



ELECTORAL AREA SERVICES COMMITTEE

Thursday, July 21, 2022

Held Electronically

and Transmitted via the SCRD Boardroom,
1975 Field Road, Sechelt, B.C.

AGENDA

CALL TO ORDER 9:30 a.m.

AGENDA

1. Adoption of Agenda

PRESENTATIONS AND DELEGATIONS

2. Kathleen Suddes, Chair, Sunshine Coast Community Forest Verbal
Regarding Sunshine Coast Community Forest Update
(Voting – Electoral Area Directors)

REPORTS

3. Sunshine Coast Regional District Zoning Amendment Bylaw No. Annex A
722 – Second Reading pp 1 - 338
Senior Planner
(Voting – Electoral Area Directors)
4. Zoning Amendment Bylaw No. 310.195, 2022 (562 Veterans Annex B
Road) – Consideration of First, Second and Third Readings and pp 339 - 346
Adoption
Planner
(Voting – Electoral Area Directors)
5. Agricultural Land Commission Application 64280 (SCRD Annex C
ALR00016) pp 347 - 352
Senior Planner
(Voting – Electoral Area Directors)
6. Amendment to Development Variance Permit DVP00029 Annex D
(Persephone Brewery) pp 353 - 363
Senior Planner
(Voting – Electoral Area Directors)
7. Management of Community Sewer Systems Annex E
General Manager, Infrastructure Services pp 364 - 762
(Voting – Electoral Area Directors)

- | | |
|---|-------------------------|
| 8. Planning and Development Department Q2 2022 Report
General Manager, Planning and Development
(Voting – Electoral Area Directors) | Annex F
pp 763 - 781 |
| 9. Halfmoon Bay (Area B) Advisory Planning Commission Minutes of
June 28, 2022
(Voting – Electoral Area Directors) | Annex G
pp 782 - 783 |
| 10. Roberts Creek (Area D) Advisory Planning Commission Minutes of
June 20, 2022
(Voting – Electoral Area Directors) | Annex H
pp 784 - 785 |
| 11. Elphinstone (Area E) Advisory Planning Commission Minutes of
June 22, 2022
(Voting – Electoral Area Directors) | Annex I
pp 786 - 788 |
| 12. West Howe Sound (Area F) Advisory Planning Commission
Minutes of June 28, 2022 and July 5, 2022
(Voting – Electoral Area Directors) | Annex J
pp 789 - 793 |

COMMUNICATIONS

IN CAMERA

ADJOURNMENT

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: SCRD Board – July 21, 2022

AUTHOR: Yuli Siao, Senior Planner

SUBJECT: Zoning Bylaw No. 722 Consideration of Second Reading

RECOMMENDATION

THAT the report titled Zoning Bylaw No. 722 Consideration of Second Reading be received for information;

AND THAT the revised Zoning Bylaw No. 722 be considered for Second Reading;

AND THAT a public hearing be arranged to consider Zoning Bylaw No. 722;

AND FURTHER THAT Director _____ be delegated as the Chair and Director _____ be delegated as the Alternate Chair for the Public Hearing.

BACKGROUND

On May 12, 2022, the SCRD Board adopted the following resolution:

133/22 **THAT** the report titled Zoning Bylaw No. 722 Consideration of First Reading be received for information;

AND THAT Zoning Bylaw No. 722 be considered for first reading;

AND THAT staff schedule a public information meeting to consider Zoning Bylaw No. 722;

AND FURTHER THAT Zoning Bylaw No. 722 be referred to agencies and Advisory Planning Commissions for comment.

This report summarizes and addresses feedback received from public information meetings and agency referrals, and recommends revisions to Zoning Bylaw No. 722 for consideration of second reading and holding of a public hearing.

DISCUSSION

Following first reading, Zoning Bylaw No. 722 was referred to agencies and advisory planning commissions for comment. Two public information meetings were held, physically on June 8 and electronically on June 9, 2022. A web page (<https://letstalk.scrd.ca/bylaw-722>) dedicated to information on the Bylaw is also online to provide information to the public, receive feedback and answer questions. A complete record of comments received through this consultation process can be found in Attachment B. A comparative summary of major differences between Bylaw 722 and Bylaw 310 is provided in Attachment A. The following is a discussion of common points (in *italic font*) raised through the consultation and recommended revisions to the Bylaw (Attachment C) to address those comments.

1. *Through this Bylaw the SCRD is not addressing the urgent housing needs and population growth on the Sunshine Coast boldly and quickly enough. There should be sweeping changes to the rigid existing regulations on parcel size and dwelling size and type, to allow more substantial density increase, larger dwellings, and more innovative and flexible building design for a wide range of living arrangements, siting and space configurations in rural properties.*

As an intermediate update, Zoning Bylaw 722 does not contemplate significant changes to land use density. It is intended to work within the established policy context of 6 different Official Community Plans that cover 4 Electoral Areas and ultimately form a stepping stone for more comprehensive future planning work projects that will involve regional growth planning and renewal of those OCPs. As such, fundamental consideration of where and how we grow as a community is better suited to future comprehensive planning work, which will require holistic review of a broad range of factors such as demographics, economy, infrastructure, environment, technology and design, and in-depth consultation with the community.

As the first step towards a holistic densification strategy, Bylaw 722 uses existing OCP policy frameworks to focus on infill opportunities on existing lots, in alignment with existing land uses. These infill opportunities include the allowance of larger auxiliary dwellings where the use was already permitted and the inclusion of secondary suites within all single-unit dwellings. This approach is considered a “gentle density” increase that works within the existing land use density framework and the established SCRD water and wastewater system services.

2. *As more efficient sewage treatment systems that produce very clean effluent and require no or very small absorption fields are available, creation of much smaller parcels and more dwellings per parcel should be allowed.*

The current minimum subdivision parcel size of 2000 m² is based on standards of Vancouver Coastal Health (VCH) for Type 1 septic systems where there is no connection to a community sewage treatment facility. Type 1 systems are generally more reliable and require less maintenance. VCH indicates that it is important to keep the standards for these most commonly used systems in place in order to secure safe disposal of waste water. Type 2 or 3 systems produce higher quality effluent and require smaller drain fields, but are prone to failure without vigorous regular maintenance. These systems could be considered by VCH only if a local government adopts and enforces a maintenance bylaw. However, this would require a cost-benefit analysis against other options and is the type of discussion best suited for future OCP updates that consider how and where density should be considered with commensurate servicing standards.

The current limits on the number of dwellings on parcels of certain sizes are also generally based on standards for the Type 1 system. However, VCH is not opposed to “gentle” infill densification on existing parcels, such as secondary suites or larger auxiliary dwellings as proposed in the Bylaw. Necessary upgrade to existing sewage systems to accommodate additional dwellings is evaluated through the building permit process.

3. *The proposed increase in auxiliary dwelling unit size would result in more short-term rentals being operated in these dwellings and put more pressure on bylaw enforcement.*

The Bylaw specifically prohibits short-term rentals in auxiliary dwellings exceeding 55 m² in size, and thus establishes a clear requirement that larger auxiliary dwellings be used for long-term residential purposes, be they for rental tenancies or intergenerational family use. Smaller auxiliary dwellings (not exceeding 55 m²) will still be allowed to operate as short-term rentals as they are under the current zoning bylaw. Therefore, it is not anticipated that the increased size provision for auxiliary dwellings will result in an increase of short-term rentals in auxiliary dwellings, but rather encourage their construction and use for long-term residential uses.

4. *There are opposing opinions regarding the keeping of chickens and bees on residential properties: on one hand, it is expressed that this use should be banned due to concerns on noise, odour, attractant of pests and other nuisance causing neighbourhood conflicts; but on the other hand, there is call for removing restrictions on this use, such as the number of animals, parcel size requirements, etc. There are also requests for allowance of other domestic fowls and animals, and clarification on rules about roosters.*

The new provisions for keeping of chickens and bees in Bylaw 722 (first reading version) are intended to provide a residential agricultural opportunity at a small scale and on small parcels, which are otherwise not allowed to keep those animals under the current Bylaw 310. These new regulations seek to strike a balance between offering this opportunity and maintaining neighbourhood character and peace. Therefore, the numbers of chickens and beehives are limited to 6 and 2 respectively on parcels over 1000 m² in size in more densely populated Residential Zones (R1 and R2). This is consistent with general best practice adopted in some rural areas in southern BC. The keeping of all domestic animals, including bees, fowls, rabbits, horses, goats, sheep, etc., is a larger-scale operation and covered under current regulations for keeping of livestock, which is permitted without limit on the number of animals on parcels over 3500 m² in most zones in Bylaw 310 and will remain unchanged in Bylaw 722.

To improve clarity, strengthen measures to prevent neighbourhood conflicts and maintain consistency with existing regulations for keeping of livestock, revisions to Bylaw 722 (first reading version) have been made to relevant sections (Sections 5.5, 5.6). The revised regulations are summarized below.

Where uses are permitted:

Parcel size	Zone	Chicken (hen & rooster)	Beehive	Livestock
<1000 m ²	All zones except AG	Not permitted	Not permitted	Not permitted
1000 m ² - 3500 m ²	All zones except RM1, RM2, RM3	6 hens per 1000m ² , rooster not permitted	2	Not permitted except chickens and bees
>3500 m ²	All zones except RM1, RM2, RM3	Permitted	Permitted	Permitted
Any size	AG	Permitted	Permitted	Permitted

Setback and facility requirements:

- Chickens shall be provided with coops or outdoor enclosures;
- No drinking or feeding trough, manure pile, enclosure, structure or building for the keeping of chickens, except fences under 2 m in height to enclose animals, shall be located within 10 m of a parcel line;

- c) Entrance to a beehive shall face away from adjacent parcels;
- d) No beehives shall be located within 7.5 m from any parcel line;
- e) No beehive shall be located within 4.5 m of any parcel line fronting a highway;
- f) No enclosure, feeding or drinking trough, or structure used for the storage of feed, bedding or manure related to the keeping of livestock except chickens and bees shall be located within 20 m of a parcel line;
- g) Premises where chickens and/or other livestock are kept are required to be registered with the Province of British Columbia to support the Province's emergency response network;
- h) Beekeeping requires provincial registration pursuant to the Bee Regulation of the *Animal Health Act*.

5. The limit of 20% of total floor area of all buildings on a parcel to be used for home based business is too restrictive, especially for small properties with small dwellings but need for a large work space such as workshop, tutoring, daycare, etc.

Home based business is an auxiliary use in most zones where it is permitted. This limit is imposed in order to enforce the auxiliary nature of home based business and maintain the neighbourhood character and zone intents that are normally determined by the principal uses, particularly residential zones. It is also intended to prevent over development of an auxiliary use and neighbourhood conflicts.

Yet recognizing the potential negative impact of the 20% limit on functional home based businesses on small properties with small dwellings, it is recommended that this limit be increased to 50% for residential zones and 40% for rural and other zones, along with regulations to control operation of home based business, such as parking, delivery, nuisance, containment, customer visitation and employees, to maintain the auxiliary nature of the use and prevent neighbourhood conflicts (Section 5.4).

6. The proposed floor area limits of 30% and 40% of parcel area for all buildings within a parcel less than 1500 m² and 750 m² respectively are too restrictive and unfairly penalize small parcels.

These limits are intended to control building density on small parcels and maintain the rural ambience as indicated by many official community plans (OCP) as an important asset of the Sunshine Coast. Making substantial change to the maximum floor area ratios or consideration of eliminating them, would require significant analysis and warrants more in-depth community feedback.

Existing Bylaw 310 permits a maximum floor area ratio of 30% throughout the full spectrum of lot sizes less than 1500m². This is most burdensome for smaller parcels for which the restricted floor area ratios apply. Noting that staff have previously supported some relaxations through planning applications on these smaller parcels, the proposed changes contained in first reading recognize the need to consider tweaks to allow modest increases for the smallest parcels with restricted maximum floor area ratios. Additionally, it is noted that the provision of secondary suites is a desirable inclusion in single-unit dwellings, and slightly raising the maximum floor area ratio provision on smaller lots is a way to ensure property owners are further encouraged to consider building these needed rental units.

The initial proposal was to allow a floor area ratio of up to 40% on parcels less than 750 m², while leaving parcels between 750 m² and 1500 m² at a 30% floor area ration. However, it has been noted that this creates an inequity where lots between 750 m² and slightly less than

1000 m² would receive less permitted floor area than those just below 749 m² in size. Therefore, staff have revised this proposal to create a more equitable sliding scale.

The new proposal is for a floor area ratio of 40% for lots less than 1500 m² up to a maximum permitted floor area of 450 m² (4843 sq. ft.). This new maximum floor area would apply to lots greater than 1125 m², where the 40% floor area ratio reaches the proposed maximum permitted 450 m². This proposed maximum floor area is derived from the currently achievable maximum floor area under the existing Bylaw 310 provisions of a 30% floor area ratio on a 1499.9 m² parcel (the largest parcel with restricted floor area ratios).

In summary of the proposed floor area ratio changes, most parcels would receive modest increases to their floor area ratios, which would help alleviate individual planning application requests for size increases and encourage the inclusion of secondary suites by providing additional floor area opportunities. Only parcels at just less than 1500 m² in size would see no increase in allowable floor area ratio over current Bylaw 310. It is additionally noted that there are other regulations such as parcel coverage, height and setbacks that further restrict the volumetric buildable area of parcels, and therefore the ease and capacity of maximizing the additional proposed floor area may not be equal on all parcels, depending on their size, topography and configuration. For example, in some cases achieving maximum allowable floor area may require the construction of basements. It is also noted that the previously allowable additional 45 m² (484 sq. ft.) of floor area within buildings for an enclosed off-street parking use remains unchanged.

7. How will Bylaw 722 support a Community Climate Action Plan to be developed by the SCRD?

Bylaw 722 has several new technical provisions to support energy efficient buildings and green energy devices, and enhance climate change preparedness:

- a. Floor area definition excludes exterior walls. This will support energy efficient buildings such as passive houses, which have thicker, better insulated walls.
- b. Height exceptions are applied to green roofs, solar collectors and wind turbines.
- c. An increased oceanfront setback of 17m is proposed to be consistently applied throughout the zoning bylaw area. Area D, Roberts Creek, has been the pioneer of a 15m setback to the natural boundary of the ocean, whereas the other electoral areas subject to the current bylaw only require a 7.5m setback. This proposed change will enhance protection of properties and buildings from the effect of rising sea level and flooding and erosion due to climate change.
- d. Other watercourse setbacks are also proposed to be adjusted with an increase of 2m to the currently required setbacks to ensure consistency with the environmental protection measures that are also upheld through various Development Permit Areas. The existing setbacks in Bylaw 310 are generally in line with those required by professional reports approved through Development Permit applications; however, in many cases it has been noted that buildings and structures are built to the minimum required setback, resulting in land alterations of sensitive habits and lands for construction, as well as long-term maintenance and egress conflicts. The proposed increase of 2m to these existing setbacks is aimed at ensuring sufficient areas for excavation during construction and placement of perimeter drainage for buildings, while also ensuring long term maintenance and egress for buildings and structures without having disruptive impacts on sensitive habits and lands.

More comprehensive provisions and policies in support of the Community Climate Action Plan can be developed in future zoning bylaws and official community plans.

8. *Cannabis micro-cultivation only requires a maximum of 200 m² area and is highly secured under strict licensing requirements, therefore the minimum parcel size for this use to be permitted in rural zones should be reduced from 4 ha to 2 ha.*

The current zoning bylaw requires an 8-ha minimum parcel size in rural zones for any cannabis production. Bylaw 722 introduces differentiation in minimum parcel sizes in response to the scale of productions under the new cannabis legislation: 8 ha for standard cultivation and 4 ha for micro cannabis cultivation. Research reviewing zoning bylaws of a number of BC regional districts shows that most have not adopted differentiated regulations of parcel sizes for different types of cannabis cultivation, with one exception that requires a 2-ha minimum parcel size for micro-cultivation. There is no sufficient precedent to warrant further reducing the parcel size requirement for micro-cultivation. However, parcel size requirement for cannabis production is a condition of use, thus it can be varied by means of a Development Variance Permit. This methodology would provide flexibility for instances where it may be warranted to consider the use on a smaller parcel size based on cases-by-case review of the situation, and public consultation would occur and appropriate conditions/restrictions could be implemented through the approval process.

NEXT STEPS

If the Board gives the revised bylaw second reading, a public hearing could be held as early as September. This would allow more time for the community to continue to consider the bylaw and give feedback before the public hearing. In the meantime, the web page (<https://letstalk.scrd.ca/bylaw-722>) will continue to be the online platform to provide updated information about the bylaw and receive feedback.

As several Advisory Planning Commissions discussed a desire to have more time to orient to and potentially to provide comment on the proposed bylaw, staff will offer a follow-up workshop for APCs prior to a Public Hearing. As key users of zoning bylaws, support to APCs on orientation is important for bylaw implementation.

CONCLUSION

The public information meeting and agency referral process has gathered valuable community and agency input respecting the draft Bylaw 722.

As indicated in this report, some common points of issues raised can be addressed through the proposed revisions to the Bylaw, with the others to be reserved for future consideration as part of future comprehensive planning work that involves renewing OCPs.

Staff recommend that the Bylaw be forwarded to the Board for second reading and a public hearing to consider the Bylaw be arranged. A follow-up workshop for APCs will also be planned.

ATTACHMENTS

Attachment A – Comparative summary of differences between Bylaw 722 and Bylaw 310

Attachment B – Record of public and agency consultation comments

Attachment C - Revised Zoning Bylaw No. 722 for second reading

Reviewed by:			
Manager	X – J. Jackson	CFO/Finance	
GM	X – I. Hall	Legislative	X –
CAO	X – D. McKinley	Solid Waste	

Attachment A Comparative Summary of Major Differences Between Bylaw 722 and Bylaw 310

Bylaw 722	Bylaw 310
1. Technical Housekeeping and Enhancement	
Zone name change and consolidation to reduce redundancy	
R1	R1, R1A
R3	R2A
RU1	RU1, RU1B, RU1C, RU1D
RF1	RU4
RF2	RU4A
RF3	RU4B
RF4	RU5
RF5	RU5A
C1	C6
C2	C2, C2A
I2	I1A
I3	I2
I4	I3
I5	I4
I6	I4A
I7	I5
I8	I5A
I9	I5B
I10	I6
I11	I7
I12	I8
I13	I9
Terminology change to enhance legal accuracy	
2.1 ADMINISTRATION 2.1.1 Land, including the airspace above it and the surface of water, shall not be used, altered or subdivided and buildings and structures shall not be constructed, altered, sited or used except as specifically permitted by this bylaw.	302 Prohibition 302 Land shall not be used or subdivided and buildings and structures shall not be constructed, altered, located or used except as specifically permitted by this bylaw.
2.2 ENFORCEMENT 2.2.1 The Chief Administrative Officer, Corporate Officer, General Manager of Planning and Community Development, Manager of Planning and Development, Planner, Chief Building Official, Building Official, Bylaw Enforcement Officer, or other persons so designated by resolution, are authorized at all reasonable times to enter on property that is subject to regulation under this bylaw to ascertain whether the regulations or directions under this bylaw are being observed.	303 Enforcement The Secretary or Planning Director, being officers, or the Planner, Chief Building Inspector, Building Inspector, Bylaw Enforcement Officer, or other persons so designated by resolution, being hereby designated to act in place of the Secretary or Planning Director for the purposes of this section, are authorized at all reasonable times to enter on property that is subject to regulation under this bylaw to ascertain whether the regulations or directions under this bylaw are being observed.

More comprehensive sign regulations to supplement existing regulations	
<p>5.20 SIGNAGE</p> <p>5.20.1 No sign shall be located on a parcel for the purpose of advertising any person, matter, thing, event, or property that is not directly related to the business conducted on that parcel, with the exception of election signage during an election period.</p> <p>5.20.2 Signs for businesses on parcels with zoning for agriculture, commercial or industrial uses shall be subject to the following conditions:</p> <ul style="list-style-type: none"> a) The maximum total area of all sign faces on a parcel shall be 5 m²; and b) The maximum height of a sign shall be 3 m. <p>5.20.3 Signs for businesses, other than home occupation use and short term rental use, on parcels that are not zoned for an agriculture, commercial or industrial use, shall be subject to the following conditions:</p> <ul style="list-style-type: none"> a) No more than one sign in conjunction with a business use on the same parcel may be located on that parcel; b) A sign shall have a maximum of two faces; c) The maximum area of a sign shall be 1 m²; and d) The maximum height of a sign shall be 2.5 m. <p>5.20.4 Signs permitted in all zones are as follows:</p> <ul style="list-style-type: none"> a) An address sign including street number and street name; b) A maximum of two Real Estate Signs indicating that the building, premise or parcel on which the sign is located is for sale, rent or lease, provided each sign has a maximum of two faces and a maximum sign area of 2 m²; c) A maximum of two Development Signs each having a maximum sign area of 5 m² advertising a new development which may include the name, nature and particulars of the development, the names of the developer, contractors, subcontractors, consultants and a logo identifying the project and is temporary during the time for which there are active building permits or development related approvals in place with the Regional District; d) A maximum of one entry or identification sign for a completed subdivision or strata development, a place, a landmark or a neighbourhood, and having a maximum sign area of 3 m²; and e) A Directional Sign provided the maximum sign area is 0.5 m². <p>5.20.5 Signs erected by the Regional District are permitted in all zones.</p>	<p>502 Business Signs in Non Commercial/Industrial Zones</p> <p>(14) Signs for businesses, other than home occupations and bed and breakfasts, in zones other than the C2, C3, C4, C5, C6, M1, I1, I1A, I2, I3, I4, I5, I6 and I7 zones shall be subject to the following conditions:</p> <ul style="list-style-type: none"> (a) no more than one sign in conjunction with business uses on the same parcel may be located on that parcel; (b) a sign in conjunction with business uses shall have a maximum of two faces; (c) the maximum area of each face of a sign in conjunction with business uses shall be 1 square metre; (d) the maximum height of a sign in conjunction with business uses shall be 2.5 metres. <p>Business Signs in Commercial and Industrial Zones</p> <p>(15) Signs for businesses in the C2, C3, C4, C5, C6, M1 and I1, I1A, I2, I3, I4, I5, I6 and I7 zones shall be subject to the following conditions:</p> <ul style="list-style-type: none"> (a) the maximum total area of all sign faces on a parcel shall be 5 square metres; and (b) the maximum height of a sign shall be 3 metres.

Bicycle parking regulations to supplement existing parking regulations	
<p>6.5 BICYCLE PARKING REQUIREMENTS</p> <p>6.5.1 Two enclosed bicycle parking spaces shall be provided for each dwelling unit in RM1, RM2 and RM3 zone with such bicycle parking spaces located in a separate, dedicated room or enclosure within the apartment or townhouse with direct outside access, secured with a separate lock and key or programmed entry system, and available only to authorised users.</p> <p>6.5.2 Each enclosed bicycle space shall have a minimum vertical clearance of 1.9 metres, a minimum width of 0.6 metre, and a minimum length of 1.8 m of length.</p> <p>6.5.3 Each principal use in a Commercial zone shall provide an outdoor bicycle rack designed to accommodate a minimum of three bicycles, with a minimum width of 0.3 m for each bicycle, constructed of sturdy theft-resistant material, and having secure theft-resistant anchoring to the floor or ground.</p> <p>6.5.4 Each outdoor bicycle rack in a Commercial zone shall be in a convenient, well-lit location that provides visual surveillance by the occupants of the building the racks are intended to serve and located not more than 10 m from the entrance to the principal use.</p> <p>6.5.5 Each outdoor bicycle space shall be located on a rack with a minimum width of 0.3 m for each bicycle, designed to enable the bicycle frame and front wheel to be locked to the rack with a U-style lock and support the bicycle frame above the centre of gravity, with the bicycle rack constructed of sturdy theft-resistant material anchored to the ground.</p>	No comparable section

Simpler setback rules to suit complex and irregular rural parcel configuration															
<p>5.14 SETBACK OF BUILDINGS AND STRUCTURES</p> <p>5.14.1 The setback of building or structure shall be:</p> <p>a) a minimum of 5 m from any portion of a parcel line adjacent to a highway or an internal private road;</p> <p>b) the minimum setback from a parcel line not adjacent to a highway, an internal private road, a waterbody or a watercourse shall be as follows:</p> <table border="1"> <tr> <th>Height of building and structure</th><th>Setback</th></tr> <tr> <td>≤ 8.5 m</td><td>1.5 m</td></tr> <tr> <td>> 8.5 m</td><td>4 m</td></tr> </table>	Height of building and structure	Setback	≤ 8.5 m	1.5 m	> 8.5 m	4 m	<p>Setback regulations in most zones are based on distances from the front, side, exterior side and rear parcel lines.</p>								
Height of building and structure	Setback														
≤ 8.5 m	1.5 m														
> 8.5 m	4 m														
Simpler and more consistent regulations for auxiliary buildings															
<p>5.7 AUXILIARY BUILDINGS</p> <p>5.10.1 Unless specifically noted in the zone, auxiliary buildings are permitted in conjunction with a principal use where:</p> <p>a) A principal use exists on the parcel, or a valid building permit has been issued for the principal use on that parcel;</p> <p>b) Auxiliary buildings do not include agricultural buildings;</p> <p>c) Auxiliary buildings do not include a dwelling unit or sleeping unit;</p> <p>d) Neither overnight accommodation or cooking facilities are permitted; and</p> <p>e) The combined floor area of all auxiliary buildings shall not exceed: 5% of the parcel area or 300 m², whichever is less for a parcel more than 1500 m² in size; or 75 m² for a parcel equal to or less than 1500 m² in size.</p>	<p>502 Auxiliary Buildings and Structures</p> <p>(6) Auxiliary buildings and structures shall be permitted in conjunction with a principal use in any zone provided that:</p> <p>(a) auxiliary buildings do not include agricultural buildings; and</p> <p>(b) except as otherwise provided in this bylaw auxiliary buildings do not include a dwelling or a sleeping unit or a structure providing overnight accommodation; and the combined gross floor area of all auxiliary buildings and structures permitted is calculated according to Table I where Column I lists the parcel size Column II lists the maximum permitted combined gross floor area of all auxiliary buildings.</p> <p>Table 1</p> <table border="1"> <tr> <th>Column I</th><th>Column II</th></tr> <tr> <td>Parcel area</td><td>Max gross floor area of all auxiliary buildings</td></tr> <tr> <td>Less than 1500m²</td><td>75 m²</td></tr> <tr> <td>1500m² to 3500m²</td><td>100 m²</td></tr> <tr> <td>3500m² to 1.2 ha</td><td>150 m²</td></tr> <tr> <td>1.2ha to 1.75ha</td><td>200 m²</td></tr> <tr> <td>1.75ha or greater</td><td>250 m²</td></tr> </table>	Column I	Column II	Parcel area	Max gross floor area of all auxiliary buildings	Less than 1500m ²	75 m ²	1500m ² to 3500m ²	100 m ²	3500m ² to 1.2 ha	150 m ²	1.2ha to 1.75ha	200 m ²	1.75ha or greater	250 m ²
Column I	Column II														
Parcel area	Max gross floor area of all auxiliary buildings														
Less than 1500m ²	75 m ²														
1500m ² to 3500m ²	100 m ²														
3500m ² to 1.2 ha	150 m ²														
1.2ha to 1.75ha	200 m ²														
1.75ha or greater	250 m ²														

2. Housing Options and Design	
Increased auxiliary dwelling size to enhance housing option	
<p>1.1 AUXILIARY DWELLING UNIT</p> <p>5.2.1 An auxiliary dwelling unit:</p> <ul style="list-style-type: none"> a) Shall not exceed 90 m² in floor area excluding enclosed parking area, on parcels where not more than 2 single-unit dwellings are permitted; b) Shall not exceed 55 m² in floor area excluding enclosed parking area, on parcels where more than 2 single-unit dwellings are permitted; c) May be attached to or detached from any building on the same parcel. 	<p>502 (8) Auxiliary Dwelling Units</p> <ul style="list-style-type: none"> (a) The maximum floor area for an auxiliary dwelling unit, where permitted shall be 55 square metres. (b) The maximum floor area for a building containing a free standing auxiliary dwelling unit shall be 55 square metres. (c) A free standing auxiliary dwelling unit shall not include a garage as part of the building.
Clear rules for short term rental adopted in 2020	
<p>5.3 SHORT TERM RENTAL</p> <p>5.3.1 Short term rental is permitted as an auxiliary use, in the R1 zone where the parcel size exceeds 2000 m², and in the R2, C1, C2, C3, C4, CR1, CR2, RU1, RU1A, RU2, AG, PA2 and PA3 zones, subject to the following conditions:</p> <ul style="list-style-type: none"> a) Except as expressly permitted in this bylaw, the number of bedrooms utilized for short term rental shall not exceed two per dwelling unit, and two per auxiliary dwelling unit. b) An auxiliary dwelling unit with a size exceeding 55 m² shall not be utilized for short term rental. c) Short term rental shall not be permitted in a secondary suite. d) The total number of occupants of a short term rental establishment shall not exceed two per each permitted bedroom. e) No external indication or advertising associated with a short term rental shall be permitted on the property except a single sign up to 0.35 m² in area. f) Any dwelling utilized for short term rental shall be connected to sewerage disposal and water supply facilities that are in compliance with current regulations pursuant to the Public Health Act of British Columbia. g) A short term rental shall be operated by an operator who resides on the property where the short term rental is located and for the duration when the short term rental is in operation. 	<p>502 (11) Bed and Breakfast</p> <p>Bed and breakfast is permitted as an auxiliary use, subject in all cases to the following conditions in the R1 zone where the parcel size exceeds 2000 square metres, and in the R2, C2, C2A, C3, C4, C6, CR1, CR2, RU1, RU1A, RU1B, RU1C, RU1D, RU2, AG, PA2 and PA3 zones:</p> <ul style="list-style-type: none"> (a) Except as provided for in Section 1001A.4 for the RU1A zone and Section 1001C.3(h) for the RU1C zone or any other parts of this bylaw, the number of bedrooms utilized for bed and breakfast shall not exceed two per dwelling. (b) The total number of occupants of a bed and breakfast establishment shall not exceed two per each permitted bedroom. (c) No external indication or advertising associated with a bed and breakfast shall be permitted on the property except a single sign not exceeding 3500 square centimetres. (d) Any dwelling utilized for bed and breakfast shall be connected to sewerage disposal and water supply facilities that are in compliance with current regulations pursuant to the Public Health Act of British Columbia. (e) A bed and breakfast shall be operated by an operator who resides on the property where the bed and breakfast is located and for the duration when the bed and breakfast is in operation.

New accessory housing allowance for a single-unit dwelling	
<p>5.24 SECONDARY SUITE</p> <p>5.24.1 A secondary suite is permitted as an auxiliary use to a single-unit dwelling on any parcel except parcels within SCRD wastewater service areas.</p> <p>5.24.2 Except as otherwise provided in the bylaw, no more than one secondary suite shall be permitted per single-unit dwelling permitted on a parcel.</p> <p>5.24.3 The floor area of a secondary suite shall not exceed 55 m².</p> <p>5.24.4 The number of secondary suites permitted on a parcel shall be excluded from the calculation of any required maximum total number of dwelling units of a parcel or a building.</p>	No comparable section
Removal of building width requirement to enhance design flexibility	
The building width requirement is removed.	<p>Size of Structures</p> <p>601.5 no building containing a dwelling shall have a width less than 6 meters</p>
Floor area ratio increase to allow for more design flexibility and to encourage options, such as secondary suites, while maintaining rural character	
<p>5.13 Floor Area of Buildings</p> <p>5.13.1 On a parcel less than 1500 m² in area in the R1, R2, CR1, CR2, RU1, RU1A and RU2 zones, the maximum floor area of all buildings shall be 40% of the parcel area, or 450 m², whichever is less.</p> <p>5.13.2 Notwithstanding 5.13.1, the calculation of <i>floor area</i> within <i>buildings</i> does not include area of up to a maximum of 45 m² used for enclosed <i>off-street parking</i>.</p>	<p>504 Floor Area of Buildings</p> <p>504 (1) On a parcel less than 1500 square metres in the R1, R2, CR1, RU1, RU2 and AG zones, the maximum total floor area of all buildings on a parcel shall be the parcel area multiplied by 0.30;</p> <p>(2) In addition to the floor area in (1) up to 45 square metres is allowed for enclosed parking.</p>

3. Residential Agriculture

New rules for keeping of chicken and bees on small lots

5.5 Keeping of Chickens and Bees

5.5.1 The keeping of chickens and bees is permitted in accordance with the following:

Parcel size(m ²)	Zone	Chickens (hen & rooster)	Bee hives
<1000	All zones except AG	Not permitted	Not permitted
1000 - 3500	All zones except RM1, RM2, RM3	6 hens per 1000m ² , no rooster	2
>3500	All zones except RM1, RM2, RM3	Permitted	Permitted
Any size	AG	Permitted	Permitted

5.5.2 Setback and facility requirements:

- Chickens shall be provided with coops or outdoor enclosures;
- No drinking or feeding trough, manure pile, enclosure, structure or building for the keeping of chickens, except fences under 2 m in height to enclose animals, shall be located within 10 m of a parcel line;
- Entrance to a beehive shall face away from adjacent parcels;
- No beehives shall be located within 7.5 m from any parcel line;
- No beehive shall be located within 4.5 m of any parcel line fronting a highway;
- Premises where chickens are kept are required to be registered with the Province of British Columbia to support the Province's emergency response network;
- Beekeeping requires provincial registration pursuant to the Bee Regulation of the Animal Health Act.

502 Keeping of Poultry or Rabbits

(2) In any zone other than an R1, RM1, RM2 or RM3 zone, on a parcel having an area of 1500 square meters or more, the use of land, buildings and structures may include the keeping of poultry or rabbits for domestic consumption only provided that: (a) poultry and rabbits shall be kept in pens or similar enclosures; and (b) no drinking or feeding trough, no manure pile, and no enclosure, structure or building related to the keeping of poultry or rabbits, except fences under two metres in height to enclose animals, shall be located within 15 metres of a parcel line.

(3) Subject to the provisions of this bylaw, on a parcel having an area less than 1500 square meters the use of land,

4. Home-Based Business	
Updated and more comprehensive regulations for home-based business	
<p>5.2 HOME-BASED BUSINESS</p> <p>5.4.1 Where a <i>home-based business</i> is a permitted use:</p> <ul style="list-style-type: none"> a) It shall be <i>auxiliary use</i> to the permitted <i>principal uses</i> on a parcel; b) It shall be conducted entirely within a completely enclosed <i>building</i> permitted under this Bylaw, except in the case of a group day care where outdoor recreation <i>uses</i> are required under the <i>Community Care and Assisted Living Act</i>; c) Not more than the following percentage of the total floor area of all buildings on a parcel shall be used for a home-based business: 50% in R1, R2 and R3 Zones, and 40% in all other zones; d) No external indication other than that normally associated with a residential <i>building</i> shall exist except for a single sign up to 0.35 m² in area; e) There shall be no outdoor storage of materials, equipment, containers, or finished products; f) It must not generate traffic that exceeds the level prevailing in the neighbourhood or create a demand for off-street parking; g) It must not produce a public offence or nuisance of any kind, including noise, smoke, dust, toxic or noxious matter, odour, heat, glare, electrical interference, beyond the <i>parcel lines</i> of the <i>parcel</i> containing the <i>home-based business</i>; h) It shall not require more than two deliveries per week to be made by <i>commercial</i> vehicles or trailers; i) No product shall be sold on the premises except that which is made or produced on the premises; j) Floor area of <i>retailing</i> or <i>wholesaling use</i> of the home-business shall be limited to 20% of the floor area of the building containing the home-based business; k) <i>Kennels</i>, vehicle equipment repair and maintenance, body shops and fabricating are prohibited. l) the activities and number of non-resident employees permitted, subject to <i>parcel</i> size, shall be as per the table below: 	<p>502 (10) Home Occupation</p> <p>A home occupation is permitted as an auxiliary use in any zone except the R1, R1A zone subject to the following conditions:</p> <ul style="list-style-type: none"> (a) no external indication shall exist that any building is utilized for any purpose other than normally associated with a residential building except for a single sign not exceeding 3500 square centimetres (.35 square meters) in area; (b) all uses shall be conducted entirely within a completely enclosed building permitted under this bylaw and there shall be no out of doors storage of materials, equipment, containers or finished products; (c) retailing or wholesaling on the parcel is limited to 20% of the area used for the home occupation and must be auxiliary to that home occupation; (d) the area utilized for the purpose of conducting a home occupation shall not exceed the area utilized for residential purposes; (e) employees of a home occupation are restricted to members of a family as defined in this bylaw plus one other person; and (f) notwithstanding the definition of dwelling, a home occupation may include a commercial kitchen involving a second set of cooking facilities within a dwelling where the Ministry of Health has issued a permit for same.

Parcel Size	Employees	Permitted Activities
<1500 m ²	No non-resident employees	Child Care; Business Services; Office uses; Health Services; Artisan uses; Personal Services; Group sessions up to a maximum of 2 sessions per day; Tutoring and lessons, limited to 6 clients per day and a maximum of 3 at one time; On-site client visits only by appointment; scheduled in advance and a maximum of 6 clients per day; Horticultural product sales.
1500 to 5000 m ²	1 non-resident employee	As above
<5000 m ²	2 non-resident employees	As above with a maximum of 16 clients per day; group day care

5. Policy Alignment

New and updated regulations to align with cannabis legislations

5.9 CANNABIS PRODUCTION AND RETAIL

5.9.1 Notwithstanding any other provisions of this bylaw:

- a) Growing of cannabis is prohibited in any zone except in accordance with sub-section (b) or the growing of not more than four cannabis plants per household for personal use from licensed seeds or seedlings from licensed suppliers in accordance with federal legislation.
- b) *Cannabis production* is only permitted in the following zones in accordance with the following provisions:

Zones		Standard cultivation	Micro cultivation or nursery
Industrial	I1, I2, I3, I4, I5, I6, I7, I8, I9, I10, I11	✓	✓
Rural residential	RU1, RU1A, RU2	✓ Parcel size not less than 8 ha	✓ Parcel size not less than 4 ha
ALR	AG	✓ Outdoors in a field or inside a structure with a base consisting entirely of soil	✓ Outdoors in a field or inside a structure with a base consisting entirely of soil

5.9.2 In RU1, RU1A and RU2 Zones that are not within the Agricultural Land Reserve, no standard cannabis cultivation shall be located within 30 m of a *parcel* line, and no micro cannabis cultivation or nursery shall be located within 15 m of a *parcel* line.

5.9.3 Cannabis retail shall be prohibited in any zone except the C1, C2 and C3 Zone.

511 Non-medical Cannabis Production and Retail
Notwithstanding and other provisions of this bylaw:

(1) Non-medical cannabis production and retail are prohibited in:
(a) Residential Zones including R1, R1A, R2, R2A, RM1, RM2, RM3, CD1 and CD3 Zones; and
(b) Rural Zones including CR1, CR2, RU1, RU1A, RU1B, RU1C, RU1D, RU2, RU2A, AG, RU4, RU4A, RU4B, RU5 and RU5A Zones.

(2) For certainty, non-medical cannabis production facilities and retail are not permitted within any use permitted within the following zones:
(a) Residential Zones including R1, R1A, R2, R2A, RM1, RM2, RM3, CD1 and CD3 Zones; and
(b) Rural Zones including CR1, CR2, RU1, RU1A, RU1B, RU1C, RU1D, RU2, RU2A, AG, RU4, RU4A, RU4B, RU5 and RU5A Zones.

6. Energy Efficient Buildings and Climate Change Adaptation

More consistent waterfront setback to protect marine ecosystem and against flood

<p>5.16.1 No building or structure or any part thereof, except a boathouse located within an inter-tidal zone or within the I13 Zone, shall be constructed, reconstructed, moved, located or extended within:</p> <ul style="list-style-type: none"> a) 15 m of the natural boundary of the ocean; b) 17 m of the natural boundary of a creek, lake, swamp or pond; c) 32 m of the natural boundary of Chapman Creek, Tzoonie River, Clowhom River, Rainy River, McNab Creek, McNair Creek, Dakota Creek and Chickwat Creek; d) 22 m of the natural boundary for the portion of Roberts Creek that is seaward of Lower Road; e) In geographic areas that are in parts of Electoral Areas B, D, E and F not covered by an Official Community Plan: <ul style="list-style-type: none"> 1) 32 m of the natural boundary of a stream; 2) 32 m of the top of the bank of a ravine less the 60 m wide; 3) 17 m of the top of the bank of a ravine 60 m wide or greater; and f) 17 m of the natural boundary of all other watercourses. 	<p>507 (1) "Notwithstanding any other provisions of this bylaw, no building or any part thereof, except a boathouse located within an inter-tidal zone or within the I9 (Independent Power Project) zone, shall be constructed, reconstructed, moved, located or extended:"</p> <ul style="list-style-type: none"> (a) within seven point five (7.5) metres of the <i>natural boundary</i> of the ocean, a lake, swamp or pond with the exception of the <i>natural boundary</i> of the ocean within Electoral Area D; (b) within thirty (30) meters of the natural boundary of Chapman Creek, Tzoonie River, Clowhom River, Rainy River, McNab Creek, McNair Creek, Dakota Creek and Chickwat Creek; (c) within twenty (20) meters of the natural boundary of Roberts Creek below Lower Road; (d) within fifteen (15) meters of the top of the bank of Gibson Creek; (e) within fifteen (15) meters of the natural boundary of Chaster Creek, nor between the natural boundary and a line running parallel to and 15 meters back from the top of the bank of Chaster Creek; or (f) within fifteen (15) meters of the natural boundary of all other watercourses, including Roberts Creek above Lower Road.
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Building height exemption to support renewable energy devices	
<p>5.11 HEIGHT OF BUILDINGS AND STRUCTURES</p> <p>5.11.1 Except as otherwise provided in the Bylaw, the height of all buildings and structures shall not exceed 11 m.</p> <p>5.11.2 On parcels less than 750 m² in the R1, R2, R3, CR1, CR2, RU1, RU1A and RU2 zones, the maximum height of a single-unit dwelling unit shall not exceed 8.5 m.</p> <p>5.11.3 Notwithstanding subsection 5.11.2, where the average slope, as determined by a British Columbia Land Surveyor, of a parcel exceeds 20 percent as determined by field survey, the maximum height shall be increased to 11 m.</p> <p>5.11.4 A detached auxiliary dwelling unit or an auxiliary building or structure shall not exceed a height of 8.5 m.</p> <p>5.11.5 Notwithstanding the definition of height, where fill is necessary to raise the elevation as required by the flood control provisions of this bylaw, the height of a building or structure shall be measured from the minimum permitted elevation or the top of the fill.</p> <p>5.11.6 The following structures shall not be subject to the height requirements of this bylaw provided that such structures occupy no more than 10% of the parcel area, or if situated on a building, not more than 15% of the roof area of the building:</p> <ul style="list-style-type: none"> a) Building spire; b) Chimney; c) Mast or flag pole; d) Antennas; e) Transmission, telecommunication or utility tower; f) Monument; g) Observation tower; h) Fire hall hose drying tower; i) Water tank; j) Rooftop access limited to 5 m² in floor area; k) Elevator or ventilation machinery; l) Wind turbine; m) Silo; n) Green roof; and o) Solar collector. 	<p>503 Height of Buildings and Structures</p> <p>(1) Except as otherwise provided in this bylaw, the height of all buildings and structures shall not exceed 11 meters.</p> <p>(2) Notwithstanding the definition of height, where fill is necessary to raise the elevation as required by the flood control provisions of this bylaw, the height of a building or structure shall be measured from the minimum permitted elevation of the top of the fill;</p> <p>(3) Church spires, chimneys, flag poles, masts, aerals, fire hall hose drying towers, water tanks, domes, public monuments, observation towers, transmission towers, elevators and ventilation machinery and farm buildings including silos, shall not be subject to the height requirements of this bylaw provided that such structures occupy no more than 10% of the surface of the parcel, or if situated on a building, not more than 15% of the roof area of the principal building.</p> <p>(4) The maximum height of all fences shall not exceed 2 meters except where:</p> <ul style="list-style-type: none"> (a) permitted in other sections of this bylaw; (b) the fence abuts a highway and the height of the fence does not exceed 2 meters above the centre line of the highway; or (c) it is a structure. <p>(5) On parcels less than 750 square metres in the R1, R2, CR1, RU1, RU2 and AG zones the maximum height of a single family dwelling shall not exceed 8.5 metres.</p> <p>(6) Notwithstanding subsection (5), where the average slope of a parcel exceeds 20 percent as measured from BC Ministry of Environment 1:5,000 scale planimetric maps or as determined from field observation, the maximum height may be increased to 11 metres.</p> <p>(7) The maximum height of a building which is separate from the principal residence and which contains an auxiliary dwelling unit shall not exceed 4.5 metres.</p>

7. Definition Improvements	
Definition Changes	
Animal processing	Animal slaughter or processing
Auxiliary use	Auxiliary
Short term rental	Bed and breakfast
Cannabis production	Cannabis production facility
Community care facility	Transition house, Halfway house
Domestic	Domestic consumption
Dwelling unit	Dwelling
Two-unit dwelling	Duplex
Farm operation	Farm or farm operation
Fire department training area	Fire training area
Grade, finished	Grade, average finished
Grade, natural	Grade, average natural
Home-based business	Home occupation, Home office
Industrial	Industry
Tourist accommodation	Motel
Personal service establishment	Personal service
Site area	Site
Added New Definition	Deleted Definition
Agricultural processing (new)	Anchor (deleted)
Alteration of land (new)	Mobile home (deleted)
Alcoholic beverage production facility (new)	Creamery (deleted)
Artisan studio (new)	Feed lot (deleted)
Auto wrecking and auto storage yards (new)	Family (deleted)
Average parcel area (new)	Boarder (deleted)
Bylaw (new)	Church (deleted)

Child care facility (new)	Co-housing (deleted)
Commercial (new)	Existing water front dwelling (deleted)
Common amenity area (new)	Domestic litter (deleted)
Cooking facility (new)	Construction camp (deleted)
Fuel service station (new)	General contractor facility (deleted)
Grade, average (new)	Marine craft rental (deleted)
Green roof (new)	Medical cannabis (deleted)
Houseboat (new)	Lake (deleted)
Neighbourhood pub (new)	Multi-family unit (deleted)
Office (new)	Non-medical cannabis (deleted)
Office, health care (new)	Non-pleasure craft (deleted)
Off-street loading (new)	Outdoor firearms range (deleted)
Off-street parking (new)	Parcel line, front (deleted)
Panhandle (new)	Parcel line, rear (deleted)
Park (new)	Parcel line, side (deleted)
Pre-existing waterfront dwelling (new)	Park model recreational vehicle (deleted)
Principal building (new)	Performance hall (deleted)
Principal use (new)	Pleasure craft (deleted)
Private outdoor space (new)	Sales area (deleted)
Restaurant (new)	Shopping centre (deleted)
Retail (new)	Site coverage (deleted)
Retail, cannabis (new)	Undisturbed ground (deleted)
Retaining wall (new)	
Revetment (new)	
Secondary suite (new)	
Single-unit dwelling (new)	
Solar collector (new)	

Strata lot (new)	
Subdivision (new)	
Subdivision district (new)	
Townhouse (new)	
Underground structure (new)	
Use (new)	
Wholesale (new)	

Comments received through the Let's Talk webpage (with SCRD staff reply)

1. *I think it important to mention that this by-law is being amended to reflect conformity with revised Official Community Plans, no?*

Yes Bylaw 722 makes improvements on alignment with local policies, and provincial and federal legislations.

2. *I'm concerned about the lack of affordable housing on the Sunshine Coast. As the world population continues to grow and with Canada's welcoming immigration policies, this concern is only going to increase. I believe the proposed increased ADU maximum size to 90 square metres is too conservative. It is a step in the right direction, but lacks proactivity about the reality of the future. I'd like to see the ADU max size increased to between 105-115 sq. m as that would allow a small 3-bedroom unit that can house a 4-person family. The proposed increase to 90 sq. m will only cater to a couple. In my opinion, 90 sq. m is short-sighted. Let's get the correct size in place now and not in the next bylaw overhaul.*

Thank you for your comments and future vision on population growth. We will document your comments for consideration of any possible revision to the draft bylaw.

