



**TOWN OF VIEW ROYAL
SUBDIVISION AND DEVELOPMENT
SERVICING BYLAW NO. 985, 2017
Consolidated for Convenience to March 2019**

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**TOWN OF VIEW ROYAL
BYLAW NO. 985, 2017**

**A BYLAW TO REQUIRE THE PROVISION OF WORKS AND SERVICES AND TO ESTABLISH
STANDARDS AND REGULATIONS IN RESPECT TO THE SUBDIVISION AND DEVELOPMENT OF
LAND WITHIN THE TOWN OF VIEW ROYAL**

The *Council* of the Town of View Royal, in open meeting, enacts as follows:

PART 1 TITLE, APPLICABILITY, SEVERABILITY AND REPEAL

1.1 Title

This Bylaw may be cited as "Subdivision and Development Servicing Bylaw No. 985, 2017".

1.2 Applicability

This Bylaw applies to all lands within the area incorporated as the Town of View Royal.

1.3 Severability

If any Part, Section, Subsection, Paragraph or phrase of this Bylaw is for any reason held to be invalid by the decision of a Court of competent jurisdiction, such decision will not affect the validity of the remaining portions of this Bylaw.

1.4 Repeal

The following sections of the *Town of View Royal Land Use Bylaw, 1990, No. 35*, as amended, are hereby repealed:

- Part 8 – Subdivision and Development
- Schedule 8A – Subdivision Servicing Agreement
- Schedule 8B – Development Servicing Agreement
- Schedule 9 – Developers Agreement Security

PART 2 INTERPRETATION

2.1 Definitions

"*Application for Development*" means the information, documents, agreements, covenants and fees required under this Bylaw for a *development* or *subdivision*.

"*Approval, Final*" means the Approving Officer's affixation of his or her signature to the subdivision plan prepared by a currently practicing British Columbia Surveyor pursuant to the *Land Title Act*.

"*Approving Officer*" means the person appointed as such from time to time by the *Council* as the *Approving Officer* under the *Land Title Act*, and includes his or her lawful designate.

"*Benefiting Lands*" means lands, other than lands that are the subject of the *Owner's Application for Development*, that are capable of being connected to or serviced by *Excess or Extended Services*.

"*Boulevard*" means the portion of a *highway* between the curb lines or the lateral boundary lines of a *roadway* and the adjoining lot or between curbs on median strips or islands, but does not include curbs, sidewalks, ditches, or *driveways*.

"*Building Bylaw*" means the *Town of View Royal Building Bylaw*, No. 786, 2010, as amended or replaced from time to time.

"*Building Inspector*" means the person duly appointed as such from time to time by the *Council* and includes any person designated by the *Building Inspector* to act on his or her behalf.

"*Building Permit*" means a permit issued pursuant to the *Building Bylaw*.

"*Certificate of Final Acceptance*" means the written confirmation issued by the Director of Engineering to the *Owner* that the Warranty Period for the Works and the Landscaping, respectively, has expired, and that all deficiencies of the Works and the Landscaping, respectively, upon inspection by the Director of Engineering, have been corrected to the satisfaction of the Director of Engineering.

"*Certificate of Substantial Performance*" means the certificate issued by the *Owner's* Consulting Engineer for the Works and Landscape Architect for the Landscaping, respectively, indicating that Substantial Performance has been achieved.

"*Certificate of Total Completion*" means following receipt of the Certificate of Substantial Performance issued for the Works by the Consulting Engineer and the Landscaping by the Landscape Architect, the written confirmation of satisfactory completion of the Works and the Landscaping, respectively, issued by the Director of Engineering to the *Owner*.

"*Community Drainage System*" means a system of works owned, operated and maintained by the Ministry of Transportation or the *Town*, designed and constructed to control the collection, conveyance and disposal of surface and other water.

"*Community Sewer System*" means a sanitary sewer or a system of sewage disposal works which is owned, operated and maintained by the *Town*.

"*Community Water System*" means a system of waterworks which includes the water distribution and treatment facilities which are owned, operated or maintained by the *Capital Regional District*.

"*Construct*" or "*Construction*" means build, erect, install, repair, alter, add, enlarge, move, locate, re-locate, re-construct, upgrade, demolish, remove, excavate, or shore.

"*Consulting Engineer*" means a professional engineer who is licensed and registered to practice in British Columbia under the *Engineers and Geoscientists Act*, who is responsible for the design, construction, supervision and certification of all *Works and Services* on behalf of the *Owner*.

"*Council*" means the Municipal Council of the Town of View Royal.

"*Design Drawings*" means the drawings identifying the *Works and Services* requirements of this Bylaw, provided by the *Owner* and submitted to the *Town* pursuant to an *Application for Development*.

"Develop" or "Development" means any activity that requires a *building permit* under the Building Bylaw.

"*Director of Engineering*" means the Director of Engineering of the *Town*, or designate.

"*Driveway*" means that portion of a property that provides access to Parking or loading spaces within the property and is considered to be the extension of the property's Street access.

"*Driveway Crossing*" means the improved portion of the Boulevard or Sidewalk specifically designated and improved to provide vehicular access to a property, and includes the widest extent of the Driveway flare.

"*Estimated Cost of Works and Services*" means an estimate prepared by the *Consulting Engineer* that itemizes the fair market value or cost of construction of the *Work and Services* and which includes the value of all professional fees for design, approvals, *construction* period services and *record drawings*.

"*Excess or Extended Services*" is as defined in the *Local Government Act*. For convenience the current definition is:

- (a) a portion of a *Highway* system that will provide access to land other than the land being subdivided or developed, and

- (b) a portion of a water, sewage or drainage system that will serve land other than the land being subdivided or developed.

"Fees" means those fees payable to the *Town* in connection with the *Subdivision* or *Development* of land, as prescribed by the *Fees and Charges Bylaw No. 958, 2016*, as amended or replaced from time to time.

"Frontage" means that length of lot boundary which immediately adjoins a *highway*, other than a *lane* or walkway.

"Highway" or "Street" includes the width of a public right-of-way including *roadway, boulevard, lane, walkway, curb and sidewalk* open to public use, but does not include a private right-of-way on private property.

"Lane" means a *highway* more than 3 metres but not greater than 8 metres in width, intended to provide secondary access to a *lot*.

"Lot" means any parcel, block or other area in which land is held or into which it is subdivided whether under the *Land Title Act* or the Bare Land Strata Regulations under the *Strata Property Act* and includes a water *lot*, but does not include a phased *subdivision* boundary.

"Maintenance Period" means the period of time following *Total Completion* of the *Works and Services* where the Owner continues to maintain the *Works and Services* for a period of:

- (a) three years for required landscaping; and
- (b) one year for all other required *Works and Services*.

"MMCD" means Volume II of the Master Municipal Construction Document Platinum Edition and the MMCD Design Guidelines 2014, as amended or replaced, which forms part of this Bylaw, unless specifically modified by this Bylaw's Schedules.

"Off-site Works and Services" means *Works and Services* that are directly attributable to the *Subdivision* or *Development* and that will be owned and maintained by the *Town* or the Capital Regional District or the Province of British Columbia following issuance of the *Certificate of Final Acceptance*.

"Owner" means the registered owner of a lot or parcel in fee simple, or an agent authorized in writing by the owner, and includes:

- a) the tenant for life under a registered life estate;
- b) the registered holder of the last registered agreement for sale; and
- c) the holder or occupier of land held in the manner as referenced the *Local Government Act, Land Title Act* or *Strata Property Act*.

"Owner/Consulting Engineer Confirmation" means a confirmation letter from the *Owner* and the *Consulting Engineer*, in the form prescribed by the *Town*.

"Panhandle Lot" means any *lot* that has less than 10% of its perimeter adjoining a *highway* and gains access to said *highway* by means of a narrow strip of land, or access strip, which is an integral part of the *lot*.

"Preliminary Layout Review" means such drawings, plans, information and documents as the *Approving Officer* requires, and in such form as is required by the *Approving Officer*, to determine, on a preliminary basis:

- a) whether the proposed *Subdivision* would be against the public interest or otherwise unsuitable for *Subdivision*; and
- b) if not against the public interest or otherwise unsuitable for *Subdivision*, what the *Owner* must include in the *Application for Development*.

"Preliminary Layout Review Letter" means a letter from the *Approving Officer* to the *Owner* advising of the *Approving Officer's* response to *Preliminary Layout Review* information provided by the *Owner*, generally outlining the conditions required to be considered for *Final Approval*, subject to reasonable conditions and provisos.

"Record Drawings" means drawings prepared by and certified by the *Consulting Engineer*, and verified by the *Town*, that record the location, properties and details of all *Works and Services* as they were built. The drawings should be stamped to verify the "As-Constructed" drawings.

"Roadway" means the portion of a *highway* that is constructed, improved, designed or used for vehicular traffic or bicycle traffic or both.

"Roadway Construction Permit" means a permit issued by the *Town* in connection with an application by an *Owner* to Construct *Works and Services* on, in or under a *Highway* or *Town* lands, or to encroach upon a *Highway* or *Town* lands in constructing *Works and Services* on the *Owner's lands*.

"Security" means cash or a clean, unconditional, irrevocable and automatically renewing letter of credit drawn on a chartered bank or credit union, on terms satisfactory to the *Town*.

"Servicing Agreement" means an agreement between the *Owner* and the *Town* made pursuant to Section 219 of the *Land Title Act*, in substantially the form as prescribed and provided by the *Town*.

"Subdivision" is as defined in the *Local Government Act*. For convenience the current definition is: (a) a subdivision as defined in the *Land Title Act*, and (b) a subdivision under the *Strata Property Act*;

"*Substantial Performance*" means the stage of completion of all of the *Works and Services* when the *Works and Services* are ready to be used for their intended purpose, as certified by the *Consulting Engineer* and verified by the *Town*.

"*Total Completion*" means when all *Works and Services*, including all incomplete, defective or deficient *Works and Services* that were apparent when the *Certificate of Substantial Performance* was issued have been completed or corrected, as certified by the *Consulting Engineer* and verified by the *Town*.

"*Town*" means the Town of View Royal.

"*Town Specifications*" means all the schedules to this bylaw and MMCD.

"*Works and Services Agreement*" means a written agreement in a form prescribed by the *Town* that describes the terms and conditions agreed upon between the *Town* and the *Owner* relative to provision of *Works and Services* associated with a *Subdivision* or *Development*.

"*Works and Services*" includes site grading, Highways, sidewalks, boulevards, boulevard crossings, transit bays, street lighting, wiring, water distribution systems, fire hydrants, sewage collection and disposal systems, drainage collection and disposal systems, engineering, record drawings and such other infrastructure or systems as may be provided within the *Town* from time to time.

"*Zoning Bylaw*" means *Town of View Royal Zoning Bylaw 2014, No. 894*, as amended or replaced from time to time.

2.2 Requirements Supplementary

The requirements of this Bylaw are supplementary to the requirements of any other Town bylaw.

2.3 Amendments or Replacements

A reference to any bylaw, legislation or documents includes any amendments or replacements that may be made from time to time.

2.4 Definitions from Legislation or MMCD

Unless otherwise defined in this Bylaw, any word or expression has the meaning assigned to it in the *Land Title Act*, *Local Government Act*, *Community Charter*, *Strata Property Act* or in the MMCD.

2.5 Designates

Words directing or empowering any officer of the Town to do any act or thing, or otherwise referencing the officer by the officer's official title include that person's successors in office, the officer's lawful deputy and such person as the Council may by bylaw or resolution designate to act in the officer's place.

2.6 Standards of Measure

Any equivalent imperial units of measure shown, in parenthesis, after metric units are for information purposes only and do not form part of this Bylaw.

2.7 Bylaw Schedules

The following schedules are attached to and form part of this Bylaw:

- Schedule A – Level of Service Map (Roads)
- Schedule B – Supplementary Design Guidelines
- Schedule C – Supplementary Construction Specifications
- Schedule D – Supplementary Detail Drawings
- Schedule E – Approved Products List
- Schedule F – Drawing Specifications

PART 3 MINIMUM HIGHWAY FRONTAGE

- 3.1** *Council delegates to the Approving Officer the power to exempt a Lot, other than a panhandle Lot, from the minimum Frontage requirement under the Local Government Act.*

Part 4 APPLICATIONS

Application for Preliminary Layout Assessment:

- 4.1** Prior to the preparation of survey plans and the placing of survey posts or other survey monuments upon the land for the purpose of subdivision, an owner may apply to the Approving Officer for Preliminary Layout Review Letter.
- 4.2** An application described in Section 4.1 of this bylaw shall be made to the Approving Officer, and shall be:

- a) signed by the owner of the land that is the subject of the application, or by a person authorized in writing by the owner to act as his or her agent for the purpose of making the application;
- b) made on the application form prescribed by the Approving Officer;
- c) accompanied by the information required by the Approving Officer; and
- d) accompanied by the application fee set out in the Fees and Charges Bylaw No. 958

4.3 The Approving Officer's issuance of a Preliminary Layout Review Letter must not be construed as final approval of the proposed subdivision for land registration purposes.

Subdivision Preliminary Layout Review Letter

- 4.4** In connection with the review of an application for Preliminary Layout Assessment, the Approving Officer may issue a Preliminary Layout Review Letter identifying all conditions or requirements that are necessary for the Approving Officer's consideration of final approval of the proposed subdivision.
- 4.5** The Approving Officer's Preliminary Layout Review Letter shall not be construed as final approval of a subdivision.
- 4.6** If the Approving Officer's final approval of the proposed subdivision has not been granted within one year of the issuance of the Preliminary Layout Review Letter:
 - a) the Preliminary Layout Review Letter expires; and
 - b) if the owner wishes to proceed with the proposed subdivision, a new application for Preliminary Layout Assessment must be submitted subject to any change in conditions, bylaws, or policies that may have occurred.
- 4.7** Prior to the expiry of the Preliminary Layout Review Letter the owner may apply, in writing, for an extension of no more than six (6) months of the Preliminary Layout Review Letter, provided a written explanation of the circumstances support the extension and fee for "Statement of Conditions Renewal or extension" prescribed in the Fees and Charges Bylaw No. 958, 2016 is paid.

Additional Information

- 4.8** At any time, the Approving Officer may request that an owner provide further information that is necessary for the Approving Officer to review and consider a Preliminary Layout Plan.

Referral to Other Agencies

- 4.9** In the event that the Approving Officer or the Town refers the application for Preliminary Layout Assessment or any other application for subdivision approval to another public authority whose review of that application is required by law, or in the opinion of the Approving Officer is necessary or desirable, the owner shall be responsible for direct payment to that public authority of any fee charged by the public authority for that referral.

PART 5 SERVICING REQUIREMENTS FOR SUBDIVISIONS AND DEVELOPMENTS

- 5.1** Prior to *Final Approval* or issuance of a *Building Permit*, the *Subdivision* or *Development* must be provided with *Works and Services* within the *Subdivision*, and in connection with the *Subdivision*, and/or the *Lot* being developed as prescribed in this Bylaw.

5.2 Prior to *Final Approval* or issuance of a *Building Permit*, the *Subdivision* or *Development* must be provided with *Off-Site Works and Services* as determined by the *Director of Engineering*.

5.3 The *Director of Engineering* is hereby delegated the authority to:

- a) Determine what *Off-Site Works and Services* are directly attributable to subdivision or development and are accordingly required in any particular case;
- b) Determine what *Excess or Extended Services* are required in connection with a *Subdivision* or *Development*;
- c) Determine whether the cost of those *Excess or Extended Services* are excessive such that the municipality cannot pay for those costs;
- d) Identify the Benefiting Lands in relation to *Excess or Extended Services*;
- e) Determine what proportion of the costs associated with the *Excess or Extended Services* is associated with each benefiting property; and
- f) Enter into a Works and Services Agreement in a form generally consistent with the circumstances and in accordance with good engineering practices, Town policies and this Bylaw.

5.4 The Director is not required to undertake such determinations as listed in Section 5.3, and may refer any application that requires Excess or Extended Services to Council.

5.5 All *Off-Site Works and Services* must be provided to the Town Specifications.

5.6 All on-site services required must comply with the BC Building Code, or good engineering practices where the code is silent, and must be constructed prior to subdivision.

5.7 Despite Section 5.1 and Section 5.2, the Owner may obtain Final Approval or a Building Permit prior to the provision of Off-Site Works and Services if the Owner has provided Security in accordance with this Bylaw, and has entered into a Works and Services Agreement with the Town.

5.8 Exemptions

Despite Section 5.1 and Section 5.2, the Works and Services requirements of this Bylaw do not apply to a Subdivision which only creates:

- a) a Highway dedication;
- b) park land;
- c) a Lot for the installation of public utilities and related structures equipment; or
- d) a consolidation or a lot line adjustment, in which the number of buildable lots is not increased.

5.9 Highways

Where any parcel is to be subdivided or developed, all new highways proposed to be dedicated by subdivision plan, including widening strips of existing highways, cul-de-sacs, lanes and walkways shall be provided, located and constructed and have the dimensions, locations, alignment and gradient all in accordance with this Bylaw.

5.10 Boulevard and Sidewalks – New and Existing Highways

- a) Where any parcel is to be subdivided or developed and new highways are to be created, boulevards and sidewalks shall be provided, located, designed and constructed by the owner in accordance with this Bylaw.
- b) Where any parcel is to be subdivided or developed, and there is an existing highway immediately adjacent to the parcel, boulevards and sidewalks shall be provided, located, designed and constructed by the owner in accordance with this Bylaw.

5.11 Driveways – New and Existing

- a) Where any parcel is to be subdivided or developed, the driveway crossings shall be provided, located and constructed in accordance with this Bylaw.
- b) The Driveway Crossing surface must be constructed of a hard material, such as concrete or asphalt, unless permitted by the director, and must extend a minimum of 1.0m onto the property.
- c) Driveway Crossing that is not serving any traffic as a result of the site layout on the property must be removed and the portion of the Street reinstated at the Owner's cost to a condition similar to that of the Boulevard in the immediate vicinity.
- d) An Owner of a Parcel may not access that parcel through an adjoining Parcel's Driveway Crossing unless:
 - i) the Owner complies with all requirements of this Bylaw with regard to the Driveway Crossing; and
 - ii) the Owner's Parcel benefits from a registered easement allowing vehicles to pass through the adjoining Parcel to access the Driveway Crossing.

5.12 Street Lighting

Where any parcel is to be subdivided or developed, street light shall be provided, located and constructed in accordance with this Bylaw.

5.13 Power Supply

Where any parcel is to be subdivided or developed, and new highways are created, the power supply system shall be provided, located and constructed underground.

5.14 Power Services

Where any parcel is to be subdivided or developed, the power services shall be provided, located and constructed underground.

5.15 Telecommunications Supply

Where any parcel is to be subdivided or developed, and new highways are created, the telecommunication system shall be provided, located and constructed underground.

5.16 Telecommunications Services

Where any parcel is to be subdivided or developed, the telecommunication services shall be provided, located and constructed underground.

5.17 Water Distribution

Where any parcel is to be subdivided or developed, such subdivision or development shall be connected to *Community Water System*, which shall be provided, located and constructed in accordance with the standards of the Capital Regional District.

5.18 Fire Hydrant System

Where any parcel is subdivided or developed, and a water distribution system must be installed, a fire hydrant system shall be provided located in accordance with this Bylaw and constructed in accordance with the standards of the Capital Regional District.

5.19 Sanitary Sewage System

Where any parcel is to be subdivided or developed, such subdivision or development shall be connected to *Community Sewer System*, which shall be provided, located and constructed in accordance with the standards set out in this Bylaw.

5.20 Drainage System

Where any parcel is proposed to be subdivided or developed, such subdivision or development shall be connected to *Community Drainage System*, which shall be provided, located and constructed in accordance with the standards set out in this Bylaw.

5.21 On-site Stormwater Management System

Where any parcel is proposed to be subdivided or developed, such subdivision or development shall have a Stormwater Management Plan prepared by a consulting engineer to address all drainage, entering and exiting the existing lots, proposed lots, and Common Property, to maintain post development flows to predevelopment levels provided on-site to the satisfaction of the Director of Engineering.

5.22 In lieu of Off-site Works and Services being completed, the Town and the Developer may enter into a written agreement for cash in lieu paid to the Town in the amount determined by the Director for the cost of designing and constructing or altering the Off-site Works and Services if the Director determines on the basis of sound civil engineering practice or cost considerations that the Works and Services should be constructed or altered at a later time or concurrently with future capital construction on the same frontage road.

5.23 The Director may apply the funds collected under Section 5.22 to capital projects and within the term specified in the agreement, and the Owner shall have no further obligation to the Town in respect of those Off-site Works and Services.

5.24 If an agreement cannot be reached, the developer is required to construct the Off-site Works and Services as part of the development.

PART 6 FEES AND SECURITY

6.1 Fees and Payment of Charges

The *Owner* must pay all applicable fees and charges prior to *Final Approval*, issuance of a *Preliminary Layout Review Letter*, issuance of a *Road Construction Permit*, or issuance of *Building Permit*, as the case may be.

6.2 Subdivision and Development Fees

- (a) Pay the Engineering Administration and Inspection fee as prescribed in the Fees and Charges Bylaw.

- (b) Pay any outside consulting costs incurred by the Town relating to the subdivision and servicing of the land.

6.3 Works and Services Security

- a) The Owner must pay to the *Town* a *Security* in an amount equal to one hundred and twenty percent (120%) of the *Estimated Cost of Works and Services* required for the proposed *Subdivision* or *Development* to meet the requirements of this Bylaw in order to be granted Final approval or issuance of a *Building Permit* prior to the provision of *Works and Services*.
- b) The *Owner* is responsible for the actual cost of the *Works and Services* regardless of the adequacy of the *Security* deposited with the *Town*.
- c) Following *Substantial Performance* of the *Works and Services*, the *Town* will reduce the amount of *Security* to a total of 10% of the *Estimated Cost of Works and Services* plus 120% of the remaining deficiencies as determined by the *Director of Engineering*.

6.4 Maintenance Security

- a) Following *Total Completion* of the *Works and Services*, the Town will hold *Security* for the maintenance of the *Works and Services*, in the amount of 10% of the *Estimated Cost of Works and Services*.
- b) The *Security* will be held by the *Town* for the duration of the *Maintenance Period* as provided for in this Bylaw.

6.5 Owner Responsibility and Remedy

- a) All *Works and Services* required to be constructed or provided pursuant to the provisions of this Bylaw remain the sole responsibility of the *Owner* until a *Certificate of Final Acceptance* has been issued by the *Town*.
- b) The *Owner* must maintain the works and repair or replace any defective works during the *Maintenance Period*.
- c) Should the *Owner* fail to maintain, repair or replace said works, the *Town* may undertake such maintenance, repairs or replacement using the *Security*.

PART 7 GENERAL PROVISIONS

7.1 Compliance

No lot may be *Subdivided* or *Developed*, unless the *Subdivision* or *Development* conforms to the provisions set out in this Bylaw and other bylaws of the *Town*.

7.2 Cost of Services

All *Works* and *Services* required by this Bylaw must be constructed at the expense of the *Owner*.

7.3 Consulting Engineer

- a) The *Owner* must, at its expense, retain a *Consulting Engineer* to design, inspect, test and certify all *Works and Services*.
- b) The *Consulting Engineer* is responsible for the design of the respective works and must, upon satisfactory completion of the *Works and Services*, provide the *Town* with their written certification that they were, in fact, designed and constructed in accordance with this Bylaw and the submitted *Record Drawings*.
- c) Upon request by the *Director of Engineering*, the *Consulting Engineer* must supply copies of all inspection reports to the *Town*.
- d) Any inspection carried out by the *Town* shall not relieve the *Consulting Engineer* or *Owner* of any obligations or responsibility in connection with the installation of the works.

7.4 Rights-of-Way and Easements

- a) Works and Services constructed and installed under this Bylaw must be located within dedicated highways or within statutory rights-of-way granted by the *Owner* in favour of the *Town* or other agencies having jurisdiction.
- b) Where the *Owner* is required to grant rights-of-way to the *Town*, the *Owner* must register the rights-of-way in the Land Title Office. The terms of the rights-of-way documentation are subject to Approving Officer consent prior to registration.
- c) Upon registration of the rights-of-way and before release of any maintenance Security being held by the *Town*, the *Owner* must submit a copy of the registered rights-of-way plan and agreement to the *Town*.
- d) All costs pertaining to the acquisition, surveying and registration of all rights-of-ways are at the expense of the *Owner*.

7.5 Transfer of Ownership

Works and Services constructed and installed under this Bylaw become the property of the *Town* or the agency having jurisdiction, subject to no encumbrances, on issuance of the *Certificate of Final Acceptance*.

7.6 Record Drawings

The *Owner* must submit *Record Drawings* following the completion of the *Works and Services* and prior to issuance of a *Certificate of Final Acceptance*.

If the *Owner* wishes to receive *Final Approval* prior to submission of required *Record Drawings*, tests results, service cards, inspection reports, video reports, maintenance and operations manuals, and professional certifications, such approval may be granted at the sole discretion of the *Director of Engineering*, subject to a deficiency holdback in an amount set by the *Director of Engineering* pursuant to this Bylaw.

PART 8 ENFORCEMENT

8.1 The *Approving Officer, Director of Engineering, Building Inspector*, or designate, are authorized to enter at all reasonable times upon the lands for which an *Application for Development* has been made, for the purpose of administering or enforcing this Bylaw. No person may prevent or obstruct any such official from the carrying out of these duties under this Bylaw.

