

# CHAPTER 1

## SUBDIVISION PROCESSES



## CHAPTER 1

## SUBDIVISION PROCESSES

### PART 1 GENERAL REQUIREMENTS

#### 1.1.1. INTRODUCTION

This Manual forms the Whakatane District Council Engineering Code of Practice.

In order to encourage a range of, and flexibility in, subdivision and development design while achieving adequate levels of environmental protection, amenity, safety and infrastructure provision, the Whakatane District Plan adopts a range of subdivision and development standards as performance levels. Various methods may be employed to satisfy these levels. However, compliance with the Council's Engineering Code of Practice on a defined matter is deemed to satisfy the particular performance level applying to that matter.

#### 1.1.2 COMPLIANCE

This Engineering Code of Practice has been developed as a means of compliance with the Performance Standards contained in the Whakatane District Plan.

It is essential that compatibility of design, construction and materials is achieved in order to minimise long term costs and disruption.

While allowing for the implementation of thoroughly researched and investigated innovative ideas, the aim is to ensure that the alteration or extension of infrastructure within the Whakatane District is carried out with minimum long term costs to the community.

#### 1.1.3 DEVELOPERS REPRESENTATIVE

Information for all works and services to which this Code of Practice applies shall be supplied in accordance with the Whakatane District Plan.

The developer or subdivider shall nominate a suitably qualified and experienced representative, (hereinafter referred to in this part as the "Developer's Representative") as defined in Clause 1.1.4.2, and the subdivider or developer shall notify Council of the name of the person so employed before any work commences.

The Developer's Representative shall be responsible for:

- The preparation and submission for approval of engineering plans and specifications in accordance with Council's standards
- Supervision of the works as detailed in the approved plans and specifications
- Certifying to Council upon completion of the works, that the works have been carried out in accordance with the approved documents.

Certification of Compliance is to be in the format as shown in Appendices 1.1, 1.2, 1.3 and 1.4 in Section 1.

The Developer's Representative shall be available for a meeting on the site of the works within eight ordinary working hours of being so requested by the appropriate Council officer.

While each stage of the works must be approved by officers of the Council, they will not undertake day to day supervision and the subdivider's or developer's representative shall be responsible for ensuring that the work complies with all aspects of this standard.

#### **1.1.4 STANDARDS AND DEFINITIONS**

##### **1.1.4.1 CODES AND STANDARDS**

All Codes and Standards referred to herein are deemed to include any subsequent amendments as well.

##### **1.1.4.2 DEFINITIONS**

In this Code, unless inconsistent with the context, the following definitions shall apply:

*'Annual Exceedence Probability (AEP) means the chance of a natural hazard event of a given size or larger occurring in any one year. (Usually expressed as a percentage).*

*'Carriageway'* means any portion of a road used by motor vehicles.

*'Clean fill'* means material consisting of natural components, such as clay, soil and rock and such other materials such as concrete, brick or demolition produces (excluding asphalt), which are free of combustible and organic materials, free of voids and which are not subject to biological or chemical breakdown, and shall not be capable of leaching chemicals or toxins into the environment.

*'Cohesionless Soil'* means a non-plastic soil (sand, gravel) where the strength is derived primarily from load transfer between the soil particles.

*'Council'* means the Whakatane District Council.

*'Developer's Representative'* shall be a Chartered Professional Engineer, or Registered Surveyor, with suitable qualifications and experience, appointed by the applicant to represent him in all technical matters connected with the development or subdivision.

*'Drainage'* means sanitary drainage and/or stormwater drainage and includes pipes, open drains and sewerage treatment plants, and "drain" has a corresponding meaning.

*'Earthworks'* means any modification to the shape of the land surface, including removal of soil, excavation, drilling, tunnelling or other disturbance of the land, infilling, recontouring and construction of any road, track, landing or drainage channel, but excludes the disturbance and/or compaction of land caused by stock grazing.

*'Engineer'* means the Director - Works and Services of the Whakatane District Council or any other officer or person appointed by the Council to control engineering work for the Council.

*'Footpath'* means so much of any road as is laid out or constructed by authority of the Council primarily for pedestrians; and may include the edging, kerbing and channelling thereof.

*'Freeboard'* means the amount to be allowed above the design water level to allow for flood surface undulation, tolerance for flow estimation methods and for possible failure of the primary disposal system. Freeboard for habitable buildings shall be 500mm and for non-habitable buildings shall be 200mm.

*'Ground'* means the material in the vicinity of the surface of the earth whether soil or rock.

*'Land Drainage System'* refers to the flow of surface and ground water but concentrates mainly on peak surface discharges and their regulation under urban conditions.

*'Loose Soil'* means soil having a Standard Penetration Resistance of less than 10 blows per 300mm. Also refers to uncompacted or poorly compacted fill.

*'Owner'* in relation to any land or interest therein, is the same as the *'Owner'* as defined by Section 2(1) of the Resource Management Act 1991.

*'Post Construction Settlement'* means the settlement of the ground surface which takes place after completion of the construction of the earthworks.

*'Primary Design Flow'* is the estimated stormwater runoff selected to provide a predetermined degree of protection to the surrounding land. In most cases, this flow will be piped or contained within relatively narrow confines under public control and be protected by a reserve or easement.