3. *If I understand correctly, it is proposed that on RU1 zoned parcels of over 8,000 m2 two "single unit dwellings" will be allowed and each could have a "secondary suite" of up to 55 m2 (7.9.4). In this context, "secondary suite" is a physical part of the "single unit dwelling" - i.e. part of the same building. It seems to me that the increased housing goals would be met and the density limitations respected if, instead of "secondary suite", an "auxiliary dwelling" of ≤ 55m2 per "single unit dwelling" were allowed, noting that an "auxiliary dwelling" "may be attached to or detached from any building on the same parcel." (5.2.1 (c)). This would introduce some additional flexibility with regards to design, siting etc. It is likely that an attached "auxiliary dwelling" would be more efficient and cheaper to build than one which is detached, but there may be cases where detached is more appropriate.*

Thank you for your comments. You are correct.

4. *I'm excited of the increased agriculture opportunities. Would the sale of eggs and or poultry be allowed under R2 designation, 1.4 acres?*

As indicated in the draft bylaw, agricultural product sale would be permitted in any zone where residential agriculture is permitted. However, the types of products and their permission in different zones may be further defined as the draft bylaw proceeds to the next stage of review.

5. *Hi I have read in your questions and answers section that an R2 property over 1000m2 will be allowed 6 hens. I currently have around 30 hens and 50 meat chickens I raise for our freezer on a 1.4 acre property. This new by-law will bring me out of compliance. I had thought it was supposed to increase residential agriculture. Quite upsetting if this is true.*

Thank you for your comments. As indicated in answers to previous questions, we will review and refine these regulations.

6. *How will SCRD enforce STR regulations?*

Through the Bylaw Compliance division: <https://www.scrd.ca/Bylaw-Compliance>

7. *1. Will the keeping of chickens be under the guidance of the building inspector regarding the placement and size of the buildings used for housing chickens. In the current bylaw it specifies strict accordance for proximity to parcel boundaries. Due to the size and configuration of some properties these setbacks cannot be managed accordingly. In my opinion then chickens should not be kept if setbacks are not enforceable. 2. In regards to the language the differentiation of chickens and roosters needs to be changed. It should read hens and roosters. The keeping of up to 24 chickens should be hens not roosters and as in Surrey for instance no roosters allowed on less than 5 acres. The keepers of chickens reap the benefits but the neighbours own all the detriment. Noise, smell, rats, indiscriminate handling of manure, runoff polluting streams and ditches.*

3.all these bylaws have no teeth if not enforced according to the law.It is not descretionary by the officers the laws are in black and white are they not?

Thank you for your comments. A building housing chickens, if larger than 10 m2, will require a building permit. We will look into parcel size, setback and gender differentiation issues for the keeping of chickens, and make possible revisions to relevant bylaw sections, with the aim to strike a balance between supporting residential agriculture and minimizing neighborhood conflicts.

8. *Has the potential number of additional auxiliary units been calculated given the proposed changes to size allowable? Has an analysis been done to determine whether reducing the minimum lot size to 0.4 acres from 0.5 acres (with current smaller size limit) would create needed additional auxiliary suites without increasing density too much?*

No, the parcel size threshold of 2000 m2 remains the same for allowance of auxiliary dwelling.

9. *Why is there no mention of controlling/banning beach fires in area D and F and restricting use of beach access points from dusk till dawn? A foreshore lease is all that's required to better manage/ban beach fires as is the case in Gibsons. This is a major issue in both Elphinstone and Roberts Creek. I believe our bylaw officers and fire departments have no authority over what occurs on the beach. It is now time that the foreshore be brought under control.*

Foreshore is under the province's jurisdiction. The zoning bylaw has water zones in some areas which include the foreshore, but its regulations are intended for land use, buildings and structures, not activities.

10. *Could auxiliary dwellings and/or secondary suites also be considered for smaller lot sizes? eg. Lot: 3 Block: 14 District Lot: 810 Plan: VAP7309 Approximate Lot Size: 16117 sqft*

The parcel size threshold (2000 m2) to permit an auxiliary dwelling has not changed. But a secondary suite would be permitted by the new bylaw.

11. *We are on a 2000+ sq/metre property that includes an existing auxiliary building. We hope to finish a space above the garage to be used as a guest space. But the current bylaw does not support having any sleeping accommodations in an auxiliary building. As such, on my R1 property (+2000 sq/metres), will I be able to construct a separate auxiliary dwelling like a carriage house if an auxiliary building already exists on the property?*

You can either add a living space (auxiliary dwelling unit) within or attached to the existing auxiliary building, or build a separate carriage house containing a garage and an auxiliary dwelling unit. But only one auxiliary dwelling would be allowed on the property.

12. *If you have an auxiliary dwelling already; does this mean one can ALSO have a "secondary suit" (on 5 acres)?*

As proposed in Bylaw 722, a secondary suite is permitted as an auxiliary use and contained within a single unit dwelling.

13. *What does "support" mean for "energy efficient buildings"?*

For example, building floor area limit doesn't include wall thickness to allow thicker and better insulated walls which are commonly used in passive houses; building height limit doesn't apply to green roofs, solar panels and wind turbines.

14. *Will try and attend this evening. Can I be mailed or emailed a copy of the new bylaw. As you crowd the space with homes I am interested in noise and disturbance, visual and audios. At present limited enforcement of any bylaw infractions, piecemeal approach. The Coast has changed beyond going back and what we had has gone. What is the vision.*

The bylaw can be downloaded on this same website, look to the right.

15. *The language in regards to chickens on small lots is unacceptable. First off a male chicken is a rooster; a female chicken is a hen. The way the bylaw is written someone could have 6 roosters on a 1000 sqm lot. Secondly having chickens on a lot less than 4000 sqm (1 acre) will be invasive*

to the neighbours (noise, smell, rodents, predators). Thirdly I live in an R1 zoned area for the peace and quiet so I don't have to hear and smell chickens or livestock or grow ops. This will cause lots of neighbourhood friction and problems if passed.

Thank you for submitting your comments. We will consider them in further refinement of terminology of the subject matter in the bylaw.

16. *Will the new zoning allow a secondary suite on properties under 1/2 acre?*

Thank you for posting your questions.

Bylaw 722 would permit a secondary suite auxiliary to and contained within a single-unit dwelling.

17. *When do you anticipate revisions to bylaw 337 covering Electoral Area A? Is it anticipated that a similar increase in size to the allowable secondary dwelling will be made for Area A? Sure hope so given it is a more rural location with typically less impact on neighboring properties than in the current revisions for other Electoral areas.*

Thank you for posting your questions.

At this time, an answer to your questions is not yet available. Please contact the SCRD for future updates on this matter.

18. *There are changes to the bed and breakfast rules to no longer allow a suite to be used as a bed and breakfast. This is a new rule that was not part of the earlier short term rental regulation update. Can you please explain this change and how it affects existing secondary suite based bed and breakfasts.*

The purpose of permitting a secondary suite within a single-unit dwelling, as proposed in Bylaw 722, is to increase housing supply and options for long term residential use, rather than for short term rental accommodation. However, existing bed and breakfast within a secondary suite (referred to as an auxiliary dwelling unit) established before adoption of Bylaw 722 would be considered a legal non-conforming use, and would be allowed to continue operation as it has been. Alternatively, if an auxiliary dwelling unit is permitted on your property, the existing suite can be considered an auxiliary dwelling unit in which a bed and breakfast is permitted.

19. *Why are there now limits on the number of chickens and beehives allowed on rural properties? There were no limits under the old bylaw - why are rules being introduced to limit farming on large properties? It makes no sense to limit chickens to 24 and not have any limits on the number of other livestock.*

Thank you for your comments. The SCRD will consider your comments in refining this section of the draft bylaw to reflect a wide range of properties, zone and residential agricultural activities.

20. *There is a lot of ill feelings regarding housing being used for vacation rental purposes. I believe that tourists are an important part of the local economy. More information needs to be made to the public about the local MRD tax on vacation rentals to reduce some of the hostility towards tourists. How much of the 2% tax is currently being used for SCRD housing initiatives?*

MRDT is not directly related to the proposed Bylaw 722. Please contact Sunshine Coast Tourism for assistance on this inquiry.

21. *Hello I would like to express my concern regarding allowing the raising of chicken on properties in excess of 1000 square meters. Close proximity of a neighbours chicken coop will cause problems regarding sanitary conditions (disposal of chicken droppings), noise, airborne pollution from dust and smell, rat and other rodent infestation, as well as problems connected to attracting coyotes and other predators. These are all problems which can not be easily remedied between neighbours. The effect on property values is also a concern. My suggestion would be to increase the size requirement for a property drastically.*

Thank you for your comments. They are documented for consideration by the SCRD.

22. *I have a 1.7 acre subdividable lot in Area E RR1 We have a main house and a cottage we have to subdivide if we wanted to build a Third dwelling? and if we built a third dwelling subdivided or not could it be a duoplex or a multidwelling unit? According to previous zoning the property line for sub division would be really close to the back of the 600sqft cottage I am also wondering about how much you can change that line if at all. Also wondering if the second property that would be approximately .7 of an acre would be eligible for a 962 sqft cottage ? Thirdly would we have to cede the back and front of our property as on one side of us there are 4 houses with properties and on the other there are 2 houses and 1 with a cariage house in the front? I will be at the public meeting on June 8th in roberts creek*

For site specific development potential inquiries, please email planning@scrd.ca for further assistance.

23. *What about Tiny homes and rvs and bring able to live in them ??*

Tiny homes with building permits or certain factory certificates can be used as dwellings. RVs cannot be used as long term dwellings.

24. *If we have 1/2 an acre and with a house with a current basement suite, are we also able to build an auxiliary dwelling? All for long term rental*

The basement suite would be permitted as a secondary suite in Bylaw 722. Additionally, if the property is within R1 or R2 zone, an auxiliary dwelling is permitted.

25. *Does bylaw 722 contain any changes to land use zoning, compared to bylaw 310? If so, can the SCRD provide a detailed list of those changes so that residents can easily see them. 2. The process started in 2018, and since then we have seen extreme weather impacts, with the SCRD presenting a report on the impact of climate change on the coast in May 2022. What are the implications of the updated climate change predictions on land use zoning as laid out in bylaw 722? Are there further amendments that should be made to accommodate these? 3. Hopefully the SCRD will budget in 2023 for the preparation of a regional growth strategy for the lower Sunshine Coast, to come into effect in 2024/25. This will undoubtedly have implications for land use zoning. Will the approach be to then amend bylaw 722? Is this the most efficient way to proceed, rather than deferring the new bylaw until after the RGS is in place? 4. The above question also applies to budgeting in 2023 for new OCPs – has the SCRD sequenced all these exercises in the most efficient way, so we are not doing too many ad hoc amendments that are time-consuming and difficult for residents to follow?*

Thank you for posting your questions.

Bylaw 722 is not intended to change land use designations or densities. It is intended to provide updates on a few key opportunity areas as outlined in this website to address community needs, as well as technical housekeeping and usability enhancements. This is the first step towards a comprehensive new zoning bylaw and other planning policies in the future that would take into account a broader range of subjects and community inputs.

26. *Will the number of chickens be limited according to the lot size?will roosters be allowed as in many other jurisdictions roosters are not allowed!*

Thank you for posting your questions.

As proposed in Bylaw 722, the keeping of chickens would be in accordance with:

- a) Six chickens on any parcel zoned R1 or R2 with an area over 1000 m2;
- b) Six chickens on any parcel zoned C2 or C3;
- c) Chickens and roosters on any parcel zoned AG;
- d) 24 chickens on any parcel zoned CR1, CR2, RU1 or RU2;
- e) Six chickens on any parcel zoned PA1 or PA2

27. *Can I subdivide my 1.02 acre property in Halfmoon Bay*

This website is intended specifically for information related to Bylaw 722. For general property related inquiries please email: planning@scrd.ca

28. *It's not clear to me from all this information if I will be allowed to build a carriage house on an R1 zoned 2000m2 property in area F.*

An auxiliary dwelling in the form of a carriage house would be permitted on the property.

29. *WITH REFERENCE TO FLOOR AREA OF BUILDINGS BYLAW#722 5.13.1 On a parcel less than 750 m2 in area in the R1, R2, CR1, CR2, RU1, RU1A and RU2 zones, the maximum floor area of all buildings above the average grade on a parcel shall be the parcel area multiplied by 0.40. 5.13.2 On a parcel between 750 m2 and 1500 m2 in area in the R1, R2, CR1, CR2, RU1, RU1A and RU2 zones, the maximum total floor area of all buildings above the average grade on a parcel shall be the parcel area multiplied by 0.30. 5.13.3 Notwithstanding 5.13.1 and 5.13.2, the calculation of floor area within buildings does not include area of up to a maximum of 45 m2 used for enclosed parking. My Question: How is a threshold of 750m2 arrived at? What is the Science and Research that supports a single Threshold of less than 750m2 for the Floor Space Calculation at .40 of the Parcel Size and .30 of a Parcel Size between 750m2 and 1500m2 ?. My Question is: What are the Principles of Community Planning that support such a narrow singular Threshold? As opposed to Graded/Scaled Gradual Theshold that varies with actual parcel size? In my personal example ,I have a parcel size of 775m2 which limits my Floor Space calculation to .30. Please explain how in relation to good planning practice principles how a difference of just 25m2 is more useful and more appropriate or detrimental. Please explain how this 25m2 difference in allowable Floor Space would make for a negative impact on the Quality Of Life of the members of the community specifically how this would negatively impact the quality of life of my immediate neighbours?*

It is not possible or practical to establish infinite numbers of brackets to account for infinite parcel sizes. However, we will consider your comments and seek to devise a floor area ratio to both maintain the rural density and character as directed by the official community plans, and provide for practical building space for small lots.

30. *I'd like to 'second' the comment that "Creeker3" made. Any attempt to in increase "habitable units" within the SCRD should be done through the use of Auxiliary dwelling units and not "secondary suites". It will be much easier for property owners to add "ADUs" to their lot than to add "secondary suites" to an already existing house.*
31. *Please put dates on all of your web pages. I google zoning, and pages come up from years ago or from mystery dates. It's hard to tell what's current.*

Comments received by email

My family really appreciates the monthly newsletter you send out. It helps keep our busy family up to speed on many items that affect us.

1. I am very excited about the announcements regarding secondary suites in Bylaw 722 and hope this is passed soon!

2. I was less than happy to hear from Jonathan Jackson that backyard chickens in SCRD parcels may be limited to six chickens. I really appreciated your point suggesting that we begin to use the term 'poultry' instead of just chickens. Good work Donna. I also understand the need to help maintain balance with neighbours, but where did Mr. Jackson come up with the 'six chickens' figure? This seemed to come out of left field and was instantly noticed by my family. We moved to the Sunshine Coast to access a more rural lifestyle, and promptly built a chicken coop and now love our pet egg producers. Our neighbours have been overwhelmingly positive about having the chickens nearby, especially as we share the eggs around!

Please continue to advocate for the Elphinstone people as perhaps Mr. Jackson is misinformed.

I was not able to attend the meeting regarding the proposed changes to the zoning bylaw but want to voice my concerns.

I live in an R1 zone and am opposed to the keeping of chickens in this area. I feel the chickens will be a nuisance given the noise, smell and the wildlife they will attract. We have enough problems now with bears, coyotes, the occasional cougar and the huge population of rodents.

I have some concerns regarding our water supply. It does not seem fair that a single family dwelling is paying the same as a multi unit or bed and breakfast establishments. The bed and breakfast units use far more than the average household. The bed and breakfast units require an above average supply of water given the washing of bed linens, towels and more people using the water for showers or baths.

Last year we had to watch our produce die due to the severe water restrictions just a few weeks before our planned harvest. We had hoped to donate the excess to the food bank but this was not the case. We were forced to purchase produce we could have grown ourselves.

Please forward these comments to the Sunshine Coast Regional District.

Further to the Public Hearing at Roberts Creek gym last week I am writing in hopes you can explain, in detail, the rationale behind the following provision on page 17 carries as follows:

"Not more than 20% of the total floor area of all buildings on a parcel shall be used for a home-based business".

I wrote to my Regional Director, Andreas Tize a week before the meeting and was assured that an answer would be provided, "...at or before the Public Hearing".

I am the owner of 1519 Henderson Avenue, Roberts Creek, and similar to my neighbour Shea (second property to the south) who opened a professional pottery studio comprising far more than 20% floor area of existing structures, 3 years ago, I also believed this kind of enterprise to be a good fit in this neighbourhood.

Shea has had no complaints, related to either the amount of space her business occupies, or any other issue such as noise, traffic, smoke etc. (which are of course unrelated to the amount of floor area occupied and in any case acceptably controlled by existing provisions). I believe it is easy to create a fairly extensive list of businesses operating in similar ways to Shea, which would fall foul of such a provision and which have been operating acceptably for years.

I am unclear as to how limiting floor area for a home based business in this way might benefit either the need for home based businesses, or the nature of our community in any way. I look forward to hearing from you further at your earliest convenience.

Having read through the old and new bylaws I would like to note the following items for consideration:

1. Public engagement from June 13, 2019 suggested increased maximum size for auxiliary dwellings to 800 -1,200 sq.ft. Given this consultation was done 3 years ago, the current proposed increase to 90 sq.m. (968 sq.ft.) seems to be inadequate for today's needs. The housing situation has become much worse in the past 3 years, and will continue. Given a full re-write of the bylaws will take a significant amount of time to complete, the SCRD should consider increasing to the higher end of the recommendation as this will provide maximum housing alternatives in the short term, which are dearly needed.

2. The distinction between auxiliary building and auxiliary dwelling is resulting in buildings that could be used for short term or long term accommodation, not qualifying to be used for accommodation simply given the size. If the Bylaws permit a secondary structure to be built on a property, which is limited in size based on lot size through other provisions, what is the purpose of limiting the size of an auxiliary dwelling?

3. The term "short term rental accommodation" excludes a "sleeping unit". Given the broad definition of sleeping unit, it would appear nothing would qualify as short term rental accommodation. Can you please clarify the interplay between these two definitions?

4. The term "secondary suite" is defined, however I don't see the term referred to anywhere in the bylaws. Can you please clarify the relevance of the secondary suite definition? Can an auxiliary building contain a legal secondary suite so long as the suite is under 55 sq.m.?

Thank you for your time and consideration in making the much needed updates to current Bylaw 310.

I have read in your questions and answers section that an R2 property over 1000m2 will be allowed 6 hens.

I currently have around 30 hens and 50 meat chickens I raise for our freezer on a 1.4 acre property. This new by-law will bring me out of compliance. I had thought it was supposed to increase residential agriculture. Quite upsetting if this is true.

Thank you for hosting this meeting. It was nice to meet in person and not at the Roberts Creek Hall. I do not do zoom except to talk to Grandchildren, and I do not do Roberts Creek Hall due to allergies.

It was interesting to hear all the various view points. However, I realize this by-law encompasses Areas B, D, E and F and a wide range of various land uses. Therefore it has to be more generic than specific.

I wish to address the keeping of chickens. Like other pet owners they are not created equal. Some take care of their animals, others do not. The average homeowner has no idea how to care for chickens, or other outdoor birds. This by-law does not indicate setback, or structure built to house, nor is the chickens have to be confined to the yard by a fenced area. If I read correctly chickens will be allowed on 1/4 and 1/2 acres properties. Definitely 1/4 acre is too small. 1/2 acre I am also going to say too small for 6 chickens.

I have had birds, homing pigeons and ducks next to me and in each case have had to deal with rats. I would be most upset to have in my yard if allowed to roam. I know they can ruin a garden. I had a duck killed underneath my bathroom window one night while I was relaxing in the tub. They attract animal life like coyotes and racoons which are detrimental to household pets and the bird seed attracts bears.

On a final note we rescued a very wet and bedraggled young chicken (designer rooster) up the mountain a few months back and delivered to Gibsons Wildlife. They told us that someone one probably dumped it as it was a rooster and probably neighbours complained about noise. The owners did not know what to do with it, so unable to kill it or find someone to take it decided to dump up mountain and let fend for itself - food for coyotes, cougars or racoon. Point - should not have had chickens to begin with.

So without some stricter guidelines on the keeping of chickens it will be fraught with complaints and ill-will between neighbours. There may be another by-law governing chickens and if so strongly referred to in this generic by-law.

I understood the discussion on secondary suites and auxiliary buildings. However, I did hear the man referring to his 1000 square foot work shop and a smaller house. I have some sympathy with his case. The shop should not overpower the main structure (as the area is residential) but could at least be same size or slightly small than the house and having a maximum building size. The shop should be registered as such and there would be no allowance for an auxiliary structure. Example. A 1200 square foot house and a 1000 square foot shop as long as the parcel size is not overpowered and a total building capacity met (not more than two dwellings would have been).

There is a conversation to be had however on the largest shop size to be permitted before it is deemed too large and unsuitable. There are large buildings housing cannabis operations at present.

Under this conversation home based businesses have been allowed to flourish. They serve a purpose. I hope they are being taxed accordingly. I also hope that they are registered and that they are inspected from time to time. They are wanting to sell their products and need to be under the inspection of health and regulatory bodies, exactly like commercial enterprises. I also hope they are in the confines of a building....talked to someone who had a spa next door and apparently it was mostly outside and burned wood to heat devices.

Usage of RV and trailers as housing. They need to be in a park or area setting. They need the support of proper sanitation and water. They probably need a common shower, laundry. They need to be near public transportation. If you have lived in a RV or a trailer for any length of time they require a lot of maintenance and most are not for winter usage. Mobile homes need pads, anchors and skirting. They are treated as dwelling. They are build to a higher standard than RV and travel trailers. They are even a higher standard than park model trailers. Tiny homes that I have seen are expensive and not suited to families or even a couple and once placed the desire would be add on. They are also sponging on water, hydro and garbage and many other taxable services. If they are allowed....they need to pay. If you have two separate dwellings...you pay two utility bills. If you have two rental cottages and a main house you pay three utility bills. That is the case now. If you live in a mobile home park you pay taxes which go towards

general purposes. Yes there is a housing crisis...but people are still building huge houses and putting in expensive exteriors. Even to put in small lots with small houses results in prices people cannot afford.

Our property for many, many years could not have a second dwelling. Now that it is allowed we have thought about it as a retirement option but frankly it is too costly and too much red tape to pursue. We could live in small place and rent out larger. The option came too late in life to afford.

Isn't this nice? Now you can look forward to legally keeping chickens. If you notice some sarcasm in my tone, it's because we are being talked-down-to as if we were children. No mention of issues of real concern to us, like clear-cutting of subdivision developments, or supplying water to hundreds of ensuite bathrooms in these new subdivisions.. You may have to ration your chickens' drinking water, or make your dirty car your badge of compliance with water restrictions that start--you may have noticed--while we are currently experiencing monsoons.

I'd like to give the SCRD the benefit of the doubt but experience has shown me that they like to play shell games. So instead of buying your bee hives and building your chicken coops, get involved with the process and voice your concerns at what little opportunity for public input the SCRD allows us.

Is there consideration for flexibility to encourage the provision of housing? For example, a large lot in certain zones will be able (under the new regs) to have 2 full sized houses each with a secondary suite. That totals 4 dwellings. Why not allow a choice: 2 houses each with a suite (which cannot accommodate a family) OR 2 houses plus an auxiliary dwelling? OR 1 house plus 2 auxiliary dwellings? There is also the issue of a max of 2 dwellings regardless of the size of the lot. But if a large property is too small to subdivide in the existing zoning, why not allow an extra house if the property is over a certain size? This still would maintain the character of the neighbourhood but provide more housing. For example, some properties in CR1 (permitting 10,000 sqm) are much larger than that, but just a hair too small to subdivide and create 2 x 10,000sq m. Why not allow 3 houses on such a property or 2 houses plus an aux dwelling? I would appreciate hearing more about creative solutions that do not have to wait for the next step in changing the zoning bylaw again. This one has taken a great many years to complete. The time is NOW!

I've been a property manager for over ten years and a consultant to B C Non-profit Housing for another ten . Here are a few observations regarding land use and governance gleaned from experience:
Owners and tenants vary in their value systems ,beliefs and expectations.
A land use bylaw (s) should flow from established cultural beliefs and public knowledge . Regional governance must be educated and aware of district cultures such that regulations and procedures complement the district life and growth.
Wherever possible a relaxed approach to the creation of regulations or the perceived need for same should be attempted such that the bylaw comprises only basic regulations. This relaxation leads to land use decisions which follow generally acceptable behaviour .

Could you please write a better definition for "secondary suite" it's not a "dwelling unit". If it includes kitchen facilities it should have sink and running water?

Comments from Ministry of Agriculture and Food

Thank you for sending the below noted portion of SCRD's updated Zoning Bylaw 722 pertaining to Residential Agriculture to the Ministry of Agriculture and Food (Ministry) for our review. Ministry staff have the following comments:

- 1) With regards to land use planning, the legislative framework that the Ministry operates under is solely concerned with land in the Agricultural Land Reserve. As such, Ministry staff are not well versed on topics such as best practices associated with residential agriculture/backyard chickens.
- 2) Ministry staff are aware of several local government bylaws concerning backyard chickens. Specifically, the [City of Surrey](#) and the [City of Victoria](#) have both adopted detailed backyard chicken bylaws that explain the rules and standards of care for keeping backyard chickens. This includes how many chickens a landowner can keep, the necessary size and design of the coop and how to maintain the health and welfare of the animals. These bylaws may be helpful to further refine SCRD's Residential Agriculture section of Zoning Bylaw 722.
- 3) Lastly, the Ministry requires that as of July 1, 2022, any resident of British Columbia who owns or cares for livestock (including backyard chickens) is required to register their premises to support the Province's emergency response network. As such, Ministry staff encourage the SCRD to require that all backyard chickens are registered in the Ministry's Premises ID Program. More information on the mandatory livestock Premises ID Program can be found [here](#).

Further, the importance of livestock owners who previously registered their poultry in the Premises ID Program was a critical component of the Ministry's response to limiting the spread of Avian Influenza (AI) throughout the Province which included a positive AI case in nearby Sechelt.

If you have any additional questions, don't hesitate to reach out to Ministry staff.

Cheers,

Reed Bailey, Land Use Planner

Strengthening Farming Program

BC Ministry of Agriculture and Food

Comments from Ministry of Transportation and Infrastructure

Thank you for the opportunity to comments on proposed SCRD zoning bylaw 722. Preliminary Approval is granted for the rezoning for one year pursuant to section 52(3)(a) of the *Transportation Act*.

Kattia Woloshyniuk

Senior Development Officer

Comments from Vancouver Coastal Health

Vancouver Coastal Health (VCH) recognizes the importance of maintaining and updating Zoning Bylaws to ensure that communities are able to respond to the changing community needs and contexts. As our economical, social, and physical environments change, we appreciate the Sunshine Coast Regional District's (SCRD's) writing of Zoning Bylaw 722. Thank you for the opportunity to review and comment on this new regulation. The proposed Zoning Bylaw 722 was reviewed by the local Senior Environmental Health Officer (EHO) and Healthy Environments team.

In general, VCH supports the Zoning Bylaw 722 updates, particularly as it facilitates gentle density within existing residential zones via secondary suites and includes support for more energy efficient buildings and preparedness for climate change impacts.

Housing affordability and availability are substantial issues across the province, and we support this opportunity to supply some additional housing opportunities in the region. VCH recognizes that densification is an important planning direction necessary to tackle climate change. In general, we support densification as it supports lifestyles that contribute fewer greenhouse gas (GHG) emissions as well as promote physical activity and stronger social connections; however, we note the importance of

adhering to the Subdivision Guidelines and Sewerage Regulations to enable the safe disposal of wastewater, as well as considerations of potential land use conflicts.

We offer the following comments for your consideration:

Supporting Increased Density with Infrastructure

VCH supports increased density that corresponds with the expansion of infrastructure. For drinking water, densified developments must be supported by connection to community drinking water systems that are operated by the SCRD. For wastewater, this may entail extension or expansion of public sanitary sewage services. These community sewage treatment facilities may be operated by local governments or potentially a strata council. Depending on the size (i.e.; daily flows) of these facilities, they are regulated by VCH under the Sewerage System Regulation (SSR) or the Ministry of Environment under the Municipal Wastewater Regulation.

Local governments are encouraged to develop a Liquid Waste Management Plan (LWMP) to help plan for wastewater infrastructure that will meet future community needs. LWMPs require long-term costs and benefits from public health, environmental, and economic perspectives in order to support increased density.

Subdivision Standards

VCH relies on the standards set out in the VCH Subdivision Guideline (2010) to evaluate applications involving subdivision of larger lots into multiple smaller lots. According to this guideline, proposed new subdivided lots serviced by a community drinking water system and supported by individual onsite sewerage systems, requires a minimum lot size of 2000 m². Subdivision proposals with proposed lot sizes that are less than 2000 m² may be considered if the proposal is supported by a regulated community drinking water system, and a community sewage system as per the standards set out in section 'L' of the VCH Subdivision Guideline.

At present, the VCH Subdivision Guideline evaluates proposals based on type 1 soil conditions that would support a Type 1 treatment system as defined in the SSR. In the development of a subdivision, appropriate soil depths and conditions are evaluated by VCH staff during the wet season assessment. Type 1 treatment systems typically operate with a lower effluent application rate and are less prone to problems resulting from lack of maintenance, seasonal occupancy and power outages. Reliance on Type 1 soils/systems for subdivision assessments is in close alignment with best practices established in the Provincial Subdivision Best Practice Guideline (2017).

VCH advocates that local governments develop and enforce Maintenance Bylaws that would mandate regular maintenance of onsite sewerage systems. This would allow a subdivision assessment to proceed with consideration of Type 2 and 3 soils/systems. Type 2 and 3 systems typically require more maintenance, but they produce a higher quality effluent that can be discharged into a smaller drain field. These systems are more prone to failure if regular maintenance is not diligently followed; however, as a result of further treatment, Type 2 and 3 systems allow for higher density rural development when the systems are operating properly. Adoption and enforcement of Maintenance Bylaws as a pre-condition to allowing evaluation of subdivisions based on Type 2 and 3 soils/systems, is directly established as a best practice in the Provincial Subdivision Best Practice Guideline (2017).

Restrictive covenants may have an impact on plans to increase density on existing lots. During the site and soil evaluation of a subdivision, we may request restrictive covenants related to onsite sewerage systems. Restrictive covenants are charged against the title of new parcels. The two covenant types are as follows:

1. Sewerage system covenant areas: A restrictive covenant that sets aside a certain area on the survey plan on the lot to be used exclusively for onsite sewage systems (i.e.; no building footprints). The area is typically sized to fit two sewerage systems to allow for a future install if the initial system fails over time. The covenant language is only applied to the identified sewage disposal area, not the entire lot.
2. Dwelling restriction or flow restriction covenant: During site and soil assessment, marginal soil depths or conditions (given the proposed lot size) may be observed, triggering a requirement for a professional

assessment report, and a dwelling or 'flow restriction' to be imposed through a restrictive covenant. These covenants are charged against the entire parcel. The

covenant language may stipulate that only one single family dwelling with a certain maximum number of bedrooms may exist on the property. More modernized covenant language would restrict the total amount of waste water flow generated on the parcel to correspond to typical waste water flows generated by one single family dwelling with a certain number of bedrooms. These covenants are less common than sewerage system covenant areas.

These sewerage-related covenants are applied according to the standards in the VCH Subdivision Guideline on a case- by-case basis during the subdivision process. Overall, their purpose is to protect the long term ability of the new parcel to adequately treat and dispose of sewerage flows, and reduce the risk of health hazards presented by failed sewerage systems.

Legislation Overview: Sewerage System Regulation

Enacted in 2005, the Sewerage System Regulation (SSR) applies to all smaller onsite sewerage systems, including those for houses, small businesses and small communal systems. The SSR is 'performance-based,' and responsibility for the proper design, sizing, layout and installation of onsite systems is carried out by 'Authorized Persons' (AP) as defined by the SSR. An AP is a Professional or a Registered Onsite Wastewater Practitioner (ROWP). APs have an obligation to file their plans with VCH Health Protection offices. VCH staff are not directly involved in the design or inspection of any additional or upgraded sewerage systems that would support new dwelling units on existing lots.

Increasing Density on Existing Lots

In general, VCH supports increased density on existing lots that rely of onsite sewerage systems as long as wastewater handling is properly addressed. Increased density may be achieved by adding secondary suites or auxiliary dwellings as illustrated in the proposed changes to the Bylaw. In some cases, this may be carried out in the context of the SCRD strata conversion process.

VCH does not apply the VCH Subdivision Guideline or its minimum lot size requirements for increased dwelling units on existing lots. Similarly, there is no soil standard evaluation conducted by VCH staff. When new dwellings or additional bedrooms are proposed, the SCRD's building permit process triggers an assessment and an AP would identify the need for an upgrade of the sewerage system(s). We consider this to be an appropriate process to ensure wastewater handling is appropriately addressed under these conditions. Furthermore, we are not opposed to allowing increased density on existing lot sizes that are less than 2000 m², as long as the processes outlined above are adhered to.

Livestock and Childcare Uses

We note that CD1 zoning permits both childcare and livestock on-site. We encourage the SCRD to consult with VCH on any proposals that would enable both uses as there is a potential health risk that can be mitigated through various measures such as proper housing and increased hygiene when handling chickens and eggs.

Energy Emission Considerations

Climate change is a pressing public health concern and requires two-fold action to mitigate our GHG emissions to reduce its impacts, as well as adaptation to the anticipated changes as a result of our current emissions. We are pleased to see height exemptions for green energy devices and measures included to enable improve building insulation. As the SCRD continues to work through its climate adaptation planning, we encourage the Regional District to continue thinking about additional zoning measures that will continue to encourage more climate-resilient development.

We recognize that Zoning Bylaw 722 largely serves as an update to Zoning Bylaw 310, and it does not currently seek to incorporate additional policies to support increasing densities across the region. VCH anticipates that conversations around increasing density will continue over time, through which the Regional District can further its policies around energy efficiency and climate change preparedness. We look forward to continuing the discussion with the SCRD to enable the development of resilient and healthy communities that continue to maintain safe infrastructure to handle drinking water and wastewater.

Thank you for the opportunity to review this application and the associated proposal and to provide comments from our perspective. Feel free to contact us if you have any questions.

Darren Molder

Senior Environmental Health Officer & Drinking Water Officer

Laura Chow

Senior Planner, Healthy Environments

Shishalh nation:

I am writing in response to your email dated May 31, 2022 , received in our offices June 3, 2022 regarding proposed SCRD Zoning Bylaw 722 within shishalh Nation swiya (world, birthplace, lands, "Territory"). This application has been assigned to me under file number SNR22182.01. Please refer to this file number in the subject line of all future correspondence.

This application will be reviewed following the shishalh Nation Lands and Resources Decision-Making Policy. If you have not done so already, Chief and Council require that you closely read the Policy. Upon completion of our review, shishalh Nation will provide an official response via email or a letter from Chief and Council. *Please do not make a decision prior to receiving the shishalh Nation response.*

Kirin Lamb (she/her)

Implementation Coordinator, Rights & Title Department

Stewardship & Territorial Land Management

PO Box 740, 5555 Sunshine Coast Hwy, Sechelt, BC V0N 3A0

t 604-740-5600 ext. 342 | toll free 1-866-885-2275

Public information meeting notes – June 8, 2022, Roberts Creek Elementary School

Brett McGillivray

Commented the agriculture is encouraging but a pity there is no water to grow food.
Encourage everyone to grow food but once we hit stage four then what.

Chair commented water is a big concern on the coast, and there is on-going community discussions on how to address that.

Mary Degan

Concerned over chickens and the six-bird limit.

Property is a half-acre that is zoned R2.

Currently raising chickens and 200 ducks. Six chickens aren't enough and a rooster is needed.

Food source for my family.

Concern as the definition was poultry and now it will be just chickens.

There is no one raising chickens commercially on the coast, if I don't have a rooster I have no chickens this year.

There was 100 chicken's born on the coast this year due to my eggs.

Food sustainability is an issue, I am contributing to food for other families on the coast.

Issues with bringing chickens from off coast, potential for disease.

Currently has a closed cope system.

Should be able to have twelve chickens on a half-acre lot.

Question is re-zoning a possibility and to apply to the Agricultural Land Commission?
New farmers coming to the coast can't afford to buy agricultural land and are using another person's land to farm.

Chair noted rezoning are always possible and encourages getting in touch with staff to discuss further.
There is still time to make tweaks as this is only at the first reading stage.

Donna Shugar

Pleased we are starting to make some changes, 2018 was not the beginning of the process it happened numbers of years before that, was a SCRD Board member.

It is disappointing we have to wait till 2028 to get change, as the coast has some serious issues currently. Encourage staff to look at greater flexibility in the housing area, just being able to have secondary suite in your house is very little in terms of making a shift to creating housing for the numbers of people who need it.

Flexibility to be able to have two dwellings and an auxiliary dwelling.

Should be able to expand housing needs as per lot size, more dwellings allowed per parcel size.

The one size fits all no matter how big your property is, you can't have more than two dwellings on a property is ridiculous.

Any zone any sized lot is pretty much the same, make it flexible.

Chair noted the size increase of the new auxiliary dwelling is bigger than the existing allowance. Willing to work with the Official Community Plan's and specific requirements with Vancouver Coastal Health and Ministry of Transportation and Infrastructure. Looking at flexible housing solutions that is safe for the environment.

Alexander Van Borek

On-going issues with the SCRD.

Concerns over dwelling limitations per parcel size.

Septic requirements have changed and are no longer tied to the 30-year-old septic system requirement.

If you want to increase density then more people should be allowed to live on the property.

Density is all cultural.

Question how are you going to change the parcel size, to allow more people to live on a smaller piece of property?

Why not start research on smaller septic systems? We are way behind on septic systems locally.

Chair replied the SCRD is bound by other government agencies like Vancouver Coastal Health and their septic field requirements.

Vancouver Coastal Health isn't willing to budge on the half acre parcel size for a septic system. Larger community septic services would be a long-term trajectory. Lots of solutions out there. Vancouver Coastal Health won't authorize type two and type three septic systems to allow for smaller lots.

Chris Hergesheimer

Thanks for doing this work, big challenges. Why not go big go structural, go all in why wait seven/eight years for the change.

The community has no time for this eight-year time frame, it is scary and sad.

Housing affordability's connected to diversity which is directly connected to density is green, sustainable, and affordable, there is no solution of expanding the square foot print of a little house.

Why can't you take 1000sqft which is allowed and make three 300+ tiny house.

The square footage should be a unit and let people distribute as they see fit.

Glaring issue and grey areas is tiny homes and RV situations and nowhere to put them with proper amenities, added stress on people. There is a housing crisis.

There are 1000's of people living in small non-conforming buildings.

Background in food and agriculture.

We need to remove all friction that exists for producing and selling and harvesting local food on the Sunshine Coast, actively promote the production of food in all areas.

We cultivate 21 hectares on the Sunshine Coast in crops.

Six chickens are an issue, let people decide.

Delete all friction and embrace the rural and what comes from that is food production.

More public consultation is required.

Short term wins for the community is a must.

Housing needs to a priority, we know what the community wants and to be more proactive to work with the SCRD.

Chair responded the eight-year time frame is just a snapshot of on-going work ahead of u, it's the beginning of a larger community conversation.

Official Community Plans are all up for on-going negotiation as well as Bylaw 337. Mentioned Bang the Table webpage for public consultation and more dialogue. Density increase is important to address and can't move to fast and need to look at it more closely. Regional growth policy and more Official Community Plan support. Broader aspects for future density to be looked at.

Larry Hunt

Question about density and density limitation within an existing structure?

Currently has a building permit with the SCRD and it has been sent back deemed un-processable right now due to the maximum allowable living space of the house which is at 30%.

Question is it true the new bylaw will allow 40% maximum allowable living space?

Planner responded there is a proposal for small parcels under 750sq. metres in RU1/RU2 zones to increase the maximum floor coverage from 30% to 40%. Senior Planner clarified the new bylaw has a 30% of the floor area of the lot size for the lot size under 1500 sq. metres, to 40% to show on the smaller parcels. Any parcel under that size would be allowed more floor area for all the buildings on the lot.

Staff can look into this regulation a bit further to be fair to allow for smaller lots.

Edmund Butler

Thanks staff, concern over home businesses.

Been on the coast for 35 years and is a local furniture builder.

The proposed change would not meet most home-based business's needs.

20% capacity is an issue.

This provision will change all aspects with home businesses.

Question what is meant by auxiliary use?

Question regarding the restriction of the floor area percentage.

No good reason why one person can't occupy a 1000sq.ft. workshop?

So many home businesses locally far exceed the 20%.

Most businesses can't work with 300sq.ft. space which is being proposed.

There will be a lot of push back in the community.

Limiting the square footage how does this protect the nature of our community.

Senior Planner clarified home based businesses are to be an auxiliary use. Limits of home-based businesses can't be more than the residential area of the property. Staff will look into an allowable percentage for parcel sizes for a better solution.

Senior Planner clarified what an auxiliary use is.

Chair noted there needs to be further clarification regarding the floor percentage for a home-based business. We are trying to make the mark with the community.

Rob Seath

Concerned with the maximum of six chickens.

Has 2/3 of an acre for property, wanting to add a trailer and put in a utility pole. What can I do with this property, can I put trailers on it, yurts, carriage houses?

Can you have a secondary suite in an auxiliary building?

Planner clarified in terms of trailers and dwelling units it is based on the zoning and lot size.

Trailers are recreational vehicles in general, not considered as a dwelling unit and not permitted.

Based on the lot size an auxiliary dwelling unit would be permitted based on the zoning.

Chair will follow up regarding the specific property concerns; members of the public can comment on Bang the Table or email our planning team.

Rob Flux

Lack of flexibility, could easily be fixed as back in 2019 when the public consulted the increase of auxiliary dwelling size was suggested from 800 – 1200 sq. ft.

Question on how the 968 sq. ft. was decided on, as this puts a limit on things?

Built an auxiliary building of 1080 sq. ft. thought we could use it for short term/long term rental, only to find out we can't use it for that use.

Can't expect people to live in 600 sq. ft.

Confusion over all the different definitions for dwellings and auxiliary dwelling, secondary suite, carriage houses, just not clear.

Easy fix to increase the size of the secondary dwelling, maximum size proposed.

Give people the option for flexibility.

Question can you have a secondary suite in an auxiliary building?

Senior Planner clarified that 968 sq. ft. would be better suited than the original 600 sq. ft.

Senior Planner clarified the different dwelling definitions.

Senior Planner clarified that a secondary suite can be within a single unit dwelling. An auxiliary building can't be used as a dwelling.

Elaine Futterman

Question are the comments from this meeting going to be reviewed before the second reading of the bylaw? or is the Board going to review what is currently proposed and go straight to public hearing?

Concerned for lack of preparation that the public has for attending this information meeting.

A lot of concerns are more directed to specific properties.

The bylaw is important for the whole Sunshine Coast; it's going to affect the density, ambience, infrastructure etc.

Concerned most people haven't been exposed to the changes of the new bylaw.

Question before the second reading can the public have a chance to review changes after the first reading?

Question can a presentation to the public be brought forth after all the tweaks have been made from the public information meetings, before second reading?

Chair noted all the feedback/trends will be put forth to make changes/tweaks before the second reading of the bylaw, for the Board to address.

Chair noted staff would get the message out to the public before the second reading of the proposed changes.

Donna Shugar

Talking about no density changes, a secondary suite is a different density than a single-family dwelling. Concerns over double density issues, construction safety issues, retro fitting a secondary suite is very different from new construction.

Concern over the notion to see if there are problems down the road, then we will fix that.

Community stress over the six-chicken maximum.

Make changes upfront in the beginning rather than waiting.

Chair clarified staff are trying to get this right with evolution. No bylaw is going to be 100% perfect and this bylaw will serve the community for the best of current needs, a lot more work to be done in the community for conversation and community plans.

Mila Swinney

Thanked the staff.

Need to look a bit more at all the issues within the bylaw, better to address a change that is happening, then later when a change has been made.

Time to make one big change as a big picture and not a smaller one.

People have different situations and not everyone's situation is the same.

Senior Planner stated there is some important work, to be brave to be bold and to take care of the big picture, not all of this can be taken care of with this one tool. Hope to have more public engagement.

Senior Planner noted this change is very important for youth and future generations and to look for further away of engagement from peers.

Public information meeting notes – June 9, 2022, electronic

Vineet Miglani

Commends the planning department for the bylaw changes, a good need for the community and in the right direction.

Changes to the auxiliary building size from 592 sq. ft. to 969 sq. ft does it involve the cap of 2000 sq. metres of the land area or, if a property is smaller than 2000 sq. metres would a smaller auxiliary dwelling be permitted?

More broad base benefits and more inclusive, help with affordability.

Septic technology has evolved over the years and allows for smaller septic fields.

Housing crisis is now, lesser lots of 2000 sq. metres should be looked at now not 5-10 years down the road.

Chair responded that Vancouver Coastal Health is who the SCRD uses for all septic requirements and they require the 2000 sq. metre minimum in order for a property to be on a septic system for a subdivision size. SCRD would be looking at community sewer under future OCP policies.

The bylaw is consistent with current all six OCP's, any changes have to currently be consistent. Increase in density will be discussed in future planning projects with the community.

Justin & Christa Hull

The proposed work all looks positive.

Or property is zoned R1 and is 2000 sq. metres in size, need clarity about the auxiliary building vs. the auxiliary dwelling? Currently have an existing auxiliary building-built years ago with a loft space above. Need more information on what is permitted for the use of the space, can it be a short-term rental? What is the difference between a carriage home and auxiliary dwelling?

Senior Planner clarified auxiliary building is a building, not meant to be occupied for living space. An auxiliary dwelling is a place for habitation.

The auxiliary dwelling will be permitted in the new bylaw, like the carriage house you mentioned.

Carriage home is a common name for a living space that is on top or attached to a garage.

Auxiliary dwelling (carriage house or garden suite/cabin) can be attached to any building.

Chair clarified within the bylaw there are size limits depending on the land size.

Justin & Karen

Where do you put density?

Couldn't find information in the bylaw on the look and feel of neighbourhoods.

Concerned about the allowance of secondary dwellings, is there going to be an increase of land clearing, plastic greenhouse tents and unsightly dwellings that are quick to construct.

Maintaining the green rural look of the community and how to balance that.

Not anti-development, encourage to prioritize big developments in the rural ambiance of community areas.

Chair responded what we can do now under the existing OCP's and what needs to wait to be able to have greater community conversations, as who wants to be as the Sunshine Coast, like what each electoral area wants to do.

Secondary suites are a common thing to see in a single unit dwelling. BC Building Code has detailed provisions on how those can safely do.

Auxiliary dwellings there's a struggle hard to find the right balance, there was large call from the community to increase the size.

Monitoring land clearing in the rural areas.

Bigger community conversations need to be had for future development pieces.

Staff acknowledged the elected officials in the audience.

Kevin Rea

Is there some form of a provision for restricting the use of an enlarged auxiliary dwellings for full time residents only, or are they going to have a permitted use, as vacation or short-term rental?

Would the same provision apply to the new allowance for in home suites?

The allowance of a secondary suite in a single unit dwelling, might create a loop hole for people to utilize as a secondary suite will be less expensive and a greater revenue builder than a secondary dwelling.

Will the bylaw department be able to address illegal issues or will there be covenants for construction?

Chair clarified there will be provisions typically on either a one bedroom or studio format (55 sq. metres) fits the provisions of a short-term rental or a bed and breakfast. Any unit bigger than 55-90 sq. metres would not be able to be used as a short term rental under the new provisions.

Senior Planner clarified the purpose for allowing a secondary suite in a single unit dwelling would be to provide housing choice for a small living space, intended for a long-term use, not a short-term use and would not be permitted in a secondary suite. Short term rental can be permitted in a single unit dwelling.

Chair clarified SCRD relies more on bylaw enforcement for enforcement as our jurisdiction does not issue business licenses. Covenants for time of construction can be difficult to manage, the bylaw is more relied on for any infractions.

Lucas Vall

Clarity on the definition of a short-term rental? What is permitted and what is not.
More clarity to the bylaws for short-term rentals.
Short term rentals are good for the area.
Housing concerns on density 2000 sq. metres should be flexible.

Chair clarified the Residential Tenancy Act is how the SCRD defines what a short-term rental is.

Senior Planner clarified short-term rental/ bed and breakfast regulations in the current bylaw was updated a year ago. Permitted in any single unit dwelling or auxiliary dwelling at a limit of two bedrooms for use as a short-term rental. Requirement of a permanent onsite operator, must reside on the property when the rental is operating as well as parking, signage, sewer treatment and water permissions as per the bylaw.

