
PART 1: GENERAL REQUIREMENTS AND PROCEDURES**100 SCOPE**

This Standard provides a means of compliance with the Rules and Performance Criteria of the District Plan. The Standard is to be used in all infrastructure constructed in Rodney District whether by private development or public works.

Developments that do not comply with the District Plan Rules and Performance Criteria or that apply standards that do not comply with this Standard may require a Resource Consent and/or specific approval by the **Engineer**. Approval will be at the discretion of the **Engineer** and subject to the provision of sufficient information to show that the quality of the finished product is not compromised.

Part 1 of this Standard concerns matters of general application and general requirements to be observed.

Parts 2 to 7 of this Standard define requirements relating to particular types of services to be provided, and the means of compliance.

101 INTERPRETATION**101.1 General**

101.1.1 Where any other standard named in this Standard has been declared or endorsed in terms of the Standards Act 1988, then:

- (a) Reference to the named standard shall be taken to include any current amendments declared or endorsed in terms of the Standards Act 1988; or
- (b) Reference to the named standard shall be read as reference to any standard currently declared or endorsed in terms of the Standards Act 1988 as superseding the named standard, including any current amendments to the superseding standard declared or endorsed in terms of the Standards Act 1988.

101.1.2 The word "shall" indicates a requirement that is to be adopted in order to comply with a Standard.

101.2 Definition

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

AEP means Annual Exceedance Probability which is the probability of the exceedance of a given rainfall or flood event within a period of one year.

ASSET ACCEPTANCE CERTIFICATE means a certificate issued by an Asset Manager or Network Service Provider to indicate that all relevant infrastructural works have been completed and connected to the existing infrastructure to their satisfaction.

ASSET MANAGER is a Council officer that is responsible for specifying performance criteria, assessing designs for new and existing works, approving and implementing the proposed works and maintaining the assets vested in Council.

COHESIVE SOIL means a plastic soil (clay, silt, organic) where the strength is derived primarily from cohesion between the soil particles.

CONSENT means the resource consent pursuant to s.108 of the Resource Management Act 1991 or subdivision consent pursuant to s.220 of the Act, and all conditions attached thereto.

CONSENTS FIELD SUPERVISOR means the person appointed by the **Engineer** to assist the **Engineer's Representative**, to carry out site inspections, co-ordinate and arrange formal acceptance inspections and tests during and at the completion of the works.

The Consents Field Supervisor will be named in the Engineering Plan Approval letter and will be responsible for all communications relating to inspections and testing between the **Developer's Representative** and Council.

In the event of any change to the Consents Field Supervisor the Council will immediately notify the Developer's Representative in writing.

CONSENT-WORKS COMPLETION CERTIFICATE means a certificate issued by the **Engineer** to indicate completion and acceptance of infrastructural works or other consent works necessary to service Building Consents or required under Resource Consents, and not subject to s.224 of the Resource Management Act.

COUNCIL means Rodney District Council and persons authorised to act on its behalf.

DEVELOPER means the person(s) who own the land on which the development is occurring, or who holds a subdivision consent or resource consent for the development on the land. In the case of works carried out by the Rodney District Council the engineer to that Contract shall have the same responsibilities and meaning in terms of these standards as the **Developer**. For the sake of simplicity in these standards the term Engineer to the Contract will not be used.

DEVELOPMENT means any works that are being undertaken as part of a subdivision consent, or as a condition of a resource consent, and any works that are undertaken on land that is, or will in the future be in public ownership or that the public have or are likely to have access to. Included are any works that will be vested in the Council on completion. These standards also apply to works carried out by Council.

Works required by resource consent conditions, which are intended to perform in the manner of publicly owned utilities such as potable, storm and wastewater, carriageways, shall be constructed to these standards notwithstanding they will remain in private ownership.

DEVELOPER'S REPRESENTATIVE means the person appointed by the **Developer** as the first point of contact between the Council and the **Developer** in respect of the works.

Unless previously agreed in writing by the Engineer, the Developer's Representative shall be a professional engineer, or a registered surveyor, with relevant development experience, who shall be responsible for all communication between the Council (through the Engineer's Representative) and the Developer, its agents, representatives and contractors;

The Developer should advise the Council in writing, the name and contact details of the Developer's Representative as early as possible in the consent process and no later than the submission of the engineering plans for approval.

In the event of any change in the Developer's Representative, the Developer shall immediately notify the Council in writing.

DIAMETER Pipe diameters refer to the internal diameter of the pipe except PE and PVC pipes where they are referenced by their external diameter.

DISTRICT means the District of the Rodney District Council.

DISTRICT ARTERIAL ROADS means roads connecting the Regional Arterial routes to industrial or residential zones and can connect one area to another, as outlined in the Council's Land Transport Strategy.

DISTRICT PLAN means the Rodney District Council's District Plan pursuant to the Resource Management Act 1991 and includes operative and proposed plan changes and variations once notified.

DRAINAGE means wastewater drainage or stormwater drainage, and "drain" has a corresponding meaning.

EARTHWORKS means any alteration to the contours, including the excavation and backfilling or re-compaction of existing natural ground and the stripping of vegetation and topsoil.

ENGINEER means the Director, Infrastructure or other person delegated to control all public [or the development of all intended public], Infrastructure in the District.

ENGINEER'S REPRESENTATIVE means the person appointed by the **Engineer** as the first point of contact between the Council and **Developer** for all engineering matters.

Generally the Engineer's Representative will be the Development Engineer handling the subdivision or resource consent, and whose name will be notified to the Developer when the file is allocated. The Engineer's Representative will be responsible for all communication on engineering matters (except field inspection and testing) between the Council and the Developer, its agents, representative and contractors (through the Developer's Representative).

In the event of any change in the Engineer's Representative, the Council will immediately notify the Developer's Representative in writing.

