CONTENTS

SECTION 3 – LEGAL RESPONSIBILITY ASSOCIATED WITH COUNCIL ASSETS

3.1 INTRODUCTION ............................................................................. 1

3.2 TRAINING AND QUALIFICATIONS.................................................. 1
  3.2.1 Qualifications and Experience.................................................. 1

3.3 LIABILITY ...................................................................................... 6
  3.3.1 Information.......................................................................... 6
  3.3.2 Indemnity ............................................................................ 6
    3.3.2.1 General................................................................... 6
    3.3.2.2 Excavation and Reinstatement works within legal road ............................................ 7
  3.3.3 Performance Bonds ............................................................... 7
  3.3.4 Delegations.......................................................................... 8
  3.3.5 Engineering Manager’s Discretion ............................................ 8

3.4 OWNERSHIP AND LOCATION OF SERVICES AND RETAINING WALLS ........................................................................................... 8
  3.4.1 Services on Public Land.......................................................... 8
  3.4.2 Services on Private Land .......................................................10
  3.4.3 Drainage of Right-of-Way (ROW) Driveways .........................11
  3.4.4 Private Wastewater Pumping Stations .....................................11
  3.4.5 Retaining Walls and Structures...............................................11

3.5 STRUCTURES ALONGSIDE OR OVER SERVICES......................... 12
  3.5.1 General ..............................................................................12
3. LEGAL RESPONSIBILITY ASSOCIATED WITH COUNCIL ASSETS

3.1 INTRODUCTION

The purpose of this section is to clearly define responsibilities and obligations of any party involved in the design, construction and maintenance of a Council-owned asset, or asset to be vested in Council. In particular it addresses:

a) Matters concerning training and qualifications of any operator involved in the construction and maintenance of a Council-owned asset (see section 3.2);

b) Liability and responsibility for the quality of a Council-owned asset (section 3.3)

c) Legal and physical protection of an asset in terms of its location, ownership, access and responsibility, whether it is Council-owned or located on Council-owned land (section 3.4).

d) Standards controlling building work in proximity to or over an underground asset (section 3.5)

3.2 TRAINING AND QUALIFICATIONS

This section sets out minimum requirements for contractors in the construction of assets that will be vested in Council.

3.2.1 Qualifications and Experience

a) To ensure the highest standard of quality of construction, works carried out on any asset vested or to be vested in the Nelson City Council, contractors must comply with the following standards:

b) A contractor or the on-site supervisor of the contractor must hold a minimum relevant qualification and training for the proposed design or works in accordance with the Training Requirements Schedule, Table 3-1 and Table 3-2.

c) For each individual site where there are more than 3 personnel working onsite then one member of the contractor’s staff onsite must have an operator (Level 3) qualification or above.

d) For sites involving multiple works (e.g. subdivision or projects where utility and road works are being constructed and/or sites where more than one contracting company are involved) then one member of the contractor’s staff onsite must have a supervisor (Level 4) qualification or above.

e) Contractors must be suitably experienced in the field of work to be undertaken. Council will request a schedule of qualifications in support of this in advance of any work being undertaken.
f) Contractors who intend to work on Council’s live water reticulation will only be permitted to do so if they are authorised by Council and have submitted the appropriate application and gained approval.

g) Table 3-1 and Table 3-2 below sets out works usually carried out in the construction of infrastructural assets. Council officers will assess the work involved once engineering plans have been received. Council will then advise the DPA the expected qualifications that a contractor will require to complete the works.
Table 3-1 Qualifications Matrix - National Certificates *(Numbers relate to qualifications listed in Table 3-2)*

