## **AGENDA**

# MAYOR'S STANDING COMMITTEE ON HOUSING AFFORDABILITY AND SUPPLY Monday, June 14, 2021 at 8:30 a.m.

# **Held electronically via MS Teams**

Due to COVID-19 measures, Saanich is unable to accommodate the public for any Council, Committee of the Whole, Advisory, Board or Foundation meetings while maintaining the limits on large gatherings due to the Public Health Order.

As per the Order of the Minister of Public Safety and Solicitor General, Emergency Program Act, Ministerial Order No. M192, public attendance at the meeting is not required if it cannot be accommodated in accordance with the applicable requirements or recommendations under the Public Health Act.

To listen to this meeting via telephone please call 833-214-3122 and use phone conference ID 398 675 008#. Please be advised that MS Teams callers are identified by your phone number, which will be viewed on screen by all attendees of the meeting, and not retained.

## 1. CALL TO ORDER

# 2. ADOPTION OF MINUTES (attachment)

April 12, 2021

# 3. NEW BUSINESS

- a) Secondary suites in new single family dwellings (N. Taylor)
  - Discussion
- b) Subdivision Bylaw Policy Review (February 8, 2021 referral from Council)
  - Presentation from Engineering

# 4. ADJOURNMENT

## ITEMS FOR FUTURE MEETINGS

- Dinner & Learn topics:
  - o Proforma
  - High level approach to long range planning.
  - Service delivery and housing strategy.
- Speaker to present on topic of financing for housing.

# MINUTES MAYOR'S STANDING COMMITTEE ON HOUSING AFFORDABILITY AND SUPPLY

Held online via Microsoft TEAMS

April 12, 2021 at 8:30 am

Present: Mayor Fred Haynes (Chair), Councillor Zac de Vries (8:50 am), Councillor Karen

Harper, Councillor Ned Taylor

Staff: Sharon Hvozdanski, Director of Planning; Cameron Scott, Manager of Community

Planning; Pam Hartling, Senior Planner, Community Planning; Tania Douglas, Senior

Committee Clerk

## Minutes

MOVED by K. Harper and Seconded by N. Taylor: "That the Minutes of the Mayor's Standing Committee on Housing Affordability and Supply meeting held October 5, 2020, be adopted as circulated."

CARRIED

# Addition to the agenda:

Topic of solar panels and shading was added to the agenda for discussion.

### **NEW BUSINESS**

# a.) Cordova Bay Local Area Plan

The Senior Planner presented information about the Cordova Bay Local Area Plan. The following was noted:

- A description was given on the levels of density and the make-up of the area along with a general history of population and growth.
- Housing goals focus most growth in the Village. There is opportunity for development on the Trio site, on Saanich's Doumac parcel and potentially on Church and institutional sites. No concept has been received from Trio to date.
- The Village housing plan is a larger area and is based on walking distance. The area includes more lots zoned at RS-6 for single family dwellings, and offers more triplex and four-plex buildings as infill options.
- Thirty year projections were done; there are about 731 units in the existing village and 3,095 units are forecast for future units. This does not include potential at the Trio site, the Ridge and general neighbourhood infill potential.
- Thinking about application to other Saanich neighbourhoods, the thought is to expand the range of housing types and densities to all villages and centres and along corridors, and also continue with neighbourhood infill where possible.
- The Housing Strategy will support housing in local areas as well district-wide approach to parking and infill incentives.

Comments/questions from committee were noted:

- The layering out of housing from the centre of the village makes sense.
- Question asked if more height could be achieved for some properties that are located against the ridge slope.
  - Staff noted there are some variations to height and the ridge reduces as you move north of the village.

- Maybe opportunity should be taken to consider if the limitations of the Official Community Plan (OCP) need to be examined. The OCP has conceptual walking distances in villages with a walk range of about 5 minutes from a village centre to the edge. The Plan could show more flexibility in these numbers by providing a range.
  - Staff noted that the OCP provides a foundation and it may be that some guidelines may need to be adjusted district-wide. The walkability number can change where there is a density bonus provision.
  - It was clarified that the village core has a five-minute walking distance, while the village neighbourhood has a 15-plus minute walking distance.
- Comment made that a new LAP has been created but is based on a 1993 Plan and concern was expressed that the LAP process feels challenging with having such a dated Plan.
- There is a lot of change happening that cannot be planned for, and this makes it difficult to proactively respond to.
- Changes in community, economic, social and environmental flows impact the urban landscape.
- There are massive retrofits happening and there are many illegal suites because the formal framework has not been able to keep up with the market changes and reality surrounding housing.
- This report shows a good example of population growth. It is difficult to keep up with the speed of change.
- This is a well put together plan but the fundamental question is are changes to the LAPs the way to go?
- The Shelbourne plan took seven years and it will be difficult to build affordable housing along the corridor. Even when a plan is approved, it is difficult to know when housing can be built as land prices, materials and labour costs rise.
- Suggestion was made to have a dinner and learn on long range planning and densification/housing.
  - Staff noted as Saanich (Greater Victoria) is unique in terms of the approach we need to take to develop truly affordable housing, discussion about 'learnings' from other cities such as San Francisco and Singapore would be beneficial.
- Question raised why zoning is RS-6 and not RS-1.
  - Staff noted that the village area is going from 930 square metre lots to 560 square metre lots, and there is better density with attached housing. Attached housing is encouraged but single family dwellings are the default because they are easier to build.
- Question raised about: low-rise designs, is the Church is interested in developing and has daycare been discussed.
  - Four-storeys and under are considered low rise structures.
  - Staff have had informal conversations with the Church with regard to affordable housing.
  - It is possible that daycare could be part of the Trio site or the Church site. The school property is short on space with the Senior centre.
- Question raised about garden suites in the area.
  - Staff noted there is a lot of interest in garden suites, and the community recognizes the need. In some areas there could be a garden suite plus a secondary suite on a parcel as there is support for multi-units.
  - If Council endorses the Cordova Bay LAP, then staff will seek direction on how to best pursue housing (eg. will BC Housing participate or will there just be market housing).
- Comment made that this is a good plan for today but not for the future.
- Need to consider how to address challenges of re-development, and suggestion made that the LAP could be adjusted to expand beyond current boundaries because there are many sub-optimal sites along the edge that offer good walkability.

 Staff noted that the overarching consideration is affordability and staff will look into this.

The Chair asked staff to double-check with Cordova Bay Elementary about potentially having a daycare on site. They also noted that a Council discussion needs to occur regarding: the best way to get information to residents; policy framework constraints; and affordability goals.

# b.) Six month update – hiring of new development related staff positions

The Director of Planning noted there was a hiring freeze in early 2020 due to Covid-19. In October 2020 and January 2021 two new staff members were hired and Planning now has a full staff complement. In reply to a question they noted that hiring pools for planning positions have slightly increased in size.

# c.) Infrastructure – discussion of principles

A discussion occurred regarding upcoming changes to the Subdivision Bylaw. It was suggested that clarity is needed on who the Bylaw applies to, and who is responsible for building infrastructure. In the 1990's when the Bylaw was created there were more subdivisions, however there are fewer now and it was suggested that discussion is needed on whether homeowners should be caught in the current requirements to connect to services (storm water, sewer, other).

An example was given of people building garden suites who were asked to build infrastructure for the street. Council did not anticipate this problem and should consider who is responsible for upgrades, and whether single family dwellings should be included. Question raised on the definition of a subdivision and what other categories will come into play when development occurs. Committee is interested in what the next steps are to clarify the questions surrounding the current process, as it is flawed in terms of equity. Suggestion made that perhaps a sharing factor is needed and there may be an equitable solution for both homeowners and Saanich; question asked what they do in Langford.

It was noted that municipal risk and groundwater supply/redirection are issues and it may be necessary for homeowners to contribute to water infrastructure.

The Director of Planning acknowledged there may be a more appropriate name for the Bylaw as it relates to the installation of engineering works and services rather than detailed subdivision matters. The name will be addressed as part of the ongoing updating of this Bylaw by Engineering.

\*\*\* Councillor Taylor left the meeting at 10:01 am \*\*\*

# d.) Secondary suites in new single family dwellings

This item will be discussed further at the May meeting when Councillor Taylor is present. Comments noted:

- There is already a motion coming back to Council regarding secondary suites, and staff can provide an update at the next MSCHAS meeting.
- Half of new single family dwellings in Saanich have secondary suites.
- Many local governments require a secondary suite in new builds.
- The Housing Task Force discussed this issue.

- There are broader issues; suites do serve as a mortgage helper but they also make base housing more expensive.
- There are many houses that have both secondary suites and garden suites.

# e.) Solar panels

Comments noted:

- Complaints have been received from people who install solar panels only to have their neighbours plant trees or build next door, causing the solar panel area to be shaded.
- There are jurisdictions that have rules regarding this and Saanich should discuss this.
- Part of the problem is the desire to have a large tree canopy conflicts with those who want to have solar panels.
- There are also height issues as some solar panels are flush and some are cantilevered.
- Panels need to be placed in a way that does not create friction.
- Solar panels are not necessarily helpful in achieving climate goals as they are not super helpful. In terms of affordability they play a role (eg. lower strata fees for some).
- Buildings are required to be solar ready but perhaps this is not desirable. A larger tree
  canopy is more helpful for the climate as they cool streets and enrich lives. Suggestion
  made that the push for solar panels are about affordability rather than for the
  environment.

The Director of Planning will provide a future mini-update via email regarding solar panels.