*'Principal Provider'* is the party paying for the installation of underground utilities as set out in SNZ HB 2002:2003 – Code of Practice for Working in the Road.

*'Private Road'* means any roadway, place, or arcade laid out within the district on private land by the owner thereof but intended for the use of the public generally.

*'Private Way'* means any way or passage whatsoever over private land within the district, the right to use which is confined or intended to be confined to certain persons or classes of persons, and which is not open or intended to be open to the use of the public generally.

*'RMA 1991'* means Resource Management Act 1991.

*'Road'* means the whole of any land which is defined as *'Road'* by Section 315 of the Local Government Act 1974. It includes carriageways, berms and other grassed areas, footpaths and pedestrian accessways, and is the total area from boundary to boundary, customarily referred to as *'road reserve'*.

*'Sanitary Drainage'* means drainage primarily for the reception and discharge of effluent and wastewater.

*'Scheme Plan'* means a scheme plan of a proposed subdivision in terms of Section 218 of the Resource Management Act 1991.

'*Secondary Flow Path*' refers to the path taken by stormwater runoff in excess of the primary design flow and should be capable of producing a reasonable degree of protection to the surrounding buildings.

'*Service Lane*' means the whole of any land which is defined as 'Service Lane' by Section 315 of the Local Government Act 1974.

'*Shall*' indicates a requirement that is to be adopted in order to comply with the Standard, while the words '*should*' or '*may*' indicate a recommended practice.

'*Soft Soil*' means cohesive soil having a low shear strength (less than 25 KPa).

'*Soil*' means the heterogeneous aggregation of particles comprising either peat, clays, silts, sands, gravels, crushed and re-oriented rock fragments, or a mixture of any of the above. The term excludes rock that is intact and rock masses whether highly jointed or not.

'*Soils Engineer*' means a person who is currently entitled to practice as a Chartered Professional Engineer and who has pre-qualified with IPENZ with geotechnical accreditation and has experience in the field of soils engineering which is acceptable to Council; or such other person as the Council may specifically approve as being competent.

'*Stable Ground*' means ground existing in a state which can be shown by a Soils Engineer is unlikely to settle, slip, erode or otherwise move to the detriment of superimposed buildings, services, roads or property generally.

'*Stormwater*' means water or other runoff resulting from precipitation (rain, hail, snow) and does not include Trade Waste or Domestic Sewage.

'*Stormwater Drainage*' means a drain primarily for the reception and discharge of stormwater.

'*Street*' has the same meaning as '*Road*'.

'*Street Classifications*'

### **Secondary/District Arterials**

Roads which are:

- Of strategic importance
- Links between residential, commercial, industrial, or recreation land use activities
- A significant element in the local economy

**Note:** *Generally such roads would be within urban areas but in some localities, such roads would provide alternative links between centres of population or be significant for the movement about a district, of goods or produce*

### Collector Routes

Routes which are:

- Primarily suited to urban situations, between or within areas of population yet have a place in rural areas. In rural areas, where land use activity is relatively intensive, it is necessary to provide links between local roads and arterials
- Locally preferred between or within areas of population or activities
- Complimentary arterials
- Usually paved and are of road geometry aligned with operational safety standards

### Local Roads

- Roads whose primary function is property access
- All other roads servicing land use activity

*'Road Opening Notice'* means a notice in the form of Appendix 3.1.

*'Subdividing Owner'* means the owner or owners of the land to be subdivided, until allotments are sold.

*'Survey Plan'* has the same meaning as in the Resource Management Act 1991.

*'Trade Waste Discharge'* is any liquid with or without matter in suspension or solution, that is or may be discharged from a trade premises in the course of any trade or industrial process or operation, or in the course of any activity or operation of a like nature, but does not include stormwater or domestic sewage.

*'Trench'* means any excavation within a road for the purpose of maintaining, locating or installing services, and excavations on grassed berms for the purpose of providing or maintaining services to residential sections except shallow excavations for the purpose of constructing vehicle crossings.

*'Trencher'* means any person or persons responsible for actually carrying out the trenching or reticulation installation for or on behalf of any Principal Provider

*'Wastewater'* means water containing waste matter, in solution or suspension, discharged from any premises

## **PART 2 PLANNING**

### **1.2.1 SUBDIVISION PROCESS**

#### **1.2.1.1 GENERAL**

All subdivision developments require a Resource Consent as provided for in the Resource Management Act 1991. The consent application will generally be approved provided all requirements set out in the District Plan are met.

Some development works may also require consents from Environment Bay of Plenty.

#### **1.2.2 RESOURCE CONSENT APPLICATION**

The following information is required for a subdivision consent application:

- Scheme Plan showing all existing site information and services, the subdivision layout, and identifying roads reserves and lots
- Legal description of land being developed and identification of notes on titles, easements etc.
- Geotechnical report from a geotechnical engineer (where applicable)
- Assessment of environmental effects
- Assessment of serviceability of each lot with all required infrastructure and services
- Assessment of overland flows from upstream catchment [where required]
- Secondary flow paths for 1% AEP storm events
- Previous relevant consents
- Records of discussions with other affected parties
- Completed application form
- Application fee

#### **1.2.3 CONSENT COMMENCEMENT**

Provided the Consent is granted and the conditions therein are not subject to objection, then the date is recognised as the commencement of the five year time period.

