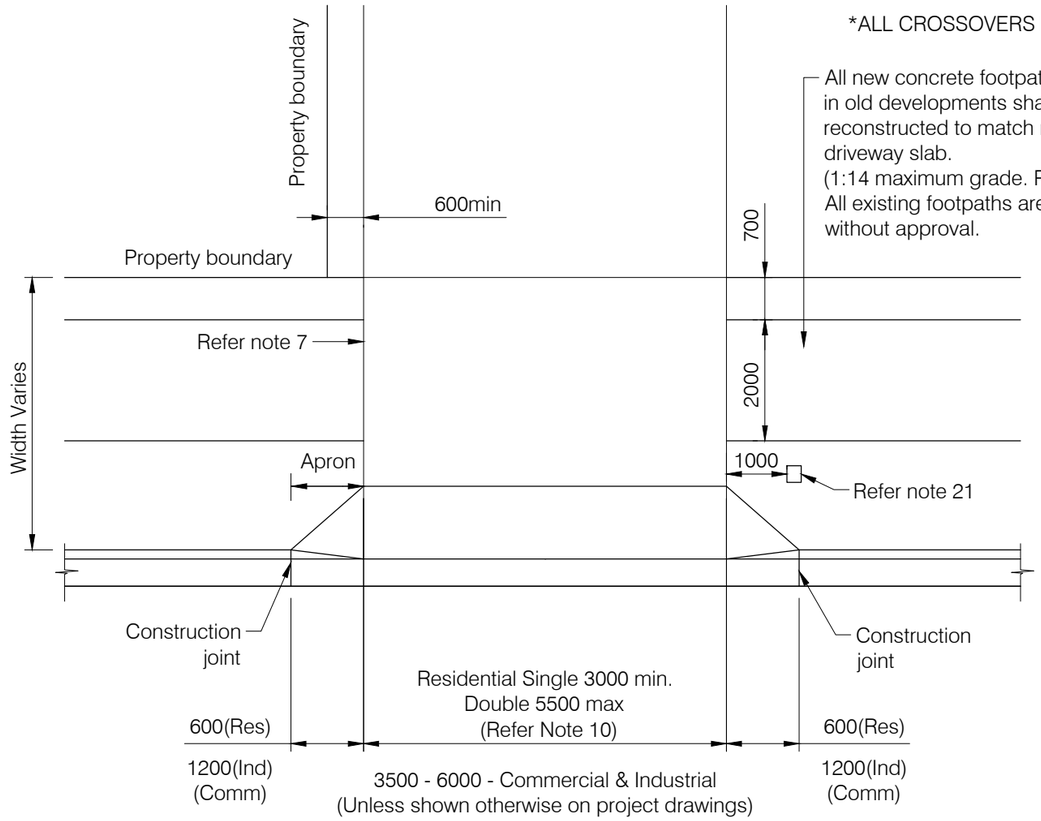
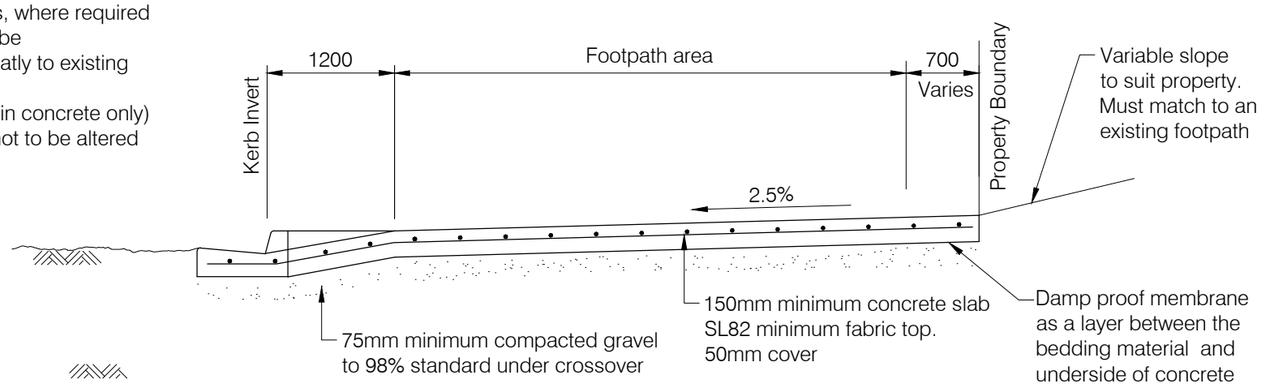
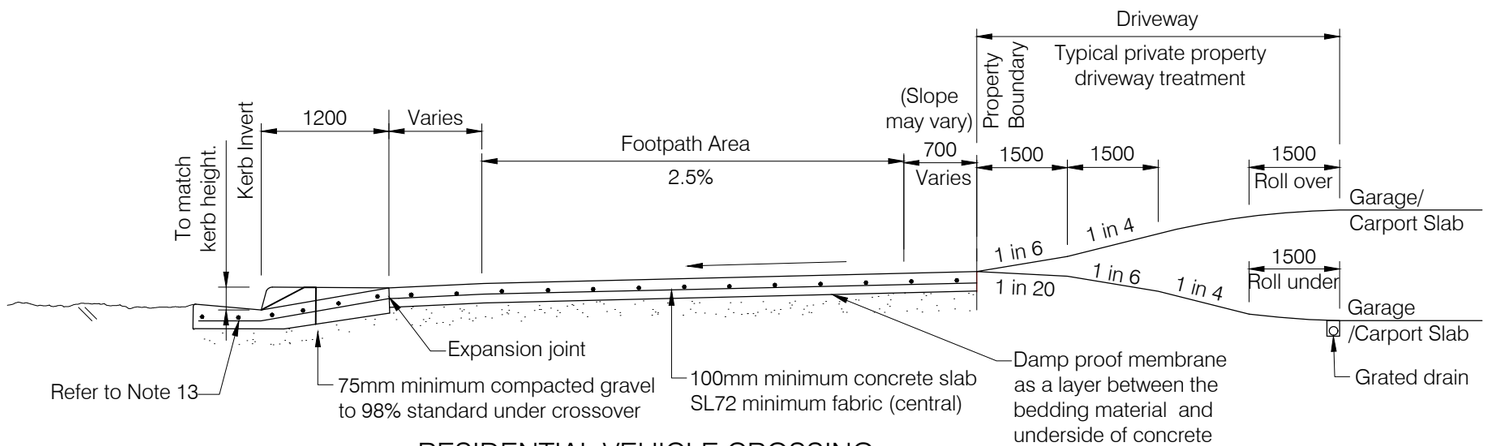
*ALL CROSSOVERS NOT COMPLYING WITH THIS DRAWING REQUIRE APPROVAL