ENGINEERING PLAN APPROVAL means the formal approval of engineering plans submitted by the **Developer's Representative** for all works required by conditions of consent or otherwise necessary or proposed on site. An engineering plan approval includes a set of submitted drawings and specifications stamped 'Approved', an approval letter and all notations on the drawings and conditions in the letter.

FOOTPATH means so much of any road, pedestrian accessway or public reserve as is laid out or constructed by authority of the Council primarily for pedestrians; and may include the edging, kerbing and channelling thereof.

GEOTECHNICAL ENGINEER means a person who is currently entitled to practice as a Chartered Professional Engineer and has experience in geotechnical engineering acceptable to the **Engineer**; or such other person as the **Engineer** may specifically approve as being competent.

GROUND is a general term used to describe the material in the vicinity of the surface of the earth whether soil or rock.

HOUSEHOLD UNIT OR DWELLING UNIT means any building or group of buildings, or part thereof used, or intended to be used principally for residential purposes and occupied or intended to be occupied by not more than one household.

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.

LOCAL ROADS refers to all roads servicing residential and rural development other than Arterial and Collector Roads.

LOOSE SOIL means soil with no cohesion. Also refers to soil which is not compacted or is poorly compacted soil and/or fill.

LOW FLOW PATH refers to the path taken by runoff resulting from ground water discharge and light rainfall. The low flow path is to be kept to the minimum size consistent with ease of maintenance and may be considered to be 2% to 5% of the primary design flow.

MINIMUM FLOOR LEVEL

This shall have three meanings:

- (a) That applying for flood situations where it shall mean the contour level supplied to ensure the building footprint is outside the design flood plus any applied freeboard.
- (b) That applying for sea inundation where it shall have the same effect as in (a) above.
- (c) The elevation difference between the floor and the invert of both the wastewater or stormwater private drain at the point of connection to the public system. This shall be a minimum of one metre to safeguard against backflow effects.

NEIGHBOURHOOD RESERVES are public reserves for local community recreation.

NETWORK SERVICE PROVIDER is an independent Company responsible for the provision and supply of utility services and/or professional or construction services to the general public. For example Telecom, Vector, Fulton Hogan or Downer EDI Works.

NZTA is the New Zealand Transport Agency a Crown Entity established on 1 August 2008, bringing together the functions of Land Transport New Zealand and Transit New Zealand.

PEDESTRIAN ACCESSWAYS are paths that link between two roads or a road to a park reserve. They do not include paths on roads or reserves.

POST CONSTRUCTION SETTLEMENT means the settlement of the ground surface which takes place after completion of the construction of the earthworks.

PRECONSTRUCTION MEETING means the meeting between the **Engineer's Representative, Developer's Representative** before the commencement of any work on site. This meeting will establish the intended programme of work and the Council's required schedule of inspections.

PRIMARY DESIGN FLOW means the estimated stormwater runoff selected to provide a reasonable degree of protection to the surrounding land. In most cases this flow will be piped or contained within relatively narrow confines under public control.

PRIVATE ROAD means any roadway, place, or arcade laid out on private land within the District, by the owner thereof 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 person, and which is not thrown open or intended to be open to the use of the public generally, and includes Rights of Way, Common Access Lots and Body Corporate land developed as access.

REGIONAL ARTERIAL ROADS refers to all roads which form the principal corridors for general traffic movement not catered for by motorways, expressways or rail lines. They predominantly carry through-traffic from one urban area to another.

ROAD OPENING NOTICE refers to an approval form that must be obtained from Rodney District Council's Network Service Provider for roading before any work is undertaken by contractors or service providers. This is a Health and Safety in Employment Act 1992 requirement and refers to work undertaken within the road reserve, esplanade or any Council owned land.

SCHEME PLAN refers to a plan of development lodged with Council pursuant to Section 88 Resource Management Act 1991.

SEA INUNDATION LEVEL

This refers to the minimum level at locations on the east and west coast for which **Developers** will be required to construct earthworks and infrastructure to reasonably ensure against the combined effects of:

- sea level rise due to climate change
- astronomical tide
- barometric setup
- wind setup
- wave setup
- wave run up

These effects are combined to arrive at the sea inundation level.

As in the case of flood situations, buildings will need to be situated outside and above this level. The minimum floor level for buildings will have a freeboard applied to this level.

SECONDARY FLOW PATH refers to the path taken by runoff in excess of the primary design flow and should be capable of producing a reasonable degree of protection to the surrounding buildings (normally a 1% AEP flood for commercial, industrial and habitable residential floor levels).

A freeboard above the secondary flow level is normally considered advisable when determining allowable floor levels. This is to cater for inaccuracies in flow estimation methods and for possible failure of the primary system.

SOFT SOIL means cohesive soil having low shear strength (for example, less than 25 KPa).

SOIL means the heterogeneous aggregation of particles comprised of 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 rock masses whether highly jointed or not.

STABLE GROUND means ground existing in a state which is unlikely to settle, slip, erode or otherwise move to the detriment of superimposed buildings, services, roads or property generally.

STRATEGIC ROUTES means roads, motorways and rail lines which form part of a network of strategic importance nationally, having the highest standards with access control where necessary.

SURVEY PLAN means a survey plan of a development in terms of Section 223 of the Resource Management Act 1991 being a plan of a development in form for deposit under the Land Transfer Act 1952 or with the Registrar of Deeds, and includes the title plan under the Survey Regulations 1972.

URBAN AREA means an area, which is used, or intended to be used solely or principally for residential, commercial, industrial or any other similar urban purposes or any two or more such purposes.

WALKWAYS are all footpaths on reserves.

WASTEWATER DRAINAGE has the same meaning as "sewage drainage" as referred to in the Local Government Act 1974.

102 INSURANCE REQUIREMENTS AND DEVELOPER'S RESPONSIBILITIES

102.1 The **Developer** shall appoint a **Developer's Representative** to be the first point of contact between Council and the **Developer** in respect of the works.