#### **1.2.4 OBJECTIONS**

The Consent holder may object to any or all of the conditions set out in the Consent, provided that notification of such action is given within 15 working days from the date of receipt of the Consent.

#### **1.2.5 CONSENTS GRANTED UNDER DELEGATED AUTHORITY**

The Manager Development and Compliance, and the Director Environment and Policy, have delegated authority from the Council to grant consent to most subdivision applications. A subdivision comprising more than ten lots must be decided by the Planning Committee of Council



This committee is comprised of elected Councillors who have delegated powers to grant (or refuse) resource consent applications put before them.

Hearings and decisions are held by the Committee if:

- There is no delegation to a staff member, or if the staff member does not wish to exercise delegation
- A pre-hearing meeting has failed to resolve issues
- A Planner's recommendations are challenged
- The applicant does not accept all of the conditions

Refer to Section 357 of the Resource Management Act for further details.

### **1.2.6 ENVIRONMENT COURT**

Under Section 358 of the Resource Management Act, any person who is affected by the decisions of the Hearing procedure can appeal the decision of the Committee to the Environment Court. It is recommended that advice be sought from legal counsel before entering this procedure.

### **1.2.7 SECTION 223 CERTIFICATION**

[Refer to Section 223 of the Resource Management Act 1991]

The developer shall submit a survey plan of the subdivision to Council for approval. The Council will consider this plan and ensure that it complies with the Scheme Plan and the Resource Consent conditions. This plan must be prepared by a registered surveyor. A survey plan must be submitted to Council for approval within five years of the date of commencement of the consent. The Council must process a survey plan under S223 within 10 working days of its receipt.

### **1.2.8 SECTION 224C CERTIFICATION**

[Refer to Section 224C of the Resource Management Act 1991]

The Council will issue the 224C Certificate when it is satisfied that all Resource Consent conditions have been met and that all development contributions have been paid.

The 224C Certificate is provided for under Section 224C of the Resource Management Act 1991 and is required by the District Land Registrar before the issue of titles for the newly created lots can proceed.

### **1.2.9 REQUIREMENTS FOR 224C APPLICATION**

The Developer may apply for a 224C Certificate when;

- All works required to be carried out as conditions of the consent are completed
- All development contributions have been paid
- The Developer has posted a bond to an agreed value to cover the cost of completing the works to the standards set out in the conditions of the consent.

- All of the relevant quality checklists as may be required, complete with all the test certificates, all duly signed by, or on behalf of, the Developer have been submitted and approved
- The as-built plans and data information set out in Clause 1.5.3 of this chapter have been supplied and approved

A bond document is required to be secured by a cash payment or a bank guarantee, generally to a value not exceeding 150% of the value of the work. A legal agreement is entered into between the Developer and the Council to define the work to be completed.

When applying for a 224C Certificate the developer must submit:

### **1.2.10 PRACTICAL COMPLETION**

“Practical Completion” is reached when Council is satisfied that the construction has progressed to a stage where all weather access is available to every lot created and all essential infrastructure services are available to every lot.

Work that may remain to be completed at Practical Completion may include:

- Topsoil and grassing of berms
- Landscaping
- Erection of signs

### **1.2.11 DEFECTS LIABILITY PERIOD**

All works carried out during the subdivision shall be subject to a Defects Liability Period of twelve months. The Defects Liability Period shall commence from the date of issue of the Certificate of Practical Completion.

### **1.2.12 COMPLETION**

“Completion” is when all works are fully complete and all defects that have arisen during the Defects Liability Period have been rectified.

### **1.2.13 SERVICE EASEMENTS**

All public sewer, stormwater and water mains which are laid in private property, are to be protected by easements in favour of Council. The minimum width of the easement shall be half the depth from ground level to the invert of the pipe plus 600 mm, either side of the pipe, or such other width as required, taking into account the soil structure and adjacent local features. The easement shall be of sufficient width to allow practical access for maintenance purposes, and shall be not less than 3 metres wide.

The position of all pipes in easements shall not be more than 500 mm from the location shown on the engineering plans submitted for engineering approval. It shall be the responsibility of the developer to ensure that this condition is complied with.

All easement documents shall be prepared by the Council's solicitor at the expense of the developer.

#### **1.2.14 FENCING**

Fencing shall be required at the sides of any road, street, reserve or accessway, if in the opinion of the Council such fencing is necessary to ensure the safety of the public, or to avoid, remedy or mitigate any adverse effect on the environment.

Fences are required on both sides of a pedestrian accessway in accordance with Standard Drawing R 14.

Other fences to be erected will be specified by the Council and must be constructed in accordance with the requirements of the District Plan, Standard Drawing R 14, or as approved by the Engineer.

Temporary fencing shall be erected by the subdivider to protect the general public, particularly children, during the course of construction of the development, from all danger areas in the subdivision. Signs shall be erected warning persons of any dangerous areas. The use of barbed wire is prohibited.

---

## **PART 3      ENGINEERING PLANS**

### **1.3.1      DRAWING STANDARDS**

All drawings shall be prepared and submitted on sheets of the Standard ISO Type A series. Principal drawings are to be on A1 or A2 sizes as appropriate. Detailed drawings, site plans, etc may be of A3 or A4 sizes.

