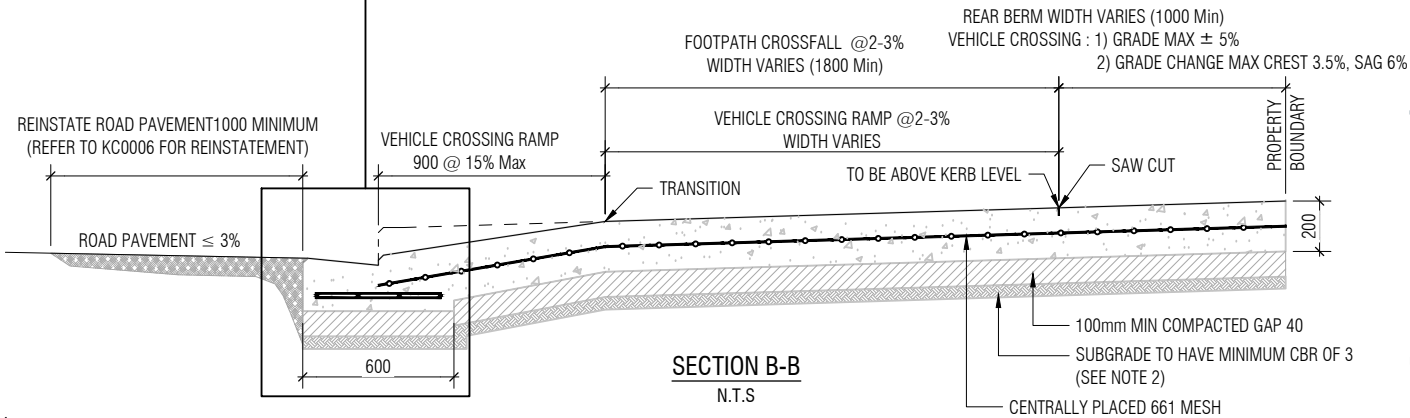
1. All dimensions are in millimetres unless noted otherwise.
2. If CBR of existing Subgrade is <3, Pavement Design should be provided and approved by Auckland Transport.
3. All concrete to be 20 MPa and constructed in accordance with NZS 3109 with a broom finish and contain upto 4Kg/m^3 black oxide.
4. Saw cut expansion joints at 4m centres maximum each way in addition to saw cuts shown on dwg.
5. Any existing infrastructure within the crossing may require specific design approval for relocation.
6. Construct in same material and finish as surrounding footpath.
7. Width of vehicle crossing to be designed by using tracking curves for intended large heavy vehicles.
8. Rear Width as permitted under Auckland Unitary Plan;
   COMMERCIAL USE;
   3700-4000 - Single vehicle crossing
   6000-7000 - Double vehicle crossing
   RESIDENTIAL USE;
   2750-3000 - Single vehicle crossing
   5500-6000 - Two-Way Shared Access
   3000-3500 - One-Way Shared Access
9. Formwork shall be full depth of concrete and straight.

PERSPECTIVE VIEW
N.T.S



VEHICLE CROSSING-FOOTPATH
SEPARATED FROM KERB
N.T.S





SECTION B-B
N.T.S

Notes:

1. All dimensions are in millimetres unless noted otherwise.
2. If CBR of existing Subgrade is <3, Pavement Design should be provided and approved by Auckland Transport.
3. All concrete to be 20 Mpa and constructed in accordance with NZS 3109 with a broom finish and contain upto 4% oxide.
4. Saw cut expansion joints at 4m centres maximum each way in addition to saw cuts shown on dwg.
5. Any existing infrastructure within the crossing may require specific design approval for relocation.
6. Construct in same material and finish as surrounding footpath.
7. Width of vehicle crossing to be designed by using tracking curves for intended large heavy vehicles.
8. Rear Width as permitted under Auckland Unitary Plan;
   COMMERCIAL USE;
   3700-4000 - Single vehicle crossing
   6000-7000 - Double vehicle crossing
   RESIDENTIAL USE;
   2750-3000 - Single vehicle crossing
   5500-6000 - Two-Way Shared Access
   3000-3500 - One-Way Shared Access
9. Formwork shall be full depth of concrete and straight.

CHIEF ENGINEER APPROVED

TDM TECHNICAL STANDARDS

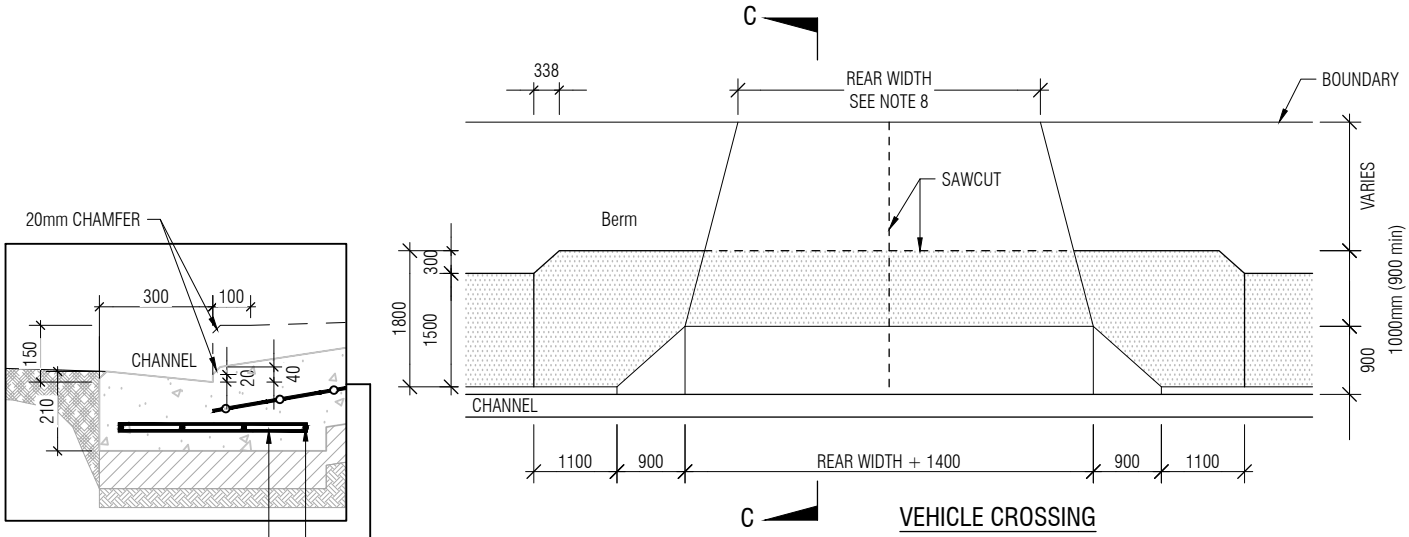
Commercial Vehicle Crossing (Sheet 3 of 4)

