



*Extending a driveway to the road:*  
***Building a vehicle crossing***



*Asset Services Group*



If you want to improve vehicle access to your property, you may want to put in a crossing or 'run-up' across the footpath and kerb to the road.

- You can pay the Hutt City Council to do it for you
- You can hire a contractor
- Or you can do it yourself.

If you do the job yourself, or a contractor does it, it will have to be inspected by council staff. There are strict rules covering the way it's built and the materials you use.

Either way, the council will give you a quote for the job. This 'quote' will be an estimate of the cost for the Council to install it. Whoever installs it, you must first pay a deposit to the Council, – made up of the following:

- \$200 refundable after inspection; and a
- \$72 non-refundable inspection fee.

The deposit will be refunded, less inspection fees, provided the job meets the required standards. If it does not meet Council's standards, the cost of any repairs Council makes will be taken out of your deposit.

## Contents

Residential Vehicle Crossings	2
Residential Vehicle Crossings using interlocking paving blocks	5
Heavy duty vehicle crossings	8
Extra heavy duty vehicle crossings	11

## What do I need to do first?

First you need to contact the Council on 570 6912 or go to the Hutt City website at [www.huttcity.info](http://www.huttcity.info) to request an application to install a vehicle crossing.

Four different types of vehicle crossings are set out in this brochure. Each type of crossing has slightly different standards and requirements.

## Before construction

If you do the job yourself it's your responsibility to find out where all the underground cables and services are on the site. That includes sewer, stormwater, drainage, water supply, gas, power and telecommunications services. Please take the time to make sure where all these services are, because you will have to pay for any damage done and of course any contact with underground power cables can be fatal.

If the crossing is being installed by a contractor or the council, it is their responsibility to find out about these things.

## Health and safety

The safety of the general public must be ensured at all times. Any area left excavated, or with concrete not firm enough to walk on, must be barricaded. There has to be enough room for pedestrians, prams and wheelchairs to move around the site. If they're forced to detour onto the road then a barricade must be installed between them and the traffic.

The barricades must be clearly visible at all times. In some cases they may need to be hung with lamps so they can be seen at night.

# Vehicle crossing plans

## 1. Residential vehicle crossings

(see plans on page 6)

This is the standard crossing used for a single residential property access.

### *Preparing the vehicle crossing*

- Dig out the area where the crossing is to be installed to an even 100mm below the finished level, leaving a firmly compacted foundation.
- Break out the existing kerb over the full width of construction, including the haunches, which are the sloping sides of the crossing. To do this, excavate fully behind the kerb and knock the kerb face with a heavy hammer. Leave a clean, rough surface on which to join the new concrete.
- If the crossing is being installed through an existing concrete path, a neat join must be made at either an existing construction joint in the path, or at a newly made saw cut.

### *Ensure haunches are the correct length*

- Install defect-free, straight boxing on all edges, except where the crossing is going through an existing concrete path, in which case the new concrete is to be neatly joined as described above. To prevent bulging of the step face, the boxing must be fully secured.

### *Concrete construction*

- A Council officer must inspect the base of the vehicle crossing before the concrete is poured.  
Contact phone: 570 6912.
- Concrete used for vehicle crossings must be ready-mixed concrete – 17.5 MPa mix.
- We recommend adding Fibremesh, or chopped fibreglass, to the concrete for extra strength and to extend the life of your concrete.
- Place the concrete on the prepared, moistened and compacted ground surface to a level slightly higher than the boxing.

- Thoroughly tamp with a vertical and transverse motion using a screed board to ensure the concrete is evenly compacted over the whole crossing.
- Screed off across the top of the boxing and along the crossing.
- Continue tamping and screeding until the surface is even and smooth.
- If it rains while the concrete is still wet, protection will be required. In hot weather the new concrete will have to be protected from cracking when it shrinks. Use material such as wet sacks or building paper.