# f.) Dinner and learn - further topics

Current topic on the dinner and learn list includes Proforma. Item, "Further approval delegations to staff' was removed. New topics include:

- High-level talk on the approach to long range planning; and suggestion made that this should be a regional discussion. Request for information on what San Francisco and Singapore models are doing.
- Regional Mayor's meeting noted an interest in discussion of the Urban Development Institute.
- Service delivery and the housing strategy.

# **ADJOURNMENT**

MOVED by Councillor Harper and Seconded by Councillor de Vries, "That the Mayor's Standing Committee on Housing Affordability and Supply meeting be adjourned at 10:31 a.m."

CARRIED

Mayor Haynes, Chai
I hereby certify these Minutes are accurate
Committee Secretary

1410-04 Report - Council

# SUBDIVISION BYLAW REFERRAL

Notice of Motion from Councillor Harper from the Special Council meeting January 25, 2021 to refer the Subdivision Bylaw, 1995 to the Mayor's Standing Committee of Housing Affordability and Supply.

MOVED by Councillor Harper and Seconded by Councillor de Vries: "That Council refer the Subdivision Bylaw, 1995 and all its related schedules to the Mayor's Standing Committee on Housing Affordability and Supply for policy review in consideration of the departmental work underway by staff to update the bylaw, including possible revisions to the levels of service for drainage."

Council discussion ensued with the following comments:

This is a good opportunity to consider some of the issues that arose from a
previous Development Variance Permit application, clarification of how many
and where the areas are within the Urban Containment Boundary that do not
have stormwater management systems and funding mechanisms.

- It is appropriate to refer the item to the Mayor's Standing Committee on Housing Affordability and Supply for review prior to the bylaw amendment

coming to Council.

- The implications of a bylaw amendment on housing affordability should be considered.

In response to questions from Council, the Director of Engineering stated:

- Updating of the Engineering Servicing Specifications would take place as part of the bylaw review.
- It may take up to a year and a half to complete the review and for the bylaw amendment to come to Council for consideration.
- A number of Advisory Committees may have a role in reviewing the bylaw.
- An end result may be a separate works and services bylaw.

The Motion to Refer was then Put and CARRIED

# THE CORPORATION OF THE DISTRICT OF SAANICH



# SUBDIVISION BYLAW 7452 - DECEMBER, 1995

Schedule H referred to in this Bylaw is available separately from the Land Development Division

## THE CORPORATION OF THE DISTRICT OF SAANICH

# **BYLAW NO. 7452**

## FOR REGULATING THE SUBDIVISION OF LAND

WHEREAS the Council may by bylaw regulate the subdivision of land, the area, shape, and dimensions of parcels of land and the dimensions, locations, design and construction of highways, works and services in order to promote orderly, efficient, economical and aesthetically pleasing development, to preserve the established amenities of the Municipality, and to ensure that subdivisions are suited to the use to which they are intended.

**THEREFORE** the Municipal Council of The Corporation of the District of Saanich enacts as follows:

# 1.0 TITLE

1.1 This bylaw may be cited as the "Subdivision Bylaw, 1995".

# 2.0 STANDARDS OF MEASURE

2.1 The equivalent Imperial units of measure shown in parenthesis after metric units are for information purposes only and do not form part of this bylaw.

# 3.0 **DEFINITIONS**

In this bylaw, unless the context otherwise requires,

APPLICANT means a person who has applied for approval of a proposed subdivision whether as the owner or as the agent for the owner of the land included therein.

APPROVING OFFICER means the person appointed by the Municipal Council to be the Approving Officer and includes the Deputy Approving Officer.

BOND means an irrevocable letter of credit, cash, or certified cheque.

COLLECTOR STREET means a street designated as a collector street in the Official Community Plan.

CONDITIONAL APPROVAL means that approval granted by the Approving Officer setting out conditions, including works and services which must be completed or agreed to prior to the granting of final approval.

CONTRACTOR means any person, persons, or corporation which shall undertake the installation of municipal services on behalf of either the applicant or the Municipality.

CUL-DE-SAC means a street which terminates with a vehicular turning area.

DIRECTOR OF ENGINEERING means the Director of Engineering of The Corporation of the District of Saanich or any employee authorized to act on his behalf.

DIRECTOR OF PARKS AND RECREATION means the Director of Parks and Recreation of The Corporation of the District of Saanich or any employee authorized to act on his/her behalf.

DOUBLE FRONTING LOT means a lot abutting two streets, neither of which is a flanking street.

FINAL APPROVAL means that approval granted by the Approving Officer when all relevant requirements of this bylaw, the <u>Land Title Act</u> and any other relevant bylaws and legislation have been fulfilled.

FRONTAGE means the front lot line.

FRONTAGE STREET means a street which is parallel and adjacent to a major street and which provides access to abutting properties.

HIGHWAY means a right-of-way dedicated for a street, path, walkway, trail, lane, bridge, road, thoroughfare, and any other public way.

JOG means a brief or abrupt change in direction.

LOCAL STREET and RESIDENTIAL ROAD means a street that generally carries light traffic volumes with an origin or destination along its length.

LOT WIDTH means the length of a straight line perpendicular to a straight line connecting the mid-point of the front and rear lot line and at a distance measured from the front lot line, equal to the minimum width requirement of the zone in which the parcel is located.

MAJOR STREET means a street designated as a major street in the Official Community Plan.

MANAGER OF INSPECTION SERVICES means the Manager of Inspection Services of The Corporation of the District of Saanich, or any person authorized to act on his behalf.

MEDICAL HEALTH OFFICER means the duly appointed senior health official of the Capital Regional District.

OWNER means a person registered in the books of the Land Title Office as owner of the land proposed to be subdivided.

PANHANDLE PARCEL means a parcel which requires a relatively narrow strip of land, or panhandle, which is an integral part of the lot, to provide the principal vehicular access to a street.

*PARCEL* means any lot, block, or other area in which real property is held or into which real property is subdivided but does not include a street or portion thereof.

PRELIMINARY PLAN means a dimensioned sketch or plan submitted with an application to subdivide.

PROFESSIONAL ENGINEER OR CONSULTING ENGINEER means a person who is registered or licensed as such under the provisions of the Engineers and Geoscientists Act of the Province of British Columbia.

PUBLIC UTILITY means any system having facilities installed in a right-of-way for the purpose of providing a service to property and shall include water distribution, sewage and drainage collection, street lighting, electric power distribution, telephone, cable television, and gas distribution systems.

RIGHT-OF-WAY means land or any interest in land acquired for the purpose of:

- a) public rights of passage with or without vehicles; or
- b) erecting and maintaining any pole-line; or
- c) laying, placing, and maintaining drains, ditches, pipes, transmission lines, or wires for the conveyance, transmission, or transportation of water, electric power, forest products, oil, or gas, or both oil and gas, or solids as defined in the Pipelines Act"; or
- d) the disposal of sanitary sewage, storm water or drainage;
- e) the operation and maintenance of the undertaking,

and shall include a Statutory Right-of-Way as defined in the "Land Title Act".

ROADWAY means the portion of a street that is improved, designed and used for vehicular traffic.

RURAL STREET means any street in an area designated in the Zoning Bylaw as an "A" zone located outside the Urban Containment Boundary which is not classified as a Collector or Major street.

RURAL ZONE means a zone designated in the Zoning Bylaw and described by an "A" zone classification, eg: A-1.

SERVICE LEVEL means the standard of service required for development of subdivisions.

STREET means a highway which affords the principal means of vehicular access to abutting lots, and includes a road or road allowance.

SUBDIVISION means the division of land into two or more parcels whether by survey plan or by metes and bounds description or otherwise.

SURVEYOR means a land surveyor licensed and registered as a land surveyor in the Province of British Columbia.

SURVEY PLAN means a fully dimensioned legal plan prepared by a surveyor submitted for final approval.

WALKWAY means a highway for the use of the walking public only, except that a walkway may be designed to afford emergency vehicle use.

WATER COURSE means any natural drainage course or source of water, whether usually containing water or not, and includes any lake, river, stream, creek, spring, ravine, swamp, gulch, or source of ground water whether open or enclosed.

WORKS AND SERVICES means the roadways, drainage, water and sewer systems, sidewalks, boulevards, street lighting and underground wiring or any other works to be provided for in a subdivision of land under this bylaw.

WORKS INSPECTOR means the municipal employee authorized by the Director of Engineering Services who shall, from time to time, make such inspections and tests of any work being carried out as he considers necessary and shall coordinate works being carried out within the municipality.

Unless otherwise defined herein, any word or expression in this bylaw shall have the meaning assigned to it in the <u>Local Government Act</u> or the <u>Land Title Act</u> if not defined in the <u>Local</u> Government Act.

## 4.0 GENERAL PROVISIONS

- 4.1 No land shall be subdivided within the Municipality unless the subdivision has been approved by the Approving Officer.
- 4.2 An application to subdivide shall be in the form prescribed by Section 6.0.
- 4.3 The Approving Officer may request further information from an applicant at any time.
- 4.4 The Approving Officer, the Director of Engineering Services, the Manager of Inspection Services, and any municipal employee acting under the authority of any one of them may, at all reasonable times, enter upon any property for the purpose of administering and enforcing this bylaw. No person shall prevent or obstruct, or attempt to prevent or obstruct, the entry of any authorized officials upon any property as authorized under this bylaw.