<table>
<thead>
<tr>
<th>Key</th>
<th>Pavement Surfacing</th>
<th>Road Construction &amp; Earthworks</th>
<th>Utilities</th>
<th>Road Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 5 &amp; 6 Designer Contract Manager</td>
<td></td>
<td></td>
<td></td>
<td>National Diploma in Civil Engineering (Applied) <em>(25)</em></td>
</tr>
<tr>
<td>Hot Mix Asphalt Design <em>(2)</em></td>
<td>Multi-Site Supervision <em>(3)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 4 Supervisor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulk Bitumen Equipment <em>(8)</em></td>
<td></td>
<td></td>
<td></td>
<td>Senior Operator <em>(21)</em></td>
</tr>
<tr>
<td>Civil Plant Operation <em>(11)</em></td>
<td>Road Opening Site Co-Ordinator <em>(15)</em></td>
<td>Horizontal Directional Drilling Controller <em>(17)</em></td>
<td>Agrichemical Application <em>(26)</em></td>
<td></td>
</tr>
<tr>
<td>Level 3 Operator</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pavement Surfacing Plant Operation <em>(6)</em></td>
<td>Asphalt Paving Machine Operation <em>(7)</em></td>
<td>Civil Plant Operation (Bulk Earthmoving) <em>(12)</em></td>
<td></td>
<td>Road Marking Operator <em>(22)</em></td>
</tr>
<tr>
<td>Level 2 Skilled Labourer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pavement Surfacing Application <em>(3)</em></td>
<td>Civil Construction Works <em>(13)</em></td>
<td></td>
<td></td>
<td>Road Marking Assistant <em>(23)</em></td>
</tr>
<tr>
<td>Level 1 Basic Skills</td>
<td></td>
<td></td>
<td></td>
<td>General Introductory Skills (GIS) <em>(24)</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Road Opening (Trenching) <em>(20)</em></td>
</tr>
</tbody>
</table>

Numbers relate to qualifications listed in Table 3-2.
<table>
<thead>
<tr>
<th>National Certificate</th>
<th>Work or issues involved in the construction works</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Pavement Surfacing Chip Seal Design Level 5</td>
<td>Supervisor or Contracts Manager Specialized Industry in Asphalt</td>
</tr>
<tr>
<td>2 Pavement Surfacing (Hot Mix Asphalt Design) Level 5</td>
<td>Supervisor or Contracts Manager Specialized Industry in Asphalt</td>
</tr>
<tr>
<td>3 Pavement Surfacing (Multiple Site Supervision) - Level 5</td>
<td>Specialized Industry Skills, Health and Safety, Site Supervision, STMS Bitumen Safety, Specialize in either Asphalt or Chipseal Laying on Multiple Sites</td>
</tr>
<tr>
<td>4 Pavement Surfacing (Single Site Supervision) Level – Level 4</td>
<td>Specialized Industry Skills, Health and Safety, Site Supervision Bitumen Safety, Specialize in either Asphalt or Chipseal Laying</td>
</tr>
<tr>
<td>5 Pavement Surfacing (Bulk Bitumen Equipment) - Level 3/4</td>
<td>Specialized Industry Skills, Health and Safety. Bitumen Safety, Transporting Materials, Safety, Spraying</td>
</tr>
<tr>
<td>6 Pavement Surfacing (Plant Operation) - Level 3</td>
<td>Generic Skills Qualification – Specific to Surfacing Industry Skills, Health and Safety. Bitumen Safety, Truck Driving with Materials, Machinery</td>
</tr>
<tr>
<td>7 Pavement Surfacing Asphalt (Paving Machine Operation) - Level 3</td>
<td>Specialized Industry Skills, Health and Safety Paving Machine Operation, Bitumen Safety</td>
</tr>
<tr>
<td>8 Pavement Surfacing (Application) - Level 2</td>
<td>Generic Skills Qualification – Specific to Surfacing Industry Skills, Health and Safety</td>
</tr>
<tr>
<td>9 Civil Plant Management – Level 4</td>
<td>Specific Industry Skills in Civil Plant Management Management of Plant and equipment</td>
</tr>
<tr>
<td>10 Civil Construction Supervisor - Level 4</td>
<td>Supervise Specific Industry Skills, Health and Safety, STMS Coordinate Single or Multiple Sites, Earthworks, Surveying, Consultants, Quality</td>
</tr>
<tr>
<td>11 Civil Plant Operations – Level 3</td>
<td>Specific Industry Skills, Health and Safety Machinery Road Construction, Road Maintenance, Culverts and Drainage, Earth Works,</td>
</tr>
<tr>
<td>12 Civil Plant Operations (Bulk Earthmoving) – Level 3</td>
<td>Specific Industry Skills, Machinery Operation, Bulk Earth Works</td>
</tr>
<tr>
<td>13 Civil Construction Works - Level 2</td>
<td>Generic Skills Qualification – Specific Industry Skills, Health and Safety, Road Construction, Road Maintenance, Culverts and Drainage, Concrete Work, Kerb and Channel, Interlocking Pavers, Retaining Structures, Safety Barriers,</td>
</tr>
<tr>
<td>National Certificate</td>
<td>Work or issues involved in the construction works</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>(Numbers in left column relate to qualifications listed in Table 3-1)</td>
<td></td>
</tr>
<tr>
<td>14 Water Reticulation Supervisor - Level 4</td>
<td>Roadside Amenities, Traffic Signage</td>
</tr>
<tr>
<td>15 Road Opening Site Coordinator - Level 3</td>
<td>Specialized Industry Skills, Confine Space, STMS Installing Pipes, Fittings, Dewatering/Pumping Opening and Reinstating, Levels, Testing</td>
</tr>
<tr>
<td>Qualification being Reviewed</td>
<td>Foreperson or Individual Operator, STMS Coordinate Road Opening Operations, Notify Public of Operations Liaise with relevant parties, STMS, Supervise personnel, Ensure legal standards are met, correct procedures methods and materials are used.</td>
</tr>
<tr>
<td>16 Water Reticulation Service Person - Level 2/3</td>
<td>Specialized Industry Skills, Confine Space, Outside the Boundary Replacement, Cleaning, Blockages</td>
</tr>
<tr>
<td>17 Horizontal Directional Drilling Site Controller - Level 3</td>
<td>Specialized Industry Skills, Health and Safety</td>
</tr>
<tr>
<td>18 Infrastructure Pipe Laying - Level 2/3</td>
<td>Specific Industry Skills, Health and Safety, Electro fusion and Butt Welding, Confine Space, Installing Pipes, Fittings, Dewatering/Pumping Opening and Reinstating, Levels, Testing</td>
</tr>
<tr>
<td>19 Drain laying - Level 3</td>
<td>Specialized Skills Inside the Section Boundary</td>
</tr>
<tr>
<td>20 Road Opening Trenching - Level 1/2 (Qualification being Reviewed)</td>
<td>Road Opening - Traffic Control, Opening the Surface, Backfilling and Compaction</td>
</tr>
<tr>
<td>21 Road marking Skilled Operator - Level 3/4</td>
<td>Specialized Industry Skills, Health and Safety, Supervise Road marking Operations, STMS</td>
</tr>
<tr>
<td>22 Road marking (Operator) - Level 3</td>
<td>Specialized Industry Skills, Health and Safety Perform Road marking Tasks</td>
</tr>
<tr>
<td>23 Road marking (Assistant) – Level 2/3</td>
<td>Generic Skills for the Trainee - New Trainee into Industry, Health and Safety, Driving, Hazards, Basic Road making Tasks</td>
</tr>
<tr>
<td>24 General Introductory Skills – Level 2</td>
<td>Generic Skills Qualification – Basic Industry Skills New Trainee into the Industry</td>
</tr>
<tr>
<td>25 National Diploma in Civil Engineering – Level 6</td>
<td>Specialized in Civil Contracting, Local Government and Consulting</td>
</tr>
<tr>
<td>27 Health and Safety – Level 3</td>
<td>Specific knowledge of safety and emergency response.</td>
</tr>
</tbody>
</table>