***Haunches capped with plaster are not permitted.***

- The boxing can be removed after the concrete is hard. Care should be taken not to damage the new work in the process.
- The new crossing should not be driven on for at least four days. It should be used with care for a fortnight until the concrete has gained strength.

***Roof stormwater drains***

- If a roof stormwater drain passes through the excavation, it must be angled from the front edge of the path so it enters the channel, or gutter, at the nearest side of the crossing. See drawings.
- The pipes must be laid straight and true on a bed of concrete and surrounded with 50mm of concrete, making a continuous leak-proof pipe.
- 100mm galvanised pipes or 110mm UPVC plastic piping may be used. Two 6.5mm steel rods should be placed in the top of the kerb where the pipe passes through. There are special rectangular fittings which attach to circular pipes for kerb installations.

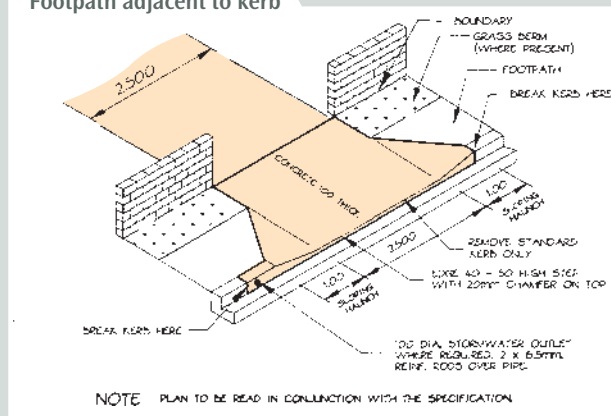
***Water hydrants and other obstructions***

- Phone the Council on 570 6912 for advice if you come across a water hydrant, valve box, manhole, sump or some other obstruction.

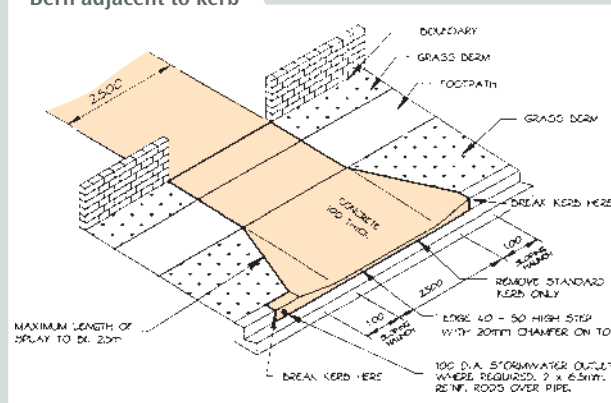
### Completion of the crossing

- When you have finished, please notify Council's Street Services division on 570 6912.
- The crossing will be inspected. If it has been installed according to specification, your deposit will be refunded by post, less the inspection fees. If any defects are found, you will be advised of further work required.

#### Footpath adjacent to kerb



#### Berm adjacent to kerb



## 2. Residential vehicle crossings using interlocking paving blocks

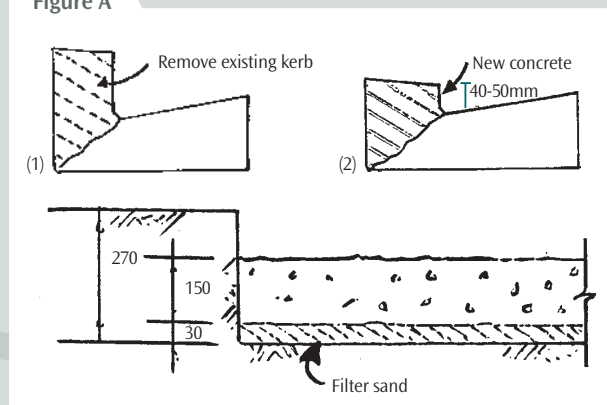
(Use the plans on page 7,8 and 9.)