All draughting shall conform to NZS/AS 1100 : 1992 – Technical Drawing, and NZS 5902 Part 5 : 1981, or other New Zealand Standards where appropriate. In particular, the minimum height of letters is to conform to NZS/AS 1100. Linework must be no finer than 0.18mm and all lines must be of uniform density.

The symbols shown on Standard Drawing G 01 are to be used. Other symbols are to conform to NZS/AS 1100 or the appropriate New Zealand Standard.

### **1.3.2      DRAWING CONTENT**

The following drawings are to be submitted where appropriate, to cover the extent and scope of the proposed development.

- a)      Locality Plan: Showing information sufficient to locate the subject site relative to existing features such as roads, already developed land, etc
- b)      Staging Plan: Where the development is likely to be constructed in stages, a plan showing the pattern and chronology of the land development shall be submitted. The staging must be approved as a part of the resource consent decision.
- c)      Earthworks and Run-off Control:      Plan view
- d)      Roading Plans:      Plan View, Long Sections, Cross Sections, Road Marking and Signage, Landscaping, Detail Drawings
- e)      Stormwater:      Plan View, Long Sections
- f)      Wastewater:      Plan View, Long sections, Pump Station Details [Including rising mains if applicable]
- g)      Water:      Plan view

### **1.3.3      SCALES**

The following scales shall be used:

Plan & Long section:	Horizontal	1:500, 1:250
	Vertical	1:100, 1:50
Cross Sections:	Horizontal	1:100
	Vertical	1:100 or 1:50

**Note:** *Wherever possible scheme plan scales shall conform to the engineering plan scale.*

### **1.3.4 ORIENTATION OF PLANS**

#### **(a) Plans and Long-Sections**

The north point shall be to the top of the sheet wherever practicable. All plans and long-sections shall have the lesser distance (m) on the left hand side of the sheet. For drainage and water supply, the lesser distance of a line shall be at the downstream end of the pipe. Long-sections should as far as possible be orientated the same as the plan.

#### **(b) Cross-Sections**

Cross-sections shall commence at the bottom left hand corner of the sheet and proceed upwards in order of increasing traverse distance. Where the road reserve is 20m wide, it may not be possible to place two columns of sections on one sheet, in which case the sheet may be rotated 90° clockwise and the sections plotted from the "bottom" of the sheet to the "top".

The left and right kerb lines shall be determined by facing in the direction of increasing distance. For open channel flow, left and right banks shall be determined by facing in the direction of flow.

### **1.3.5 BENCHMARKS AND STANDARD DATUM**

All survey drawings and development plans shall be referenced to the New Zealand Map Grid (NZMG).

The standard reference datum for all levels shall be "Moturiki" Datum plus 100 metres and all levels shall be stated in terms of this datum. A statement of compliance with this clause shall be included on all drawings with levels thereon.

The "As Built" plan shall show the position of benchmarks in terms of survey co-ordinates or by accurate survey and the level thereon in terms of Moturiki Datum plus 100 m.

To provide permanent reference levels, suitable benchmarks shall be placed where directed by Council, at not greater than 250m intervals. Wherever possible, benchmarks are to be located at tangent points in positions where they are unlikely to be disturbed during construction or by future maintenance.

If existing benchmarks are disturbed during the course of the work, including the Defects Liability Period, they shall be reinstated and re-levelled at the subdivider's expense.

### **1.3.6 SUPPORTING DOCUMENTATION**

#### **1.3.6.1 Geotechnical Information**

Where required by Council, a report from a Soils Engineer on the ground conditions and an opinion as to the suitability of the land for the purpose proposed. [Refer to Appendices 2.1 and 2.2 in Section 2]]

**1.3.6.2      Roading**

Road pavement design calculations, including the results of all preliminary soil testing.

**1.3.6.3      Stormwater Drainage**

Detailed catchment runoff calculations showing for each sub-catchment. The formula input factors used in the calculations. Detailed pipeline flow capacity analysis.

**1.3.6.4      Wastewater**

Wastewater flow estimates for each catchment together with catchment boundaries and areas. Pipe flow calculations showing pipe capacity and flow velocity for average dry weather flow, peak daily flow and peak wet weather flow. Pump station calculations justifying the selection of wet well size, pump selection and rising main hydraulics.

**1.3.6.5      Video Inspection Report.**

A video inspection report is required where a private drain is to become a part of the public network.

**1.3.6.6      Water**

Fire flow calculations

**1.3.6.7      Structural Information**

Calculations and manufacturers specifications as and where required.

## **PART 4      ENGINEERING WORKS**

### **1.4.1      PLAN ACCEPTANCE**

Submitted engineering plans will be audited against the requirements of the Resource Consent engineering conditions, and the standards set out in Section 3 of this Chapter.

### **1.4.2      FINAL PLANS**

After the plans have been accepted, the Developer's Representative shall submit a further two complete sets of plans for stamping and signing on behalf of Council. These copies will be returned to the Developers Representative after signing. One complete copy of the stamped and signed plans shall be available on the site at all times.

### **1.4.3      CHANGES TO PLANS**

The submitted plans may only be amended after satisfactory consultation with the relevant department of Council directly involved with the changes.