102.2 The **Developer** (through its Representative) must, prior to commencing the works, satisfy the **Engineer** that the **Developer** and its agents, representatives and contractors have in place current professional indemnity insurance to the value of \$500,000 (or such greater sum as the **Engineer** may reasonably require) for the following:

Design of the development/works, including preparation of and obtaining the approval of engineering documents by Council;

Supervision of the works;

Certification upon completion that the works have been carried out in accordance with approved consent conditions and engineering plans.

102.3 Such insurance must be effected with insurers and on terms and conditions reasonably acceptable to the Council, including that such insurance is effected in the joint names of Council and the insured party. Proof of payment of the premiums on such insurance must be provided at any time on demand by Council.

102.4 The **Developer** (through its Representative) must, prior to engaging any agent, representative or contractor, satisfy the **Engineer** that the terms of such engagement requires such agent, representative or contractor to provide the same Warranties to both the **Developer** and Council for their respective benefits, so that in terms of the Contracts (Privacy) Act 1982, Council can enforce those Warranties in the Council's sole discretion directly against the relevant Agent, Representative or Contractor of the **Developer**.

102.5 For all development works to be vested in Council ownership (the "works") or development works that remain in private ownership, the **Developer**, for itself and its agents, representatives and contractors, undertakes, warrants and represents to the Council that:

The works will be carried out, and their design is:

In compliance with all applicable laws and regulations including all necessary building, resource and any other consents, permits and authorities;

In a good and workmanlike manner and in accordance with any plans and specifications provided to Council; and

To sound and accepted architectural and engineering standards.

Each of the Developer and its agents, representatives and contractors have all the skill and expertise to be expected of a person undertaking the works with resources and experience in projects of a similar scope and complexity to the works; and

All information provided at any time to the Council by the Developer, its agents, representatives or contractors (including but not limited to that relating to design of the works) is complete, accurate and correct in all respects.

102.6 The **Developer** acknowledges that, in allowing the works to be vested in Council or for works that remain in private ownership, Council is relying on the undertakings, warranties and representations set out above (the "Warranties"). Should any of the Warranties (or any other warranty, action or undertaking contained in these conditions) at any time be found to be incorrect or otherwise breached in any way, then (without prejudice to Council's right to disclaim ownership of the works or to pursue any other right or remedy available to it (including in its regulatory capacity) the **Developer** will indemnify Council from and against any and all direct or indirect costs, losses, damages or liabilities whatsoever suffered or incurred by Council.

102.7 Upon completion of the development works to become part of Council's infrastructure, ownership of the works except those works that remain in private ownership shall be vested in the Council subject to the conditions set above.

103 PROCEDURE FOR APPROVAL DESIGN AND CONSTRUCTION

103.1 Early Consultation

103.1.1 It is essential that the preparation of the scheme plan of subdivision adequately provides for the requirements of these Standards. Early liaison between the surveyor preparing the scheme plan and the **Developer's Engineer** is strongly advised.

103.1.2 In particular, attention is drawn to the need for consideration of proposed final contour (Part 2), adequate road widths (Part 3), adequate utility reserve area for stormwater devices (Part 4) and suitable contour for proposed reserves (Part 7).

103.1.3 Where sites on the east coast of the District, with the exception of Gulf Harbour, at elevations below RL 5.0 are to be developed sites on the West Coast RL 4.0 the **Developer's Representative** must consult with the Stormwater Asset Manager on the level to be applied to the development. Additional modelling may be necessary if the level needs to be adjusted to allow for local variations particularly in terms of wave run-up. Expected levels vary up and down the coast line and early contact is essential to determine what level is to be applied. Estuaries will require additional considerations to the level adopted at the nearby coastline.

103.1.4 In cases where major infrastructure assets are to be vested to Council (such as stormwater devices or pumping stations), early consultation with the relevant Asset Manager through the **Engineer's Representative** is strongly recommended.

103.2 Documents to be submitted with Consent Application

103.2.1 Section 106 of the Resource Management Act 1991 requires the suitability of the land to be subdivided to be addressed. The District Plan requires evidence of stable, flood free building sites prior to development consent.

103.2.2 Reports submitted with the scheme plan shall be prepared by suitably qualified engineers, addressing the suitability of the site in terms of the above documents and the servicing of the sites in terms of this Standard.

103.2.3 In the case of stability or foundation soil strengths or on-site effluent disposal, reference should be made to the above documents and to Part 2 of this Standard.

103.2.4 In the case of flooding inundation or stormwater treatment, reference should be made to the above documents, to Part 4 of this Standard, and to the relevant Catchment Management Study, if any, held by the Council.