8.2 Violation

- a) No person shall contravene this Bylaw or suffer or permit any act or thing to be done in contravention of this Bylaw.
- b) It is an offence for any person to cause, suffer, or permit the development or subdivision of land in contravention of this Bylaw or otherwise to contravene or fail to comply with this Bylaw.
- c) It is an offence for any person to prevent or obstruct, or attempt to prevent or obstruct the authorized entry of the *Approving Officer* or other appointed employee, authorized under this Bylaw.

8.3 Penalties

- a) Every person who violates a provision of this Bylaw commits an offence and is liable upon summary conviction to a penalty of not less than \$500.00 and not exceeding ten thousand dollars (\$10,000) and costs of prosecution.
- b) Every day of violation constitutes a separate offense.

PART 9 EFFECTIVE DATE

9.1 This Bylaw comes into force and takes effect upon the final reading and adoption thereof.

READ A FIRST TIME this 17th DAY OF OCTOBER, 2017.

READ A SECOND TIME this 17th DAY OF OCTOBER, 2017.

READ A THIRD TIME this 17th DAY OF OCTOBER, 2017.

ADOPTED BY COUNCIL, SIGNED BY THE MAYOR AND THE CORPORATE OFFICER AND SEALED WITH THE SEAL OF THE TOWN OF VIEW ROYAL THIS 7th DAY OF NOVEMBER, 2017.

MAYOR

CORPORATE OFFICER

SCHEDULE A

Level of Service Map (Roads)



DRAFT SCHEDULE A LEVEL OF SERVICE MAP

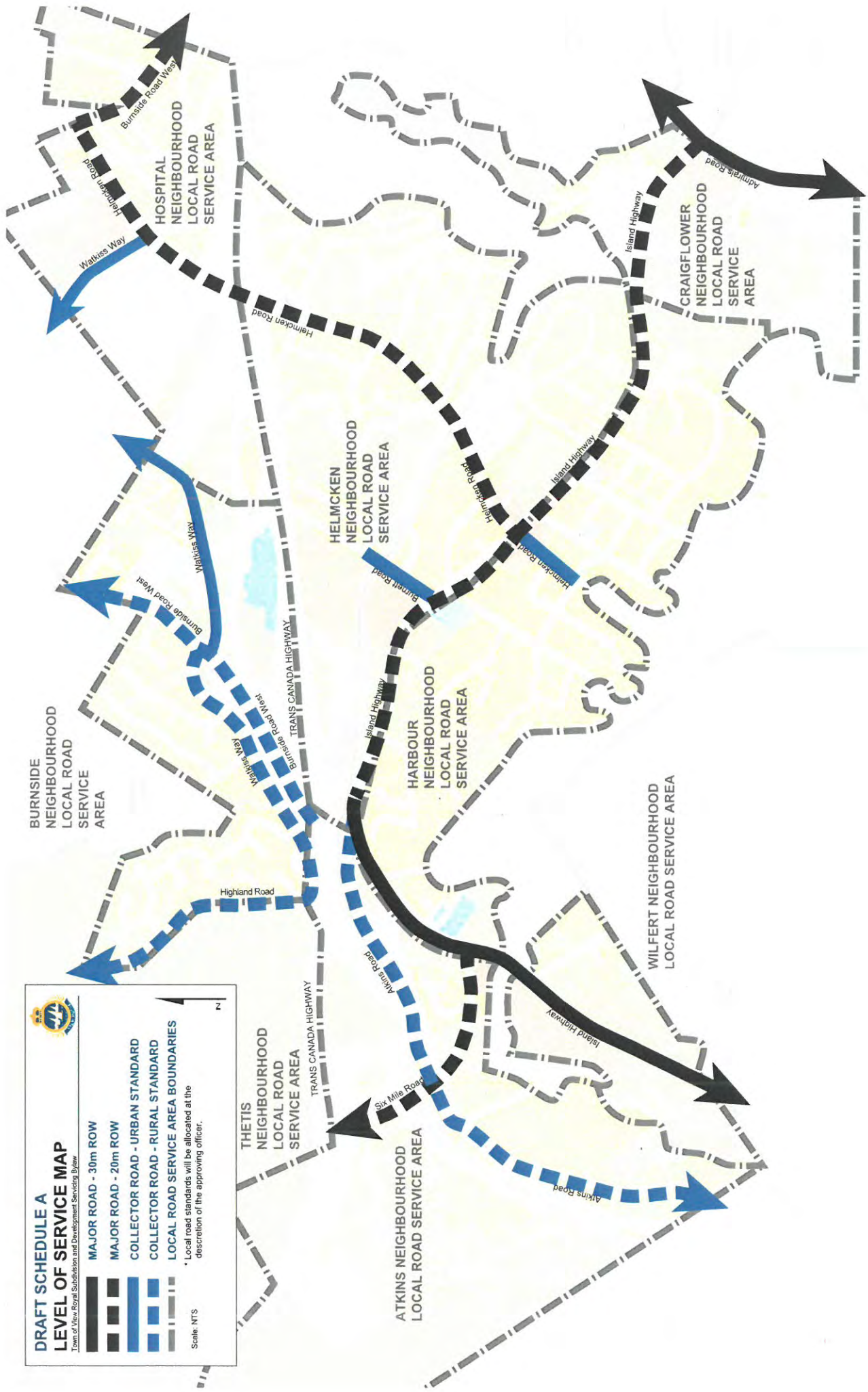
Town of View Royal Subdivision and Development Servicing Bylaw

- MAJOR ROAD - 30m ROW
- MAJOR ROAD - 20m ROW
- COLLECTOR ROAD - URBAN STANDARD
- COLLECTOR ROAD - RURAL STANDARD
- LOCAL ROAD SERVICE AREA BOUNDARIES

* Local road standards will be allocated at the discretion of the approving officer.

Scale - NTS

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SCHEDULE B

SUPPLEMENTARY DESIGN GUIDELINES

SUPPLEMENTARY DESIGN GUIDELINE GENERAL USE DESCRIPTION

This schedule contains supplementary design guidelines to be applied in conjunction with the Design Guideline Manual of the Master Municipal Construction Documents, dated 2014, both of which shall apply to all Works and Services constructed within the Town of View Royal.

Supplementary Design Guidelines contained within this Schedule supplement or supersede the Master Municipal Construction Document (MMCD). Where the Town of View Royal Supplementary Design Guidelines are in conflict with the MMCD, the Town of View Royal Design Guidelines shall take precedence.

Section number and clause numbers in the Town of View Royal Supplementary Design Guidelines coincide with the MMCD numbering protocol.

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5.14.3	Driveway Location and Width
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5.17.3	Pavement Alternatives
Section 12.0	Landscape Requirements
12.1	Plans
12.2	Boulevard Trees
12.3	Tree Retention

Section 1.0 - General Design Considerations

Add the following:

1.7 - Decommissioning

A. Existing Pipe Utilities

Unless otherwise approved, all abandoned pipes within public rights-of-way shall be removed and disposed of off-site as per applicable environmental requirements. Trench backfilling shall be performed in accordance with trench backfilling procedures required for new pipe installation. All disturbed surfaces shall be restored to equal or better conditions.

B. Existing Sanitary Lift Stations

The preferred method of decommissioning abandoned sanitary lift stations includes total removal of the pump tank (wet well) and all associated works within the tank, electrical and instrumentation components, and abandoning and permanently sealing off all pipes connecting to the tank. If a concern exists that the removal of the below ground tank may cause soil instability and disturbance to the existing nearby structures, the tank may be abandoned in place after the following procedure is followed:

- Thoroughly flush the tank and all connecting pipes,
- Isolate pump tank entirely from all piping, electrical and instrumentation connections by disconnecting and removing services and sealing off the pipes with concrete grout or similar material,
- Strip the inside area of the tank off of any metallic and non-metallic components,
- Remove tank lid and cut off and remove tank wall to minimum 1m depth below finished surface
- Drill 8 horizontal symmetrical 100mm dia. holes per each metre of height of remaining tank in place starting at the bottom of the tank, and
- Fill the tank with lightly compacted clean river sand and install a single layer of non-woven filter fabric against each drilled hole.

Section 2.0 - Water Distribution

All Water Distribution requirements shall be confirmed with the Capital Regional District who is the water distribution system provider in the Town of View Royal. For all developments that include non-single family properties fire flow calculations must be submitted in accordance with the latest Fire Underwriters Survey with confirmation provided by the Capital Regional District that sufficient fire flow exists to protect the proposed development.

Section 3.0 - Sanitary Sewers

As per MMCD.

Section 4.0 – Storm Drainage

4.3.1 – The Minor System

Replace this section with the following:

Consists of pipe, gutters, catch basins, driveway culverts, open channels, watercourses, rain gardens, oil interceptors and other stormwater management BMPs designed to capture, convey, treat, or modify flows up to a 10-year return frequency.

All minor system components are to be sized to ensure that the hydraulic grade line of 10-year frequency flows remain below ground surface, and the flood protection elevation of dwellings, or within bank limits in the case of open channels and bio-swales.

4.3.2 – The Major System

Replace this section with the following:

Consists of surface flood paths, roadways, roadway culverts, watercourses and stormwater management facilities designed to capture, convey, treat, or modify larger flows up to a 100-year return frequency.

4.4 – Runoff Analysis

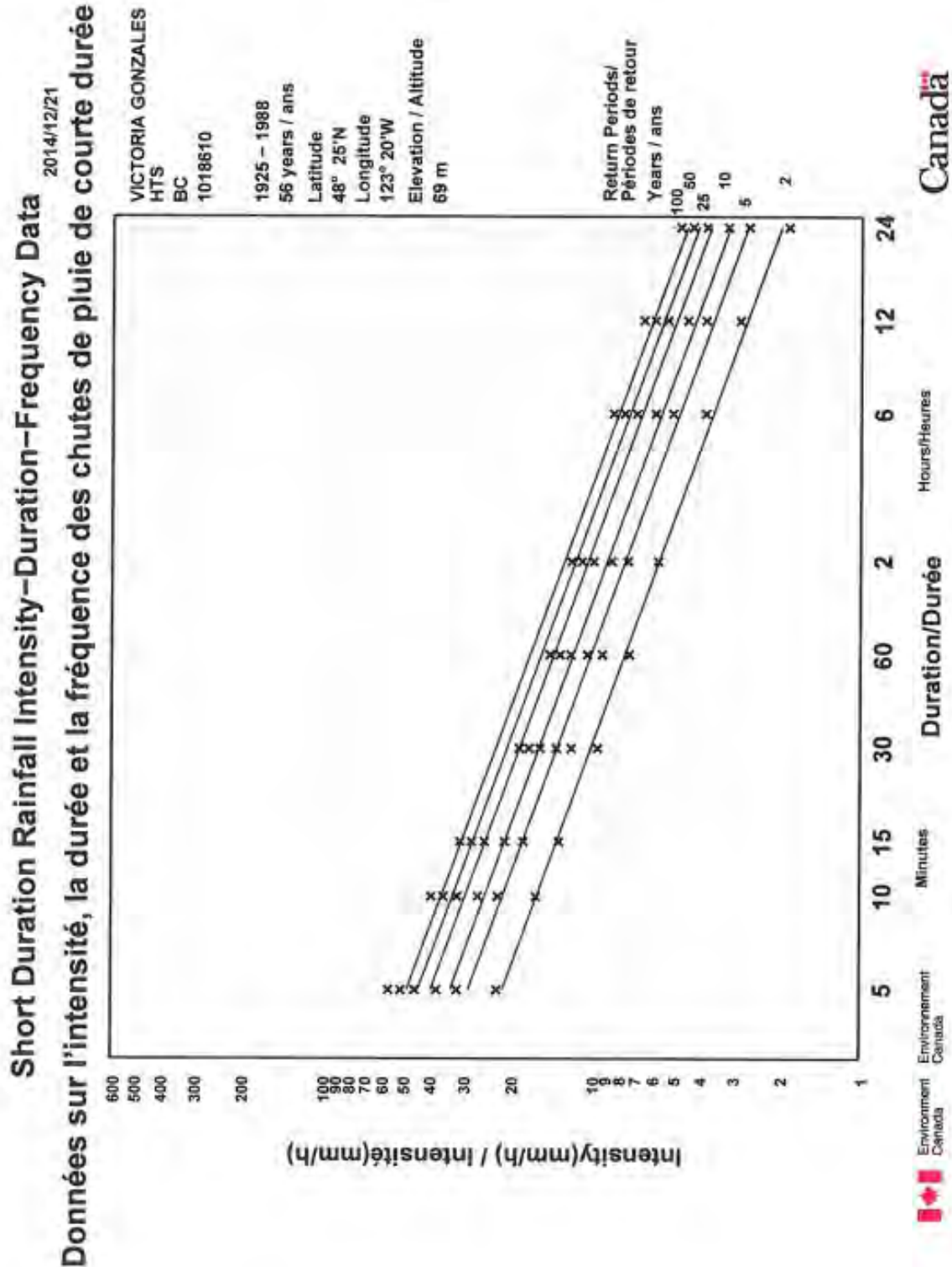
Replace this section with the following:

Rainwater management design should be carried out using one or more of the following methods as indicated below. Calculations are to be submitted with designs. The Rainfall Intensity Duration curve is provided for reference in the figure below.

- Rational Method: Applicable in most cases for the purposes of conveyance design only and for areas less than 10 hectares in size.
- Hydrograph Method: Applicable for complex systems involving multiple catchments with highly variable land use conditions, where flow attenuation features are involved (e.g. detention pond, constructed wetland), or for gross areas exceeding 10 hectares. Computer models shall be SWMM based, or as otherwise approved by the Town of View Royal.
- Mass Balance: Volumetric based computations may be used to supplement flow analysis for the design of water quality treatment facilities and Best Management Practices intended for rainwater retention.

Note: Aside from the runoff analysis method applied, hydraulic grade lines and associated system performance shall consider governing downstream hydraulic boundary conditions, which may be

available from the Town of View Royal. If not available from the Town, or available to the degree necessary to support the design, additional off-site analysis may be required.



4.11 – Runoff Controls

Add the following to the end of this section:

4.11.10 - Performance Targets

All developments must incorporate water quality treatment provisions into the design, to meet the performance targets specified in the Town of View Royal *Storm Water Regulation Bylaw No. 902, 2015*.

Section 5.0 – Roads

5.3 – Cross-Section Elements

Replace this section with the following:

Recommended road cross sections elements are shown on the typical sections in the Town of View Royal Supplementary Detail Drawings (Schedule D).

Right-of-way and pavement widths shown in the Town of View Royal Supplementary Design Guidelines (Schedule B) and the Town of View Royal Supplementary Detail Drawings (Schedule D) are subject to increases to accommodate the following:

- Intersections
- Turn lanes
- Bike lanes
- Bus bays

Unless noted otherwise in Town of View Royal Supplementary Design Guidelines and Town of View Royal Supplementary Detail Drawings, or by condition of the Servicing Agreement, topsoil with sod and trees is required on medians and boulevards. Where the width is insufficient for maintenance of vegetation or ability to accommodate trees, concrete surfaces will be required.

Note: Table 5.1, 5.2 and 5.3 have been omitted in lieu of the Town of View Royal Supplementary Detail Drawings.

5.11.1 – Sidewalk

Replace this section with the following:

The requirement for sidewalks is as shown in the Town of View Royal Supplementary Detail Drawings.

In the absence of specific local requirements, sidewalk details should be as follows:

- Minimum width: 1.5 m (excluding adjacent curb)
- Cross-slope: 2%, except at driveways and wheelchair ramps
- Drainage: Towards gutter

5.13 – Transit Facilities

Replace this section with the following:

The requirement for transit facilities will be established by the Town of View Royal, in consultation with BC Transit.

Bus bay locations should be established in cooperation with BC Transit. Bus bay details should be in accordance with the Pullouts section of the TAC Geometric Design Guidelines. It is assumed that local residential roads shall be serviced by community shuttle vehicles, while collector and arterial roads shall be serviced by full-sized City buses.

Bus bays must be constructed as per the BC Transit Infrastructure Design Guidelines and include the following Portland cement pavement structure:

- Portland Cement Concrete: 225mm
- Base Course: 150mm
- Subbase: 300mm

Transit signs should be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

Additional guidelines are included in BC Transit, *Infrastructure Design Guidelines* and Canadian Urban Transit Association, *Canadian Transit Handbook*.

5.14.3 – Driveway Location and Width

Replace this section with the following:

Subject to providing adequate sight distance in accordance with TAC, driveway location and width shall conform to the following:

- a) The Driveway Crossing on any corner Parcel must be sited on the Street having the more minor street classification.
- b) The outer edge of a Driveway Crossing on any corner single-family residential Parcel cannot be located less than seven and one half (7.5) metres from the point of the Streets' intersection.
- c) The outer edge of a Driveway Crossing on any corner commercial or multi-family Parcel cannot be located less than twelve (12.0) metres from the point of the Streets' intersection.
- d) The outer edge of a Driveway Crossing shall not be closer than one and one half (1.5) metres to the extension of the adjoining lot boundary as if continued into the Town's Street.
- e) The outer edge of a Driveway Crossing must be a minimum of three (3.0) metres from any tree unless root barriers are installed as approved by the Director.
- f) The outer edge of a Driveway Crossing must be a minimum of one and one half (1.5) metres from any above-ground utility equipment or street light.
- g) The surface of a Driveway Crossing must be a minimum of one (1.0) metre above underground utility equipment.
- h) A Driveway Crossing may be permitted to be constructed at the Owner's cost over utility boxes if the casting of the utility box is of sufficient thickness to support the traffic that will be using the Driveway Crossing, and provided that the applicable utility company has provided written consent.
- i) The Director or Engineering may reduce the minimum clearances required in g) and h) above, if the applicable utility company has provided written consent.

Amendment Bylaw No. 1014, 2019

5.14.4 – Driveway Grades

Replace this section with the following:

Refer to VRSD-R18 for grades and level distance.

Amendment Bylaw No. 1014, 2019

5.17.3 – Pavement Alternatives

Add the following to the end of this section:

The pavement alternatives are minimum standards only. Subgrade soil conditions must be verified by a qualified geotechnical engineer and the subgrade stiffness must be verified by proof roll prior to implementing the minimum standards. Alternatively, site-specific road structures should be designed by a qualified geotechnical engineer.

Section 12.0 – Landscape Requirements

12.1 - Plans

Designs and drawings shall be prepared and sealed by a Landscape Architect currently registered in British Columbia. Plans shall clearly show all survey, existing and proposed soft and hard landscape features and all existing and proposed roads and above ground services.

Plans shall be at minimum 1:200 [1/16" = 1'-0"] scale and shall include cross-sections and sight clearance.

Landscape plans must clearly show:

- Materials and character of the surface treatment at entire site.
- Planting plan and a plant list. Planting plan shall indicate the general planted size and spacing of plants. Plant list shall document quantity, scientific and common name, and scheduled size of plants at the time of planting.
- Existing trees to be retained / removed. Tree protection strategy during construction shall be noted. Refer to section 8.3 of this document for further information regarding existing tree retention.
- Hard landscape features, e.g., paving, walls, lighting, fencing, furniture, signage, trellis, water feature, drainage, etc. Materials for such hard landscape features shall be clearly indicated.
- Grading at entire site, including location and elevation of all area drains in hard landscape, storm drainage swales, lawn basins in soft landscape areas.

12.2 – Boulevard Trees

Tree selection, handling, planting and maintenance must meet the current editions of BCSLA/BCLNA Landscape Standards and the CNTA Nursery Stock Standard, be in good health and condition without wounds, have normal form, and be free of diseases and pests.

All tree root balls and pots to be free of noxious weeds.

All trees of excurrent genera to have single leaders (no trees with co-dominant stems permitted).

All trees to have encircling/girdling roots removed at the time of planting.

All tree species are to be approved by the Director of Engineering, or designate, and be a minimum of 6cm caliper, branched at or above 1.3m if deciduous, or 3m in height if coniferous. No pruning of the scaffold branches or leader should be undertaken; only broken branches should be pruned.

Protect tree from danger during planting. Ensure root ball is protected from sun, frost or desiccation.

Planting

Planting holes must be free draining to the extent that rainwater and/or supplemental water does not accumulate and drown the roots. If necessary, the subgrade must be graded with positive slope and/or drainage services such as but not limited to percolation holes, french drains or drain pipes must be installed to suit.

Watering of the root ball must be undertaken immediately after planting and then for the first growing season so that the root ball is thoroughly wetted once per week (minimum).

The tree should be pruned to ANSI A3000 standards after establishment and from time to time to train it for structure to conform to the form of the species and to respond to growing site constraints. All pruning must be undertaken by or performed under the direction of a qualified arborist certified by the International Society of Arboriculture and who demonstrates proficiency in pruning.

The mulched root zone should be refreshed annually to replace the mulch. This area must be weeded by hand to avoid trunk and root damage from string trimmers or mowers.

In situations where designed boulevard area does not provide adequate rooting volume, structural soil and/or Silva Cells may be utilized to provide further soil volume. Silva Cells are considered an experimental product at the time of publication of this manual. The use of Silva Cells must be approved by the Town of View Royal prior to installation on public property. Design and installation techniques are to be provided by Silva Cell suppliers and approved by the Town of View Royal.

Root barriers must be installed at the time of planting whenever a tree is installed within 2 metres of a sidewalk or other hardscape features, excluding roads; or where specified on approved drawings. Barriers must be made commercially, produced for the purpose of deflecting roots downward, and be of a specification approved by the Town of View Royal. Placement of root barriers must be as per manufacturer's instructions.

Tree Spacing

Boulevard trees are to be spaced at 8-10m [26'-33'] on centre.

Clearances

The following table is the guidelines for minimum clearances for all of boulevard trees. Clearances shall be measured from the closest edge of the listed items to the centre of tree:

Light Standards	4 metres
Electrical / Communication Poles	1.5 metres
Driveways / Crossings	2 metres
Fire Hydrants	1.8 metres
Corner Clearance (from extended property line)	3 metres

Stop Signs	6 metres
Manholes, Valve Boxes, Service Kiosks	1.5 metres

12.3 – Tree Retention

All of the existing trees that are 20cm DBH (Diameter Breast Height) or more must be surveyed and assessed by certified Arborists. Landscape plans shall clearly indicate whether such trees are to be retained or removed. Tree protection zones during construction shall be consulted with certified Arborists and shown on plans.

Retention of existing trees is encouraged in park lands and in areas that do not require major re-grading.

SCHEDULE C

SUPPLEMENTARY CONSTRUCTION SPECIFICATIONS

SUPPLEMENTARY SPECIFICATIONS GENERAL USE DESCRIPTION

This schedule contains supplementary specifications to be applied in conjunction with the Specifications of the Master Municipal Construction Documents, dated 2009, both of which shall apply to all Works and Services constructed within the Town of View Royal.

Supplementary Specifications contained within this Schedule supplement or supersede the Master Municipal Construction Document (MMCD). Where the Town of View Royal Supplementary Specifications are in conflict with the MMCD, the Town of View Royal Supplementary Specifications shall take precedence.

Section number and clause numbers in the Town of View Royal Supplementary Specifications coincide with the MMCD numbering protocol.

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Section	Description
32 91 21	Topsoil and Finish Grading
32 92 19	Hydraulic Seeding
32 92 20	Seeding
32 92 23	Sodding
32 93 01	Planting of Trees, Shrubs and Groundcovers
33 11 01	Waterworks
33 30 01	Sanitary Sewers
33 34 01	Sewage Force mains

Section:

Description:

1.3 Source Quality Control

- 1.3.2 VRSS

Delete clause 1.3.2 and substitute the following:

Contractor is responsible to provide to Contract Administrator a soils test commissioned by the contractor specifically for this project. Soils analyses commissioned by the soils manufacturer will not be accepted. The Contract Administrator will designate the soil testing laboratory. Contractor is responsible for arrangement and payment for soil analysis and amendments to growing medium as determined. Contractor shall instruct soil testing laboratory to submit results directly to the Contract Administrator prior to commencement of work. The recommendations of the laboratory will be the basis of requirements for soil acceptance and soil amendments.

- 1.3.3 VRSS

Add clause 1.3.3:

Growing medium shall meet BCSLA/BCLNA Landscape Standard, latest edition, unless otherwise specified.

- 1.3.4 VRSS

Add clause 1.3.4:

Contractor is responsible to provide to Contract Administrator a soils test commissioned by the contractor specifically for this project. Soils analyses commissioned by the soils manufacturer will not be accepted. The Contract Administrator will designate the soil testing laboratory. Contractor is responsible for arrangement and payment for soil analysis and amendments to growing medium as determined. Contractor shall instruct soil testing laboratory to submit results directly to the Contract Administrator prior to commencement of work. The recommendations of the laboratory will be the basis of requirements for soil acceptance and soil amendments.

- 1.3.5 VRSS

Add clause 1.3.5:

Contractor to provide separate soils test(s) for all soil deliveries over 30 days apart. See testing requirements above (1.3.4)

- 1.3.6 VRSS

Add clause 1.3.6:

The Contractor shall guarantee that the growing medium submitted for laboratory analysis will be a representative sample of the growing

medium delivered to the site. The Contractor shall provide receipts upon request of the Contract Administrator.

- 1.3.7 VRSS

Add clause 1.3.7:

Imported soils to be free of weeds and weed seeds. Contractor will be responsible for the removal and replacement of approved soils at no cost to the owner.

- 1.3.8 VRSS

Add clause 1.3.8:

At the discretion of the project Contract Administrator submit up to two additional samples at intervals outlined by the Contract Administrator of growing medium taken from material delivered to site. Samples shall be taken from three (3) random locations and mixed to create a single uniform sample for review.

- 1.3.9 VRSS

Add clause 1.3.9:

Failure to have the growing medium tested as indicated above may result in the removal of substandard soils at the Contractor's expense.