Senior Planner clarified the new bylaw definitions and regulations will be clearer for short-term rentals.

Kim D

Commented clarity required on the changes to secondary suites and auxiliary dwellings.
Changes are to improve housing, there are around 500 short term rentals from Gibsons to Halfmoon Bay.

Karen Webb

Seeking more information on the 15-metre setback from water sources, currently lives next to a creek. What sources of water would fall under the new bylaw?
What happens to the 15-metre setback to hard scape structures that are currently in place? Would they be grandfathered? How will this be enforced?
Clarity on the 15-metre setback for building structures i.e. retaining walls, would approval be required from the SCRD?
How is the 15-metre set back determined?
Full support to protect natural boundaries.
Concerns of cannabis production and alignment with the Agricultural Land Reserve (ALR), some areas of production don't fit within the farming community.
Cannabis production should be in industrial zones rather than agricultural zones.

Chair clarified the setback is currently in the Area D electoral area, and the new bylaw the set back will be enforced throughout all the electoral areas to protect coastal flooding, climate change, erosion and marine/aquatic habitats. Provincial regulations are subject to and may require a qualified environmental professional to determine where the setback actually is and to provide guidance. The new bylaw is trying to set a minimum setback but could change per situation and regulations.

If existing structures are in place today it would be grandfathered but would still be illegal conformity as per the bylaw in place at the time, variance options available is the structure doesn't meet setback requirements, there are ways to work around things for maintenance or add-ons in some cases.

Senior Planner spoke regarding riparian areas requirements in areas around fresh water as they are different from areas near the ocean. Provincial regulation the SCRD is obligated to uphold is the

30 metre assessment area are to be assessed from any side of a water course (any fresh water) for any land alteration.

Fresh water setbacks no big changes within the new bylaw, the setback to the ocean is the primary change that is occurring in this bylaw from 7.5 metres and is proposed to 15 metres from the ocean with commitments to allies with reconciliation.

The 15-metre setback from the ocean is proposed to be for buildings and structures, not about land alteration.

Development permits are in place for land alterations for only two of the electoral areas, still have work to do for policies for the other areas.

The natural boundary to the ocean is also the parcel line, boundary line between private property and public land and that is determined by a survey.

Senior Planner clarified cannabis production is considered a farm use in the ALR and cannot be permitted by the local zoning. Cannabis production is permitted in an open field outside or within a building that consists of a soil floor, this alignment is to be considered with ALR regulations. Different zones permit cannabis production, most industrial zones permit production and some rural zones, when a parcel size is over a certain size and certain parcel sizes including different types of production i.e. standard, micro etc.

Chair responded the ALR is in place to protect the soil base on the land, the structure would have to have a soil-based floor and not a proper foundation.

Senior Planner clarified land clearing is permitted by the ALR for farm use and the SCRD can't regulate.

The Chair called a second time for speakers.

Senior Planner acknowledged the elected officials in attendance.

Kevin Rea

What is the original objective of changing the size of the allowable auxiliary dwelling units, was it not considered a movement for additional auxiliary dwellings or in-home suites, will this not cause an explosion of the vacation rental movement that is already embedded here?

Additional larger auxiliary dwelling will be rented by people who need a rental or would it be a vacation rental.

Concerns over auxiliary dwelling uses and enforcement to not be used as a vacation rental.

Chair responded larger auxiliary dwelling units, if it is exceeded 55 sq. metres, it wouldn't be permitted to be used a vacation/short term rental. Secondary suites are being introduced, a short-term rental can still be permitted in a single unit dwelling.

Senior Planner clarified the reasons for increasing the size of the auxiliary dwelling units, through previous consultation the community asked for it. The existing size of 52 sq. metres is too small to accommodate a family, given the reason for the increase to 90 sq. metres, to provide a moderate mid-range housing option.

Vineet Miglani

What is the difference between a secondary suite and an auxiliary dwelling, and what will be allowed in the new bylaw?

Senior Planner clarified the density in the old or new bylaw has not changed. The auxiliary dwelling will only be permitted is the parcel size exceeds the 2000 sq. metres.

The secondary suite has a smaller floor area of 55 sq. metres and to be contained within a single unit dwelling, size and location are the main difference.

Auxiliary dwelling unit can be attached to any building or a stand-alone and is only permitted when the parcel size exceeds 2000 sq. metres. In the new bylaw the auxiliary dwelling unit floor size is increased from 55 sq. metres to 90 sq. metres.

Donna Shugar

Where the issues brought up from the in-person meeting held at the Roberts Creek Elementary School were brought up tonight regarding, home based business floor area percentage of 20%, concern over the maximum of six chickens and the issue of increased flexibility for housing options?

Concern the term poultry has been replaced by chickens, as community members raise ducks, geese etc., perhaps return to the term poultry.

Chair responded there was some question about the housing flexibility brought up. Staff are encouraged from the comments heard from both public information meetings.

Chair mentioned the comment regarding the proposed regulation of a home-based businesses floor area a noted to 20% of the whole floor area of the property, and questions arose that some home-based businesses that percentage would be too small. Staff will be looking at this feedback for consideration.

Chair mentioned there were a lot of questions pertaining to the number of allowable chickens (six) in the proposed bylaw. The public raised concern that six chicken would not be enough, to raise chicken and eggs in a meaningful way. Staff are going to take back and look at, and have further conversation with the community.

Area D APC comments

Key Points of Discussion:

- It is quite difficult to analyze changes in proposed Bylaw 772 without a side by side comparison with Bylaw 310 on a computer screen.
- It was not obvious which changes were organizational in the new Bylaw and which were substantive.
- Regarding setbacks from roads: Greenhouses are difficult to site for sun exposure and requiring more distance from property lines may make them impossible to have.
- Why not a sliding scale instead of discrete rules? An example found in Section 4.3, Subdivision Requirements, one measure for parcels between 2000 and 3500 square metres, and a different requirement for parcels over 3500 square metre.
- Intentions to increase density in the new Bylaw requires more predictive analysis. By how much would density increase? Will the changes accommodate more housing?
- There is no reference to vacation homes. They create dark neighborhood's prone to increased crime, don't provide the same support to the local economy, and put more pressure on transportation to and from the Sunshine Coast. Can that issue be addressed in the new Bylaw? Or would it not be possible because jurisdiction and of property tax benefit to the Province.
- Replace method of limiting the footprint of a home-based business from "20% of the size of the house". A thousand square foot studio or workshop would require a 5000 square foot house. Many home occupations require a large space. Robert Studer is an example. A home office has vastly different requirements from a cabinet shop or a pottery. Parcel coverage is a better metric to use. A Grandfathered-in industrial shop would not be protected if destroyed by natural disaster. It could not be rebuild to the required size.
- The maximum number of permanently parked vehicles on the property should be considered.

- With bigger setbacks, the tendency will be to put the parking and vehicle noise on the property line. Rules that put parking at lot lines will create more noise and fumes for neighbours.
- What is a care centre? You are allowed a 'second dwelling', or care centre. Page 123 defines care facility but not care centre.
- A glossary is required to define terms.
- How will a provincially granted 'agriculture status' on the land title relate to the new Bylaw?

The Director pointed out that any suggestions received before 3rd reading is part of the adoption process, so having a better way to compare documents or getting more clarity on some issues should not be a problem in order to make subsequent recommendations.

Recommendation:

That the Area D APC will respond after we have a detailed comparative analysis of the material differences between Bylaw 310 and Bylaw 722.

Area E APC comments

Comments:

- What are the intentions regarding cannabis growing under the new Bylaw on ALR land? Food production will become more critical in our area. It will be good to save ALR land for food production in preference to cannabis.
- What resources does the RD have to enforce the Bylaw? What will happen with properties that become non-conforming once the new Bylaw takes effect?
- Will there be setbacks applied to growing cannabis near property lines in residential neighborhood's? Setbacks should be large enough to protect neighbour's from the odor of cannabis cultivation.
- Definitions of poultry, fowl, roosters, etc. could be clearer.
- Would my birds, including ducks, chickens, one rooster, possibly turkey, on my R2 1/2 acre lot property be grandfathered in under the new Bylaw? A rooster is essential to keep my birds reproducing on site. If roosters are prohibited bringing chickens from off coast will introduce diseases like avian flu. Muscovy ducks are quieter than chickens.
- If noise is an issue regarding roosters, what about vehicle noise at 4 AM?
- Rooster noise really bothers some people.
- We must have roosters or we will not sustain egg production. We don't produce enough of our food, so we must have measures that protect food production.
- Electric fences have not been mentioned and these can be helpful for bee keeping and raising livestock.
- Parking regulations should not lead to having everything paved. Could there be a provision to require a percentage of permeable surfaces, especially on smaller properties?
- Can stormwater issues be addressed in the new Bylaw?
- Can changes to secondary dwelling size allowances be considered in relation to maximum lot coverage. Could there be increased flexibility, e.g. two small houses, instead of a large main dwelling and smaller secondary?

Recommendation:

The Area E APC recommended that our comments be considered

Area A APC comments

- Bylaw 722 does not apply to Electoral Area A
- Is there concern that the OCP may have to change current Zoning Bylaws?
- Secondary suites permitted. Bigger auxiliary dwelling units such as carriage house or garden cottage: size increased from 592 ft² (55 m²) to 969 ft² (90 m²)

- Cannabis production is not permitted in residential areas. Medical cannabis is exempt from residential areas.
- Will Electoral Area A Zoning Bylaw 337 be absorbed into Bylaw 722 if so shouldn't we have been included in the discussion from the beginning?
- Climate change support means in a technical way, not financial. Examples: information about water setbacks, green roofs, solar panels and wind turbines.
- A mini-farm in your backyard. Beekeeping and chickens permitted, along with your own farm stand in some areas.

Area B APC comments

- the possibility of reducing parcel size of land for growing cannabis to allow for micro cultivators
- closer monitoring and enforcement of bylaws regarding B&Bs.
- more affordable housing available to address employment issues on the Coast

Area F APC comments

Points from discussion included:

- Am comfortable with our general statement that we support the intention of Proposed Zoning Bylaw No. 722.
- In the "Let's Talk" website, there are a lot of issues around chickens. There needs to be further clarification around poultry raising, such as the difference between hens and broilers, and information around slaughtering if you have chickens on your property.
- Suggest that issues around chickens and poultry may get sorted through second reading.
- At the very outset of the bylaw, in the Interpretation section, there is reference to the defined terms being in italics, but then no reference to where the definitions are located. There should be directions on where you can find the definitions.
- Some definitions of dwelling units are problematic in some respects; e.g., "auxiliary dwellings" indicates size restrictions in the definition and in the bylaw. There is room to improve the language so it is clearer for the use and the definitions. Definitions, particularly as they relate to things such as dwelling units, etc., should be revisited in relation to the specific provisions in the bylaw that are referenced, so that there is not a duplication of prohibitions and language.
- Definition of "seasonal use" refers to it being six months. Is that consecutive or is it total months?
- The defined terms are italicized. When I read through the definitions, the defined terms are sometimes in italic and sometimes not; needs consistency.
- Climate resiliency – Did not see a lot that really expanded the opportunities. On page 23 of the bylaw regarding construction levels, the wording was around .6m above the provincial standard; a measurement may not be appropriate five years from now. Would like to see it more tightly tied to provincial best practices, flood standards, flood construction levels. Needs to be more "tight".
- Climate resiliency – There was not a lot of detail regarding using gray water and storm water supply. Maybe have ability to have tanks within setbacks to have fire protection, or, especially in more rural zones, opportunities to bolster our ability to respond to fire using gray water or storm water. Look at more detail around supporting that kind of climate resiliency.
- Housing: restrictions on shipping containers, page 23. Shipping containers would be another opportunity for housing types, with the right regulations. Same with tiny homes. How do tiny homes fit into the definition of mobile homes?
- What is the build-out of the proposed bylaw for Area F in the different zones? It is stated the bylaw would not change density. Getting a sense of potential density with the proposed bylaw may be useful to determine if this is a good direction. Not sure how 722 fits into OCPs. Would the zoning bylaw be impacted by a Regional Growth Strategy? Look at this in more of a big picture way.
- Would question the total prohibition of the shipping container model for auxiliary building. Fire resistance is an excellent characteristic of shipping containers. This structure is used as a fence, for storage at some properties on the highway, and would be extremely efficient as a deterrent to highway

noise.

- In correlating Bylaw Nos. 310 and 722, it appears the number of zones and subdivision districts has changed. In 310, it appears there are 15 rural zones and 11 subdivision districts; in 722, there are 11 rural zones and 16 subdivision districts.
- If Bylaw No. 722 is adopted, concern about the development of updated OCPs, and coordinating with regional development plans. Those Big Pictures will have significant impact on this zoning bylaw. Concern: if we proceed with the bylaw, those bigger pictures get pushed further into the future. If 310 were to stay as is, and the OCP coordination of development plans were pushed to the forefront, it would be a more efficient use of everyone's time. Would be forced to look at the region as a whole. There has to be a vision of the coast as a whole. It is the sort of thing that is easy to allow to percolate as an idea in the background through successive elected officials.
- Important that this goes through. Even to get the base similarity implemented. There are some good ideas here. It gets the regions in a similar space, a baseline for OCP development.
- Concern about the impacts of bees on the neighbourhood if allowed on a fourth of an acre. Retain current lot size restrictions for beekeeping allowed in Bylaw 310. There is a definite impact on neighbouring parcels; the proposed size restrictions seem to be not adequate.
- Imported honeybees have impact on native bees. Would support not allowing them on smaller lots for reasons you've described.
- "Single-unit dwelling" – Members perceived that "single-detached dwelling" would be more understandable or less confusing;
- "Two-unit dwelling" – Members found this term was confusing.
- What would build-out look like if every single detached dwelling had a secondary suite?
- What would be the impact of individual dwellings? What about parking, roads, schools, etc.? What would our communities look like with this flexibility?

Recommendation No. 1 *Area F APC Feedback on Proposed Zoning Bylaw No. 722*

That the Area F APC continues to support the intention of the Proposed Zoning Bylaw No. 722 as stated in the Overview and, upon further review, recommend:

- That the location of the Definitions be included in the Interpretation section at the outset of the bylaw;
- To review the substantive provisions of the bylaw and referenced definitions for clarity;
- To clarify regarding the keeping of chickens, and to clarify "hens" and "broilers" and if there are different impacts between the two, and to clarify regulations around slaughtering poultry;
- To reconsider the keeping of bees lot size restriction, as there is a significant impact by bees to neighbouring parcels and to native flora and fauna, including native bees;
- To scrap the current word "single-unit dwelling" and replace it with "single-detached dwelling".

SUNSHINE COAST REGIONAL DISTRICT ZONING BYLAW NO. 722

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PART 1 ENACTMENT

1.1 TITLE

- 1.1.1 This Bylaw may be cited for all purposes as the “*Sunshine Coast Regional District Zoning Bylaw No. 722, 2019*”.

PART 2 ADMINISTRATION

2.1 ADMINISTRATION

- 2.1.1 Land, including the airspace above it and the surface of water, shall not be *used, altered* or subdivided and *buildings* and *structures* shall not be constructed, altered, sited or *used* except as specifically permitted by this bylaw.

2.2 ENFORCEMENT

- 2.2.1 The Chief Administrative Officer, Corporate Officer, General Manager of Planning and Community Development, Manager of Planning and Development, Planner, Chief Building Official, Building Official, Bylaw Enforcement Officer, or other persons so designated by resolution, are authorized at all reasonable times to enter on property that is subject to regulation under this bylaw to ascertain whether the regulations or directions under this bylaw are being observed.

2.3 OFFENCE

- 2.3.1 Every person who:
- a) violates any of the provisions of this bylaw;
 - b) *causes* or permits any act or thing to be done in contravention of any of the provisions of this bylaw;
 - c) neglects or omits to do anything required under this bylaw;
 - d) carries out, *causes* or permits to be carried out any development in a manner prohibited by or contrary to any of the provisions of this bylaw;
 - e) alters land in contrary to any provisions of this bylaw;
 - f) fails to comply with an order, direction or notice given under this bylaw;
 - g) prevents or obstructs or attempts to prevent or obstruct the authorized entry of the Manager, Planning & Development, Planner, Chief *Building* official, *Building* official, Bylaw Enforcement *Officer*, or other person so designated by resolution of the *Board*
- shall be deemed to have committed an *offence* under this bylaw.

2.4 PENALTY

- 2.4.1 Every person who commits an offence under this bylaw is liable on summary conviction to a penalty under the *Offence Act*.
- 2.4.2 Each day during which an offence occurs shall be deemed to constitute a new and separate offence.

2.5 SEVERABILITY

- 2.5.1 If any section, subsection, sentence, clause or phrase of this bylaw is for any reason held to be invalid by the decision of any Court of competent jurisdiction, the invalid portion shall be severed and the decision that it is invalid shall not affect the validity of the remainder.

PART 3 INTERPRETATION

3.1 INTERPRETATION

- 3.1.1 In this Bylaw, defined terms and provincial legislation are shown in italics, except for those in headings.
- 3.1.2 A reference to any bylaw of the *Regional District* or Provincial or Federal legislation is a reference to that law as amended, whether amended before or after the effective date of this Bylaw.
- 3.1.3 All measurements and symbols in this Bylaw shall be interpreted as follows:
- a) “m” means metre
 - b) “m²” means square metres
 - c) “kg” means kilogram
 - d) “ha” means hectares
 - e) “<” means “less than”
 - f) “≤” means “equal to or less than”
 - g) “>” means “greater than”
 - h) “≥” means “equal to or greater than”
 - i) Where “Section” does not expressly refer to another enactment, it shall be interpreted as referring to this Bylaw.
- 3.1.4 For ease of use, all defined words in this Bylaw are shown in italics; be it in their singular or plural forms and with any combination of uppercase or lowercase letters.

PART 4 ESTABLISHMENT OF ZONES AND SUBDIVISION DISTRICTS

4.1 ESTABLISHMENT OF ZONES

- 4.1.1 For the purposes of this Bylaw the Sunshine Coast Regional District Electoral Areas B, D, E and F are divided into the following zones:

RESIDENTIAL ZONES	ABREVIATION
Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3
RURAL ZONES	
Country Residential One	CR1
Country Residential Two	CR2
Rural Residential One	RU1
Rural Residential One A	RU1A
Rural Residential Two	RU2
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG
COMPREHENSIVE DEVELOPMENT ZONES	
Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4
COMMERCIAL ZONES	
Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4

Commercial Five	C5
Marine Transportation	M1
WATER ZONES	
Water One	W1
Water Two	W2
INDUSTRIAL ZONES	
Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13
PARK ZONES	
<i>Park and Assembly One</i>	PA1
<i>Park and Assembly Two</i>	PA2
<i>Park and Assembly Three</i>	PA3
<i>Park and Assembly Four</i>	PA4

- 4.1.2 The area and boundary of each zone is defined by Schedule A which is hereby deemed to form part of the bylaw.
- a) Land located outside Schedule A or not expressly identified in a particular zone in Schedule A is zoned RU2.
 - b) The surface of tidal or non-tidal waters located outside Schedule A or not identified on Schedule A as being a particular zone shall be deemed to be un-zoned.
- 4.1.3 Where the zone boundary is shown on Schedule A as following a *highway* or *watercourse*, the centre line of the road allowance or *watercourse* shall be the zone boundary.
- 4.1.4 Despite any provisions in this bylaw that would permit residential, *industrial* or *commercial* activities within a *riparian assessment area*, the *Riparian Areas Protection Regulation* applies in respect to that area.

4.2 ESTABLISHMENT OF SUBDIVISION DISTRICTS

4.2.1 For the purposes of this Bylaw the Sunshine Coast Regional District Electoral Areas B, D, E and F are divided into the following Subdivision Districts:

SUBDIVISION DISTRICT	MINIMUM PARCEL AREA	AVERAGE PARCEL AREA	Conditions
A	1000 m ²	-	-
B	1500 m ²	-	-
C	2000 m ²	-	-
D	2800 m ²	3500 m ²	-
E	4000 m ²	5000 m ²	-
E1	8000 m ²	-	-
E2	8000 m ²	-	Except Block 30 District Lot 695 Plan 2746
F	8000 m ²	10000 m ²	-
G	1.75 ha	-	-
G1	1 ha	1.7 ha	Parcels donated to the <i>Regional District</i> as park, excluding areas dedicated as park under Section 510 of the <i>Local Government Act</i> , may be used towards the calculation of average parcel area.
I	4 ha	-	-
J	25 ha	-	The minimum <i>parcel area</i> may be reduced to 10 ha if a minimum of 15% of the land in the <i>subdivision</i> is dedicated as <i>park</i> in an area deemed to be a significant <i>site</i> for a public parks amenity by the <i>Regional District</i> , pursuant to Section 510 of the <i>Local Government Act</i> and one or more of the following criteria are met: 1. The land improves access to waterfront lands, including the sea and watercourses; 2. The land links or expands parks and greenways, forming interconnected natural corridors; 3. The land connects community focal features and the waterfront; 4. The land includes areas for the protection of environmentally sensitive lands; and 5. The land includes a viewpoint and opportunity for nature appreciation.
Z	100 ha	-	-
CD1	-	360m ²	See Section 8.1

CD3	-	-	See Section 8.3
RM3	-	-	See Section 7.6

- 4.2.2 The area and boundary of each *subdivision district* is defined by Schedule B which is hereby deemed to form part of the bylaw. Land not expressly identified in a particular *subdivision district* in Schedule B is designated *Subdivision District Z*.
- 4.2.3 Where the *subdivision district* boundary is shown on Schedule B as following a *highway* or *watercourse*, the centre line of the road allowance or *watercourse* shall be the subdivision boundary.

4.3 SUBDIVISION REQUIREMENTS

- 4.3.1 The calculation of minimum *parcel area* shall not include:
- a) Area to be used for community sewer field and equipment;
 - b) Area to be dedicated for public open space, *park* or returned to the Province, except as permitted by the *Strata Property Act*; or
 - c) Area to be dedicated as a *highway*.
- 4.3.2 Where a proposed parcel is equal or greater than 3500 m² in area, it shall have a minimum of 2000 m² of continuous developable area which is not included within:
- (a) a panhandle; or
 - (b) a right-of-way, hydro transmission corridor or an area restricted by covenant where the effect of the restriction imposed by the right-of-way or covenant prohibits the placement of a structure; or
 - (c) a streamside protection and enhancement area where the effect of the restriction imposed by the streamside protection and enhancement area prohibits the placement of a structure.
- 4.3.3 Where a proposed parcel is less than 3500 m² but not less than 2000 m² in area, it shall have a minimum of 1000 m² of continuous developable area which is not included within:
- (a) a panhandle; or
 - (b) a right-of-way, hydro transmission corridor or an area restricted by covenant where the effect of the restriction imposed by the right-of-way or covenant prohibits the placement of a structure; or
 - (c) a streamside protection and enhancement area where the effect of the restriction imposed by the streamside protection and enhancement area prohibits the placement of a structure.
- 4.3.4 The requirements of Sections 4.3.3 and 4.3.4 shall not apply to:
- (a) a parcel in the CD1 or CD2 or RM3 zone; or

(b) a parcel, which is used or intended for a purpose that does not generate sewage, and a restrictive covenant is registered on its title, satisfactory to the Approving Officer, which prohibits the construction of buildings and structures.

4.4 HOOKED PARCELS

- 4.4.1 No *parcel* shall be created which has a portion of the proposed *parcel* physically separated by a *highway* or another legal *parcel* except:
- a) Where each physically separated portion has an area sufficient to satisfy the minimum and average *parcel area* requirements of the applicable *subdivision district*; or
 - b) Where each non-conforming part of the *parcel* is restricted to uses that do not generate sewage, and a covenant is registered on title to restrict the uses and prohibit the construction of a *building* or structure or further subdivision.

4.5 MINIMUM PARCEL AREA EXCEPTIONS

- 4.5.1 Minimum or average *parcel area* regulations required by the applicable *subdivision district* shall not apply:
- a) Where the *parcel* is intended for a use that does not generate sewage, and a restrictive covenant is registered on its title, which prohibits sewage generating uses and the construction of *buildings* and *structures*;
 - b) Where the *parcel* is intended for *public utility use* or *park*;
 - c) Where lot lines are relocated to facilitate an existing development or improve parcel layout provided that:
 - 1. No additional *parcels* are created; and
 - 2. All *parcels* are adjacent; and
 - 3. no parcel shall be enlarged to a size permitting further subdivision unless the area of each parcel included in the lot line relocation meets the minimum parcel area and all other requirements of the applicable *subdivision district*.
 - d) Where a *Provincial non-residential upland lease* or *aquatic lease* is granted;
 - e) To a hooked parcel that meets the criteria that is described in Section 4.4.1.b;
 - f) Where a *parcel* has more than one *subdivision district* designation and the proposed *subdivision* is limited to separating the two designations;
- 4.5.1 The minimum *parcel area* and the average *parcel area* required by the applicable *subdivision district* under this bylaw for a proposed *subdivision* may be reduced by a maximum of 10 % where:
- a) this bylaw or the Approving Officer requires that land be provided by the owner for widening of an existing *highway* or right-of-way; and

- b) The proposed *subdivision* will create no more than two additional *parcels*; and
- c) The subject parcel is within the C, D, E, E1, E2, F, G or I *subdivision district*.

4.5.2 The minimum parcel size and the average parcel size required by the applicable subdivision district under this bylaw for a proposed subdivision may be reduced by a maximum of 20 percent, where the proposed subdivision is to provide a residence for a relative pursuant to Section 514 of the *Local Government Act*, provided that no parcel created by the subdivision is less than 2500 square metres and a covenant is registered on title of each *parcel* created to limit the number of *dwelling* units to one and to prevent a change in the parcel's use for 5 years.

4.5.3 The maximum reduction available under Sections 4.5.2 and 4.5.3 is 20% of the original parent *parcel*.

PART 5 GENERAL REGULATIONS

5.1 USE REGULATIONS FOR ALL ZONES

5.1.1 The following *uses* are permitted in any zone:

- a) *Public uses;*
- b) *Public utilities;*
- c) *Horticulture or silviculture;*
- d) *Forest management* is permitted on private managed forest land as defined under the *Private Managed Forest Land Act*;
- e) *Child group daycare* facilities in accordance with requirements of the *Community Care and Assisted Living Act* of BC except in the RF3 Zone;
- f) Real estate field sales office, to a maximum floor area of 15 m², in all zones except the RF3 Zone;
- g) *Community Care Facilities* pursuant to the *Community Care and Assisted Living Act* and amendments thereto; and
- h) A secondary suite except in any zone where a single-unit dwelling is prohibited.
- i) Home-based business except in any zone where a dwelling unit is prohibited.

5.1.2 Notwithstanding subsection 5.1.1, all *uses* not expressly permitted within a zone are prohibited.

5.2 AUXILIARY DWELLING UNIT

5.2.1 An auxiliary dwelling unit:

- a) Shall not exceed 90 m² in floor area excluding otherwise permitted enclosed parking area, on parcels where not more than 2 single-unit dwellings are permitted;
- b) Shall not exceed 55 m² in floor area excluding enclosed parking area, on parcels where more than 2 single-unit dwellings are permitted;
- c) May be attached to or detached from any building on the same parcel.

5.3 SHORT TERM RENTAL

5.3.1 *Short term rental* is permitted as an auxiliary use, in the R1 zone where the parcel size exceeds 2000 m², and in the R2, C1, C2, C3, C4, CR1, CR2, RU1, RU1A, RU2, AG, PA2 and PA3 zones, subject to the following conditions:

- a) Except as provided for in Section 7.10.2(c) for the RU1A zone or any other parts of this bylaw, the number of bedrooms utilized for bed and breakfast shall not exceed two per dwelling, including an auxiliary dwelling.
- b) An *auxiliary dwelling unit* with a size exceeding 55 m² shall not be utilized for *short term rental*.

- c) *Short term rental* shall not be permitted in a secondary suite.
- d) The total number of occupants of a *short term rental* establishment shall not exceed two per each permitted bedroom.
- e) No external indication or advertising associated with a *short term rental* shall be permitted on the property except a single sign up to 0.35 m² in area.
- f) Any dwelling utilized for *short term rental* shall be connected to sewerage disposal and water supply facilities that are in compliance with current regulations pursuant to the *Public Health Act* of British Columbia.
- g) A *short term rental* shall be operated by an operator who resides on the property where the *short term rental* is located and for the duration when the *short term rental* is in operation.

5.4 HOME-BASED BUSINESS

5.4.1 Where a *home-based business* is a permitted use:

- a) It shall be *auxiliary use* to the permitted *principal uses* on a parcel;
- b) It shall be conducted entirely within a completely enclosed *building* permitted under this Bylaw, except in the case of a group day care where outdoor recreation *uses* are required under the *Community Care and Assisted Living Act*;
- c) Not more than the following percentage of the total floor area of all buildings on a parcel shall be used for a home-based business: 50% in R1, R2 and R3 Zones, and 40% in all other zones;
- d) No external indication other than that normally associated with a residential *building* shall exist except for a single sign up to 0.35 m² in area;
- e) There shall be no outdoor storage of materials, equipment, containers, or finished products;
- f) It must not generate traffic that exceeds the level prevailing in the neighbourhood or create a demand for off-street parking that cannot be contained within the *parcel* containing the *home-based business*;
- g) It must not produce a public offence or nuisance of any kind, including noise, smoke, dust, toxic or noxious matter, odour, heat, glare, electrical interference, beyond the *parcel lines* of the *parcel* containing the *home-based business*;
- h) It shall not require more than two deliveries per week to be made by *commercial* vehicles or trailers;
- i) No product shall be sold on the premises except that which is made or produced on the premises;
- j) Floor area of *retailing* or *wholesaling use* of the home-business shall be limited to 20% of the floor area of the building containing the home-based business;
- k) *Kennels*, vehicle equipment repair and maintenance, body shops and fabricating are prohibited.
- l) the activities and number of non-resident employees permitted, subject to *parcel size*, shall be as per the table below:

Parcel Size	Employees	Permitted Activities
<1500 m ²	No non-resident employees	Child Care; Business Services; Office uses; Health Services; Artisan uses; Personal Services; Group sessions up to a maximum of 2 sessions per day; Tutoring and lessons, limited to 6 clients per day and a maximum of 3 at one time; On-site client visits only by appointment; scheduled in advance and a maximum of 6 clients per day; Horticultural product sales.
1500 to 5000 m ²	1 non-resident employee	As above
<5000 m ²	2 non-resident employees	As above with a maximum of 16 clients per day; group day care

5.5 KEEPING OF CHICKENS AND BEES

5.5.1 The keeping of chickens and bees is permitted in accordance with the following:

Parcel size (m ²)	Zone	Chickens (hen & rooster)	Bee hives
<1000	All zones except AG	Not permitted	Not permitted
1000 -3500	All zones except RM1, RM2, RM3	6 hens per 1000m ² , roosters not permitted	2
>3500	All zones except RM1, RM2, RM3	Permitted	Permitted
Any size	AG	Permitted	Permitted

5.5.2 Setback and facility requirements:

- Chickens shall be provided with coops or outdoor enclosures;
- No drinking or feeding trough, manure pile, enclosure, structure or building for the keeping of chickens, except fences under 2 m in height to enclose animals, shall be located within 10 m of a parcel line;
- Entrance to a beehive shall face away from adjacent parcels;
- No beehives shall be located within 7.5 m from any parcel line;
- No beehive shall be located within 4.5 m of any parcel line fronting a highway;
- Premises where chickens are kept are required to be registered with the Province of British Columbia to support the Province's emergency response network;
- Beekeeping is required to register with the Province of British Columbia pursuant to the Bee Regulation of the Animal Health Act.

5.6 KEEPING OF LIVESTOCK

5.6.1 Where the keeping of *livestock* is a permitted use:

- a) No enclosure, feeding or drinking trough, or structure used for the storage of feed, bedding or manure related to the keeping of *livestock* shall be located within 20 m of a *parcel line*;
- b) The minimum *parcel* area shall be 3500 m²; and
- c) Premises where chickens and/or other livestock are kept are required to be registered with the Province of British Columbia to support the Province's emergency response network.

5.7 HORTICULTURAL PRODUCT SALES

5.7.1 Where *horticultural product sales* are a permitted use:

- a) Notwithstanding any other parts of this bylaw, only one sign up to 0.35 m² in area is permitted to be installed on a *parcel*, in a manner that does not obstruct the site access or egress.
- b) Notwithstanding other setback regulations in this bylaw, a portable open-air stand used for horticultural product sales shall be setback a minimum of 1.5 m from a parcel line abutting a highway.

5.8 AGRICULTURAL PRODUCT SALES

5.8.1 *Agricultural product sales* are permitted in any zone where keeping of *livestock*, *residential agriculture* or *agriculture* is permitted and the production of *livestock* or *agriculture* takes place on the parcel so zoned.

5.8.2 Where *agricultural product sales* are a permitted use:

- a) Except for the AG Zone, only one sign up to 0.35 m² in area is permitted to be installed on a *parcel*, in a manner that does not obstruct the site access or egress.
- b) A portable open-air stand used for horticultural product sales shall be setback a minimum of 1.5 m from a parcel line abutting a highway.

5.9 CANNABIS PRODUCTION AND RETAIL

5.9.1 Notwithstanding any other provisions of this bylaw:

- a) Growing of cannabis is prohibited in any zone except in accordance with sub-section (b) or the growing of not more than four cannabis plants per household for personal use from licensed seeds or seedlings from licensed suppliers in accordance with federal legislation.
- b) *Cannabis production* is only permitted in the following zones in accordance with the following provisions:

ZONES		STANDARD CULTIVATION	MICRO CULTIVATION OR NURSERY	CONDITIONS OF USE
INDUSTRIAL	I1, I2, I3, I4, I5, I6, I7, I8, I9, I10, I11	Permitted	Permitted	
RURAL RESIDENTIAL	RU1, RU1A, RU2	Permitted		<i>Parcel size not less than 8 ha</i>
			Permitted	<i>Parcel size not less than 4 ha</i>
AGRICULTURAL LAND RESERVE	AG	Permitted	Permitted	Outdoors in a field or inside a structure with a base consisting entirely of soil

5.9.2 In RU1, RU1A and RU2 Zones that are not within the Agricultural Land Reserve, no standard cannabis cultivation shall be located within 30 m of a *parcel* line, and no micro cannabis cultivation or nursery shall be located within 15 m of a *parcel* line.

5.9.3 Cannabis retail shall be prohibited in any zone except the C1, C2 and C3 Zone.

5.9.4 Cannabis production or retail shall not be permitted as a home-based business.

5.10 AUXILIARY BUILDINGS

5.10.1 Unless specifically noted in the zone, auxiliary *buildings* are permitted in conjunction with a *principal use* where:

- A *principal use* exists on the *parcel*, or a valid *building* permit has been issued for the *principal use* on that *parcel*;
- Auxiliary buildings* do not include *agricultural buildings*;
- Auxiliary buildings* do not include a *dwelling unit* or *sleeping unit*;
- Neither overnight accommodation or cooking facilities are permitted; *and*
- The combined *floor area* of all *auxiliary buildings* shall not exceed:
5% of the *parcel area* or 300 m², whichever is less for a parcel more than 1500 m² in size;
or
75 m² for a parcel equal to or less than 1500 m² in size.

5.11 HEIGHT OF BUILDINGS AND STRUCTURES

- 5.11.1 Except as otherwise provided in the Bylaw, the *height* of all *buildings* and *structures* shall not exceed 11 m.
- 5.11.2 On *parcels* less than 750 m² in the R1, R2, R3, CR1, CR2, RU1, RU1A and RU2 zones, the maximum *height* of a *single-unit dwelling* unit shall not exceed 8.5 m.
- 5.11.3 Notwithstanding subsection 5.11.2, where the average slope, as determined by a British Columbia Land Surveyor, of a parcel exceeds 20 percent as determined by field survey, the maximum height shall be increased to 11 m.
- 5.11.4 A detached *auxiliary dwelling unit* or an auxiliary building or structure shall not exceed a *height* of 8.5 m.
- 5.11.5 Notwithstanding the definition of *height*, where fill is necessary to raise the elevation as required by the flood control provisions of this bylaw, the *height* of a *building* or *structure* shall be measured from the minimum permitted elevation or the top of the fill.
- 5.11.6 The following *structures* shall not be subject to the *height* requirements of this bylaw provided that such *structures* occupy no more than 10% of the *parcel area*, or if situated on a *building*, not more than 15% of the roof area of the *building*:
- a) Building spire;
 - b) Chimney;
 - c) Mast or flag pole;
 - d) Antennas;
 - e) Transmission, telecommunication or utility tower;
 - f) Monument;
 - g) Observation tower;
 - h) Fire hall hose drying tower;
 - i) Water tank;
 - j) Rooftop access limited to 5 m² in *floor area*;
 - k) Elevator or ventilation machinery;
 - l) Wind turbine;
 - m) Silo;
 - n) *Green roof*; and
 - o) *Solar collector*.

5.12 HEIGHT OF FENCES

- 5.12.1 The maximum *height* of a *fence* shall not exceed 2 m except where:
- a) Expressly permitted; or
 - b) the fence abuts a highway and the height of the fence does not exceed 2 meters above the centre line of the highway.

5.13 FLOOR AREA OF BUILDINGS

- 5.13.1 On a *parcel* less than 1500 m² in area in the R1, R2, CR1, CR2, RU1, RU1A and RU2 zones, the maximum *floor area* of all *buildings* shall be 40% of the *parcel area*, or 450 m², whichever is less.
- 5.13.2 Notwithstanding 5.13.1, the calculation of *floor area* within *buildings* does not include area of up to a maximum of 45 m² used for enclosed *off-street parking*.

5.14 SETBACK OF BUILDINGS AND STRUCTURES

- 5.14.1 The setback of *building or structure* shall be:

- a) a minimum of 5 m from any portion of a parcel line adjacent to a *highway* or an internal private road;
- b) the minimum setback from a parcel line not adjacent to a *highway*, an internal private road, a *waterbody* or a *watercourse* shall be as follows:

Height of building and structure	Setback
≤ 8.5 m	1.5 m
> 8.5 m	4 m

5.15 SETBACK EXCEPTIONS

- 5.15.1 Features that attach to and project beyond the face of a *building*, including but not limited to exterior insulation, chimney, bay window, balcony, porch, deck, ornament, step, eave, canopy, may extend into a required *setback* not abutting a highway to a maximum of 0.6 m measured perpendicular to the line that defines the setback area if the extension conforms to the British Columbia Building Code.
- 5.15.2 An *underground structure* may be sited on any portion of a *parcel*, except within 4.5 m of a *highway*, provided the maximum projection above finished grade does not exceed 1 m at any point and the purpose of the projection is not for a driveway or stairwell entrance.
- 5.15.3 *Setback* exceptions in this section apply to *setbacks* from the *natural boundary* of a *waterbody* or *watercourse*.
- 5.15.4 Where a variance is proposed to reduce a required setback the measurement shall be taken to the outermost extreme, as measured in plan view, of any overhangs, projections, cantilevered architectural features and the like.

5.16 SETBACK FROM WATERBODIES AND WATERCOURSES

- 5.16.1 No, *building or structure* or any part thereof, except a boathouse located within an inter-tidal zone or within the I13 Zone, shall be constructed, reconstructed, moved, located or extended within:
- a) 15 m of the *natural boundary* of the ocean;
 - b) 17 m of the *natural boundary* of a creek, lake, swamp or pond;

- c) 32 m of the *natural boundary* of Chapman Creek, Tzoonie River, Clowhom River, Rainy River, McNab Creek, McNair Creek, Dakota Creek and Chickwat Creek;
- d) 22 m of the *natural boundary* for the portion of Roberts Creek that is seaward of Lower Road;
- e) In geographic areas that are in parts of Electoral Areas B, D, E and F not covered by an Official Community Plan:
 - 1) 32 m of the *natural boundary* of a *stream*;
 - 2) 32 m of the top of the bank of a *ravine* less the 60 m wide;
 - 3) 17 m of the top of the bank of a *ravine* 60 m wide or greater; and
- f) 17 m of the *natural boundary* of all other *watercourses*.

5.16.2 Unless expressly authorized pursuant to a valid and subsisting Development Permit, as required, no removal, alteration, or destruction of vegetation, soil removal or deposit, may take place within:

- a) 15 m of the *natural boundary* of the ocean;
- b) 30 m of the *natural boundary* of a creek, lake, swamp or pond;
- c) 30 m of the *natural boundary* of Chapman Creek, Tzoonie River, Clowhom River, Rainy River, McNab Creek, McNair Creek, Dakota Creek and Chickwat Creek;
- d) 20 m of the *natural boundary* for the portion of Roberts Creek that is seaward of Lower Road;
- e) In geographic areas that are in parts of Electoral Areas B, D, E and F not covered by an Official Community Plan:
 - 1) 30 m of the *natural boundary* of a *stream*;
 - 2) 30 m of the top of the bank of a *ravine* less the 60 m wide;
 - 3) 15 m of the top of the bank of a *ravine* 60 m wide or greater; and
- f) 15 m of the *natural boundary* of all other *watercourses*.

5.17 SETBACK EXCEPTIONS: MOORAGE FACILITIES

5.17.1 Notwithstanding Section 5.16.1, Moorage facilities shall be permitted to extend into the *setback*.

5.18 FLOOD CONSTRUCTION LEVELS

5.18.1 Notwithstanding any other provision of this Bylaw, the underside of the floor system of any area *used* for habitation, business or storage of goods damageable by floodwaters; the top of land fill elevation or top of *pad* on which a *manufactured home* is located; or the top of the perimeter of a poured-in-place concrete footing on which a *manufactured home* is located shall be:

- a) At least 0.6 m above the 200-year flood level according to provincial records or 2 m above the *natural boundary* of the ocean or any *waterbody* or *watercourse*, *whichever is higher*;
or

- b) At least 3 m above the *natural boundary* of Chapman Creek, Tzoonie River, Clowhom River, Rainy River, McNab Creek, McNair Creek, Dakota Creek and Chickwat Creek.

5.19 STORAGE

5.19.1 Other than as permitted in the I7 zone, no *parcel* shall be used:

- a) For the wrecking of a motor vehicle; or
- b) For the storage of a motor vehicle which has been without a license under the *Motor Vehicle Act* for a period of more than one year, is not housed in a garage or carport, and which is intended to be self-propelled but is not capable of locomotion under its own power.

5.19.2 In residential zones, one shipping container per *parcel* is permitted only on a temporary basis during active construction on the property, where such construction is subject to a valid *Building Permit*, provided the shipping container is removed within two weeks of the completion of construction or the expiration of the permit.

5.20 SIGNAGE

5.20.1 No sign shall be located on a *parcel* for the purpose of advertising any person, service, matter, thing, event, or property that is not directly related to the business conducted on that *parcel*, with the exception of election signage during an election period.

5.20.2 Signs for businesses on *parcels* with zoning for *agriculture, commercial or industrial uses* shall be subject to the following conditions:

- a) The maximum total area of all sign faces on a *parcel* shall be 5 m²; and
- b) The maximum *height* of a sign shall be 3 m.

5.20.3 Signs for businesses, other than home occupation *use* and *short term rental use*, on *parcels* that are not zoned for an *agriculture, commercial or industrial use*, shall be subject to the following conditions:

- a) No more than one sign in conjunction with a business *use* on the same *parcel* may be located on that *parcel*;
- b) A sign shall have a maximum of two faces;
- c) The maximum area of a sign shall be 1 m²; and
- d) The maximum *height* of a sign shall be 2.5 m.

5.20.4 Signs permitted in all zones are as follows:

- a) An address sign including street number and street name;
- b) A maximum of two Real Estate Signs indicating that the *building, premise or parcel* on which the sign is located is for sale, rent or lease, provided each sign has a maximum of two faces and a maximum sign area of 2 m²;
- c) A maximum of two Development Signs each having a maximum sign area of 5 m² advertising a new development which may include the name, nature and particulars of the development, the names of the developer, contractors, subcontractors, consultants and a

- logo identifying the project and is temporary during the time for which there are active *building* permits or development related approvals in place with the *Regional District*;
 - d) A maximum of one entry or identification sign for a completed *subdivision or strata* development, a place, a landmark or a neighbourhood, and having a maximum sign area of 3 m²; and
 - e) A Directional Sign provided the maximum sign area is 0.5 m².
- 5.20.5 Signs erected by the Regional District are permitted in all zones.

5.21 GOLF COURSE

- 5.21.1 In any zone except an AG, RF3 or RM3 zone, on a parcel of land having an area of 20 ha or more, the use of land, buildings and/or structures may include a golf course.
- 5.21.2 The combined floor area of clubhouses, pro shops, restaurants and similar facilities auxiliary to a golf course permitted under 5.21.1 shall not exceed 200 m².

5.22 OCCUPANCY DURING CONSTRUCTION

- 5.22.1 A building or recreational vehicle may be used in the R1, R2, CR1, CR2, RU1, RU2, and AG Zones to provide accommodation for the resident during construction of a principal dwelling on a parcel, provided that:
 - a) a building permit under the current applicable SCRD Building Bylaw has been issued for the principal dwelling on the parcel and the principal dwelling is under construction;
 - b) a temporary building permit under the current applicable SCRD Building Bylaw, if necessary, has been issued for the building or recreational vehicle providing accommodation during construction;
 - c) the method of sewage disposal complies with the applicable regulations;
 - d) no addition shall be made to the building or recreational vehicle; and
 - e) occupancy of the building or recreational vehicle shall not continue beyond the commencement of occupancy of the permanent dwelling or the expiry date of the temporary building permit for the building or recreational vehicle, whichever occurs first.

5.23 SPLIT-ZONED PARCELS

- 5.23.1 Where a parcel has more than one zone:
 - a) In Electoral Area D, the zone that permits the least number of dwellings when calculated using the total parcel area shall be used to determine the maximum number of dwellings that may be permitted on a parcel;
 - b) In all other electoral areas, the zone that permits the greatest number of dwellings when calculated using the total parcel area shall be used to determine the maximum number of dwellings that may be permitted on a parcel; and
 - c) all other zoning regulations of each applicable zone shall apply exclusively to the portion of the parcel with that zone.

5.24 SECONDARY SUITE

- 5.24.1 A secondary suite is permitted as an auxiliary use to a single-unit dwelling on any parcel except parcels within SCRD wastewater service areas.
- 5.24.2 Except as otherwise provided in the bylaw, no more than one secondary suite shall be permitted per single-unit dwelling permitted on a parcel.
- 5.24.3 The floor area of a secondary suite shall not exceed 55 m².
- 5.24.4 The number of secondary suites permitted on a parcel shall be excluded from the calculation of any required maximum total number of dwelling units of a parcel or a building.

PART 6 PARKING AND LOADING

6.1 GENERAL PARKING SPACE REQUIREMENTS

- 6.1.1 Except for parallel parking, every required *off-street parking* space shall have a minimum width of 2.5 m and a minimum length of 5.5 m.
- 6.1.2 Where an off-street parking space abuts a wall or other obstruction along its side, the required width shall be 0.3 metres wider than required under Section 6.1.1.
- 6.1.3 Where parallel parking is provided, every required *off-street parking* space shall have a minimum width of 2.5 m and a minimum length of 6.5 m.
- 6.1.4 Tandem parking spaces shall count as one parking space.
- 6.1.5 Every required *off-street parking* space shall provide vehicular access to a *highway or a* manoeuvring aisle.
- 6.1.6 The minimum width of a manoeuvring aisle for two way 90-degree parking shall be 6.5 m.
- 6.1.7 The minimum width of a manoeuvring aisle for parallel parking shall be 3.8 m (one way manoeuvring aisle) or 6.4 m (two way manoeuvring aisle).
- 6.1.8 Unless expressly permitted otherwise, required *off-street parking* spaces shall be located on the same *parcel* as the *use* being served.
- 6.1.9 Notwithstanding Section 6.1.8, required *off-street parking* spaces for a parcel accessed only by water may be provided in an area where public parking or parking for other properties is permitted by this Bylaw.
- 6.1.10 Where any new development is proposed, an existing *use* of a development is changed, or an existing development is enlarged, on-site vehicle parking and loading shall be provided by the property owner in accordance with Section 6.4.
- 6.1.11 In the case of multiple *uses*, the total requirements for the *off-street parking* facilities shall be the sum of the requirements for each *use* computed separately.
- 6.1.12 In the case of a *use* not specifically mentioned, the required *off-street parking* spaces shall be the same as for a similar *use*.
- 6.1.13 When excess *off-street parking* facilities are provided, the location, design and operation of such facilities shall comply with all the regulations of Part 6 of this Bylaw.
- 6.1.14 All *off-street parking* for more than three vehicles shall provide a permanent durable surface consisting of asphalt, concrete, permeable/porous pavement, interlocking paving stones or similar treatment that is dust-free.
- 6.1.15 All *off-street parking* areas and manoeuvring aisles, with the exception of driveways, shall have a maximum gradient and cross slope of 6 percent.