103.2.5 A report on the impact of traffic on existing roads, if required.

- 103.2.6** If any re-contouring is proposed, existing and provisional proposed contours shall be shown on a copy of the scheme plan together with all proposed retaining structures clearly depicted in relation to external and proposed internal boundaries, and detailing extent and height. Such works and structures are subject to Rules in the District Plan and may require assessment as part of the resource consent process.
- 103.2.7** In the case of un-serviced lots, whether urban or rural, a report including detailed site plans is required, indicating the relationship between requirements for all on site features such as bush or natural features to be covenanted, buildings, access and hard standing areas, stormwater & sewage treatment disposal, areas subject to natural hazards such as flooding, inundation or instability. Individual site plans (to scale) must be included. This report is additional to, but may be included in reports addressing the individual features.
- 103.3 Engineering Documents to be submitted with Consent Application**
- 103.3.1** As a condition of its approval of the development, the Council may require engineering documents to be submitted. These documents comprise:
- (a) Engineering drawings, specifications (the **Engineer** to determine if this is required), calculations and landscaping plans, covering the following sections of the work to be carried out:
 - Site re-contouring and earthworks
 - Roading
 - Street lighting
 - Drainage (stormwater and wastewater)
 - Stormwater treatment and remediation devices
 - Wastewater drainage pump stations
 - Water supply and other services
 - Landscaping plans including any proposed planting in roads, reserves and stormwater devices and details of any significant vegetation being removed
 - Playgrounds or other structures
 - (b) Amended drawings shall be submitted for approval of any variation from the approved engineering drawing that is deemed necessary.
 - (c) "Asbuilt" plans to the requirements of section 103.5.6, 103.6 & 103.7
- 103.3.2** The engineering drawings, specifications and calculations shall be submitted together with a completed Application for Engineering Plan Checklist (Appendix "A"), Engineering Plan Approval (Appendix "B"), and Design Certification (Appendix "G1", refer to section 103.4). If the documents meet the Council's requirements, the **Engineer** shall approve the documents, and return one copy to the **Developer** endorsed accordingly. All engineering drawings must be allocated an RDC Plan number.
- 103.3.3** Should any part of the proposed works depart from the requirements of these Standards, sufficient supporting information shall be submitted with the engineering plans to enable detailed evaluation of the proposal in terms of the District Plan and these Standards to enable the processing pursuant to the District Plan.
- 103.3.4** Conditions of approval imposed by the Auckland Regional Council may, of necessity, be made known after this approval process. Any amendment necessary shall be submitted for approval.
- 103.3.5** A copy of the approved Auckland Regional Council set of documents and the approval letter shall be available for inspection on site at all times.
- 103.3.6** A copy of all Council stamped approved amendments and the relevant approval letters shall be available for inspection on site at all times

103.4 Design Certification

103.4.1 All engineering plans shall be accompanied by a Design Certification in the form of Appendix "G1" of these Standards. The Design Certification shall certify compliance of the engineering plans with the requirements of these Standards, and shall list all works that are subject to an alternative design not specifically provided for in these documents.

103.4.2 It is the designer's responsibility to clearly identify all facets of the works that do not comply with these Standards and to provide all calculations, test results and other proof to satisfy the requirements of the District Plan.

103.5 Number of Copies and Format of Documents Required**103.5.1 Engineering Plans and Calculations**

Three sets of the engineering plans size A2 or A3 together with two sets of each of the engineering specifications, all relevant calculations for catchments, pipe flows, structural and pavement designs, stormwater treatment and mediation device designs, pump station design and any other relevant documents shall be submitted. After approval, one set of engineering plans and specifications, suitably endorsed, will be returned to the **Developer**.

103.5.2 Building consents pursuant to the Building Act 2004 are required for cast-in-situ pump stations and culverts, deep pump stations requiring internal landings, bridges and any buildings not exempt by the Act or as required by the **Engineer**.

103.5.3 The Building Act 2004 requires a building consent for all retaining structures subject to a surcharge (such as slope or vehicle loads), and all retaining structures exceeding 1.5m in retained height. Conditions of resource consents for retaining structures adjacent to boundaries will generally impose a surcharge and hence require a building consent.

Minor retaining structures not requiring a building consent, will be approved under the engineering plan approval subject to adequate structural detailing on the plans and provision of a Producer Statement Design (PS 1) and design calculations with the documentation.

103.5.4 The building consent requires a specific application, and is separate to, not part of, the application for engineering plan approval

103.5.5 S223 Survey Plan

All survey plans (s223) shall be submitted through Landonline for E certification

103.5.6 Asbuilt Plans

Asbuilt information shall be submitted in digital format together with three sets of asbuilts plans size A2 or A3. Existing infrastructure must be clearly demarked from new works on all sets. Refer to section 103.6 & 103.7 for details required. All asbuilt plans must be allocated an RDC plan number.

103.6 Digital Format

103.6.1 Council require asbuilt plans in digital CAD format. The Engineers or **Developers** unable to submit data in this format will experience delays in the issue of the Asset Acceptance Certificate and 224(c) or Consents Work Completion Certificate. Note: Council will in future require all asbuilt plans to be provided in a standardised CAD format – this format is under development and will be made available for use when completed.

103.6.2 Use of general notes and co-ordinate schedules on plans is encouraged in order to reduce clutter.

103.6.3 Digital File format shall be DWG, DXF or other GIS file format in LINZ coordinate system. Standard compression utilities can be used for large files.

All levels are to be in Orthometric Heights related to Auckland 1946 Height Datum.

103.6.4 Digital data can be sent on disc or sent via e-mail attachment to the Resource Management Administration Officer (coneng@rodney.govt.nz). The relevant RMA or ENG or ABA number is to be quoted in the subject line of the e-mail message or on the disc label. (In the case of Council funded works projects, digital data is to be sent to the Contracts Officer.

103.6.5 Where more than 2 electronic documents are supplied to Rodney District Council on a disc, the Developer will include on the disk, a 5 column spreadsheet table in 'csv' format and named 'DocIndex'. For each file there will be a line showing:

- Date of Delivery of the CD to Rodney District Council.
- Rodney District Council Job/Contract/RMA/Project number.
- Filename of the electronic file as shown by a listing of files on the disc.
- Supplier's Drawing Number or Document Reference as shown in the document.
- Drawing or Document Title as shown in the document

103.7 Hardcopy Drafting Standards

103.7.1 Graphical data is to be located/plotted to within +-50mm of true ground position.

103.7.2 All concept, scheme plan and engineering construction plans shall be submitted in hardcopy format.

103.7.3 Plan Scales:

Plans must be produced to a suitable scale. The following scales are given as a recommendation:

Plans	=	1 to 500 or 1 to 250
Longitudinal Sections		
Horizontal	=	1 to 500
Vertical	=	1 to 100
Cross Sections	=	1 to 100
Details	=	As required

103.7.4 Datum

All levels are to be in Orthometric Heights related to Auckland 1946 Height Datum. Levels in these terms shall be shown on the drawings.