**1.4 Measurement
and Payment**

- 1.4.4 VRSS

Add clause 1.4.4:

Contractor to account for additional growing medium required as a result of settlement.

END OF SECTION

Section:

Description:

1.2 References

- 1.2.1 VRSS Delete clause 1.2.1 and replace with the following:
Current Edition of British Columbia Landscape Standard

1.6 Samples

- 1.6.2 VRSS Add clause 1.6.2:
Contractor to provide cut sheets and seed analysis of approved mixes prior to delivery to site

2.1 Grass Seed

- 2.1.3 VRSS Delete clause 2.1.3 and replace with the following:
Seed to have a minimum germination rate of 80% and minimum purity of 97% except where otherwise required by professional selecting seed mixture.

END OF SECTION

Section:

Description:

1.2 References

- 1.2.1 VRSS Delete clause 1.2.1 and replace with the following:

Current Edition of British Columbia Landscape Standard

1.6 Samples

- 1.6.2 VRSS Add clause 1.6.2:

Contractor to provide cut sheets and seed analysis of approved mixes prior to delivery to site.

1.9 Inspection and Testing

- 1.9.2 VRSS Add clause 1.9.2:

Finished grade to be approved prior to seeding, refer to section 31 22 01 Site Grading.

2.1 Grass Seed

- 2.1.3 VRSS Delete clause 2.1.3 and replace with the following:

Seed to have a minimum germination rate of 80% and minimum purity of 97% except where otherwise required by professional selecting seed mixture.

END OF SECTION

Section:

Description:

**1.4 Handling
and Storage**

- 1.4.3 VRSS Delete clause 1.4.3 and replace with the following:

No storage of unused sod overnight during growing season.

1.6 Samples

- 1.6.2 VRSS Delete clause 1.6.1 and replace with the following:

Contractor to provide name of supplier and seed analysis for approval a min. of 48 hours prior to delivery to site.

2.1 Sod

- 2.1.2 VRSS Delete clause 2.1.2 and replace with the following:

Sod to be suitable for high traffic areas, offer good wear tolerance, shall be grown on sand or sandy loam based medium and shall be un-netted from approved supplier, see section 1.6.2 above.

.1 Sod cut size typical unless stated otherwise in contract documents, such as areas where large roll applications are desired.

END OF SECTION

Section:

Description:

**1.3 Source Quality
Control**

1.3.1 VRSS

Delete clause 1.3.1 and replace with the following:

Obtain approval from Contract Administrator of plant material at source prior to shipping. Acceptance of plant material at its source does not prevent rejection on site prior to or after planting operations.

1.3.3 VRSS

Add clause 1.3.3:

All materials and execution to conform to the latest edition of the BCLNA (BC Landscape and Nursery Association) and BCSLA Landscape Standard.

1.3.4 VRSS

Add clause 1.3.4:

Trees delivered to site to be from nursery with current certification for Phytophthora.

1.3.5 VRSS

Add clause 1.3.5:

All root balls to be free of invasive and weed species. Contractor responsible for removal and replacement at their cost of all plant stock and effected soil to be found contaminated.

1.3.6 VRSS

Add clause 1.3.6:

Plant substitutions require a minimum of 2 months' notice in writing for all Tree, Shrub, and Groundcover Species. All substitutions to be approved by project Contract Administrator.

1.3.7 VRSS

Add clause 1.3.7:

Plant specimen search to extend a minimum area to extend to British Columbia, Washington State and Oregon State.

1.4 Scheduling

- 1.4.3 VRSS

Delete clause 1.6.1 and replace with the following:

Plan, schedule and execute work to ensure a continuous supply of water for landscape purposes in adequate amounts and at adequate pressures for satisfactory irrigation of all plants from time of delivery until total performance if not responsible for maintenance thereafter.

1.5 Handling and Storage

- 1.5.5 VRSS Add clause 1.5.5:

Immediately store and protect plant material that will not be installed within 2 hours after arrival.

- 1.5.6 VRSS Add clause 1.5.6:

Protect stored plant material from frost, wind and sun and as follows:

- .1 For bare root plant material preserve moisture around roots by heeling-in or burying roots in topsoil and watering to full depth of root zone.
- .2 For pots and containers maintain moisture level in containers. Heel-in fibre pots.
- .3 For balled and burlapped and wire basket root balls, place to protect branches from damage. Maintain moisture level in root zones.

1.8 Site Examination

- 1.8.2 VRSS Add clause 1.8.2:

Verify existence and location of any on-site utilities. Contact the contract administrator immediately for directions as to procedure should any piping or utilities be encountered during excavation.

1.10 Inspection and Testing

- 1.10.2 VRSS Add clause 1.10.2:

Notify Contract Administrator when plants are available for inspection. All plants are subject to inspection and may be rejected for failure to comply with this specification at any time until total performance. Remove and replace rejected material at no cost to owner.

- 1.10.3 VRSS Add clause 1.10.3:

Tagged plant material selected and tagged at nursery to remain tagged until plants have been inspected onsite and approved by project Contract Administrator.

- 1.10.4 VRSS

Add clause 1.10.4:

Subsequent site inspections to review transplanted and supplied materials will be performed over the duration of the contract.

- 1.10.5 VRSS

Add clause 1.10.5:

Final inspection to be made at the end of warranty period as specified. For release from contract all material must be alive and in a healthy growing condition at the time of the inspection.

- 1.10.6 VRSS

Add clause 1.10.6:

Project Contract Administrator may waive one or more inspections at their discretion, such actions will not impair the right of the project Contract Administrator to inspect work or materials which have been damaged or in any way do not conform to contract documents.

END OF SECTION

Section

Description

Refer to Capital Regional District (CRD) Supplementary Specifications for Waterworks, as applicable.

END OF SECTION

Section

Description

2.0 PRODUCTS

2.1 General

- 2.1.3 VRSS

Add clause 2.1.3

Refer to Schedule E – Approved Products List.

**2.2 Plastic Pipe, Mainline
Smooth Profile**

- 2.2.6 VRSS

Add clause 2.2.6

Pipe joints shall be restrained non-metallic joints, Cobra Lock or approved equal.

END OF SECTION

Section

Description

2.0 PRODUCTS

2.1 General

- 2.1.3 VRSS

Add clause 2.1.3

Refer to Schedule E – Approved Products List for pipe material.

**2.2 Pipe, Joints and
Fittings**

- 2.2.3 VRSS

Delete 2.2.3 and substitute the following:

Refer to the Approved Products List for pipe joints.

- 2.2.5 VRSS

Delete 2.2.5 and substitute the following:

Refer to the Approved Products List for pipe fittings.

END OF SECTION

SUPPLEMENTARY DETAIL DRAWINGS

This schedule contains supplementary detail drawings to be applied in conjunction with the Standard Detail Drawings of the Master Municipal Construction Documents, dated 2009, both of which shall apply to all Works and Services constructed within the Town of View Royal.

Supplementary Detail Drawings contained within this Schedule supplement or supersede the Master Municipal Construction Document (MMCD). Where the Town of View Royal Supplementary Detail Drawings are in conflict with the MMCD, the Town of View Royal Supplementary Detail Drawings shall take precedence.

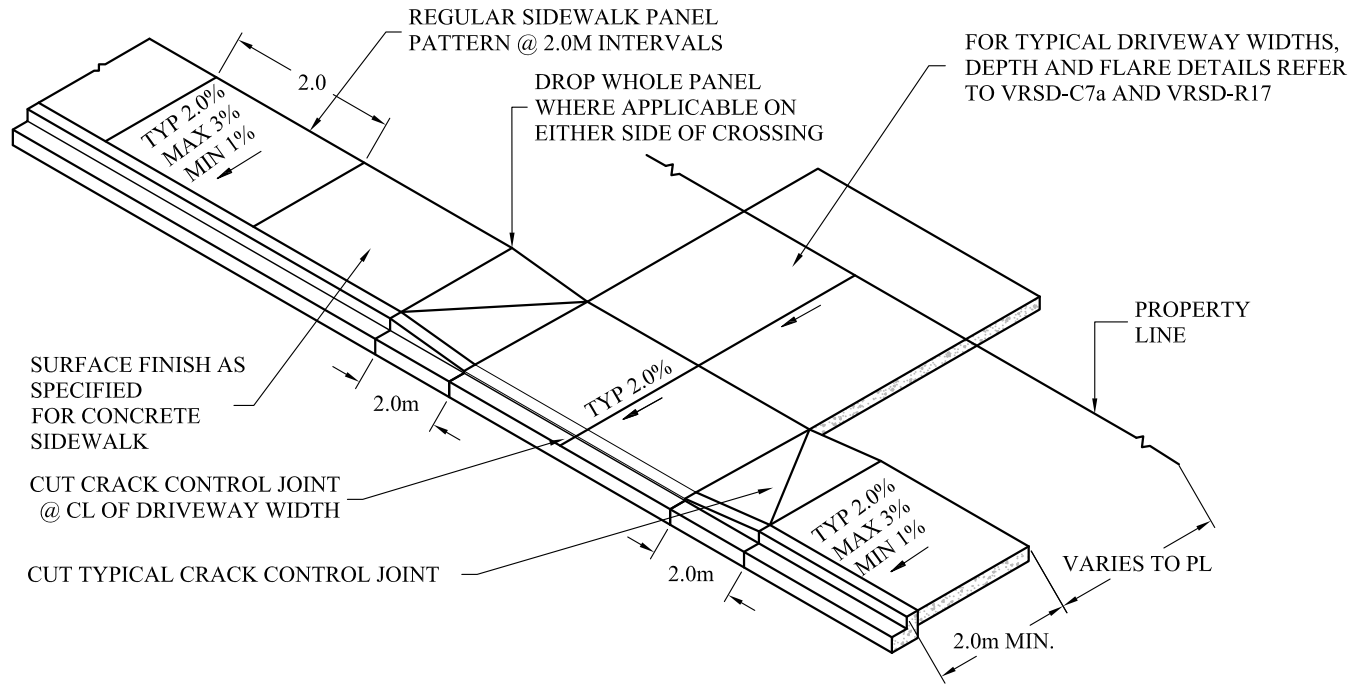
Drawing numbers in the Town of View Royal Supplementary Detail Drawings coincide with the MMCD numbering protocol.

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Detail Drawing	Description
VRSD-C7a	Typical Driveway Crossing Type "A"
VRSD-C7b	Typical Driveway Crossing Type "B"
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VRSD-G5a	Limits of Pavement Construction
VRSD-L1	Tree Protection Detail
VRSD-L2	Boulevard Tree Planting Detail
VRSD-L3	Rock Retaining Wall (Gravity)
VRSD-L4	Plant Pockets in Rock Wall
VRSD-L5	Concrete Retaining Wall Installation
VRSD-R2	Speed Table – Raised Crosswalk
VRSD-R3	Speed Table – Emergency Vehicles
VRSD-R4	Sign Post Installation - 1 of 2
VRSD-R5	Sign Post Installation - 2 of 2
VRSD-R6	Street Name Blade
VRSD-R7	Local 14m ROW - Rural
VRSD-R8	Local 14m ROW - Urban
VRSD-R9	Local 18m ROW - Rural
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VRSD-R11	Local 18m ROW – Urban Class B
VRSD-R12	Collector 20m ROW – Rural
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VRSD-R15	Major 20m ROW – Urban
VRSD-R16	Major 30m ROW – Urban
VRSD-R17	Sidewalk Driveway Crossings
VRSD-R18	Driveway Grades
VRSD-R19	Sight Line Setbacks
VRSD-R20	Sample Site Servicing Plan

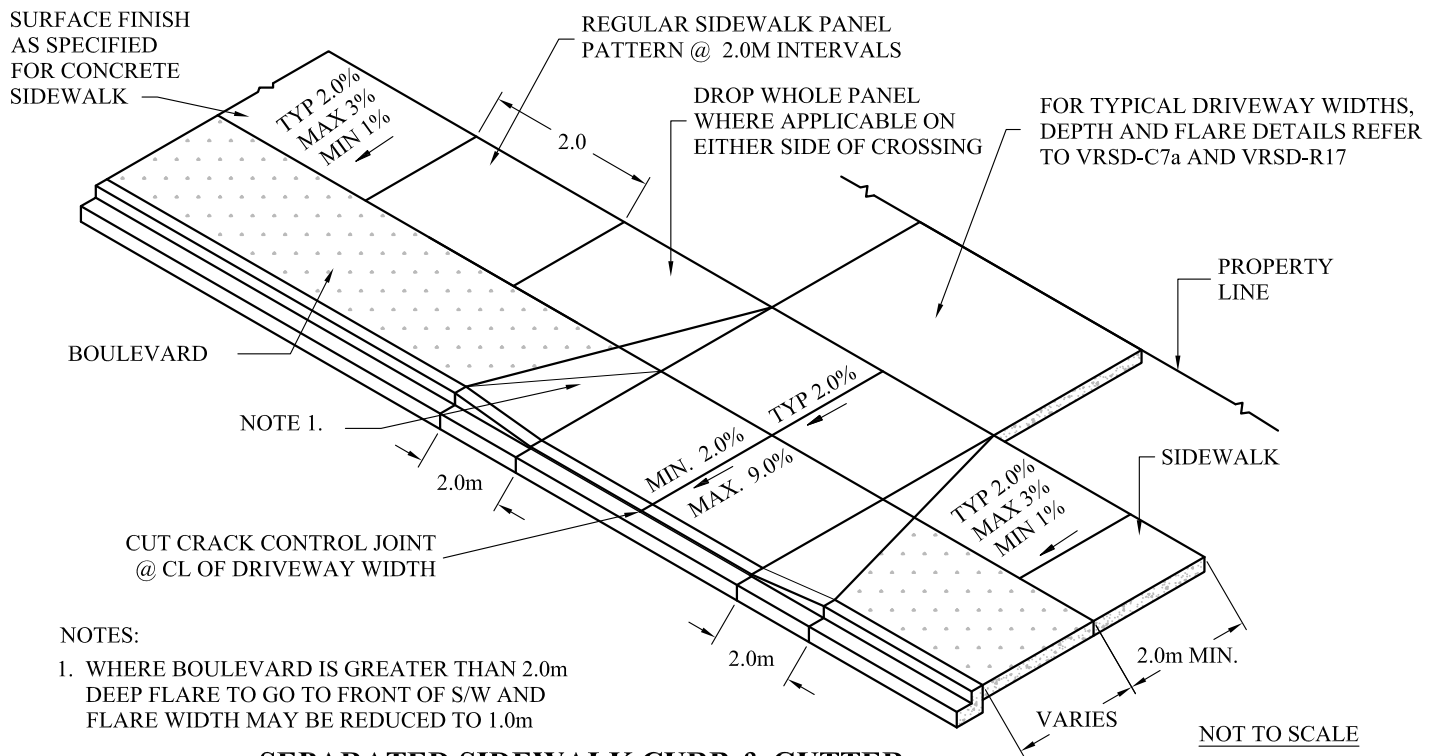
TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



COMBINED SIDEWALK CURB & GUTTER

NOT TO SCALE



SEPARATED SIDEWALK CURB & GUTTER

NOT TO SCALE

NOTES:

1. WHERE BOULEVARD IS GREATER THAN 2.0m
DEEP FLARE TO GO TO FRONT OF S/W AND
FLARE WIDTH MAY BE REDUCED TO 1.0m

TYPICAL DRIVEWAY CROSSING TYPE 'A'

DRAWING NUMBER

VRSD-C7a

REVISION NUMBER

1

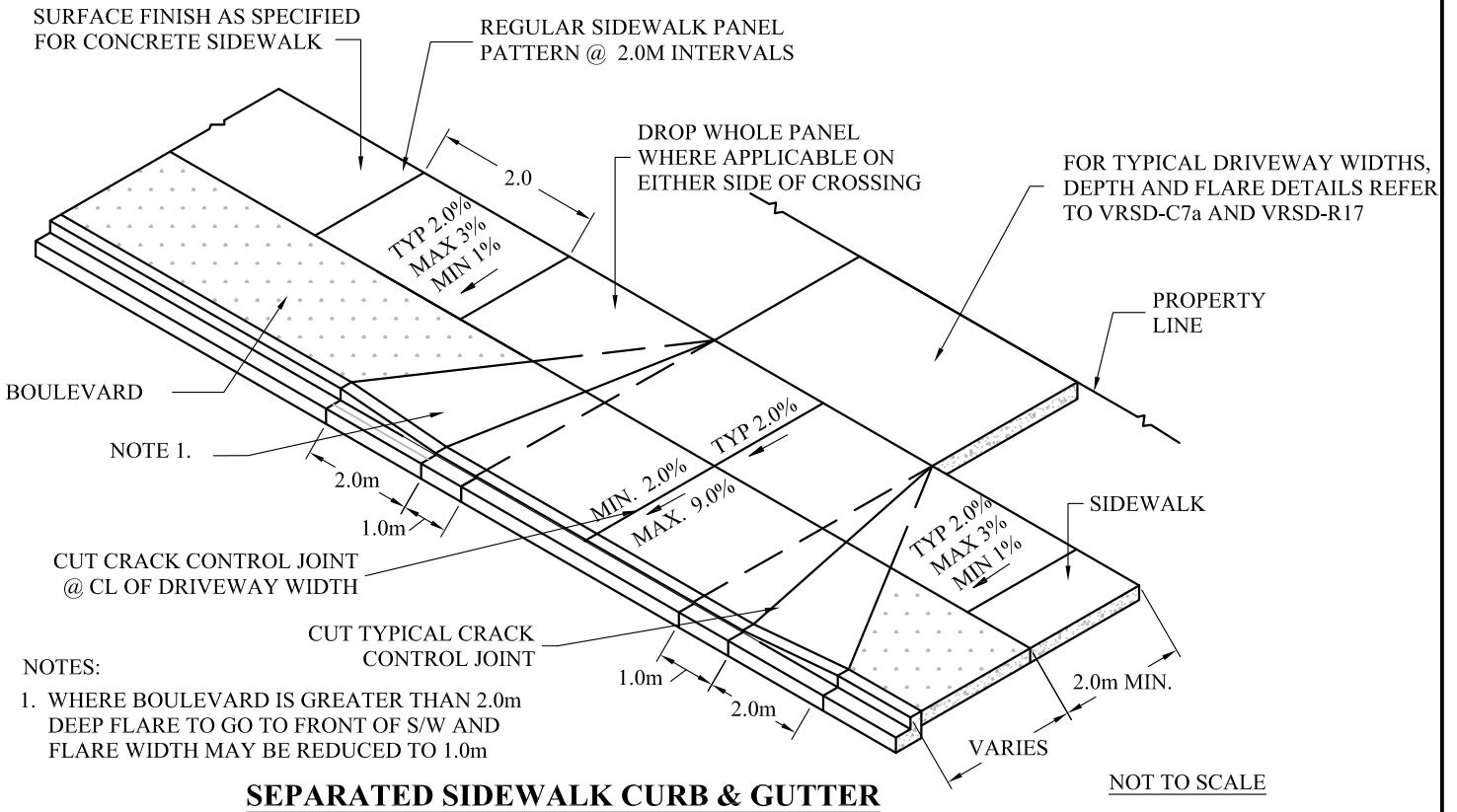
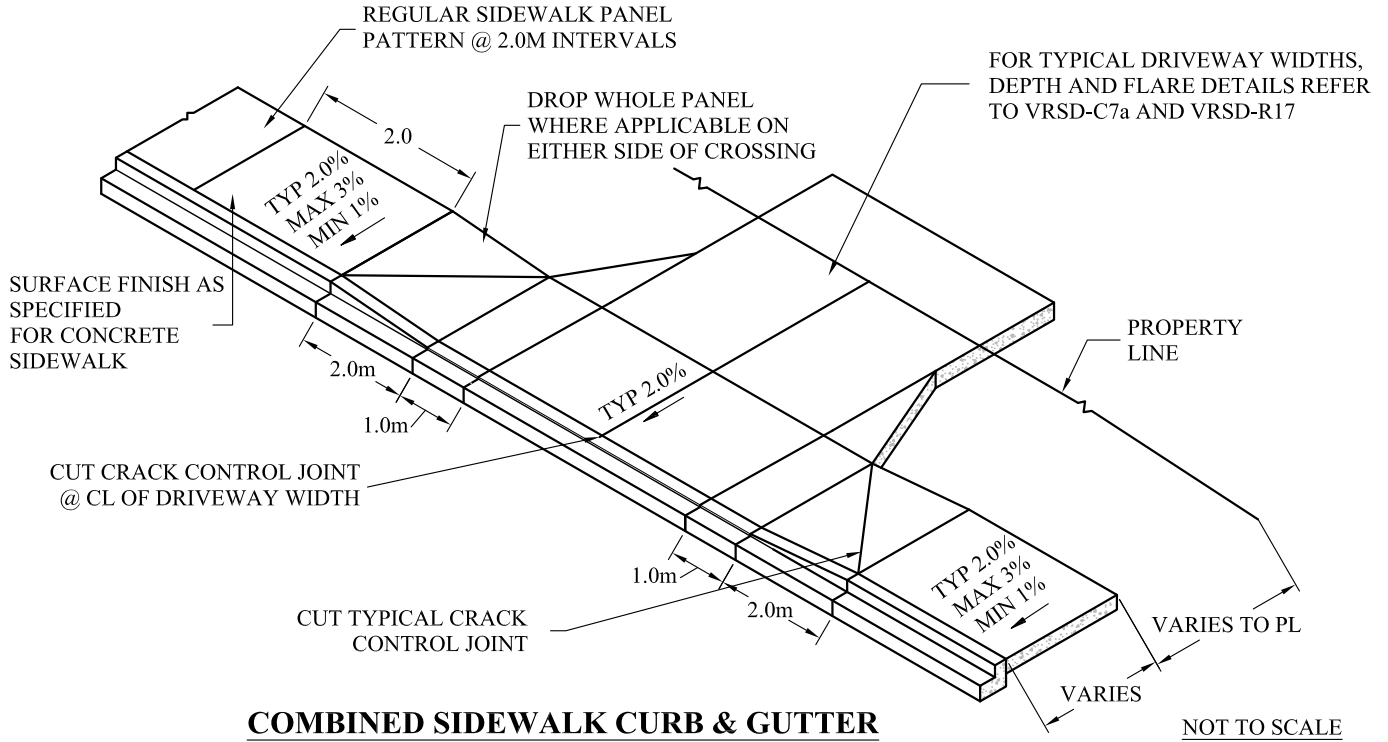
SCALE

NTS



TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



TYPICAL DRIVEWAY CROSSING TYPE 'B'

DRAWING NUMBER

VRSD-C7b

REVISION NUMBER

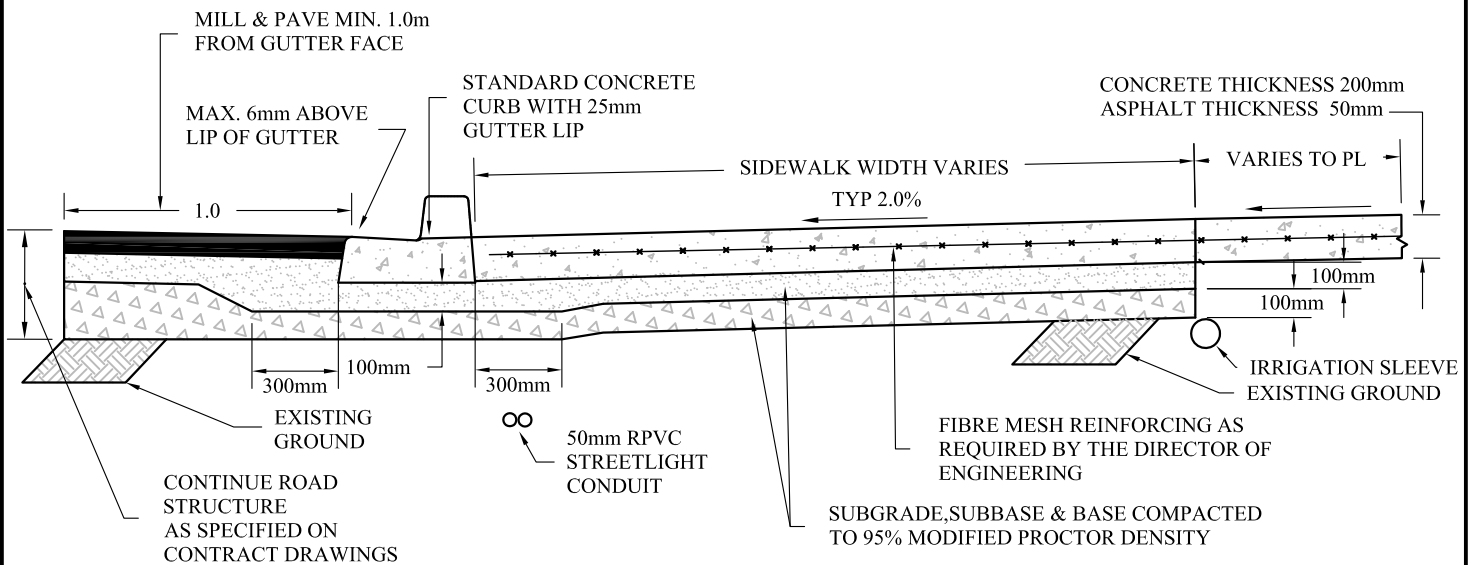
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SCALE