Date: 23/01/2025

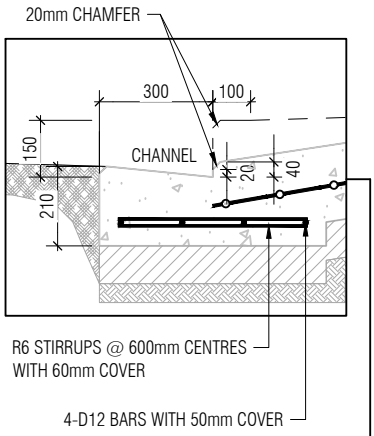
SED No. VX0203

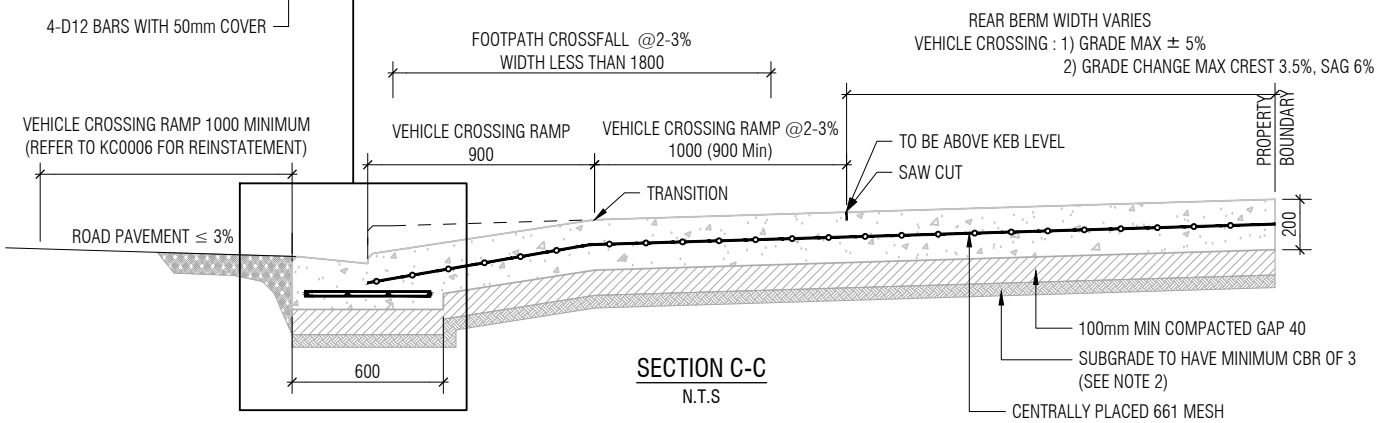
Version D

PERSPECTIVE VIEW
N.T.S



VEHICLE CROSSING
WITH FOOTPATH <1.8m
N.T.S





SECTION C-C
N.T.S

Notes:

1. All dimensions are in millimetres unless noted otherwise.
2. If CBR of existing Subgrade is <3, Pavement Design should be provided and approved by Auckland Transport.
3. All concrete to be 20 MPa and constructed in accordance with NZS 3109 with a broom finish and contain upto 4Kg/m^3 black oxide.
4. Saw cut expansion joints at 4m centres maximum each way in addition to saw cuts shown on dwg.
5. Any existing infrastructure within the crossing may require specific design approval for relocation.
6. Construct in same material and finish as surrounding footpath.
7. Width of vehicle crossing to be designed by using tracking curves for intended large heavy vehicles.
8. Rear Width as permitted under Auckland Unitary Plan;
   COMMERCIAL USE;
   3700-4000 - Single vehicle crossing
   6000-7000 - Double vehicle crossing
   RESIDENTIAL USE;
   2750-3000 - Single vehicle crossing
   5500-6000 - Two-Way Shared Access
   3000-3500 - One-Way Shared Access
9. Formwork shall be full depth of concrete and straight.

CHIEF ENGINEER APPROVED

TDM TECHNICAL STANDARDS

Commercial Vehicle Crossing (Sheet 4 of 4)