**Note:** Some courses may not be available at the time of writing but will be during the life of this document.
3.3  LIABILITY

3.3.1 Information

The following sets out matters of liability and responsibility for any works involving an asset that is vested in or is to be vested in Nelson City Council ownership.

a) The Developer is responsible for complying with all statutes, standards, regulations, bylaws, requirements and obligations. The Developer is also responsible for giving all notices, obtaining all necessary consents and providing for the protection of other property from damage resulting from the development works.

b) Plans held by Council are the best to their knowledge. Council takes no responsibility for inaccurate information or unknown infrastructure found on site.

c) Council will not be liable for any damages or loss whatsoever suffered from the use of information held by Council.

d) All contractors/consultants must undertake other (such that there is a duty) field investigations that are necessary for surveyors/designers/owners etc to investigate fully/pothole to verify designs and correct positions of services etc.

e) The consent holders, their employees, contractors and agents are responsible for physically locating the position of pipes and other utilities and infrastructure before commencing works.

3.3.2 Indemnity

3.3.2.1 General

a) All Designers or DPA’s must have current professional indemnity insurance for an amount not less than two hundred thousand dollars ($200,000) with run-off cover of at least two years.

b) Any contractor/operator undertaking excavation and reinstatement works within the road reserve shall hold public liability insurance for an amount not less than two million dollars ($2,000,000) for any claim or series of claims arising out of the same occurrence.

c) Compliance with any instruction of Council, or any person acting on its behalf, in performing what is considered to be necessary actions in terms of these standards shall not absolve the contractor from any legal liability that he would otherwise have had in regard to claims for damage or failure of work for the client.