In all cases the changes must be documented and the amendments shown on the accepted plans.

### **1.4.4      COMMENCEMENT OF WORK**

No engineering works shall commence on any subdivision or development until all approvals and acceptances [engineering, resource consent and others] have been obtained.

### **1.4.5      QUALITY OF WORK**

The Developer's Representative is responsible for ensuring that the engineering works constructed by contractors are carried out to the requirements shown on the accepted plans and to best work practices.

The Developer's Representative shall be responsible for satisfactory completion of the Quality Checklists. Where the Quality checklists require the presence of a Council representative, then the Developer shall make such arrangements as required.

The Soils Engineer supervising the filling shall supply a certificate that any fill has been carried out in accordance with these requirements except that such certificate shall not be required where exemptions in accordance with Clause 2.3.6 apply.

### **1.4.6      EMERGENCIES**

The Council is to be informed without delay, if, during the course of construction works any situation arises whereby the security of public or private property, or the operation of any public facility is endangered. The Council may instruct the subdivider's representative to carry out such remedial measures as the Council thinks fit to remove the danger. Any work so ordered is to be done at the expense of the subdivider.

If the work is not commenced within eight working hours of the issuing of the instruction, the Council may arrange for the required work to be carried out at the subdivider's expense. Should any emergency requiring immediate attention arise, the Council may carry out the work and recover the costs from the subdivider.

#### **1.4.7 PUBLIC PROTECTION**

The developer shall take all reasonable measures to protect the public from the adverse effects of construction works. Particular attention shall be paid to the erection and maintenance of temporary fencing, especially in areas of potential ponding. Signs shall be erected warning of any dangers within the site. These protection measures shall be shown in the approved Health and Safety Plan.

#### **1.4.8 DAMAGE**

All damage to existing roads, services or private property, or disturbance of survey boundary marks due to, or caused by, any new works, shall be the liability of the subdivider. The damage must be repaired by the subdivider immediately following identification of the problem or instruction from the Council. If the work is not commenced within sixteen working hours or such other reasonable time as agreed by the Engineer, then the Council may arrange for the necessary work to be carried out and charged to the subdivider. This provision includes removal of mud and debris from existing roads in the vicinity of the subdivision. A daily removal of such debris may be necessary in the interests of traffic safety.

#### **1.4.9 ON-SITE TESTING**

Any work that requires testing in the presence of a Council officer shall be pre-tested and proved satisfactory by the Developer's Representative prior to the witnessed testing.

If the work does not meet the standard, then a fee will be charged for the second and any subsequent visit to remeasure or retest the work.

#### **1.4.10 AUDITING**

The consent holder's representative shall notify the Council (telephone 07 306 0500, fax 07 307 0718) by completing an Asset Inspection Memorandum (see Appendix 1.6), when the following phases of work are reached and at such other phases as the Council may determine to enable inspection to be carried out:

- Prepared earthworks and subsoil drainage prior to filling
- Completed earthworks and prepared subgrade
- Commencement of drainage reticulation
- Commencement of water reticulation
- Finished basecourse
- Before the commencement of carriageway surfacing
- Pressure testing of services

Inspection will be carried out within twenty four hours of notification if possible. Work shall not proceed until inspection has been made, or alternatively until authorisation is given to proceed.



#### **1.4.11          PRESERVATION OF ARCHAEOLOGICAL FEATURES**

Where an archaeological or historical site is known or is suspected to exist, Council may impose, in granting a Resource Consent, such conditions relating to any modification or disturbance of the affected land as it deems appropriate.

All archaeological sites are protected by the Historic Places Act 1993. The applicant shall cease all operations immediately, should any koiwi or other taonga be discovered within the area of the development. No archaeological sites shall be modified or disturbed in any way unless written authority has been obtained from the New Zealand Historic Places Trust in consultation with the relevant iwi authority.

#### **1.4.12          CONNECTION TO SERVICES**

Connection of new stormwater, wastewater and water supply reticulation to existing systems can be carried out by the Developer, but only with specific approval from Council.

The Developer shall apply for approval at least five working days before the connection is to be made. The new services must have been tested and shown to meet all requirements prior to the connection being made.

#### **1.4.13          HEALTH AND SAFETY**

All work being carried out either as a direct contract to Council or as part of a subdivision development shall be completed in such a manner that it complies in every respect with the Health & Safety in Employment Act 1992.

Prior to any work commencing, an approved "Health & Safety Plan" shall be provided.

Where the work extends onto the existing road network, the Contractor shall provide and maintain an approved temporary traffic management plan in accordance with the Transit New Zealand Code of Practice for Temporary Traffic Management.

#### **1.4.14          UTILITY NETWORK SERVICES**

Works of any nature may encounter utility network services whether overhead or underground.

The Contractor shall, before starting any excavation work, obtain all necessary consents from the appropriate Principal Providers before excavating in the region of any services.

#### **1.4.15          SERVICE COVERS**

During construction no earthmoving or other equipment which may cause damage shall be used over service covers, manholes or other buried equipment.

After construction or rehabilitation of pavements and where alteration to existing ground levels has occurred as part of the development works, all surface covers and manhole lids shall be adjusted in level so as to be generally flush with the surrounding surfaces.

During the course of construction all surface openings of covers to underground services must be maintained clear of spoil so as to be readily accessible at all times.