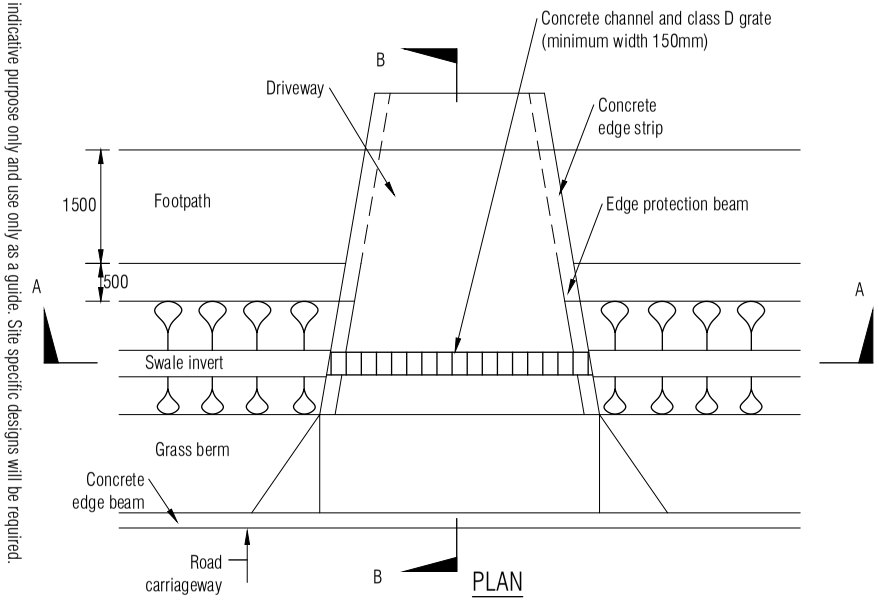
Date: 23/01/2025

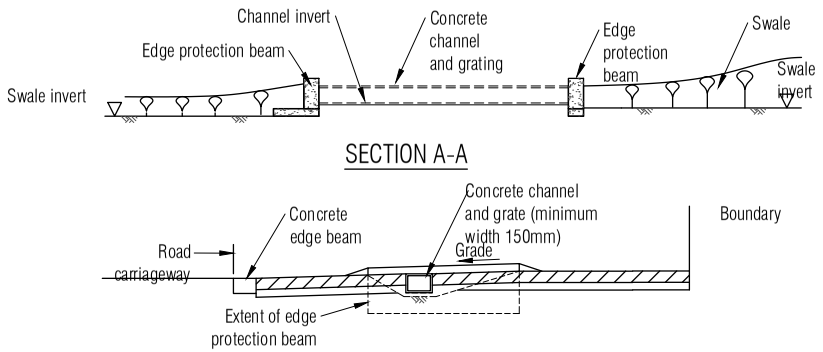
SED No. VX0204

Version D

NOTES:

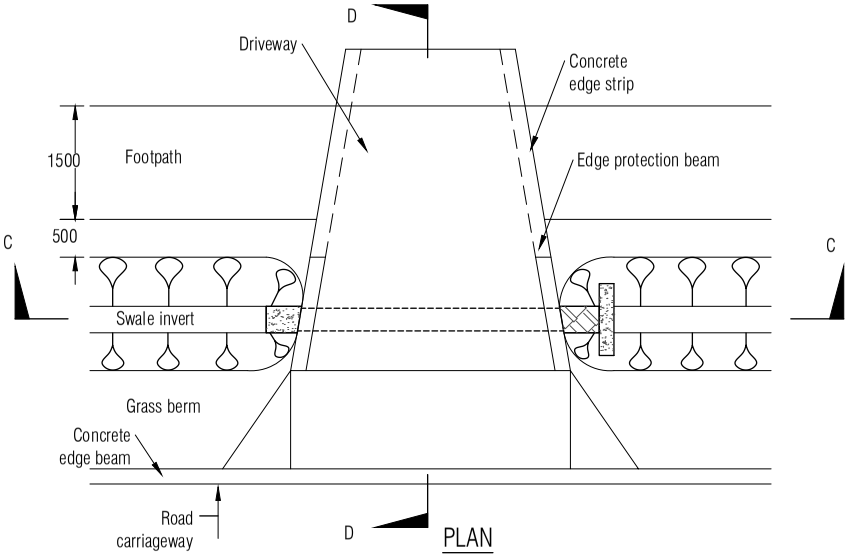
1. This drawing is for indicative purpose only and use only as a guide. Site specific designs will be required.
2. A swale is a shallow stormwater treatment device. For table drains and land drains, use VX0301 - VX0303.

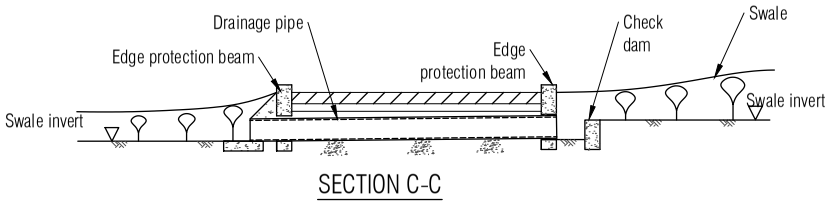


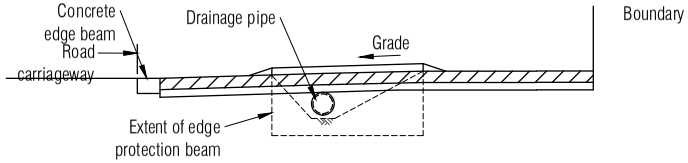


SECTION B-B

DRIVEWAY CROSSING USING GRATED CHANNEL







SECTION D-D

DRIVEWAY CROSSING USING DRAINAGE PIPE

APPROVED ENGINEER

TDM TECHNICAL STANDARDS

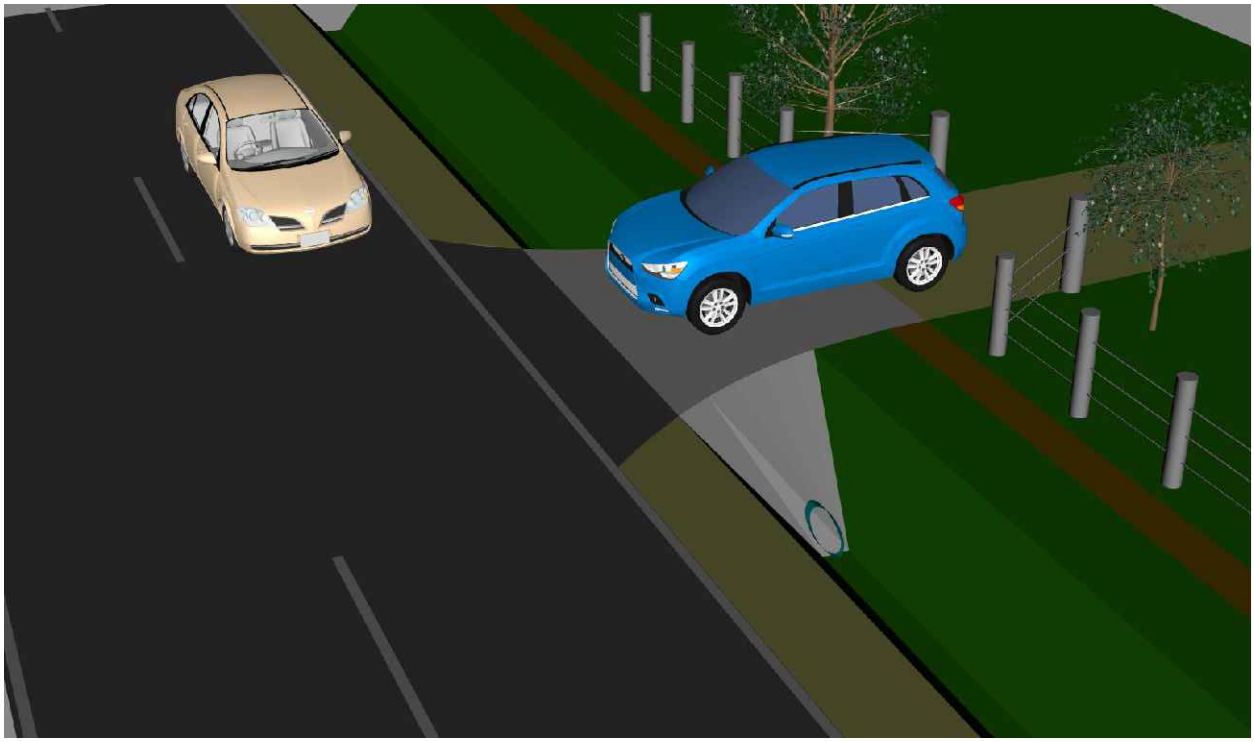
Typical commercial driveway crossing through a swale