d) The Council shall not be held liable for a loss of income due to construction works or loss of services while Council’s contractors or agents work on programmed works.
3.3.2.2 Excavation and Reinstatement works within legal road

a) The contractor/operator will be held responsible for any street maintenance work required as a result of the excavation and reinstatement operations until twenty four (24) months after notification to the Council that the final surfacing material has been applied.

b) Any such maintenance work required by Council shall be undertaken by the operator at the operator’s cost within five (5) working days of being notified by the Council to undertake repair works. If on the grounds of safety there is a need for more immediate action this remedial work shall be completed within forty eight (48) hours or such other time as may be directed by the Council. Should this not be complied with, Council reserves the right to arrange or undertake such maintenance work and this work shall be at the cost of the Operator.

c) See Section 8, Trenching and Reinstatement of the LDM for further details.

d) For infrastructure, the Developer shall retain responsibility for addressing defects arising from poor workmanship or faulty materials during the required maintenance period.

3.3.3 Performance Bonds

The Developer shall provide a performance bond for unknown construction or design defects in cash or from a bondsman such as a registered bank (as defined in section 2 of the Reserve Bank of New Zealand Act 1989) or insurance company or other approved company, and meet the following conditions:

a) The bond shall apply to all subdivision or development construction works involving three or more additional lots or three new residential sites or where roads or services are to be vested in the Council.

b) The bond for maintenance shall be for the sum of $1,300 per lot or residential site from a minimum of $3,900 to a maximum of $26,000.

c) The term of the performance bond for defects liability shall be for a minimum period of twenty four (24) months from the satisfactory completion of the works (for contracts), or the issue of a 224 certificate as required under the RMA. Note: a maximum term of five (5) years may be imposed for low impact stormwater designs.

d) The performance bond for defects shall cover maintenance attributable to defects and the remedy of all defects arising from defective workmanship or materials. This shall cover the services and road construction works that are to be vested in the Council and other civil and structural engineering construction works to serve the subdivision or development and including electrical supply and telecommunication cable systems.
e) The Developer/consent holder shall be liable for the remedy of all asset defects arising before the end of the period of maintenance, together with Nelson City Council costs in administering the bond. The developer will not be liable for Damage by third parties.

f) In the event that such a defect arises the Developer shall be advised and, provided that the remedial work is not classified as urgent, given the opportunity to address the defect. Where urgent work is required to maintain service or where work on a ‘live’ system is required it shall be carried out by Council’s contractor at the Developer’s cost.

The performance bond for maintenance shall not be required to cover general earthworks but shall be required to cover earthworks considered to be part of the civil engineering construction.

3.3.4 Delegations

The Council has the authority to enforce the provisions of the Land Development Manual and may delegate such authority to any officer of Council or its nominated consultant.

3.3.5 Engineering Manager’s Discretion


b) On application to the Engineering Manager for an alternative design, full supporting information shall be provided. This shall include all advantages and disadvantages of the proposal.

c) Council’s interests will concentrate on the long-term public benefits to the ratepayer and limited maintenance costs for the future, rather than a short-term benefit for private individuals or Developers.

3.4 OWNERSHIP AND LOCATION OF SERVICES AND RETAINING WALLS

This section deals with the location of services, and ownership responsibilities associated with all and any part of the service on privately-owned land, or privately-owned services on Council-owned land.

3.4.1 Services on Public Land

Stormwater, water supply and wastewater reticulation shall be located in accordance with the following general requirements:

a) The preferred location of services to be vested in Council is on Council-owned land;

b) All services shall be aligned in accordance with the requirements of each section of this document.

c) All services shall be easily accessible for maintenance and repair works, so as to minimise disruption during excavation.
d) Diagonal crossing of other services, including kerb lines and boundaries or fence lines, at acute angles less than 45 degrees shall be avoided wherever possible.

e) A minimum of 200mm vertical separation distance to all other underground services is required.

f) Must meet the specific conditions of Table 3-3.