# 5.0 GENERAL PARCEL REQUIREMENTS

- 5.1 No land shall be subdivided having
  - (a) a width or an area less than the minimum prescribed in the Zoning Bylaw;
  - (b) a depth less than 27.5 metres (90.2 feet) for conventional lots and 30.0 metres (98.43 feet) for panhandle lots.
- 5.2 Notwithstanding Section 5.1, the Approving Officer may approve a plan of subdivision which creates a parcel or parcels which do not comply with the minimum parcel size or width requirements of the Zoning Bylaw where:
  - (a) two or more parcels are being consolidated and resubdivided, and
  - (b) the proposed subdivision will result in the same or a lesser number of parcels, and
  - (c) none of the parcels to be created by the subdivision is smaller in area or in width than the smallest of the existing parcels of land being subdivided, or
  - (d) at least one of the parcels in the proposed subdivision is within the Agricultural Land Reserve and the Provincial Agricultural Land Commission has approved the subdivision, in which case one of the new parcels may be smaller than the smallest existing parcel.

- 5.3 Notwithstanding Section 5.1, the Approving Officer may approve a plan of subdivision which creates a parcel or parcels which do not comply with the minimum parcel size or width requirements of the Zoning Bylaw, provided that at least one of the parcels is to be held by the Municipality or another level of government or public authority and,
  - i) the parcel is necessary to permit the orderly subdivision or servicing of adjacent lands in the future; or
  - ii) the parcel is for a Municipal or other public use.
- Notwithstanding Section 5.1, where a parcel is located in two zone districts, one of which is either rural or RS-18, the Approving Officer may approve a plan of subdivision which creates a residual parcel within the Rural Zone which does not comply with the minimum parcel requirements of the Rural Zone.
- 5.5 Double fronting residential parcels shall not be permitted unless it is impracticable to provide suitable alternatives or where specifically required by the Approving Officer.
- 5.6 Access from a street to the front building line of each parcel being created by subdivision must be practical and reasonable. The Approving Officer may require the applicant to provide a report from a qualified person indicating the feasibility of constructing a driveway at a grade not to exceed 15%.
- 5.7 Where unusual soil or drainage conditions exist or may develop within the land to be subdivided, the applicant may be required to furnish information, or to aid in the gathering of information, that will allow the Approving Officer to determine whether the area, shape and dimensions of parcels are adequate in view of the nature of the ground and the anticipated use of the land.
- 5.8 All existing buildings relative to a new boundary must be shown by a land surveyor on a plan or sketch to ensure compliance with the setback requirements of the Zoning Bylaw.
- 5.9 Where, on inspection, boundaries cannot be satisfactorily identified, the Approving Officer may require that the applicant have a proposed subdivision staked out on the ground by a surveyor.
- 5.10 Property lines of parcels which intersect a highway shall be at right angles or radial to the highway unless the Approving Officer is satisfied that it is impracticable to comply.

- 5.11.1 The minimum area requirements for panhandle lots in the RS-6, RS-6A, RS-8, RS-8A, RS-10, RS-10A, RS-10B, RS-11, RS-12, RS-12A, RS-12B, and RS-CH1, and RS-CH2, zones excludes the area contained within the access strips.
- 5.12 Notwithstanding Section 5.1, the Approving Officer may approve a plan of subdivision of a parcel which is in the A-7 zone which does not comply with the minimum parcel requirements of the Zoning Bylaw if:
  - i) the parcel to be subdivided is separated into two parts by a highway or another lot, and
  - ii) the parcel is to be subdivided into two lots corresponding to the two parts referred to in i), and
  - iii) each lot shown on the plan is greater than 2,500 m<sup>2</sup> (26,910 ft<sup>2</sup>).
- 5.13 The power to exempt a parcel, other than a panhandle parcel, from the minimum frontage requirement under Section 944 of the Local Government Act or any successor legislation, is delegated to the Approving Officer.

# 6.0 CONDITIONAL APPROVAL

- 6.1 Every application for conditional approval of a subdivision shall be made by the registered owner or by his authorized agent.
- 6.2 All applications shall be submitted on the appropriate forms to the Planning Department and shall be accompanied by the fee imposed under the "Land Use and Development Application Fee Bylaw, 1998, No. 7832", any amendments thereto or any successor bylaws.
- An application for a subdivision shall be accompanied by twelve copies of a sketch plan drawn to a scale of 1:500, unless otherwise directed by the Approving Officer, prepared by a surveyor or other qualified person showing the following information:
  - a) the boundaries of all adjacent parcels and the relationship of the proposed subdivision to at least one street intersection;
  - b) the layout, dimension, and alignment of all parcels and highways;
    - c) topographical information as required by the Approving Officer;
    - d) the location, dimension and size of all buildings which will remain after subdivision

- e) the location, species, dripline and size of all trees protected by "The Tree Preservation Bylaw, 1997, No. 7632", and amendments thereto or any successor bylaws, and where required by the Approving Officer the location, species, dripline and size of all mature trees within the area to be subdivided.
- f) the location of any water courses within the land to be subdivided.
- Where an application for subdivision indicates further subdivision or rezoning of the land within the proposed subdivision or of any adjacent land, the Approving Officer may require the applicant to furnish a sketch plan showing the ultimate subdivision indicating how the application fits into the ultimate subdivision.
- 6.5 Conditional approval is valid for a period of one year. If the final approval has not been granted within that period, the application must be resubmitted and it shall be considered as a new application subject to any change in conditions, bylaws or policies that may have occurred.
- 6.6 Conditional approval shall not be construed as final approval of a subdivision.

# 7.0 DESIGN AND INSTALLATION OF WORKS AND SERVICES

- 7.1 Every owner of land proposed for a subdivision shall provide, locate and construct at his own expense, such highways, sidewalks, boulevards, boulevard crossings, transit bays, streetlighting, underground wiring, water distribution system, fire hydrant system, sewage collection system and drainage disposal system within the subdivision, and on the highway or highways immediately adjacent to the land being subdivided as required by Schedules A, B, C, D, E, F, G, H, and I of this bylaw.
- 7.2 The owner shall retain, at his expense, a professional engineer who shall design the works and services required and in accordance with the terms and conditions of Schedule H.
- 7.3 All works and services required to be installed at the owner's expense under this bylaw shall be constructed and installed to the standards prescribed under this bylaw prior to final approval of the subdivision by the Approving Officer, unless the owner of the land:
  - (a) Deposits within the Municipality a bond, in a form satisfactory to the Approving Officer, in the amount of 120% of the estimated cost of the works and services; and

(b) Enters into a Subdivision Servicing Agreement with the Municipality to construct and install the required works and services by a specified date or forfeit the amount secured by the bond.

# 7.4 The owner shall, prior to final approval,

- (a) Enter into a written agreement with the Municipality to rectify any deficiencies in design, materials or workmanship that may arise in connection with the works and services during the twelve months next following the assumption of responsibility for the works and services by the Municipality. The length of the warranty period may be increased at the direction of the Director of Engineering Services; and
- (b) Deposit with the Director of Engineering Services a bond in the amount of 5% of the estimated cost of the works and services, or \$500 whichever is the greater, in a form satisfactory to the Director of Engineering Services as a guarantee of performance under this agreement.
- (c) Pay an administration and inspection fee equal to 4.5% of cost estimates acceptable to the Municipality of the construction of any works and services required by any Municipal Bylaw pursuant to Section 931 of the Local Government Act or Sections 12 and 13 of the Bare Land Strata Regulations under the Strata Property Act.
- 7.5 Where water, drainage, or sewage systems required for the subdivision are not within a highway, the owner of the proposed subdivision shall grant to the Municipality a right-of-way acceptable to the Director of Engineering Services in accordance with the Municipality's standard Right-of-Way Agreement.
- 7.6 Where water, drainage or sewage systems required for the subdivision must cross over privately owned land outside the subdivision, the owner shall be responsible for obtaining the consent of the owner of such land to grant to the Municipality a right-of-way permitting the installation and repair of such services, in accordance with the Municipality's standard Right-of-Way Agreement.

## 8.0 FINAL APPROVAL

- 8.1 Final approval shall not be granted until the conditions for the installation of works and services as specified by Schedule H have been fulfilled.
- 8.2 The survey plan shall conform substantially to the plan granted conditional approval but, subject to the agreement of the Approving Officer, it may include only a portion of the lands included in the conditional approval.

- 8.3 Where a survey plan is not required, the applicant shall provide the Approving Officer with a clear, written description of the proposed method of subdivision accompanied by a sketch or plan showing the correct dimensions and legal description of the parcel being subdivided.
- 8.4 The survey plan, or description in lieu thereof, shall be accompanied by:
  - (a) an examination fee as prescribed by the regulations to the Land Title Act;
  - (b) a State of Title Certificate for each parcel of land included in the subdivision;
  - (c) an S-1 Form indicating that all property taxes have been paid; and
  - (d) six paper prints, a duplicate mylar and digital file based on standards set out by the Surveyor General Branch of the survey plan if the subdivision is being done by plan.
- 8.5 When a survey plan is not required, the Approving Officer shall sign and date the plan in accordance with the Land Title Act and shall return the plan to the surveyor. Final approval is valid for a period of 60 days and if the subdivision is not registered within that period, it must be submitted for reapproval accompanied by the fee imposed under the "Land Use and Development Application Fee Bylaw, 1998, No. 7832", any amendments thereto and any successor bylaws.
- 8.6 If the survey plan is rejected, the applicant shall be advised in writing and the reasons for rejecting the subdivision shall be given. If a survey plan was tendered with the application it shall be returned to the applicant unsigned, less the paper copies required by Section 8.4(d).