SED No. VX0205

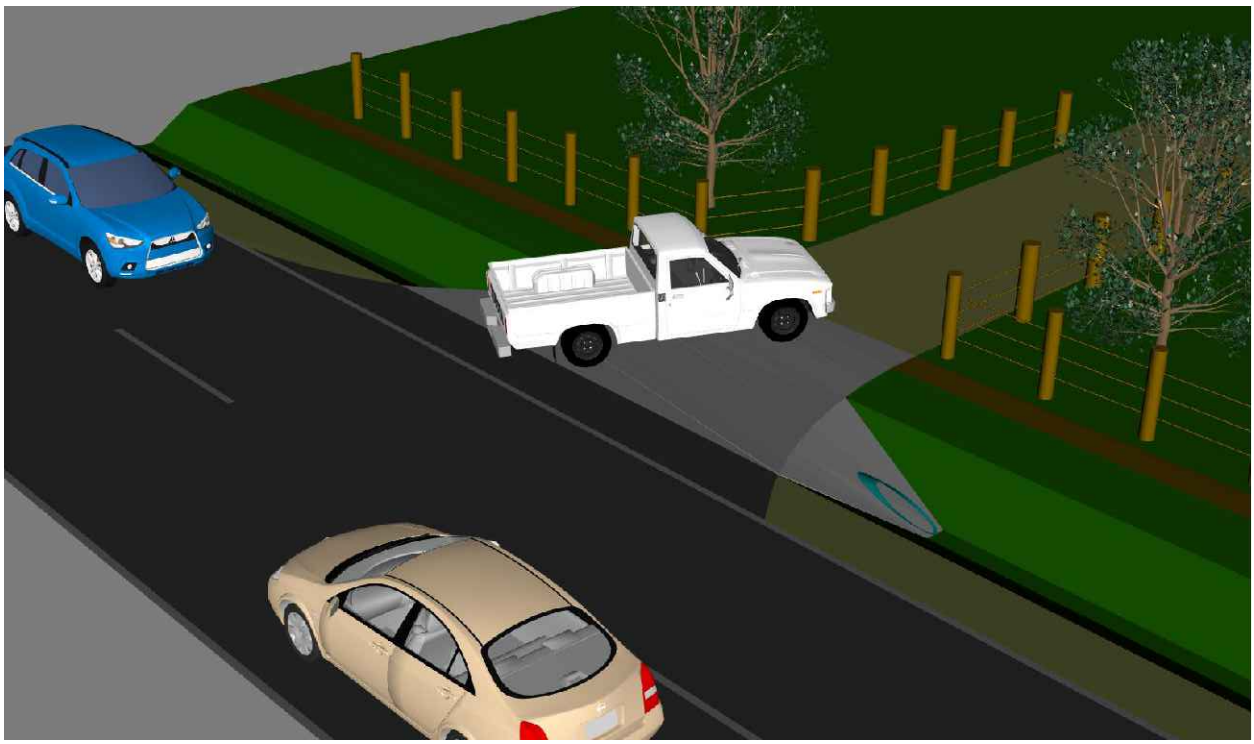
Date: 23/01/2025

Version B

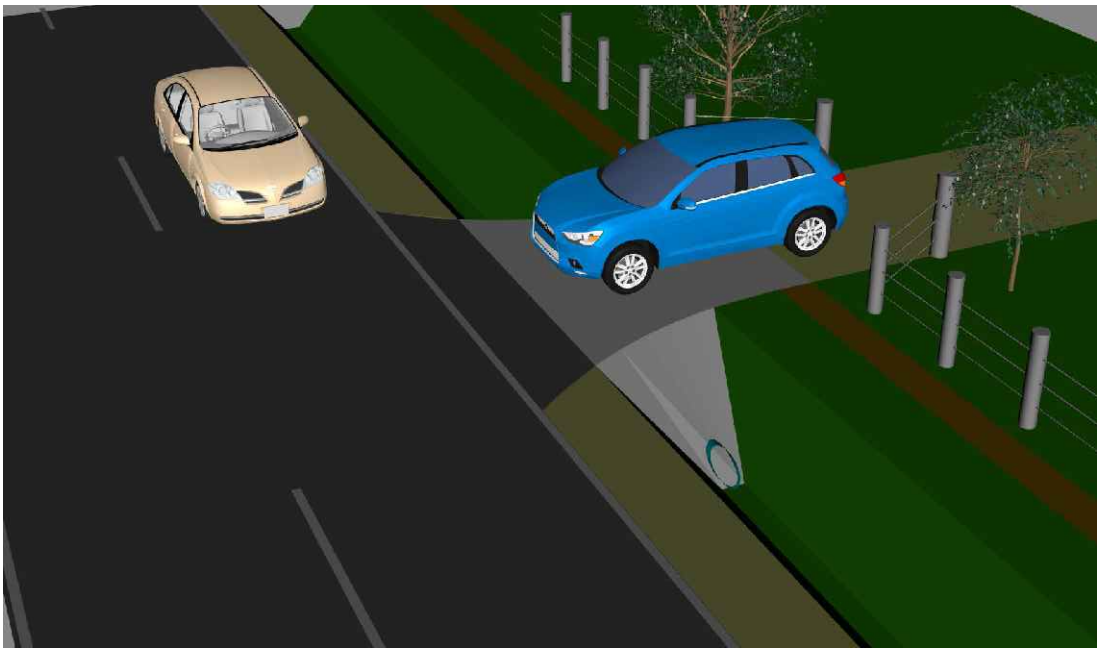
VX0205



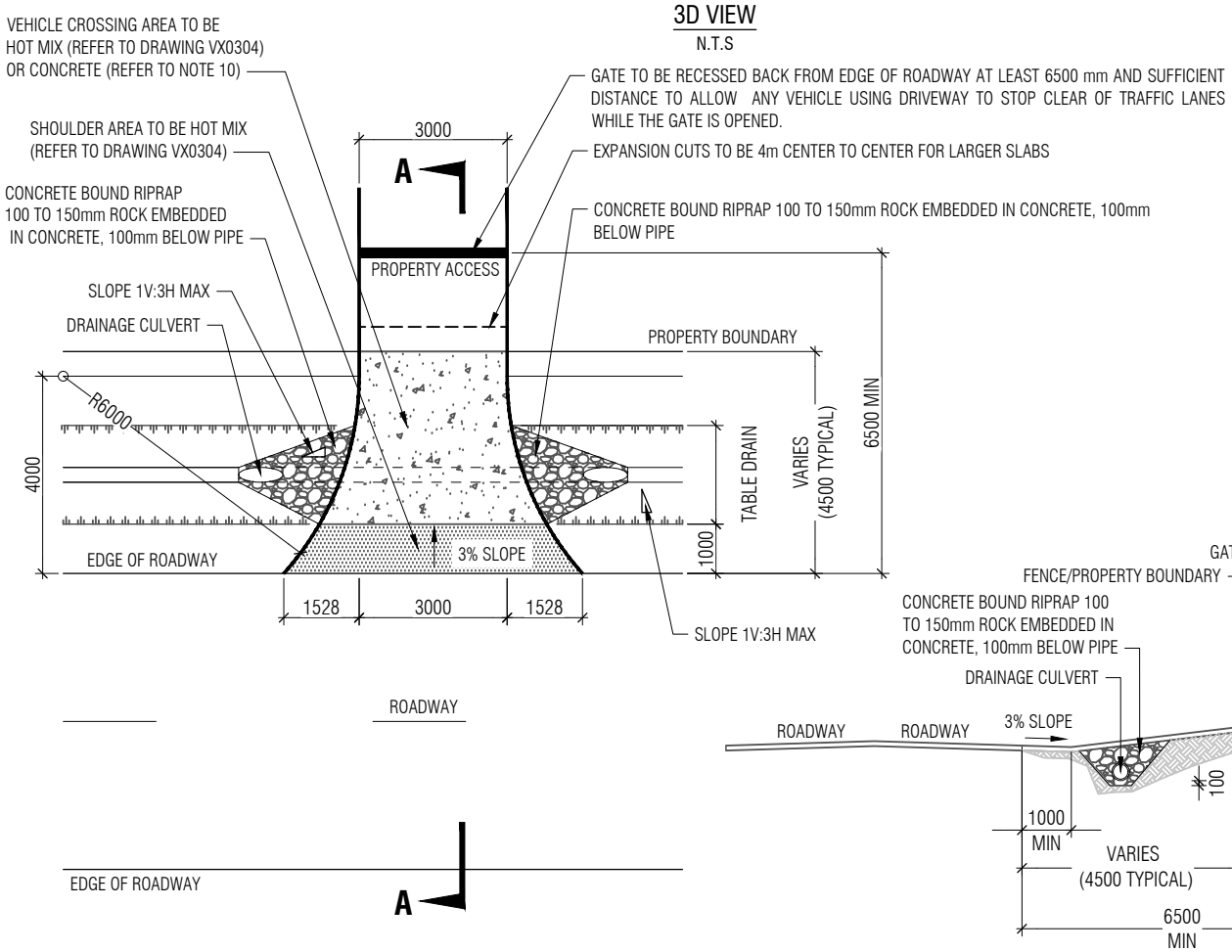