PLAN



COMMERCIAL & INDUSTRIAL VEHICLE CROSSING



RESIDENTIAL VEHICLE CROSSING
(OPTIONAL KERB TYPE)

NOTES

1. All joints to existing kerbs shall be sawcut prior to breaking out concrete for removal. Entire section of kerb to be removed.
2. Concrete is to be N32 min residential, N32 min. commercial/industrial in accordance with AS1379 and AS3600.
3. All concrete to be broom finished.
4. Where a concrete footpath abuts a crossing an expansion joint shall be installed and the footpath levels must not be changed.
5. Expansion joints to be 10mm thick, closed cell cross linked polyethylene foam (85-150kg/m), 12mm round galvanised dowels @ 600 Ctrs
6. Depths of concrete and reinforcing steel shown are minimum requirements for good foundations and average traffic loadings. Where this does not apply, depths of concrete and reinforcing steel shall be increased to suit specific conditions.
7. Where an existing footpath is saw cut and a new footpath is installed abutting the existing concrete, an expansion joint shall be formed in accordance with note 5. Dowels may be fixed into existing concrete by drilling and fixing using a chemical anchoring solution.
8. Subgrade to be compacted to 95% standard.
9. All dimensions are in millimetres.
10. 'Residential' refers to single dwelling or duplex. All other crossings as per commercial/industrial details.
11. Where new sections of footpath are required, these shall be 2000mm wide and constructed in accordance with standard drawing s1035.
12. For Cook Shire Council, fibre can be used in lieu of reinforcement fabric.
13. For layback kerb residential crossing, the undamaged tray may be left in situ and 12mm galvanised dowels @ 600mm Ctrs installed.
14. Relocating or removal of a street tree requires an approval.
15. Stormwater downpipe outlets to be located clear of crossover and aprons.
16. Refer to FNQROC Development Manual Section D9 for street tree clearances.
17. Driveway to be 500mm clear of electrical pillars.
18. Driveway edge to be 1m clear of light and power poles.
19. All new downpipe connectors to kerb + channel are to use kerb adapter to match kerb profile.
20. Refer to S2005 where hydrants are located in driveways.
21. Minimum 1m clearance from edge of driveways to utilities, including adjacent power poles, light poles and junction boxes, etc.
22. Driveway edge to be 600mm clear of any stormwater kerb inlet pits
23. Additional options for modified treatments for constrained applications for access crossovers are given on S1015-Sheet 2. Design will require Council approval.