## 9.0 SCHEDULES

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

SCHEDULE A:	Service Levels
SCHEDULE B:	Standards for street configurations
SCHEDULE C:	Standards for clearing, grading, draining and surfacing
	streets
SCHEDULE D:	Standards for street lighting and underground wiring
SCHEDULE E:	Standards for water distribution systems
SCHEDULE F:	Standards for storm water collection systems
SCHEDULE G:	Standards for sanitary sewage collection systems
SCHEDULE H:	Saanich Engineering Servicing Specifications
SCHEDULE I:	Standards for the Installation of Boulevard Street Trees

# 10.0 REPEAL

10.1 Bylaw No. 5805, being the "Subdivision By-law, 1987" and amendments thereto, are hereby repealed except insofar as they may repeal any other bylaw.

# 11.0 EFFECTIVE DATE OF BYLAW

Read a first time this 4th day of December, 1995

Read a second time this 4th day of December, 1995

Read a third time this 4th day of December, 1995

Adopted by Council, signed by the Mayor and Clerk and sealed with the Seal of The Corporation on the 11<sup>th</sup> day of December, 1995.

"CARRIE M. MacPHEE"	"FRANK LEONARD"
Clerk of The Corporation of the	Mayor
District of Saanich	

**SCHEDULES** 

# **SCHEDULE A - SERVICE LEVELS**

# **SCHEDULE A - SERVICE LEVELS**

				Servic	e Level	s*		
Classification	Zone	All Subdivisions						
a company of the last of	and the same of th	Wtr	Drn	Swr	Str	Lght	U/W	
RURAL	RURAL A				1	c §1,500	none	
SINGLE FAMILY	2	2	2	2	2	2		
	RS-14, RS-14A, RS-15	2	2	2	2	1	2	
	RS-16	2	2	1	2	1	2	
and the second second	RS-18	1	1	1	1	1 1	2	
TWO FAMILY	RD	2	2	2	2	2	2	
MULTI-FAMILY	CD-1RO, RA, RC, RM, RP, RT	2	2	2	2	2	2	
COMMERCIAL			2	2	2	2	2	
	C-13	1	1	1	2	1	2	
INDUSTRIAL	M-1 to M-3 inclusive, M-5, M-7	2	2	2	2	2	2	
	M-4	2	2	1	2	2	2	
INSTITUTIONAL	MFI, P-1, P-1A, P-1R, P-1U, P-3, P-6, P-7, P-11, P-12, P-13	2	2	2	2	2	2	
	P-2, P-2WL, P-5, P-9, P-10	1	1	1	1	1	none	
¥	P-4, P-4H, P-4HR, P-4N	1	1	1	2	1	none	

SERVICE LEVELS

WTR: WATER DRN: DRAINAGE SWR: SEWER STR: STREETS

LGHT: STREET LIGHTING U/W: UNDERGROUND WIRING

1 - SERVICE LEVEL 1
2 - SERVICE LEVEL 2

# ACCESS REQUIREMENTS FOR PANHANDLE LOTS -

WIDTH OF ACCESS STRIP - 4.0 M (13.1 FT), EXCEPT WHERE THE ACCESS LENGTH EXCEEDS 37.5 M (123 FT), THE WIDTH MUST BE INCREASED TO 6 M (19.7 FT) - WHERE TWO PANHANDLE LOTS ARE BEING DE VELOPED TOGETHER AND WHERE ACCESS STRIPS ARE ADJOINING THE MINIMUM WIDTH OF EACH ACCESS STRIP CAN BE REDUCED TO 3.0 M (9.8 FT) PROVIDED RECIPROCAL RIGHTS-OF-WAY WILL BE REGISTERED.

# **SCHEDULE B**

### STANDARDS FOR STREET CONFIGURATIONS

- 1. Major and collector streets are to be continued without jogs through the area being subdivided. Collector streets shall have a width of 20 metres (65.6 feet). Major streets shall have a width deemed appropriate by the Approving Officer for the particular street involved.
- 2. Local streets shall conform in alignment to existing adjacent streets, where practicable, and shall have a width in accordance with the specifications of Schedule H.
- 3. Cul-de-sac streets shall be provided at the closed end with an area designated to permit safe and adequate space for turning of motor vehicles. Provision shall be made in the turning area for a landscaped island unless the Approving Officer is satisfied that it is impractical to comply. A parking island shall be provided in the turning area to accommodate street parking on the basis of one stall for each parcel around the turning area where the parcel has an area of less than 800 m<sup>2</sup> (8,611 ft<sup>2</sup>), and a curb frontage which measures less than 9 metres (29.6 feet).
- 4. The property line radius of turning areas at the end of cul-de-sac streets shall be:
  - (a) 12 metres (39.4 feet) with no island;
  - (b) 14 metres (45.9 feet) with a standard island; or
  - (c) 15 metres (49.2 feet) with a parking island.
- 5. Intersecting street boundaries shall be rounded to a 6 metre (19.7 feet) radius curve if:
  - (a) one of the intersecting streets is 15 metres (49.2 feet) or less in width;
  - (b) one or both intersection streets are considered to be major or collector streets; or
  - (c) the interior angle at the street intersection is 80° or less.
- 6. Jogs in street alignment at intersections shall be permitted, provided the distances between centre lines at the jog is a minimum of 80 metres (262.5 feet), unless it is impractical to comply because of the existing street configuration.
- 7. Where bends occur in an existing street alignment, the angle shall be replaced by an appropriate curve.
- 8. Reversed curves in street alignment shall be separated by tangents.
- 9. Streets are to be laid out with due regard to the topography so as to avoid flat or excessive grades.
- 10. Intersecting streets shall meet substantially at right angles, unless the Approving Officer otherwise requires or permits. In no case shall streets intersect at any angle of less than 70°.

# **SCHEDULE C**

# STANDARDS FOR CLEARING, GRADING, AND SURFACING STREETS

### 1.0 CLEARING AND GRADING

1.1 The entire area of all streets shall be brought to the designed grades and shapes. All unsuitable material shall be removed and replaced or otherwise dealt with in accordance with the specifications of Schedule H.

## 2.0 SURFACING

#### 2.1 Sidewalks

# 2.1.1 Scope

Permanent sidewalks shall be installed on each side of all major streets and on one side of all collector streets, in accordance with the specifications in Schedule "H".

# 2.1.2 Material, Width and Construction

Sidewalks shall be 1.5 metres (4.9 feet) in width and constructed of cement concrete pavement, in accordance with the specifications of Section "H".

# 2.2 Walkways

# 2.2.1 Scope

Walkways not less than 2 metres (6.6 feet) wide shall be dedicated where, in the opinion of the Approving Officer, they are essential to provide circulation or access to schools, playgrounds, shopping centres, transportation, beaches, and other community facilities, or for proper circulation of pedestrian traffic.

# 2.2.2 Material, Width, and Construction

Service Level 2 requires a paved width of 2 metres (6.6 feet) constructed of cement concrete pavement, in accordance with the specifications of Schedule "H".

# 2.2.3 Fencing

Service Level 2 requires that a fence, 1.5 metres (4.9 feet) shall be erected on both sides of a walkway, in accordance with the specifications of Schedule "H".

## 2.3 Paved Streets

# 2.3.1 Scope, Service Level and Materials

- (a) Service Level 1 requires machine laid asphalt with 1 metre (3.3 feet) gravel shoulders in accordance with the specifications of Schedule "H".
- (b) Service Level 2 requires machine laid asphalt or cement concrete pavement with curbs. Construction shall be in accordance with the specifications of Schedule "H".

#### 2.3.2 Curbs

Curbs shall be of concrete integral with either a concrete gutter or a cement concrete pavement roadway. Curb dimensions and construction shall conform to the specifications of Schedule "H".

# 2.3.3 Required Width of Paving

The width of paving shall be as shown in the following table:

	STREET SERVICING		
	Service Level 1	Service Level 2	
5. 8	All Uses	Single Family & Two Family Dwelling Uses	Multiple Dwelling, Commercial, Industrial, Institutional Uses
Local Streets	5 metres (16.4 feet)	8.5 metres (27.9 feet)	11 metres (36.1 feet)
Collector Streets	none	11 metres (36.1 feet)	11 metres (36.1 feet)

- 2.3.4 (a) Where a highway or highways exist adjacent to the proposed subdivision but no developed street exists, or the existing street does not meet the width or construction standards set out in this Bylaw, or an existing street lacks underground wiring or street lighting services, a street, together with underground wiring and street lighting shall be constructed, installed, improved, upgraded, or widened along that portion of the highway or highways immediately adjacent to the lands being subdivided in accordance with Table 1.
  - (b) The requirement in the preceding Subsection (a) shall not apply to a highway where:
    - (i) no works or services of the same or comparable standard have been installed or constructed on any other portion of the highway, and,

- (ii) no present engineering plans exist for the upgrading or construction of such works and services in the future by Municipal crews or subdividers.
- (c) In cases where an owner is required to construct, improve, upgrade or widen less than the full designed width of the street, the improvements shall be installed for the prescribed width measured from the edge of the pavement or curb of the designed road nearest to the proposed subdivision.
- (d) Notwithstanding section 2.3.4(a), street improvements will be required in all cases where existing pavement standards are less than 6.0 metres in width complete with water control for all service level 2 areas, and 5.0 metres in width with 1.0 metre shoulders for all service level 1 areas.
- 2.3.5 Unless required by section 2.3.4 to upgrade or widen the pavement to a higher standard, road improvements shall consist of upgrading the existing pavement to the minimum standards set out in section 2.3.4(d).