Table 3-3 Location of services

<table>
<thead>
<tr>
<th>Service</th>
<th>Drawing or Standard Reference</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stormwater</td>
<td>The extent of the Council’s responsibility for public stormwater is defined in NCC Drainage Ownership Policy. Both primary and secondary stormwater systems shall be physically and legally protected. Direct connection of a stormwater pipe into the wastewater system is not permitted under any circumstances. Secondary flow paths shall be identified in all instances and located (in preference) in: • roads/reserves • public land, or • private land (protected by suitable easements/consent notices, and on a limited basis).</td>
<td>Design of overland flow paths through private property will generally not be permitted in new developments. Where a flow path is approved through private property it shall be clear of building sites and protected by an easement in favour of Council or private landowner and a consent notice which prohibits ground reshaping and the erection of barriers or any features that may compromise the functioning of the secondary flow path system. Ponding and overland flow on roads is permitted for storm events exceeding 6.67% and 2% AEP for piped and major streams respectively. Light vehicles shall be able to pass along the road in a 50 year ARI event, and large 4WD in a 100 year ARI event.</td>
</tr>
<tr>
<td>Water supply</td>
<td>See SD 414 and 415.</td>
<td>See SD 701 for private connections to properties and meter and lateral location requirements for water services.</td>
</tr>
<tr>
<td>Wastewater</td>
<td>The extent of the Council’s responsibility for public wastewater is defined on SD 601. Sewer mains shall be aligned within public areas such as roads wherever possible. Sewers in roads shall be aligned parallel to kerb lines within and near the centre of the carriageway to ensure that they do not clash with other services or occupy the full carriageway width. Adequate clearance from other services and kerb lines shall be maintained to allow for: excavation on existing services; the future relaying of the drains; the provision of additional future services.</td>
<td>To be classified as a public wastewater sewer a line must have been inspected, approved, and designated as such by Council. (Council responsibility does not extend to private pumping systems and rising mains which remain the responsibility of the users they serve). Minimising the possibility of surface water infiltration of the wastewater system by ensuring that surface openings are not located in flood routes. Wastewater manholes shall not be located with the manhole cover closer than 2.0m from the channel or edge of seal (in the carriageway) or at low points in the finished ground surface, i.e., secondary flow path or ponding areas. In curved roads, sewers shall generally follow the road alignment in straight lines between manholes on such alignment that they do not occupy the full carriageway width.</td>
</tr>
</tbody>
</table>
3.4.2 Services on Private Land

The preferred location of services is on public land. However, this cannot be achieved in all circumstances, due to the location of existing infrastructure networks, land ownership and the topography of the landscape. The following matters guide the placement of services on private land:

a) Where services are to be located on private land, consideration shall be given to:

1) Preserving access to the pipelines for maintenance purposes;
2) Preserving the route for relaying services in the future; and
3) Avoiding likely positions for buildings, garages, carports and retaining walls.

b) The preferred alignments of piped reticulation on private property shall be:

1) Within rights-of-way (ROWs) or driveways;
2) Outside probable building envelopes;
3) Clear of fence lines and kerb lines;
4) Clear of large trees or heavily vegetated areas;
5) Adjacent to boundaries;
6) Parallel to boundaries.

c) Where a service is located on private land access for repairs and maintenance shall be maintained, and the following conditions met:

1) An easement shall be required in favour of the Council, where as part of a subdivision or development proposal, pipes less than or equal to 300mm diameter will be located in private property. The minimum width of easement shall be 2.0m with the pipe placed central within the easement. For pipes greater than 300mm diameter the minimum width of easement shall be 3.0m plus the pipe diameter (i.e. 1.5m either side of the pipe).

2) The standard wording required on engineering plans in the “notes” section, shall be: “Memorandum of Easement in Gross shall be provided in favour of Nelson City Council to convey stormwater and/or wastewater in a pipe and to provide unrestricted access along the line of the pipe for maintenance and renewal work and to protect secondary flow paths”.

3) Similar easements may be required over private common drains in favour of the lots served.
4) Pipelines deeper than 2.5m may require easement widths greater than 3.0m plus pipe diameter to allow for wider than normal trench widths needed to access the pipe in the future.

d) Where any construction work is required on another property, the owners consent shall be endorsed on the original drawing in opaque black ink (not biro) that will permit satisfactory scanning reproduction.

### 3.4.3 Drainage of Right-of-Way (ROW) Driveways

The Designer shall design a stormwater control method such that the primary stormwater flows are prevented from discharging:

a) Across the footpath (existing or proposed) where the ROW falls towards the road/street and the right of way area is greater than 20m².

b) Across private property where the ROW falls away from the road/street, or at any low point within the ROW.

### 3.4.4 Private Wastewater Pumping Stations

Private pumping stations should be avoided where possible. Where, due to topography or other circumstances it is not practical or possible to provide a gravity system, Council may give approval for a private pumping station provided it complies with the specific design criteria as follows:

a) Properly designed wet well pumping stations with macerator pumps servicing industrial/commercial sites which employ permanent staff capable of ensuring that adequate maintenance is carried out.

b) Adequate emergency procedures and storage shall be established which precludes the possibility of uncontrolled overflow, e.g. power failure, pump failure.

c) Separate power supply and meter board is provided.

d) Self-contained miniature pumping systems may be approved providing the pump is only to serve a secondary amenity on a lot where the primary service shall be a gravity sewerage system.

e) Any private pumping station and rising main remains the responsibility of the users and shall be located entirely on private property, i.e., discharge to gravity lateral at the boundary. This may require an appropriate odour control system to be installed at that point.