F	NOTES AND FOOTPATH AREA AMENDED	05/12/23
E	NEW DETAIL AND NOTES ADDED	27/08/20
REVISIONS		DATE

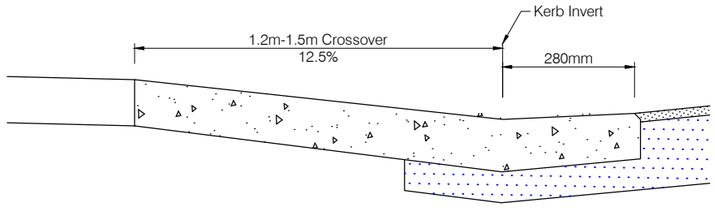
FNQROC

ACCESS CROSSOVERS
Sheet 1 of 2

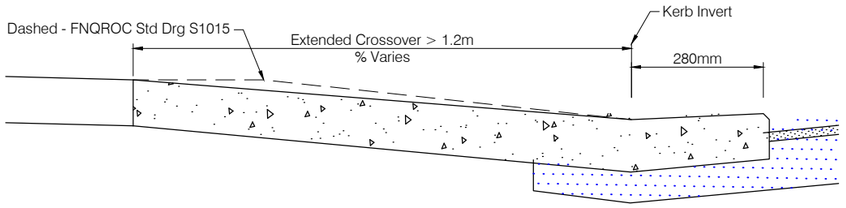
Standard Drawing
S1015

E | F

*OPTIONS 1 TO 6 REQUIRE SPECIFIC COUNCIL APPROVAL



Option 1: 12.5% Ramp
NTS

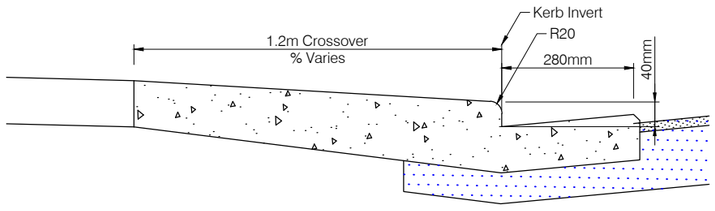


Design Considerations

Positives:
- To improve vehicle clearances (helpful with steep shoulder crossfalls)

Negatives:
- Proximity of pedestrian footpaths may restrict crossover lengths.

Option 2: Extended access crossover similar To FNQROC standard drawing S1015
NTS

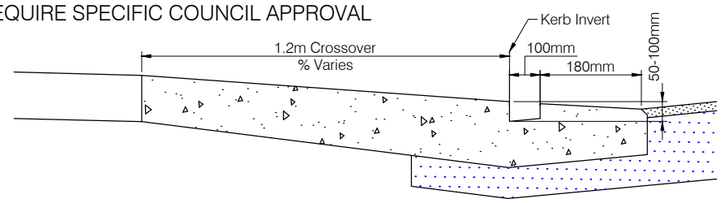


Design Considerations

Positives:
- To improve vehicle clearances (helpful with steeper verges)

Negatives:
- Less smooth transition for vehicles.
- Minor noise increase.

Option 3: 40mm lip at kerb invert
NTS

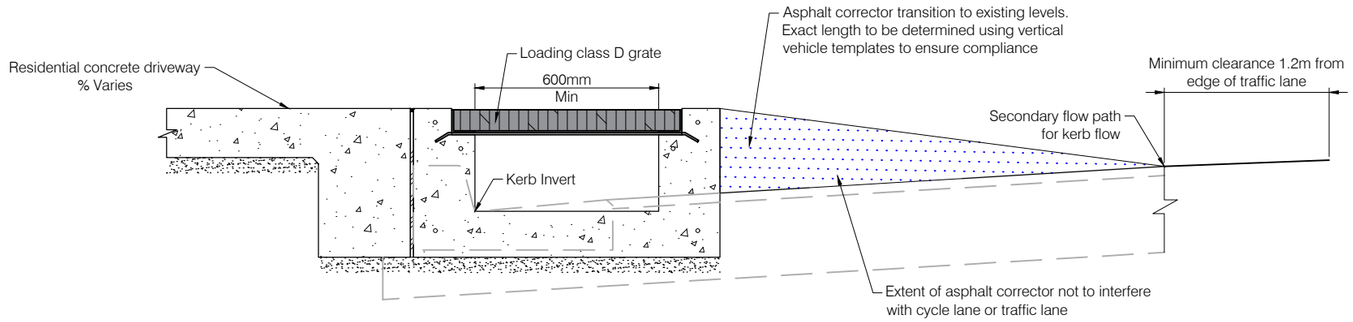


Design Considerations

Positives:
- To improve vehicle clearances (helpful with steeper verges)