**1.4.16 CESSPITS**

Special care shall be taken to prevent cesspits being filled, or cesspit grates being blocked with rubble, spoil or other material during the course of the works. The Contractor shall ensure that the cesspit chambers and grates are kept clear and open at all times, and at the end of the works the Contractor shall clean all new cesspits, and any others which may have been affected.

## **PART 5      WORKS COMPLETION**

### **1.5.1      WORKS CLEARANCE**

The developer shall apply for the 224C Certificate only when he is satisfied that the work is finished to the required standard. This includes the submission of the complete and accurate as-built details. Refer also to Clause 1.2.9 of this Chapter.

### **1.5.2      QUALITY SYSTEMS**

The Quality Assurance checklists (refer Appendices 1.1, 1.2, 1.3 and 1.4) must be completed and submitted at the time of application for works clearance. Works clearance will not be considered until all certifications and quality assurance exercises are complete and as-built plans are received.

### **1.5.3      "AS-BUILT PLANS"**

For subdivisions not exceeding two lots, "As Built" plans, in the form of transparent foils endorsed and certified correct by a registered surveyor (refer Appendix 1.5) are to be submitted by the subdivider.

For subdivisions exceeding two lots, "As Built" plans shall be submitted in an electronic format which is completely compatible with Council's GIS/CAD system. Digital data will be subjected to a verification procedure to ensure that it complies with the Council's system and requirements. Any data not meeting the requirements will be returned to the data provider for rectification with a brief outline of the non-compliance.

"As Built" plans shall show the following information:

- Sanitary drainage reticulation, including lid and invert levels of manholes and measured positions of manholes relative to boundary pegs and measurements to house junction, bends, ramps and other fittings, referred to the centre of the downstream manhole cover
- The position of all house connections should also be related to a section boundary peg, and the invert levels of connections given (ground levels can be altered subsequent to utility construction)
- Stormwater drainage reticulation detailed as for (a) above
- Water reticulation including depth and position of mains, location of hydrants, valves and tees relating to the nearest boundary peg
- The position of all service connections is to be related to the nearest section boundary peg
- The type of material and class of all pipes installed for sanitary drainage, stormwater and water supply
- Areas of filling showing the extent and depth of fill over original ground in the form of a six metre grid, or by fill contours showing original ground levels and finished ground levels
- All alterations to the submitted engineering drawings found necessary during construction and approved of in writing by the Engineer
- The correct street names as approved by Council
- All building footprints relative to site boundaries when applicable

- Kerb lines, footpaths, roundabouts, traffic islands, road marking and signage.

#### **1.5.4 ASSET INFORMATION**

An Asset Data Sheet and an Asset Data Schedule showing the extent and value of all new infrastructure created by the development shall be submitted on an electronic form which will be supplied by Council.

#### **1.5.5 LANDSCAPE WORKS**

The Council does not require “As-Builts” of street landscaping. The developer must be satisfied that the street landscaping is in accordance with the design and must include landscaping in the Certificate of Completion.

**CHAPTER 1**  
**SUBDIVISION PROCESSES**  
**STANDARD DRAWINGS**

G 01 ..... Drawing Symbols and Line Types



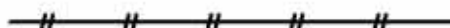
Existing

Proposed

Boundary line unfenced



Fenceline on boundary



Fenceline not on boundary



Sanitary sewer with manhole connection and pump station



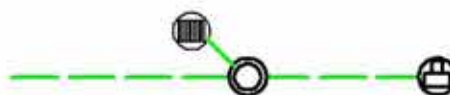
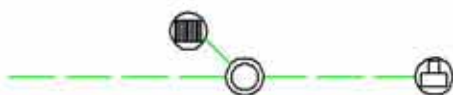
Sanitary sewer rising main



Seal edge



Stormwater line with manhole, cesspit and pump station



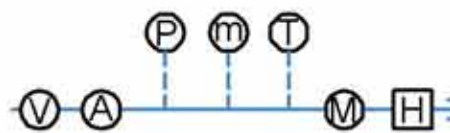
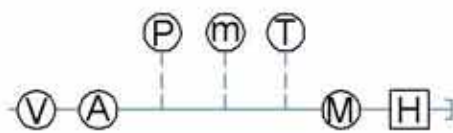
Underground telecommunications



Underground power with service box



Watermain with sluice valve, air valve, peet valve, meter, toby, bulk meter, hydrant and blank cap



Rider main with peet-valve



NOTE: The line weights for existing services shall be 0.25mm width, and for all proposed services 0.5mm.