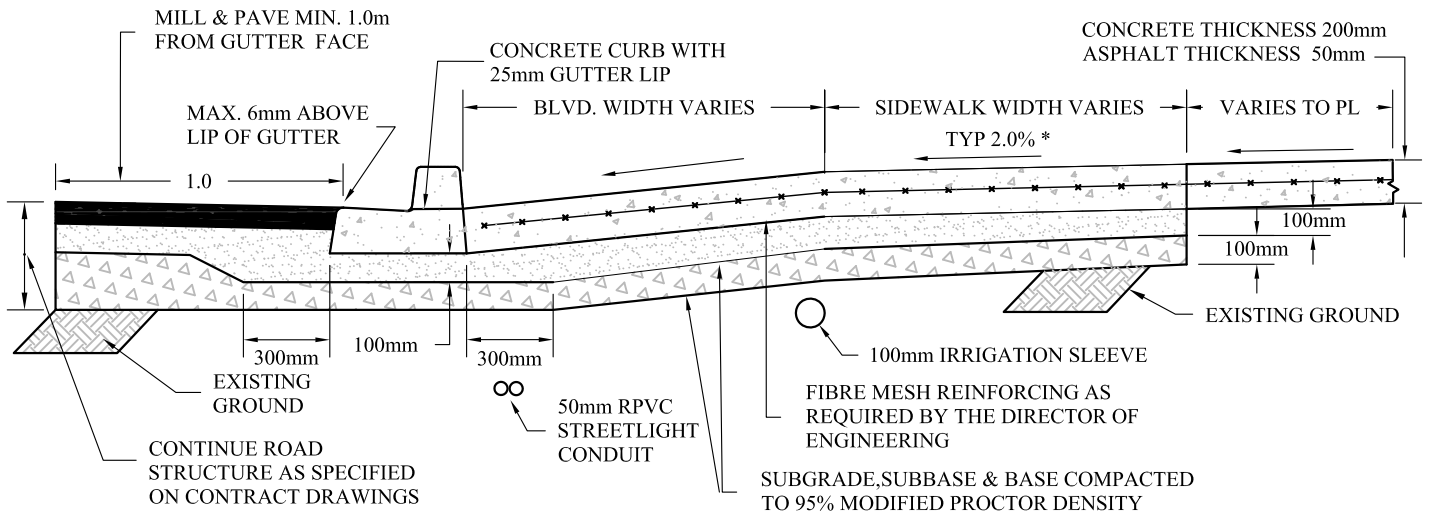
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TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



COMBINED SIDEWALK CURB & GUTTER



SEPARATED SIDEWALK CURB & GUTTER

DRIVEWAY CROSS SECTION

DRAWING NUMBER

VRSD-C7c

REVISION NUMBER

1

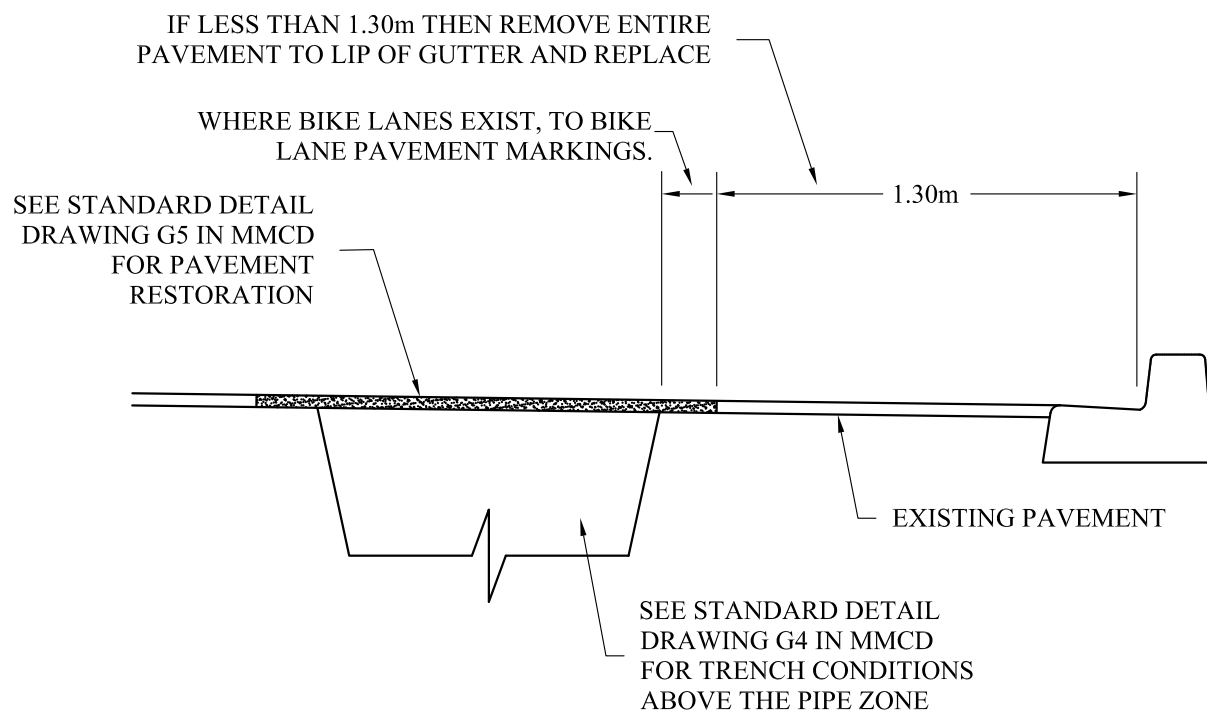
SCALE

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TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING

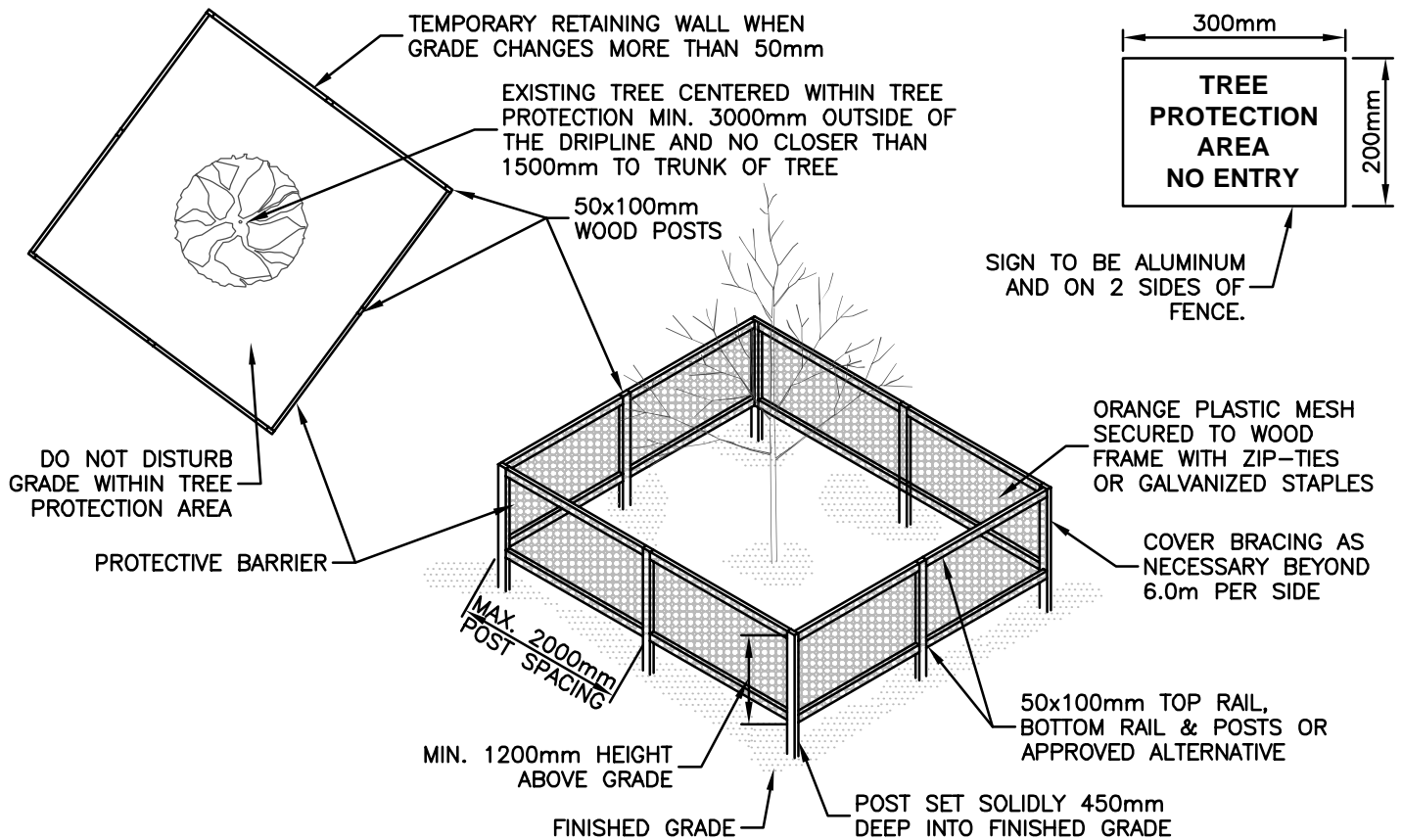


LIMITS OF PAVEMENT RESTORATION

DRAWING NUMBER
VRSD-G5a
REVISION NUMBER
1
SCALE
NTS

TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



NOTES:

1. INSTALL TREE PROTECTION BARRIER BEFORE SITE CLEARING AND INITIATION OF CONSTRUCTION. FENCING MUST BE REVIEWED BY THE TOWN'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
2. TREE PROTECTION BARRIER SHALL BE MAINTAINED DURING CLEARING AND SITE CONSTRUCTION AND SHALL BE REMOVED WITHIN 2 WEEKS OF PROJECT COMPLETION.
3. KEEP AREA WITHIN OR AGAINST PROTECTION BARRIER CLEAR OF BUILDING MATERIALS, LITTER AND STANDING WATER.
4. UNDERGROUND SERVICES, DRAINAGE PIPES, SWALES OR GRADING SHALL NOT CAUSE GRADES TO CHANGE WITHIN THE TREE PROTECTION AREA. APPROVAL BY THE TOWN'S REPRESENTATIVE SHALL BE REQUIRED FOR ALL GRADE CHANGES WITHIN THE CRITICAL ROOT ZONE.
5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE WITHIN TREE PROTECTION BARRIER. DAMAGED TREES WILL BE REPLACED AT CONTRACTOR'S COST.
6. ANY DISRUPTION OR PLANTING WITHIN THE TREE PROTECTION AREA IS TO BE SUPERVISED BY THE PROJECT ARBORIST, LANDSCAPE ARCHITECT, OR TOWN'S REPRESENTATIVE.
7. RETAINED TREES TO BE WATERED AT THE DIRECTION OF THE CONSULTING ARBORIST, LANDSCAPE ARCHITECT, OR TOWN'S REPRESENTATIVE.
8. IF EXCAVATION IN CRITICAL ROOT ZONE IS REQUIRED IT SHALL BE CARRIED OUT BY HAND, WITH USE OF AN AIRSPADE OR HYDRO EXCAVATED UNDER THE SUPERVISION OF A CERTIFIED ARBORIST.



TREE PROTECTION DETAIL

DRAWING NUMBER

VRSD-L1

REVISION NUMBER

1

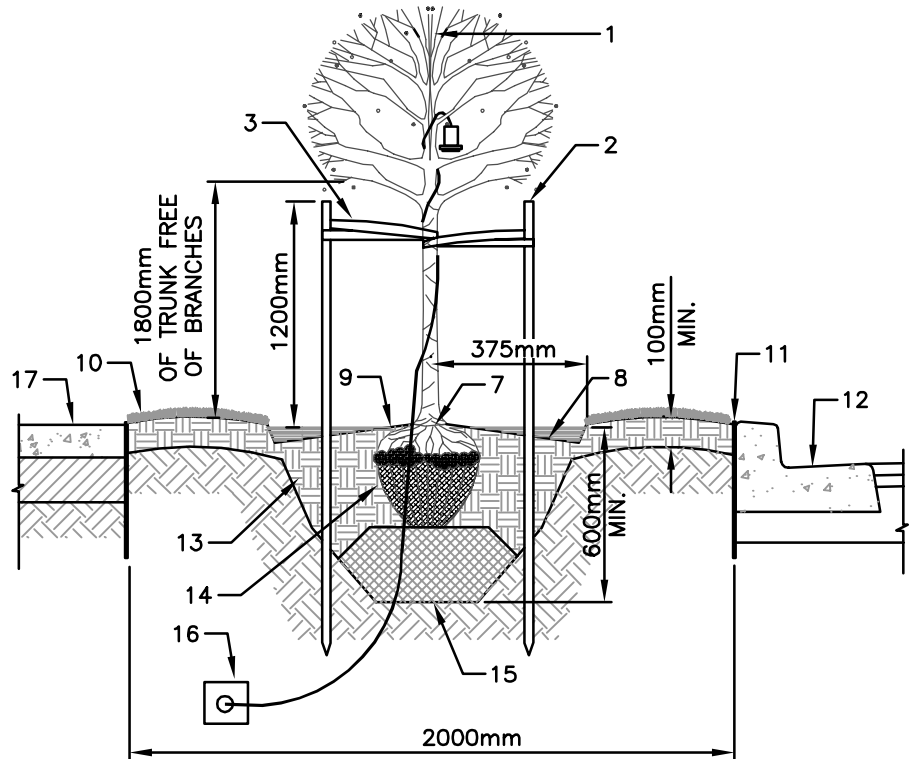
SCALE

NTS

TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING

1. DO NOT CUT LEADER
2. SET TREE PLUM. STAKE TREE WITH TWO VERTICAL 50mmX50mm PRESSURE TREATED STAKES 1500mm LONG TO BE POSITIONED PARALLEL TO STREET FOR STREET TREES OR TO PREVAILING WIND. STAKE NOT TO PENETRATE OR TO DAMAGE ROOT BALL.
3. SECURE WITH ARBOR TIE TREE TIE MATERIAL OR EQUAL. TIE IN FIGURE EIGHT PATTERN AND ATTACH TO STAKES WITH SHINGLES NAILS OF HEAVY DUTY STAPLES.
4. EXCAVATED TREE PITS SHALL HAVE POSITIVE DRAINAGE. WHEN FULLY FLOODED WITH WATER, TREE PITS SHALL DRAIN WITHIN 1 HOUR AFTER FILLING. THE CONTRACTOR SHALL EXCAVATE THROUGH ANY IMPERVIOUS CLAY LAYER IF ENCOUNTERED. THE CONTRACTOR SHALL NOT USE PRIVATE PROPERTY WATER SUPPLY FOR THIS TESTING.
5. ALL PANTING SHALL MEET OR EXCEED THE REQUIREMENTS OUTLINED IN THE 2009 EDITION OF THE BC LANDSCAPE STANDARDS (BCLS), AND MMCD PLATINUM EDITION DOCUMENTS, UNLESS OTHERWISE SPECIFIED. IF THERE IS A DISCREPANCY BETWEEN THESE TWO DOCUMENTS, THEN THE CONTRACTOR SHALL FOLLOW THE BCLS.
6. ALL TREES SHALL BE INSPECTED BY TOWN'S REPRESENTATIVE PRIOR TO PLANTING.
7. AFTER SETTLEMENT, TOP OF THE ROOTBALL TO BE FLUSH WITH SURROUNDING GRADE. FINISHED GRADE OF PLANTING TO BE EQUIVALENT OF NURSERY GROWN GRADE OF TREE.
8. CREATE A 50mm DEEP WELL IN GROWING MEDIUM FOR THE FIRST YEAR OF WATERING. ENSURE WELL IS A CLEAN EDGED CIRCLE WITH A DIAMETER OF 750mm.
9. PLACE MULCH. 75mm MIN. DEPTH, OVER THE PLATING WELL, KEEP MULCH BACK FROM TRUCK A MINIMUM DISTANCE OF 100mm.
10. NEW SOD PLANTING ON 100mm MIN OF GROWING MEDIUM. REFER TO SPECIFICATIONS.



11. 450MM DEEP ROOD DEFLECTION BARRIER (UB18-2 OR APPROVED EQUAL) PLACED AGAINST BACK OF CURB TO FINISH TO 10MM ABOVE FINISHED MULCH SURFACE. REFER MANUFACTURER'S SPECIFICATIONS. BARRIER TO BE INSTALLED WHEN TREE IS LESS THAN 2 METRES FROM SIDEWALK OF DRIVEWAY.
12. ASPHALT ROADWAY WITH CONCRETE CURB.
13. PLANTING HOLE DEPTH IS TO BE 600mm OR EQUAL TO THE HEIGHT OF THE ROOTBALL, WHICHEVER IS GREATER. PLANTING HOLE EDGE TO BE A SHALLOW ANGLE. SCARIFY SIDES AND BOTTOM OF TREE PIT PRIOR TO PLANTING.
14. REMOVE STRAPPING, CUT ALL BINDING MATERIAL AND FOLD BURLAP INTO HOLE PRIOR TO BACKFILLING WITHOUT DISTURBING PEET BALL.
15. ENSURE A MINIMUM OF 300mm DEPTH OF COMPACTED SUBGRADE UNDERNEATH ROOTBALL TO PREVENT SETTLING OF TREE. SOIL TEST MAY BE REQUIRED IF REQUESTED BY TOWN'S REPRESENTATIVE.
16. LIGHTING ELECTRICAL WIRING TRENCH & RECEPTACLE LOCATION IF REQUIRED – REFER TO ELECTRICAL DRAWINGS.
17. CONCRETE SIDEWALK – REFER TO ENGINEERING DRAWINGS
18. SOIL TESTING MAY BE REQUIRED TO CONFIRM NUTRIENT REQUIREMENTS. FERTILIZE AS PER BCLS SPECIFICATIONS.



BOULEVARD TREE PLANTING DETAIL

DRAWING NUMBER

VRSD-L2

REVISION NUMBER

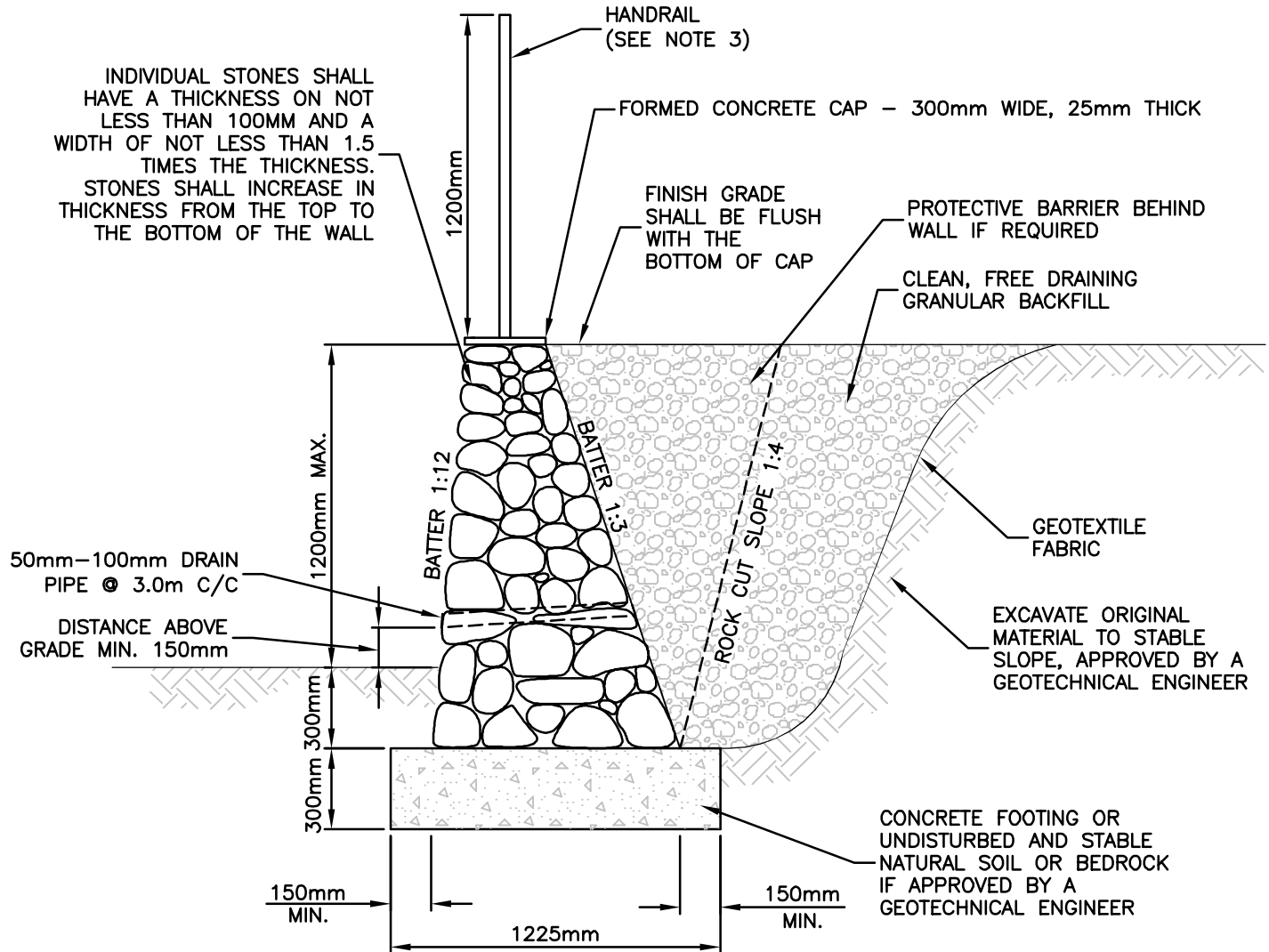
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SCALE

NTS

TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



NOTES:

1. WALLS OVER 1.2 METERS HIGH TO BE DESIGNED AND INSPECTED BY A GEOTECHNICAL ENGINEER.
2. MORTAR TO BE 1 PART PORTLAND CEMENT TO 2 PARTS SAND.
3. WALL OVER 600mm MAY REQUIRED A HAND RAIL AT THE DISCRETION OF THE TOWN'S REPRESENTATIVE. TYPE OF HANDRAIL TO BE DETERMINED BY THE TOWN'S REPRESENTATIVE.