103.8 Connection To Existing Roads and Services

103.8.1 Approval is necessary to extend new roads beyond the site to connect into existing roads.

Provision shall be made for all indicative and designated roads specified in the District Plan. Unless approved otherwise by conditions of the Resource Consent, these roads shall be vested in the Council and formed to the full appropriate standard for the future zoning of the land.

103.8.2 The formation, metalling, kerbing, channelling and sealing of new roads shall be extended out beyond the site to connect to existing roads and shall include the provision of stormwater disposal from the existing road. The normal cost of connecting to existing roads and services, including the alteration of the same shall be borne by the **Developer** and shall not be a charge against the Council.

103.8.3 Where extensive works are required, the cost of carrying out these shall be the subject of a special agreement between Council and the **Developer**.

103.8.4 Once authorised under Section 103.19.4 the connection to the existing water reticulation will be made by the Council's Network Service Provider and the full cost charged to the **Developer**.

103.8.5 Once authorised under Section 103.19.4, the connection to the existing stormwater and wastewater drainage reticulation may generally be carried out by the **Developer** under the supervision of the Council's Network Service Provider.

Each new property connection to the existing stormwater and wastewater drainage reticulation or system shall be carried out by the **Developer** under the supervision of the Council's Network Service Provider.

103.8.6 On completion of the connection, or if no connection, on satisfactory inspection/testing, the Council's Network Service Provider will issue to the Council the relevant Asset Acceptance Certificate (Section 103.24).

103.9 Building Over Or Close To Wastewater or Stormwater Pipelines

103.9.1 Building over or close to a storm water or waste water pipeline will only be permitted if diversion is not practical due to space, gradient or where significant additional length of pipeline and a number of structures will be created.

103.9.2 The diversion of public storm water and wastewater pipelines shall be carried out in accordance with Council's Standards For Engineering Design & Construction and appropriate fees will apply. Refer to Council's "Building over or Close to Public Storm Water and Waste Water Pipelines" Appendix "P"

103.10 Work Beyond Developer's Property

103.10.1 Where a drainage connection (or any other work) has to be carried out within private property not owned by the Developer, including Council owned property and NZTA Property, the Developer shall make the necessary arrangements and obtain a written consent to enter from the property owner prior to the work being carried out. The consent should either be signed on a copy of the relevant engineering plans, or make specific reference to the plans sighted by the person signing. A copy of this consent to enter and carry out work shall be provided to the Engineer prior to the work commencing. If the Developer is unable to obtain the authority from the owner, Council may assist in obtaining this authority, provided that all other avenues have been explored to obtain consent.

103.10.2 Where any work is to be undertaken within a public highway maintained by Rodney District Council, permission in the form of an approved Road Opening Notice must first be obtained from the relevant Council Network Service Provider. A copy of this Road Opening Notice shall be provided to the **Engineer** prior to the work commencing.

103.10.3 Where any work is to be undertaken within a public highway under the control of NZTA, written permission must be first obtained from this Agency prior to any work commencing. A copy of this consent must be provided to the **Engineer** prior to work commencing. At completion a Section 93 Certificate is required prior to the release of the 224(c) Certificate.

103.11 Health and Safety Plan**103.11.1 Health and Safety in Employment Act 1992**

103.11.2 Where work is being undertaken on or adjoining Council owned or administered land the **Developer**, its representative, its contractors and any subcontractors shall comply with all the requirements of the Health and Safety in Employment Act 1992 (the Act) including any Regulations made pursuant to Section 21 of the Act.

103.11.3 The **Developer** shall ensure that its contractors submit to the **Engineer** site specific Health and Safety Plans for any part of the works on or adjoining public land (including roads) or private property not in the ownership of the **Developer** prior to the commencement of works. The plans shall address all known hazards and other health and safety aspects that are particular to the places of work involved. Such aspects include the work practices and work methods that a contractor proposes to use to execute the works as they affect both the contractor's employees and the public in general. The plans shall be updated as works progress to incorporate hazards unforeseen at the commencement.

103.11.4 The Council reserves the right to inspect the place(s) of work from time to time to ensure the **Developer's**/contractor's compliance with the Act. The inspection and the outcomes there from shall be appropriately recorded. The **Developer** and contractor shall be represented at such inspections and shall upon request provide the Council upon request with the accident/incident reports and statistics maintained for the place(s) of work. The **Developer** shall be liable for any costs incurred in complying with the Act following such inspections.

103.11.5 The **Developer** shall indemnify and keep indemnified the Council from all costs, damages, fines, penalties, loss and expense incurred or suffered by the Council in respect of any breach of the Health and Safety in Employment Act 1992, conviction or proceedings instigated against the Council pursuant to the Act directly or indirectly related to a breach by the **Developer**, its representative or its contractors or subcontractors of any of the requirements of the Act. Written evidence of compliance with this requirement shall be provided to the **Engineer**.

103.11.6 If the **Developer** becomes aware that he or his contractors or subcontractors are or may be in breach, or are likely to be in breach of any of the requirements of the Act, then the **Developer** shall immediately notify the Council of such a breach or anticipated breach and, in relation to any breach or anticipated breach in connection with the contract works or subcontract works the **Developer** shall follow (at its sole cost) the directions, if any, of the Council (without being under any obligation to give any such directions) to avoid, remedy or mitigate such breach or anticipated breach.

103.12 Traffic Management Plans

103.12.1 In the event that any development involves any work on a Council road berm, carriageway, reserve, esplanade or on any Council owned property a Traffic Management Plan in accordance with TNZ "Code of Practice for Temporary Traffic Management" must be submitted to and approved by the Council's Network Service Provider before work commences. The plan shall detail the nature and scope of measures being undertaken to protect road users, the general public and construction workers from harm resulting from the work being undertaken. Details of control procedures, intended signage, placement and any requests for speed reduction must be included and approved. The person preparing/submitting the Traffic Management Plan to the Council for approval **must** be a current/certified holder of the Site Traffic Management Supervisors Course (STMS) Level One.