- We recommend you use an experienced paving contractor for this type of work. However, this specification can be used as a guide for householders building their own vehicle crossing using interlocking paving blocks.
- All blocks must be of the interlocking type, 80mm minimum thickness.
- There are no restrictions on colour.
- Any pattern can be used although 'Herringbone' is preferred.
- Concrete edge restraints, or nib edging, is required on both sides of the crossing.

### Construction sequence

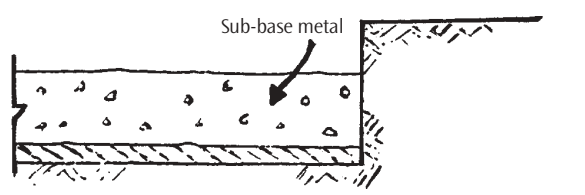
- The perimeter of the crossing should be set out accurately according to the previous instructions in *1. Residential Vehicle Crossings*. If blocks are to be laid in place of an existing concrete path, then saw cutting is required.
- Dig out the area to an even 270mm below finished level, leaving a firmly compacted foundation.
- Break out any concrete footpath and the kerb to the channel. Replace a 40-50mm nib onto the channel as shown in Figure A.

Figure A



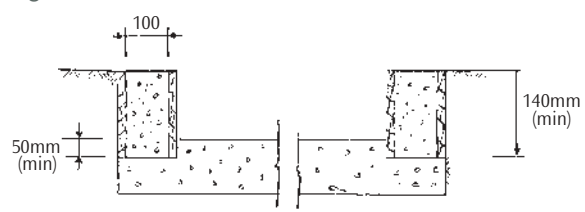
- A Council officer must inspect the completed excavation before work continues. Contact phone 570 6912.
- Place a 30mm layer of filter sand, also called 'paver bedding sand', over the dug out surface.
- Place the sub-base metal and compact it to a finished depth of 150mm (Figure B). Metal sold by quarries as '40mm down Domestic Basecourse' is adequate. Compact the metal with a plate vibrator, vibrating tamper or vibrating roller, with a minimum of two passes of the compactor.

Figure B



- Box and pour kerb and edge restraints. Edge restraints should extend 50mm below the surface of the sub-base metal. Allow the concrete to cure for three days before beginning work again (Figure C).

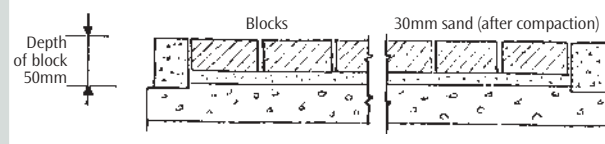
Figure C



- Put down a layer of bedding sand and screed it to a flat surface with a depth of 40mm. All sand must be covered with blocks on the same day.
- Start laying the blocks at the lowest point and lay them uphill, being careful not to walk on the bedding sand before the blocks are laid. Lay all full units first then finish with cut blocks around the edges. Fill any small remaining holes with mortar. Ensure there is a 2 to 3mm gap between the blocks.

- Once the blocks are in position the area can be compacted using a mechanical flat plate vibrator with a square plate big enough to cover at least 12 laid blocks (approximately 0.5m x 0.5m). The whole area should be passed over with the compactor at least twice.
- As soon as practical after compacting the blocks, sweep joint filling sand over the surface and use the compactor to fill the joints between blocks. Joints should be completely filled with sand. Sweep the blocks again to remove excess sand. The sand will settle into the joints, so reapply the sand after 14 days. Note: the joint filling sand should be dry when used.

**Figure D**



### ***Final surface tolerances***

- Paving shall be within ( 10mm of the design level.
- Deviation from a 3 metre straight edge shall not exceed 8mm.
- Difference in level between adjacent paving blocks shall not exceed 2mm.
- Joint width should not exceed 4mm.

### ***Other construction issues***

See the previous instructions in 1. Residential Vehicle Crossings for dealing with roof stormwater drains or obstructions such as water hydrants and manholes.

### ***Completion of the crossing***

When you have finished the crossing, please notify Council's Street Services division on 570 6912.

The crossing will be inspected. If it's been installed according to specification, your deposit will be refunded by post, less the inspection fees. If any defects are found, a message will be left advising you of the further work required.