Negatives:
- Less smooth transition for vehicles.
- Minor noise increase
- Minor blockage risk - not suitable where there is excessive vegetation matter present
- Slight reduction in road shoulder, stormwater, flow capacity
- Potential obstruction/hazard to non-vehicle users

Option 4: 100mm channel at kerb invert
NTS

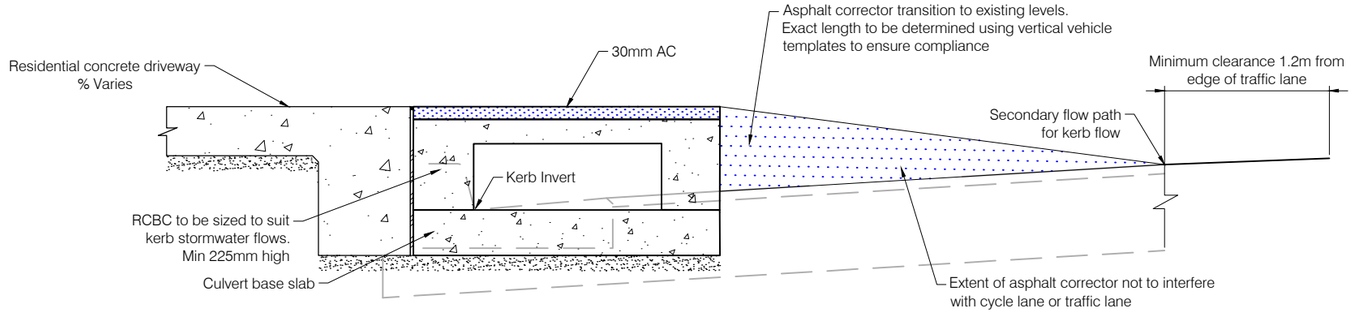


Design Considerations

Positives:
- Improve vertical vehicle clearance where there is a significant difference in height between road shoulder and property levels.
- Grates make for easier clearance of debris

Negatives:
- Less smooth transition for vehicles.
- Minor noise increase
- Minor blockage risk
- Significant reduction in road shoulder, stormwater, flow capacity (potentially only suitable for extremely wide shoulders)
- Medium blockage risk

Option 5: Grated vehicle crossing
NTS



Design Considerations

Positives:
- Improve vertical vehicle clearance where there is a significant difference in height between road shoulder and property levels.

Negatives:
- Less smooth transition for vehicles.
- Minor blockage risk
- Significant reduction in road shoulder, stormwater, flow capacity (potentially only suitable for extremely wide shoulders)
- Medium blockage risk

Option 6: RCBC with 30mm asphalt overlay over culvert
NTS

NOTES

1. All reinforcing for options 1-4 to be as per sheet 1 for relevant crossing type.
2. Option 5 & 6 - refer project specific drawings for for structural details.
3. All modified treatment options to have vertical vehicle template checks to comply with AS2890.1 (Vehicle B85 or B99 as applicable)
4. Consideration of impacts on stormwater flooded widths by selected option to be assessed by project engineer for compliance with minor & major stormwater events
5. Modified treatments for constrained applications on this drawing require an application to council and a specific site approval by council.
6. Options 1 to 6 generally provide increasing complexity and interference/loss of amenity to road users, therefore higher level options are considered less desirable by council and will not be accepted without reasonable consideration and assessment of the lower level options.
7. The development application to council proposing the selected access crossover treatment design shall include:
   A. Documented design drawings
   B. Justification in writing for the selected higher level treatment options
   C. Reasons why simpler lower level treatments and the standard treatment not be adopted
8. Justification of the selected higher level treatment option shall include design considerations of the following where relevant:
   A. Location, function, road geometry, road hierarchy and posted speed limit
   B. Obstruction and hazard presented to all road users including vehicles, cyclists and pedestrians
   C. Obstruction to stormwater drainage including risk of flooding of traffic lanes
   D. Potential for debris to block stormwater flow
   E. Roadway and stormwater channel maintenance and cleaning
   F. Safety of roadway access and egress for crossover users
   G. Adequate and safe vertical vehicle clearance

A	ORIGINAL ISSUE	05/12/23
REVISIONS		DATE

FNQROC

ACCESS CROSSOVERS
Sheet 2 of 2
Modified Treatments For Constrained Applications

Standard Drawing

S1015

A