2016-04-29



ROCK RETAINING WALL GRAVITY

DRAWING NUMBER

VRSD-L3

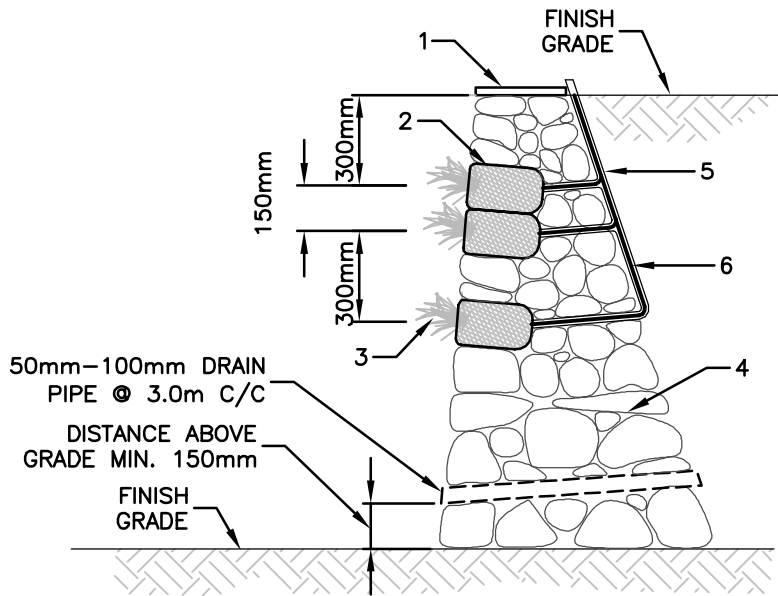
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SCALE

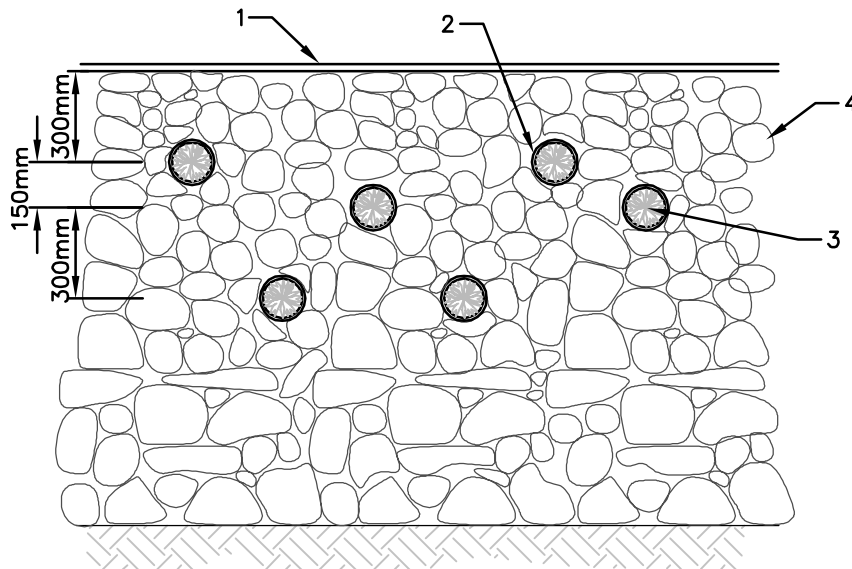
NTS

TOWN OF VIEW ROYAL SUPPLEMENTARY STANDARD DETAIL DRAWING



LEGEND:

1. CONCRETE COPING – REFER TO ENGINEERING DRAWINGS
2. PLANT POCKET WITH GROWING MEDIUM (150mm WIDE BY 250mm DEEP TYPICAL)
3. PLANT MATERIAL – SEE PLANT LEGEND.
4. ROCK WALL – REFER TO ENGINEERING DRAWINGS
5. 1" PVC IRRIGATION SLEEVE TO EXTEND 2" ABOVE SURFACE
6. 1/4" DRIPLINE – TIE INTO DRIP IRRIGATION SYSTEM AT FINISHED GRADE AT TOP OF WALL



PLANT POCKETS IN ROCK WALL

DRAWING NUMBER

VRSD-L4

REVISION NUMBER

1

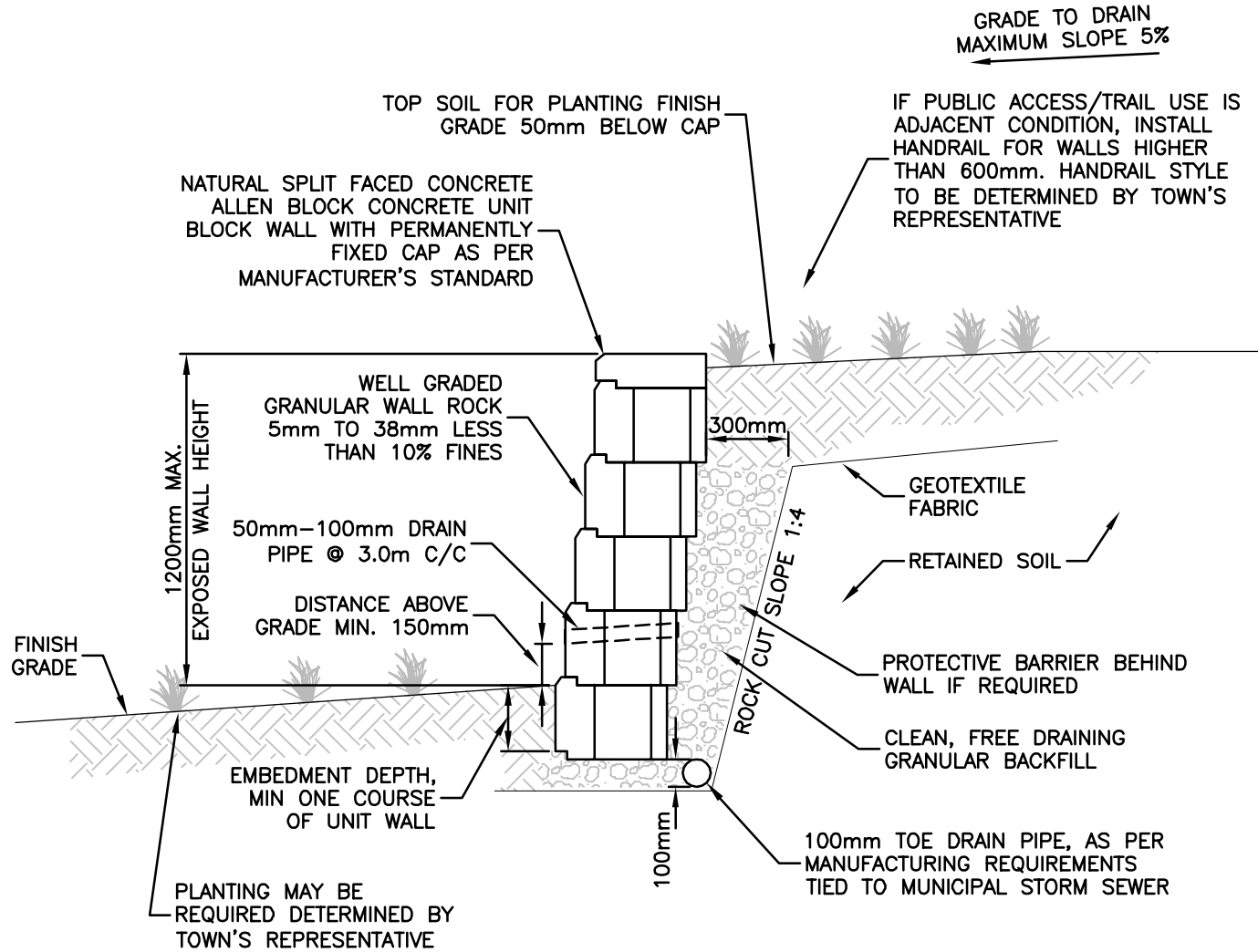
SCALE

NTS



TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



2016-04-29



CONCRETE RETAINING WALL INSTALLATION

DRAWING NUMBER

VRSD-L5

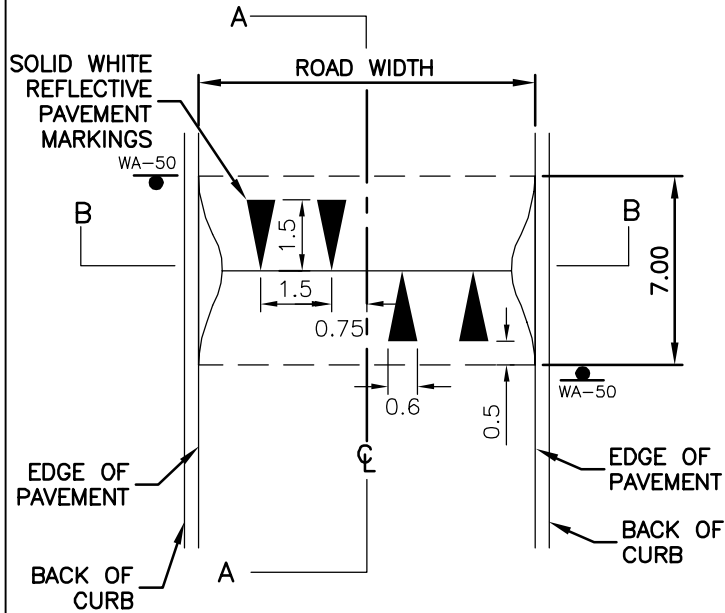
REVISION NUMBER

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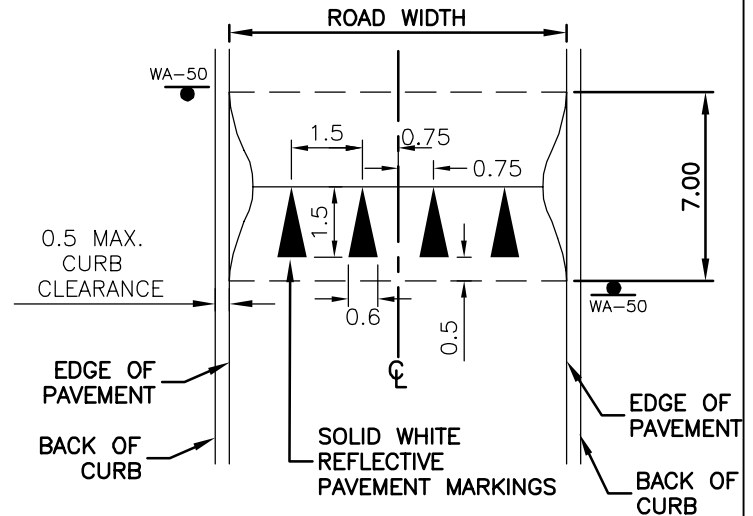
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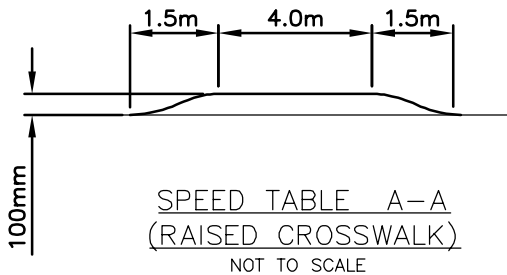
TOWN OF VIEW ROYAL SUPPLEMENTARY STANDARD DETAIL DRAWING



TWO-WAY STREET
NOT TO SCALE



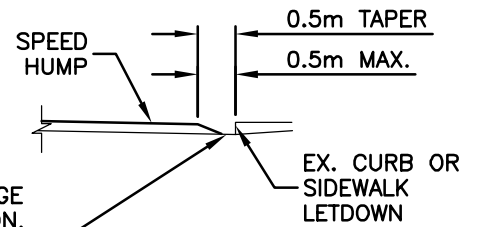
ONE-WAY STREET
NOT TO SCALE



**SPEED TABLE A-A
(RAISED CROSSWALK)**
NOT TO SCALE

SIGN DESCRIPTION
WA-50 SPEED HUMP
(HIGH INTENSITY GRADE
WITH ANTI-GRAFFITI FILM)

RAISED CROSSWALK WITH DRAINAGE
SHALL BE TAKEN INTO CONSIDERATION.
MAY REQUIRE INSTALLATION OF CATCH
BASIN OR PIPE AT THE DISCRETION OF
THE TOWN'S REPRESENTATIVE.



TAPERED END B-B
NOT TO SCALE

SINUSOIDAL SPEED HUMP AND RAISED CROSSWALK DEVELOPMENT

DISTANCE (m)	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875	1.000	1.125	1.250	1.375	1.500	1.625	1.750	1.875	4.0
FINISHED HEIGHT (mm)	0	1	3	7	12	18	25	32	40	48	55	62	68	73	77	79	100

2016-04-29



SPEED TABLE – RAISED CROSSWALK

DRAWING NUMBER

VRSD-R2

REVISION NUMBER

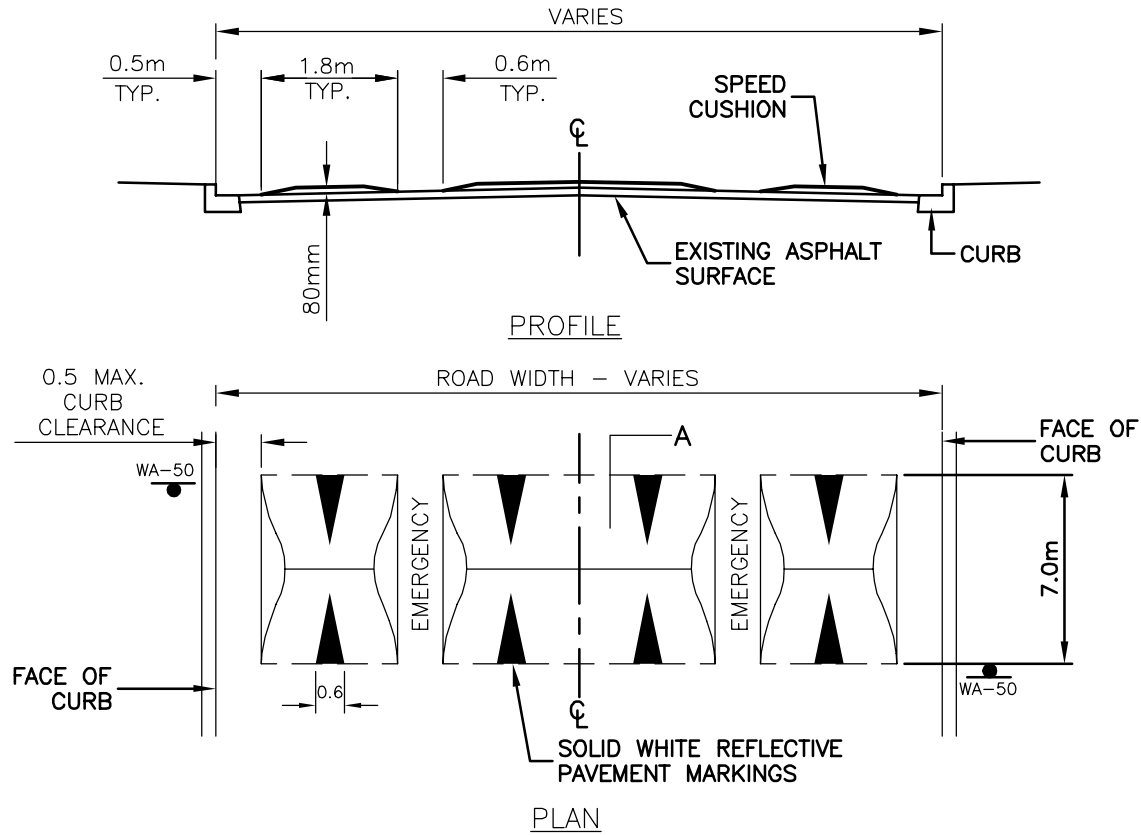
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SCALE

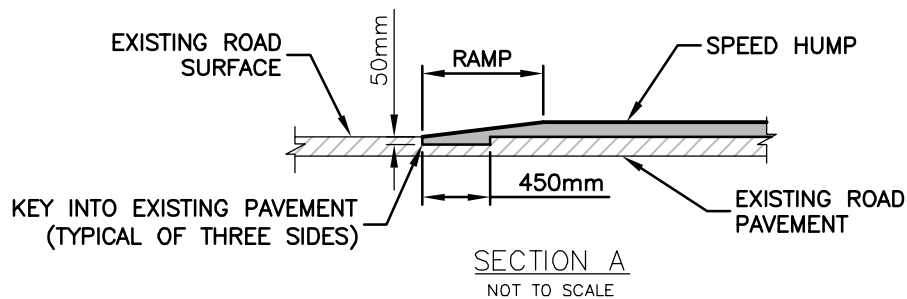
NTS

TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



SPEED TABLE – EMERGENCY VEHICLES
NOT TO SCALE



SINUSOIDAL SPEED HUMP AND RAISED CROSSWALK DEVELOPMENT

DISTANCE (m)	0.000	0.125	0.250	0.375	0.500	0.625	0.750	0.875	1.000	1.125	1.250	1.375	1.500	1.625	1.750	1.875	4.0
FINISHED HEIGHT (mm)	0	1	3	7	12	18	25	32	40	48	55	62	68	73	77	79	100

2016-04-29



SPEED TABLE – EMERGENCY VEHICLES

DRAWING NUMBER

VRSD-R3

REVISION NUMBER

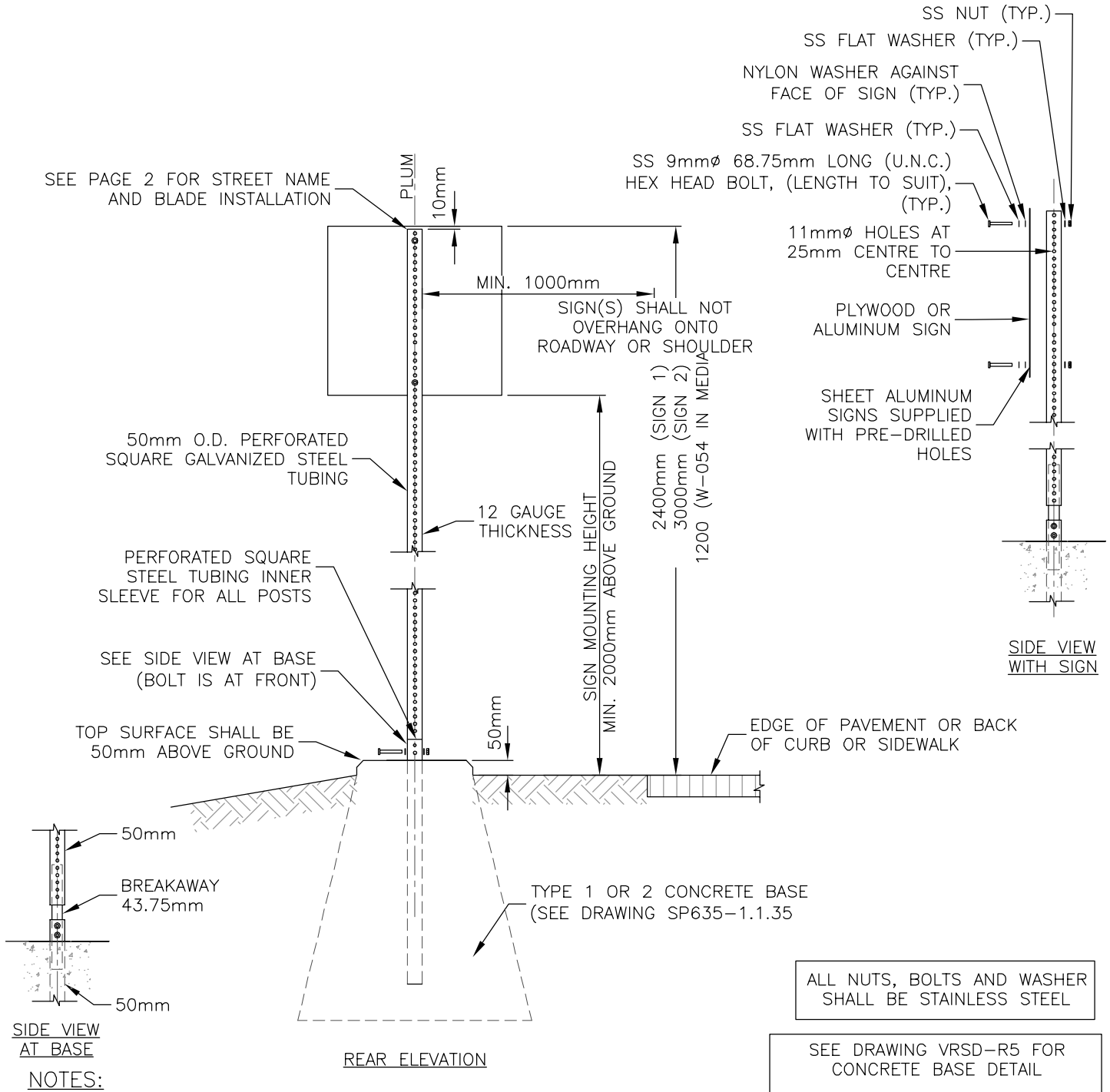
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SCALE

NTS

TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



NOTES:

1. MOUNTING HEIGHTS AND OFFSETS SHALL FALL WITHIN THE RANGES NOTED IN THE MINISTRY MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS. FOR ADDITIONAL INFORMATION AS MOTI'S REFER TO TRSP ASSOCIATION OF CANADA MUTCD SPECIFICATIONS AS WELL.



SIGN POST INSTALLATION – 1 OF 2

DRAWING NUMBER

VRSD-R4

REVISION NUMBER

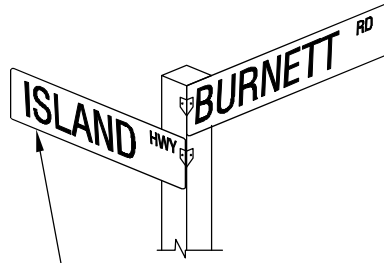
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SCALE

NTS

TOWN OF VIEW ROYAL

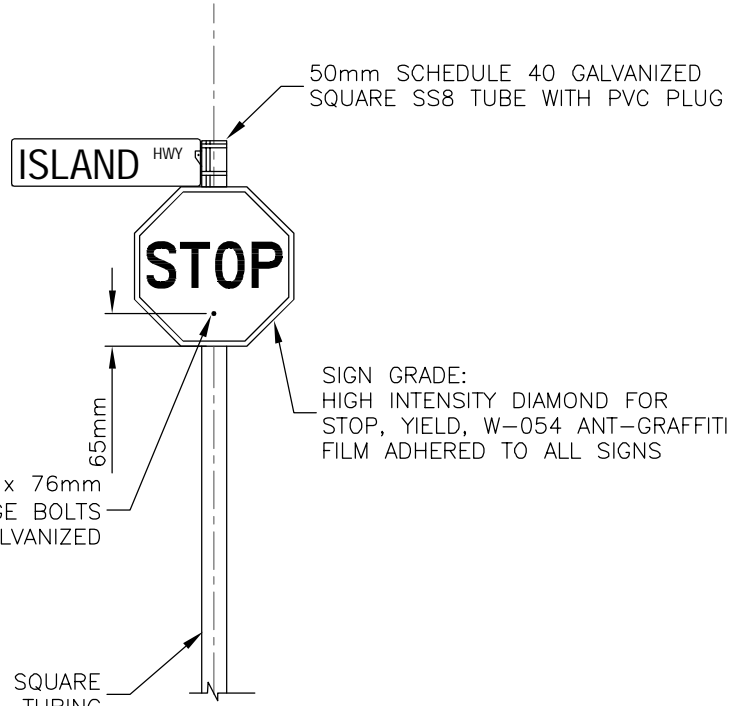
SUPPLEMENTARY STANDARD DETAIL DRAWING



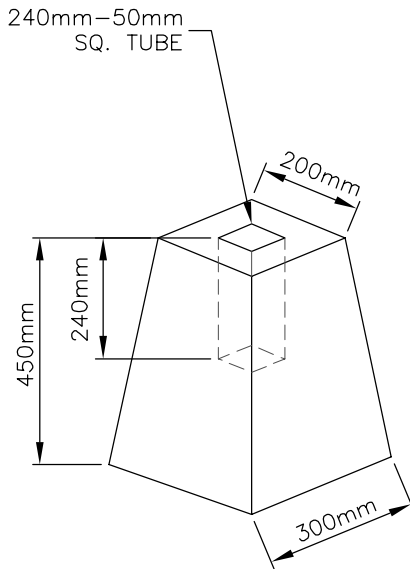
MAIN ROAD TO BE ON
BOTTOM OF POST

TOP & BOTTOM 10mm x 76mm
N/C TREADED CARRIAGE BOLTS
WITH FLAT WASHER GALVANIZED

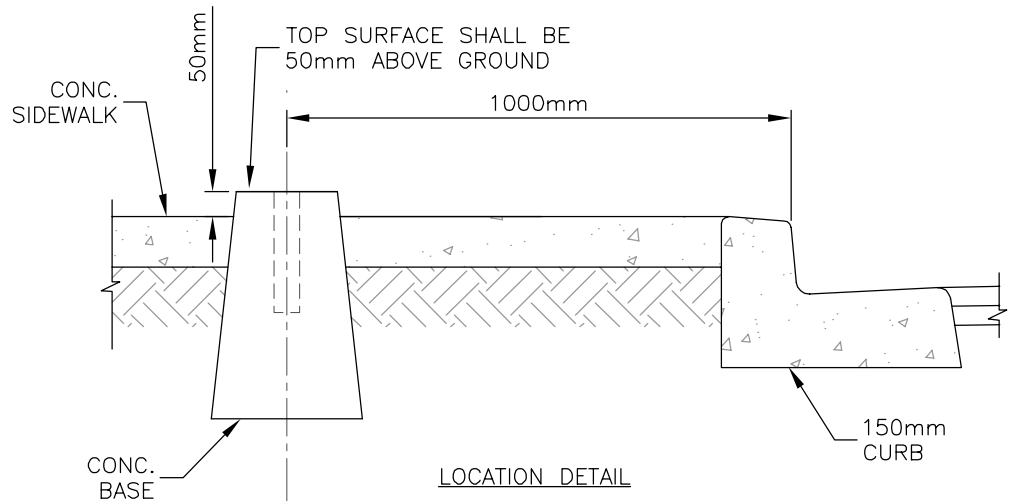
50mm O.D. PERFORATED SQUARE
GALVANIZED STEEL TUBING



FRONT ELEVATION



CONCRETE BASE



LOCATION DETAIL

FOR INSTALLATION ON STREETLIGHT POLE,
STAINLESS STEEL BANDING WITH BUCKLES
AND BRACKETS SHALL BE USED.