WHAKATANE DISTRICT COUNCIL



PREPARED BY OPUS

STANDARD DRAWING

NOT TO SCALE

DRAWING SYMBOLS AND LINE TYPES

G01

ISSUE 7.0  
SEPTEMBER 2007

## ROAD AND TRAFFIC CERTIFICATION OF SUBDIVISION CONSTRUCTION

<b>Name of Subdivision:</b>	
<b>Council File No:</b>	
<b>Main Contractor:</b>	
<b>Roading Sub Contractor:</b>	
<b>Engineer Responsible for Supervision:</b>	
<b>Qualifications:</b>	

		Y	N/A	N	Inspection or Test Date	Comments
<b>A</b>	<b>KERBING AND CHANNELLING</b>					
	Kerb & channel complete and free of defects					
	Kerb type as per engineer drawings approved by Council					
	Carriageway positions as shown on approved engineering drawings					
	Kerb levels checked and found to be as per approved engineering drawings					
<b>B</b>	<b>SUBGRADE</b>					
	Subgrade inspected and approved by supervising engineer prior to metalling					
	Subgrade compaction, strength and uniformity found to be as per documents approved by Council and as necessary for pavement design					
	Subgrade level and smoothness tolerances found to be as per documents approved by Council					
<b>C</b>	<b>BASECOURSE</b>					
	Basecourse supplied complies with documents approved by Council					
	Basecourse compacted to the standard given in the documents approved by Council					
	Basecourse depth checked @ 20m crs max and found to be not less than that shown on engineering drawings					
<b>D</b>	<b>SEALING SURFACE</b>					
	Sealing surface inspected and approved by supervising engineer prior to sealing					
	Sealing surface true to line and free of bumps					
	Water will not pond on the sealing surface					
	Sealing surface swept clean of loose aggregate, dust and dirt prior to sealing					
	Sealing surface smooth and tightly bonded and presenting a clean stone mosaic free of a skin of fines					
	Sealing surface reasonably dry @ time of sealing					



		Y	N/A	N	Inspection or Test Date	Comments
<b>E</b>	<b>SEALING/ASPHALTIC CONCRETING</b>					
	Sealing chips supplied comply with documents approved by Council					
	Sealing chips sufficiently dry and good adherence to binder achieved					
	Bitumen cutback approved by supervising Engineer					
	Application rate approved by supervising Engineer					
	Chip rolled with pneumatic tyred rollers as per documents approved by Council					
	Second coat chip seal applied					
	Surplus chip removed					
	Asphaltic concrete applied in accordance with the documents approved by Council					
<b>F</b>	<b>MISCELLANEOUS</b>					
	All shared accesses constructed in accordance with Council's Code of Practice					
	Street lighting completed as per documents approved by Council					
	Materials tested as required by approved specification					
	Street lights activated					
	Footpaths completed					
	All pedestrian accessways constructed in accordance with Councils Code of Practice					
	Berms topsoiled, grass established and mown once					
	Pedestrian accessways fenced					
	Road marking completed as per documents approved by Council					
	Benchmarks placed in kerb @ 250 metres crs max from nearest benchmark					
	Traffic signs erected as per documents approved by Council					
	Street name signs erected as per documents approved by Council					

**COMMENTS:**

---



---

I am experienced in roading construction and, as per clause 1.1.3 of Council's Code of Practice for Development. I have been engaged by the owner to supervise the roading construction for the above subdivision. As per clause 1.5.2, I hereby certify that except as noted above the roading, footpaths, street lighting and signage are now complete and the works have been carried out in accordance with the documents approved by Council and sound engineering practice.

**Signed:** \_\_\_\_\_ (Engineer Responsible for Supervision)

**Name:** ----- **Date:** -----

# STORMWATER RETICULATION

## CERTIFICATION OF SUBDIVISION CONSTRUCTION

<b>Name of Subdivision:</b>	
<b>Council File No:</b>	
<b>Main Contractor:</b>	
<b>Stormwater Sub Contractor:</b>	
<b>Engineer Responsible for Supervision:</b>	
<b>Qualifications:</b>	

		Y	N/A	N	Inspection or Test Date	Comments
<b>A</b>	<b>LINES AND LATERALS</b>					
	All pipe diameter and classes as per approved engineering drawings					
	Lines laid in the position shown on approved engineering drawings					
	Lines laid to levels given on approved engineering drawings					
	All lines laid in accordance with Manufacturer's instructions and relevant NZ Standards					
	All pipe bedding as per drawings/specifications approved by Council					
	All lines and laterals true to grade					
	All lines and laterals true to line					
	All lines free of faults, debris and obstructions					
	Each lot provided with a stormwater connection					
	The levels of all connections are such that pumping of stormwater by home owners will not be necessary					
	Ends of all connections pegged as per of Council's Code					
<b>B</b>	<b>MANHOLES</b>					
	All joints sealed as per manufacturer's instructions					
	All manholes benched and haunched					
	All safety steps installed as per standard drawings					
<b>C</b>	<b>SUMPS AND STRUCTURES</b>					
	All sumps cleaned out at completion of roading					
	All inlet and outlet structures as per approved engineering drawings					

**COMMENTS:** \_\_\_\_\_

I am experienced in stormwater reticulation and, as per clause 1.1.stormwater construction for the above subdivision. As per clause 1.5.2, I hereby certify that except as noted above the stormwater reticulation system is now complete and the works have been carried out in accordance with the documents approved by Council, and sound engineering practice.