- 6.1.16 All *off-street parking* areas and manoeuvring aisles shall have surface drainage directed to rain gardens, drainage ditches, rock pits or landscaped areas within the *parcel*.
- 6.1.17 All off-street parking signs and pavement markings shall comply with the standards of the Transportation Authority of Canada publication entitled "Uniform Traffic Control Devices for Canada".
- 6.1.18 All *off-street parking* in Commercial and Residential Multiple Zones shall provide a continuous landscape strip not less than 2 m wide, planted with shrubs and trees at least 0.9 m in height at the time of planting, except for accesses for manoeuvring aisles, *highways* and walkways.

6.2 ACCESSIBLE PARKING SPACE REQUIREMENTS

- 6.2.1 Each accessible parking space provided shall have a minimum width of 3.7 m, a minimum depth of 5.5 m and a minimum height clearance of 2.75 m.
- 6.2.2 Each accessible parking space shall include a vertical sign of at least 300 mm wide and 450 mm high centre mounted 1.5 m to 2.5 m above the surface of the parking area and a sign painted on the surface of the parking area, identifying the space as an accessible parking space.
- 6.2.3 Commercial, *Industrial*, *Assembly* and Multi-unit residential *uses* must provide one accessible space once a total of 10 parking spaces are required, two spaces once 40 spaces are required, three spaces once 75 spaces are required, and one additional accessible space for each 50 subsequently required spaces.

6.3 LOADING SPACE REQUIREMENTS

- 6.3.1 Every required *off-street loading* space shall have a minimum width of 3.0 m, a minimum depth of 9.2 m and a vertical clearance of 4.3 metres.
- 6.3.2 Every required *off-street loading* space shall provide vehicular access to a *highway*.

6.4 OFF-STREET PARKING AND LOADING SPACE REQUIREMENTS

- 6.4.1 The number of *off-street parking* and loading spaces for motor vehicles shall be calculated according to the following table:

USE	REQUIRED PARKING SPACE	REQUIRED LOADING SPACE
PRINCIPAL DWELLINGS		
single-unit dwelling	2	0
single-unit dwelling in CD1	1.5	0
dwelling in CD3	1.5 per dwelling	0
two-unit dwelling (each dwelling unit)	2	0
townhouse	1.5 plus 0.25 per dwelling unit for visitors	0

apartment	1.2 plus 0.25 per dwelling unit for visitors	0
manufactured home in RM2	1 plus 0.25 per dwelling unit for visitors	0
AUXILIARY DWELLING UNITS		
single-unit dwelling in conjunction with commercial or industrial use	1	0
auxiliary dwelling unit	1	0
secondary suite	1	0
AUXILIARY RESIDENTIAL USES		
Home-based business	1 per employee plus 1 per 20 m ² of retail area	0
short term rental	1 per bedroom	0
horticultural product sales	2 per parcel	0
auxiliary residential assembly	6 per 100 m ² floor area	0
COUNTRY AND RURAL RESIDENTIAL USES		
animal shelter	1 per 100 m ² of floor area + 2.0 per 100 m ² of office floor area + 1 per fleet vehicle	1
horse riding, training or boarding facility	1 per stall	0
garden nursery	4 per 100 m ² of retail sales area plus 1 per 185 m ² of greenhouse area	0
community care facility	1 per bedroom	0
COMMERCIAL USES		
retail and general commercial	4 per 100 m ² floor area	1 for the first 700 m ² of floor area plus 1 for each additional 500 m ² of floor area
office	2.5 per 100 m ² floor area	0
bank	3.5 per 100 m ² floor area	1
healthcare office	4 per 100 m ² floor area	0

specialty food retail	4 per 100 m ² floor area	0
personal service establishment	3 per 100 m ² floor area	0
restaurant	10 per 100 m ² floor area	1 per 200 m ² floor area
tourist accommodation	1 per sleeping unit	0
marina	1 per 2 berths of mooring	1 per 40 boat stalls to a maximum of 4
neighbourhood pub	10 per 100 m ² floor area	1 per 200 m ² floor area
tourist information centre	1 per 8m ² floor area	0
<i>fuel service station</i>	1 per service bay	1
golf course	6 per green	0
theatre	0.25 per seat	0
artisan studio	1 per employee plus 4 per 100 m ² floor area	0
funeral home	1 per seat in assembly hall	0
all uses permitted in CD2	60	1 combined space to serve assembly and camp assembly
commercial and marina uses in CD3	4	1
commercial storage in I1A	1 per 620 m ² floor area	1 per 1860 m ² floor area
INDUSTRIAL USES		
light industry	1.5 per 100 m ² floor area	1 per 1400 m ² of floor area for buildings greater than 700 m ² floor area to a maximum of 4
warehouse	1 per 200 m ² floor area	
manufacturing	1 per 100 m ² floor area	
cannabis production facility	1 per 200 m ² floor area	
INSTITUTIONAL USES		
post office	3 per 100 m ² floor area	1
hospital	1.8 per bed	1 per 60 beds
assembly	6 per 100 m ² floor area	0
church	0.25 per seat	0
elementary school	1 per classroom	1 per 3000 m ² floor area
secondary school	2 per classroom	
yard waste transfer station	1 for each waste disposal area	0

- 6.4.2 Where the number of required parking spaces in the table is expressed as a calculated figure or as a minimum number of spaces, the number of spaces provided shall be the greater of the two requirements.
- 6.4.3 Where the calculation of parking spaces results in a fraction, the total number of spaces required shall be rounded to the nearest whole number.

6.5 BICYCLE PARKING REQUIREMENTS

- 6.5.1 Two enclosed bicycle parking spaces shall be provided for each dwelling unit in RM1, RM2 and RM3 zone with such bicycle parking spaces located in a separate, dedicated room or enclosure within the *apartment* or *townhouse* with direct outside access, secured with a separate lock and key or programmed entry system, and available only to authorised users.
- 6.5.2 Each enclosed bicycle space shall have a minimum vertical clearance of 1.9 metres, a minimum width of 0.6 metre, and a minimum length of 1.8 m of length.
- 6.5.3 Each principal use in a *Commercial* zone shall provide an outdoor bicycle rack designed to accommodate a minimum of three bicycles, with a minimum width of 0.3 m for each bicycle, constructed of sturdy theft-resistant material, and having secure theft-resistant anchoring to the floor or ground.
- 6.5.4 Each outdoor bicycle rack in a *Commercial* zone shall be in a convenient, well-lit location that provides visual surveillance by the occupants of the building the racks are intended to serve and located not more than 10 m from the entrance to the principal use.
- 6.5.5 Each outdoor bicycle space shall be located on a rack with a minimum width of 0.3 m for each bicycle, designed to enable the bicycle frame and front wheel to be locked to the rack with a U-style lock and support the bicycle frame above the centre of gravity, with the bicycle rack constructed of sturdy theft-resistant material anchored to the ground.

PART 7 RESIDENTIAL ZONES

7.1 RESIDENTIAL ONE (R1)

7.1.1 Intent

To permit *Single-Unit dwellings* in residential areas with additional *dwellings* on larger residential lots.

7.1.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>single-unit dwelling</i>	See Part 5 for General Regulations.
2	<i>additional single-unit dwellings</i>	1) <i>Parcel area</i> must exceed 3500 m ² . 2) The total number of <i>dwelling</i> units shall not exceed the maximum density permitted in Section 7.1.3.

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>auxiliary dwelling unit</i>	1) <i>Parcel area</i> must exceed 2000 m ² . 2) The total number of <i>dwelling</i> units shall not exceed the maximum density permitted in Section 7.1.3. 3) See Section 5.2 for <i>Use Provisions</i> .
2	short term rental	1) <i>Parcel area</i> must exceed 2000 m ² . 2) See Section 5.3 for <i>Use Provisions</i> .
3	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
4	keeping of <i>livestock</i>	1) <i>Parcel area</i> must exceed 3500 m ² . 2) See Section 5.6 for <i>Use Provisions</i> .

- d) Additional general *use* regulations are provided in Section 5.1.

7.1.3 Density

- a) The maximum density shall be as follows:

<i>PARCEL AREA</i>	<i>MAXIMUM DWELLING UNITS PER PARCEL</i>	<i>DWELLING UNITS PERMITTED</i>
≤2000 m ²	1	Single-unit <i>Dwelling</i>
>2000 m ²	2	1 Single-Unit <i>Dwelling</i> and 1 <i>Auxiliary dwelling unit</i>
>3500 m ²	2	2 Single-unit <i>Dwellings</i>

7.1.4 **Parcel coverage**

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be as follows:

<i>PARCEL AREA</i>	<i>PARCEL COVERAGE</i>
<750 m ²	45%
≥750 m ²	35%

7.1.5 **Setbacks**

Shall be as per Part 5.

7.1.6 **Parking**

Requirements as per Part 6.

7.1.7 **Site Specific Uses**

Notwithstanding provisions of Section 7, in Lot 5, District Lot 1398, Plan VAP21531

(81 MONROE RD – Electoral Area F), the maximum total floor area of all buildings shall be the parcel area multiplied by 0.313, to a maximum of 310m².

7.1.8 **Height of Buildings and Structures**

Requirements as per Section 5.11.

7.1.9 **Floor Area of Buildings**

Requirements as per Section 5.13.

7.2 RESIDENTIAL TWO (R2)

7.2.1 Intent

To permit *Single-Unit dwellings* and in low density residential areas.

7.2.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>single-unit dwelling</i>	1) See Part 5 for General Regulations.
2	<i>additional single-unit dwelling or two-unit dwelling</i>	1) <i>Parcel area</i> must exceed 3500 m ² . 2) The additional single-unit <i>dwelling</i> may be used as a <i>community care facility</i> . 3) The total number of <i>dwelling units</i> shall not exceed the maximum density permitted in Section 7.2.3.

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>auxiliary dwelling unit</i>	1) <i>Parcel area</i> must exceed 2000 m ² . 2) The total number of <i>dwelling units</i> shall not exceed the maximum density permitted in Section 7.2.3. 3) See Section 5.2 for <i>Use Provisions</i> .
2	<i>short term rental</i>	See Section 5.3 for <i>Use Provisions</i> .
3	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
4	<i>keeping of livestock</i>	1) <i>Parcel area</i> must exceed 3500 m ² . 2) See Section 5.6 for <i>Use Provisions</i> .

- d) Additional general *use* regulations are provided in Section 5.1.

7.2.3 Density

The maximum density shall be as follows:

PARCEL AREA	MAXIMUM DWELLING UNITS PER PARCEL	DWELLING UNITS PERMITTED
≤2000 m ²	1	Single-unit <i>Dwelling</i>

>2000 m ²	2	1 Single-unit <i>Dwelling</i> and 1 <i>Auxiliary dwelling unit</i> ; or 1 two-unit dwelling
>3500 m ²	2	2 Single-unit <i>Dwelling</i> Units; or 1 single-unit dwelling and one community care facility

7.2.4 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be as follows:

PARCEL AREA	PARCEL COVERAGE
<3500 m ²	35%
≥3500 m ²	15%

7.2.5 Setbacks

The minimum *setbacks* from a *parcel* line for all *buildings* and *structures* shall be as per Sections 5.14, 5.15, 5.16 and 5.17.

7.2.6 Parking

Requirements as per Part 6.

7.2.7 Height of Buildings and Structures

Requirements as per Section 5.11.

7.2.8 Floor Area of Buildings

Requirements as per Section 5.13.

7.3 RESIDENTIAL THREE (R3)

7.3.1 Intent

To permit *Single-Unit dwellings* with restricted second *floor areas* in low density residential areas.

7.3.2 Permitted Uses

a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	single-unit <i>dwelling</i>	See Part 5 for General Regulations.

b) The permitted auxiliary *uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>short term rental</i>	See Section 5.3 for <i>Use Provisions</i> .

c) Additional general *use* regulations are provided in Section 5.1.

7.3.3 Density

The maximum permitted density shall be limited to one *Single-Unit Dwelling* per *parcel*.

7.3.4 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 45%.

7.3.5 Setbacks

The minimum *setbacks* from a *parcel* line for all *buildings* and *structures* shall be as per Sections 5.14, 5.15, 5.16 and 5.17.

7.3.6 Parking

Requirements as per Part 6.

7.3.7 Additional Building Requirements

- a) The maximum *floor area* of all *buildings* in any *parcel* in the R3 zone shall be the *parcel* area multiplied by 0.40, to a maximum of 300 m², including a minimum of 28 m² reserved for parking within a garage or carport.
- b) The maximum *floor area* of the second storey of any building shall not exceed 75% of the *floor area* of the first storey, including the *floor area* of an attached garage.
- c) Maximum height of any building shall be 8.5 m.

7.4 RESIDENTIAL MULTIPLE ONE (RM1)

7.4.1 Intent

To permit *multi-unit residential buildings*.

7.4.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>apartment</i>	See Part 5 for General Regulations.

- b) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>community care facility</i>	1) <i>Parcels</i> must exceed 3500 m ² . 2) Maximum total floor area of 300 m ² .
2	<i>common amenity area</i>	See Section 7.4.6

- c) Subject to compliance with all other provisions of this bylaw, more than one auxiliary use shall be permitted.
- d) Additional use regulations are provided in Part 5.

7.4.3 Density

The maximum permitted *Density* shall be as follows:

MAXIMUM NUMBER OF DWELLING UNITS	TYPE OF DWELLING UNIT PERMITTED
60 per hectare	<i>Apartment</i>

7.4.4 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 35%.

7.4.5 Setbacks

- a) The minimum *setback* from a *parcel* line for all *buildings* and *structures* permitted shall be 7.5m.
- b) *Setback* exceptions as per Section 5.15.

7.4.6 Common Amenity Areas

Common amenity areas shall be provided as per the following:

- a) A minimum of 6 m² per dwelling unit, or a total of 40 m² per parcel, whichever the greater; and
- b) On sites containing 12 or more dwelling units, a minimum of 40% of the required common amenity area shall be within a building.

7.4.7 **Parking**

Requirements as per Part 6.

7.4.8 **Height of Buildings and Structures**

The maximum height of any building shall be 15m.

7.5 RESIDENTIAL MULTIPLE TWO (RM2)

7.5.1 Intent

To permit *manufactured home* parks.

7.5.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>manufactured home</i>	See Part 5 for General Regulations.

- b) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>service buildings</i>	See Part 5 for General Regulations.
2	<i>retail sales</i>	1) For RM2 zone residents only. 2) <i>Parcel area</i> must exceed 1.75 ha. 3) <i>Retail sales area</i> shall not exceed 30 m ² .
3	<i>common amenity area</i>	See Section 7.5.6

- c) Subject to compliance with all other provisions of this bylaw, more than one auxiliary use shall be permitted.
- d) Additional use regulations are provided in Part 5.

7.5.3 Density

The maximum permitted *Density* shall be 15 dwelling units per hectare.

7.5.4 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 35%.

7.5.5 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted shall be 5m.
- b) *Setback* exceptions as per Section 5.15.

7.5.6 Common Amenity Areas

Common amenity areas shall be provided as per the following: A minimum of 6 m² per dwelling unit, or a total of 40 m² per parcel, whichever the greater.

7.5.7 **Private Outdoor Space**

A minimum area of 40 m² of directly accessible *Private outdoor space* must be provided for each dwelling unit.

7.5.8 **Parking**

Requirements as per Part 6.

7.5.9 **Height of Buildings and Structures**

Requirements as per Section 5.11.

7.6 RESIDENTIAL MULTIPLE THREE (RM3)

7.6.1 Intent

To permit *manufactured home* parks.

7.6.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>manufactured home</i>	See Part 5 for General Regulations.

- b) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>service buildings</i>	See Part 5 for General Regulations.
2	<i>common amenity area</i>	See Section 7.5.6

- c) Subject to compliance with all other provisions of this bylaw, more than one *principal* or *auxiliary use* shall be permitted.

- d) Additional use regulations are provided in Part 5.

7.6.3 Density

The maximum permitted *Density* shall be as follows:

MAXIMUM NUMBER OF <i>DWELLING</i> UNITS	CONDITIONS
15 per hectare	Base density
20 per hectare	Density Bonus, where: a) a minimum of an additional 0.92 hectares of park is dedicated; and b) a housing agreement under Section 483 of the <i>Local Government Act</i> designating at least 20% of the units or parcels as affordable housing using criteria based on CHMC and Statistics Canada information.

7.6.4 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 40%.

7.6.5 Setbacks

The minimum *setbacks* from a *parcel* line for all *buildings* and *structures* shall be as per Sections 5.14, 5.15, 5.16 and 5.17.

7.6.6 Common Amenity Areas

Common amenity areas shall be provided as per the following:

A minimum of 6 m² per dwelling unit, or a total of 40 m² per parcel, whichever the greater.

7.6.7 Private Outdoor Space

A minimum area of 40 m² of directly accessible *Private outdoor space* must be provided for each dwelling unit.

7.6.8 Parking

Requirements as per Part 6.

7.6.9 Height of Buildings and Structures

Requirements as per Section 5.11.

7.7 COUNTRY RESIDENTIAL ONE (CR1)

7.7.1 Intent

To permit residential *and rural uses* on large rural lots.

7.7.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	single-unit <i>dwelling</i>	See Part 5 for General Regulations.
2	second single-unit <i>dwelling or two-unit dwelling</i>	1) <i>Parcel area</i> must exceed 8000 m ² . 2) The second <i>dwelling unit</i> may be used as a <i>community care facility</i> . 3) Total number of <i>dwelling units</i> shall not exceed maximums under Section 7.7.4.
3	<i>agriculture</i>	
4	keeping of <i>livestock</i>	See Section 5.6 for <i>Use Provisions</i> .

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.
- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>auxiliary dwelling unit</i>	1) <i>Parcel area</i> must exceed 3500 m ² . 2) See Section 5.2 for <i>Use Provisions</i> .
2	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
3	<i>short term rental</i>	See Section 5.3 for <i>Use Provisions</i> .

- d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.
- e) Additional use regulations are provided in Part 5.

7.7.3 Parcel Coverage

PARCEL AREA	MAXIMUM PARCEL COVERAGE
≤3500 m ²	35%

>3500 m ²	15%
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7.7.4 Density

The maximum density of *dwelling units* shall be as follows:

MINIMUM <i>PARCEL</i> AREA	MAXIMUM <i>DWELLING</i> UNITS PER <i>PARCEL</i>	TYPE OF <i>DWELLING</i> UNITS PERMITTED
≤3500 m ²	1	Single-unit <i>Dwelling</i>
>3500 m ²	2	1 Single-unit <i>Dwelling</i> and 1 <i>Auxiliary dwelling unit</i> ; or 1 two-unit <i>dwelling</i>
>8000 m ²	2	2 Single-unit <i>Dwellings</i> ; or 1 single-unit <i>dwelling</i> and one community care facility

7.7.5 Setbacks

The minimum *setbacks* from a *parcel* line for all *buildings* and *structures* shall be as per Sections 5.14, 5.15, 5.16 and 5.17.

7.7.6 Parking

Requirements as per Part 6.

7.7.7 Height of Buildings and Structures

Requirements as per Section 5.11.

7.7.8 Floor Area of Buildings

Requirements as per Section 5.13.

7.8 COUNTRY RESIDENTIAL TWO (CR2)

7.8.1 Intent

To permit residential *and rural uses* on large rural lots.

7.8.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	single-unit <i>dwelling</i>	See Part 5 for General Regulations.
2	<i>agriculture</i>	
3	keeping of <i>livestock</i>	1) <i>Parcel area</i> must exceed 3500 m ² . 2) See Section 5.6 for <i>Use Provisions</i> .

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
2	<i>short term rental</i>	See Section 5.3 for <i>Use Provisions</i> .

- d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.

- e) Additional use regulations are provided in Part 5.

7.8.3 Parcel Coverage

PARCEL AREA	MAXIMUM PARCEL COVERAGE
≤3500 m ²	35%
>3500 m ²	15%

7.8.4 Density

The maximum density of *dwelling units* shall be one single-unit dwelling per parcel.

7.8.5 Setbacks

The minimum *setbacks* from a *parcel* line for all *buildings* and *structures* shall be as per Sections 5.14, 5.15, 5.16 and 5.17.

7.8.6 Parking

Requirements as per Part 6.

7.8.7 Height of Buildings and Structures

Requirements as per Section 5.11.

7.8.8 Floor Area of Buildings

Requirements as per Section 5.13.

7.9 RURAL RESIDENTIAL ONE (RU1)

7.9.1 Intent

To permit residential and rural *uses*.

7.9.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>single-unit dwelling</i>	See Part 5 for General Regulations.
2	<i>second single-unit dwelling</i>	1) The second <i>dwelling unit</i> may be used as a <i>community care facility</i> . 2) Total number of <i>dwelling units</i> shall not exceed maximums under Section 7.9.4.
3	<i>agriculture</i>	
4	<i>garden nursery</i>	
5	<i>keeping of livestock</i>	1) Parcel area must exceed 3500 m ² 2) See Section 5.6 for <i>Use Provisions</i> .
6	<i>vehicle repair and maintenance</i>	1) Contained within an enclosed building; 2) There is no storage outside of the enclosed building; 3) No such building shall exceed 4.5 m in height; 4) Minimum setback of such a building from all parcel lines shall be 7.5 m; 5) The floor area of such building shall not exceed 75 m ² ; 6) <i>Parcel area</i> must exceed 8000 m ² within Electoral Area E and 3500 m ² in all other electoral areas.
7	<i>animal shelters</i>	1) <i>Parcel area</i> must exceed 1.75 ha. 2) <i>Kennels</i> are only permitted in Electoral Areas E and F.
8	<i>horse riding, training or boarding facility</i>	<i>Parcel area</i> must exceed 1.75 ha.
9	<i>manufacturing or storage</i>	1) <i>Parcel area</i> must exceed 1.75 ha. 2) <i>Use</i> must be within a single fully enclosed <i>building</i> . 3) <i>Building floor area</i> shall not exceed 75 m ² . 4) Maximum <i>building height</i> shall be 6 m. 5) Minimum building setback to any parcel line shall be 7.5 m.

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.
- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>auxiliary dwelling unit</i>	1) Density requirement as per Section 7.9.4. 2) See Section 5.2 for <i>Use Provisions</i> .
2	<i>short term rental</i>	See Section 5.3 for <i>Use Provisions</i> .
3	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
4	wildlife rehabilitation	1) Parcel area must exceed 3500 m ² 2) Must be auxiliary to a residential use

- d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.
- e) Additional use regulations are provided in Part 5.

7.9.3 Parcel Coverage

PARCEL AREA	MAXIMUM PARCEL COVERAGE
≤3500 m ²	35%
>3500 m ²	15%

7.9.4 Density

- a) In Electoral Areas B, D and E, except Lot C (being a consolidation of Lots A and B, CA7357770), Block A, District Lot 4537, Group 1, New Westminster District, Plan EPP24269, the maximum number of *dwelling units* shall be as follows:

PARCEL AREA	DWELLING UNITS PER PARCEL	TYPE OF DWELLING UNITS PERMITTED
<3500 m ²	1	1 Single-unit Dwelling
≥3500 m ² ≤8000 m ²	2	1 Single-unit <i>Dwelling</i> and 1 <i>Auxiliary dwelling unit</i>
>8000 m ²	2	2 single-unit dwellings; or 1 single-unit dwelling and 1 community care facility

- b) In Electoral Area F except Block 9, North Part of District Lot 693, Plan 3920, the maximum number of *dwelling units* shall be as follows:

PARCEL AREA	DWELLING UNITS PER PARCEL	TYPE OF DWELLING UNITS PERMITTED
<0.8 ha	1	1 Single-unit Dwelling
≥0.8 ha ≤1.75 ha	2	1 Single <i>Dwelling Unit</i> and 1 <i>Auxiliary dwelling unit</i>
>1.75 ha	2	2 single-unit dwellings

- c) In Block 9, North Part of District Lot 693, Plan 3920, the maximum number of *dwelling units* shall be as follows:

PARCEL AREA	DWELLING UNITS PER PARCEL	TYPE OF DWELLING UNITS PERMITTED
<3500 m ²	1	1 Single-unit Dwelling
≥3500 m ² ≤8000 m ²	2	1 Single-unit <i>Dwelling</i> and 1 <i>Auxiliary dwelling unit</i>
>8000 m ²	2	2 single-unit dwellings; or 1 single-unit dwelling and 1 community care facility

- d) In Lot C (being a consolidation of Lots A and B, CA7357770), Block A, District Lot 4537, Group 1, New Westminster District, Plan EPP24269, the maximum number of *dwelling units* shall be as follows:

PARCEL AREA	DWELLING UNITS PER PARCEL	TYPE OF DWELLING UNITS PERMITTED
<1.6 ha	1	1 Single-unit Dwelling
≥1.6 ha	2	2 single-unit dwellings; or 1 single-unit dwelling and 1 community care facility

7.9.5 Setbacks

- The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* and setback exceptions shall be in accordance with Sections 5.14 and 5.15.
- Notwithstanding Subsection (a), no *manufacturing* or *storage use* shall be located within 7.5 m of a *parcel line*.
- Notwithstanding Subsection (a), no *animal shelter*, *horse riding*, *training or boarding facility*, or *wildlife rehabilitation use* shall be sited within 15 m of a *parcel line*.

7.9.6 Parking

Requirements as per Part 6.

7.9.7 Height of Buildings and Structures

Requirements as per Section 5.11.

7.9.8 Floor Area of Buildings

Requirements as per Section 5.13.

7.9.9 Site Specific Uses

- 7.9.9.1 A distillery, meadery or cidery licensed under the BC *Liquor Control and Licensing Act* and associated sale, tasting and on-site tour are permitted on Lot 15 District Lot 1311 Plan 4216, subject to the following provisions:
- a) Tasting and on-site tours shall be conducted in accordance with the terms and conditions of the liquor license for the distillery.
 - b) Third-party commercial events or assembly associated with the distillery: not permitted.
 - c) Maximum building height: 4.5 m
 - d) Maximum building floor area: 100 m²
 - e) Minimum setback from any lot line: 7.5 m
 - f) Minimum number of parking spaces for distillery and associated uses: 11
 - g) Outdoor storage: not permitted
 - h) Tasting and retail room: maximum floor area shall be 18 m²; maximum seating capacity shall be 8 persons
 - i) Outdoor tasting: not permitted
- 7.9.9.2 Notwithstanding any other parts of this bylaw, within Lot 10 of Block 3, District Lot 3376, Plan 14932, the following shall apply:
- a) *auxiliary residential assembly* is permitted, provided that:
 - 1. no more than 12 persons are assembled at any one time and per day;
 - 2. the total combined floor area used for *auxiliary residential assembly*, exclusive of bedrooms providing transient overnight accommodation, dining and other amenity areas, does not exceed 60 m²;
 - 3. any area used for *auxiliary residential assembly* is located at least 7.5 m from a parcel line;
 - 4. on-site parking is provided in accordance with Part 6 of this bylaw, and shall be located at least 7.5 m from a parcel line;
 - 5. the *auxiliary residential assembly* is operated by the principal residents;
 - 6. employees of the *auxiliary residential assembly* are restricted to members of the family who are the principal residents plus one other person;
 - 7. notwithstanding any other parts of this bylaw, no more than one sign is installed on the parcel, in a manner that does not obstruct or obscure site access or egress, nor has an area exceeding 0.35 m²;
 - 8. the provision of transient overnight accommodation for persons attending the *auxiliary residential assembly* does not exceed five bedrooms per parcel;
 - 9. a building used for *auxiliary residential assembly* purposes is connected to either a community sewer facility or on-site sewage disposal facilities in accordance with current regulations pursuant to the *Public Health Act*.
 - b) The total combined number of bedrooms used for transient accommodation for both *auxiliary residential assembly* and short term rental use shall not exceed five bedrooms per parcel, with the total number of bedrooms for short term rental independent of *auxiliary residential assembly* not exceeding two bedrooms per dwelling.
 - c) Animal shelter, kennel, vehicle repair and maintenance, horse riding, training and boarding facility, manufacturing and storage building and wildlife rehabilitation facility are not permitted.

7.10 RURAL RESIDENTIAL ONE A (RU1A)

7.10.1 Intent

To permit Single-Unit *dwelling*s and auxiliary rural *uses*.

7.10.2 Permitted Uses

a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>single-unit dwelling</i>	See Part 5 for General Regulations.
2	<i>second single-unit dwelling</i>	1) The second <i>dwelling unit</i> may be used as a <i>community care facility</i> . 2) Total number of <i>dwelling units</i> shall not exceed maximums under Section 7.10.4.
3	<i>agriculture</i>	
4	<i>garden nursery</i>	
5	<i>keeping of livestock</i>	1) Parcel area must exceed 3500 m ² 2) See Section 5.6 for <i>Use Provisions</i> .
6	<i>vehicle repair and maintenance</i>	1) Contained within an enclosed building; 2) There is no storage outside of the enclosed building; 3) No building shall exceed 6.0 m in height; 4) Minimum setback of a building from all parcel lines shall be 7.5 m; 5) The floor area of such building shall not exceed 75 m ² ; 6) <i>Parcel area</i> must exceed 8000 m ² within Electoral Area E and 3500 m ² in all other electoral areas.
7	<i>horse riding, training or boarding facility</i>	<i>Parcel area</i> must exceed 1.75 ha.
8	<i>manufacturing or storage</i>	1) <i>Parcel area</i> must exceed 1.75 ha. 2) <i>Use</i> must be within a single fully enclosed <i>building</i> . 3) <i>Building floor area</i> shall not exceed 75 m ² . 4) Maximum <i>building height</i> shall be 6.0 m. 5) Minimum building setback to any parcel line shall be 7.5 m.

b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>auxiliary dwelling unit</i>	1) Density requirement as per Section 7.10.4. 2) See Section 5.2 for <i>Use Provisions</i> .
2	<i>short term rental</i>	1) May be provided in one or two dwellings permitted on a parcel. 2) The area utilized for short term rental accommodation shall not exceed a combined total of five bedrooms per parcel. 3) See Section 5.3 for <i>Use Provisions</i> .
3	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
4	wildlife rehabilitation	1) Parcel area must exceed 3500 m ² 2) Must be auxiliary to a residential use

- d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.
- e) Additional use regulations are provided in Part 5.

7.10.3 Parcel Coverage

PARCEL AREA	MAXIMUM PARCEL COVERAGE
≤3500 m ²	35%
>3500 m ²	15%

7.10.4 Density

The maximum number of *dwelling units* shall be as follows:

PARCEL AREA	DWELLING UNITS PER PARCEL	TYPE OF DWELLING UNITS PERMITTED
<3500 m ²	1	1 Single-unit Dwelling
≥3500 m ² ≤8000 m ²	2	1 Single <i>Dwelling Unit</i> and 1 <i>Auxiliary dwelling unit</i>
>8000 m ²	2	2 single-unit dwellings; or 1 single-unit dwelling and 1 community care facility

7.10.5 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* and setback exceptions shall be in accordance with Part 5.
- b) Notwithstanding Subsection (a), no *manufacturing* or storage *use* shall be located within 7.5 m of a *parcel line*.

- c) Notwithstanding Subsection (a), no *horse riding, training or boarding facility*, or wildlife rehabilitation *use* shall be sited within 15 m of a *parcel line*.

7.10.6 **Parking**

Requirements as per Part 6.

7.10.7 **Height of Buildings and Structures**

Requirements as per Section 5.11.

7.10.8 **Floor Area of Buildings**

Requirements as per Section 5.13.

7.11 RURAL RESIDENTIAL TWO (RU2)

7.11.1 Intent

To permit residential, rural and resource *uses*.

7.11.2 Permitted Uses

a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>single-unit dwelling</i>	See Part 5 for General Regulations.
2	<i>second single-unit dwelling</i>	1) The second <i>dwelling unit</i> may be used as a <i>community care facility</i> . 2) Total number of <i>dwelling units</i> shall not exceed maximums under Section 7.11.4.
3	<i>agriculture</i>	
4	<i>garden nursery</i>	
5	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
6	<i>keeping of livestock</i>	1) <i>Parcel area</i> must exceed 3500 m ² . 2) See Section 5.6 for <i>Use Provisions</i> . 3) A maximum of 50 pigs may be kept on a parcel exceeding 1.75 ha.
7	<i>vehicle repair and maintenance</i>	1) Contained within an enclosed building; 2) There is no storage outside of the enclosed building; 3) No building shall exceed 6.0 m in height; 4) Minimum setback of a building from all parcel lines shall be 7.5 m; 5) The floor area of this use shall not exceed 75 m ² ; 6) <i>Parcel area</i> must exceed 8000 m ² within Electoral Area E and 3500 m ² in all other electoral areas.
8	<i>animal shelters</i>	1) <i>Parcel area</i> must exceed 1.75 ha. 2) <i>Kennels</i> are only permitted in Electoral Areas E and F.
9	<i>wildlife rehabilitation</i>	<i>Parcel area</i> must exceed 8000 m ² .
10	<i>horse riding, training or boarding facility</i>	<i>Parcel area</i> must exceed 1.75 ha.
11	<i>manufacturing or storage</i>	1) <i>Parcel area</i> must exceed 1.75 ha. 2) <i>Use</i> must be within a single fully enclosed <i>building</i> . 3) <i>Building floor area</i> shall not exceed 75 m ² . 4) Maximum <i>building height</i> shall be 6.0 m. 5) Minimum building setback to any parcel line shall be 7.5 m.
12	<i>fire training area</i>	Only in Block A, District Lot 1313, Plan 5950

13	tourist information centre	1) <i>Parcel area</i> must exceed 8000 m ² . 2) The building does not exceed 4.5m in height 3) The maximum floor area does not exceed 185m ²
14	<i>forest management</i>	
15	public works yard	Only in Block A, District Lot 1313, Plan 5950
16	<i>campground</i>	1) <i>Parcel area</i> must exceed 1.75 ha. 2) Maximum 10 camp sites per hectare
17	<i>construction camp</i>	<i>Parcel area</i> must exceed 1.75 ha.
18	sawmill and shakemill	1) <i>Parcel area</i> must exceed 1.75 ha. 2) Excludes the <i>use</i> of planers and chippers. 3) <i>Site area</i> must not exceed 1000 m ² .
19	equipment repair and maintenance	1) <i>Parcel area</i> must exceed 1.75 ha. 2) <i>Use</i> must be contained with a fully enclosed <i>building</i>
20	<i>cannabis production facility</i>	1) <i>Parcel area</i> must exceed 8 ha 2) See Section 5.9 for <i>use</i> regulations

b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>auxiliary dwelling unit</i>	1) Density requirement as per Section 7.11.4. 2) See Section 5.2 for <i>Use</i> Provisions.
2	<i>short term rental</i>	See Section 5.3 for <i>Use</i> Provisions.

d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.

e) Additional use regulations are provided in Part 5.

7.11.3 Parcel Coverage

PARCEL AREA	MAXIMUM PARCEL COVERAGE
≤3500 m ²	35%
>3500 m ²	15%

7.11.4 Density

- a) The maximum density of *dwelling units* shall be as follows:

PARCEL AREA	ELECTORAL AREA	DWELLING UNITS PER PARCEL	TYPE OF DWELLING UNITS PERMITTED
< 8000 m ²	E	1	1 Single-unit Dwelling
< 1 ha	B, D	1	1 Single-unit Dwelling
< 1.5 ha	F	1	1 Single-unit Dwelling
≥ 1.5 ha	F	2	2 single-unit dwellings
≥ 8000 m ² ≤ 4 ha	E	2	2 single-unit dwellings; or 1 single-unit dwelling and 1 community care facility
≥ 1 ha ≤ 4 ha	B, D	2	2 single-unit dwellings; or 1 single-unit dwelling and 1 community care facility
> 4 ha	B, D	4	3 single-unit dwellings, and 1 auxiliary dwelling unit not exceeding 55 m ² in floor area
> 4 ha	E	2	2 single-unit dwellings

7.11.5 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* and setback exceptions shall be in accordance with Sections 5.14 and 5.15.
- b) Notwithstanding Subsection (a), none of the following *uses* shall be located within 15 m of any *parcel line*:
1. wildlife rehabilitation centre;
 2. tourist information centre;
 3. campground;
 4. animal shelter or kennel;
 5. manufacturing and storage;
 6. construction camp;
 7. sawmill or shakemill;
 8. equipment repair and maintenance;
 9. horse riding, training or boarding facility;
 10. keeping of pigs.

7.11.6 Parking

Requirements as per Part 6.

7.11.7 Height of Buildings and Structures
Requirements as per Section 5.11.

7.11.8 Floor Area of Buildings
Requirements as per Section 5.13.

7.11.9 Site Specific Uses

7.11.9.1 A maximum of 10 sleeping cabins are permitted on Block 2 District Lot 3380 Plan 4341, subject to the following regulations:

- a) No cooking or sanitary facilities shall be contained within any sleeping cabin.
- b) No person shall occupy any sleeping cabin for transient accommodation for more than 10 days in any calendar month.

7.11.9.2 In addition to the uses permitted in Section 7.11.2 the following uses are permitted on Lot 1, DL 1657, Plan VAP23053, PID 016-713-541:

- a) general contractor facility;
- b) equipment works yard;
- c) storage and sale of landscape products such as topsoil, bark mulch, gravel and sand;
- d) concrete batch plant;
- e) third dwelling, in the form of a manufactured home, auxiliary to the uses in (a) – (d) to be used for the purpose of housing a caretaker or watchman.
- f) Conditions of Use:
 - 1. For vehicle repair and maintenance, despite Section 7.11.2:
 - 1) there is no storage outside of an enclosed building;
 - 2) no such building shall exceed 7.5 m in height;
 - 3) the total floor area of such buildings shall not exceed 600 m²;
 - 4) the required setback from all parcel lines is 7.5 m.
 - 2. For manufacturing or storage, despite Section 7.11.2:
 - 1) there is no storage outside of an enclosed building;
 - 2) more than one building is permitted;
 - 3) no such building shall exceed 7.5 m in height;
 - 4) the total floor area of such buildings shall not exceed 600 m²;
 - 5) the required setback from all parcel lines is 7.5 m.
 - 3. For equipment works yard:
 - 1) more than one site area may be used;
 - 2) the use shall be screened by a solid fence or landscaping;
 - 3) the maximum total site area shall be 1 ha.

7.11.8.3 In addition to the uses permitted in Section 7.11.2, concrete batch plant is permitted on Block 6 except; Part Now Road Plan LMP1312, District Lot 1657, Plan 4563 and Block 7 except; Part Now Road Plan LMP1312, District Lot 1657, Plan 4563.

7.11.8.4 Notwithstanding Section 7.11.4, an auxiliary dwelling unit is permitted on Lot 7 District Lot 1582 Group 1 New Westminster District Plan LMP22397.

7.11.8.5 In Block A District Lot 1313 Plan 5950, the following apply:

a) In addition to the uses permitted in Section 7.11.2, the following uses are permitted on a parcel exceeding 1.75 ha:

1. Non-commercial *community storage facility* provided that:
 - 1) No building shall exceed 6 m in height; and
 - 2) The footprint of the building shall not exceed 450 m².
2. Public works yard;
3. Yard waste transfer station that is auxiliary to a public works yard;
4. *fire training area*, with a minimum of 7.5 m setback to all property lines.

b) The maximum density of *dwelling units* shall be as follows:

PARCEL AREA	DWELLING UNITS PER PARCEL	TYPE OF DWELLING UNITS PERMITTED
< 1 ha	1	1 Single-unit Dwelling
≥ 1 ha ≤ 4 ha	2	2 single-unit dwellings; or 1 single-unit dwelling and 1 community care facility
> 4 ha	4	3 single-unit dwellings and 1 auxiliary dwelling unit

7.12 RURAL FOREST ONE (RF1)

7.12.1 Intent

To permit *forest management* uses.

7.12.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	single-unit <i>dwelling</i>	1) See Part 5 for General Regulations. 2) Not more than one single-unit dwelling is permitted per parcel
2	<i>forest management</i>	

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	log booming, sorting and storage	Must be auxiliary to <i>forest management</i> . Shall be setback a minimum of 100 m from a parcel line. Must not exceed a <i>site area</i> of 2,000 m ²
2	wood processing in the form of sawmills, shake mills and wood chippers	Must be auxiliary to <i>forest management</i> . Shall be setback a minimum of 100 m from a parcel line. Must not exceed a <i>site area</i> of 2,000 m ²

7.12.3 Parcel Coverage

The maximum permitted *parcel coverage* shall be 5%.

7.12.4 Floor Area

The floor area of all buildings on a parcel shall not exceed 300 m².

7.12.5 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted in RF1 Zone shall be 5m.
- b)

7.12.6 Parking

Requirements as per Part 6.

7.12.7 Height of Buildings and Structures

Requirements as per Section 5.11.

7.13 RURAL FOREST TWO (RF2)

7.13.1 Intent

To permit *forest management* without allowance for a *Single-Unit dwelling*.

7.13.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>forest management</i>	

- b) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	log booming, sorting and storage	Must be auxiliary to <i>forest management</i> . Shall be setback a minimum of 30 m Must not exceed a <i>site area</i> of 2,000 m ²
2	wood processing in the form of sawmills, shake mills and wood chippers	Must be auxiliary to <i>forest management</i> . Shall be setback a minimum of 30 m Must not exceed a <i>site area</i> of 2,000 m ²

7.13.3 Parcel Coverage

The maximum permitted *parcel coverage* shall be 5%.

7.13.4 Floor Area

The floor area of all buildings on a parcel shall not exceed 300 m².

7.13.5 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted in RF2 Zone shall be 5m.

7.13.6 Parking

Requirements as per Part 6.

7.13.7 Height of Buildings and Structures

Requirements as per Section 5.11.

7.14 RURAL FOREST THREE (RF3)

7.14.1 Intent

To permit *forest management* and other rural uses.

7.14.2 Permitted Uses

- a) The permitted *uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>single-unit dwelling</i>	1) See Part 5 for General Regulations. 2) Not more than 1 permitted per parcel 3) The total floor area of all dwellings on a parcel shall not exceed 355 m ² .
2	auxiliary dwelling unit	1) Not more than 1 permitted per parcel 2) The total floor area of all dwellings on a parcel shall not exceed 355 m ² .
3	<i>forest management</i>	
4	<i>park</i>	
5	log booming, sorting and storage	1) Parcel size must exceed 3.75 ha. 2) The total building floor area shall not exceed 250 m ² . 3) Shall not be located within 30 m of a parcel line.
6	wood processing in the form of sawmills, shake mills and wood chippers	

7.14.3 Parcel Coverage

PARCEL AREA	MAXIMUM PARCEL COVERAGE
≤ 3.5 ha	15%
> 3.5 ha	10%

7.14.4 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted in RF3 Zone shall be 5m.

7.14.5 Parking

Requirements as per Part 6.

7.14.6 Height of Buildings and Structures

Requirements as per Section 5.11.

7.15 RURAL FOREST THREE (RF4)

7.15.1 Intent

To permit rural uses compatible with watershed protection.

7.15.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE
1	<i>forest based outdoor recreation</i>
2	outdoor natural science education or research
3	fish and wildlife habitat management and enhancement facilities
4	interpretive facilities
5	<i>park</i>
6	<i>restricted watershed areas</i>

7.15.3 Floor Area

The floor area of all buildings on a parcel shall not exceed 100 m².

7.15.4 Setbacks

No *uses* or structures permitted under Section 7.15.2 shall be sited within 30 m of a *parcel* line.

7.15.5 Parking

Requirements as per Part 6.

7.15.6 Height of Buildings and Structures

Requirements as per Section 5.11.

7.16 RURAL FOREST THREE (RF5)

7.16.1 Intent

To permit *forest management* and other rural uses.

7.16.2 Permitted Uses

a) The permitted *uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>single-unit dwelling</i>	1) See Part 5 for General Regulations. 2) Not more than 1 permitted per parcel
2	<i>forest management</i>	
3	<i>park</i>	
4	<i>forest based recreation</i>	
5	<i>environmental conservation</i>	

7.16.3 Parcel Coverage

PARCEL AREA	MAXIMUM PARCEL COVERAGE
≤ 3.5 ha	15%
> 3.5 ha	10%

7.16.4 Floor Area

The floor area of all buildings on a parcel shall not exceed 300 m².

7.16.5 Parcel Coverage

The maximum permitted *parcel coverage* shall be 10%.

7.16.6 Setbacks

The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted in RF5 Zone shall be 5m.

7.16.7 Parking

Requirements as per Part 6.

7.16.8 Height of Buildings and Structures

Requirements as per Section 5.11.

7.17 AGRICULTURAL (AG)

7.17.1 Intent

To permit agricultural *uses* on suitable lands, including those located within the Agricultural Land Reserve (ALR).

7.17.2 Permitted Uses

- a) Notwithstanding any provision in this Bylaw, any use within the AG Zone shall be in accordance with the Agricultural Land Reserve Use Regulation.
- b) Permitted *uses* shall be limited to the following:

	USE	CONDITIONS
1	<i>agriculture</i>	
2	<i>raising and keeping livestock</i>	
3	<i>farm or farm operation</i>	
4	single-unit dwelling	1) Not more than 1 permitted per parcel 2) Floor area shall not exceed 350 m ²
5	auxiliary dwelling unit	1) Not more than 1 permitted per parcel 2) <i>Parcel area</i> must exceed 1 ha 3) Floor area shall not exceed 90 m ²
6	<i>horse riding, training or boarding facility</i>	1) <i>Parcel area</i> must exceed 1 ha. 2) A <i>horse riding, training or boarding facility</i> shall not contain more than 3 horse stalls per hectare to a maximum of 40 horse stalls per <i>parcel</i> .
7	<i>park</i>	The total <i>floor area</i> of all <i>buildings and structures</i> used as part of a <i>park</i> , including biodiversity conservation, passive recreation, heritage, wildlife and scenery viewing shall not exceed 100 m ² .
8	<i>cannabis production</i> facility	See Section 5.9.
9	<i>agricultural product sales</i>	1) Must be auxiliary to a farm. 2) All farm products offered for sale must be produced on the farm on which the <i>retail</i> sales are taking place; or 3) The total sales <i>floor area</i> , both indoors and outdoors, for all agricultural products does not exceed 300 m ² , and at least 50% which is limited to the sale of farm products produced either on that agricultural land or

		by an association, as defined by the <i>Cooperative Association Act</i> , to which the owner of the farm on which the <i>agricultural product sales</i> take place belongs.
10	<i>animal processing</i>	At least 50% of animals slaughtered and farm product processed, packaged or stored by an animal slaughtering facility shall be reared and produced on the same farm.
11	<i>farm research and education</i>	The total <i>floor area</i> of all <i>buildings</i> and <i>structures</i> used for farm education and research shall not exceed 100 m ² .
12	dairy production	<ol style="list-style-type: none"> 1) At least 50% of the farm products <i>used</i> for dairy products must be produced on the same farm. 2) Retail sale area subject to conditions of agricultural product sale 3) Use may include on-site tour
13	<i>alcohol production facility</i>	<ol style="list-style-type: none"> 1) May include a brewery, <i>distillery</i>, meadery, <i>cidery</i> and/or <i>winery</i>. 2) Unless otherwise authorized by the ALC, a minimum of 50% of the farm products <i>used</i> in alcoholic beverage products must be produced on the same farm; or 3) Must have a land area more than 2 ha, and at least 50% of the total farm product for processing supplied by a British Columbia farm under a minimum three-year contract. 4) <i>Use</i> may include preparation and storage of products. 5) <i>Use</i> may include an <i>area</i> for agricultural product sale. 6) <i>Use</i> may include on-site tours.
14	food and beverage service lounge	<ol style="list-style-type: none"> 1) Shall be an auxiliary <i>use</i> to alcoholic beverage production. 2) Total <i>floor area</i> shall not exceed 100 m². 3) Shall have a maximum indoor seating capacity of 30. 4) Shall have a maximum outdoor area of 50 m². 5) May serve alcoholic beverages other than those produced on the same farm, provided that the beverages are sold as single servings for immediate consumption within the food and beverage service lounge or in a special event area operated in accordance with a special event endorsement issued under the <i>Liquor Control and Licensing Regulation</i>.
15	<i>agri-tourism</i>	Accommodation <i>uses</i> are permitted as per Section 7.17.3.
16	<i>short term rental</i>	See Sections 5.3 and 7.17.3 for <i>Use</i> Provisions.