2016-04-29



SIGN POST INSTALLATION – 2 OF 2

DRAWING NUMBER

VRSD-R5

REVISION NUMBER

1

SCALE

NTS

TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



6" VIEW ROYAL STREET BLADE
 MAIN FONT – 3.875" HELVETICA COMPACT – FORCED 80% (LENGTH)
 NO EXIT FONT – 1.65" HELVETICA MEDIUM – FORCED 0 (NONE)



9" VIEW ROYAL STREET BLADE
 MAIN FONT – HIGHWAY GOTHIC "B" – FORCED 0 (NONE)
 PRIVATE ROAD FONT – HIGHWAY GOTHIC "E/M" – FORCED 0 (NONE)
 NO EXIT FONT – 2.33" HELVETICA MEDIUM – FORCED 0 (NONE)

STREET BLADE SPECIFICATIONS:

ALUMINUM, EXTRUDED EDGES TOP & BOTTOM, PRINTED ON WHITE EG REFLECTIVE VINYL.
 BLUE – PANTONE 282c @ 70% / DOUBLE PRINT (HIT)
 YELLOW – GERBER YELLOW GCS-015 @ 100% DOUBLE PRINT

2016-04-29



STREET NAME BLADE

DRAWING NUMBER

VRSD-R6

REVISION NUMBER

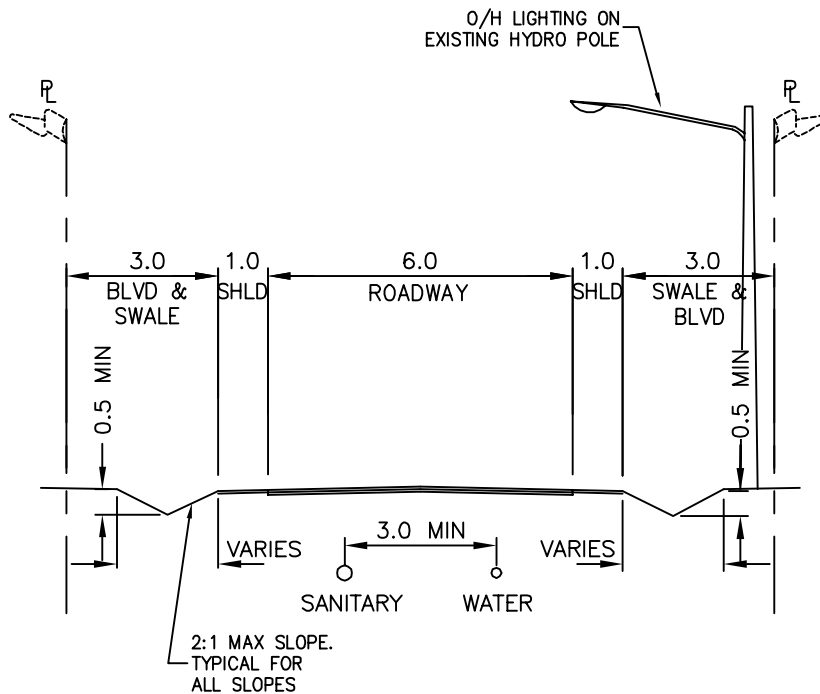
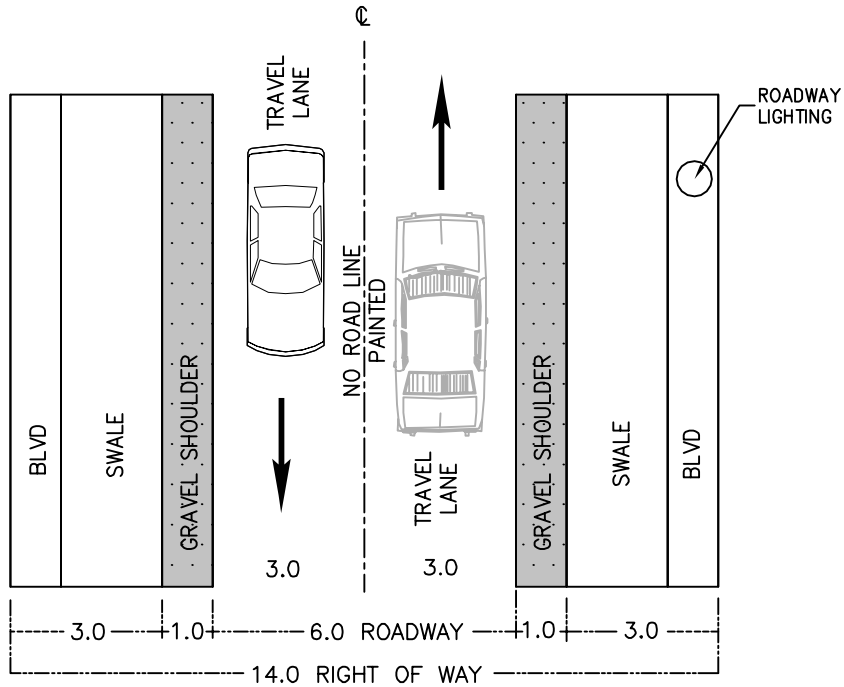
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SCALE

NTS

TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



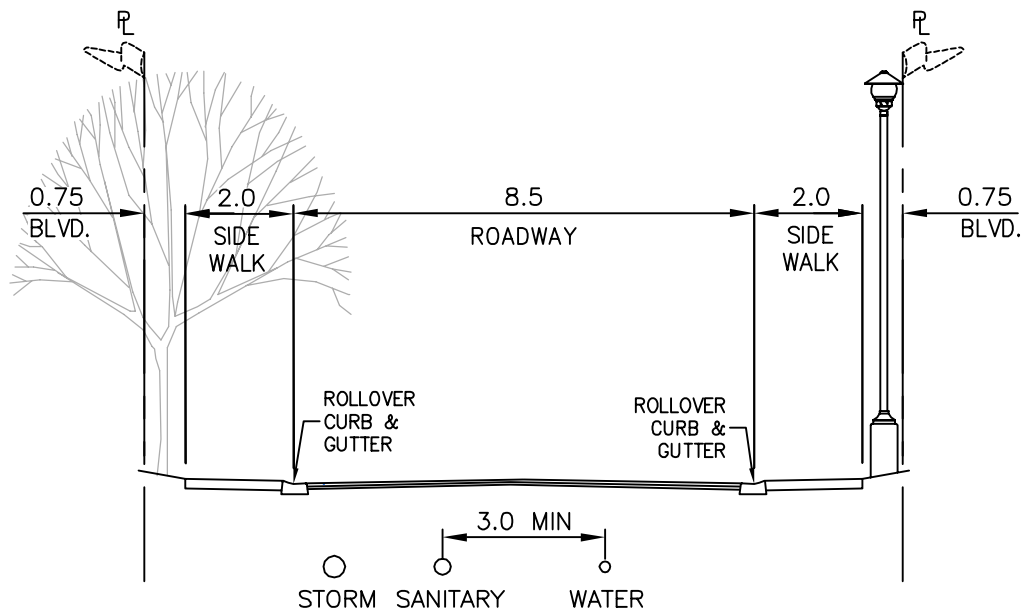
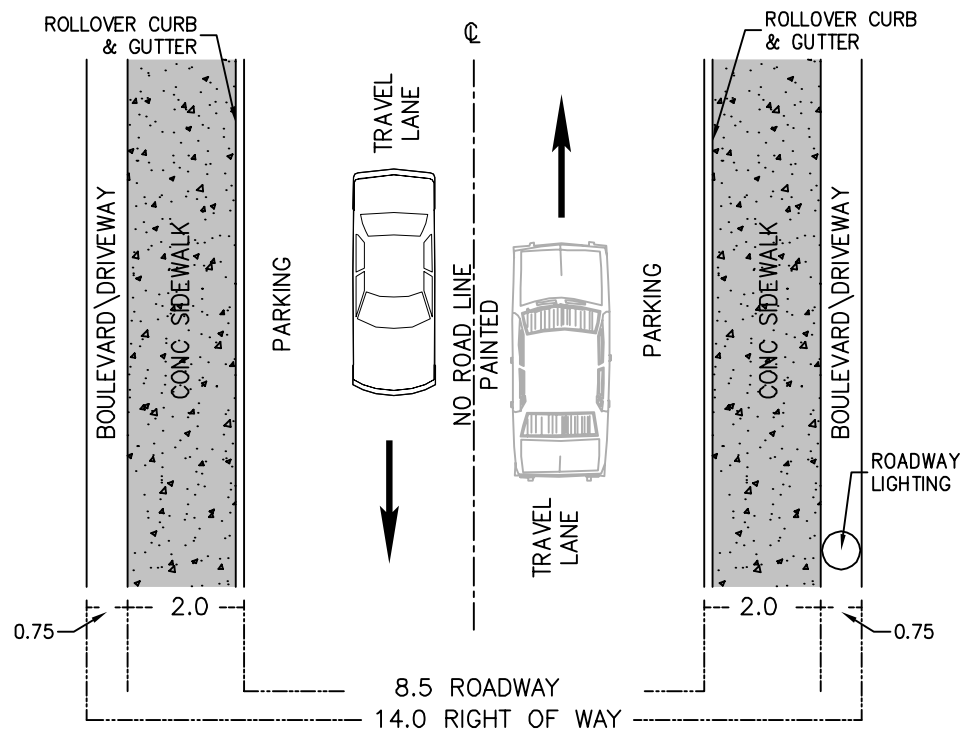
2016-04-29



LOCAL 14m ROW – RURAL

DRAWING NUMBER
VRSD-R7
REVISION NUMBER
1
SCALE
NTS

TOWN OF VIEW ROYAL SUPPLEMENTARY STANDARD DETAIL DRAWING



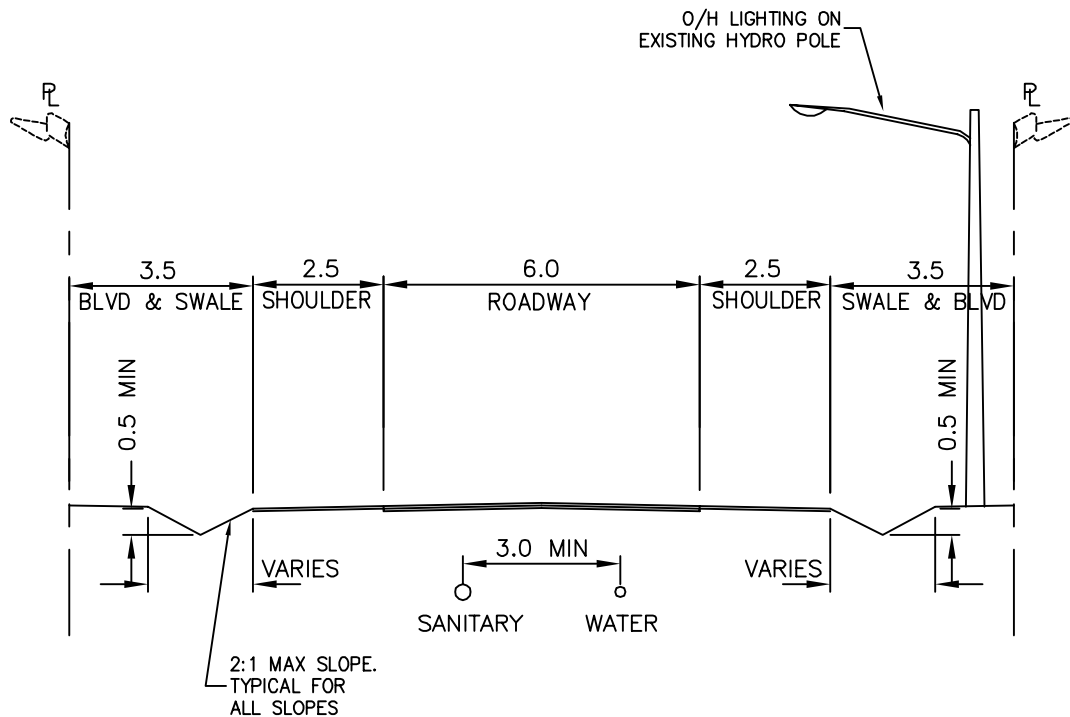
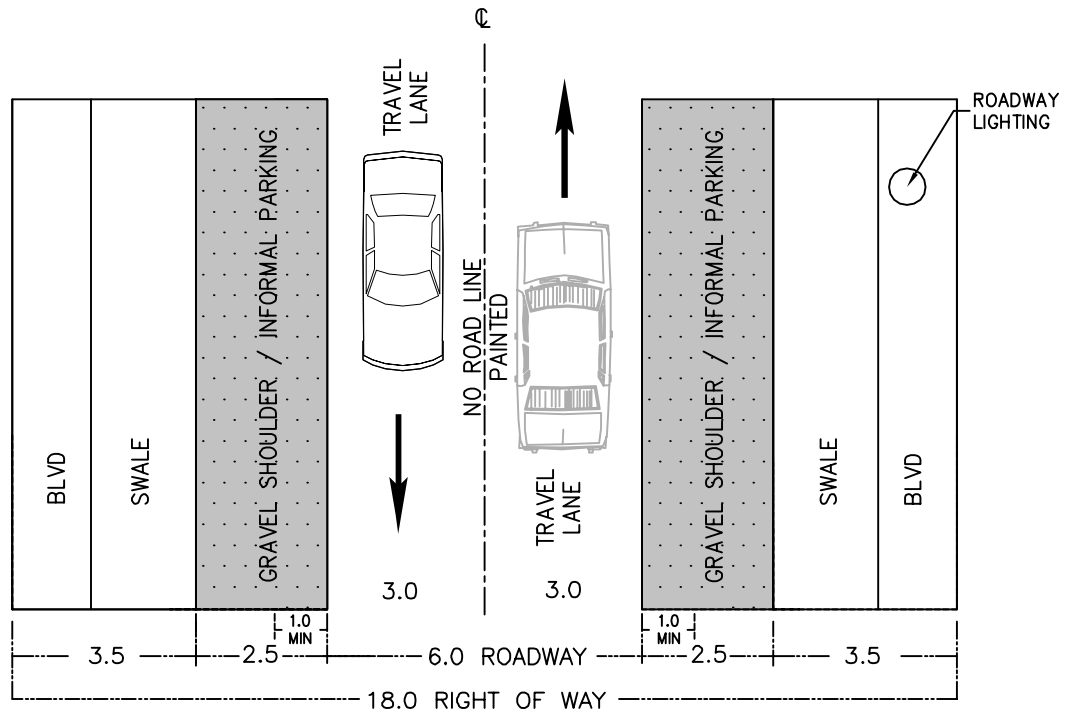
2016-04-29



LOCAL 14m ROW – URBAN

DRAWING NUMBER
VRSD-R8
REVISION NUMBER
1
SCALE
NTS

TOWN OF VIEW ROYAL SUPPLEMENTARY STANDARD DETAIL DRAWING



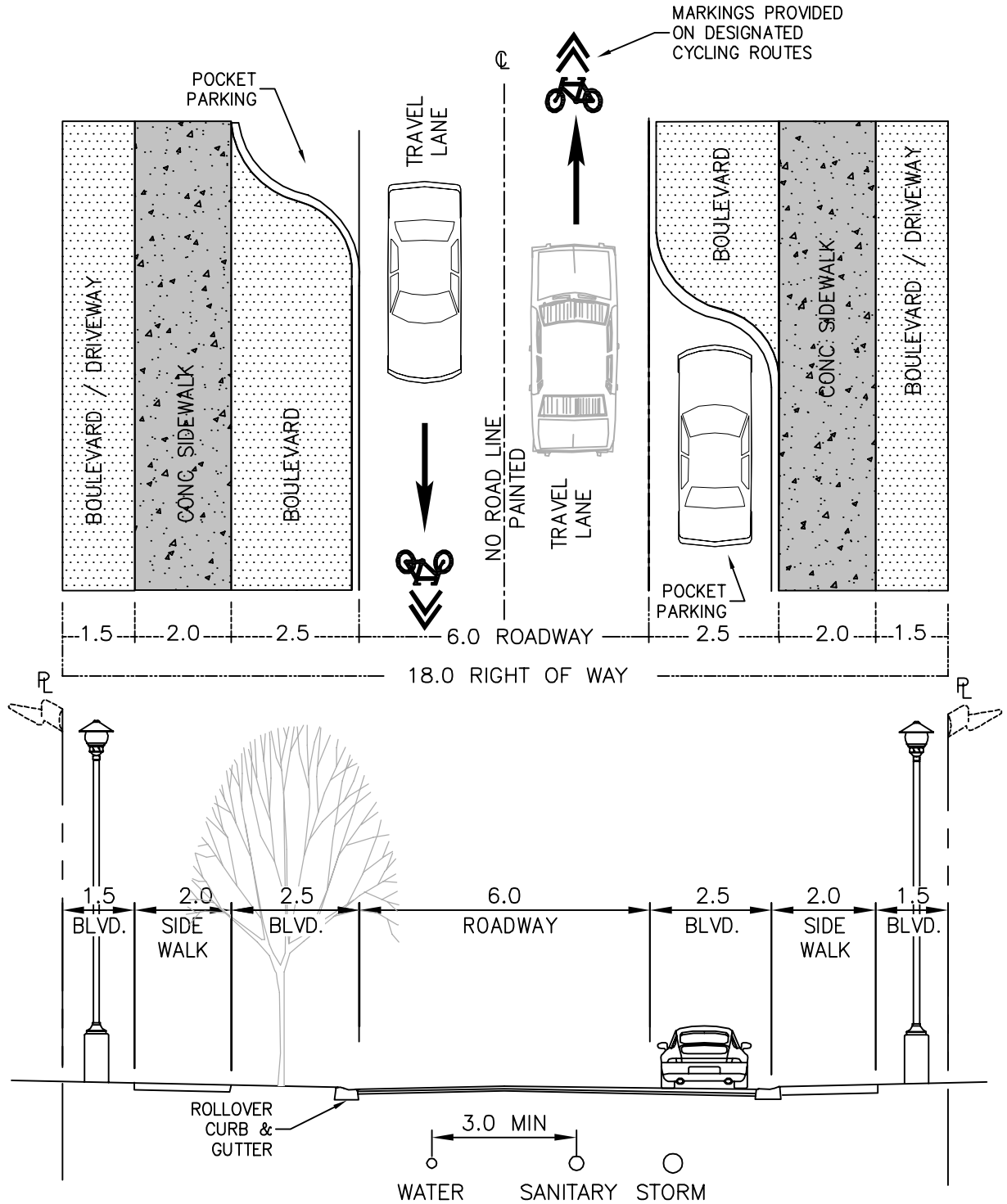
2016-04-29



LOCAL 18m ROW – RURAL

DRAWING NUMBER
VRSD-R9
REVISION NUMBER
1
SCALE
NTS

TOWN OF VIEW ROYAL SUPPLEMENTARY STANDARD DETAIL DRAWING



NOTE: ALL PAVEMENT MARKINGS AND STENCILS TO BE THERMOPLASTIC

2016-04-29



LOCAL 18m ROW – URBAN CLASS A

DRAWING NUMBER

VRSD-R10

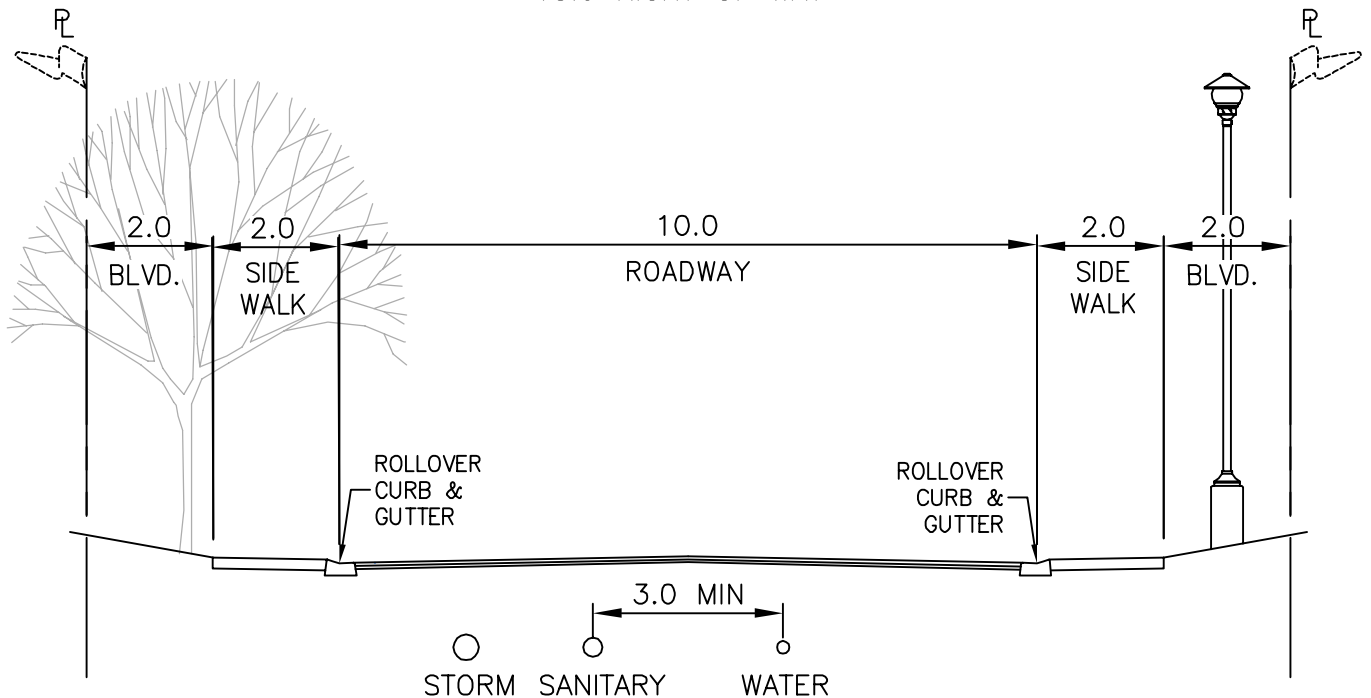
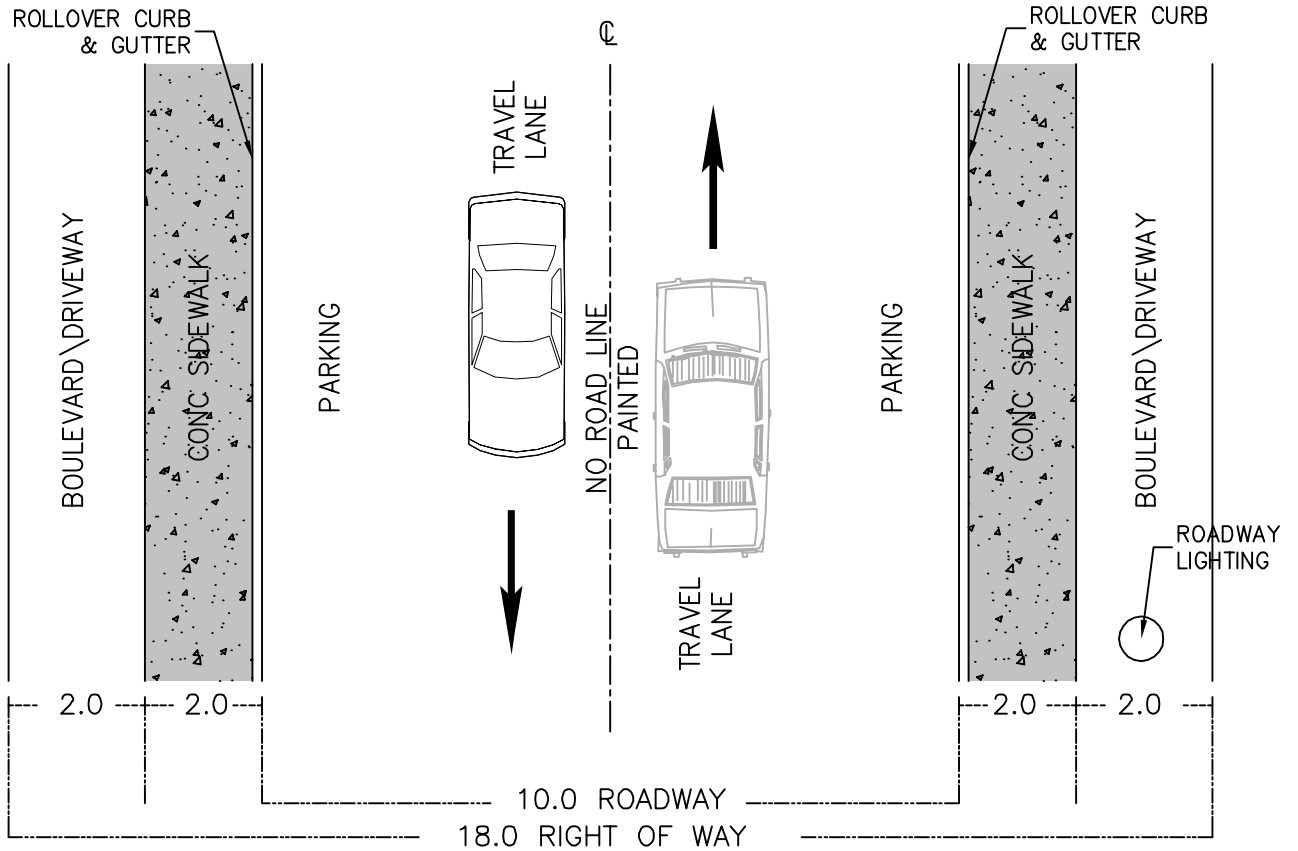
REVISION NUMBER