**TABLE I** 

	ZONES	ZONES	ZONES
	A, RS-18, P-2, P-2WL, P-5, P-9, P-10	RS-1 to RS-16 inclusive, RS-CH1, RS-CH2, RS-CR, RS-EL, RS-F, RS-MF, RD	RA, RC, RM, RP, RT, C, CD-1RO, CD-2MV, CD-3GA, M, P-1, P-1A, P-1R, P-1U, P-3, P-4, P-4H, P-4HR, P-4N, P-6, P-7, P-11, P-12, P-13, MFI, MFC-CH
LOCAL	5m Rural Street Standards [Schedule H, SD-R-4*]	6m of a 8.5 m Residential Standard Street [Schedule H - SD-R-1*]	7m of an 11m Residential (RC, RT, RM, RA, RP) Standard Street [Schedule H - SD-R-1-A*‡] or 7m of an 11 m Collector Street (C, CD-1RO, CD-2MV, CD-3GA, M, P-1, P-1A, P-1R, P-1U, P-3, P-4, P-4H, P-4HR, P-4N, P-6, P-7, P-11, P-12, P-13, MFI, MFC-CH)
COLLECTOR	41	6m of an 11m Collector Street [Schedule H - SD-R-2‡]	7m of an 11m Collector Street [Schedule H - SD-R-2‡]
MAJOR		7m of a 14m Major Street [Schedule H - SD-R-3‡] or one-half, whichever is greater	7m of a 14m Residential Street [Schedule H - SD-R-3‡] or one-half of the overall width, whichever is greater

<sup>\*</sup> In cases where the street terminates or will terminate within the frontage, an appropriate turnaround must be constructed at the terminus. Refer to SD-R-7 in Schedule "H".

<sup>‡</sup> Concrete sidewalk is required.

# **SCHEDULE D**

# STANDARDS FOR STREET LIGHTING AND UNDERGROUND WIRING

# 1.0 SCOPE AND SERVICE LEVEL

- 1.1 Service Level 1 does not require underground wiring.
- 1.2 Service Level 2 requires underground wiring.
- 1.3 Service Level 1 requires street lighting at intersections and turning areas only, except streetlights will not be required in areas designated not to have street-lights
- 1.4 Service Level 2 requires street lighting along all streets.

## 2.0 DESIGN AND INSTALLATION

- 2.1 Street lighting shall be designed and installed by the municipality at the owner's expense in accordance with specifications of Schedule "H".
- 2.2 Except for lots which can be served directly from an existing pole line, underground wiring shall be installed by the owner to provide sufficient underground wiring and appurtenances from the existing wiring system to provide each lot in the subdivision with an adequate supply of electrical power, telephone, cable and telecommunications in accordance with the design, approval and inspection requirements of the appropriate utility company.

# **SCHEDULE E**

### STANDARDS FOR WATER DISTRIBUTION SYSTEMS

## 1.0 SCOPE AND SERVICE LEVEL

- 1.1 Service Level 1 requires a connection to the Municipal water system, or, if not available, requires confirmation from a professional engineer that each lot has the capability to supply 3400 litres (748 gallons) per day from a well.
- 1.2 (a) Service Level 2 requires that each lot shall be connected to the existing Municipal water system.
  - (b) Where a highway exists adjacent to the proposed subdivision but no watermain has been installed, the main shall be installed along the frontage of the subdivision and connected to the existing Municipal water system.

# 2.0 DESIGN

- 2.1 Watermains and appurtenances shall be designed in accordance with the locations and sizes required by Schedule "H" and shown on a plan approved by the Director of Engineering Services.
- 2.2 The locations of the watermains shall be within a street unless otherwise approved by the Director of Engineering Services.

## 3.0 CONSTRUCTION

3.1 Watermains and appurtenances shall be laid in accordance with the specifications of Schedule "H".

# **SCHEDULE F**

## STANDARDS FOR STORMWATER COLLECTION SYSTEMS

## 1.0 SCOPE AND SERVICE LEVEL

- 1.1 Service Level 1 requires a drainage system where existing soil or site conditions make a drainage system necessary to protect the established amenities of adjoining properties or streets. Where a drainage system is required a ditch will be permitted which may flow to a watercourse or other ditch acceptable to the Approving Officer.
- 1.2 (a) Service Level 2 requires an enclosed storm drain system installed by the owner complete with service connections to serve all parcels and streets being created by subdivision at a depth of capacity sufficient to serve the subdivision. The system shall discharge to a watercourse, ditch, or enclosed drain acceptable to the Approving Officer.
  - (b) Where a highway exists adjacent to the proposed subdivision but no drain main has been installed, the mains shall be installed along the frontage of the subdivision and connected to the acceptable outlet.
- 1.3 Service Level 2 requires that any watercourse flowing through the subdivision shall be enclosed unless:
  - (a) the pipe size would exceed 90 cm (3.0 ft); and
  - (b) an agreement will be entered to ensure that no building will be constructed within 7.5 m (24.6 ft) from the edge of the watercourse.
- 1.4 Service Level 2 requires that any flow of surface water from adjoining land or from the subdivision land shall be maintained naturally along the existing ground surface or, if concentrated in any way, shall be intercepted and connected to an enclosed drain system.

## 2.0 DESIGN

- 2.1 Designs shall be in accordance with the specifications of Schedule "H" and the drainage system in the subdivision shall be fully integrated with the systems in adjoining areas.
- 2.2 Designs and plans shall be approved by the Director of Engineering Services prior to construction.

# 3.0 RIGHTS-OF-WAY

3.1 Where a subdivision subject to Service Level 2 is traversed by a watercourse or drainage ditch, a drainage right-of-way shall be provided along such watercourse or drainage ditch or its or their planned alignment to a width deemed necessary by the Approving Officer for construction, maintenance, conservation or beautification purposes.

# **SCHEDULE G**

## STANDARDS FOR SANITARY SEWAGE COLLECTION SYSTEMS

#### 1.0 SCOPE AND SERVICE LEVEL

- 1.1 Service Level 1 requires that each lot shall be capable of being provided with a conventional septic tank and disposal field to meet the requirements of Provincial Health Regulations.
- 1.2 (a) Service Level 2 requires that a sanitary sewage collection and disposal system complete with service connections shall be installed by the owner to serve all lots being created by the subdivision and shall connect to the municipal sewerage system.
  - (b) Where a highway exists adjacent to the proposed subdivision but no sewer main has been installed, the main shall be installed along the frontage of the subdivision and connected to the acceptable outlet.
- 1.3 No subdivision within the Sewer Service Area shall be approved until the Director of Engineering Services has confirmed to the Approving Officer that sewers will be available to serve the parcels to be created by the subdivision within 90 days after approval of the final survey plan.

## 2.0 DESIGN

- 2.1 The designs of a sewer system shall be in accordance with the specifications of Schedule "H" and the sewer system in the subdivision shall be fully integrated with the systems in adjoining areas.
- 2.2 Designs and plans shall be approved by the Director of Engineering Services prior to construction.

# 3.0 CHARGES

3.1 Land included in any subdivision in which a sewage collection and disposal system has been installed at the cost of the owner shall be exempt from the charges imposed by the Municipality for the capital cost of works of a like nature, and all such land shall be exempt from such charges for a period of twenty (20) years.

## 1. INTRODUCTION

- 1.1 Contents of Engineering Specifications
  - 1.1.1 The Engineering Specifications contains the following sections:

#### 1. Introduction

- **2. General Specifications** outline the requirement to provide works and services in the Municipality and the process to be followed in providing them.
- 3. Design Specifications provide the requirements for the preparation of design drawings, including drafting specifications, as well as the technical aspects of the various types of works and services.
- 4. Construction Specifications provide detailed information on materials and construction methods in the provision of works and services. The Municipality has adopted the *Master Municipal Construction Document (MMCD)* as the principal construction specification, and the *Engineering Specifications* provide information supplemental to the MMCD, including Municipal Supplemental Standard DetailDrawings.
- 1.2 Relationship of Engineering Specifications to other Specifications, Standards, and Bylaws
  - 1.2.1 The level of services to be provided for subdivisions shall be as per the *Subdivision Bylaw*, 7452, *September 2001*, or its latest version.
  - 1.2.2 The Engineering Specifications are Schedule H to the Subdivision Bylaw and as such they apply to the design and installation of sanitary sewers, storm drains, waterworks, roadways, sidewalks, street lighting, and other works and services within and servicing new fee-simple subdivisions in the Municipality, and within Municipal road allowances, municipal rights of way or municipal properties.
  - 1.2.3 No departure from the *Engineering Specifications* shall be permitted without the prior written approval of the Municipality.

# 2. GENERAL SPECIFICATIONS AND DEVELOPMENT PROCEDURES

#### 2.1 Definitions and Conventions

2.1.1 Unless otherwise defined herein, any word or expression in this document shall have the meaning assigned to it in the *Subdivision Bylaw*, the *Zoning Bylaw*, the *Local Government Act* or the *Land Title Act*, in that order of precedence.

**APPLICANT** means a person who has applied for approval of a proposed subdivision, whether as the owner or as the agent for the owner of the land included therein, or a person who has applied for approval of a building permit, whether as the owner or as the agent for the owner, for a development for which there is a requirement to construct works within municipal road allowances, municipal rights of way or municipally owned properties.

**CONSULTING ENGINEER** means a Professional Engineer, registered in the Province of British Columbia, experienced in the field of Municipal Engineering, or their authorized representative, who is retained by the Applicant.

MASTER MUNICIPAL CONSTRUCTION DOCUMENTS or MMCD means the Specifications and Standard Detail Drawings of the latest version of the *Master Municipal Construction Document, Volume 2, Printed 2000*, published by the Master Municipal Construction Documents Association, as amended from time to time and includes any successor document.