17	<i>kennel</i>	Only permitted in Electoral Areas E and F.
18	<i>Agricultural processing</i>	

7.17.3 Temporary Uses

- a) A temporary *use* permit may be issued for the purpose of permitting *agri-tourism accommodation* auxiliary to *agriculture* or a farm operation.
- b) Accommodation approved under a temporary use permit under this section shall:
 1. be situated on a parcel having an area of at least 1.75 ha and classified for property tax assessment purposes as a farm;
 2. occupy less than 5% of the parcel for the total developed area for structures, landscaping and access associated with the accommodation.
 3. be limited to 10 sleeping units in total, including short term rental bedrooms.
 4. be either connected to a community sewer facility or have on-site sewage disposal facilities in place that are in accordance with current regulations pursuant to the *Health Act*.

7.17.4 Setbacks

- a) The minimum *setbacks* from a *parcel line* for *buildings* and *structures* and setback exceptions shall be in accordance with Sections 5.14 and 5.15.
- b) Notwithstanding Subsection (a), the minimum *setbacks* from a *parcel line* for permitted *uses*, structures or buildings for agricultural purposes in the AG Zone shall be as follows:

<i>USE, STRUCTURE OR BUILDING</i>	<i>ABUTTING A HIGHWAY (m)</i>	<i>OTHER PARCEL LINE (m)</i>	<i>WATERCOURSE /WATERBODY SETBACK (m)</i>
beekeeping	5	1.5	-
<i>agricultural buildings, structures, or outdoors storage areas, except otherwise specified under this section</i>	5	5	-
<i>agricultural buildings, structures, or outdoor storage areas having confined livestock areas including up to 1 au of swine</i>	10	15	15 for 10 or fewer AU
<i>agricultural buildings, structures, or outdoor storage areas having confined livestock areas including more than 1 au of swine</i>	25	30	30 for more than 10 AU

animal slaughter or processing for:			
1. <i>domestic consumption</i>	5	5	15
2. <i>commercial</i>	5	30	15
food and beverage service lounge	10	15	-
<i>greenhouse</i> containing no artificial lighting	5	5	-
<i>greenhouse</i> containing artificial lighting	15	15	-
<i>kennel</i> , including outdoor runs	10	15	-
<i>agricultural product sales</i> except in the form of an open air stand	5	5	-
<i>agricultural product sales</i> in the form of an open air stand	1.5	5	-
<i>agri-tourism campground</i>	10	10	-
<i>agricultural waste storage facility</i>	5	10	15
field storage of agricultural solid waste	5	10	30
chemical storage <i>structure</i>	10	10	15
mushroom growing medium preparation and storage	5	40	15
soiless medium preparation	10	15	-
soiless medium storage	5	7.5	-
<i>seasonal</i> feeding areas	-	-	30
composting or compost storage	5	10	15
wood waste storage	5	10	15

7.17.5 Parcel Coverage

<i>USES</i>	<i>MAXIMUM PARCEL COVERAGE</i>
All buildings and structures except greenhouses	15%
Residential buildings and structures and their auxiliary uses	10%
Greenhouse	50%

7.17.6 Parking

Requirements as per Part 6.

7.17.7 Height of Buildings and Structures
Requirements as per Section 5.11.

7.17.8 Site Specific Uses

	LEGAL DESCRIPTION	REGULATION
a)	Lot 17, District Lot 682, Plan 13714	<i>A garden supply centre</i> is an additional permitted use.
b)	Lot 12, Block E, District Lot 905, Plan EPP47776 Lot 13, Block E, District Lot 905, Plan EPP47776	1. Only one <i>single-unit dwelling</i> is permitted. 2. The <i>dwelling unit</i> shall have a ground <i>floor area</i> not exceeding 170 m ² and a total <i>floor area</i> not exceeding 280 m ² .

PART 8 – COMPREHENSIVE DEVELOPMENT ZONES

8.1 COMPREHENSIVE DEVELOPMENT ONE (CD1)

8.1.1 Intent

To permit *Single-Unit dwellings, two-unit dwellings* and common amenities.

8.1.2 Permitted Uses

The permitted *uses* shall be limited to the following:

	USE	CONDITIONS
1	single-unit dwelling	Only in Strata Lots 1-31 as shown on Schedule C.
2	<i>two-unit dwelling</i>	Only in Strata Lots 1-31 as shown on Schedule C.
3	common facility	May include shared kitchen and dining room, laundry, day-care and children's play area, auxiliary office and meeting rooms, lounge, library, workshop, one guest room, and greenhouse only in location as shown on Schedule C.
4	<i>ground level parking</i>	Only in the area labelled as Vehicle Parking on Schedule C.
5	<i>outdoor recreation facility</i>	May be in the form of a playground, courtyard, kitchen garden areas, and gazebo only in the area labelled as Common Amenity Area (CAA) on Schedule C.
6	<i>park and trail</i>	Permitted in the area labelled as Park on Schedule C.
7	<i>nature oriented recreation</i>	Permitted in the area labelled as Forested Area on Schedule C.
8	<i>auxiliary building</i>	Used for storage, workshops, studios, greenhouses, recycling and composting; and the keeping of livestock, subject to Section 5.6 of this bylaw and permitted only in the area labelled as Common Amenity Area (CAA) as shown on Schedule C.

8.1.3 Siting of Buildings and Structures

8.1.3.1 Structures shall be sited in accordance with the setbacks delineated on Schedule C, or otherwise as specified in Sections 5.14 and 5.15.

8.1.3.2 Structures located on land designated pursuant to the *Land Title Act* as "strata lot" shall be sited as follows:

- no structure shall be located within 0.6 m of a parcel line adjacent to an internal road;
- a building above its first storey shall not be located within 2.3 m of a parcel line adjacent to an internal road;
- the distance between two buildings used as dwellings located opposite of a side parcel line shall not be less than 3 m;

- d) a building used for a dwelling shall not be located within 6 m of a parcel line opposite to the parcel line adjacent to an internal road;
- e) an auxiliary building may be located within 0 m from a parcel line not adjacent to an internal road, and may not be located within 15 m of a parcel line adjacent to an internal road.

8.1.3.3 Structures located on land designated pursuant to the *Land Title Act* as "common property" shall be sited as follows:

- a) no structure shall be located within 5 m of a parcel line;
- b) a building containing less than 55 m² of floor area shall not be located within 3 m of a strata lot parcel line.

8.1.4 Floor Area

8.1.4.1 The floor area of buildings located on land designated pursuant to the *Land Title Act* as "strata lot" shall be regulated as follows:

- a) the total floor area in a dwelling on a strata lot shall not exceed 195 m²;
- b) the combined floor area of all auxiliary buildings located on a strata lot shall not exceed 20 m².

8.1.4.2 The floor area of buildings located on land designated pursuant to the *Land Title Act* as "common property" shall be regulated as follows:

- a) the combined floor area of all buildings in the area labelled as Common Amenity Area (CAA) on Schedule C shall not exceed 2,000 m²; and
- b) the floor area of a building in the area labelled as Common Amenity Area (CAA) on Schedule C shall not exceed 325 m².

8.1.5 Building Size

The size of buildings located on land designated pursuant to the *Land Title Act* as "strata lot" shall be regulated as follows:

- a) parcel coverage shall not exceed 40% per parcel;
- b) a building shall have a length not exceeding 17 m;

8.1.6 Density

- a) The total number of *parcels* designated pursuant to the *Land Title Act* as *strata lot* shall not exceed 31, in addition to one *parcel* designated as "common property", one parcel dedicated as *park* and at least one area dedicated for sewerage disposal and treatment.
- b) No more than one dwelling may be located on a parcel

8.1.7 Forested Area

Construction or placement of any structure or building in the area labelled as Forested Area on Schedule C is expressly prohibited.

8.1.8 Parking

Requirements as per Part 6.

8.1.9 Height of Buildings and Structures

Requirements as per Part 5, except that the *height* of a *building* shall not exceed 8 m.

8.2 COMPREHENSIVE DEVELOPMENT TWO (CD2)

8.2.1 Intent

To permit *mixed residential, rural and commercial uses*.

8.2.2 Permitted Uses

- a) The permitted principal *uses* shall be limited to the following in the locations depicted on Schedule E:

	USE	CONDITIONS
1	assembly	Shall be limited to a total audience seating capacity of 120.
2	camp assembly	1) A Minimum <i>site area</i> of 758 m ² shall be provided per <i>sleeping unit</i> as part of a <i>camp assembly</i> ; 2) Shall be limited to a total combination <i>sleeping units</i> and practice studios not exceeding 50.
3	horticulture	
4	agriculture	
5	music and teaching studios	
6	child care facility	
7	community care facility	
8	indoor and outdoor recreation	

- b) The permitted auxiliary *uses* shall be limited to the following in conformance to Schedule E:
1. kitchen / dining hall auxiliary to a camp assembly;
 2. office;
 3. one *single-unit dwelling*;
 4. surface parking;
 5. washroom facilities;
 6. maintenance / storage.

8.2.3 Siting of Buildings, Structures and Uses

- a) No structure may be located within 15 m of a parcel line, except as expressly permitted by this Bylaw.
- b) Notwithstanding Section 8.2.3 (a), a structure may be located on a parcel line in the following circumstances:
1. a retaining wall adjoining a surface parking area
 2. a fence used to screen a surface parking area
 3. a single freestanding sign

- c) Notwithstanding Section 8.2.3 (a), unless as otherwise specified on Schedule E, no vehicle parking, loading/unloading or storage area may be located within 15 m from a parcel line.

8.2.4 Parking and Loading Area

- a) all parking/loading/unloading or storage areas shall be completely screened from abutting rural-residential properties, by the placement of plant materials, berms, retaining structures and/or fencing, as specified on Schedule E.
- b) off-street parking spaces shall be sited and screened in a manner that minimizes disturbance of mature coniferous and deciduous trees and arranged in groupings of at least one tree per five parking spaces.

8.2.5 Signage

Except for directional parking and traffic signs, not more than one freestanding sign is permitted per parcel, having a maximum of two sign faces, with each sign face area not exceeding 1m², and with a height not exceeding 2.5 m.

8.2.6 Parcel Coverage

The coverage of all buildings and structures on a parcel shall not exceed 10 %.

8.2.7 Height of Buildings and Structures

Requirements as per Section 5.11.

8.3 COMPREHENSIVE DEVELOPMENT ONE (CD3)

8.3.1 Intent

To permit *mixed residential and commercial uses*.

8.3.2 Permitted Uses

a) The permitted principal *uses* shall be limited to the following in compliance with Schedule D:

	USE	CONDITIONS
1	Single-unit dwelling	A maximum of 52 dwelling units is permitted, consisting of up to 33 single-unit dwellings and up to 19 units of two-unit dwellings and/or multi-unit dwellings.
2	Two-unit dwelling	
3	Multi-unit dwelling	
4	Marina	
5	Restaurant	The total floor area for these uses permitted in Commercial Area 1 shown on Schedule D shall not exceed 100 m ² .
6	Retail	

b) The permitted auxiliary *uses* shall be limited to the following:

1. Recreation facilities auxiliary to residential uses
2. Common sewage disposal facilities auxiliary to the principal uses

8.3.3 Siting of Buildings, Structures and Uses

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* and setback exceptions shall be in accordance with Sections 5.14 and 5.15.
- b) No vehicle parking, loading/unloading or storage area may be located within 5 m from a parcel line except when used for launching marine craft or temporarily servicing the marina or a loading space for the commercial uses.

8.3.4 Density

The total number of *parcels* designated pursuant to the *Land Title Act* as “strata” shall not exceed 52 for residential *dwellings*, in addition to not more than one *commercial* area, one area designated as “marina”, at least one area designated as “common property”, one *parcel* dedicated as “park” and at least one area dedicated for sewerage disposal and treatment.

8.3.5 Parcel Coverage

The coverage of all buildings and structures on a parcel shall not exceed 25 %.

8.3.6 Parking

Requirements as per Part 6.

8.3.7 Height of Buildings and Structures

Requirements as per Section 5.11.

8.4 COMPREHENSIVE DEVELOPMENT FOUR (CD4)

8.4.1 Intent

To permit *a strata development with common amenities*.

8.4.2 Permitted Uses

- a) In area designated as “strata lot” pursuant to the *Strata Property Act*, the permitted uses shall be limited to the following:

	USE	CONDITIONS
1	single-unit dwelling	Not more than 1 per strata lot
2	auxiliary building	In accordance with Section 5.10

- b) In area designated as “common property” of a strata pursuant to the *Strata Property Act*, the permitted uses shall be limited to the following:

	USE	CONDITIONS
1	building for common use of the strata	May contain: 1) kitchen, dining room, laundry 2) day care and auxiliary children’s play area, office, meeting room, lounge, library and workshop 3) one guest bedroom for non-commercial transient accommodation of the same occupant(s) for a period not exceeding 15 consecutive days
2	<i>ground level parking</i>	5 spaces including a minimum of 1 accessible space
3	<i>outdoor recreation facility</i>	May be in the form of a playground, courtyard and garden
4	<i>greenhouse</i>	
5	<i>auxiliary building</i>	In accordance with Section 5.10 and used for storage, workshop, studio, recycling or composting
6	keeping of <i>livestock</i>	See Section 5.6 for <i>Use Provisions</i> .

8.4.3 Siting of Buildings and Structures

- a) No structures shall be located within 1.5 m from a parcel line not adjacent to a highway or a parcel within the Agricultural Land Reserve.
- b) No structures shall be located within 5 m from a parcel line adjacent to a highway.
- c) No structures shall be located within 10 m from a parcel line adjacent to a parcel within the Agricultural Land Reserve.

8.4.4 Floor Area

The maximum floor area of a dwelling on a strata lot shall not exceed 30% of the area of the strata lot.

8.4.5 Lot Size

- a) The minimum average size of all strata lots shall be 500 m².
- b) The absolute minimum strata lot size shall be 485 m².
- c) The absolute maximum strata lot size shall be 810 m².
- d) The area of land designated as “common property” pursuant to the *Strata Property Act* shall not be less than 50% of the entire area of the strata parcel.

8.4.6 Parcel Coverage

- a) Parcel coverage of all buildings and structures on land designated as “strata lot” pursuant to the *Strata Property Act* shall not exceed 35% of the area of the strata lot.
- b) Parcel coverage of all buildings and structures on land designated as “common property” of a strata pursuant to the *Strata Property Act* shall not exceed 15% of the area of the “common property”.

8.4.7 Buffering

A buffer consisting of existing vegetation supplemented by new plantings shall be in place within the setback area adjacent to a parcel within the Agricultural Land Reserve or a highway.

8.4.8 Parking

Requirements as per Part 6 except as expressly permitted by Section 8.4.2.

8.4.9 Height of Buildings and Structures

Requirements as per Section 5.11.

PART 9 COMMERCIAL ZONES

9.1 COMMERCIAL ONE (C1)

9.1.1 Intent

To permit a limited range of small-scale local neighbourhood *commercial uses*.

9.1.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>retail sales</i>	The total <i>floor area</i> used for <i>retail</i> sales and storage shall not exceed 250 m ² .
2	<i>restaurant</i>	The total <i>floor area</i> used for the restaurant including dining, cooking and storage shall not exceed 100 m ² .
3	<i>tourist information centre</i>	

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>single-unit dwelling</i>	Limited to one auxiliary to the commercial use per <i>parcel</i> .
2	<i>short term rental</i>	See Section 5.3 for <i>Use Provisions</i> .

- d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.

- e) Additional use regulations are provided in Part 5.

9.1.3 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 50%.

9.1.4 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* shall be 5m.
- b) No parking, loading or storage areas shall be located in a *setback* required under this bylaw where the abutting property is zoned R1, R2, RM1 or RM2.
- c) *Setbacks* exceptions as per 5.15.

9.1.5 Parking

Requirements as per Part 6.

9.1.6 Height of Buildings and Structures
Requirements as per Section 5.11.

9.2 COMMERCIAL TWO (C2)

9.2.1 Intent

To permit neighbourhood or village centre *commercial uses*.

9.2.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>retail sales</i>	No building located within the boundaries of the Roberts Creek Official Community Plan that is used for retail sales as a principal use shall have a floor area larger than 500 m ² .
2	bakery	
3	<i>restaurant</i>	Excluding drive-through restaurant
4	<i>personal service establishment</i>	
5	artisan studio	Lot 13 District Lot 810 Plan 5157 only
6	educational facility	1) Lot 13 District Lot 810 Plan 5157 only; 2) No more than 12 students and 3 instructors shall be assembled at any one time.
7	<i>office</i>	
8	<i>health care office</i>	
9	veterinary clinic	
10	<i>assembly</i>	
11	<i>neighbourhood pub</i>	
12	<i>tourist information centre</i>	Excluding Lot 13 District Lot 810 Plan 5157
13	<i>off-street parking</i>	

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.
- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	single-unit <i>dwelling</i>	Limited to one auxiliary to a commercial use per <i>parcel</i> .
2	<i>short term rental</i>	See Section 5.3 for <i>Use Provisions</i> .
3	keeping of <i>livestock</i>	Excluding Lot 13 District Lot 810 Plan 5157
4	residential agriculture	Excluding Lot 13 District Lot 810 Plan 5157

5	parking	Includes parking provided for other properties.
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- d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.
- e) Additional use regulations are provided in Part 5.

9.2.3 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 50%.

9.2.4 Setbacks

- a) The minimum setbacks from a *parcel* line for all buildings and structures permitted shall be 5m.
- b) No parking, loading or storage areas shall be located in a setback required under this bylaw where the abutting property is zoned R1, R2, RM1, RM2 or RU1.
- c) Setbacks exceptions as per Section 5.15.

9.2.5 Parking

Requirements as per Part 6.

9.2.6 Height of Buildings and Structures

Requirements as per Section 5.11.

9.3 COMMERCIAL THREE (C3)

9.3.1 Intent

To permit tourist *commercial uses*.

9.3.2 Permitted Uses

a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>tourist accommodation</i>	
2	<i>campground</i>	Maximum 25 camp sites per hectare in Electoral Area E
3	<i>marina</i>	
4	<i>restaurant</i>	
5	<i>tourist information centre</i>	

b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>retail</i>	1) Maximum of 100 m ² in Electoral Area E; 2)
2	<i>personal service establishment</i>	
3	<i>single-unit dwelling</i>	Limited to one auxiliary to a commercial use per <i>parcel</i> .
4	<i>short term rental</i>	See Section 5.3 for <i>Use Provisions</i> .
5	<i>keeping of livestock</i>	See Section 5.6 for <i>Use Provisions</i> .
6	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .

d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.

e) Additional use regulations are provided in Part 5.

9.3.3 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 50%.

9.3.4 Setbacks

- a) The minimum setbacks from a *parcel* line for all buildings and structures permitted shall be 5m.
- b) No parking, loading or storage areas shall be located in a setback required under this bylaw.
- c) Setbacks exceptions as per Section 5.15.

9.3.5 Parking

Requirements as per Part 6.

9.3.6 Height of Buildings and Structures

Requirements as per Section 5.11.

9.3.7 Site Specific Uses

	LEGAL DESCRIPTION	REGULATIONS
a)	<i>Strata lots 1-30, Strata Plan VR757, District Lot 4545.</i>	<ol style="list-style-type: none">1. Additional to permitted uses in Section 9.3.2, one dwelling per strata lot is permitted.2. A minimum 50% of the land area denoted on Strata Plan VR757, District Lot 4545, shall be undivided and undeveloped open space.
b)	District Lot 2657 Group 1 New Westminster District	<p>Notwithstanding Section 9.3.2, the following provisions shall apply:</p> <ol style="list-style-type: none">1. Only the following uses are permitted:<ol style="list-style-type: none">a. <i>Campground</i> with a maximum of 10 campsites per hectare;b. A maximum of 5 <i>portable cabins</i> per hectare;c. <i>Restaurant, retail, service and office</i> not exceeding a total floor area of 3 m² per campsite and 6 m² per portable cabin;d. Home occupation;e. Short term rental;f. Boat ramp;g. Outdoor recreation.2. <i>Portable Cabin</i>3. No person shall occupy any <i>portable cabins</i> or camp sites for transient accommodation purposes for more than a total of 15 days in any calendar month.4. A <i>portable cabin</i> shall not be considered an <i>auxiliary building or structure</i>.5. Notwithstanding Section 9.3.3, the <i>parcel coverage</i> of all <i>buildings and structures</i> shall not exceed 15%.

9.4 COMMERCIAL FOUR (C4)

9.4.1 Intent

To permit *tourist accommodation and auxiliary commercial uses*.

9.4.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE
1	<i>tourist accommodation</i>
2	<i>restaurant</i>
3	<i>tourist information centre</i>
4	<i>fuel service station</i>

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.
- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>single-unit dwelling</i>	Limited to one auxiliary to a principal use per <i>parcel</i> .
2	<i>retail sales</i>	
3	<i>short term rental</i>	See Section 5.3 for <i>Use Provisions</i> .
4	<i>keeping of livestock</i>	See Section 5.6 for <i>Use Provisions</i> .

- d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.
- e) Additional use regulations are provided in Part 5.

9.4.3 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 35%.

9.4.4 Setbacks

- a) No structure shall be located within:
1. 15 m of the parcel line adjacent to a highway;
 2. 5 m of the south parcel line;
 3. 3.5 m of the east or west parcel line.
- b) No parking, loading or storage areas shall be located in a setback area.
- c) *Setbacks* exceptions as per Section 5.15.

9.4.5 Parking

Requirements as per Part 6.

9.4.6 Height of Buildings and Structures

Requirements as per Section 5.11.

9.5 COMMERCIAL FIVE (C5)

9.5.1 Intent

To permit *commercial uses*.

9.5.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>retail</i>	
2	<i>whole sale</i>	
3	<i>office</i>	
4	<i>personal service</i>	
5	<i>neighbourhood pub</i>	
6	<i>assembly</i>	
7	<i>restaurant</i>	
8	<i>tourist accommodation</i>	
9	<i>tourist information centre</i>	
10	<i>fuel service station</i>	
11	<i>light industry</i>	Must be contained entirely within an enclosed building
12	<i>marina</i>	
13	<i>moving and storage facility</i>	
14	<i>Off-street parking</i>	

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.
- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>single-unit dwelling</i>	Limited to one auxiliary to a principal use per <i>parcel</i> .
2	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
3	<i>keeping of livestock</i>	See Section 5.6 for <i>Use Provisions</i> .

- d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.
- e) Additional use regulations are provided in Part 5.

9.5.3 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 50%.

9.5.4 Setbacks

a) No structure shall be located within:

1. 5 m of the east or west parcel line;
2. 3.5 m of the north or south parcel line.

b) No parking, loading or storage areas shall be located in a setback area.

c) *Setbacks* exceptions as per Section 5.15.

9.5.5 Size of Structure

No building used for retail and wholesale sales as a principal use shall have a floor area larger than 2350 m², with the exception of Electoral Area E, where the maximum floor area shall be 1394 m².

9.5.6 Parking

Requirements as per Part 6.

9.5.7 Height of Buildings and Structures

Requirements as per Section 5.11.

PART 10 - WATER ZONES

10.1 MARINE TRANSPORTATION ZONE (M1)

10.1.1 Intent

To recognize the Langdale Ferry Terminal for marine transportation *use*.

10.1.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	marine transportation	Includes the <i>use</i> of marine vessels as a ferry terminal and temporary storage of marine vessels (private and/or public)
2	transportation centre	Includes foot passengers, bicyclists, transit, motor vehicles, car share, <i>commercial</i> trailer drop, <i>float</i> plane and emergency helicopter services.

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>office</i>	
2	<i>retail</i>	
3	<i>restaurant</i>	
4	mobile vendors	Includes food truck
5	<i>single-unit dwelling</i>	Limited to one for the purpose of housing a caretaker or watchman.
6	parking	Includes parking provided for employees, the public and other properties.
7	<i>park</i>	

- d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.

10.1.3 Floor and Site Area

The combined *floor area* and site area for *retail*, *restaurant* and mobile vendor *uses* shall not exceed 20% of the total *building floor area* up to a maximum of 835 m².

10.1.4 Setbacks

- a) No structure shall be located within:
 - 1. 7.5 m of a parcel line adjacent to a highway;
 - 2. 4.5 m of all other parcel lines.
- b) *Setbacks* exceptions as per Section 5.15.

10.1.5 Maximum Height of Buildings and Structures

The maximum permitted *height* of all *buildings* and *structures* in Marine Transportation zones shall be as follows:

<i>BUILDING TYPE</i>	<i>MAXIMUM HEIGHT</i>
<i>building</i>	20 m
<i>structure</i>	25 m
<i>fence</i> within the required <i>setback</i> area	3 m

10.1.6 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 50%.

10.1.7 Parking

Requirements as per Part 6.

10.2 WATER ZONE ONE (W1)

10.2.1 Intent

To permit *park* and limited boat facilities in a water zone.

10.2.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>mooring facility</i>	1) Must be auxiliary to the <i>principal use</i> on the <i>adjacent upland parcel</i> . 2) Must have a maximum combined area of 65 m ² , excluding pedestrian access areas.
2	<i>boathouse</i>	Exterior perimeter not exceeding 35 m
3	<i>public boat ramp</i>	
4	<i>private float</i>	Shall have no physical connection to an <i>adjacent upland parcel</i> and used primarily for recreational purposes, shall have a maximum surface area of 10 m ² .
5	<i>park</i>	

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

10.2.3 Prohibited Uses

The following uses are expressly prohibited:

- a) The installation or *use of marine ways*;
- b) *Houseboats*.

10.2.4 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted shall be 1.5 m.
- b) A *mooring facility* that extends into the *inter-tidal zone* may be located on the *natural boundary* or adjacent *parcel line* of *adjacent upland parcel*.
- c) A shared *mooring facility* serving two adjacent *parcels* may be located on a *parcel line* where the *parcels* are situated on or over the surface of water.

10.2.5 Maximum Height of Buildings and Structures

The maximum permitted *height* of all *buildings* and *structures* shall be 4.5 m.

10.3 WATER TWO (W2)

10.3.1 Intent

To permit forest and marine *industrial uses* in a water zone.

10.3.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	boat ramp	
2	log booming and sorting	Including the storage and maintenance of log booming and sorting equipment
3	transfer and storage of forestry and industry related goods	
4	moorage of marine transportation vessels	

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

10.3.3 Prohibited Uses

Aquaculture is expressly prohibited.

PART 11 INDUSTRIAL ZONES

11.1 INDUSTRIAL ONE (I1)

11.1.1 Intent

To permit *light industry uses*.

11.1.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>light industry</i>	All <i>manufacturing</i> must be housed within a completely enclosed <i>building</i> .
2	<i>retail or wholesale</i>	No building located within boundaries of the West Howe Sound Official Community Plan and the Elphinstone Official Community Plan that is used for retail and wholesale sales as a principal use shall have a floor area larger than 2350 m ² .
3	<i>fuel service station</i>	
4	<i>general repair</i>	
5	<i>office</i>	
6	<i>restaurant</i>	
7	<i>moving and storage</i>	
8	<i>marina</i>	
9	<i>seafood storage and processing</i>	1) There is no smoking, shucking, cooking, canning, packaging or storage outside of an enclosed building; 2) The required setback from all parcel lines is 7.5 m; 3) The floor area utilized for the purpose of smoking, shucking, cooking, canning, packaging, or storage shall not exceed 150 m ² .
10	<i>airport or heliport</i>	
11	<i>aquaculture</i>	
12	<i>sawmill and shakemill</i>	1) Parcel size must exceed 1.75 ha 2) Excluding chippers and planers where the <i>site area</i> is less than 1000 m ²

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.
- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>single-unit dwelling</i>	Limited to one auxiliary to an industrial use per <i>parcel</i> .
2	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
3	keeping of <i>livestock</i>	See Section 5.6 for <i>Use Provisions</i> .
4	tourist information centre	

- d) Subject to compliance with all other provisions of this Bylaw, more than one *auxiliary use* shall be permitted.
- e) Additional use regulations are provided in Part 5.

11.1.3 Parcel Coverage

The maximum permitted *parcel coverage* shall be 50%.

11.1.4 Setback

- a) The minimum *setback* of all *buildings* and *structures* from a *parcel line* abutting any zone except an Industrial zone shall be 7.5 m.
- b) *The minimum setback* of all *buildings* and *structures* from a *parcel line* abutting an Industrial zone shall be 1.5 m.
- c) No parking, loading or storage areas shall be located in a setback area
- d) *Setback* exceptions are as per Section 5.15.

11.1.5 Parking

Requirements as per Part 6.

11.1.6 Height of Buildings and Structures

Requirements as per Section 5.11.

11.1.7 Site Specific Use

In addition to the uses permitted in Section 11.1.2, a *cannabis production facility* is permitted on Lot 1 District Lot 1365 Plan LMP5923, PID 017-913-969.

11.2 INDUSTRIAL TWO (I2)

11.2.1 Intent

To permit *light industry uses*.

11.2.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>light industry</i>	1) Permitted on a portion of Lot 5, Block 6, District Lot 692, Plan 3633, as shown on Schedule F. 2) Must be contained entirely within an enclosed <i>building</i> .
2	<i>retail or wholesale</i>	Permitted on a portion of Lot 5, Block 6, District Lot 692, Plan 3633, as shown on Schedule F.
3	automobile sale and service	1) Permitted on a portion of Lot 5, Block 6, District Lot 692, Plan 3633, as shown on Schedule F. 2) Excluding <i>fuel service station</i> , auto body and paint shop.
4	<i>office</i>	Permitted on a portion of Lot 5, Block 6, District Lot 692, Plan 3633, as shown on Schedule F.
5	moving and storage	
6	<i>tourist information centre</i>	Permitted on a portion of Lot 5, Block 6, District Lot 692, Plan 3633, as shown on Schedule F.

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.
- c) One single-unit dwelling is permitted *auxiliary to a principal use*.
- d) Additional use regulations are provided in Part 5.

11.2.3 Prohibition

- a) *Fuel service station*, propane or fuel distribution or conversion facility, or auto body or paint shop is expressly prohibited.
- b) No outdoor storage of materials, equipment, containers or finished products, except outdoor display and sales lots for automobiles and light trucks shall be permitted.

11.2.4 Parcel Coverage

- a) *Parcel coverage* of all non-residential *buildings* and *structures* shall not exceed 20%;
- b) The maximum *floor area* of all *buildings* shall not exceed 50% of the *parcel area*.

11.2.5 Setback

- a) The minimum *setback* of all *buildings* and *structures* from a *parcel line* abutting the RU2 or AG Zone shall be 15 m.

- b) *The minimum setback of all buildings and structures from a parcel line* abutting an Industrial zone shall be 1.5 m.
- c) No parking, loading or storage areas shall be located within 10 m from a parcel line abutting the RU2 or AG Zone.
- d) *Setback* exceptions are as per Section 5.15.

11.2.6 Landscaping

- a) Landscaping of all land in a setback area abutting the RU2 or AG zone, except for a driveway having a maximum width of 7.5 m, shall be provided and maintained to screen *commercial or industrial uses* within the I2 zoned parcel from the *residential* or rural zoned land.
- b) Landscaping of all land, except the minimum amount necessary to provide vehicle access, in the setback area abutting Stewart Road shall be provided.

11.2.7 Parking

Requirements as per Part 6.

11.2.8 Height of Buildings and Structures

Requirements as per Section 5.11.

11.3 INDUSTRIAL THREE (I3)

11.3.1 Intent

To permit marine *industrial uses*.

11.3.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>marina</i>	
2	<i>marine ways</i>	1) Including servicing, repair and sales
3	Boat-building	
4	barge ramp and freight handling facilities	
5	<i>commercial</i> fishing storage facilities	
6	<i>aquaculture</i>	
7	<i>aquaculture processing</i>	1) The <i>parcel area</i> must exceed 1.75 ha. 2) Must be located in a fully enclosed <i>building</i> .
8	sawmill and shakemill	1) The <i>parcel area</i> must exceed 1.75 ha. 2) Must be located in a fully enclosed <i>building</i> .
9	log booming and sorting	

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.
- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>single-unit dwelling</i>	Limited to one auxiliary to the principal use for the purpose of housing a caretaker or watchman.
2	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
3	keeping of <i>livestock</i>	See Section 5.6 for <i>Use Provisions</i> .

- d) Additional use regulations are provided in Part 5.

11.3.3 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 60%.

11.3.4 Setbacks

- a) The minimum *setback* from a *parcel line* for all *buildings* and *structures* permitted shall be 7.5m.
- b) No parking, loading or storage area associated with permitted *uses* shall be located within 7.5 m of a *parcel line*.
- c) No *aquaculture processing* and no sawmill or shake mill shall be located within 25 m of a *parcel line*.
- d) *Setback* exceptions are as per Section 5.15.

11.3.5 Parking

Requirements as per Part 6.

11.3.6 Height of Buildings and Structures

Requirements as per Section 5.11.

11.4 INDUSTRIAL FOUR (I4)

11.4.1 Intent

To permit *logging uses*.

11.4.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	log booming and sorting	1) Including the storage and maintenance of log booming and sorting equipment used on the same log booming and sorting site 2) A minimum site area of 4 ha is required.

- b) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>single-unit dwelling</i>	Limited to one auxiliary to the principal use for the purpose of housing a caretaker or watchman.
2	storage of logging equipment	
3	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
4	keeping of <i>livestock</i>	See Section 5.6 for <i>Use Provisions</i> .

- c) Subject to compliance with all other provisions of this Bylaw, more than one *auxiliary use* shall be permitted.
- d) Additional use regulations are provided in Part 5.

11.4.3 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 15%.

11.4.4 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted shall be 30 m.
- b) No parking, loading or storage shall be located within 30 m of any parcel lines except the natural boundary of a salt water body.
- c) *Setback* exceptions are as per Section 5.15.

11.4.5 Parking

Requirements as per Part 6.

11.4.6 Height of Buildings and Structures
Requirements as per Section 5.11.

11.5 INDUSTRIAL FIVE (I5)

11.5.1 Intent

To permit mineral, sand and gravel processing, and concrete product *manufacturing uses*.

11.5.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	mineral, sand and gravel processing	The minimum required <i>site area</i> is 1.75 ha.
2	<i>manufacturing</i> concrete products	The minimum required <i>site area</i> is 1.75 ha.

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>single-unit dwelling</i>	Limited to one auxiliary to the principal use for the purpose of housing a caretaker or watchman.
2	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
3	keeping of <i>livestock</i>	See Section 5.6 for <i>Use Provisions</i> .

- d) Subject to compliance with all other provisions of this Bylaw, more than one *auxiliary use* shall be permitted.

- e) Additional use regulations are provided in Part 5.

11.5.3 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 35%.

11.5.4 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted shall be 30 m.
- b) No parking, loading or storage shall be located within 15 m of any parcel lines except the natural boundary of a salt water body.
- c) *Setback* exceptions are as per Section 5.15.

11.5.5 Parking

Requirements as per Part 6.

11.5.6 Height of Buildings and Structures

Requirements as per Section 5.11.

11.6 INDUSTRIAL SIX (I6)

11.6.1 Intent

To permit mineral, sand and gravel processing, and concrete product *manufacturing uses*.

11.6.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	mineral, sand and gravel processing	The minimum required <i>site area</i> is 1.75 ha.
2	<i>manufacturing</i> concrete products	The minimum required <i>site area</i> is 1.75 ha.
3	storage and processing of land clearing vegetation debris	May include: 1) The recovery of resources such as pulp mill fuel products, landscape mulch and <i>silviculture</i> ground cover and 2) The burning of residual waste material in conjunction with the recovery of resources

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.
- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>single-unit dwelling</i>	Limited to one auxiliary to the principal use for the purpose of housing a caretaker or watchman.
2	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
3	keeping of <i>livestock</i>	See Section 5.6 for <i>Use Provisions</i> .

- d) Subject to compliance with all other provisions of this Bylaw, more than one *auxiliary use* shall be permitted.
- e) Additional use regulations are provided in Part 5.

11.6.3 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 35%.

11.6.4 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted shall be 30 m.

- b) No parking, loading or storage shall be located within 15 m of any parcel lines except the natural boundary of a salt water body.
- c) *Setback* exceptions are as per Section 5.15.

11.6.5 Parking

Requirements as per Part 6.

11.6.6 Height of Buildings and Structures

Requirements as per Section 5.11.

11.7 INDUSTRIAL SEVEN (I7)

11.7.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	Wood processing	Includes shakemill and sawmill
2	<i>Automobile wrecking and storage yard</i>	
3	<i>Log booming and sorting</i>	
4	<i>Refuse disposal</i>	May include commercial septage treatment
5	<i>Mineral, sand and gravel processing</i>	
6	Manufacture of concrete products	
7	Animal processing	
8	Aquaculture	

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.
- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>single-unit dwelling</i>	Limited to one auxiliary to the principal use for the purpose of housing a caretaker or watchman.
2	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
3	keeping of <i>livestock</i>	See Section 5.6 for <i>Use Provisions</i> .

- d) Subject to compliance with all other provisions of this Bylaw, more than one *auxiliary use* shall be permitted.
- e) Additional use regulations are provided in Part 5.

11.7.3 Site Area

Not more than one of the uses listed in Section 11.7.2 (a) is permitted for every 6000 m² of land.

11.7.4 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 35%.

11.7.5 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted shall be 7.5m.
- b) No parking, loading or storage shall be located within 7.5 m of a parcel line.
- c) *Setback* exceptions are as per Section 5.15.

11.7.6 Parking

Requirements as per Part 6.

11.7.7 Height of Buildings and Structures

Requirements as per Section 5.11.

11.8 INDUSTRIAL EIGHT (I8)

To permit refuse disposal uses.

11.8.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	landfill, refuse transfer station and recycling depot	May include commercial septage treatment

- b) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>single-unit dwelling</i>	Limited to one auxiliary to the principal use for the purpose of housing a caretaker or watchman.
2	retail	Must be auxiliary to the recycling depot

- c) Subject to compliance with all other provisions of this Bylaw, more than one *auxiliary use* shall be permitted.
- d) Additional use regulations are provided in Part 5.

11.8.3 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 35%.

11.7.1 Intent

To permit pulp and paper mills, *light industry* and *industrial uses*, and refuse disposal sites.

11.8.4 Setbacks

- a) No structure, parking, loading or storage shall be located within 7.5 m of a parcel line.
- b) *Setback* exceptions are as per Section 5.15.

11.8.5 Parking

Requirements as per Part 6.

11.8.6 Height of Buildings and Structures

Requirements as per Section 5.11.

11.9 INDUSTRIAL NINE (I9)

11.9.1 Zone Purpose

To permit *industrial uses*.

11.9.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	Wood processing	Includes shakemill and sawmill
2	Automobile wrecking and storage yard	
3	Log booming and sorting	
4	Industry	
5	Mineral, sand and gravel processing	
6	Manufacture of concrete products	
7	Animal processing	

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	single-unit dwelling	Limited to one auxiliary to the principal use for the purpose of housing a caretaker or watchman.

- d) Additional use regulations are provided in Part 5.

11.9.3 Restricted Uses

The following uses are expressly prohibited:

- a) storage or disposal of hazardous, contaminated, biomedical and toxic waste including PCBs;
- b) chromium manufacturing and similar high impact chemical plants;
- c) petrochemical refining;
- d) explosives/ammunition manufacturing;
- e) battery manufacturing;
- f) metal smelting/electroplating.

11.9.4 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 50%.

11.9.5 Setbacks

- a) No building or structure shall be located within 5 m of a parcel line abutting a highway.
- b) No building or structure shall be located within 2 m of a parcel line not abutting a highway.
- c) *Setback* exceptions are as per Section 5.15.

11.9.6 Parking

Requirements as per Part 6.

11.9.7 Height of Buildings and Structures

Requirements as per Section 5.11.

11.10 INDUSTRIAL TEN (I10)

11.10.1 Intent

To permit *industrial uses*.

11.10.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	pulp and paper mills	
2	Uses permitted in I1 Zone	
3	construction camps or yards	
4	Refuse disposal	May include commercial septage treatment.
5	temporary accommodation	Only for employees during periodic maintenance and servicing of a pulp and paper mill.
6	oxygen manufacturing plants	

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.
- c) Additional use regulations are provided in Part 5.

11.10.3 Site Area

Not more than one of the uses listed in Section 11.10.2 is permitted for every 6000 m² of land.

11.10.4 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 35%.

11.10.5 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted shall be 7.5m.
- b) *Setback* exceptions are as per Section 5.15.

11.10.6 Parking

Requirements as per Part 6.

11.10.7 Height of Buildings and Structures

Requirements as per Section 5.11.

11.11 INDUSTRIAL ELEVEN (I11)

11.11.1 Intent

To permit *industrial uses*.

11.11.2 Permitted Uses

a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	Uses permitted in I1 Zone	Maximum <i>parcel coverage</i> of all <i>buildings</i> and <i>structures</i> shall be 50%
2	Uses permitted in I3 Zone	Maximum <i>parcel coverage</i> of all <i>buildings</i> and <i>structures</i> shall be 50%
3	Uses permitted in I7 Zone	1) Minimum site area for each permitted use shall be 6000 m ² 2) Maximum <i>parcel coverage</i> of all <i>buildings</i> and <i>structures</i> shall be 35%
4	construction camps or yards	1) Minimum site area for each permitted use shall be 6000 m ² 2) Maximum <i>parcel coverage</i> of all <i>buildings</i> and <i>structures</i> shall be 35%
5	Cannabis production facility	Maximum <i>parcel coverage</i> of all <i>buildings</i> and <i>structures</i> shall be 35%

b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

c) Additional use regulations are provided in Part 5.

11.11.3 Setbacks

a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted shall be 7.5m.

b) *Setback* exceptions are as per Section 5.15.

11.11.4 Parking

Requirements as per Part 6.

11.11.5 Height of Buildings and Structures

Requirements as per Section 5.11.

11.12 INDUSTRIAL TWELVE (I12)

11.12.1 Intent

To permit *industrial uses*.

11.12.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE
1	Uses permitted in I11 Zone
2	bulk fuel storage including fuel truck parking areas

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.
- c) Additional use regulations are provided in Part 5.

11.12.3 Site Area

The minimum site area for each permitted use shall be 6000 m².

11.12.4 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 50%.

11.12.5 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted shall be 7.5m.
- b) *Setback* exceptions are as per Section 5.15.

11.11.6 Landscaping

Landscaping of all land in a setback area abutting a highway shall be provided and maintained to separate the industrial use of a parcel from the highway.

11.11.7 Parking

Requirements as per Part 6.

11.11.8 Height of Buildings and Structures

Requirements as per Section 5.11.

11.13 INDUSTRIAL THIRTEEN (I13)

11.13.1 Intent

To permit independent power facilities.

11.13.2 Permitted Uses

The permitted *uses* shall be limited to independent power projects and accessory buildings and structures.

11.13.3 Temporary Use Permit Area

The I13 Zone is designated a Temporary Use Permit Area.

11.13.4 Site Area

The minimum site area shall be 5000 m².

11.13.5 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 60%.

11.13.6 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* permitted shall be 7.5m.
- b) *Setback* exceptions are as per Section 5.15.

11.13.7 Parking

- a) Requirements as per Part 6.
- b) Every independent power project shall be provided with one space for parking and space for loading, unloading and manoeuvring of tridem axle trucks as defined in the Commercial Transport Regulations under the *Commercial Transport Act*.

11.13.8 Height of Buildings and Structures

Requirements as per Section 5.11.

PART 12 PARK AND ASSEMBLY ZONES

12.1 PARK AND ASSEMBLY ONE (PA1)

12.1.1 Intent

To provide for general *park*, outdoor recreation and *assembly uses*.

12.1.2 Permitted Uses

a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>assembly</i>	
2	<i>park</i>	
3	outdoor recreation	
4	<i>education facility</i>	The total <i>floor area</i> shall not exceed 500 m ² .
5	<i>demonstration forest</i>	
6	<i>community care facility</i>	
7	childcare facility	
8	<i>Off-street parking</i>	

b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	single-unit <i>dwelling</i>	Not more than one permitted for the purpose of housing a caretaker or watchman
2	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
3	keeping of <i>livestock</i>	See Section 5.6 for <i>Use Provisions</i> .

d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.

e) Additional permitted *uses* as per Section 5.1.

12.1.3 Parcel Coverage

a) The maximum permitted *parcel coverage* of all *buildings* and *structures* except buildings used for *assembly* shall be 35%.

b) The maximum permitted *parcel coverage* of *buildings* used for *assembly* shall be 50%.

12.1.4 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* except a building used for *assembly* shall be 7.5m.
- b) Setbacks for a *building* used for *assembly* shall be as per Section 5.14.
- c) No parking, loading or storage shall be located within the required setback area.
- d) *Setback* exceptions are as per Section 5.15.

12.1.5 Parking

Requirements as per Part 6.

12.1.6 Height of Buildings and Structures

Requirements as per Section 5.11.

12.2 PARK AND ASSEMBLY TWO (PA2)

12.2.1 Intent

To provide for *assembly*, *camp assembly* and limited *commercial uses*.

12.2.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE
1	<i>assembly</i>
2	<i>park</i>
3	<i>camp assembly</i>
4	outdoor recreation
5	<i>education facility</i>
6	<i>community care facility</i>
7	childcare facility
8	<i>off-street parking</i>

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	single-unit <i>dwelling</i>	Not more than one permitted for the purpose of housing a caretaker or watchman
2	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
3	keeping of <i>livestock</i>	See Section 5.6 for <i>Use Provisions</i> .
5	Short term rental	See Section 5.3 for <i>Use Provisions</i> .

- d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.

- e) Additional permitted *uses* as per Section 5.1.

12.2.3 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 35%.

12.2.4 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* shall be 7.5m.
- b) No parking, loading or storage shall be located within the required setback area.

c) *Setback* exceptions are as per Section 5.15.

12.2.5 Parking

Requirements as per Part 6.

12.2.6 Height of Buildings and Structures

Requirements as per Section 5.11.

12.3 PARK AND ASSEMBLY THREE (PA3)

12.3.1 Intent

To provide for *camp assembly uses*.

12.3.2 Permitted Uses

- a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE
1	<i>camp assembly</i>
2	outdoor recreation
3	<i>community care facility</i>
4	childcare facility

- b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

- c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	<i>single-unit dwelling</i>	Not more than one permitted for the purpose of housing a caretaker or watchman
2	<i>residential agriculture</i>	See Section 5.5 for <i>Use Provisions</i> .
3	keeping of <i>livestock</i>	See Section 5.6 for <i>Use Provisions</i> .
4	<i>Short term rental</i>	See Section 5.3 for <i>Use Provisions</i> .

- d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.

- e) Additional permitted *uses* as per Section 5.1.

12.3.3 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 15%.

12.3.4 Site Area

A minimum *site area* of 1 ha is required for any *uses* listed in Section 12.3.2 (a).

12.3.5 Setbacks

- a) The minimum *setbacks* from a *parcel line* for all *buildings* and *structures* shall be 15m.
- b) No parking, loading or storage shall be located within the required setback area.
- c) *Setback* exceptions are as per Section 5.15.

12.3.6 Parking

Requirements as per Part 6.

12.3.7 Height of Buildings and Structures

Requirements as per Section 5.11.

12.4 PARK AND ASSEMBLY FOUR (PA4)

12.4.1 Intent

To provide for an *firearms range* and *assembly uses*.

12.4.2 Permitted Uses

a) The permitted *principal uses* shall be limited to the following:

	PRINCIPAL USE	CONDITIONS
1	<i>assembly</i>	In the form of a clubhouse, training and field studies centre.
2	outdoor recreation	
3	wildlife habitat protection areas	
4	firearms range	
5	<i>off-street parking</i>	

b) Subject to compliance with all other provisions of this bylaw, more than one *principal use* shall be permitted.

c) The permitted *auxiliary uses* shall be limited to the following:

	AUXILIARY USE	CONDITIONS
1	single-unit <i>dwelling</i>	Not more than one permitted for the purpose of housing a caretaker or watchman.
3	<i>camp assembly</i>	

d) Subject to compliance with all other provisions of this bylaw, more than one *auxiliary use* shall be permitted.

e) Additional permitted *uses* as per Section 5.1.

12.4.3 Parcel Coverage

The maximum permitted *parcel coverage* of all *buildings* and *structures* shall be 5%.