Evidence of the Network Service Provider's approval must be provided to the **Engineer** before work commences.

103.12.2 In the event that any development involves the significant movement of heavy vehicles on and off site on a frequent basis, a Traffic Management Plan must be submitted in accordance with Section 103.12.1.

103.12.3 The Council's minimum requirements for traffic control are those standards and rules set out in the TNZ "Code of Practice for Temporary Traffic Management" and its revisions. When relevant, requirements in excess of these will be set out in the consent conditions or the engineering plan approval.

103.12.4 The **Developer** shall be responsible for the provision of watchmen/flagmen and the provision, erection, maintenance, and when no longer required, the removal of all barricades, fencing, temporary roadways and footpaths, signs and lighting necessary for the effective protection of property, for control of traffic and for the safety of others.

103.13 Road Names

103.13.1 New road names require the formal approval of the Council. The procedure for the approval of new road names is available from Council.

103.13.2 Once Council approval of the road name is received, the **Developer** shall erect road name plates, as approved by the **Engineer**, at all road intersections, in locations which are visible from all approaches. This work must be completed prior to the issue of the Section 224C RMA Certificate.

103.13.3 The standard road name plate shall be as shown on Rodney District Council Drawing Number 18000 Sheet No. 3.1 & 3.2

103.14 Approval before Commencing Work

103.14.1 Work shall not commence upon the engineering construction of the development unless:

The Council has granted a resource consent; and

There are no outstanding Appeals, or rights of Appeal to the Environment Court; and

The **Engineer** has approved the engineering drawings; landscape plans specifications and calculations for the specific work that is required. (Refer to Section 103.3.2)

Copies of the approved Traffic Management Plan (Refer to Section 103.11 & 103.12), and the Health and Safety Plan have been received by the **Engineer**.

All other necessary consents including ARC consents have been obtained.

All consents to enter to construct, including on Council owned land, NZTA approvals (refer to Section 103.10.1 & 103.10.3) and Road Opening Notices (refer to Section 103.10.2) must be copied and forwarded to the **Engineer**.

The pre construction meeting has been held (refer to Section 103.15).

103.14.2 Provided that where the Council has entered into an agreement with the **Developer** to enable preparatory work to be undertaken prior to the approval of the scheme plan, or prior to the approval of all of the engineering plans, the **Engineer** will, in such circumstances, approve the engineering drawings, specifications and calculations to enable the work to proceed, subject to the engineering drawings, specifications and calculations being satisfactory.

103.14.3 The **Engineer** may grant staged approval to allow earthworks to commence prior to approval of other works.

103.14.4 The Environment Court has ruled that works must not proceed without the Court's consent in cases where an Appeal is lodged against Consent Conditions and has not been heard, or a right of Appeal to the Court still exists, such as in the case of an Objection lodged with the Council and still unheard.

103.15 Notification of Pre-construction Meeting

103.15.1 The **Developer** shall arrange an on site Pre-Construction meeting of the **Developer's Representative**, with the **Consents Field Supervisor** named in the Engineering Plan approval letter. The **Developer** shall give at least five working days notice in writing of the time and place of the meeting in the form of Appendix "C". This is subject to the confirmation of the **Consents Field Supervisor** who will arrange the attendance of the **Engineer's Representative** and/or any other Council Officers considered necessary.

103.15.2 The **Developer** shall advise the **Engineer** on the Pre-Construction Meeting form required under Section 103.15.1, of the names, addresses and contact telephone numbers of the contractor and principal subcontractors to whom it is proposed to award the work and the nature of the work awarded in each case.

103.15.3 At the pre-construction meeting, and throughout the construction period, the contractor's site representative shall have on site:

- Copies of the approved engineering drawings
- Approval letter (including approved Amendments)
- Health and Safety Plan
- Traffic Management Plan
- Copies of the Development or Resource Consent
- Copies of any Auckland Regional Council Consents necessary for the works
- Signed copies of all Consents to Enter for Construction for works on land not owned by the Developer
- Road Opening Notices

103.15.4 The **Consents Field Supervisor** will advise the **Developer's Representative** in writing at the Pre-Construction Meeting of the phases of work for which the commencement of work is to be notified to the **Consents Field Supervisor** to enable inspection to be carried out. Such phases may include, but shall not be limited to, the following:

- Prepared earthworks and subsoil drainage prior to filling
- Completed earthworks
- Commencement of drainage reticulation
- Commencement of water reticulation
- Prepared subgrade

- Completed subbase
- Finished basecourse
- Before the commencement of road sealing
- Before the commencement of any concrete work
- Any other phases required by the Engineer (i.e. Traffic islands, roundabouts, Traffic signals)
- Testing of all reticulation (potable, stormwater, and wastewater)

103.15.5 These Inspections should be carried out by the Council within 24 hours of notification if possible, but should these inspections not be completed within 48 hours of notification, work may proceed, provided the **Developer's Representative** has undertaken the inspections.

103.15.6 Minor works not requiring engineering plans are subject to the Notification and inspection requirements and procedures set out in section 103.15.1 to 103.15.3, 103.19, 103.20, 103.22, 103.23 and 103.24. Failure to satisfy this requirement may result in additional costs and delay completion.

103.16 Supervision of Work

103.16.1 The **Developer** shall be responsible, both directly and through the **Developer's Representative**, for ensuring that work is carried out in accordance with the approved documents and to sound engineering practice. The **Consents Field Supervisor** must be advised of relevant stages reached as set out in Section 103.15.4.