RURAL VEHICLE CROSSING (ZONE SPEED=50km/hr)



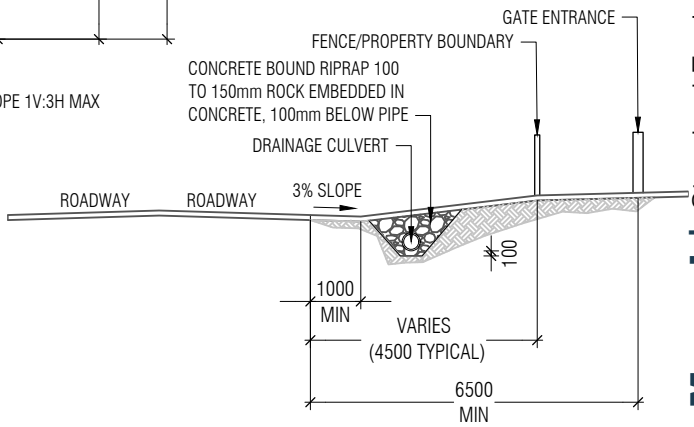
RURAL VEHICLE CROSSING (ZONE SPEED > 60km/hr)



3D VIEW
N.T.S



VEHICLE CROSSING PLAN
N.T.S



SECTION A-A
N.T.S

NOTES:

1. All dimensions are in millimeters unless noted otherwise
2. The radius of 6.0m may increase to a maximum width of 9.0m if needed to accommodate the tracking path of a large heavy vehicle.
3. The 6.5m minimum gate distance may increase as needed for length of large vehicles frequently using access.
4. Drainage culvert ≥ 300mm diameter concrete pipe is required.
5. Pavement design to be approved by AT for use other than single residential life style lot.
6. Table drain may need to be deepened and diverted away from road to install culvert
7. Whole driveway in the private property to be soild, either concrete or hotmix, to avoid tracking of materials, detritus, metal etc on to the public road.
8. Larger Slabs to have expansion cuts 4m center to center
9. Where a footpath is provided or planned, the gate recess must be measured fro the back of the footpath
10. Concrete section – residential standard(150mm thick 20MPa concrete on 100 mm thick GAP 40– subgrade minimum CBR of 3) or commercial standard((200mm thick 20MPa concrete on 100 mm thick GAP 40 with the 661 mesh – subgrade minimum CBR of 3)

CHIEF ENGINEER APPROVED

TDM TECHNICAL STANDARDS

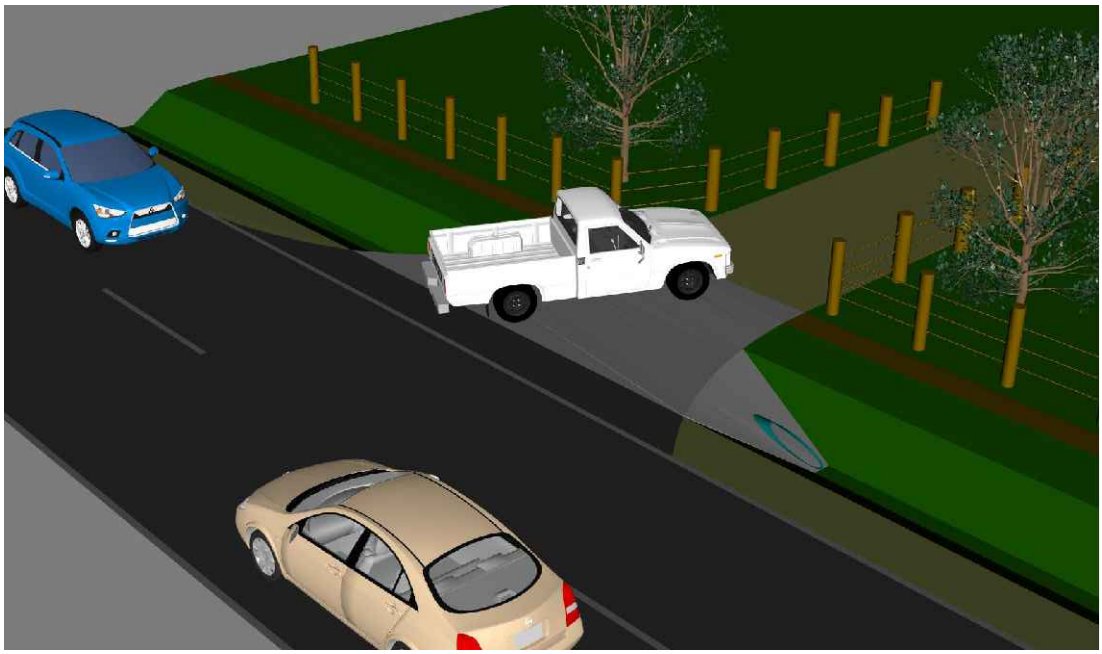
Rural Vehicle Crossing (Zone Speed=50km/hr)