**MUNICIPAL or MUNICIPALITY** means the Corporation of the District of Saanich or the Director of Engineering Services or any employee authorized to act on the Director of Engineering Services' behalf.

**TAC MANUAL** means *Geometric Design of Canadian Roads*, Transportation Association of Canada, September 1999, as amended from time to time and includes any successor document.

**TAC URBAN SUPPLEMENT** means *Urban Supplement to the Geometric Design of Canadian Roads*, Transportation Association of Canada, April 1995, as amended from time to time and includes any successor document.

- 2.1.2 The words "shall" and "must" and "is required" indicate the imperative. The word "should" indicates the desired or intended result without being mandatory. The word "may", and like expressions, indicate a choice, an election, or a permitted procedure, according to the context.
- 2.1.3 The headings and sub-headings in this document are for the convenience of the reader only. The intent of each part shall be as stated in the text.

### 2.2 Consulting Engineer

- 2.2.1 As required by the *Subdivision Bylaw*, all works and services shall be designed and inspected during construction by a Consulting Engineer.
- 2.2.2 The Applicant will be required to submit a letter confirming that an Engineer /Client Agreement is in force and outlining the level of engineering services to be provided. The Agreement should be in accordance with the recommendations of the Association of Professional Engineers and Geoscientists of BC and the Consulting Engineers of BC. At the least, the Agreement shall provide for the level of engineering services required in this specification.

- 2.2.3 The Consulting Engineer shall be responsible for design, layout, approval of materials, field reviews of installation, communication with the Contractor, and preparation of as-constructed record drawings, for all services which are the responsibility of the Applicant. Approval of the design drawing by the Municipality is only to ensure general conformance with the Subdivision Bylaw and the Engineering Specifications. The Consulting Engineer is solely responsible for the appropriateness of the design in all aspects.
- 2.2.4 Engineering Field Reviews shall consist of general and sufficient resident inspection to ensure that the works and services are constructed in accordance with the approved design drawings. "Sufficient inspection" shall range from a minimum of one site visit per day during construction to full time resident inspection for major developments. The Consulting Engineer shall submit copies of inspection reports, when requested, to the Works Inspector.
- 2.2.5 In addition to the Consulting Engineer carrying out field reviews, the Works Inspector may periodically inspect the work for general conformance to the specifications, and will assist in co-ordinating subdivision construction with any related works to be done by the Municipality. Inspection by the Municipality of any aspect of the Works will not relieve the Applicant of the responsibility to ensure that the Works undertaken by their Contractor are in accordance with the *Engineering Specifications*.
- 2.2.6 The Works Inspector may bring to the attention of the Consulting Engineer the use of unacceptable materials or practices. If satisfactory remedial action is not taken, the Director of Engineering Services may issue instructions to the Consulting Engineer to have the Applicant's Contractor cease construction until remedial action is taken.
- 2.2.7 If the Consulting Engineer wishes to make any changes to an approved design, either before or during the execution of the work, they shall first submit a marked print showing proposed revisions to the Director of Engineering Services. If approval is granted for the revision, the original drawing shall be immediately revised by the Consulting Engineer, signed by the Director of Engineering Services, and new prints issued. These two operations may be carried out simultaneously.
- 2.2.8 The Consulting Engineer and the Applicant should be aware that Municipal employees must adhere strictly to Workers Compensation Board regulations. If Inspectors or other Municipal employees are unable to perform their duties due to working conditions which are unsafe for them, delays in approvals or municipal work may result.

#### 2.3 Circulation and Approval of Design Drawings

- 2.3.1 The steps to be undertaken to have design drawings approved generally include:
  - Preliminary Drafting Check by the Consulting Engineer
  - Circulation within the Municipality
  - Revisions as required by the Consulting Engineer
  - Submission of Design Drawing Approval Package by the Consulting Engineer.
  - Preparation of estimates by the Director of Engineering Services for works and services to be done by the Municipality.
  - Preparation of Financial Terms and Conditions (FTC) by the Director of Engineering Services
  - Issuance of Design Approval
  - Payment of Fees and Charges by the Applicant

## 2.3.2 Preliminary Drafting Check

- 2.3.2.1 Design Drawing Numbers shall be obtained from the Municipal Drafting Department prior to the circulation submission
- 2.3.2.2 A Municipal Preliminary Check Sheet shall be completed and submitted with the circulation submission.

### 2.3.3 <u>Circulation</u>

- 2.3.3.1 Circulation submissions shall be eleven (11) full sets of design drawings.
- 2.3.3.2 The drawings will be checked by the Director of Engineering Services upon receipt for obvious deficiencies and will be returned to the Consulting Engineer if required.
- 2.3.3.3 After circulation within the Municipality, a comment sheet is compiled and a Design Drawing Approval Form is prepared, indicating revisions to be done before approval will be considered. These are returned to the Consulting Engineer for revisions to the design as required.

## 2.3.4 <u>Design Drawing Approval Package</u>

- 2.3.4.1 Among other items, the Approval Package submitted by the Consulting Engineer shall include:
  - Original design drawings on vellum.
  - A letter regarding the Engineer/Client Agreement as noted in a previous section of these specifications.
  - The registerable plan of subdivision.
  - Copies of any rights of way or easements required for the works and services.
  - Any approvals and/or permits from senior governments
  - An estimate of the cost of the works to be done by the Applicant.
  - Drainage calculations if applicable.
- 2.3.4.2 If any trees are to be removed from Municipal property, approval of Council will be required before the Design Approval can be issued.

## 2.3.5 Financial Terms and Conditions and Design Approval

- 2.3.5.1 The Financial Terms and Conditions (FTC) sheet will be prepared by the Director of Engineering Services and will include all fees and charges such as: fees for work to be done by the Municipality, development cost charges, etc.
- 2.3.5.2 The FTC will include information as to the amount of the security deposits required for early registration as per the *Subdivision Bylaw*. The cost estimate prepared by the Consulting Engineer, after review by the Director of Engineering Services, forms the basis of the security deposit amounts.
- 2.3.5.3 The approved Design Drawings and the FTC will be returned to the Consulting Engineer and a copy of the FTC will be sent to the Applicant.

### 2.4 Works and Services Installation

- 2.4.1 The following steps shall be carried out <u>prior to start of construction</u> of the Works and Services:
  - 2.4.1.1 Design Drawings shall be approved by the Director of Engineering Services.
  - 2.4.1.2 The Consulting Engineer shall make arrangements to inspect the site of the work in the company of a Works Inspector, such inspection to occur at least 24 hours prior to start of construction. The Works Inspector will indicate what works they must inspect and what their availability is for inspections.
  - 2.4.1.3 A permit must be obtained from the Director of Engineering Services to work on a Municipal road allowance and/or rights-of-way.
  - 2.4.1.4 Works to be carried out by Municipal forces are subject to prepayment of the costs. A minimum three weeks must be allowed after payment for preparation of work orders and scheduling of the work.
  - 2.4.1.5 Payment must be made to the Municipality for the supply of hydrants, water valves and water flush valves assemblies. The Applicant's Contractor shall pick up these items at the Municipal Works Yard.
  - 2.4.1.6 Blasting will be allowed only after securing a permit from the Municipality.
- 2.4.2 If any work proceeds without Municipal inspection, the Director of Engineering Services may require the works to be exposed for an inspection. Inspection by the Municipality of any aspect of the Works will not relieve the Applicant of the responsibility to ensure that the Works undertaken by their Contractor are in accordance with the Engineering Specifications.
- 2.4.3 Every effort must be made to protect boulevard trees from harm during service installation. No tree root over 50 mm in diameter may be cut or damaged on any tree on Municipal property. No tree may be removed unless it is shown as such on the approved Design Drawing.
- 2.4.4 A copy of the approved Design Drawing and the *Engineering Specifications*, including the *MMCD*, shall be maintained by the Contractor at the construction site at all times during the installation of all services.
- 2.4.5 Underground subdivision services shall not be permitted to operate as part of existing Municipal services until the respective subdivision services have been inspected, tested and approved in writing by the Director of Engineering Services.
- 2.4.6 The Municipality shall make all necessary connections or alterations to existing watermains, sanitary sewers, and storm drains at the Applicant's expense.
- 2.4.7 The Municipality shall install all required street lighting at the Applicant's expense. The Applicant's contractor shall coordinate the work with the Municipality.

## 2.5 Testing of Works and Services

2.5.1 Works and services shall be tested in accordance with the relevant sections of the *Construction Specifications* of this document.