12.4.4 Setbacks

a) No structure, parking, loading or storage shall be located within 7.5 m of a parcel line.

b) *Setback* exceptions are as per Section 5.15.

12.4.5 Parking

Requirements as per Part 6.

12.4.6 Height of Buildings and Structures
Requirements as per Section 5.11.

PART 13 DEFINITIONS

A

<i>adjacent upland:</i>	means land abutting the <i>natural boundary</i> of a <i>waterbody</i> .
<i>agriculture:</i>	<p>means cultivating, producing or harvesting crops and marketing and selling the crops harvested on the same <i>parcel</i>.</p> <p>Agriculture includes:</p> <ul style="list-style-type: none">▪ the storage and sale on a farm of the crops harvested on the same <i>farm</i>;▪ the storage on a farm of farm machinery, implements and supplies used on that farm;▪ repairs on a farm of farm machinery and implements <i>used</i> on the same farm; <p>Agriculture excludes:</p> <ul style="list-style-type: none">▪ rearing <i>livestock</i>; and▪ all <i>manufacturing</i>, storage and repairs not referred to in this definition.
<i>agricultural building:</i>	means a <i>building</i> or structure <i>used</i> in conjunction with <i>agriculture</i> , including a <i>farm operation</i> and, may contain accommodation in the form of an <i>auxiliary dwelling unit</i> or <i>sleeping unit</i> for farm workers if constructed in accordance with all applicable enactments and in existence for residential purposes prior to February 22, 2019.
<i>agricultural processing:</i>	means the <i>use</i> of land, <i>buildings</i> or <i>structures</i> for the processing of horticultural, agricultural, apiculture, or <i>aquaculture</i> products associated with a <i>farm operation</i> .
<i>agricultural product sales:</i>	means the <i>use</i> of land, <i>buildings</i> or <i>structures</i> for the sale of horticultural, agricultural, <i>livestock</i> , apiculture, or <i>aquaculture</i> products, including wine, cider, beer, mead, or distilled spirits.
<i>agricultural unit or (AU):</i>	means an equivalent live farm animal weight corresponding to 455 kg for <i>livestock</i> , <i>poultry</i> or <i>farmed game</i> , or any combination of these equaling 455 kg.
<i>agricultural waste storage facility:</i>	means the use of land, <i>building</i> or <i>structure</i> <i>used</i> to contain agricultural liquid or solid waste or other bio-solids.
<i>agri-tourism:</i>	means <i>temporary</i> and seasonal activities auxiliary to a <i>farm operation</i> , that promote or market agricultural products grown,

raised or processed on a *parcel* classified for assessment purposes as a farm, but excludes *tourist accommodation*.

alteration of land:

means, but is not limited to: soil relocation due to building or parking lot construction or alteration; removal, alteration, disruption or destruction of vegetation; soil removal or deposit; construction or alteration of: retaining walls, patios, lawns; agriculture activity; any structural change to a building or structure that results in an increase or decrease in the area or volume of the building or structure.

alcoholic beverage production facility

means a licensed establishment for the *manufacturing* of alcoholic beverages, and includes facilities commonly known as brewery, distillery, cidery, and meadery.

animal shelter:

means the *use* of land, *buildings* or *structures* for the temporary accommodation, provision of care and rehabilitation of animals, either commercially or not for-profit, but excludes *kennels*.

animal processing:

means slaughtering *livestock* for commercial purposes, or cutting, eviscerating, sectioning, deboning, smoking, curing or packaging meat or meat products.

apartment:

means a *building* that contains three or more *dwelling units*.

aquaculture:

means growing or harvesting fish, shellfish, molluscs, crustaceans and marine algae in accordance with the requirements of this bylaw.

Aquaculture includes:

- the cleaning, icing and storage of fish grown on the same fish farm for period of at least 90 days
- the cleaning, storage, shucking and packaging of shellfish, molluscs, crustaceans and marine algae.

Aquaculture excludes:

- the rendering, canning, smoking, cooking and processing not included in this definition, of fish, molluscs, crustaceans and marine algae;
- the manufacture of fish feed or the mixing of fish offal with fish feed;
- the disposal on the same *site* of fish offal;
- the outdoor storage of fish offal; and
- the *use* of *float houses* or suction or dredging harvesting methods.

<i>aquaculture processing:</i>	means the treating or preparing of fish, shellfish, molluscs, crustaceans and marine algae and any treatment or <i>use</i> of fish offal for the preparation of fish feed. Aquaculture processing includes: <ul style="list-style-type: none"> ▪ the cleaning, smoking, packaging, cooking or canning of fish, shellfish, molluscs, crustaceans and marine algae provided that: <ul style="list-style-type: none"> ○ the area <i>used</i> for cooking or canning does not exceed 250 square meters; and ○ the cleaning, smoking, packaging, cooking or canning is carried out within a fully enclosed <i>building</i> permitted in this bylaw. ▪ the storage of live fish for holding or bleeding purposes ▪ the storage of oyster shells ▪ the storage and any treatment of fish offal provided that the storage and treatment of fish offal is carried out within a fully enclosed <i>building</i> permitted in this bylaw; <p>Aquaculture processing excludes:</p> <ul style="list-style-type: none"> ▪ any treatment or preparation not included in this definition and specifically excludes <i>rendering</i>.
<i>artisan studio:</i>	means a building, or portion thereof, used for the creation, display or sale of arts and crafts.
<i>assembly:</i>	means the gathering of persons for charitable, civic, cultural, educational, entertainment, philanthropic, political, recreational, private education or religious purposes, which may include social halls, clubs, child care services, but excludes sleeping or <i>dwelling units</i> , or <i>camp assembly uses</i> .
<i>auto wrecking and auto storage yards:</i>	means the use of land or structures for collection, <i>disassembly</i> , disposal, sale, salvage or storage of vehicles, including vehicles which are abandoned, inoperative, or obsolete.
<i>auxiliary building or structure:</i>	means a <i>building</i> or <i>structure</i> , ancillary or subordinate to a <i>principal use</i> located on the same <i>parcel</i> , and excludes an <i>agricultural building</i> and <i>auxiliary dwelling unit unit</i> .
<i>auxiliary dwelling unit unit:</i>	means a dwelling that has a maximum floor area of 90 m ² and is subordinate and auxiliary to the principal <i>single-unit dwelling(s)</i> located on the same parcel.
<i>Auxiliary residential assembly</i>	means the gathering of persons for charitable, cultural, educational, philanthropic, political or religious purposes on a

parcel that is used principally as a residence, and may include overnight transient accommodation and related gatherings within a dwelling.

auxiliary use:

means a use which is:

- (1) incidental to the principal use; and
- (2) if in a building, subordinate in floor area to a principal use;
- (2) subordinate in purpose or floor area, or both, to a principal use; and
- (3) exclusively devoted to a principal use and located on the same lot as the principal use.

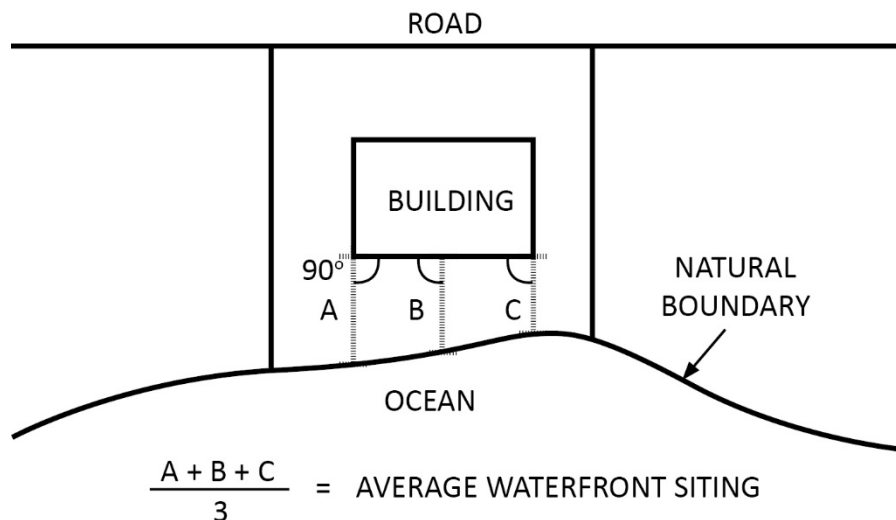
average parcel area:

means the average area of all parcels in a subdivision, subject to the following conditions:

- (1) excludes remainders
- (2) excludes areas required for parkland dedication under Section 510 of the Local Government Act
- (3) excludes areas required for highway dedication
- (4) excludes areas for a common amenities or a community sewerage system
- (5) may include areas dedicated as parkland which are above the requirements under Section 510 of the Local Government Act provided that the areas are determined by the Regional District to provide a community benefit

average waterfront siting:

means the average distance from a *building* to the *natural boundary* of the ocean measured at right angles at the extreme corners of the *building* and the mid-point of the *building* face, all facing the ocean.



<i>bay window:</i>	means a window protruding from a wall line which adds space, but not <i>floor area</i> , to a <i>building</i> .
<i>Board:</i>	means the Board of Directors of the Sunshine Coast <i>Regional District</i> .
<i>boat ramp:</i>	means a form of graded access comprising concrete or other hard-surface materials located within the <i>inter-tidal zone</i> , which is used for launching and removing <i>marine craft</i> from the water.
<i>boathouse:</i>	means a <i>structure</i> , auxiliary to a residential use, used exclusively for <i>domestic mooring</i> and/or storing <i>marine craft</i> and equipment and supplies related directly to the operation and <i>use of marine craft</i> , which does not contain, support or attach to a <i>dwelling</i> or habitable <i>floor area</i> .
<i>building:</i>	means any <i>structure used</i> or intended to be used for supporting or sheltering any <i>use</i> or occupancy.
<i>buoy:</i>	means a buoyant object, affixed on the surface of water by a rope, chain or wire connected to an anchor, having no connection to land above the low water mark, which is used to aid in navigating or for <i>mooring</i> .
<i>bylaw:</i>	means the Sunshine Coast <i>Regional District</i> Zoning Bylaw No. 722, 2019 as amended.

C

<i>camp assembly:</i>	means the gathering of persons for the purpose of recreational or <i>seasonal</i> accommodation and may include <i>sleeping units</i> and <i>auxiliary uses</i> .
<i>campground:</i>	means the temporary accommodation of travellers using temporary, moveable tents, trailers, or <i>recreational vehicles</i> with continuous occupancy not exceeding 30 days, but specifically excludes a <i>manufactured home, short term rental or tourist accommodation</i> .
<i>cannabis production:</i>	means the cultivation, processing, production, testing, research and packaging of cannabis or cannabis-containing products, which may include standard cultivation, micro cultivation or nursery as licensed under federal legislation, but excludes the growing of up to four cannabis plants per household for personal use from licensed seed or seedling suppliers in accordance with federal legislation.

<i>commercial:</i>	means a <i>use</i> , operated for the purpose of profit or gain, involving the sale or rental of goods or services, personal services, or the servicing and repair of goods; and includes <i>retail</i> sales, wholesaling in conjunction with <i>retail</i> sales, <i>commercial</i> schools, household services and household repairs, but excludes a <i>fuel service station</i> .
<i>commercial mooring facility:</i>	means a <i>marina</i> operated for profit or gain and includes facilities where <i>marine craft</i> fuel storage and sales and boat repair and maintenance are carried on.
<i>common amenity area:</i>	means an area of a parcel with developed amenities of facilities for the use and benefit of all residents in a multiple residential zone including but not limited to trails, constructed greenspace, playing fields, etc. that is not a riparian, environmentally sensitive, or hazardous area, an area where the grade exceeds 20%, and an area where the beneficial <i>use</i> is restricted by a covenant on title.
<i>community care facility:</i>	means a small-scaled facility licensed or authorized by the applicable agency that provides food and lodging with or without charge to two or more persons receiving social services as defined by the <i>Guaranteed Available Income for Need Act</i> , being treated under the <i>Mental Health Act</i> , receiving foster home services under the <i>Unit and Child and Service Act</i> , or receiving personal care, supervision, social or educational training or physical or mental rehabilitative therapy under the <i>Community Care and Assisted Living Act</i> but does not include a public school under the <i>School Act</i> or a private school, any portion of a facility licensed under the <i>Hospital Act</i> or home designated or approved as a detention home under the <i>Correction Act</i> .
<i>community storage:</i>	means storage of materials related to <i>seasonal</i> festivals and events for local community groups and service clubs.
<i>confined livestock area:</i>	means an area of land or <i>building</i> where <i>livestock</i> are kept or secured by a <i>structure</i> such as a <i>fence</i> , wall or landscape barriers, and includes <i>poultry</i> coops, pens and outdoor runs, stables, feedlots, paddocks, corrals, exercise yards, and animal holding areas, but does not include associated <i>seasonal</i> feeding or grazing areas.
<i>cooking facility:</i>	means any arrangement of cooking facilities and may include gas, propane, or electric ranges or stoves, microwave ovens, counter-top cooking units, hot plates, wall ovens, toaster ovens, electric frying pans, pressure cookers, crock pots or any other such cooking facility or any combination of such cooking facilities, and includes the service lines which provide the energy source being used or intended to be used to service such facilities.

D

<i>demonstration forest:</i>	means land administered by a public authority and <i>used</i> to promote public education and awareness of forests and integrated forest resource management including water management, timber harvesting, reforestation, spacing, thinning and other <i>forest management</i> practices, fish and wildlife management and outdoor recreation.
<i>domestic:</i>	means for the use or consumption of the residents of the same parcel and not for the purposes of profit or commercial gain
<i>domestic consumption:</i>	means utilization of <i>livestock</i> by residents of the same <i>parcel</i> used for the raising of <i>livestock</i> and does not include <i>retailing</i> or wholesaling.
<i>dwelling unit:</i>	means a self-contained, independent premise consisting of one or more rooms that provides living, cooking and sanitary facilities, used or intended as a residence by one or more persons.

E

<i>education facility:</i>	means land, <i>buildings</i> and <i>structures</i> used for the instruction and teaching of students in a course of study, such as an art school, trade school, professional or vocational program.
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F

<i>farm research and education:</i>	means land, <i>buildings</i> or <i>structures</i> used for researching, promoting and teaching methods of <i>agriculture</i> and farming.
<i>farm operation:</i>	means a farm operation as defined in the <i>Farm Practices Protection (Right to Farm) Act</i> .
<i>fence:</i>	means an upright constructed barrier used as an enclosure or screening around all or part of a parcel or site, and excludes a <i>retaining wall</i> or <i>revetment</i> .
<i>fire department training area:</i>	means a <i>site</i> containing fire suppression and extraction practice facilities and storage of vehicles and equipment used by fire departments located within the Sunshine Coast <i>Regional District</i> for training.
<i>float:</i>	means a buoyant platform <i>structure</i> , affixed on the surface of water by a rope, chain or wire connected to an anchor located beneath the low water mark or affixed to land or a <i>structure</i> located above the

low water mark, and which is customarily *used* for recreational purposes, such as swimming or diving, or for *mooring*.

floor area: means the total area of all floors within a *building* having a ceiling *height* of 1.8 metres or more, contained within the outside exterior walls or glazing line of windows, including areas giving access thereto, such as corridors, hallways, landings, foyers, staircases, stairwells, enclosed balconies, mezzanines, enclosed porches, verandas and enclosed parking areas, but excluding parking contained within an *underground structure*, unenclosed auxiliary parking, carports, unenclosed balconies, decks and other *building* projections permitted by this bylaw, elevators, and areas devoted exclusively to electrical or mechanical equipment servicing the *building*.

forest-based outdoor recreation: means outdoor recreation activities that take place in a natural setting out of doors, and that may require amenities such as recreational trails, outdoor shelters and picnic sites, excluding outdoor activities that require constructed facilities, *buildings* or *structures* such as playing fields and swimming pools.

forest management: means the management of forests for the production of wood, the provision of *forest based outdoor recreation*, the maintenance, restoration and enhancement of natural environmental conditions for wildlife, or for the protection of water supplies. *Forest management* includes, but is not limited to, the growing and harvesting of wood for fuel and lumber, Christmas trees, and other forms of timber production and harvesting. For private managed forest lands as defined under the *Private Managed Forest Land Act*, means *forest management* activities as set out in Schedule A of the *Private Managed Forest Land Regulation*.

fuel service station: means a *use* providing for the *retail* sale of fuels or lubricating oils for motor vehicles; may include the servicing or repair of motor vehicles, the sale of automobile accessories and limited food, beverage and convenience items, excludes the sale of propane unless otherwise permitted by this Bylaw.

G

garden nursery: means an area of land in which the *principal use* is the propagation and growing of plants for transplantation and sale and no more than 10 % of the nursery area to a maximum of 150 m² of floor or land area for auxiliary *retail* sale of fertilizer, insecticide, herbicide, seeds,

small garden hand tools, Christmas trees, animal feed and animal bedding.

garden supply centre: means an area *used* for the display, *wholesale* or *retail* sale of plants, fertilizer, insecticide, herbicide, seeds, small garden hand tools, Christmas trees, pet and farm animal feed, supplies and accessories and excludes all other *wholesale* or *retail* sales.

grade, average: means the average ground elevation, calculated by referencing the lower of *finished grade* or *natural grade* at the corners of every exterior wall or column around the perimeter of a building, excluding steps, eaves, sunlight controls, balconies, open porches, patios and uncovered swimming pools.

grade, finished: means the ground elevation, after placement of fill, removal of soil, regrading or construction.

grade, natural: means the ground elevation referencing undisturbed ground prior to human alteration or, where undisturbed ground level cannot be ascertained, the existing grade.

greenhouse: means a translucent-clad *structure used* for *horticulture*, which may have structural footings but does not have a full foundation or a floor constructed of material other than soil or wood.

green roof: means a roof of a *building* that is partially or completely covered with vegetation and a growing medium, planted over a waterproofing membrane. It may also include additional layers such as a root barrier and drainage and irrigation systems.

H

height: means the vertical distance measured from the *average grade* to the highest point of a *building* or *structure*.

highway: means street, road, lane, bridge, viaduct and any other way open to public use, but does not include a Forest Service Road, private right of way on private property or a pathway not intended for vehicular traffic.

home-based business: means an occupation, profession or craft carried out on a parcel where dwelling units are permitted in accordance with Part 5 of this bylaw but does not include a kennel, vehicle equipment repair and

	maintenance, body shop, metal fabricating, cannabis production or cannabis retail.
<i>horse riding, training or boarding facility:</i>	means the <i>use</i> of land, <i>buildings</i> or <i>structures</i> for the keeping of horses, which may also include training and instructing equestrian riders.
<i>horticultural product sales:</i>	means the <i>use</i> of land, <i>buildings</i> or <i>structures</i> for the sale of fruits, vegetables, herbs, flowers or ornamental plants that are grown and produced on the same farm or <i>parcel</i> .
<i>horticulture:</i>	means the cultivation of fruits, vegetables, herbs, flowers or ornamental plants.
<i>houseboat:</i>	means a boat, typically flat bottomed, containing one <i>dwelling unit</i> located above the water line.
I	
<i>independent power project:</i>	means a <i>commercial</i> power generation facility that is not operated by a government agency or a Provincial corporation.
<i>industrial:</i>	means a <i>use</i> providing for the <i>manufacturing</i> , processing, fabricating, assembling, storing, transporting, distributing, wholesaling, testing, and servicing or repairing of goods.
<i>institution:</i>	Means an ambulance station, arena, cemetery, college, court of law, community centre, federal <i>office</i> , fire hall, library, municipal <i>office</i> , museum, <i>park</i> , playground, police station, provincial <i>office</i> , exhibition and conference centre, research facility, stadium or public swimming pool and excludes a public storage yard or works yard.
<i>inter-tidal zone:</i>	means the area of land between the lowest low tide mark and highest high tide mark on tidal waters.

K

<i>kennel:</i>	means the <i>use</i> of land, <i>buildings</i> or <i>structures</i> , which may contain pens or cages, for boarding, breeding, providing care or training of more than three dogs over the age of three months, and where <i>pet supplies</i> may be stored and made available for auxiliary sale within a fully enclosed <i>floor area</i> not exceeding 16 m ² .
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L

<i>landfill:</i>	means an area approved and regulated by the Ministry of Environment for the disposal and transfer of solid waste and can
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include *structures* and facilities such as weigh scales, scale *office*, tool shed and staff *offices*.

landscaping: means any combination of natural or planted trees, bushes, shrubs, plants, flowers, lawns, bark mulch, decorative boulders, planters, decorative *fences*, and the like, arranged and maintained so as to enhance and embellish the appearance of a property, or where necessary to effectively screen a property, and shall not include paved parking areas and sidewalks, or uncleared natural bush, undergrowth, or uncontrolled weed growth.

lane: means a *highway* which provides a second access to a *parcel* and is less than eight meters wide.

light industry: means a *use* providing for the *manufacturing*, processing, fabricating, assembling, storing, transporting, distributing, *retail* and wholesaling including *gas fuel service stations*, testing, servicing, or repairing of goods or materials, moving and storage facilities, and excludes wood processing, log storage, auto wrecking, refuse disposal, gravel extraction, manufacture of concrete products, bulk fuel or chemical storage or refining depots or *animal processing*.

livestock: means domestic farm animals, such as cattle, horses, sheep, goats, swine and similar animals, but excludes *poultry* and bees.

M

manufactured home: means a transportable prefabricated *structure*, whether ordinarily equipped with wheels or not, that is designed, constructed or manufactured to be moved from one place to another and to be *used* for *residential use*, and that conforms to the A-277 series for modular homes or the Z-240 series for mobile homes of the Canadian Standards Association for *manufactured homes*.

manufacturing: means to make or process product but does not include the production of fish or animal feeds or the processing of *aquaculture* or *agriculture* products.

marina: means public or *commercial mooring* facilities, whether on surface of water, on land or both, and which may include the sale, servicing or rental of *marine craft* and related equipment and supplies but does not include *manufacturing* of *marine craft*.

marine craft: means motorized and non-motorized crafts and vessels *used* on waterbodies.

marine way: means a *structure* consisting of rails or skids installed above and beneath the surface of water, which when assisted by mechanical

equipment, is *used* for launching and removing *marine craft* from the water.

mobile vendor: means a vendor operating on a temporary basis from a movable cart, tent or other non-permanent structure or the display and sale of goods on a temporary basis within a structure.

mooring: means fastening or securing a floating *marine craft* to a fixed object or *structure*, such as an anchor, buoy, *float*, *pier* or *boathouse*.

mooring facility: means a fixed or anchored object or *structure*, such as an anchor, buoy, *float*, *pier* or *boathouse*, or *pedestrian access ramp* which is used for mooring.

N

natural boundary: means the visible high water mark of any lake, river, *stream* or other body of water where the presence and action of the water area so common and usual and so long continued in all ordinary years as to mark a character distinct from that of the banks thereof, in respect to vegetation, as well as in respect to the nature of the soil itself.

neighbourhood pub: means a *building* where food and beverages, including alcoholic beverages, are served and sold pursuant to a licence issued under the *Liquor Control and Licencing Act*, and may include off-premises sales.

O

office: means premises *used* for the operation of a bank, finance and trust company, federal, provincial and local government, business or profession, non-profit society and similar *uses* but does not include a *health care office*.

office, health care: means the office, clinic or laboratory of a health professional in the field of medicine, including a doctor, dentist, optometrist, physiotherapist, chiropractor and medical technician; and any other health professional regulated under the *Health Professions Act* or *Emergency Health Services Act*.

off-street loading: means a *use* providing for the loading and unloading needs of a permitted *use* on the same *parcel*.

off-street parking: means a *use* providing for the parking needs generated by a permitted *use* on the same *parcel* unless otherwise permitted by bylaw or restrictive covenant.

P

<i>pad:</i>	means a finished surface on which blocks, posts, runners, or strip footings are placed for the purpose of supporting a <i>manufactured home</i> .
<i>panhandle:</i>	means a long and narrow strip of land of a <i>parcel</i> , which is used exclusively for providing legal vehicular access to a <i>highway</i> .
<i>parcel:</i>	means a fee simple lot, block or other area in which land is held or into which land is subdivided under the <i>Land Title Act</i> or a bare-land strata plan under the <i>Strata Property Act</i> .
<i>parcel area:</i>	means the area of land within the legal boundaries of a <i>parcel</i> .
<i>parcel coverage:</i>	means the horizontal area within the outer limits of all <i>structures</i> on a <i>parcel</i> expressed as a percentage of the <i>parcel area</i> .
<i>park:</i>	means the <i>use</i> of land for passive or active recreation purposes by the public, including playgrounds, trails, greenbelts, buffers, nature interpretation areas and similar land <i>uses</i> .
<i>pedestrian access ramp:</i>	means a <i>structure</i> used to connect or provide access to a <i>float</i> from <i>adjacent upland</i> or from a <i>pier</i> .
<i>personal service establishment:</i>	means an individualized service to persons or personal property including but not limited to a barbershop, beauty shop, drycleaner, laundromat or shoe repair shop and includes the auxiliary sale of goods related to the provision of that service.
<i>pet supplies:</i>	means goods related to the keeping of domestic pets, such as speciality foods, leashes and grooming products.
<i>pier:</i>	means a <i>structure</i> consisting of a platform constructed above the surface of water, supported by a series of pilings, support columns or rock located across the <i>inter-tidal zone</i> , which is customarily used for <i>mooring</i> or to provide access to a <i>waterbody</i> .
<i>portable cabin</i>	means a building with a maximum floor area of 60 m ² that may contain one or more habitable rooms and one set of cooking and sanitary facilities, and may be moved to variable locations of a site.
<i>poultry:</i>	means domestic birds raised for the consumption of eggs or meat such as chickens, ducks, turkeys, geese, pheasants, quail, game birds and ratites (large flightless birds such as ostriches).
<i>principal building:</i>	means a <i>building</i> that accommodates the <i>principal use</i> of a <i>parcel</i> and may accommodate one or more auxiliary <i>uses</i> .

<i>principal use:</i>	means the primary purpose for which land, <i>buildings</i> or <i>structures</i> area ordinarily used.
<i>private outdoor space:</i>	means an amenity area in a residential multiple zone for the benefit of the residents of the adjacent <i>dwelling unit</i> but does not include a riparian, environmentally sensitive, hazardous or <i>common amenity area</i> and excludes an entry sidewalk or porch.
<i>public boat ramp:</i>	means a <i>boat ramp</i> operated or maintained directly or indirectly by a local, provincial or federal government.
<i>public use:</i>	means a <i>highway</i> , public wharf, <i>park</i> , or government facility.
<i>public utility:</i>	means broadcast transmission, electrical, gas, telephone, sewer or water services established or regulated by a government and does not include oil or gas storage tanks or a public storage and works yard.

R

<i>ravine:</i>	means a narrow, steep-sided valley that is commonly eroded by running water and has a slope greater than 3 horizontal : 1 vertical.
<i>recreational vehicle:</i>	means any vehicular portable <i>structure</i> constructed to CSA-Z240 RV standard holding a current license under the <i>Motor Vehicle Act</i> and which is designed to be moved from place to place on a daily basis, and to provide temporary accommodation for travel, recreation or vacation and which does not require continuous connection to sanitary, water and electrical hookups.
<i>Regional District:</i>	means the Sunshine Coast <i>Regional District</i> or the geographical area within the boundaries of the <i>Regional District</i> , as the context may require.
<i>residential use:</i>	means a <i>use</i> providing for the accommodation and home life of one or more persons in a <i>dwelling unit</i> , including activities customarily incidental to the this <i>use</i> , including <i>horticulture</i> , recreation, storage, and the keeping of domesticated pets that are not kept for financial gain.
<i>restaurant:</i>	means an establishment where food is sold to the public and where provision is made for its consumption on the premises as the <i>principal use</i> and may include the incidental serving of alcoholic beverages but excludes the <i>retail</i> sale of alcoholic beverages as a <i>principal use</i> or for off-site consumption and includes a food truck but does not include drive-through sales.
<i>restricted watershed areas:</i>	means an area within a watershed that provides water for domestic <i>use</i> where the public is restricted from entering.

<i>retail:</i>	means the sale or rental of goods or merchandise to the general public for personal or household consumption, but excludes the sale of cannabis.
<i>retail, cannabis:</i>	means premises licensed under the Cannabis Control and Licensing Act for the retail sale of cannabis.
<i>retaining wall:</i>	means vertical or near-vertical structures to retain material, or provide support to terrain where the angle of repose is exceeded, preventing it from collapsing, slipping or eroding.
<i>revetment:</i>	means sloping embankments placed on banks of water bodies or on land to hold back water and/or retain earth.
<i>riparian assessment area:</i>	means: <ul style="list-style-type: none"> ▪ for a <i>stream</i>, the 30 m strip on both sides of the <i>stream</i>, measured from the high-water mark; ▪ for a <i>ravine</i> less than 60 meters wide, a strip on both sides of the <i>stream</i> measured from the high-water mark to a point that is 30 meters beyond the top of the <i>ravine</i> bank; and ▪ for a <i>ravine</i> 60 meters wide or greater, a strip on both sides of the <i>stream</i> measured from the high-water mark to a point that is 10 meters beyond the top of the <i>ravine</i> bank.

S

<i>seasonal:</i>	means a use which occurs not more than 6 months of the year and may include temporary events held during the season.
<i>secondary suite:</i>	means a dwelling unit with a maximum floor area of 55 m ² and one set of <i>cooking facility</i> , auxiliary to and located within a building containing a <i>single-unit dwelling</i> .
<i>setback:</i>	means the minimum permitted distance under this bylaw between a building or <i>structure</i> and a specified <i>parcel</i> line.
<i>short-term rental:</i>	means use of buildings for transient accommodation provided for commercial purposes, auxiliary to the residential use, and occupied by the same occupant(s) for not more than 30 consecutive days, may include accommodation commonly known as bed and breakfast, but specifically excludes accommodation provided in a <i>campground</i> , a <i>sleeping unit</i> , a motel, a housekeeping unit, a lodge, a hotel or a resort hotel.

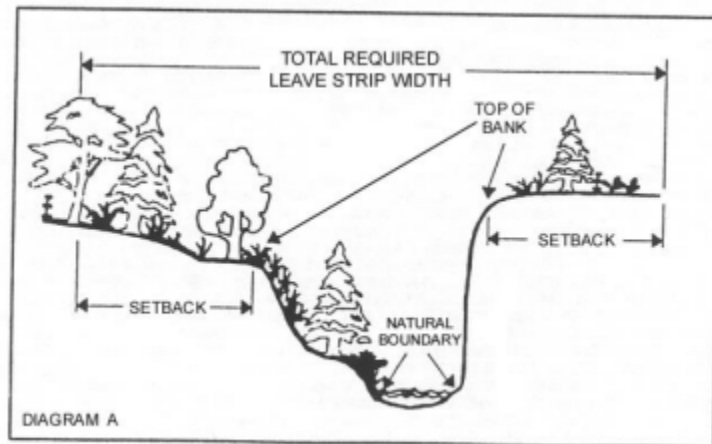
<i>silviculture:</i>	means the branch of forestry that deals with establishing, caring for and reproducing stands of trees for a variety of forest uses including wildlife habitat, timber production and outdoor recreation.
<i>single-unit dwelling:</i>	means a <i>building</i> that is <i>used</i> for a <i>residential use</i> containing one <i>dwelling unit</i> as the <i>principal use</i> ; and may contain a <i>secondary suite</i> .
<i>site area:</i>	means a defined area of land set apart for a specific <i>use</i> permitted within a zone.
<i>sleeping unit:</i>	means a bedroom or an enclosed space used for sleeping, excluding <i>cooking facility</i> , but may include washroom facility; and may be a self-contained detached <i>building</i> or located within a <i>building</i> used for <i>tourist accommodation</i> .
<i>solar collector:</i>	means a device that collects and/or concentrates solar radiation from the sun.
<i>strata lot:</i>	means a <i>strata lot</i> contained within a strata plan as defined under the <i>Strata Property Act</i> .
<i>stream:</i>	includes any of the following that provides habitat for salmonids, game fish and regionally significant fish; <ul style="list-style-type: none"> ▪ a <i>watercourse</i>, whether it usually contains water or not; ▪ a pond, lake, river, creek or brook ▪ a ditch, spring or <i>wetland</i> that is connected by surface water flowing to a <i>watercourse</i>.
<i>streamside protection and enhancement area (SPEA):</i>	means an area: <ol style="list-style-type: none"> 1. adjacent to a <i>stream</i> that links aquatic to terrestrial ecosystems and includes both existing and potential riparian vegetation and existing and potential <i>adjacent upland</i> vegetation that exerts an influence on the <i>streams</i> determined according to the Riparian Areas Protection Regulation on the basis of a report provided by a qualified environmental professional in respect of a development proposal.
<i>structure:</i>	means anything constructed, placed or erected on land or sunken into the ground, and for the purpose of this Bylaw excludes fence, revetment, retaining wall not higher than 2 m, or concrete, asphalt, pavers or other artificial surfacing.

subdivision: means the division of land into one or more *parcels* by plan, descriptive word, or otherwise under the *Strata Property Act* or *Land Title Act*.

subdivision district: means a land use classification category established in Section 4.2 of this bylaw.

T

top of ravine bank: means the first significant break in a *ravine* slope where the break occurs such that the grade beyond the break is less than 3:1 for a minimum distance of 15 metres measured perpendicularly from the break, and the break does not include a bench within the *ravine* that could be developed.



tourist accommodation: means the *use* of land and a *building* or *buildings* for the purpose of providing temporary or overnight accommodation and may include sleeping *units* and cooking facilities. *Tourist accommodation* includes a hotel, motel, lodge, motor inn, *sleeping units*, tourist cottages and resorts but excludes a *campground*, bed and breakfast or *short-term rental*.

tourist information centre: means a facility, the primary *use* of which is the promotion of tourism, and which may include an auxiliary *office* and an auxiliary residence for a caretaker.

townhouse: means a residential *building* that contains three or more *dwelling units*, all of which have a separate exterior entrance.

two-unit dwelling: means one *building* containing two dwelling units attached by conditioned space with an adjacent common wall or floor assembly, and having a maximum combined total floor area equal to 400 m² or 15% of the area of the parcel where the building is located,

whichever is less and may include a maximum of 45 m² of enclosed floor area for parking for each unit.

U

underground structure: means construction of any kind sunk into the ground and which at no point projects above finished grade by more than 1.0 metre, except at driveway and stairwell entrances.

utility: means broadcast transmission, electrical, telephone, sewer or water services regulated by a government and does not include oil or gas storage tanks, public storage and works yard or an *independent power project*.

use: means the purpose for which any *parcel, building or structure* is designed, arranged or intended, or for which it is occupied or maintained.

W

waterbody: means the ocean or a non-tidal water body consisting of a *watercourse* such as a river, *stream* or lake but does not include *wetland*.

watercourse: means any natural or man-made depression with a bed 0.6 meters or more below the natural elevation of surrounding land:

- (a) serving to give direction to a current of water at least six months of the year according to records kept by the Government of British Columbia; or
- (b) having a drainage area of two square kilometres or more.

wetland: means land that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal conditions does support, vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, fens, estuaries and similar areas that are not part of the active floodplain of a *stream* or *watercourse*.

wholesale: means the *use* of land, *buildings* or *structures* for the storage and distribution of goods in large quantities by a warehouse operator, a distributor, a manufacturer or a supplier.

Y

yard waste transfer station: means the use of land and structures for the collection, temporary storage and transfer of residential garden debris from the cutting, pruning, and trimming of plants, but does not include any residual organic kitchen household waste, and does not include any composting, processing (other than chipping) or burning of residential garden debris.

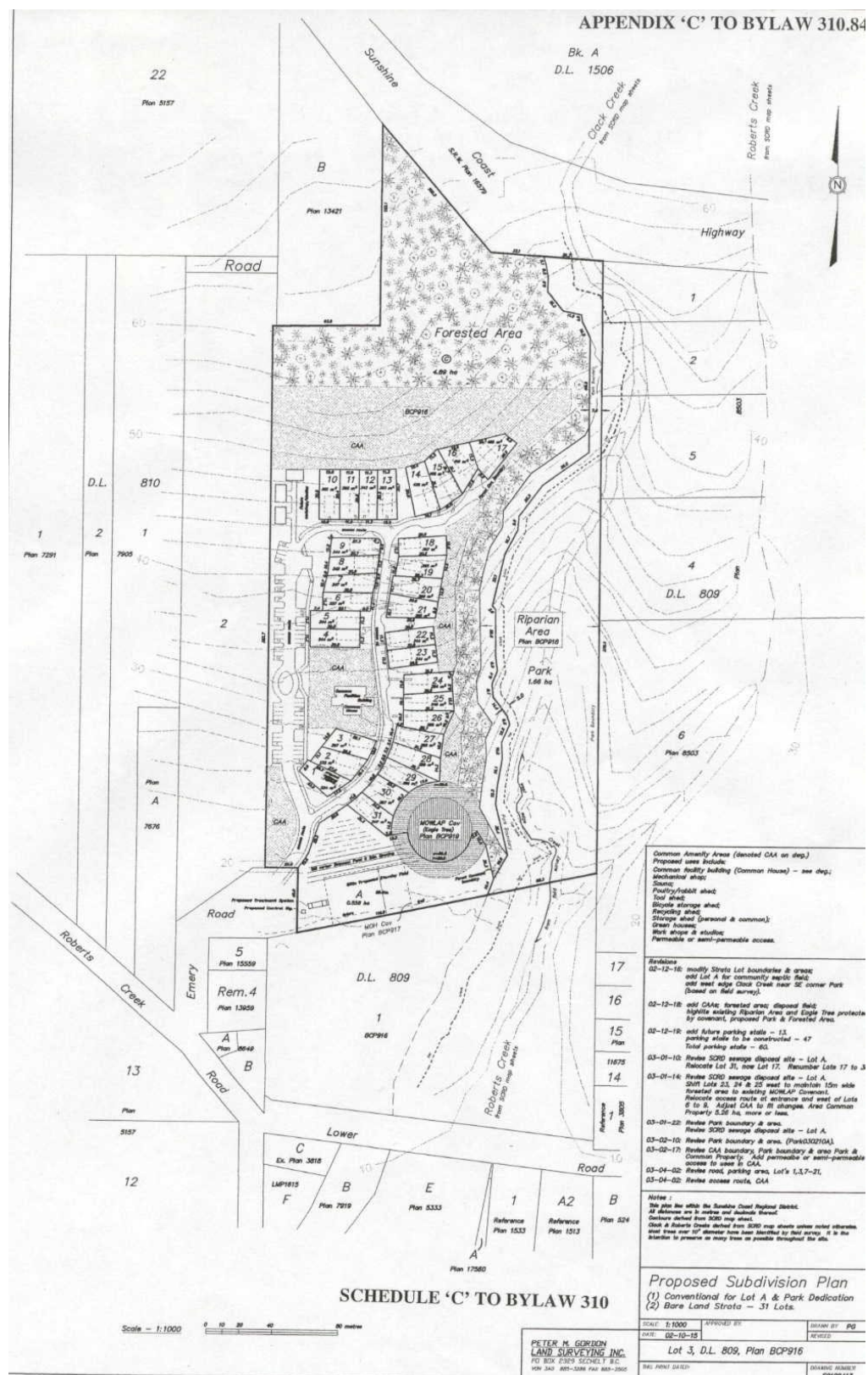
PART 14 SCHEDULES

- 14.1 Schedule A (Zones Atlas)
- 14.2 Schedule B (Subdivision Districts Atlas)
- 14.3 Schedule C
- 14.4 Schedule D
- 14.5 Schedule E
- 14.6 Schedule F

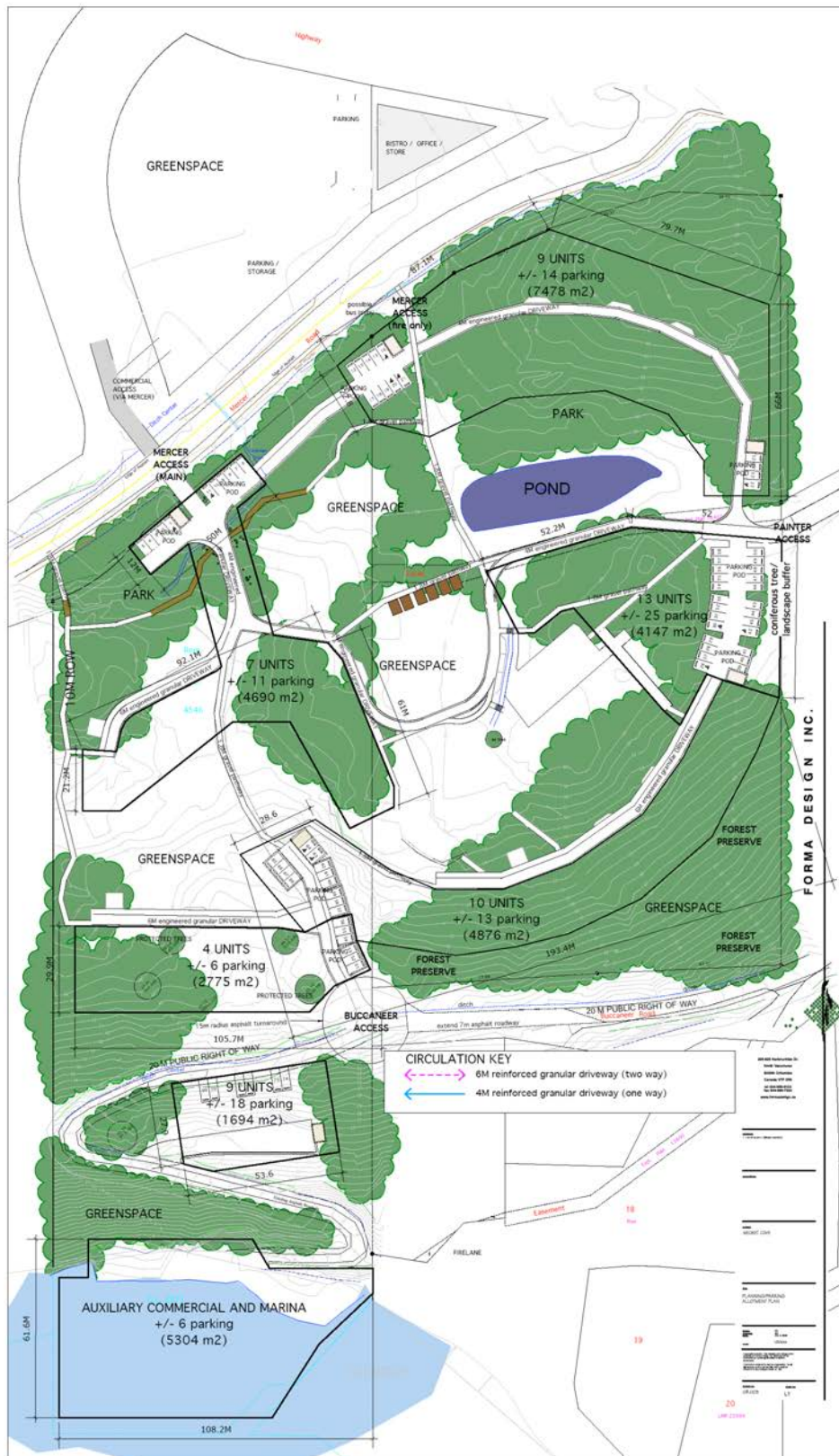
14.1 Schedule A (Zones Atlas, Separate Attachment)

14.2 Schedule B (Subdivision Districts Atlas, Separate Attachment)

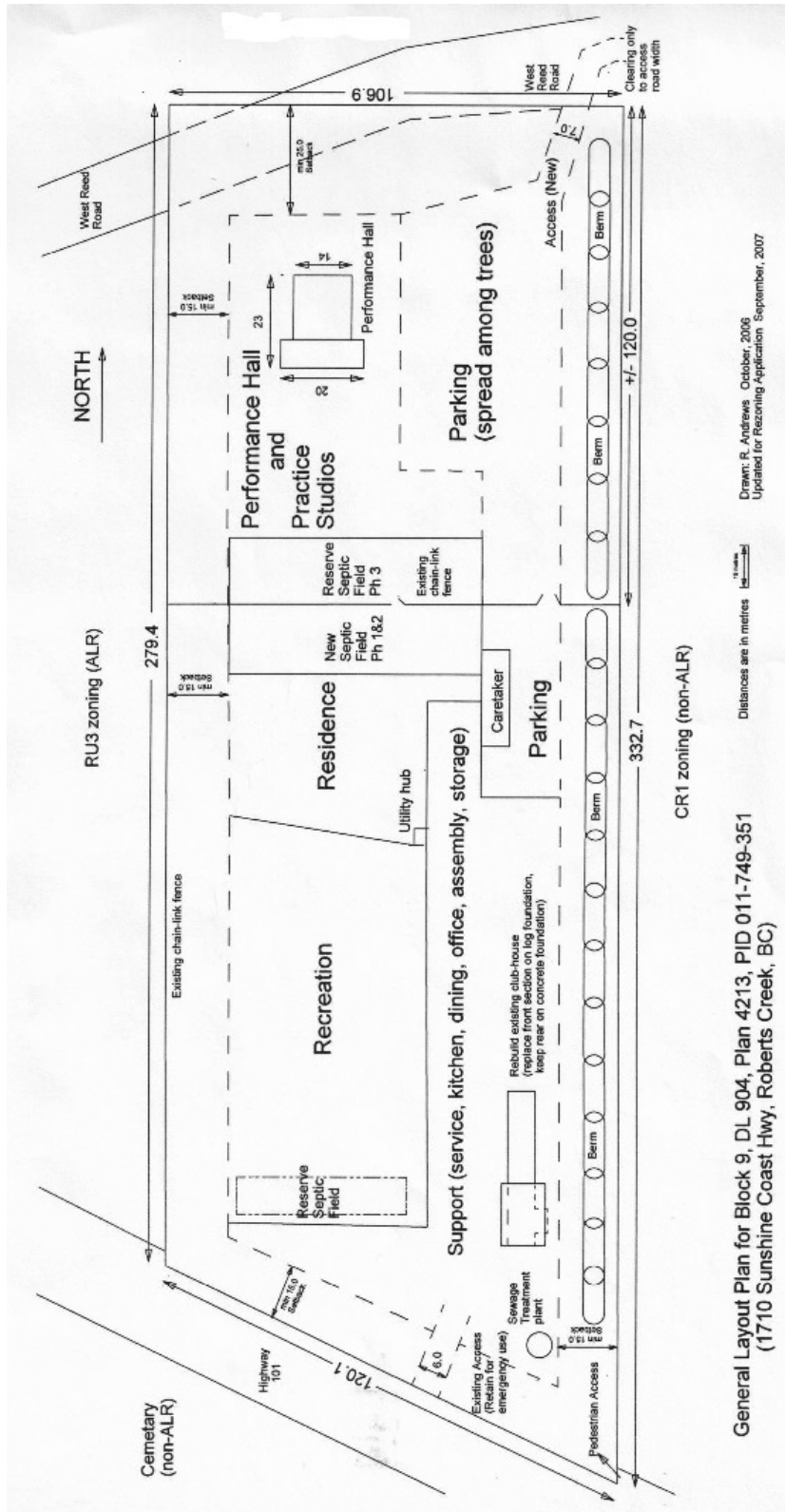
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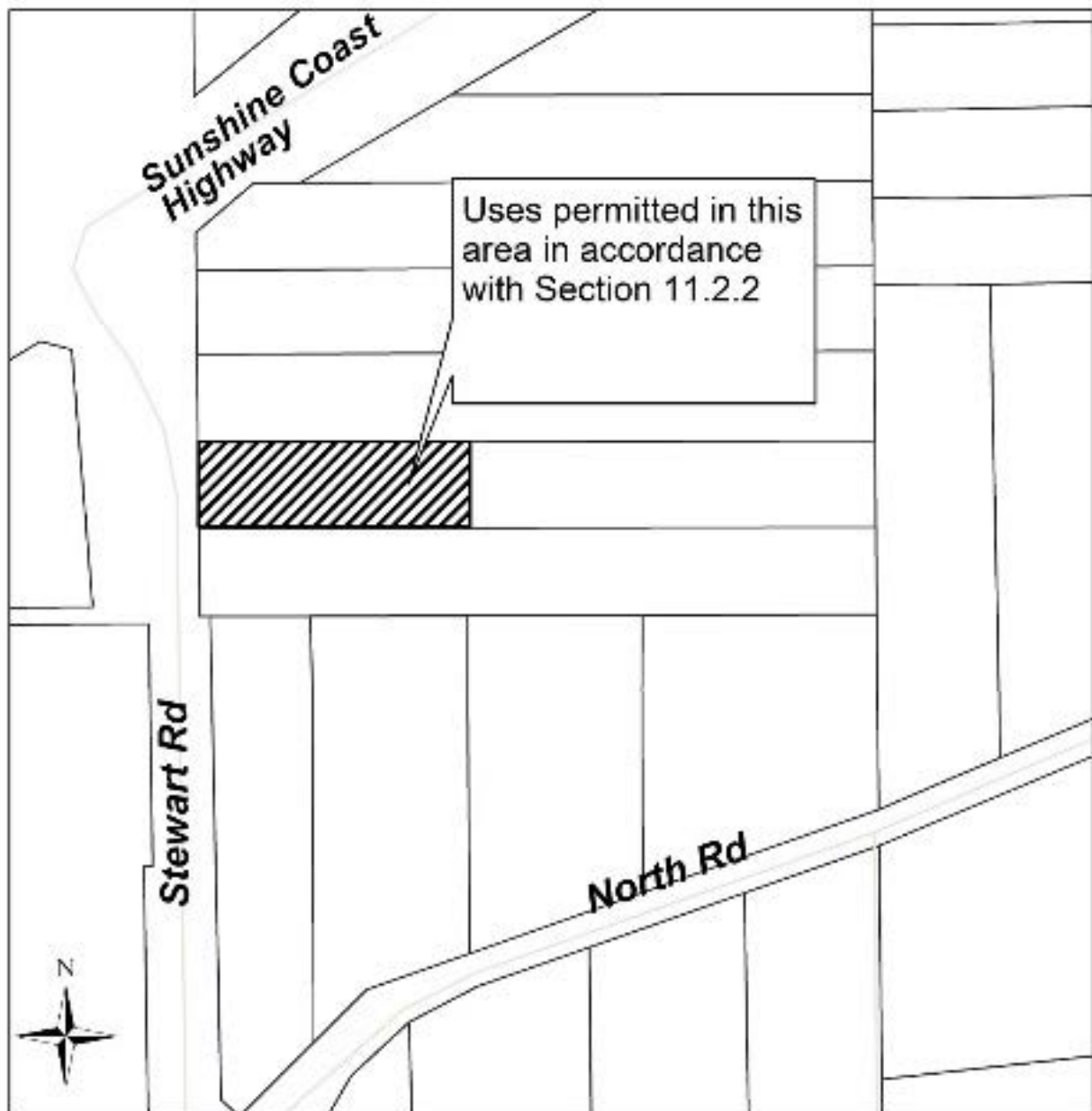
14.4 Schedule D



14.5 Schedule E



14.6 Schedule F



PART 15 REPEAL

"Sunshine Coast Regional District Zoning Bylaw No. 310, 1989", is hereby repealed.