### 3. Heavy duty vehicle crossings

(See plans on page 12)

If the crossing is to be used by more than two residential properties, or by heavy trade vehicles, then you need a heavy duty vehicle crossing.

We recommend you use an experienced concrete placement contractor for this type of crossing.

#### *Preparing the vehicle crossing*

- Dig out the vehicle crossing to an even 150mm below the finished level, leaving a firmly compacted foundation.
- Break out the existing kerb and channel (gutter) over the full width of construction, including the haunches. Leave a clean, rough surface on which to join the new concrete.
- The carriageway is to be saw cut 400mm from the outer edge of the channel and resealed with a thick layer of Mix 10 asphalt after the boxing is removed.
- If the crossing is being installed through an existing concrete path, a neat joint is to be made at either an existing construction joint in the path, or at a newly made saw cut.

#### ***Ensure haunches are the correct length.***

- Install defect-free, straight boxing on all edges, except where the crossing is going through an existing concrete path, in which case the new concrete is to be neatly joined as described above. To prevent bulging of the step face, the boxing must be fully secured.

#### *Concrete construction*

- A Council officer must inspect the base of the vehicle crossing before the concrete is poured.  
Contact phone 570 6912.
- A 12mm diameter reinforcing rod is to be placed around the perimeter of the new crossing as shown on the plan on page 10. 665 mesh reinforcement is also to be placed throughout the new crossing with a minimum of 50mm cover.

- The concrete pad is to be a minimum of 150mm thick with the new channel formed as an integral part.
- Concrete used for vehicle crossings must be ready mixed concrete 17.5 MPa mix. It is recommended you add Fibremesh or chopped fibreglass to the concrete for extra strength.
- Place the concrete on the prepared, moistened and compacted ground surface to a level slightly higher than the boxing.
- Thoroughly tamp with a vertical and transverse motion using a screed board to ensure the concrete is evenly compacted over the whole crossing.
- Screed off across the top of the boxing and along the crossing.
- Continue tamping and screeding until the surface is even and smooth.
- If it rains while the concrete is still wet, protection will be required. In hot weather the new concrete will have to be protected from cracking when it shrinks. Use material such as wet sacks or building paper.

***Haunches capped with plaster are not permitted.***

- The boxing can be removed after the concrete is hard. Care should be taken not to damage the new work in the process.
- The new crossing should not be driven on for at least four days. It should be used with care for a fortnight until the concrete has gained strength.

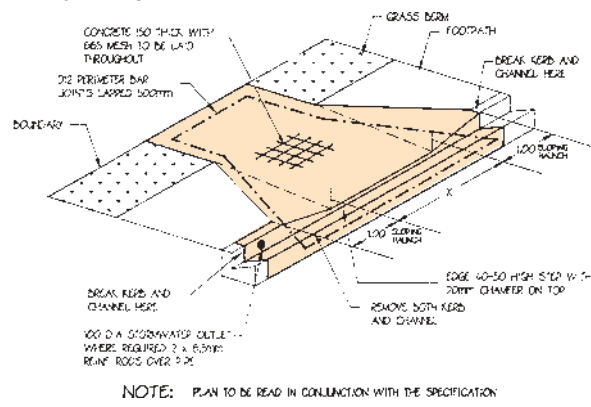
***Other construction issues***

See the previous instructions in 1. Residential Vehicle Crossings for dealing with roof stormwater drains or obstructions such as water hydrants and manholes.