## 2.6 Approval for Registration of a Subdivision or Issuance of a Building Permit

- 2.6.1 If the Applicant wishes early registration of the subdivision plan or issuance of a Building Permit prior to service installation, they shall, among other things, complete or provide the following:
  - 2.6.1.1 A Development Servicing Agreement between the Applicant and the Municipality.
  - 2.6.1.2 A Warranty Agreement.
  - 2.6.1.3 A State of Title Certificate for each legal parcel involved. Legal descriptions and references to ownership on all documents must conform exactly to that appearing on the State of Title Certificate(s).
  - 2.6.1.4 A certified cheque or irrevocable letter of credit equal to 120 percent of the deposit total indicated in Part A, Deposit Form F.T.C.-1 (Financial Terms of Conditions). Irrevocable letters of credit will not be accepted for deposit totals less than \$3,000.00.
  - 2.6.1.5 Payment by cheque or cash for the works to be installed by Municipal forces as indicated in Part B, Payments, Form F.T.C.-1.
  - 2.6.1.6 Payment by certified cheque or cash of Development Cost Charges as indicated in Part C, Form F.T.C.-1, when such charges are authorized by a Development Cost Charge Bylaw.
- 2.6.2 If the Applicant chooses to install all the required Works and Services prior to subdivision registration or building permit issuance, they shall, among other things, complete or provide the following:
  - 2.6.2.1 As-constructed record drawings, prepared in accordance with Section 3.3 As-Constructed Record Drawings, approved by the Director of Engineering Services.
  - 2.6.2.2 A Warranty Agreement and bonding as per Section 7.4 of the Subdivision Bylaw.
  - 2.6.2.3 State of Title Certificates for each legal parcel involved shall be delivered to the Municipality. Legal descriptions and references to ownership on all documents must conform exactly to that appearing on the State of Title Certificate(s).
  - 2.6.2.4 Payment by cheque or cash for the works to be installed by Municipal forces as indicated in Part B, Payments, Form F.T.C.-1.
  - 2.6.2.5 Payment by certified cheque or cash of Development Cost Charges as indicated in Part C, Form F.T.C.-1, when such charges are authorized by a Development Cost Charge Bylaw.

#### 2.7 Release of Security Deposits During Construction

- 2.7.1 The Director of Engineering Services may release a portion of any deposit for work requiring an extended period to construct, provided that:
- 2.7.2
- 2.7.2.1 The Consulting Engineer certifies in writing the extent and value of work completed, as well as itemizing the outstanding work and cost of same (including outstanding engineering fees for as-constructed record drawings submission if

applicable), and certifies that the completed works meet the specifications of the Municipality.

- 2.7.2.2 The Director of Engineering Services is satisfied that the work to date is acceptable.
- 2.7.3 Deposits may be released according to the following schedule:
  - 2.7.3.1 If the total estimated value of construction is less than \$10,000.00, no releases will be permitted.
  - 2.7.3.2 If the total estimated value of construction is \$10,000.00 or greater, but less than \$100,000.00, up to 75% of the deposit may be released.
  - 2.7.3.3 If the total estimated value of construction is \$100,000.00 or greater, up to 85% of the deposit may be released.

# 2.8 <u>Municipal Acceptance of Works and Services</u>

Acceptance of the works and services by the Municipality requires the following:

## 2.8.1 As-Constructed Record Drawings

2.8.1.1 As-constructed record drawings will be checked by the Director of Engineering Services for deficiencies, drafting requirements, agreement with the site layout, and adherence to the *Engineering Specifications*. If the drawings are unacceptable, a correction list will be prepared and the drawings will be returned to the Consulting Engineer.

## 2.8.2 <u>Construction Completion Certificate</u>

2.8.2.1 When all deficiencies in the Works have been remedied and as-constructed record drawings have been accepted by the Director of Engineering Services, a Construction Completion Certificate shall be prepared by the Director of Engineering Services. This indicates assumption of responsibility for the works and services by the Municipality.

## 2.8.3 Warranty Security

2.8.3.1 The Applicant shall enter into a Warranty Agreement and shall provide bonding as per Section 7.4 of the *Subdivision Bylaw*.

## 2.9 Final Acceptance by the Municipality

- 2.9.1 The Director of Engineering Services shall inspect the works prior to the expiration of the warranty period.
- 2.9.2 Deficiencies shall be corrected and /or deposits released in accordance with the Warranty Agreement .

## 2.10 Oversize Cost-Sharing

- 2.10.1 The Municipal Council has adopted a policy of sharing the cost of installing civil works for subdivisions when the service being installed is larger in size than is required to serve solely the property being subdivided. The larger size service must be installed by the Applicant and cost-sharing payment may be requested in accordance with the following:
  - 2.10.1.1 Watermains The difference in material cost between 150 mm diameter pipe and the cost of the pipe actually installed.

2.10.1.2 Sanitary Sewers The difference in material cost between a 200 mm diameter pipe and the cost of the pipe actually installed.

2.10.1.3 Storm Drains The difference in material cost between a 375 mm diameter pipe and the cost of the pipe size actually installed.

2.10.1.4 Roads

The cost of Collector or Major road construction in excess of standard residential road requirements. Extra depth of asphalt and base materials will be paid through the residential width as well as the total cost for the extra width of road construction exceeding residential road criteria (excluding curb, gutter and sidewalk). Cost sharing is available for single family and two family subdivisions only.

2.10.1.5 Street Lighting The cost of collector and arterial road lighting in excess of normal requirements as established by the Municipality for residential streets.

2.10.2 Payment of claims for oversize cost sharing is subject to Municipal funds being available and approval by the Director of Engineering Services. Requests for payment of cost sharing funds should be submitted after approval of as-constructed drawings but must be submitted prior to Warranty expiry.

## 2.11 Right of Way or Easement Documents

- 2.11.1 The Director of Engineering Services shall prepare all Right-of-Way documents for Sewer, Drain and Water where the Municipality will assume responsibility for maintenance. Two weeks are required for preparation of the documents.
  - 2.11.1.1 Documents for off-site Rights-of-Way required for a subdivision shall be returned to the Applicant for registration prior to Design Approval.
  - 2.11.1.2 For Rights-of-Way within a subdivision, a Right-of-Way plan, acceptable to the Land Titles Office, must be submitted at least two weeks prior to anticipated registration, to allow time for document preparation.
- 2.11.2 Private easement documents must be prepared by the Applicant's lawyer and copies of them must be submitted along with a lawyer's letter of undertaking to register the same with the subdivision plan, prior to finalization of the subdivision plan for registration.
- 2.11.3 Right-of-Way documents for power, telephone and cablevision facilities shall be prepared and registered by the respective Utility companies. It is the Applicant's responsibility to request and to coordinate the preparation of Right-of-Way documents for other utilities.
- 2.11.4 Where a single storm drain, sanitary sewer or water Right-of-Way or private easement is required, the minimum acceptable width is 3 m.
- 2.11.5 Where more than one service is installed in a Right-of-Way or private easement, the width must be increased sufficiently to accommodate the pipe sizes required, together with no less than 1m of clearance between the outside of a pipe and the edge of the Right-of-Way or private easement. The minimum acceptable width is 3.5 m.

- 2.11.6 Right-of-Way documents shall include provision for access across any portion of the lot for maintenance or repair of the sewer, drain or water by the Municipality.
- 2.11.7 Rights-of-Way shall be located within a single property (not separated longitudinally by a property line), adjacent and parallel to property boundaries, and shall be clear of proposed building sites.
- 2.11.8 Rights-of-Way shall be provided by the Applicant for the eventual extension of the sanitary sewer and/or storm drain as required by the Director of Engineering Services.

# **SCHEDULE I**

### STANDARDS FOR THE INSTALLATION OF BOULEVARD STREET TREES

# 1.0 SCOPE

- 1.01 This specification shall govern the design and location of boulevard street trees within the District. Boulevard street trees shall be planted in the boulevard on both sides of a highway being created by a subdivision or a development, and in the boulevard of an existing highway immediately adjacent to the site being subdivided or developed.
- 1.02 Boulevard trees will not be required under the following conditions:
  - (a) Where healthy boulevard street trees or healthy trees on adjacent private lands are growing at not less than the density or spacing requirements of this Schedule.
  - (b) Where there are rock barriers or soil conditions which will not sustain a healthy tree.
  - (c) Where due to the size of the boulevard area fronting the lot and the presence of driveways or other site services, there is insufficient room to plant a tree.
- 1.03 For strata title developments, the boulevard street is deemed to be the street frontage prior to development. There is no requirement for tree planting along a private strata title roadway.

# 2.0 GENERAL

- 2.01 Prior to any tree planting, the applicant's consultant shall submit planting information which shows the tree species, sizes and planting locations for approval by the Director of Parks and Recreation. This tree information for any required boulevard street tree planting shall be shown on the service drawings prepared by the applicant's consulting engineer. The location, number and spacing of trees will vary according to the site conditions. Trees species will be selected from the Saanich Parks List of Recommended Boulevard Street Trees and in accordance with the objectives of the Boulevard Street Tree Planting Program. The tree list also includes a list of possible native trees where intended.
- 2.02 All plant material shall be of good health and vigour with no visible signs of disease, insect pests, damage, or other disfigurements, and shall comply with the latest version of the "BC Landscape Standards" published jointly by the BC Landscape Architects Society and the British Columbia Nursery and Landscape Association.

# 3.0 DESIGN CRITERIA

- 3.01 The applicant's consultant shall provide tree locations on the service drawing that conforms to the Saanich Parks Boulevard Street Tree Program. The program includes a list of acceptable trees including native tree species where intended. An effort must be made to achieve species diversification within the boulevard.
- 3.02 Each tree shall be located in accordance with the other service and utility requirements shown on the service drawings.
- 3.03 Sizes of tree species to be used will be either of the following:

**Large Growing Trees** ● A species of tree which normally grows to a height greater than 8.0 metres. The minimum planting size for these trees shall be 6.0 cm caliper D.B.H..

**Medium or Small Growing Trees** • A species of tree which normally grows to a height of less than 8.0 metres. The minimum planting size for these trees shall be 5.0 cm caliper D.B.H..