Date: 23/01/2025

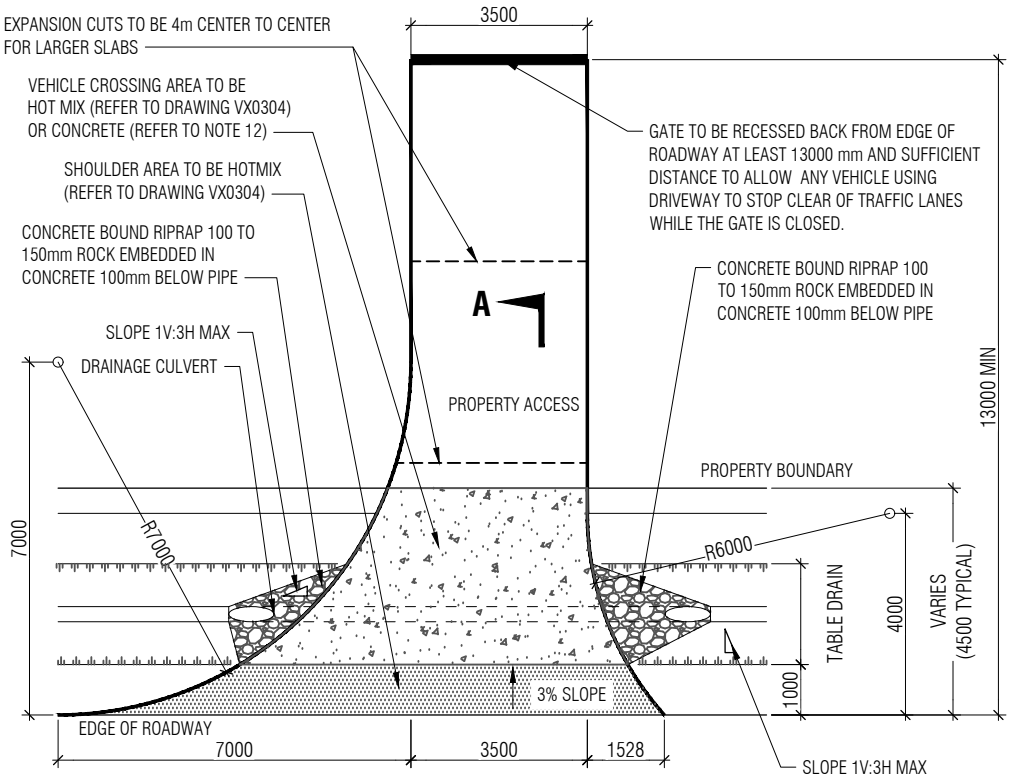
SED No. VX0302

Version C

VX0303



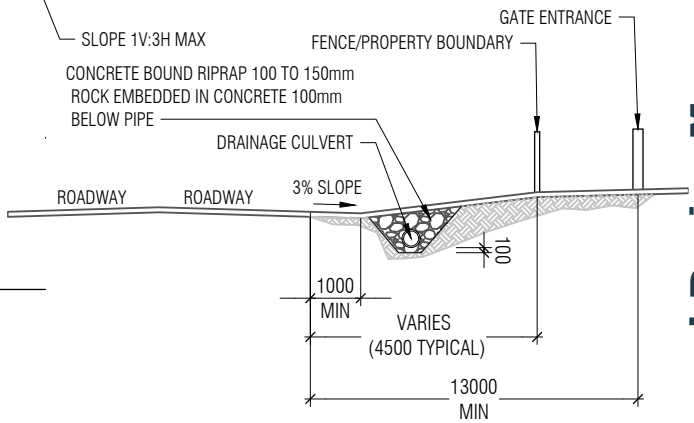
3D VIEW
N.T.S



VEHICLE CROSSING PLAN
N.T.S

NOTES:

1. All dimensions are in millimeters unless noted otherwise
2. The radius of 7.0m minimum is needed for a van with 20km/hr speed on entering the access.
3. For larger vehicles, the proposed turning speed and tracking need to be supplied. And sealed surface extended to match path.
4. The 13.0m minimum distance to the gate allows for a van turning at 20km/hr to stop. The distance may need to be increased for use by larger vehicles.
5. Drainage culvert ≥ 300mm diameter concrete pipe is required.
6. Pavement design to be approved by AT for use other than single residential life style lot.
7. Table drain may need to be deepened and diverted away from the road to install culvert.
8. Whole driveway in the private property to be soild, either concrete or hotmix, to avoid tracking of materials, detritus, metal etc on to the public road.
9. Larger Slabs to have expansion cuts 4m center to center.
10. Any vehicle clear of road shoulder.
11. Where a footpath is provided or planned, the gate recess must be measured from the back of the footpath.
12. Concrete section – residential standard(150mm thick 20MPa concrete on 100 mm thick GAP 40–subgrade minimum CBR of 3) or commercial standard((200mm thick 20MPa concrete on 100 mm thick GAP 40 with the 661 mesh – subgrade minimum CBR of 3)



SECTION A-A
N.T.S

Transport Design Manual | Standard Engineering Details

CHIEF APPROVED ENGINEER

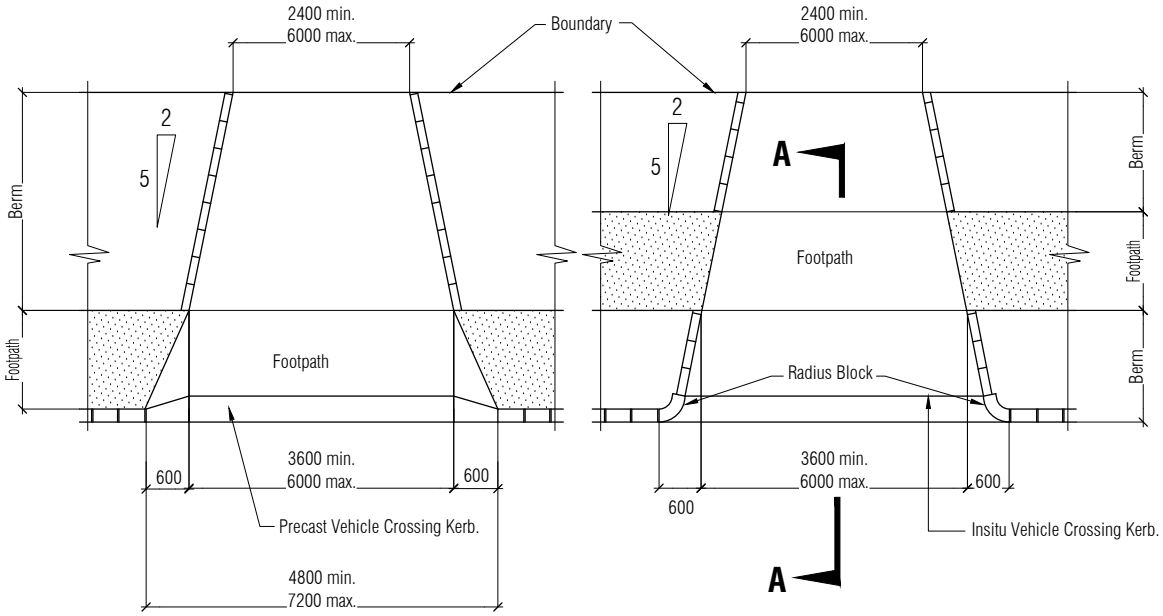
TDM TECHNICAL STANDARDS

Rural Vehicle Crossing (Zone Speed > 60km/hr)