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SCALE

NTS

TOWN OF VIEW ROYAL SUPPLEMENTARY STANDARD DETAIL DRAWING



NOTE: ALL PAVEMENT MARKINGS AND STENCILS TO BE THERMOPLASTIC

2016-04-29



LOCAL 18m ROW – URBAN CLASS B

DRAWING NUMBER

VRSD-R11

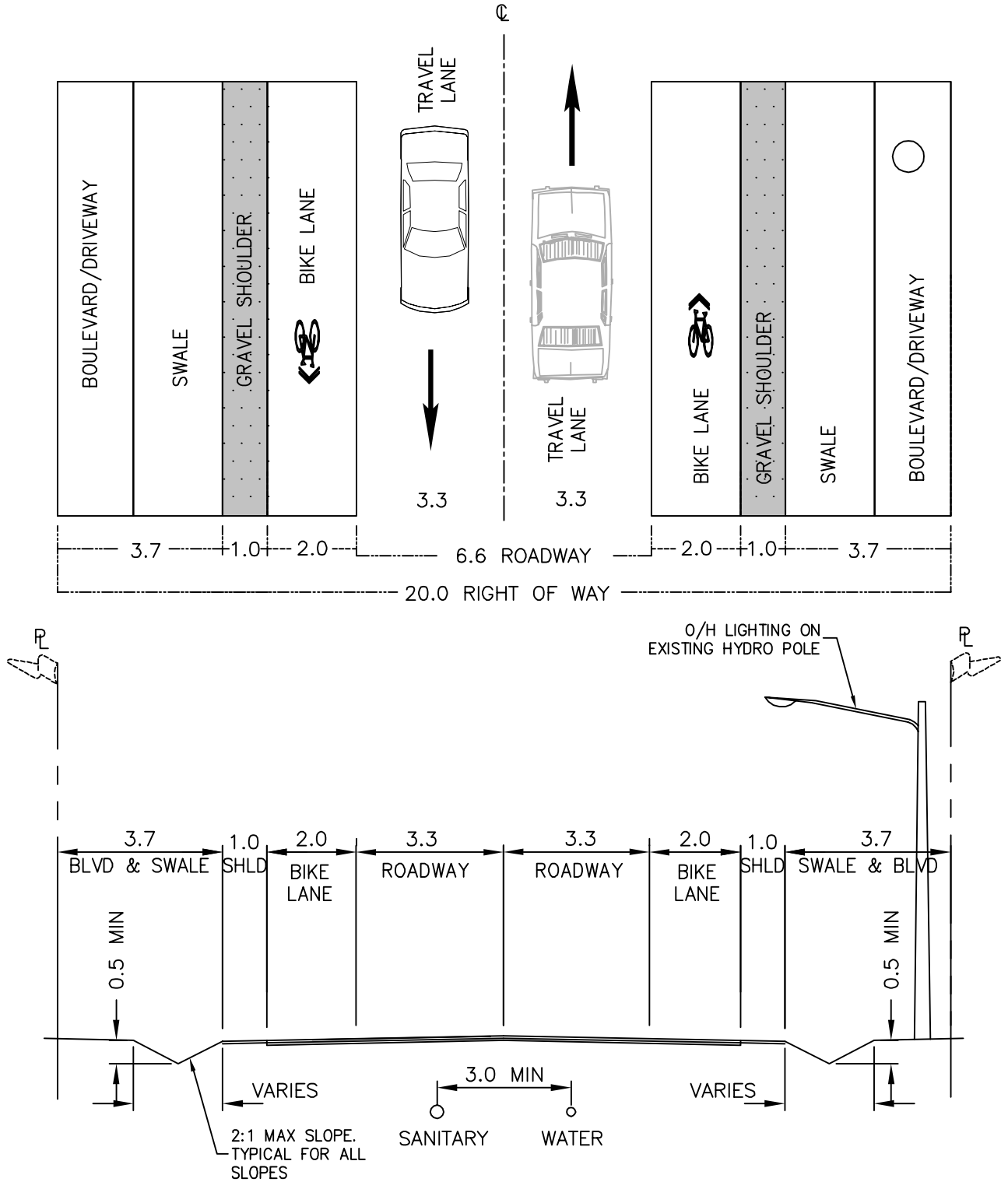
REVISION NUMBER

1

SCALE

NTS

TOWN OF VIEW ROYAL
SUPPLEMENTARY STANDARD DETAIL DRAWING



NOTE: ALL PAVEMENT MARKINGS AND STENCILS TO BE THERMOPLASTIC



COLLECTOR 20m ROW – RURAL

DRAWING NUMBER

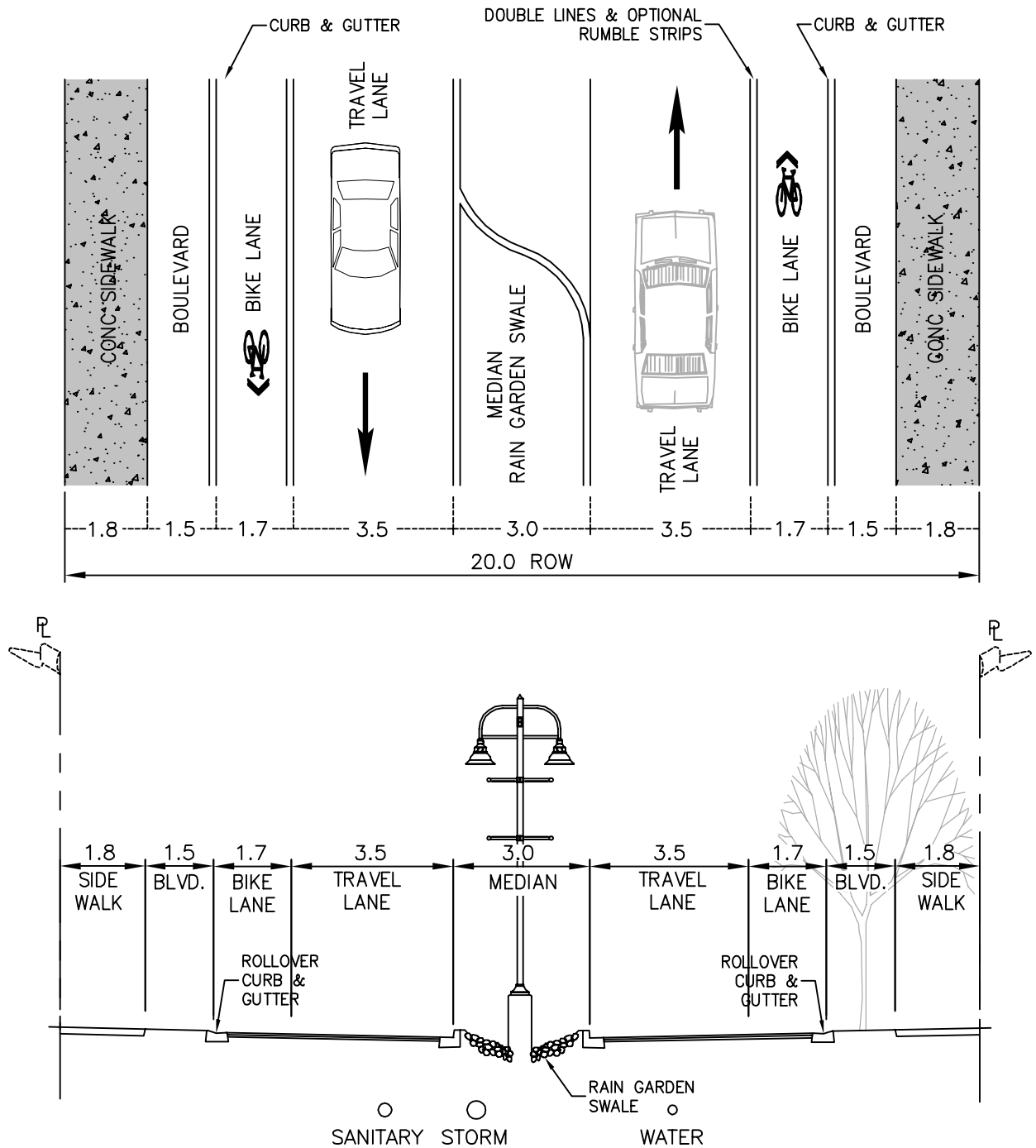
VRSD-R12

1

SCALE
NTS

TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



NOTE: ALL PAVEMENT MARKINGS AND STENCILS TO BE THERMOPLASTIC

2016-04-29



COLLECTOR 20m ROW – URBAN CLASS A

DRAWING NUMBER

VRSD-R13

REVISION NUMBER

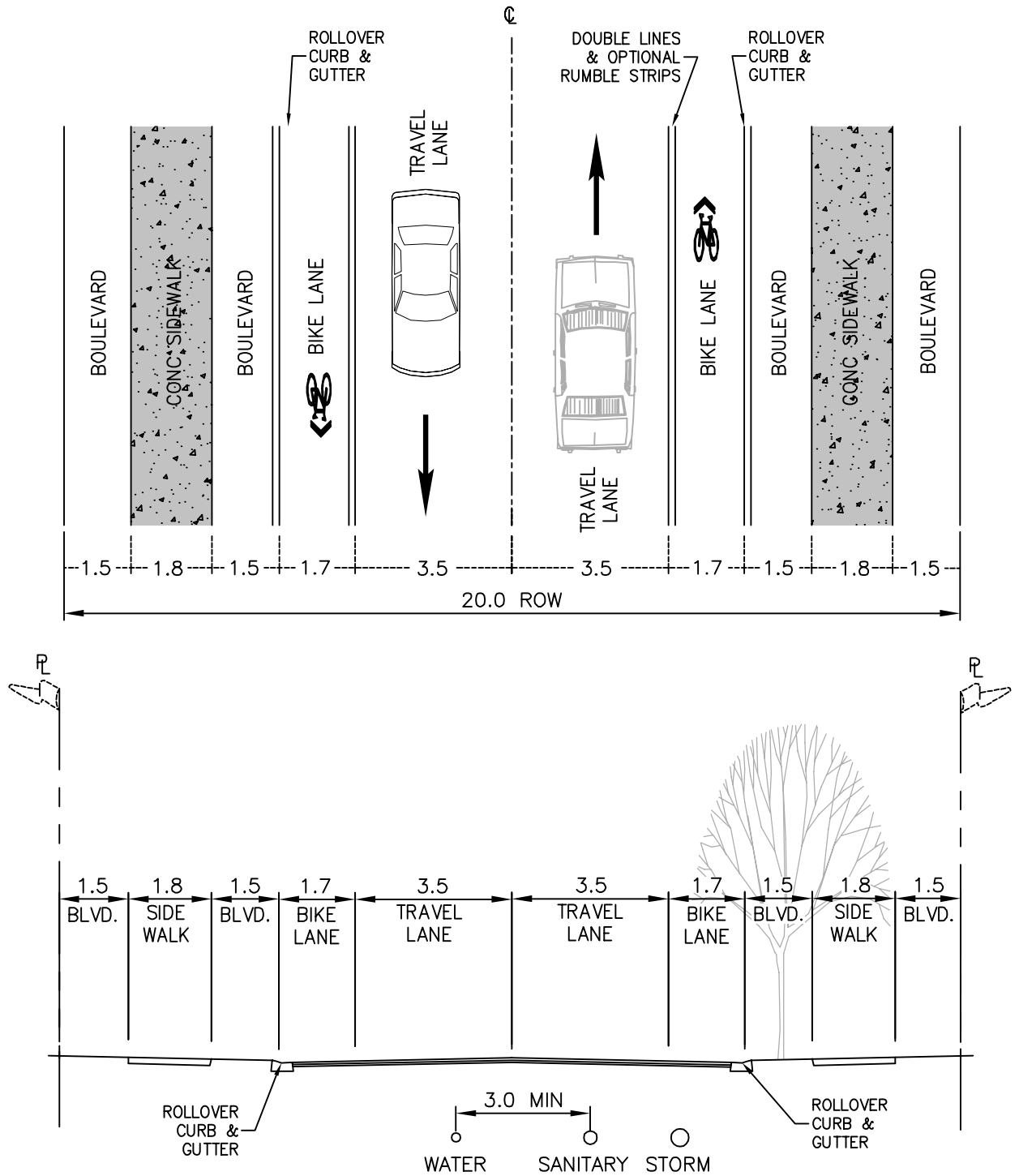
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SCALE

NTS

TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



NOTE: ALL PAVEMENT MARKINGS AND STENCILS TO BE THERMOPLASTIC

2016-04-29



COLLECTOR 20m ROW – URBAN CLASS B

DRAWING NUMBER

VRSD-R14

REVISION NUMBER

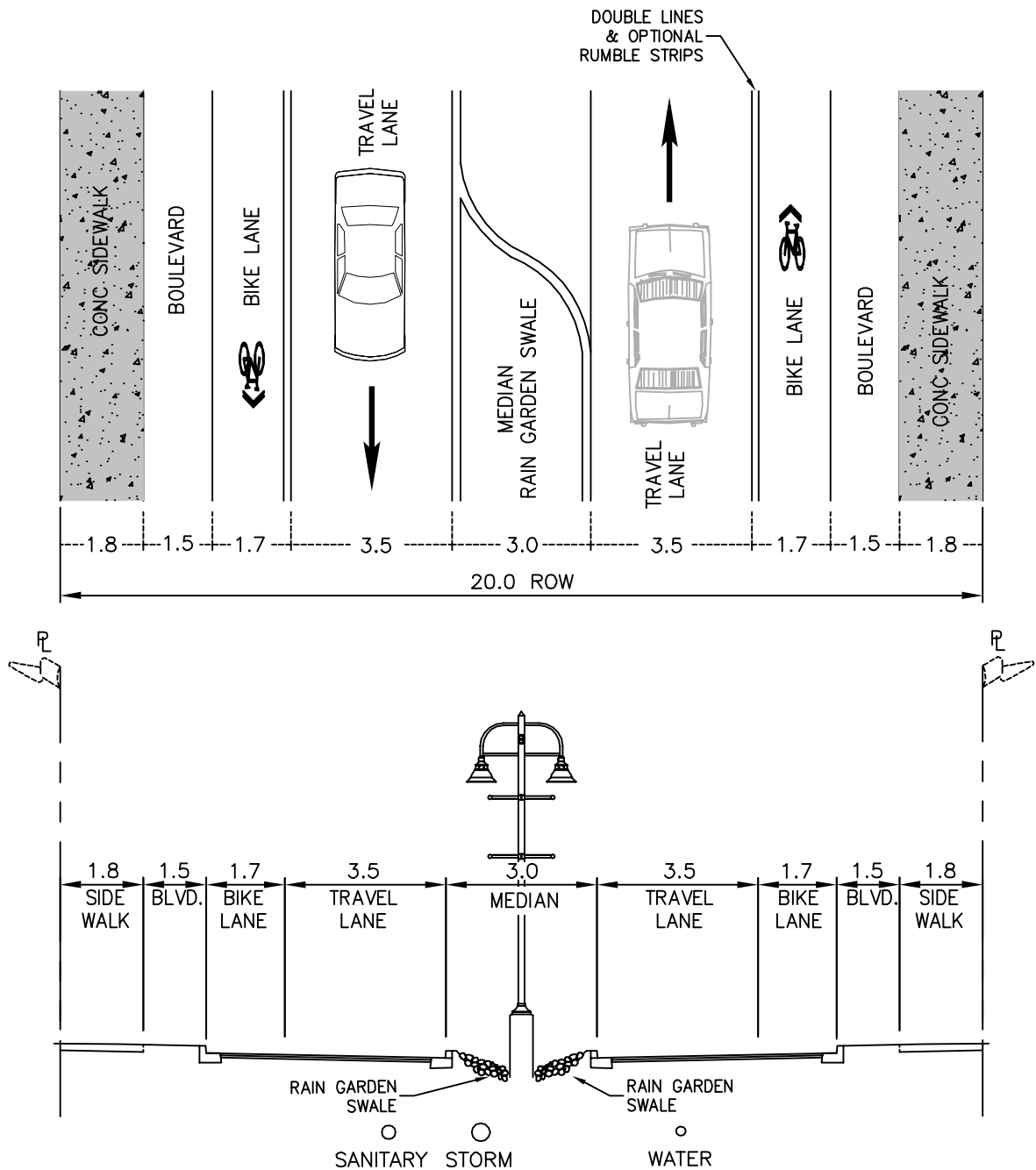
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SCALE

NTS

TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



NOTE: ALL PAVEMENT MARKINGS AND STENCILS TO BE THERMOPLASTIC

2016-04-29

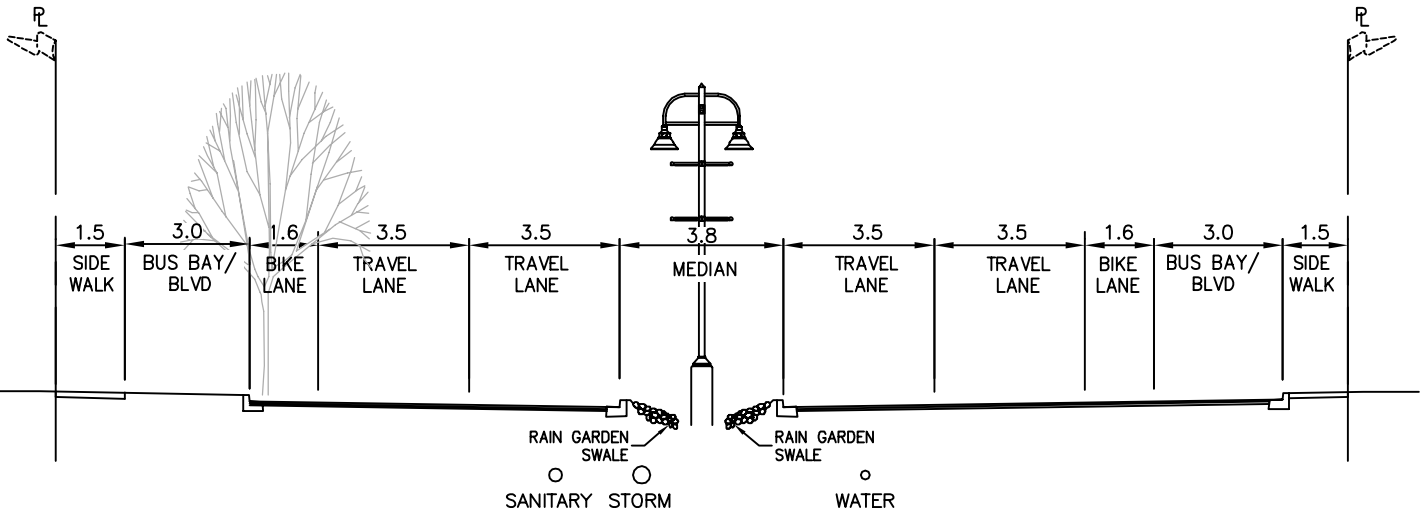
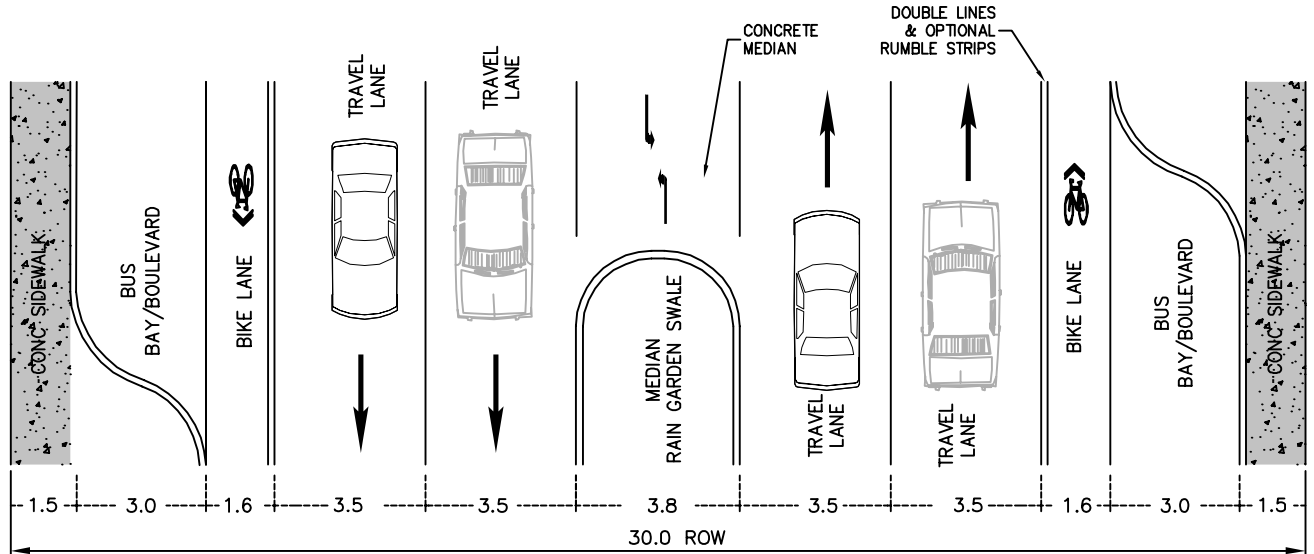


MAJOR ROAD 20m ROW – URBAN

DRAWING NUMBER
VRSD-R15
REVISION NUMBER
1
SCALE
NTS

TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



NOTE: ALL PAVEMENT MARKINGS AND STENCILS TO BE THERMOPLASTIC

2016-04-29



MAJOR ROAD 30m ROW – URBAN

DRAWING NUMBER

VRSD-R16

REVISION NUMBER

1

SCALE

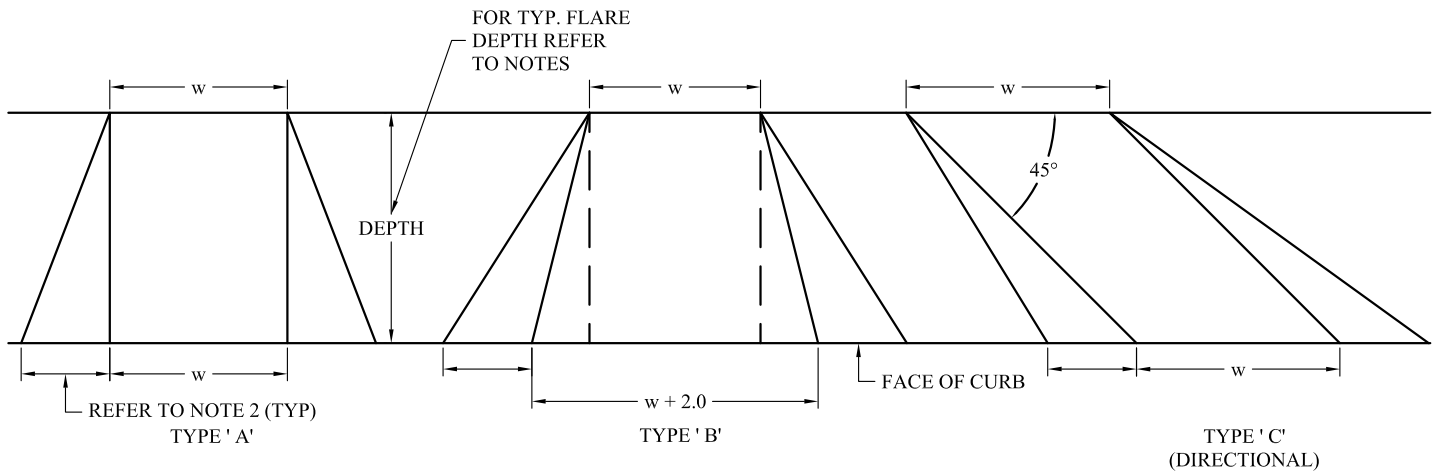
NTS

TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING

TABLE OF WIDTHS FOR DRIVEWAY CROSSINGS

LAND USE	STREET CLASSIFICATION	DRIVEWAY TYPE	CROSSING WIDTH (w)	
			* MIN	*MAX
COMMERCIAL / INDUSTRIAL or MULTI-FAMILY RESIDENTIAL	ALL	B	5.0m	10.0m
RESIDENTIAL	MAJOR	A	5.0m	7.0m
RESIDENTIAL	COLLECTOR / LOCAL	A	3.0m	7.0m
ALL	ALL	C	5.0m	10.0m



NOTES:

- 1 FLARE DEPTHS SHALL BE 3.0m UNLESS OTHERWISE APPROVED BY THE DIRECTOR
- 2 FLARE WIDTHS SHALL CONFORM TO VRSD C7a OR C7b UNLESS OTHERWISE APPROVED BY THE DIRECTOR
- 3 FOR CONSTRUCTION DETAILS REFER TO VRSD-C7c

DRIVEWAY WIDTHS

DRAWING NUMBER
VRSD-R17

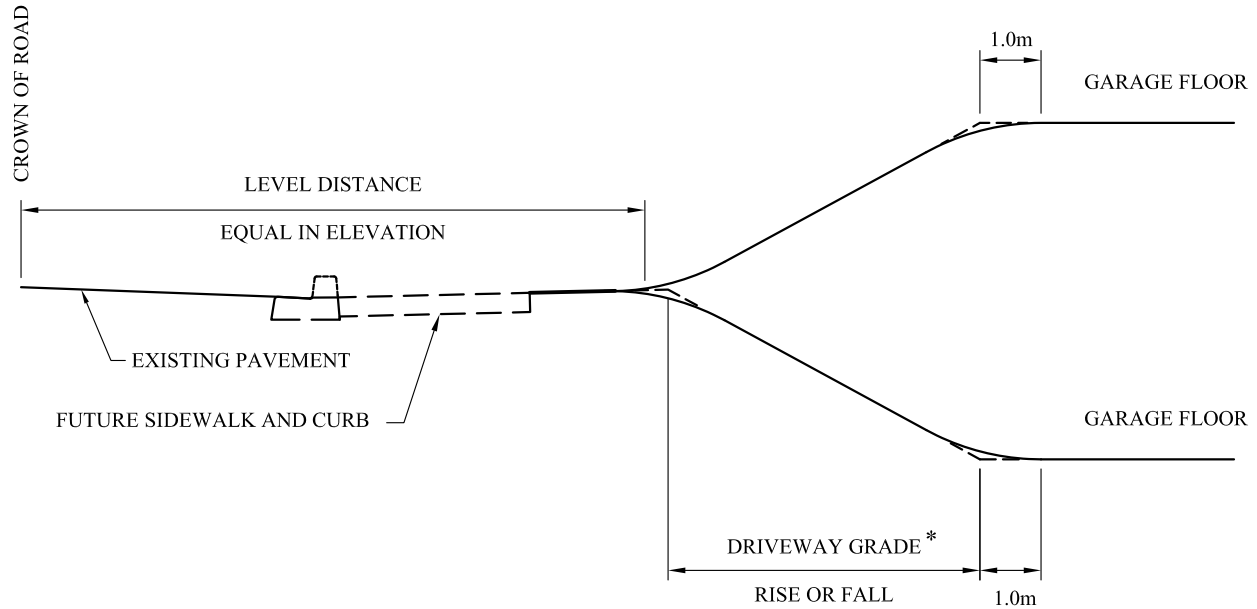
REVISION NUMBER
1

SCALE
NTS



TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



NOTES:

1. TO ALLOW FOR FUTURE ROAD WIDENING AND SIDEWALK CONSTRUCTION, THE DRIVEWAY AND FINISHED BOULEVARD GRADE MUST BE AT THE SAME ELEVATION AS THE CENTRE OF THE EXISTING ROAD SURFACE AT THE FOLLOWING LEVEL DISTANCE FROM THE PAVEMENT CENTRELINE AS PER THE TABLE BELOW.
2. MAXIMUM DRIVEWAY GRADES ARE AS NOTED BELOW OR AS REQUIRED UNDER THE BC FIRE CODE, WHICH EVER IS LESS.

ROAD CLASSIFICATION	MINIMUM LEVEL DISTANCE	* MAXIMUM DRIVEWAY GRADE
RESIDENTIAL ROADS	7.5m	12%
COLLECTOR ROADS	8.5m	12%
MAJOR ROADS	TO BE DETERMINED BY THE DIRECTOR	10%

3. WHERE THE CENTRE OF THE EXISTING ROAD SURFACE IS MORE THAN 1.5m OFF OF THE CENTRE OF THE ROAD ALLOWANCE, MEASURE THE LEVEL DISTANCE FROM THE CENTRE OF THE ROAD ALLOWANCE
4. EXCEPTIONS TO THESE STANDARDS MAY BE ALLOWED ONLY AT THE DISCRETION OF THE DIRECTOR.