- 3.04 If the tree planting location is within 1.0 m of an existing underground municipal service in the boulevard, then a current arboriculture technique will be employed in the planting pit between the tree and the municipal services, as mitigation.
- 3.05 No tree shall be planted within 1.5 m of an above ground municipal service (fire hydrant, streetlight, or driveway). Trees may be located adjacent to, or within sidewalks where approved.
- 3.06 The applicant's contractor shall note the proposed tree locations on site and avoid unduly disturbing or compacting the tree site during construction.
- 3.07 Street trees shall be required according to the following table:

\*Actual spacing will vary depending on the site conditions and tree selection

Service Level 1 A (Rural) Zones	Service Level 2 RS Zones	Service Level 3 All other zones except where a Lands Use Contract is in place
One (1) Large of Medium Growing Tree for each lot being created to a maximum of 1 tree per 100 lineal metres, or portion thereof, of lot line common to the lot and a street.	One (1) Large or Medium Growing Tree for each lot being created.	Large Growing Trees • One (1) tree for each 15.0 lineal metres, or portion thereof, or lot line common to the lot and a street.  OR  Medium Growing Trees • One (1) tree for each 8.0 lineal meters, of portion thereof, of lot line common to the lot and a street.

## 4.0 MATERIALS

4.01 Trees shall be balled and burlapped or container grown stock. Bare root trees will not be used. Container grown stock shall have a sufficiently well-established root system to hold the soil together when removed from the container. In all cases, the root system shall be strong, fibrous, free of disease, insects, or injuries, and shall be sufficiently developed to guarantee successful transplanting.

## 5.0 PLANTING

- 5.01 Boulevard street trees shall be planting by Saanich municipal crews. The developer shall pay to Saanich in advance the current Saanich charge-out rate for each tree to be planted. The charge-out rate for Boulevard Street Trees shall include the Municipality's costs to purchase, plant and maintain the tree for a one year period following planting.
- 5.02 The applicant is responsible for contacting the Public Works Inspector when the streets and boulevards are completed so that the tree planting can be done.
- 5.03 The trees shall be planted where shown on the approved design drawings. If, for some reason, the location becomes unsuitable, the applicant, the Public Works Inspector and the Saanich Parks Arborist shall determine an alternate location.
- 5.04 Notwithstanding the provisions of Section 5.01, street trees may be planted by the applicant in compliance with the specifications contained in the Saanich Parks Boulevard Street Tree Program, where:
  - a) it is proposed to construct a single family dwelling on an existing lot at the time of the bylaw adoption, or
  - b) the street tree planting is being done in conjunction with an approved development permit designated under Section 879 (3) of the *Local Government Act*.

# 6.0 INSPECTION, MAINTENANCE & ASSURANCE

- 6.01 As part of the charge-out cost, Saanich will be responsible for watering and maintaining the tree(s) during the first one year establishment period. One year after the tree planting, the tree will be inspected to ensure that it is in good condition and free of impediments to growth.
- 6.02 After the end of the one year maintenance period, the trees shall be maintained by the District as part of the annual tree maintenance program.

# SAANICH PARKS RECOMMENDED BOULEVARD STREET TREES - DECIDUOUS May 2001

Tree Type	Common Name	Variety	Spacing metres	Tree Height metres	Flower	Autumn Colour	Comments
Acer campestre	Hedge Maple		10	8	-	Y	
Acer davidii	Davids Maple		10 - 12	10		Y Pu	Striped bark
Acer ginnala	Amur Maple		8 - 10	6		, S	
Acer griseum	Paperbark Maple		10 - 12	14		R	Shredding copper bark
Acer platanoides	Norway Maple	Columnar Crimson	10 - 12	8 - 20	Y	Y	Many shapes & leaf colours
Acer pseudoplatanus	Sycamore Maple	Leopoldii	12 - 15	12		Y	
Acer rubrum	Red Maple		10 - 12	6 - 16		ΥR	Many shapes
Acer saccharum	Sugar Maple		10 - 12	15 - 20		ΥR	Stronger & slower than Norway Maple
Aesculus x carnea	Red Horse Chestnut	Briotii	12 - 15	8 - 12		Y	Fruitless variety
Amelanchier laevis	Allegheny Service berry		8 - 10	6 - 10	W	ΥR	Non-aggressive roots
Amelanchier canadensis	Shadblow Serviceberry	5	8 - 10	5 - 8	W	ΥR	Greyish young foliage
Betula jacquemonti	Paper Birch		10 - 12	18 - 21		Y	Bright white bark
Carpinus betulus fastigiata	European Hornbeam		10 - 12	10 - 12		Y	Upright growth habit
Cerdidiphyllum japonica	Katsura Tree	9	8 - 10	10 - 20	i.	S	Protect from hot sun and dry wind
Cercis canadensis	Eastern Redbud		10 - 12	6 - 12	Pu - P	Y	Some horizontal

Tree Type	Common Name	Variety	Spacing metres	Tree Height metres	Flower	Autumn Colour	Comments
5 - S			-				branching in age
Cornus florida	Flowering Dogwood		8 - 10	5 - 10	W	S	Needs good drainage
Crategus lavellei	Carriere Hawthorn		8 - 10	5 - 8	W	R	
Davidii involucrata	Dove Tree		10 - 12	10 - 20	w		Large brown fruit hangs in winter
Fagus sylvatica	European Beech	Atropunicea Purpurea, Cuprea	12 - 15	8 - 25		В	Leaves purple or copper
Fraxinus ornus	Flowering Ash		8 - 10	15 - 20	W	Y	Seedless
Fraxinus oxycarpa	Claret Ash	Reywood	10 - 12	20		R	Claret red fall colour
Fraxinus pennsylvanica lanceolata		Marshal, Summit	10 - 12	12 - 18	=	Y	Few or no seeds
Ginkgo biloba	Maidenhair Tree	(male only)	12 - 15	20		: Y	Male trees only
Ginkgo biloba	Maidenhair Tree	Sentry (male only)	8 - 10	18		Y	Male trees only
Halesia monticola	Mountain Silver Bell		12 - 12	12 - 18	W	Y	Graceful growth habit
Liquidambar styraciflua	American Sweet Gum		10 - 12	10 - 20		S	Bark deeply furrowed
Liriodendron tulipifera	Tulip Tree	Arnold, Fastigiata	12 - 15	10 - 22	ΥG	Y	Tulip shaped coloured flowers
Magnolia grandiflora	Southern Magnolia		10	8	W		Broadleaf evergreen, scented blooms
Magnolia kobus	Kobus Magnolia		10 - 12	9 - 12	W	Y	
Magnolia x soulangiana	Saucer Magnolia		8 - 10	4 - 8	<b>w</b>	Y	Large flower, very showy

Tree Type	Common Name	Variety	Spacing metres	Tree Height metres	Flower	Autumn Colour	Comments
Malus	Flowering Crabapple	Winter Gold & other med size	^10 - 12	6 - 9	W	ВҮ	Buds pink
Malus floribunda	Japanese Flowering Crabapple	Plena, Hope, Makamik, Rudolph	8 - 10	6-9	W	ВҮ	Buds deep pink
Parriottia persica	Persian Ironwood		8	6		Pu R Y	
Prunus cerasifera	Cherry Plum	Thunder Cloud, Pissardi nigra	10	7	P	R	
Prunus serrulata	Japanese Flowering Cherry	Kwanzan, Shirofugen, Ukon	10 - 12	6 - 8	PV	R	Foliage bronze
Prunus subhirtella	Flowering Cherry	Autumnalis	8 - 10	6 - 8	P		Autumn flowering
Prunus subhirtella	Flowering Cherry	Whitcombi	10 - 12	3 - 8	P		Needs good drainage
Prunus yedoensis	Yoshino Flowering Cherry	Akebobo	10 - 12	5 - 8	Р		Needs good drainage
Pyrus calleryana bradford	Bradford Pear		8 - 10	5 - 8	W	R	
Quercus coccinea	Scarlet Oak		10 - 12	6 - 15		S	* 1
Quercus palustris	Pin Oak	Crownright	10 - 12	6 - 20		S	Variety avoids dropping branches
Quercus phellos	Willow Oak		10 - 12	15 - 25		Y	Fine texture foliage
Quercus robur	English Oak	Fastigiata	10 - 12	25		Y	
Quercus rubra	Red Oak		12 - 15	18 - 25		R	
Quercus shumardii	Sumard Oak		10 - 12	25		S	
	9					ñ	Roots non-

Tree Type	Common Name	Variety	Spacing metres	Tree Height metres	Flower	Autumn Colour	Comments
Styrax japonica	Snowdrop Tree		8 - 10	9 - 11	W	RY	aggressive, unique flower
Syringa reticulata	Japanese Lilac	Ivory Silk	8	8	W	Y	Large white lilac blooms
Tilia cordata	Littleleaf Linden	Greenspire Rancho	10 - 12	6 - 15	Y	Y	Variety upright, flower fragrant
Tilia euchlora	Crimean Linden		10 - 12	8 - 15	Y	Y	Summer flower, fragrant
Zelkova serrata	Japanese Zelkova		10 - 12	15 - 18		Y	A substitute for American Elm
			5				
Native Trees for Boulevards							
Acer circinatum	Vine Maple		8	5 - 8			
Acer glabrum var Douglas	Douglas Maple		10	8 - 10			
Acer macrophyllum	Bigleaf Maple		15	15 - 20			Large leaves
Alnus rubra	Red Alder		10	10 - 15			Fast growing
Arbutus menziesii	Pacific Arbutus	ñ	- 10	12 - 15			Only in well drained soils
Betula papyrifera	Paper Birch	8	10	12 - 15	ν -	Y	Catkins
Cornus X Eddiei 'White Wonder'	White Wonder Dogwood	-	8 - 10	8 - 10	W		Alternative to native tree
Quercus garryana	Garry Oak		12 - 12	10 - 15			Roots non- aggressive, deep
Rhamnus purshiana	Cascara		8 - 10	10	Y		Silver grey bark