103.16.2 Where subsequent to the Engineering Plan Approval being granted by the **Engineer** and prior to the completion of the works the **Developer** finds it necessary to vary the terms of the Approval by way of alternative design or processes or materials to those submitted for Approval, the **Developer's Representative** shall submit an application for Amended Engineering Plan Approval to the **Engineer**. The application should contain 3 copies of the amended details together with copies of the originally approved plans clearly marked to denote the amendments and all necessary new or revised design calculations, specifications and the like.

103.16.3 Where alternative design or materials are to be substituted for those contained in the Approval, there shall be no installation of such materials until an amendment to the Approval is granted.

103.16.4 Minor variations to the Approval may, at the discretion of the **Consents Field Supervisor**, be submitted in writing through the **Consents Field Supervisor** for confirmation that the variation is acceptable to the **Engineer**. This would normally be accomplished within two working days of application.

103.17 Emergency Procedures

103.17.1 If during the course of construction, a situation arises which may endanger public or private property or the operation of a public facility, the **Engineer** may instruct the **Developer** to undertake such remedial measures as he considers necessary to abate the danger. Such work will be at the cost of the **Developer**, and carried out immediately. If the **Developer** fails to undertake these remedial measures, the Council may engage others to carry out the work at the **Developer's** cost.

103.18 Damage

103.18.1 Damage caused by new works shall be the liability of the **Developer** and shall be repaired on the written instruction of the **Engineer**. If remedial work is not commenced forthwith, the **Engineer** may carry out the work at the **Developer's** cost. This provision includes the removal of mud and debris from existing roads and environmental damage caused by siltation of stormwater systems.

103.19 Request for Inspection and Testing

103.19.1 All works shall be pre-tested and approved by the **Developer's Representative** prior to the request for Inspection and testing.

The request for inspection and testing shall be made in writing on the form Request for Inspection and Testing (Appendix "E") for

- Water supply
- Wastewater
- Stormwater
- Roothing (includes lighting)
- Reserves
- Landscaping

103.19.2 Unless previously approved in writing by the **Engineer**, each request shall cover:

- in the case of works under a subdivisional consent – all the relevant item(s) for a complete stage as depicted on an approved s.223 survey plan;
- in the case of others works (e.g. for land use or building consents) – all of the relevant item(s) for the complete project.

In every case, the Request shall be accompanied by:

- relevant final asbuilts in digital and hardcopy form;
- relevant completed asbuilt checklist - Appendix "F" ;
- confirmation that the asbuilts are based on the s.223 survey plan approved by Council;
- relevant Completion Certificate - Appendix "G" ;
- (water supply only) certificate of flushing and Chlorination Certificate by an approved laboratory.

103.19.3 Once the completeness of the Request is verified, the **Consents Field Supervisor** will arrange a time with the relevant Network Service Provider(s) for the inspection and testing. The test date shall not be less than 7 working days and not more than 15 working days from the date that the completeness was verified.

103.19.4 Subject to satisfactory inspection and testing, the relevant Council Network Service Provider will authorise the connection of the new service to the existing infrastructure in accordance with section 103.8.4 or 103.8.5.

103.20 Asbuilt Plans

103.20.1 Upon completion of construction, and as a prerequisite for a Request for Inspection and Testing under Section 103.19, copies of the relevant asbuilt plans and a completed asbuilt Checklist in the form of Appendix "F" of this document are to be submitted by the **Developer**.

103.20.2 The checklist for Engineering asbuilts Appendix "F" must be completed for any Water Reticulation, Wastewater Drainage Reticulation and Stormwater Drainage Reticulation construction. The information on the checklist is to be presented on the Engineering asBuilt Plans.

103.20.3 The checklist for roading asbuilts (Appendix "F") must be completed for any roading construction and the information on the checklist is to be presented on the Roothing Plans.

All data on roading infrastructure shall be provided in the following manner:

- Data shall conform to RAMM format as specified in Appendix "L" Road Infrastructure Data Input Manual'. A hard copy of the manual is available from the Council. Electronic (PDF) versions are available on the Council website or on a CD obtainable from the Council.
- Data entry template (in Microsoft Excel ©) is available from the Council on CD or from its website.
- A CD with electronic data in the specified format and hard copy version shall be submitted to the Council immediately after completion of each project.

- All roading infrastructure has to be certified by an approved Consultant experienced in RAMM database. A list of some local consultants with such expertise is available from the Council and can also be downloaded from the Council website.
- The supply of the roading infrastructure data and certified by an approved Consultant as stated above shall be a pre-requisite for issue of the Asset Acceptance Certificate by the Roothing Network Service Provider.
- A code compliance (CCC) for road lighting complete with illumination certificate will be attached to the request for 224.c inspection request.

103.20.4 The checklist for engineering asbuils for Parks and Coastal (Appendix "F") must be completed. The information on the checklist is to be presented on the Plans.

103.20.5 Asbuilt plans are required in digital format and hard copies. The **Developer/or Engineer** should note that if he is unable to supply asbuils to the digital standards specified in Section 103.6, there may be delays in issuing the certificate of compliance or completion.

103.20.6 In the event that the submitted asbuilt plans require correction or amendment as a result of field inspections or office checking. The **Developer's Representative** shall make the necessary corrections/amendments and submit a new digital copy together with appropriate asbuilt Checklists and three new hard copies

103.21 Approval of Uncompleted Work

103.21.1 Where in the opinion of the **Engineer** it is desirable, the **Engineer** may approve uncompleted work. All such approvals shall be conditional on appropriate Bonds being established for the completion of the works (refer to section 105).

103.22 Certification On Completion

103.22.1 On completion of the works, and as a prerequisite to a Request for Inspection/Testing, the **Developer's Representative** shall certify that the works have been completed in accordance with the requirements of the District Plan, the subdivision or resource consent conditions, these Standards, the approved plans and sound engineering policies. The Certification shall be completed in the form attached as Appendix "G".