### 3.4.5 Retaining Walls and Structures

a) Retaining walls and structures required for the primary purpose of retaining/supporting the road (including footpaths and berm areas) shall be positioned entirely within legal road.
b) Retaining walls and structures required for the primary purpose of retaining/supporting private land adjacent to the road shall be positioned outside of legal road reserve and entirely within the private property that it is retaining.

3.5 STRUCTURES ALONGSIDE OR OVER SERVICES

3.5.1 General

Building over or alongside any Common-Private or Public drain or watermain is only a Permitted Activity if it complies with the rules in the appropriate zone section of the Nelson Resource Management Plan.

The engineering requirements for building over or alongside drains or watermains are as follows:

a) Structures

1) Must be located no closer than 1.0 metre measured horizontally from the near side of any public or common private pipe or drain where the pipe or pipe equivalent (in the case of a drain) is less than or equal to 300mm in diameter.

2) Must be located no closer than 1.5 metres measured horizontally from the near side of any public or common private pipe or drain where the pipe or pipe equivalent (in the case of a drain) is greater than 300mm in diameter.

3) May overhang the line of the pipe or drain, provided the structure is cantilevered or is an eave and the height to the underside of the structure above ground level is not less than 1.8m.

4) Which are located within 3 metres measured horizontally from the outside of the pipe or drain must have the base of the foundations deeper than a line drawn at 30 degrees from the horizontal from the invert (bottom) of the pipe or drain (or between 30 degrees and 45 degrees if the design has been certified by a suitably qualified engineer).

b) Carports may be constructed over pipes or drains provided that:

1) The foundations are located in accordance with b) 4) above; and

2) The fixture to the ground/floor is a bolt-down type design which permits quick and easy removal of the structure; and

3) The carport is not closed in; and

4) The floor is not concreted to a depth greater than 150mm; and
5) An encumbrance is registered on the certificate of title for the property acknowledging the location of the pipe or drain under the building and reminding future owners that rules (2), (3) and (4) (above) apply and that access to the pipe or drain for maintenance and repair (and reinstatement afterwards) must be made available at the building owner’s cost.

c) As an alternative to (a) and (b) above, structures may be located over common private or public drains or pipes (but not pressurised pipes), if they comply with Table 3-4.

Table 3-4  Acceptable Techniques for Building over Pipes or Drains

<table>
<thead>
<tr>
<th>Technique A</th>
<th>Technique B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Applicable in the following zones:</strong></td>
<td><strong>Applicable in the following zones:</strong></td>
</tr>
<tr>
<td>Industrial, Suburban Commercial, Open Space and Recreation, and Inner City</td>
<td>Industrial, Suburban Commercial, Open Space and Recreation, Inner City, and Residential</td>
</tr>
</tbody>
</table>

Structures may be located over common private or public drains or pipes, if:

- There are no changes in direction or junctions in the portion built over; and
- The pipe is proven to be in good condition by internal inspection or a water test; and
- The floor is constructed with lift out sections, and all foundations are designed to allow the entire drain or pipe to be readily exposed for maintenance and replacement work; and
- Where the diameter of the pipe is 300mm or less, the design and use of the structure is such that an appropriate sized excavator could readily gain access along the line of the pipe for maintenance and replacement work, or appropriate access is available for hand digging; or
- Where the diameter of the pipe is greater than 300mm, the design and use of the structure is such that a 12 tonne excavator and truck could readily gain access along the line of the pipe for maintenance and replacement work.

- The diameter or width of the pipe is 150mm or less; and
- The length of pipe built over is no more than 6 metres; and
- There are no changes in direction or junctions in the portion built over; and
- The length of pipe built over is relaid using a continuous length of pipe without joints, sleeved inside a 225mm diameter class 4 concrete pipe; and
- There is practical access and the foundations are designed to allow the pipe to be readily exposed at both ends of the sleeve for maintenance and replacement work; and
- There is a minimum 6-metre clear length at one end of the sleeve to allow replacement of the pipe.

- Detailed Engineering Drawings of the proposed work are required.