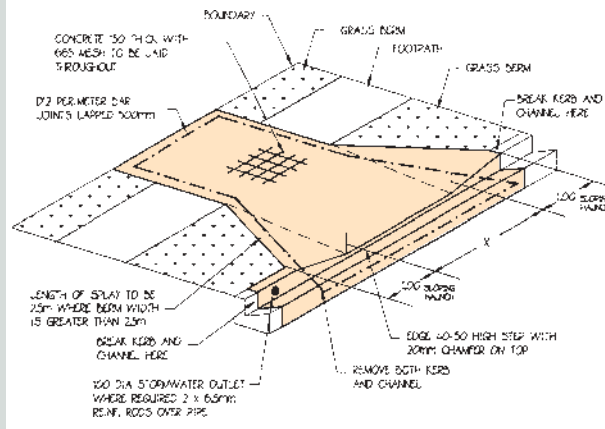
### Completion of the crossing

- When you have finished please notify Street Services on 570 6912.
- The crossing will be inspected. If it has been installed according to specification, your deposit will be refunded by post, less the inspection fees. If any defects are found, you will be advised of the further work required.

#### Footpath adjacent to kerb



#### Bern adjacent to kerb



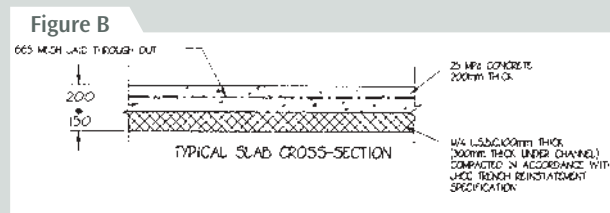
## 4. Extra heavy duty vehicle crossing

(See plan and diagram below and on page 14)

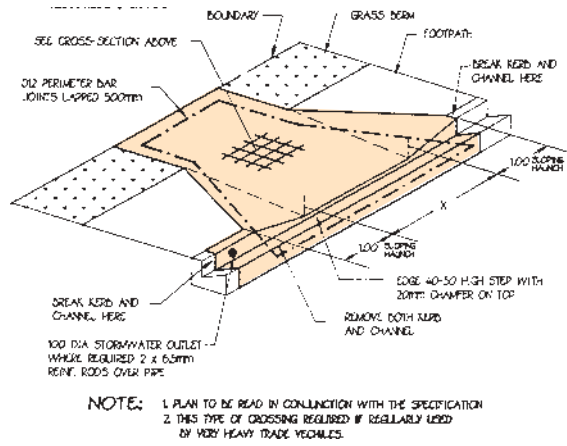
This type of crossing is required in locations regularly accessed by very heavy trade vehicles.

Crossings of this sort must be installed by an experienced concrete placement contractor.

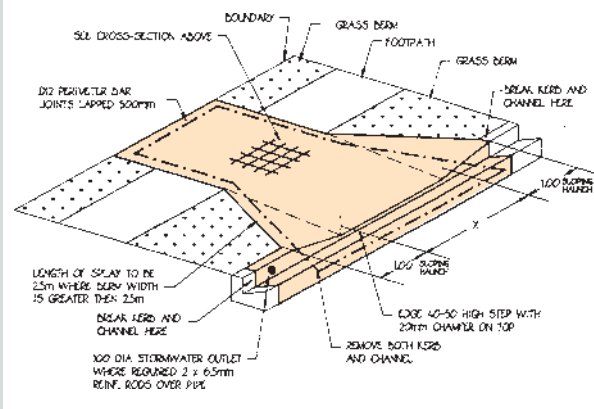
- The same instructions as detailed in 3. Heavy duty vehicle crossings apply with the following exceptions:
- The excavation will need to be carried out to a depth of 350mm below the finished level.
- A 150mm thick foundation layer is to be prepared using TNZ:M/4 basecourse metal compacted in accordance with the Council's Specification for Working in Hutt City Roads.
- The concrete slab is to be a minimum of 200mm thick constructed with 25MPa ready mix concrete.



### Footpath adjacent to kerb



### Berm adjacent to kerb





### *Contact*

If you have any questions, please contact:

**Asset Services Group**  
30 Laings Road  
Private Bag 31-912  
Lower Hutt

Tel: 04-570 6930, fax: 04-569 4290  
Email: [contact@huttcity.govt.nz](mailto:contact@huttcity.govt.nz)  
Web: [www.huttcity.info](http://www.huttcity.info)



November 2003