PART 16 ADOPTION

READ A FIRST TIME this 21th day of April, 2022

READ A SECOND TIME this day of

PUBLIC HEARING HELD this day of

READ A THIRD TIME this day of

APPROVED PURSUANT TO THE TRANSPORTATION ACT

this day of

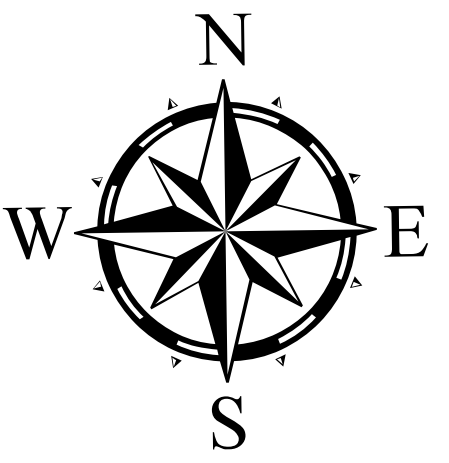
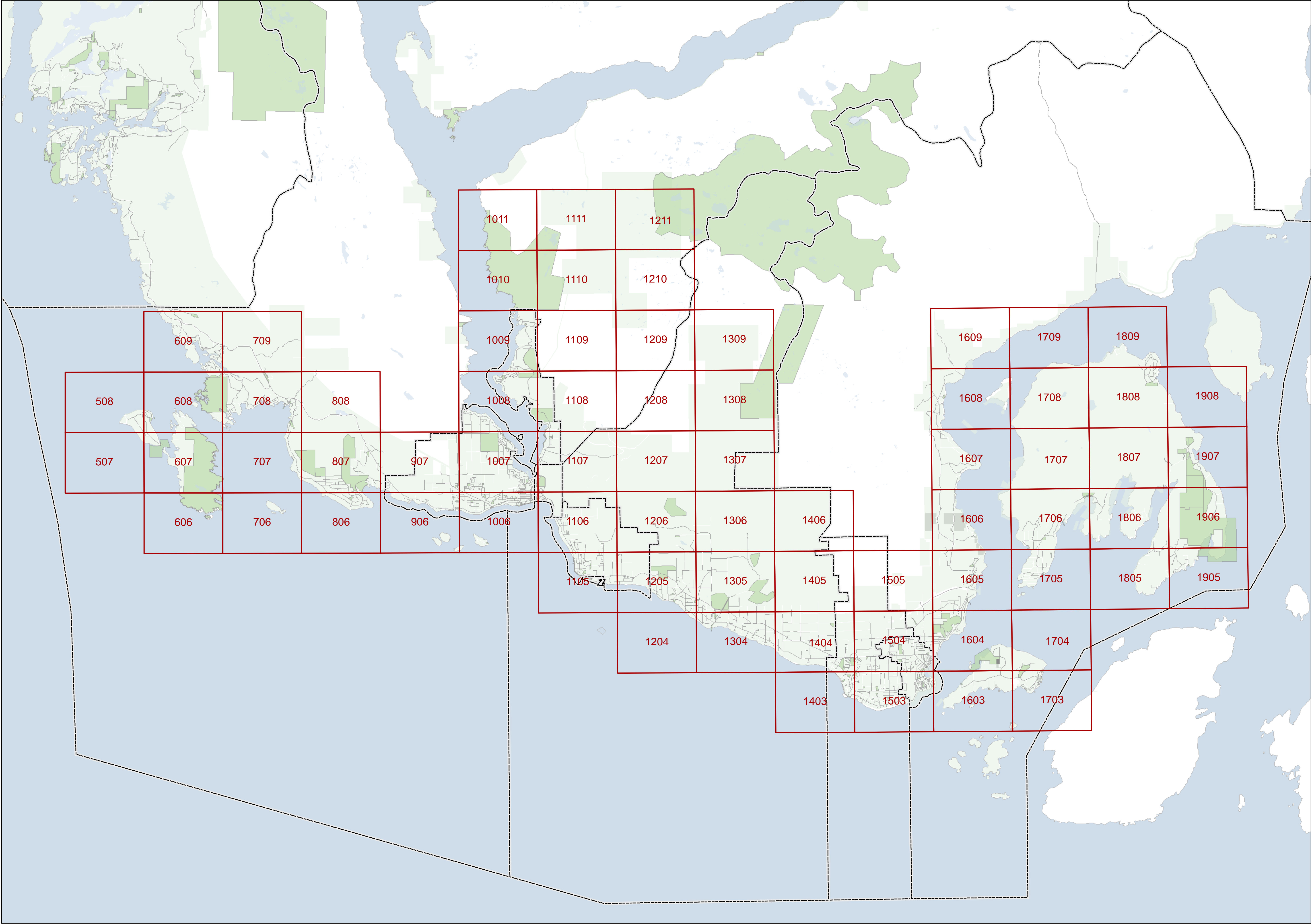
APPROVED BY THE MINISTER OF MUNICIPAL AFFAIRS AND HOUSING

this day of

RECONSIDERED AND ADOPTED this day of

CHAIR

CORPORATE OFFICER

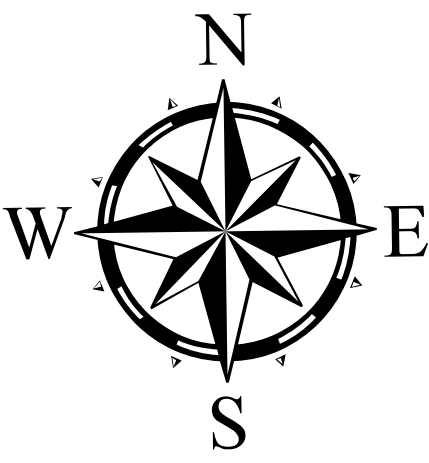
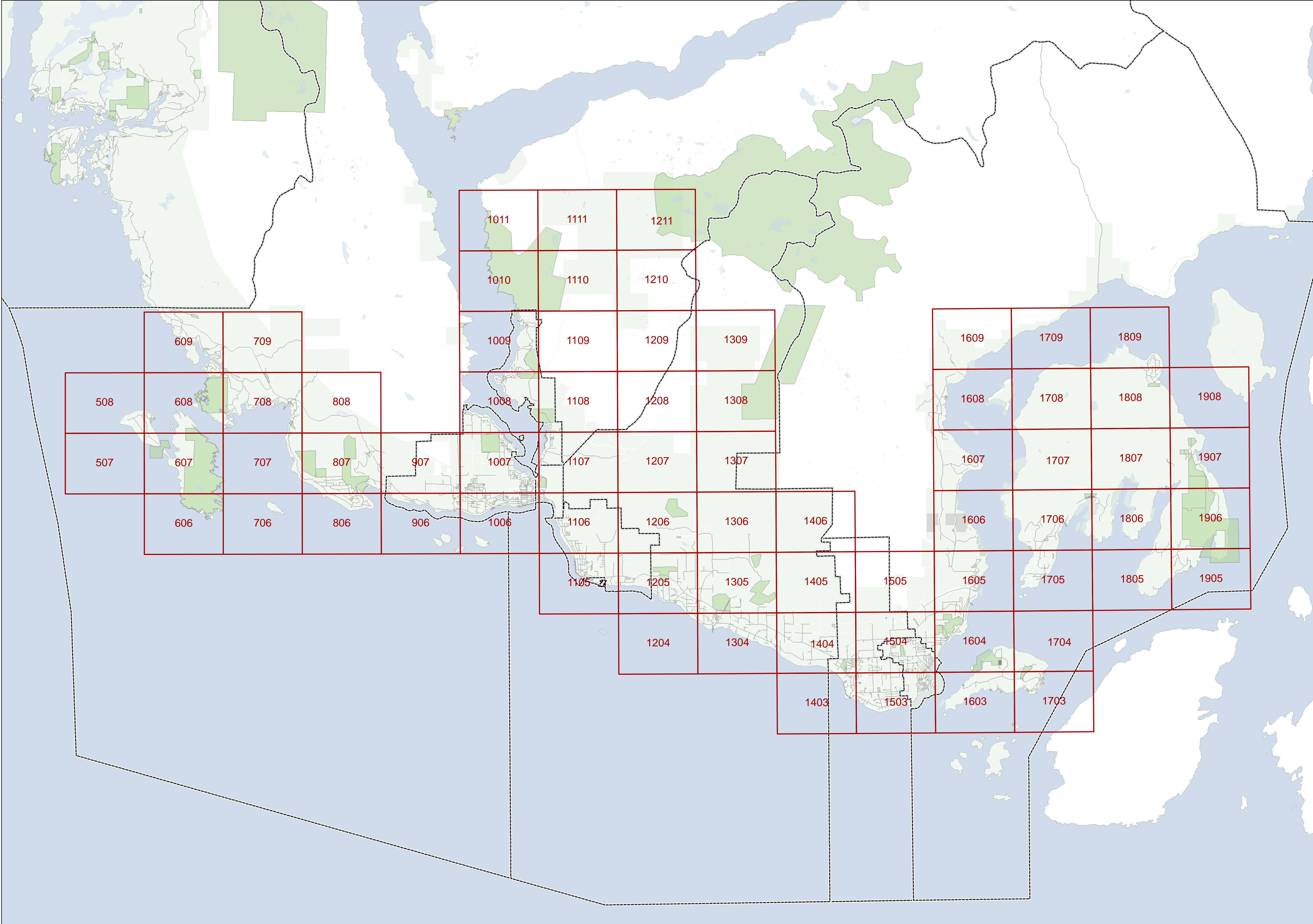


Date: 2022-01-20

This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.

BYLAW: 722

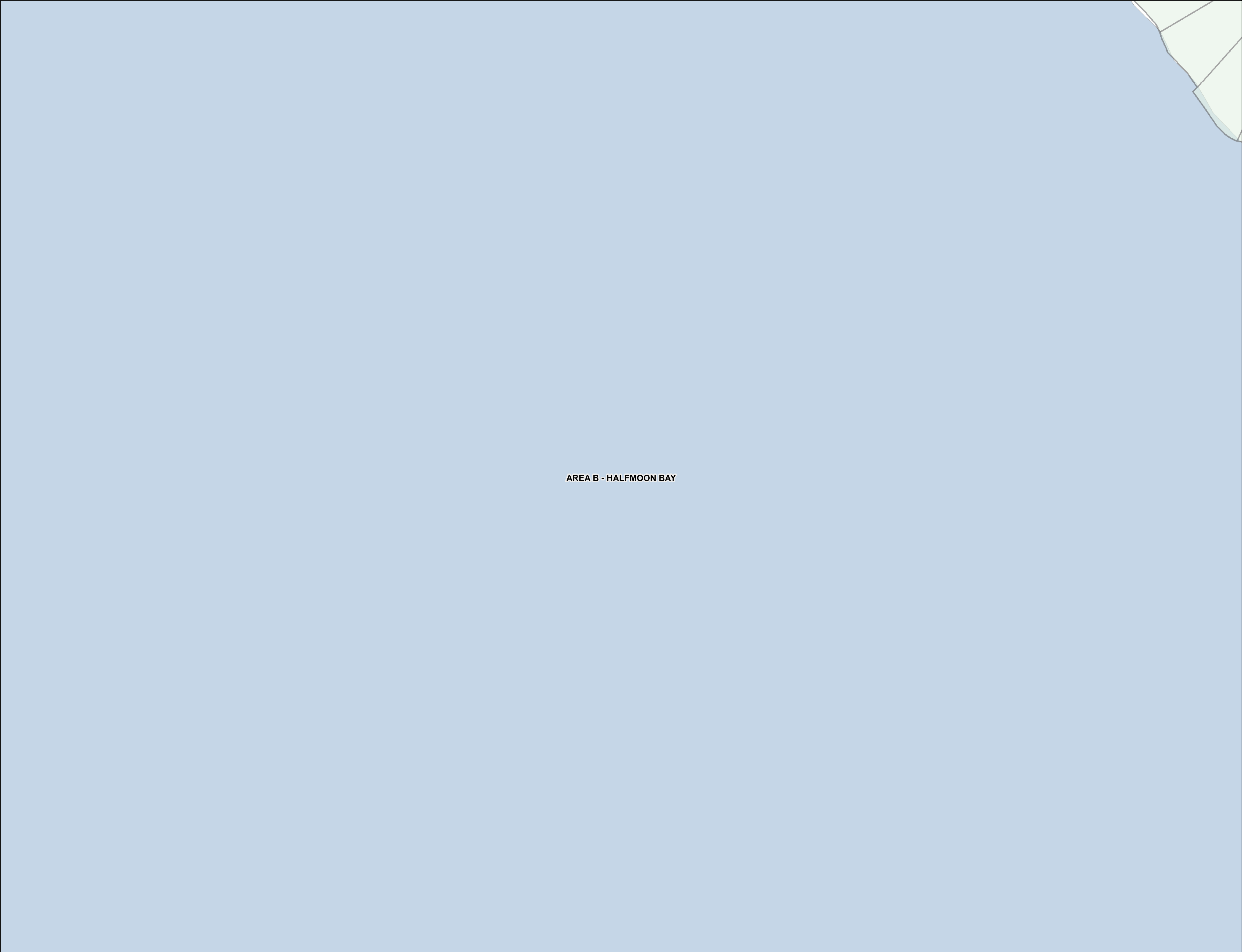
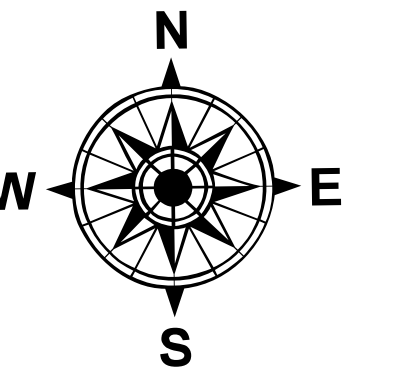
LAND USE ZONING Index Map



Date: 2022-01-20

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BYLAW: 722
SUBDIVISION
LAND USE ZONING
Index Map



AREA B - HALFMOON BAY

This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-05-12
Scale - 1:5,000

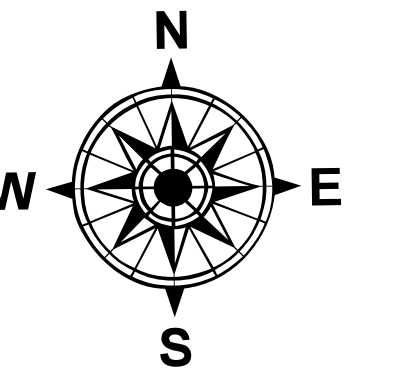
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 507

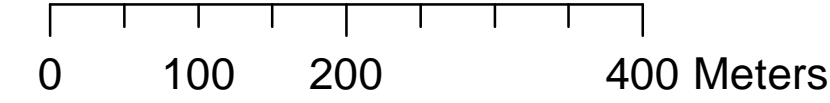



AREA B - HALFMOON BAY

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Date: 2022-05-12
Scale - 1:5,000

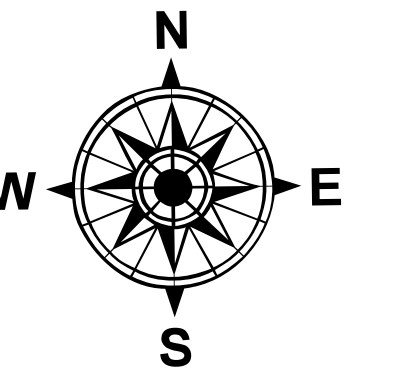


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

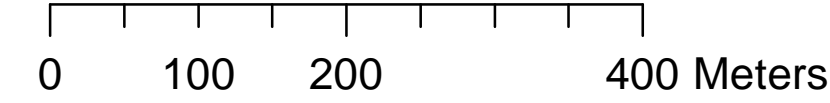
Map # 508



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Date: 2022-05-12
Scale - 1:5,000



 Zoning Subdivision

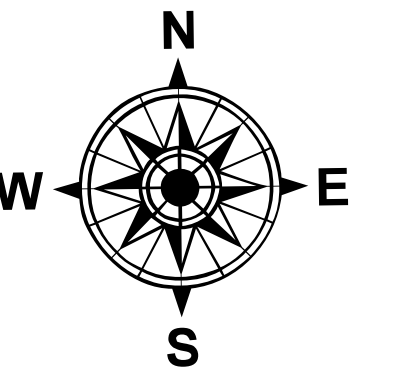
BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 606

Map # 607

A horizontal number line with tick marks every 50 units. The labels are 0, 100, 200, and 400 Meters.

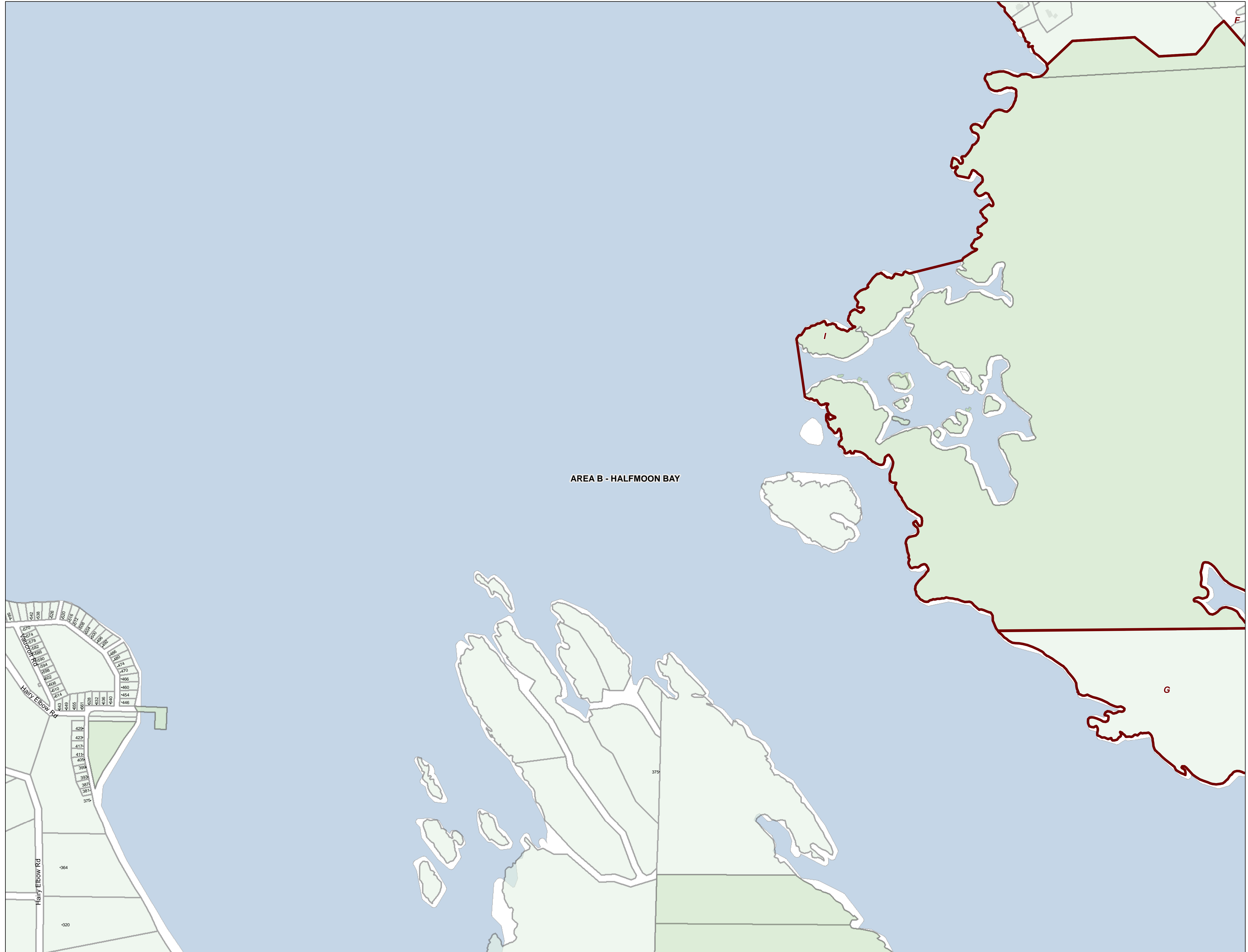


This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters



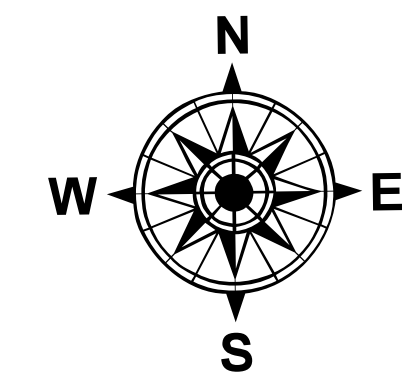
AREA B - HALFMOON BAY

Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 608

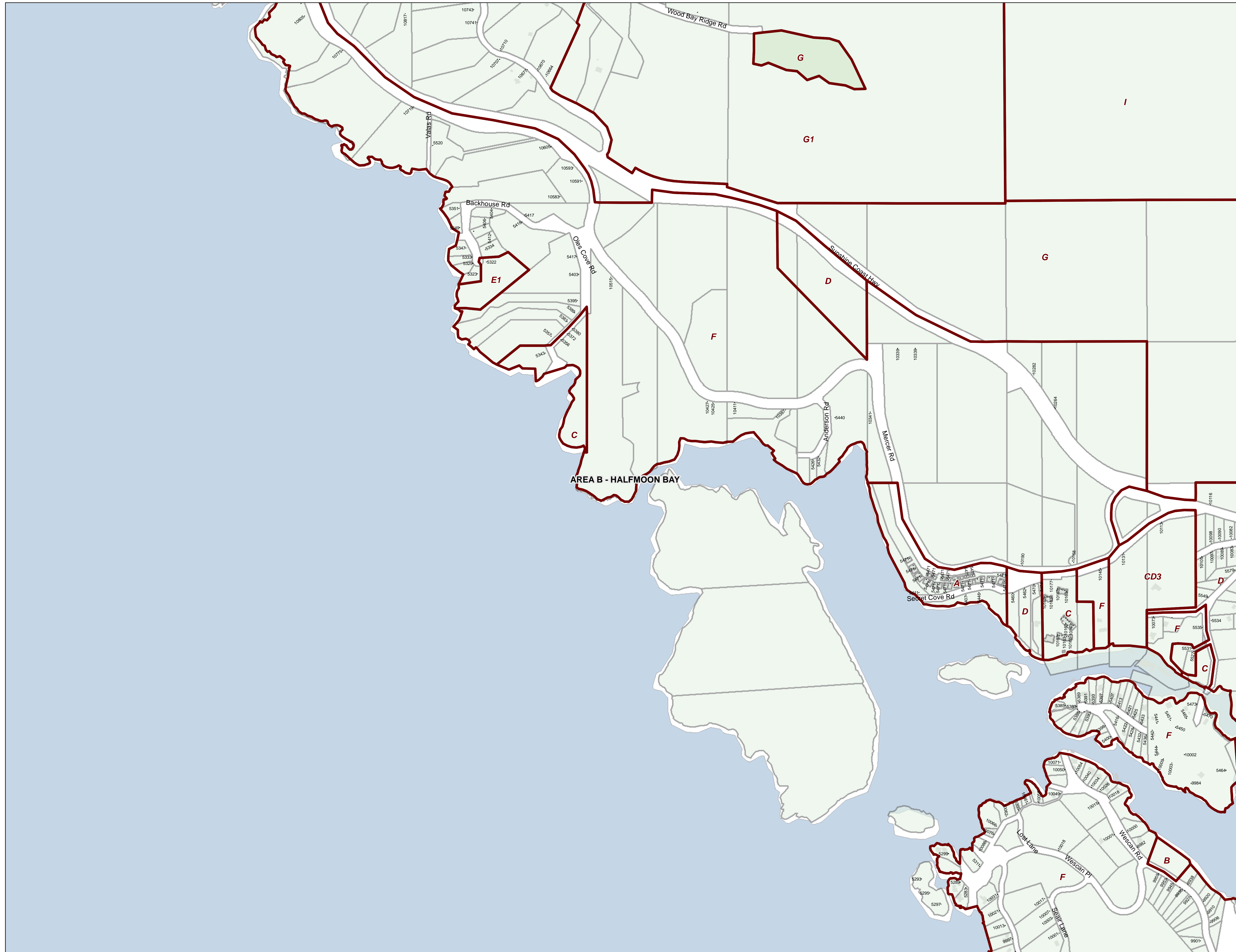


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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

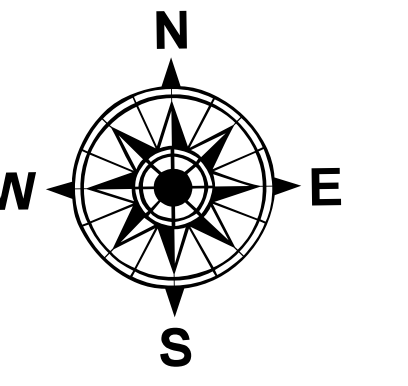


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 609

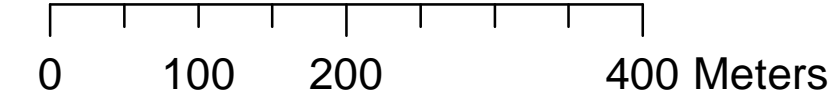



AREA B - HALFMOON BAY

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Date: 2022-05-12
Scale - 1:5,000

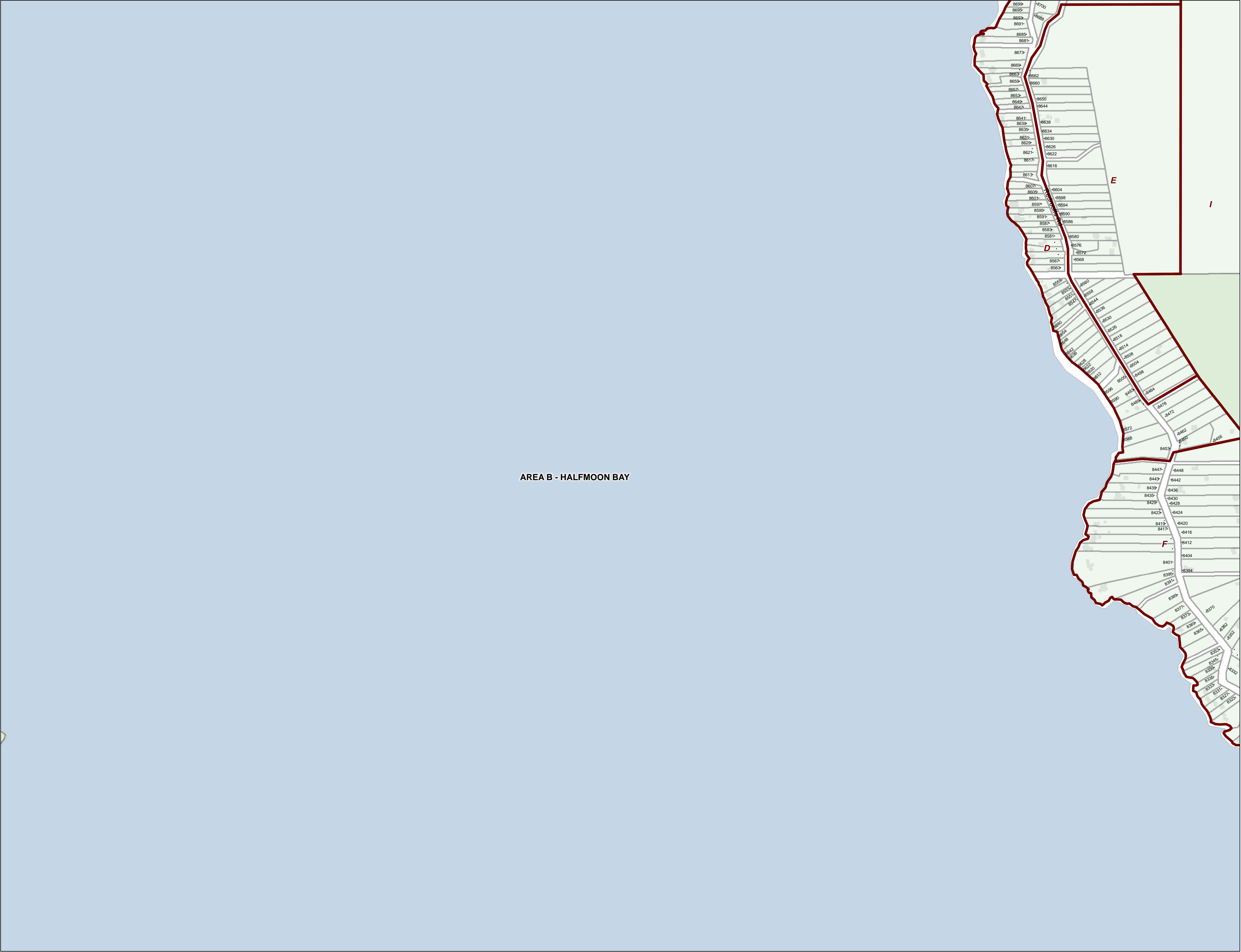


 Zoning Subdivision

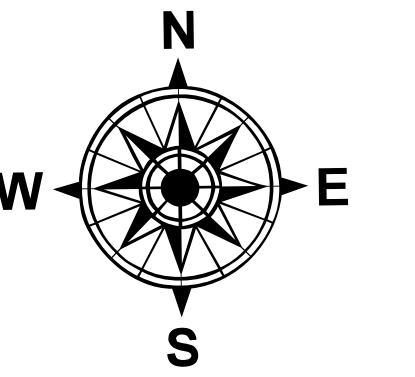
BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 706

The logo of the Sunshine Coast Regional District is a blue octagon. Inside the octagon, the words "SUNSHINE COAST" are written in white, uppercase letters along the top curve, and "REGIONAL DISTRICT" is written along the bottom curve. In the center of the octagon is a white, stylized sunburst or starburst design.

Map # 707

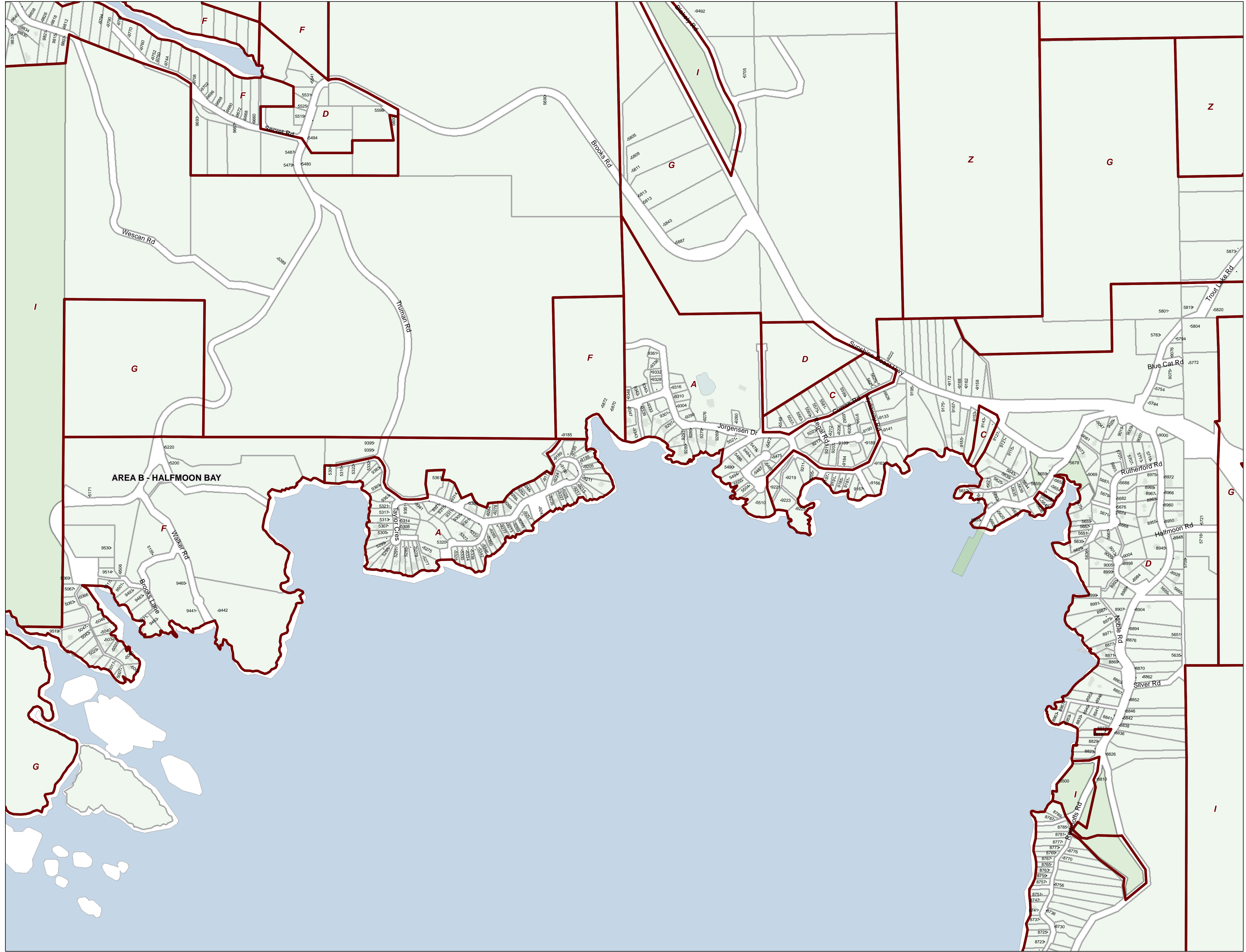



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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

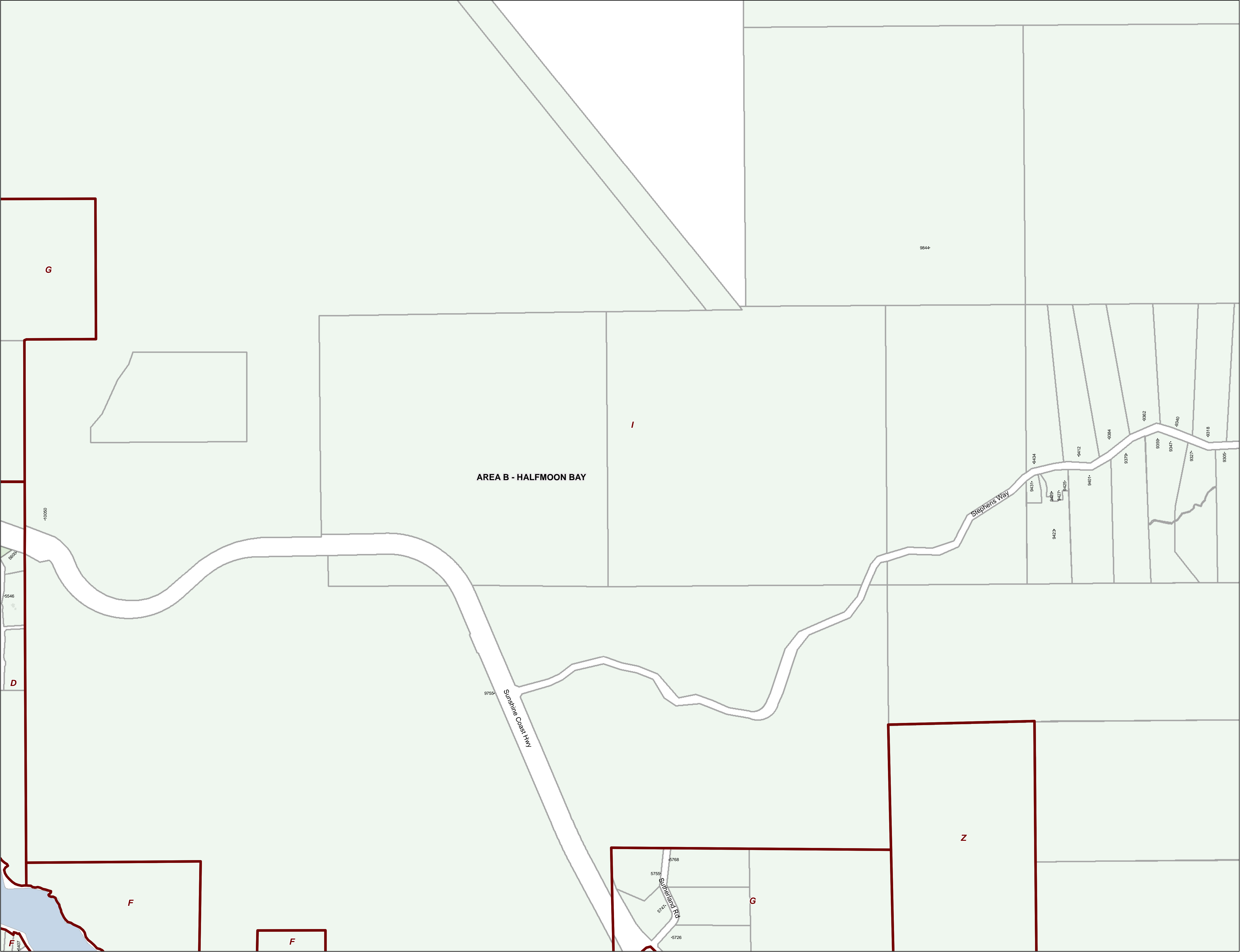
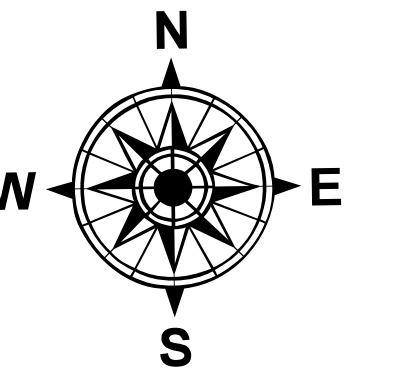


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 708



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Date: 2022-05-12
Scale - 1:5,000

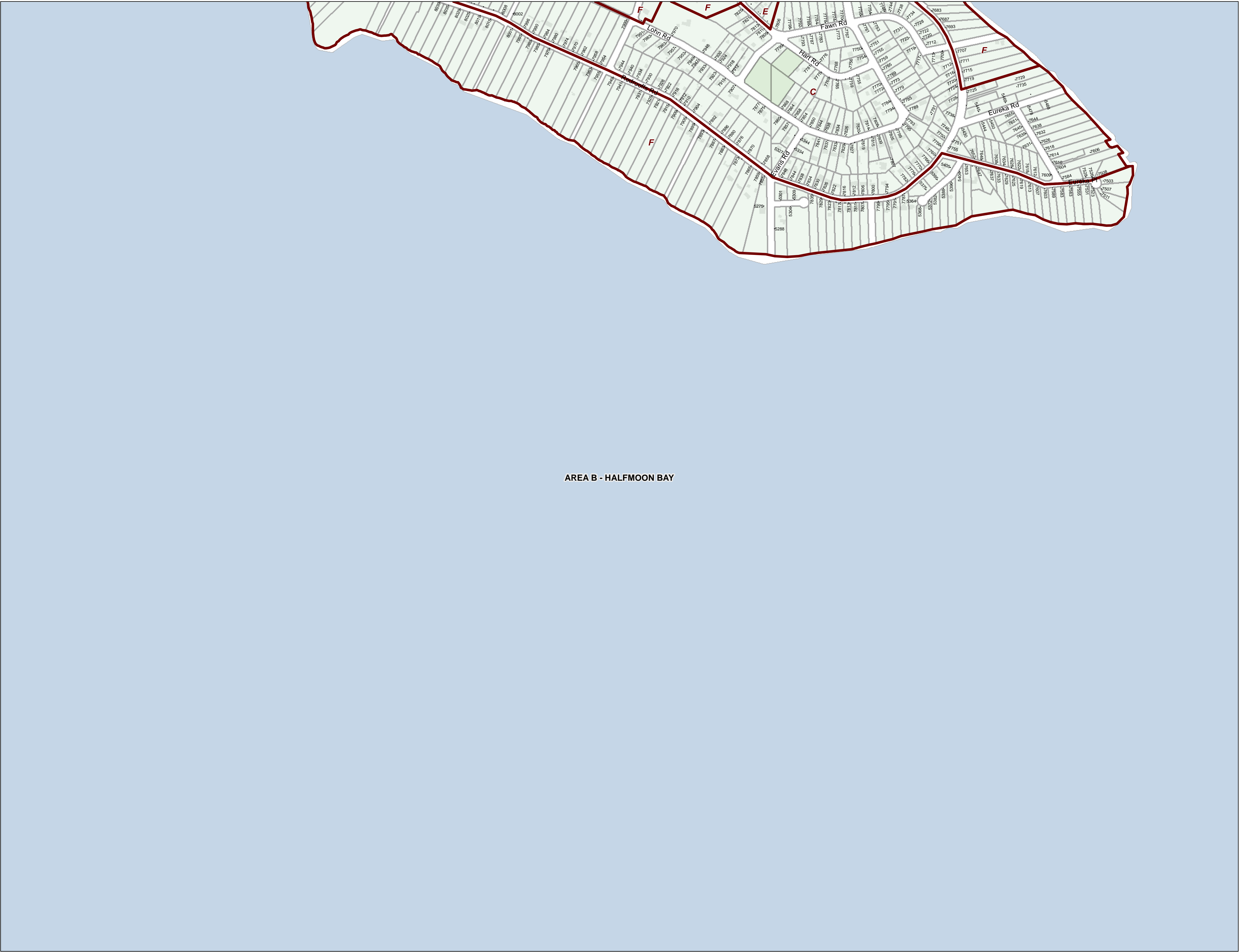
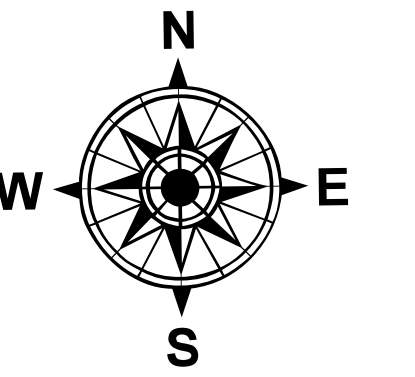
0 100 200 400 Meters

Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 709

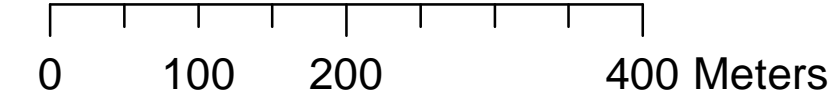


AREA B - HALFMOON BAY

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Date: 2022-05-12
Scale - 1:5,000

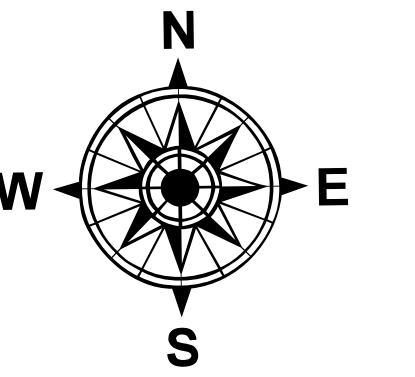


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

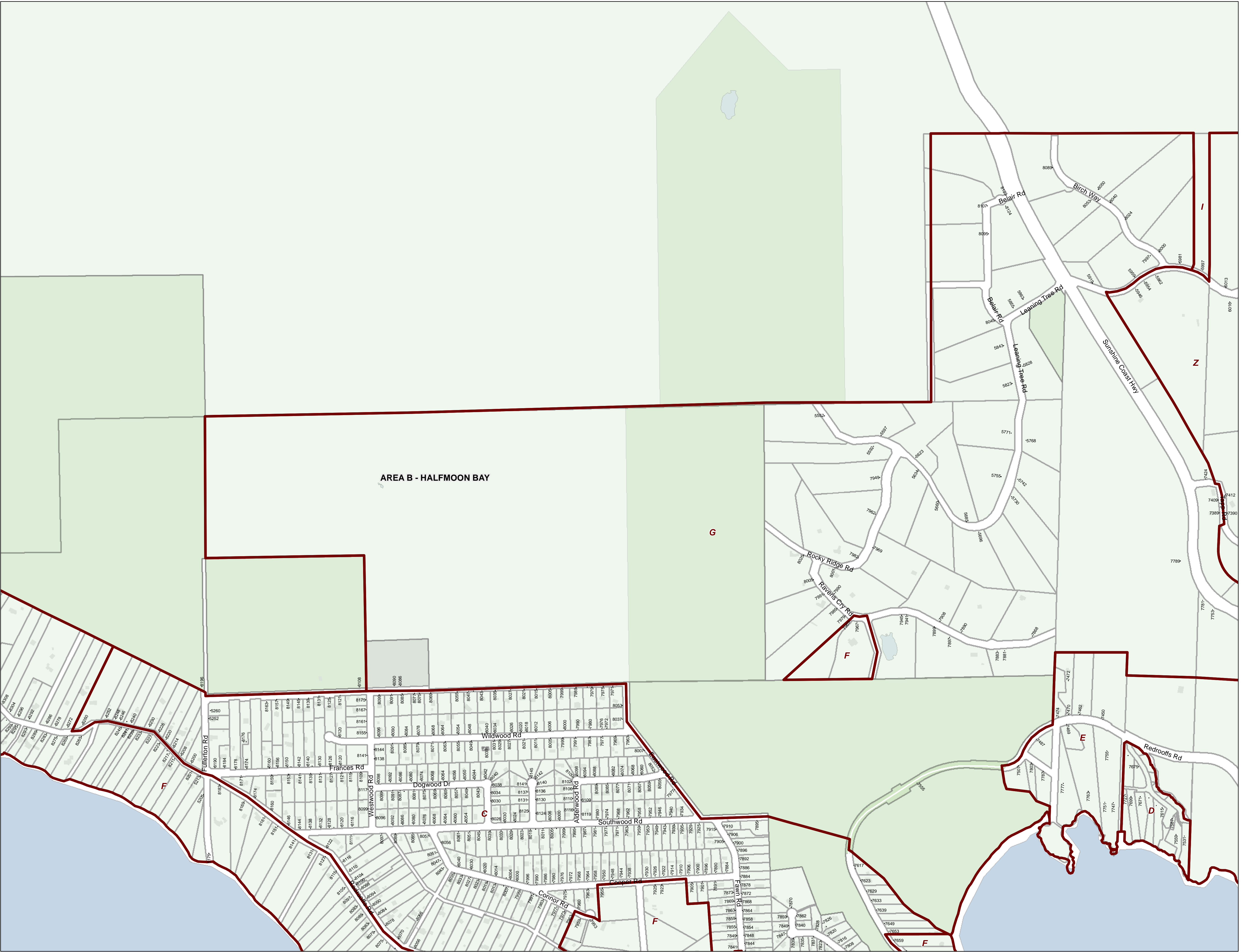
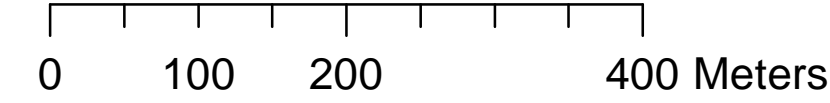
Map # 806