DRIVEWAY GRADES

DRAWING NUMBER
VRSD-R18

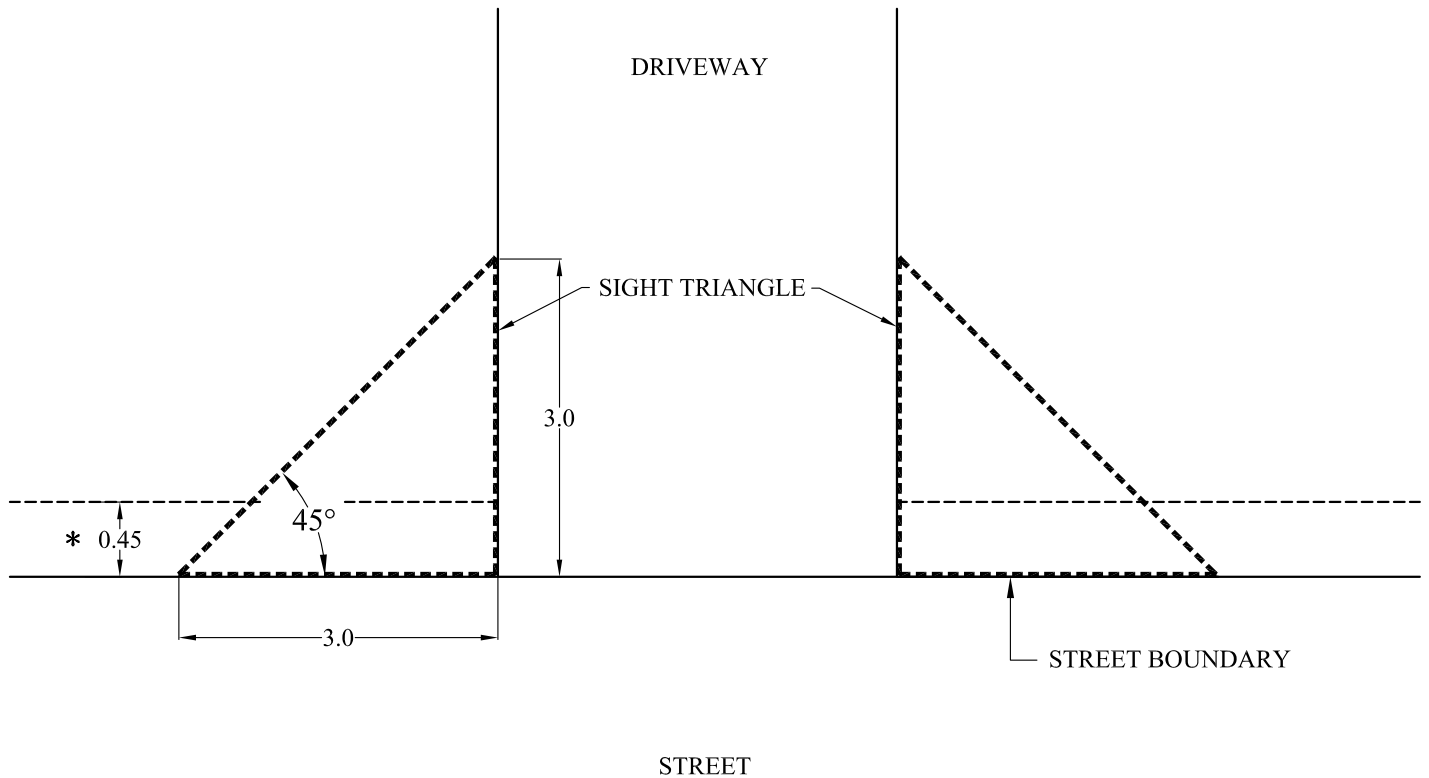
REVISION NUMBER
1

SCALE
NTS



TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



- * A PERSON SHALL NOT PLANT ANY TREE, SHRUB, BUSH OR HEDGE CLOSER THAN 0.45m TO THE STREET BOUNDARY
- * STRUCTURES, SUCH AS A FENCES OR SIGNS, SHALL NOT BE HIGHER THAN 1.2m HIGH WHEN PLACED IN THE SIGHT TRIANGLE.

SIGHT LINE SETBACKS

DRAWING NUMBER
VRSD-R19

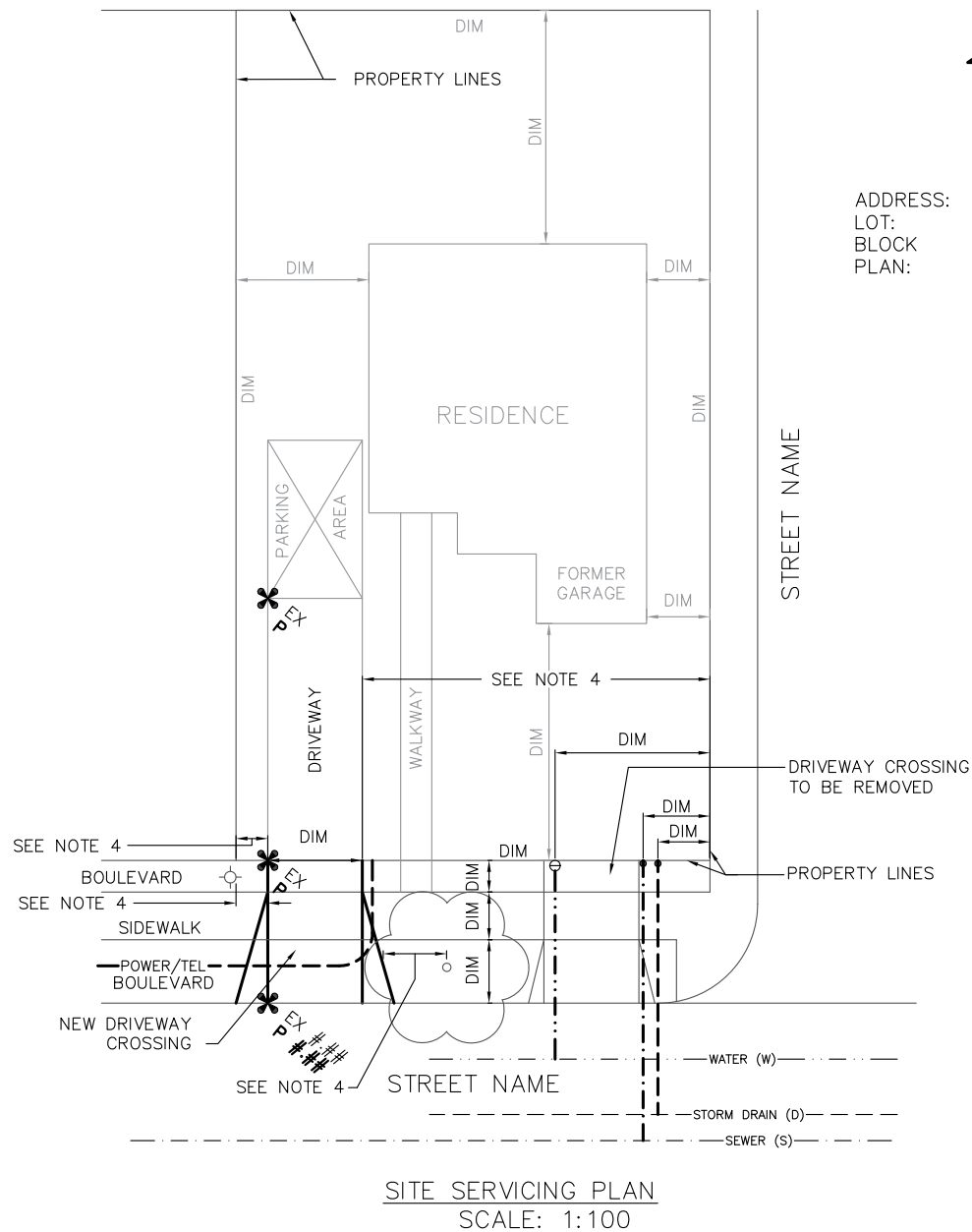
REVISION NUMBER
1

SCALE
NTS



TOWN OF VIEW ROYAL

SUPPLEMENTARY STANDARD DETAIL DRAWING



ADDRESS:
LOT:
BLOCK
PLAN:

NOTES:

1. DIMENSIONS (DIM) TO BE SHOWN IN METRES.
2. ON SITE PARKING LOCATION AND DIMENSIONS TO CONFORM TO THE ZONING BYLAW.
3. SITE SERVICING PLAN MAY BE COMBINED WITH THE SITE PLAN PROVIDED ALL INFORMATION FOR BOTH PLANS IS SHOWN.
4. REFER TO SCHEDULE B
5. STORMWATER MANAGEMENT TO BE DESIGNED, SIZED, AND LOCATED BY A CONSULTING ENGINEER.

LEGEND:

- SPOT ELEVATION
- INSPECTION CHAMBER
- WATER METER



SAMPLE SERVICING SITE PLAN

DRAWING NUMBER
VRSD-R20
REVISION NUMBER
1
SCALE
NTS

SCHEDULE E
Approved Products List

MMCD Ref (2009 Platinum)	Product	Approved Material/Type	Approved Product	Restrictions/Additional Specifications
26 56 01	Roadway Lighting			
	Ornamental Lighting	<ul style="list-style-type: none"> To be confirmed by the Town of View Royal 		
33 11 01	Waterworks	<i>Refer to Capital Regional District (CRD) Specifications</i>		
33 30 01	Sanitary Sewers			
	Plastic Pipe, Mainline Smooth Profile	<ul style="list-style-type: none"> Gasketed PVC 		
33 34 01	Sewage Force mains			
	Pipe, Joints and Fittings	<ul style="list-style-type: none"> Restrained PVC HDPE 	<ul style="list-style-type: none"> Cobralock or approved equal Sclairpipe or approved equal 	<ul style="list-style-type: none"> All PVC pipe to be restrained non-metallic joints

**SCHEDULE F
SUPPLEMENTARY DRAWING STANDARDS**



TOWN OF VIEW ROYAL DESIGN DRAWING SPECIFICATIONS

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Section 1.0 - General

- 1.2 The Drawing Specifications apply to the design of sanitary sewers, storm drains, boulevards, roadways, and street lighting, within the Town of View Royal. They also apply to the location and coordination of the other utilities within the Town of View Royal.
- 1.3 Departure from the Drawing Specifications is not permitted without the prior written approval of the Director of Engineering.
- 1.4 Any information received from the Town of View Royal about existing services shall be used as a guide only. The Town of View Royal has no responsibility for the exactness of service information obtained from the GIS, drawings and information provided electronically. The Applicant should confirm underground locations with utility companies and should verify the locations and elevations of all existing services by actual survey.

Section 2.0 - Design Drawings

- 2.1 Electronic Drawings Standards
 - 2.1.1 All design drawings shall be created using software which is compatible with AutoCAD, release 2014 or later.
 - 2.1.2 Circulation submissions shall be on paper prints. Four copies of the final design submissions shall be in black, on paper, suitable for photocopying, signed and sealed by the Consulting Engineer. Sealed design drawings will be returned to the Consulting Engineer once they have been signed by the Town of View Royal and sufficient copies have been made.
- 2.2 Sheet Sizes
 - 2.2.1 Standard sheet size is A1 metric size 594 mm x 841 mm.
- 2.3 Plan/ Profile Layouts
 - 2.3.1 The profile view shall be aligned above the plan view on the same drawing sheet.
 - 2.3.2 The use of plan on one sheet and profile on a second sheet is not acceptable.
 - 2.3.3 A north arrow, generally orientated towards the top of the sheet, shall be shown on the design drawing.
 - 2.3.4 Construction notes shall be confined to a separate "note" column, wherever possible, with numbered references in a plan or profile.
- 2.4 Scales
 - 2.4.1 All scales shall be standard metric scales
 - 2.4.2 Normal: Horizontal 1:250 or 1:100 Vertical 1:50
 - 2.4.3 Not to Scale details shall be avoided

2.5 Proposed and Existing Services

- 2.5.1 Proposed construction and improvements shall be shown as heavy solid lines. Proposed future construction shall be shown as heavy dashed lines. Existing works and services shall be shown as solid lines and shall be screened to 60% or else drawn with fine lines to create the same effect as screening.
- 2.5.2 Existing water mains, sanitary sewers, and storm drains (including all appurtenances), as well as ditches, pavement, curbs, sidewalks, underground wiring, gas, poles, trees, service connections and other underground utilities shall be indicated in plan and profile where applicable.
- 2.5.3 All services shall generally be shown on one plan with curbs (mountable or non-mountable), sidewalks, sewers, drains, gas, water and street lighting (underground wiring), fibre optics, BC Hydro and telecommunications (by company) including poles; identified as MC or NMC, S/W, S, D, G, W, L, FO, H, or (T-TELUS, S-Shaw) respectively. Other services shall be clearly designated on the drawing.
- 2.5.4 Dimensions of drawings shall be given from an existing monument or pin or proposed iron pin or lot line. Road chainage shall be tied to a monument or iron pin from the start of construction. All chainage shall be positive values with 0+0 located adjacent to the left margin of the drawing sheet. Subsequent chainages shall increase from the left margin towards the right border of each drawing sheet. All proposed works and services shall be fully dimensioned.
- 2.5.5 Connections or alterations to existing sanitary sewers and storm drains by the Town of View Royal shall be indicated on the design drawings.
- 2.5.6 Existing detail information shall include:
 - (a) All surface and subsurface infrastructure and natural features within the road allowance or project site.
 - (b) All surface and subsurface infrastructure and natural features outside the road allowance or project site that influences or may be impacted by the proposed work and services.

2.6 Elevations and Vertical Datum

- 2.6.1 Vertical control shall be shown in metric geodetic datum (mean sea level = 0). Bench mark numbers, locations and elevations can be obtained from Base Mapping & Geomatic Services Branch of the Integrated Land Management Bureau (ILMB) of the Ministry of Agriculture and Lands. The reference bench mark numbers and elevation shall be shown on the design drawings. Elevations below zero (0) metres geodetic shall be prefixed with a minus sign.
- 2.6.2 The design drawings shall show:
 - (a) the elevation, to the nearest centimetre,
 - (b) existing basement floors and,

- (c) where the building site is less than 1m above the road level, any proposed basement floor elevation or entrance,
- (d) Critical elevations at property lines i.e. Doorways and Driveways.

2.6.3 If a subdivision lot is proposed to be filled, the drawings shall show existing ground elevations at corners of the allowable building envelope or show a centre of lot profile, to indicate the extent of fill required. The placement of fill must be done under the direct supervision of Consulting Engineer and the Owner shall supply a signed and sealed report from the Consulting Engineer attesting to the suitability of the placed fill for building.

2.7 Requirements for Key Plan

- 2.7.1 A key plan shall be included on the design drawings for subdivisions or if the location of the works cannot be easily deduced from the detailed design plans.
- 2.7.2 A key plan, when required, shall be on the right side of the design drawings and shall include the following information:
 - (a) Plan of adjacent streets and existing lots with streets named and legal descriptions of subject and adjacent lots given;
 - (b) Civic address with the subject property being subdivided shown shaded;
 - (c) North arrow.
- 2.7.3 If the subdivision is to be developed in stages, each proposed stage shall be clearly outlined and order of development indicated.
- 2.7.4 If a key plan is not required, the house number of existing houses shall be shown on the detailed design plan.

2.8 Rights of Way and Easements

- 2.8.1 All existing rights-of-way or easements must be verified with supporting documents and shall be shown lightly shaded on the design drawing. Registration numbers and boundaries of rights-of-way or easement shall be shown lightly shaded.
- 2.8.2 All proposed rights-of-way for new services are to be shown as a dashed line. These shall be tied to the iron pin in each lot, together with their width, permitted use, and the note "acquire" or "proposed".

2.9 Subdivisions

- 2.9.1 The potential building envelope of each lot is to be indicated.

2.10 Roads, Curbs and Sidewalk

- 2.10.1 Both plan and profile shall be tied to an iron pin or monument, preferable near or at 0+0 chainage. If the chainage exceeds 150 m, a second tie shall be shown.

- 2.10.2 Show all iron pins adjacent to the works and the existing ground elevation at each pin or proposed pins.
- 2.10.3 Show the road width, curb and sidewalk offsets and materials used measured from the property line. A typical cross-section shall also be shown on a separate drawing sheet.
- 2.10.4 Show actual location and dimensions of sidewalk drops, on a detail plan.
- 2.10.5 Road profiles shall show centerline and gutter(s) or edge(s) of pavement elevation at 10 m intervals.
- 2.10.6 A detail plan for cul-de-sacs, shall show gutter elevations at all BC's and EC's and at intervals of no more than 5 metres along the gutter line. A profile along the gutter line shall show how it is graded.
- 2.10.7 A typical cross sectional view of road construction shall be included where circumstances require special consideration. In all cases the standard drawing section shall be referenced on the drawing.
- 2.10.8 Cross-sections are required for drawings depicting new or rehabilitated roads and sidewalks.
- 2.10.9 For new road and sidewalk features, a 10 m interval cross section is required.
- 2.10.10 For road works, cross-section elevations must span the full width of the road allowance. Cross-section elevations must include property lines, back of sidewalk, front of sidewalk, top of curb, gutter, ¼ pt of road width or edges of existing road and centerline of road. It must also illustrate changes and elevations of each break in the cross-section.
- 2.10.11 The new road works must be shown on each cross-section with bold lines that emphasize the finished surface. Elevations of the new road must be shown. Road measurements from centreline of the road allowance must also be illustrated.
- 2.10.12 The profile shall be shown at the true centreline length and provided in as close relationship as possible to the plan.
- 2.10.13 Locate catch basins by chainage to the centre back.
- 2.10.14 Existing and proposed driveway locations shall be shown, as well as a profile of each driveway from the road centreline to the end of the driveway within the property.
- 2.10.15 Chainage of the BC and EC of horizontal curves shall be shown together with the internal angle, tangent length, arc and centreline radius. A table showing curve and curve return data is to be shown on the road drawings as shown in a sample below in Table 1.

CURVE DATA TABLE 1 (example)					
Curve	A	B	C	D	E
Radius	30.000m	10.000m	110.000m	6.000m	6.000
Angle	57°49'33"	8°21'00"	18°40'59"	71°37'15"	24°41'54"
Arc	30.278m	15.595m	35.869m	7.500m	2.586m
Tangent	16.523m	9.927m	18.095m	4.329m	1.314m
B.C.	0+00.00	0+30.280	0+50.380	0+86.250	0+93.746
E.C.	0+30.280	0+45.870	0+86.250	0+93.746	0+96.260

- 2.10.16 The centerline percent grade to two decimal places shall be shown on the profile together with the following information on vertical curves:
- 2.10.17 The chainage and elevations of BVC, EVC, and VPI;
- 2.10.18 The external value, 'e';
- 2.10.19 The 'K' value;
- 2.10.20 The length of the vertical curve;
- 2.10.21 The elevation and chainage of low points for sag curves.
- 2.10.22 The gutter(s) percent grade to two decimal places shall be shown on the profile together with the following:
 - Proposed gutter(s) elevations at 10m change stations.
 - Chainage and elevation of proposed gutter(s) BC, EC, BVC, EVC and CB's.
- 2.10.23 Horizontal curve radii to be designed to the nearest 1.0m
- 2.10.24 Pavement tapers are to be dimensioned to legal with length of taper and the offset to existing pavement.

2.11 Sewer and Drains

- 2.11.1 The following information shall be shown on the profile:
 - (a) Size, type, class of pipe.
 - (b) Percent grades to two decimal places.
 - (c) Invert elevations at both inlet and outlet of manholes.
 - (d) Details of vertical curves.
 - (e) Existing utilities.
 - (f) The following information shall be shown on the plan:
 - (g) Details of horizontal curves;
 - (h) Pipe offsets from property line;
 - (i) Chainage or measurement from the downstream manhole of service connections. Offset to the nearest property corner of the end of the service connection.

- (j) Invert elevation at the property line and the grade of service connections from the upper end to the drop to the main, if other than two percent.
- 2.11.2 The following additional information shall also be shown on the appropriate part of the drawing:
 - (a) Sanitary sewer manholes and cleanouts shall be identified by a capital "S" followed by a unique letter.
 - (b) Storm drain manholes, cleanouts and catchbasins shall be identified by a capital "D" followed by a unique number.
 - (c) Structural detail of all manholes not covered by Municipal Standard Drawings or MMCD.
- 2.12 Water
 - 2.12.1 Drawings shall have the Island Health permit number and approval from CRD.
 - 2.12.2 Drawings shall indicate whether a water main passes over or under other underground services which it is crossing.
 - 2.12.3 The pipe size and type shall be shown on the profile.
- 2.13 Street Lighting and Signal Design
 - 2.13.1 Plot existing and proposed lamp and signal standards and show the measurement between them and their measurement from the proposed curb face.
 - 2.13.2 Signal and light pole design including design details and elevations including bases.
 - 2.13.3 Indicate wattage of luminaries to meet standard lighting levels.
 - 2.13.4 Plot and identify all existing and proposed street lighting and traffic signal operating devices such as:
 - (a) Underground conduits;
 - (b) Signal loops (wires);
 - (c) Traffic counters and counting loops;
 - (d) Traffic control boxes;
 - (e) Pull boxes;
 - (f) And other related street lighting infrastructure.
- 2.14 Other Utilities
 - 2.14.1 Existing and design detail information for utilities such as Hydro, Telecommunications and Gas shall be obtained from the appropriate utility company.
 - 2.14.2 The following information shall be shown on the design drawings:
 - (a) Existing utilities.
 - (b) Utility offset from property line and/or iron pin.

- (c) Lot connections and other appurtenances offset to the nearest property line.
- (d) Proposed poles shall be dimensioned from the pole's road face to property line and/or pin.
- (e) Indicate how utility vaults will drain to the storm drain system and who will install the drain connection.
- (f) Underground Hydro, telecommunications and gas infrastructure such as duct bank and vault outlines.

Section 3.0 - Record Drawings

3.1 Submission Sets

- 3.1.1 Within four weeks of completion of all services installed by the Owner, the Consulting Engineer shall deliver Record Drawings, representing what was constructed, to the Town of View Royal. These drawings shall include the following statement signed, sealed and dated by the Consulting Engineer:
- 3.1.2 "I [name and professional designation], certify that the following services (name them) were inspected during construction and to the best of my knowledge, were installed in accordance with the Town of View Royal Specifications and as shown on this drawing. I further certify that the locations of all surface appurtenances of the various utility companies are shown correctly on this Record Drawing."
- 3.1.3 The first submission of as-constructed record drawings shall consist of one paper print of the approved design drawing with changes or corrections highlighted in colour.
 - (a) Sanitary Sewer – Red
 - (b) Storm Drains – Green
 - (c) Water – Dark blue
 - (d) Gas – Brown
 - (e) Curb, sidewalk, road – Orange
 - (f) Power and Telecommunications– Purple
 - (g) Lighting – Pale Blue
- 3.1.4 After approval of the paper print submission of the Record Drawing, the original design revised as required to show services as constructed, shall be submitted, using the latest version of AutoCAD. Record drawings shall use the Town's current drawing standards and layer conventions.

3.2 Dimensioning

- 3.2.1 The as-constructed drawings shall clearly show the location of all construction, improvement and services as installed, using offsets from survey pins. The locations will be shown either by check-marking any original dimension on the drawing (if they are correct) or by showing the revised dimension beside the original dimension.

3.3 Tolerances

- 3.3.1 All horizontal dimensions shall be to the nearest 100mm. All vertical elevations shall be to the nearest 5mm, except that ground elevations and service connection inverts at property line shall be to the nearest 30mm;
- 3.3.2 Road horizontal locations shall be to the nearest 30mm;
- 3.3.3 Road vertical locations shall be to the nearest 15mm;
- 3.3.4 Minimum Basement Floor Elevation (MBFE) shall be shown to the nearest 25mm.

3.4 Roads Curb and Sidewalk

- 3.4.1 Locate the curbs, sidewalks and pavement.

3.5 Sewer and Drains

- 3.5.1 Show the location and extent of rock cuts and hardpan requiring blasting.
- 3.5.2 Show the invert elevation of inlets and outlet in manholes.
- 3.5.3 Show and label manholes, cleanouts and other appurtenances.
- 3.5.4 Locate catch basin leads at the main by measurement from the centre of the downstream manhole.
- 3.5.5 Locate service connections at property line showing distance from the nearest iron pin or property line and at the main by chainage from the centre of the downstream manhole.
- 3.5.6 Show ground and invert elevations of sewer and drain service connections at the property line or edge of right-of-way.

3.6 Water

- 3.6.1 Show domestic water service connections at property line showing distance from the nearest iron pin or property line
- 3.6.2 Show the location and extent of rock cuts and hardpan requiring blasting.
- 3.6.3 Show the profile for mains.
- 3.6.4 Tie the locations of fire hydrants to a main valve and to iron pins.

3.7 Street Lighting and Traffic Signals

- 3.7.1 Show the location and extent of rock cuts and hardpan requiring blasting.
- 3.7.2 Show all poles and light standards including details and elevations.
- 3.7.3 Show all street lighting and traffic signal operating devices such as:
 - (a) Underground conduits;
 - (b) Signal loops (wires);
 - (c) Traffic counters and counting loops;
 - (d) Traffic control boxes;

- (e) Pull boxes;
- (f) And other related street lighting and signaling infrastructure.

3.8 Other Utilities

3.8.1 Show service connections

3.8.2 Show the location, number and size of conduits and mains.

3.8.3 Show all surface appurtenances and infrastructure