Date: 23/01/2025

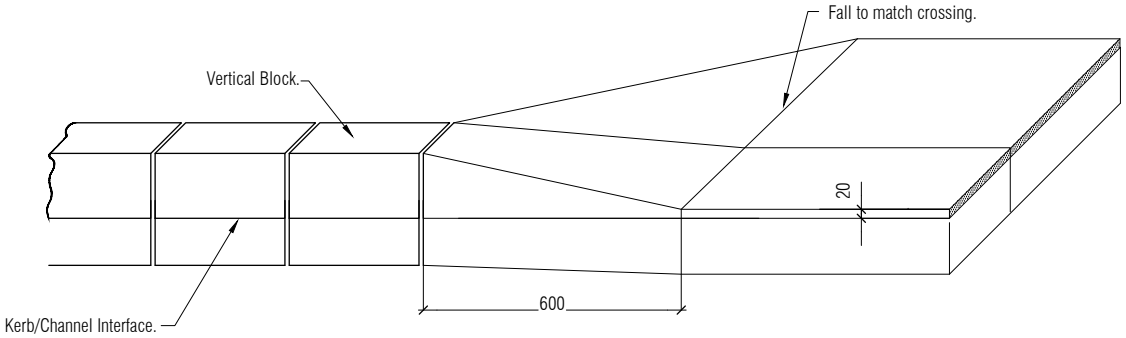
SED No. VX0303

Version C

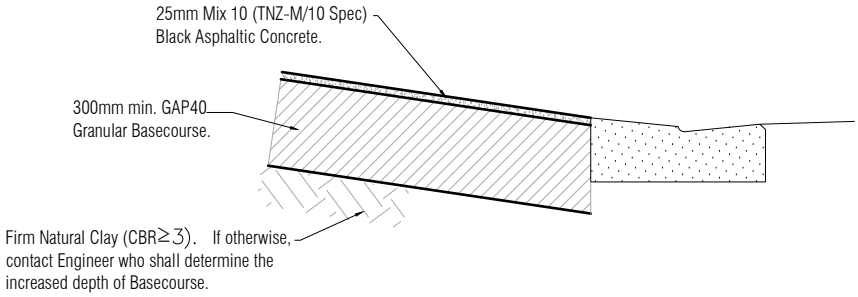


VEHICLE CROSSING
FOOTPATH NEXT TO KERB

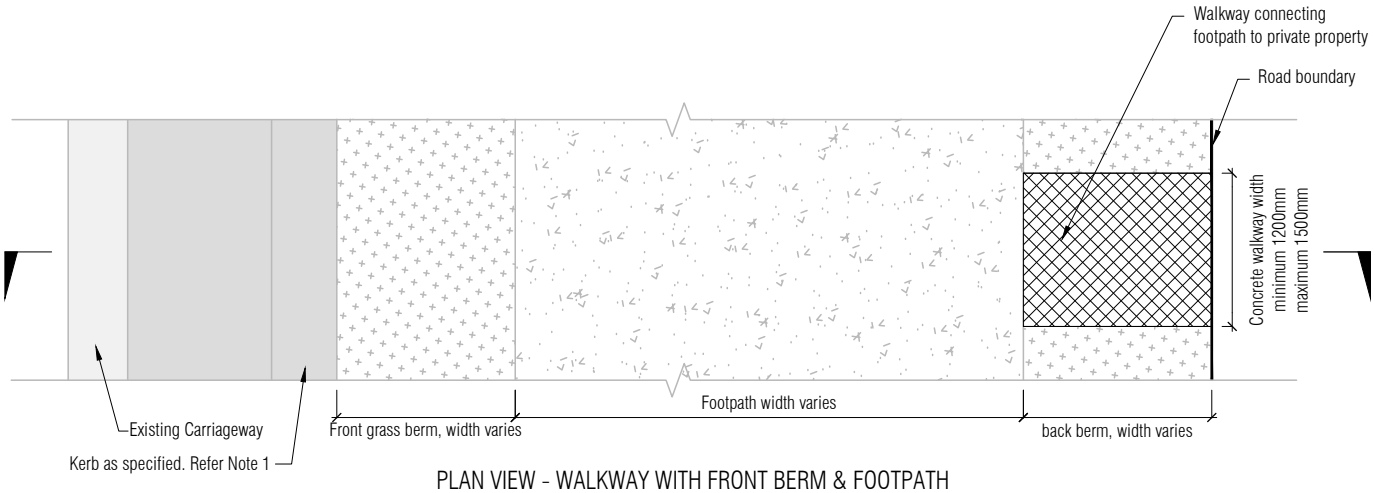
VEHICLE CROSSING
FOOTPATH SEPARATED FROM KERB



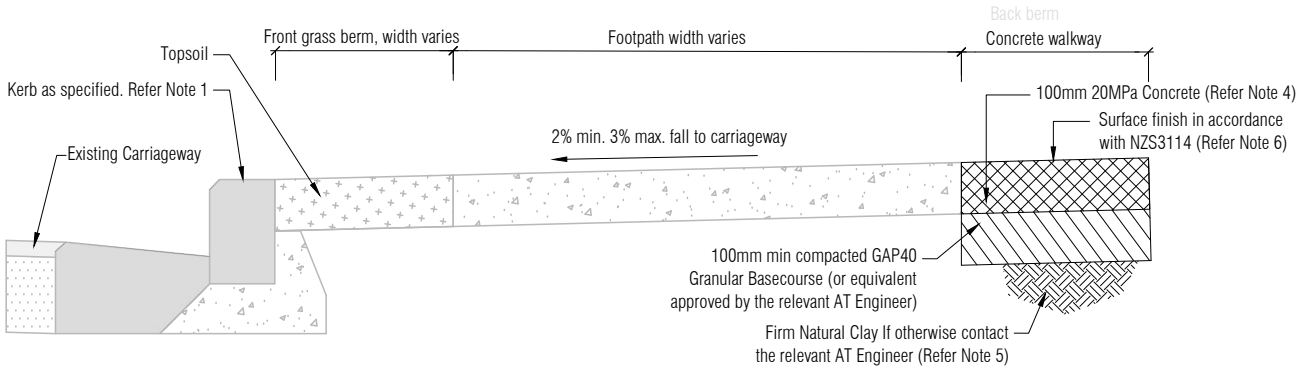
DETAIL OF KERB TRANSITION AT CROSSING



VEHICLE CROSSING



PLAN VIEW - WALKWAY WITH FRONT BERM & FOOTPATH



CROSS SECTION - WALKWAY WITH FRONT BERM & FOOTPATH

NOTES

1. Refer to Auckland Transport Standard Detail Drawings for the following details :-
   Pram Crossings - Plan No. FP0006
   Kerbs and Channels - Refer to Drawing Set KC0000
2. Minimum walkway width is 1200mm. Maximum walkway width is 1500mm
3. All Services Lids must be raised or lowered to be flush with walkway levels, to match footpath finish.
4. All concrete to be 20MPa constructed in accordance with NZS 3109 with broom or exposed aggregate finish and contain upto 4Kg/m^3 black oxide.
5. Basecourse (or bedding) layer depth must be increased for weak subgrade (CBR<3). As directed by the relevant AT engineer.
6. Construct in same material and finish as surrounding footpath or vehicle crossing.