**Signed:** \_\_\_\_\_ (*Engineer Responsible for Supervision*)

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

# WASTEWATER RETICULATION

## CERTIFICATION OF SUBDIVISION CONSTRUCTION

<b>Name of Subdivision:</b>	
<b>Council File No:</b>	
<b>Main Contractor:</b>	
<b>Wastewater Sub Contractor:</b>	
<b>Engineer Responsible for Supervision:</b>	
<b>Qualifications:</b>	

		Y	N/A	N	Inspection or Test Date	Comments
<b>A</b>	<b>LINES AND LATERALS</b>					
	All pipe diameter and classes as per approved engineering drawings					
	Lines laid in the position shown on approved engineering drawings					
	Lines laid to levels given on approved engineering drawings					
	All lines laid in accordance with Manufacturer's instructions and relevant NZ Standards					
	All pipe bedding as per drawings/specifications approved by Council					
	All trench backfill compacted to specified standard					
	All lines lamped by Engineer after backfilling and found to be satisfactory					
	All lines and laterals true to grade					
	All lines and laterals true to line					
	All lines free of faults, debris and obstructions					
	All lines and laterals satisfactorily tested as per Code of Practice in the presence of the Engineer					
	No infiltration of water into lines visible					
	A sewer connection has been provided for each lot					
	The levels of all connections are such that pumping of sewage by home owners will not be necessary					
	Ends of all connections pegged as per Council's Code					
<b>B</b>	<b>MANHOLES</b>					
	All joints sealed as per manufacturer's instructions					
	No infiltration of water visible					
	All haunching level with pipe soffits					
	Benching above soffit at a grade of 3:1 to make MH self cleansing					
	All safety steps installed as per standard drawing					
	All manholes tested as per clause 6.13.6					
<b>C</b>	<b>RODDING EYES</b>					
	Rodding eyes identified at surface with approved box with letters RE on lid					

**COMMENTS:**

---

---

---

I am experienced in the construction of water reticulation and, as per clause 1.1.3 of Council's Code of Practice for Development. I have been engaged by the owner to supervise the water reticulation construction for the above subdivision. As per clause 1.5.2, I hereby certify that except as noted above the water reticulation system is now complete and the works have been carried out in accordance with the documents approved by Council and sound engineering practice.

**Signed:** \_\_\_\_\_ (*Engineer Responsible for Supervision*)

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## WATER RETICULATION

### CERTIFICATION OF SUBDIVISION CONSTRUCTION

<b>Name of Subdivision:</b>	
<b>Council File No:</b>	
<b>Main Contractor:</b>	
<b>Water Sub Contractor:</b>	
<b>Engineer Responsible for Supervision:</b>	
<b>Qualifications:</b>	

	Y	N/A	N	Inspection or Test Date	Comments
Mains laid in the position shown on engineering drawings approved by Council					
All pipework, valves and fittings inspected by Engineer prior to backfill and found to be satisfactory					
All pipe diameter and classes as per approved Engineering drawings					
All pipe jointing and connecting systems as per Council's Code and documents approved by Council					
All pipes and fittings laid on a uniform fine bedding					
All anchor blocks required are installed					
Separation distance between water mains and other services has been achieved as per standard drawings					
Min cover to mains in 900mm in carriageway, 750mm in berms and footpaths and 180 mm @ tobies					
All trench backfill compacted to required standard					
Fire hydrants and valve boxes installed					
Top of hydrant spindle between 115 and 300mm below finished ground level					
All hydrant and valve markers installed					
All hydrant and valve boxes painted					
All hydrants flow tested and certification provided by independent authority					
After backfilling all mains and connections have been satisfactorily pressured tested in the presence of the Engineer					
Each lot provided with a water connection					
Connections terminate with a gate valve 300mm (min) inside road reserve in meter box					
Connections marked as per Council's Code					
Position of lines, connections, hydrants and valves recorded for as building.					
The new subdivision reticulation system connected to Council's mains					

**COMMENTS:**

---

---

---

I am experienced in wastewater reticulation and, as per clause 1.1.3 of Council's Code of Practice for Development. I have been engaged by the owner to supervise the wastewater construction for the above subdivision. As per clause 1.5.2, I hereby certify that except as noted above the wastewater reticulation system is now complete and the works have been carried out in accordance with the documents approved by Council, and sound engineering practice.

**Signed:** \_\_\_\_\_ (*Engineer Responsible for Supervision*)

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

To: The Engineer  
Whakatane District Council  
Private Bag 1002  
WHAKATANE 3120

**CERTIFICATE FOR AS BUILT DRAWINGS**

<b>Subdivision:</b>	
<b>Owner/Developer:</b>	
<b>Location:</b>	

I, \_\_\_\_\_ Chartered Engineer/Registered Surveyor,  
hereby certify that the manhole positions, invert and lid levels, connection locations and distances  
between manholes and pipe sizes are correct as shown on Drawings numbered:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Signed:** \_\_\_\_\_ (*Chartered Engineer/Registered Surveyor*)

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

GIS No: \_\_\_\_\_

**ASSET INSPECTION MEMORANDUM**

**INSTIGATOR:**

\_\_\_\_\_

**DEPARTMENT/COMPANY:**

\_\_\_\_\_

**DATED RAISED:** \_\_\_\_\_

**LOCATION DETAILS:**

**STREET No:** \_\_\_\_\_ **STREET:** \_\_\_\_\_

**AREA:** \_\_\_\_\_

	Sewer	Water	Stormwater	Other
<b>Asset Type:</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Purpose of Inspection:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Inspected by:** \_\_\_\_\_ **Designation:**

\_\_\_\_\_

**Date:** \_\_\_\_\_ **Approved:** Yes  No

**Inspection Comments:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_