103.23 Infrastructure Maintenance Plans and Manuals

103.23.1 Maintenance Plans and Manuals, in duplicate, for all Pump Stations, Stormwater Management Facilities, Schematic Street Light Plans and other facilities as required, shall be submitted to the **Engineer** for approval by the relevant Network Service Provider and/or Asset Manager as a prerequisite to their issue of the relevant Asset Acceptance Certificates and Sign-Off Certificates.

103.24 Asset Acceptance Certificate

103.24.1 On satisfactory completion and testing of all relevant infrastructural works for a complete stage of a Development as depicted on an approved s.223 survey plan, or in the case of others works (e.g. for land use or building consents), all of the relevant infrastructural works for the completed project, the relevant Network Service Provider will issue an Asset Acceptance Certificate to the Engineer.

On satisfactory completion and inspection or testing of all non-infrastructural works subject to consent conditions, and on acceptance of documents such as Earthworks Completion Reports, Legal Documents, and Asbuilt records, the relevant Council Officers will issue Sign-Off Certificates to the **Engineer**.

103.24.2 Issue of all Asset Acceptance Certificates and Sign-Off Certificates relevant to the current project will be a prerequisite for an application for s.224 in the case of a subdivision stage, or for compliance with conditions of a land use resource consent, or for issue of the Code Compliance Certificate on a building consent, subject to infrastructural works.

In the case of a land use resource consent or building consent, the **Engineer** will issue a **Consents-Works Completion Certificate** to the **Developer** and attach a copy to the appropriate consent file where identified by the **Developer** in the original Application for Engineering Plan Approval.

104 MAINTENANCE

104.1 The **Developer** shall be responsible for, and shall be Bonded for, the maintenance of all the works vested in Council as set out herein. The duration of the Maintenance Period shall be:

- (a) for a subdivision stage or the total development a period of six months or to 31 October (whichever is the longest) from the date of the Section 224(c) Certificate in the case of a subdivision, or from the date of the Consent Works Completion Certificate in the case of other development works; or
- (b) for a subdivision stage, or the total development, any part of which has been bonded as uncompleted works, a period of six months or 31 October (whichever is the longest) after the date of the release of all Bonds for the completion of the uncompleted work

104.2 Prior to the final acceptance, at the completion of the maintenance period, the **Developer** shall have the following works carried out:

- (a) Grass to be mown on berms and any reserve within the development.
- (b) Carriageways swept.
- (c) Channels, catchpits, and other stormwater facilities cleaned out. Outlets structures checked for erosion and rectified.
- (d) All gardens and plantings to be mulched and free of weeds, with all reasonable care taken to ensure healthy plant growth and all dead plants to be replaced.

104.3 At the completion of the maintenance period the **Developer's Representative and Council's Consent Field Supervisor** shall carry out an inspection of the works and shall certify in the form of Appendix 'I' to these documents that the works comply in all respects with the requirements of the District Plan, these Standards and the approved plans and that the works have been satisfactorily maintained, including the requirements above.

104.4 Further testing of works such as road formation, drainage and water supply systems may be required as identified during inspections. The **Developer** must rectify any section of the works that does not comply with the approved plans and specifications, or approved variations, before certification and the release of the Maintenance Bond.

104.5 On receipt of the Asset Acceptance Certificate the **Engineer** will authorise the release of the Maintenance Bond.

105 BONDS**105.1 Uncompleted Works Bonds**

105.1.1 The **Engineer** may agree to Bonding for uncompleted minor works (usually about 1.5 times the value of the outstanding work). Bonding will not be acceptable for construction of carriageways (other than second coat seals), services reticulation, and infrastructural facilities (such as stormwater treatment/attenuation, pump stations).

105.1.2 The **Engineer** must be satisfied as to the nature and amount of the Bond which may be either lodged in cash or be a Deed of Bond prepared by the Council's solicitors at the applicant's cost and, unless approved otherwise by the **Engineer**, registered on the title(s) pursuant to sections 108 and 109 of the Resource Management Act 1991.

105.2 Maintenance Bonds

105.2.1 The Maintenance Bond shall be for a sum assessed as a percentage of the total cost of roading, wastewater drainage and stormwater reticulation, water supply mains, reserve development, street planting and rights of way and may be either lodged in cash or registered on the title(s) pursuant to sections 108 and 109 of the Resource Management Act 1991. The percentage shall be as determined from the following Table 1.

Table 1 – Value Of Bond

Value of Work \$	Bond %
<\$50,000	5
\$50,001-\$100,000	4
\$100,001-\$250,000	3
>\$250,001	2

105.3 Bond Conditions

105.3.1 Cash Bonds shall be accompanied by a duly signed copy of the Council's standard Conditions of Receipt of Cash Bond form.

105.3.2 A Deed of Bond will be prepared, on the instructions of the **Engineer**, by the Council's solicitors, who unless approved otherwise by the **Engineer**, will arrange for registration by the **Developer's** solicitors.

105.3.3 The Council requires a guarantor for all bonds other than cash bonds. The guarantor shall be one of the following:

- Any bank falling within the definition of "Registered Bank"
- An insurance or bonding company registered in New Zealand and acceptable to Rodney District Council.

105.3.4 All Bonds shall be assessed on the basis of not less than two detailed and fully priced Schedules of the works proposed to be bonded, prepared by independent contractors experienced in the type of work.

The Bond amount shall be made up as follows:

- the Schedule amount increased by a factor determined by the Engineer, but not less than 1.5; plus
- An amount for administration and supervision determined by the Engineer, but not less than \$1,000.00. The actual administration cost will be calculated on an hourly basis and invoiced for payment prior to release of the Bond.

105.3.5 On completion of the maintenance period:

The maintenance period shall be twenty-four months for pond planting unless otherwise approved by the **Engineer**.

106 CHARGES

106.1 For schedule of charges refer to Council's Resource Consents Fees and Charges Schedule