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Date: 2022-05-12
Scale - 1:5,000

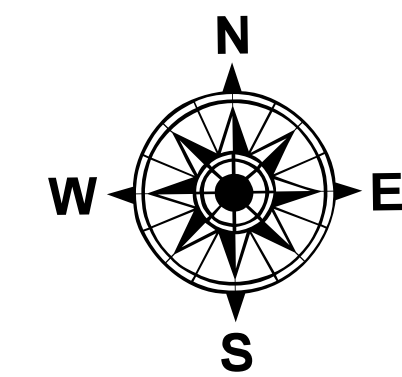


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

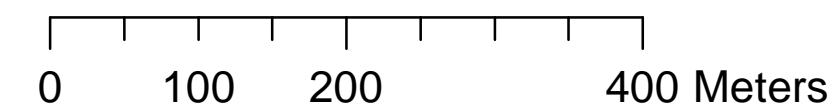
Map # 807



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Date: 2022-05-12
Scale - 1:5,000

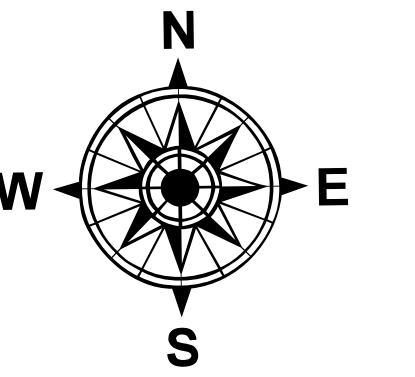


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

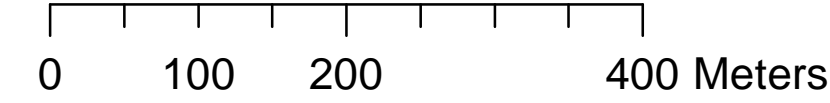
Map # 808



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Date: 2022-05-12
Scale - 1:5,000

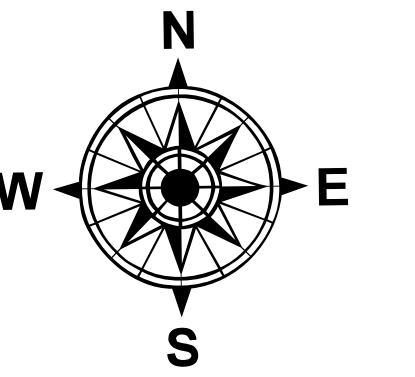


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 906

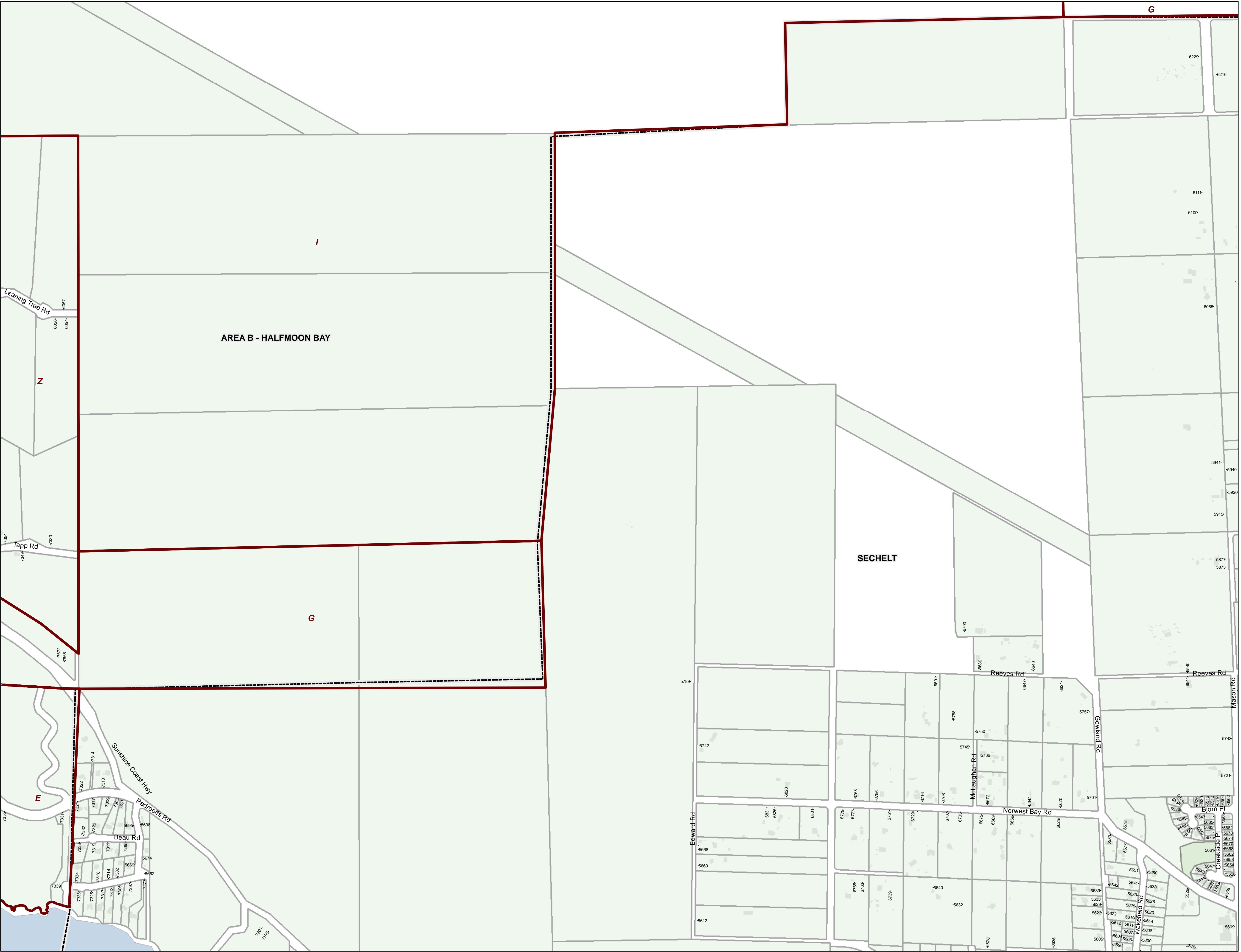


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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters



 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

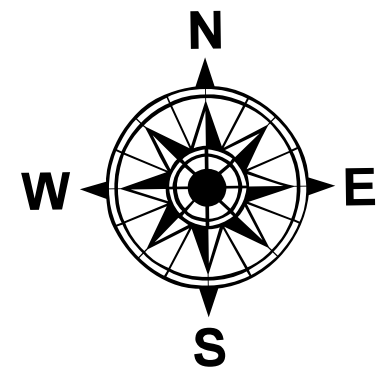
Map # 907

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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

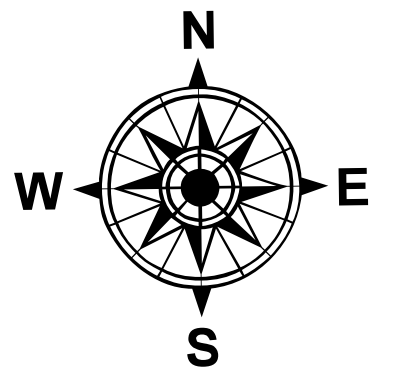


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1006



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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

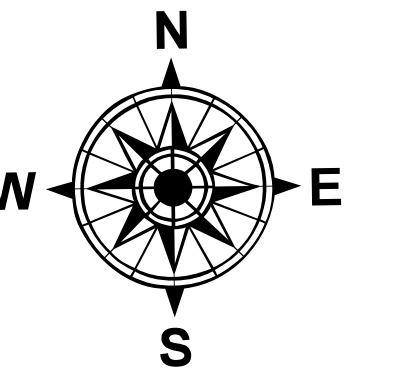


Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1007

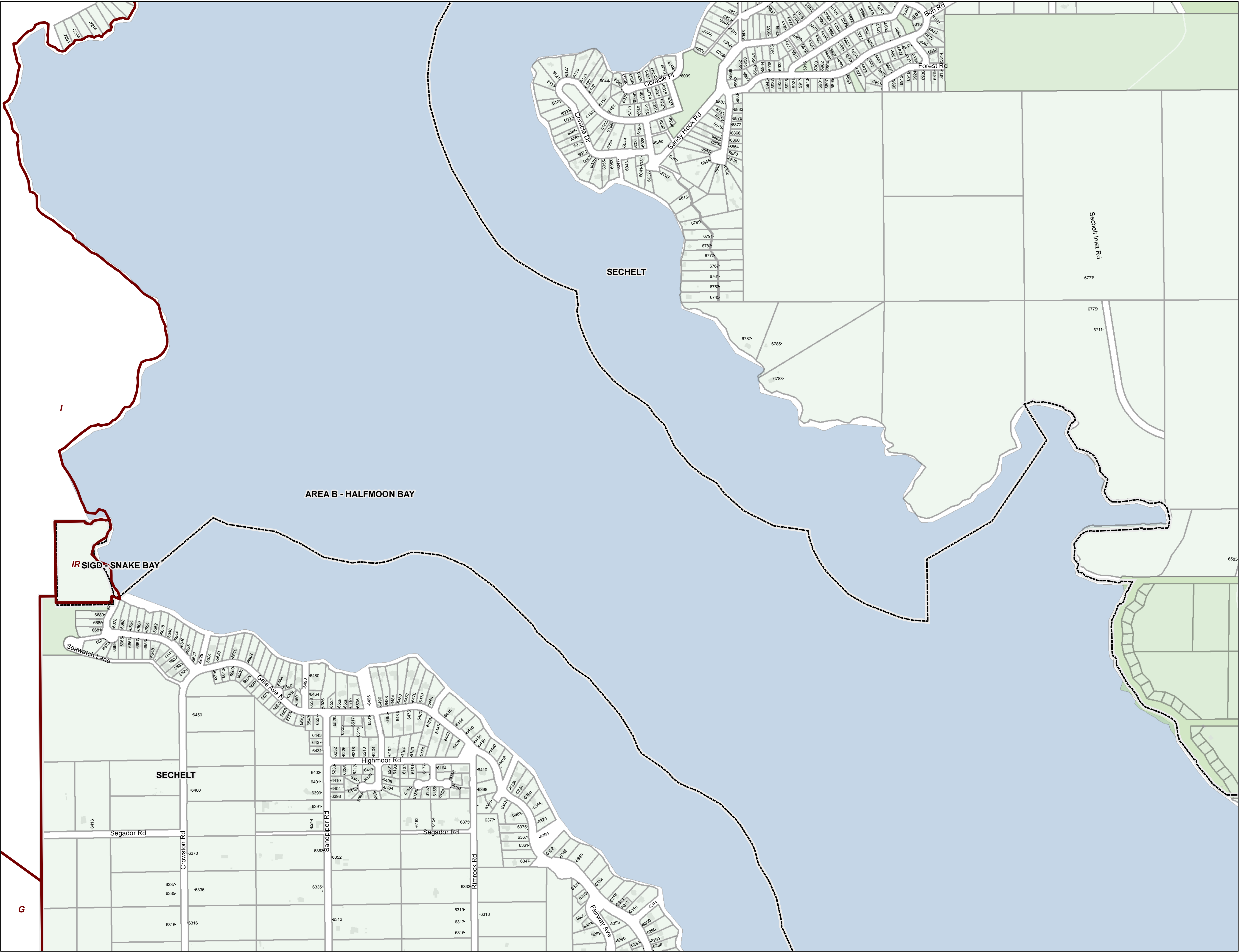


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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

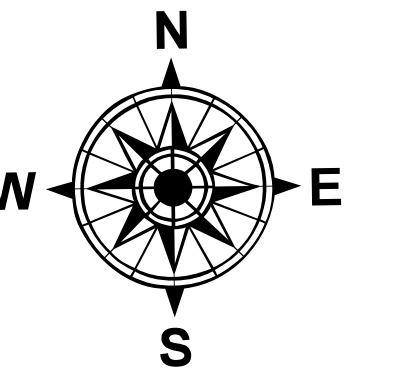


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1008

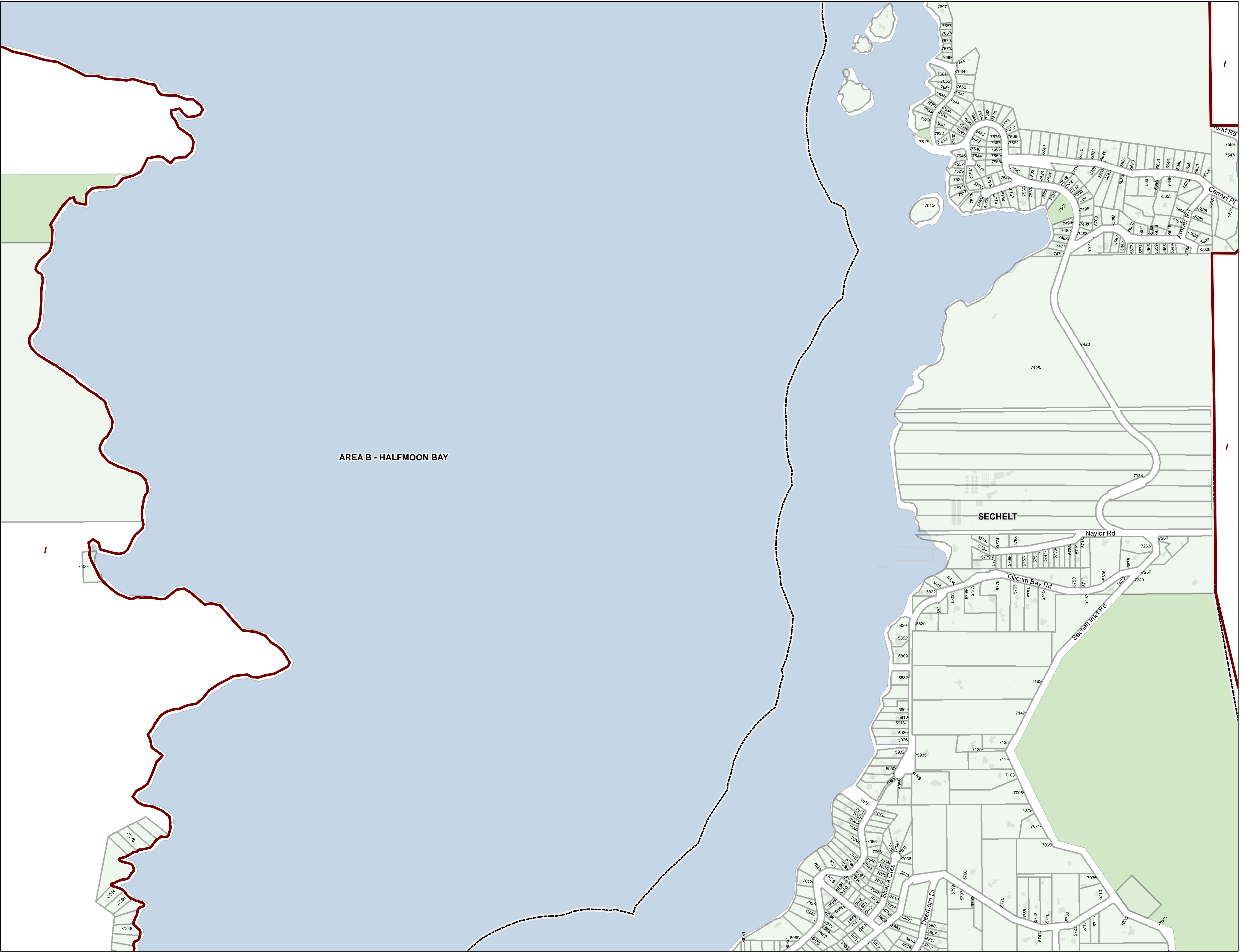


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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

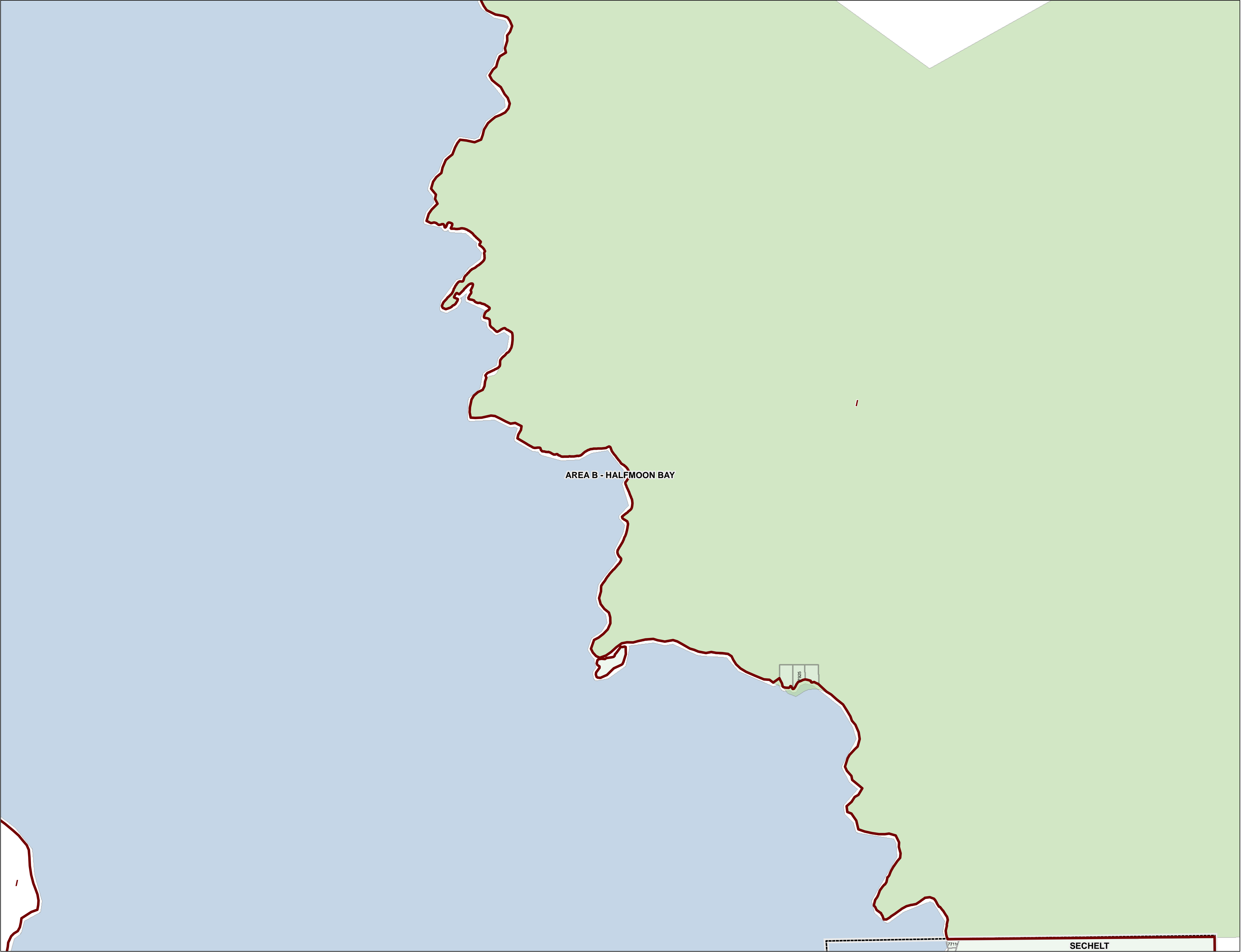
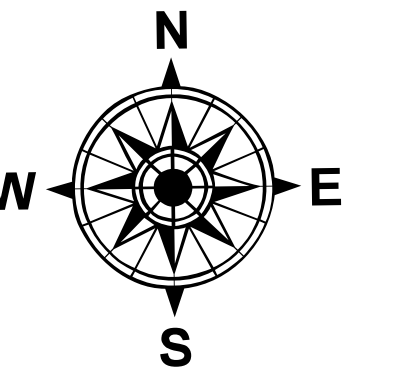


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1009



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Date: 2022-05-12
Scale - 1:5,000

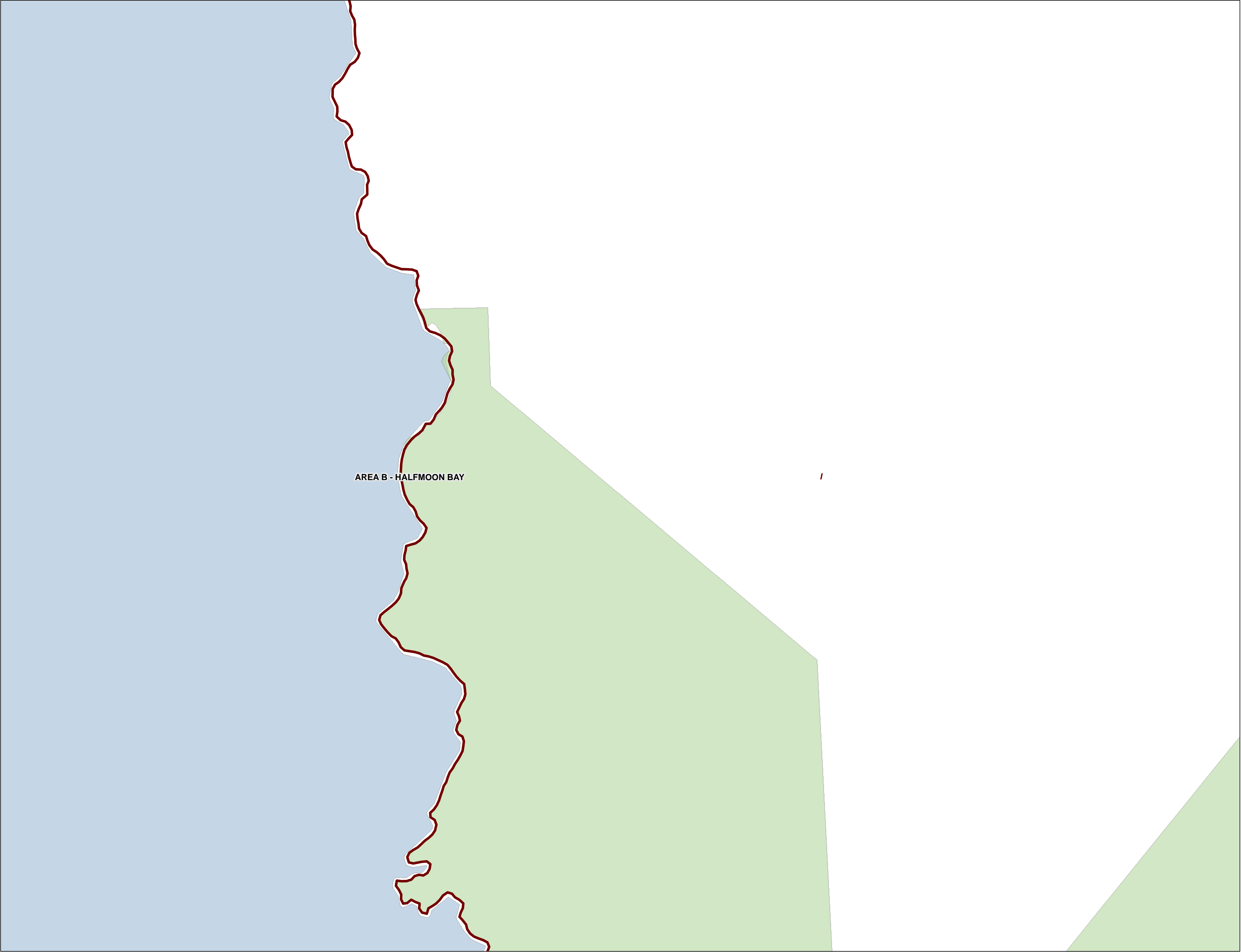
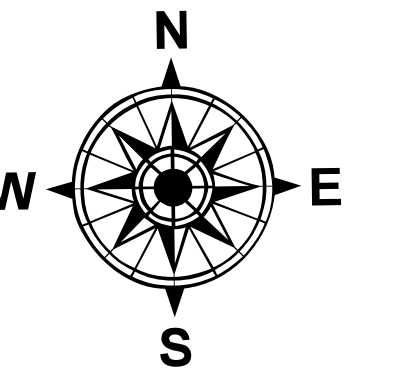
0 100 200 400 Meters

Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1010




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Date: 2022-05-12
Scale - 1:5,000

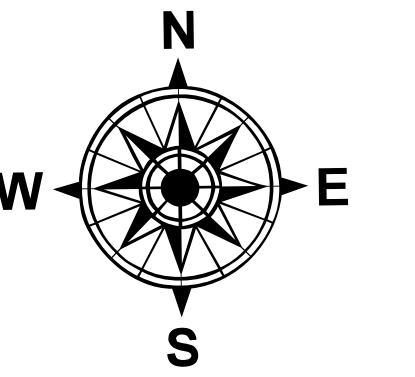
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1011

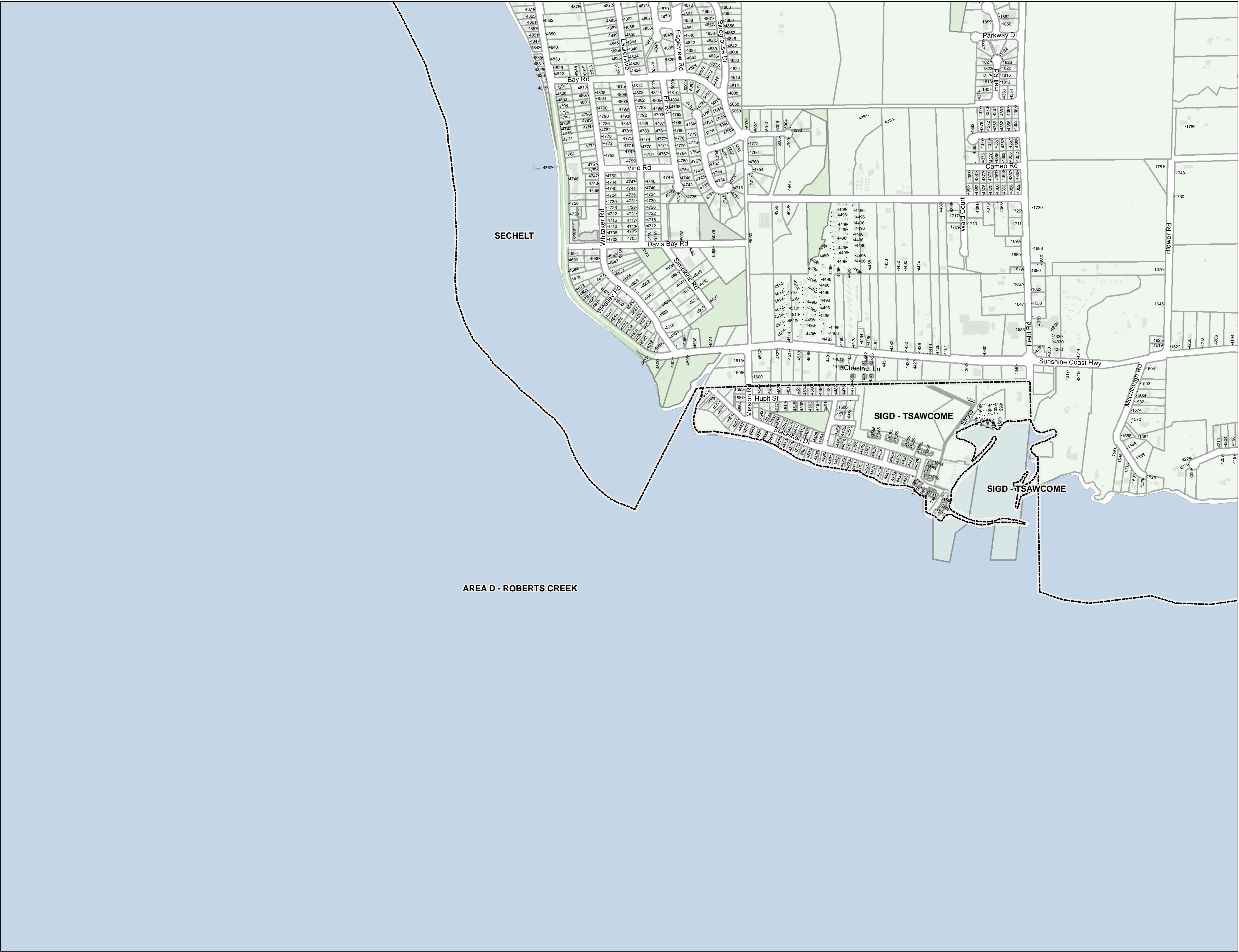


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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

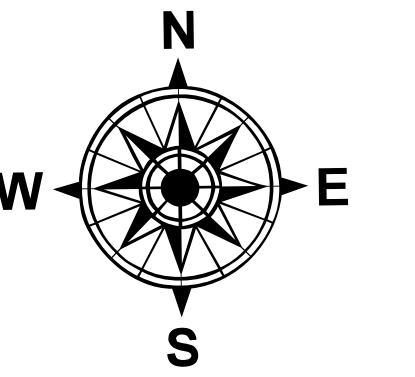


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1105

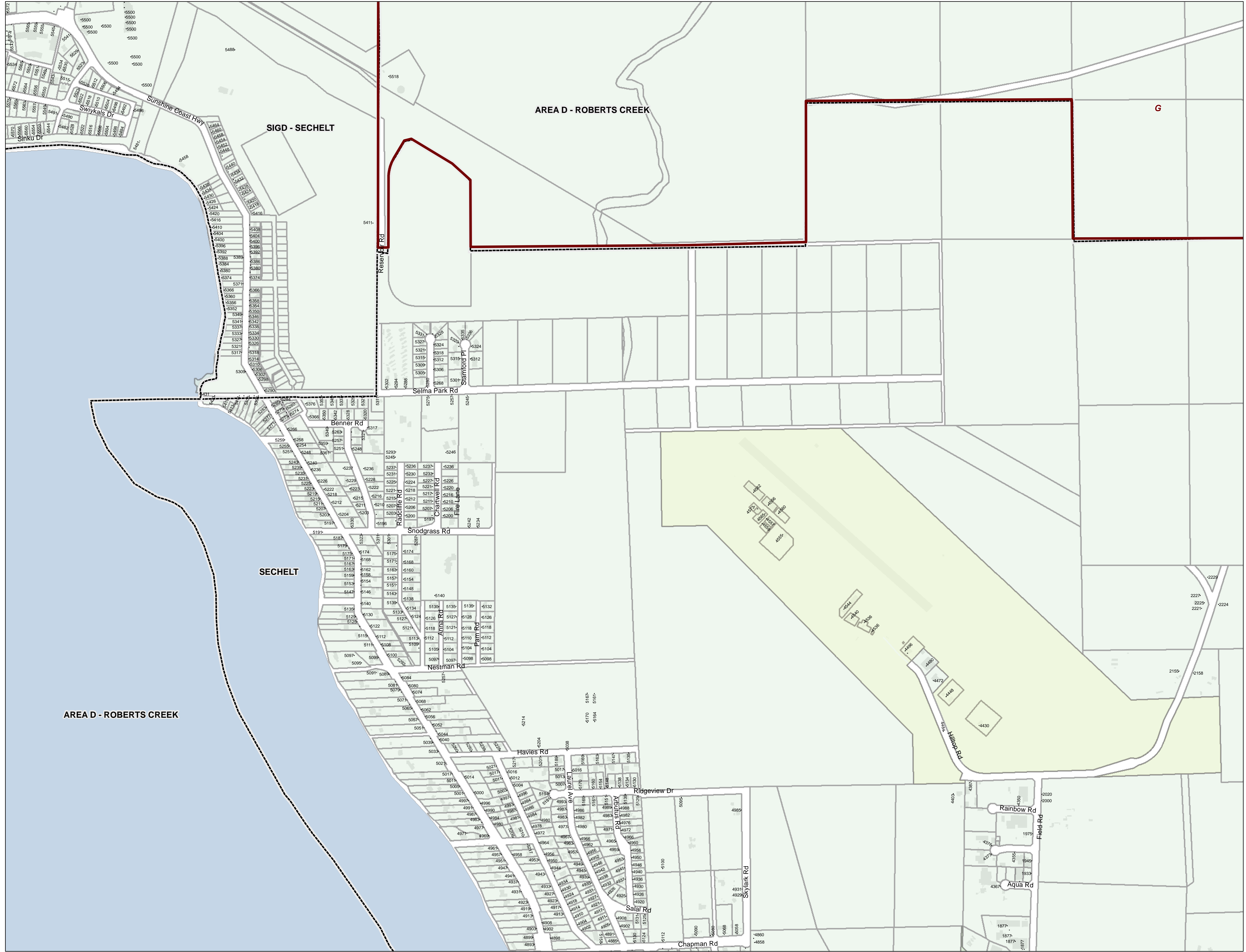


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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

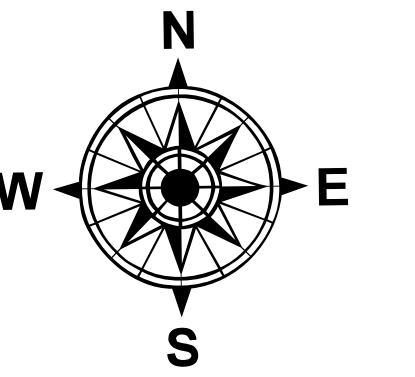


Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1106

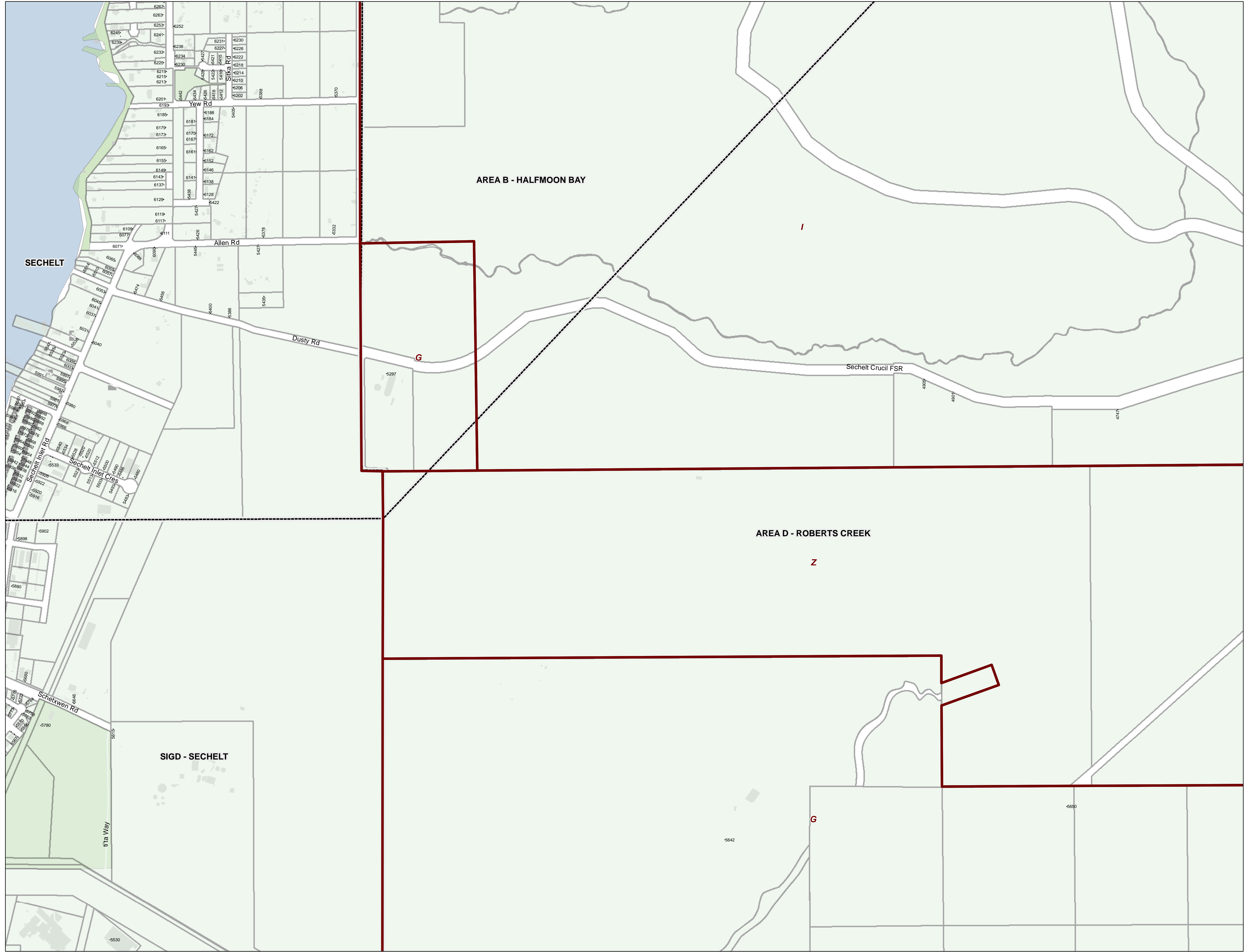


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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

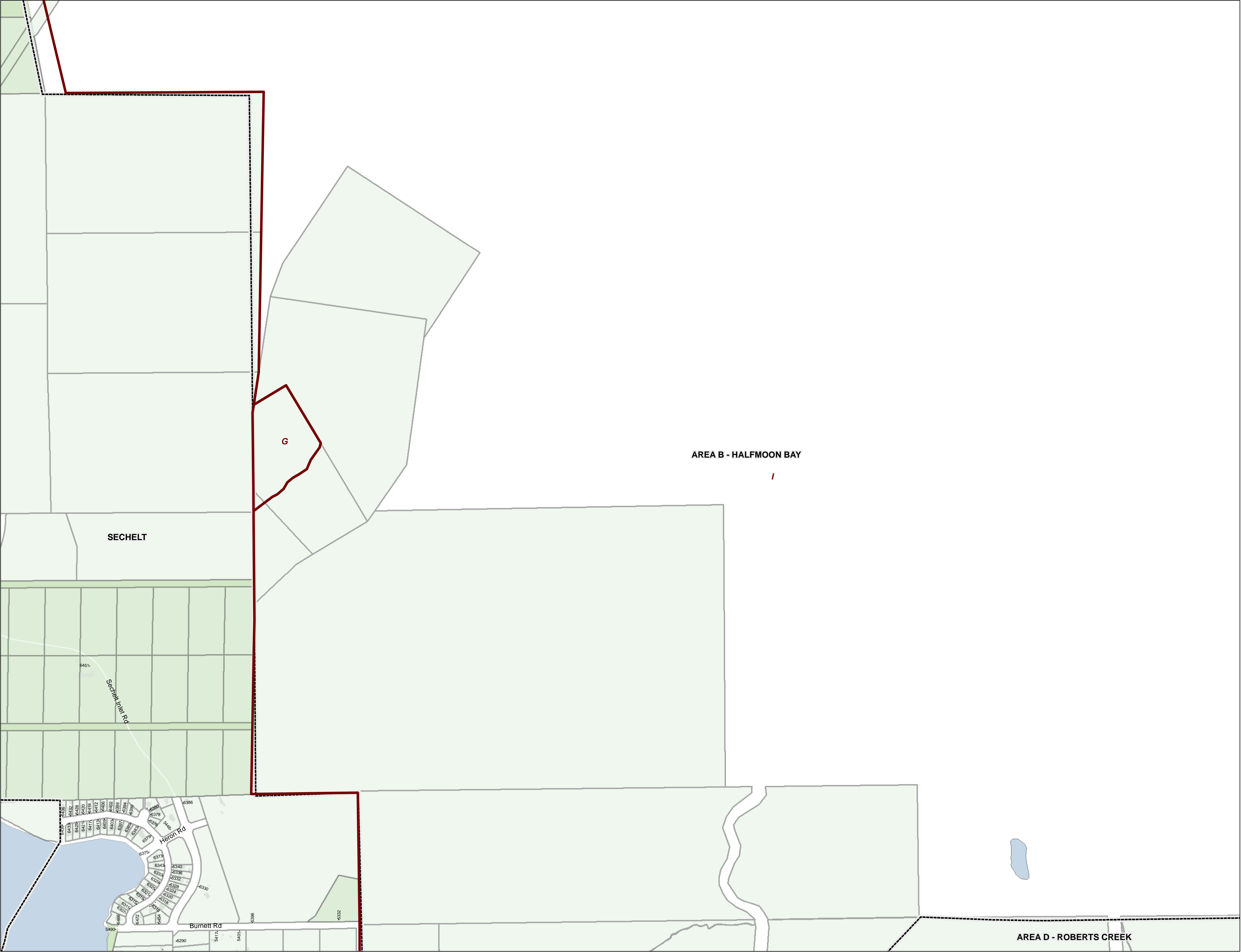
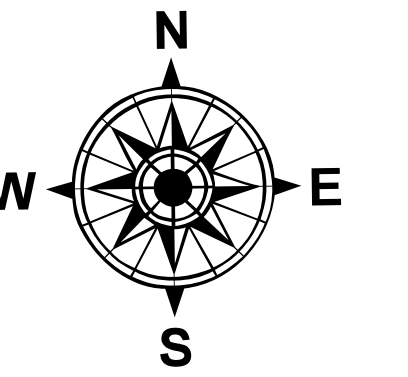


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1107



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Date: 2022-05-12
Scale - 1:5,000

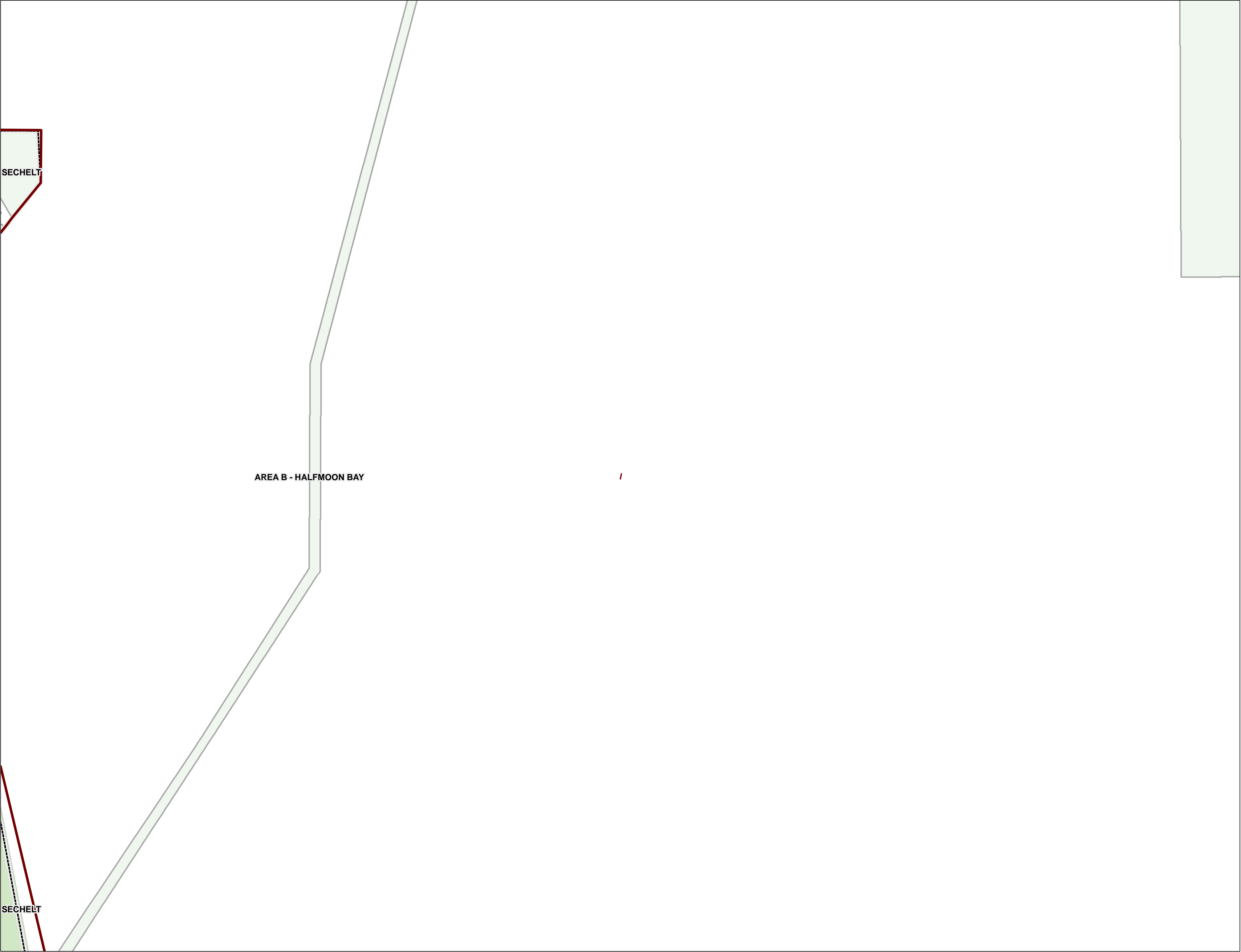
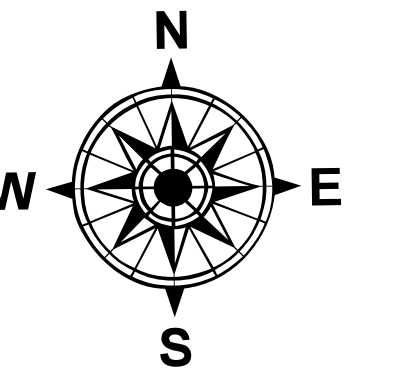
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1108



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Scale - 1:5,000

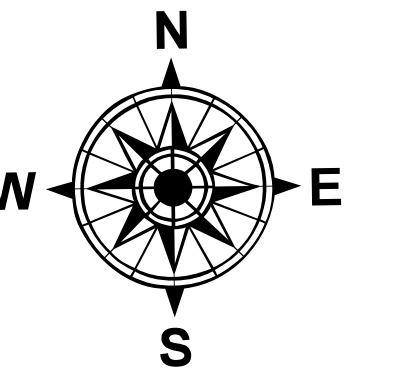
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1109



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Date: 2022-05-12
Scale - 1:5,000

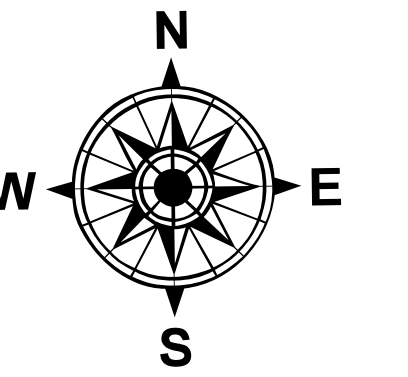
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1110



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Date: 2022-05-12
Scale - 1:5,000

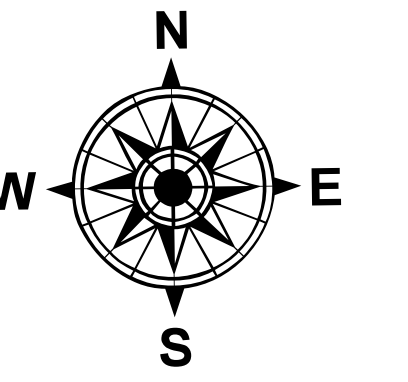
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1111



AREA D - ROBERTS CREEK

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Date: 2022-05-12
Scale - 1:5,000

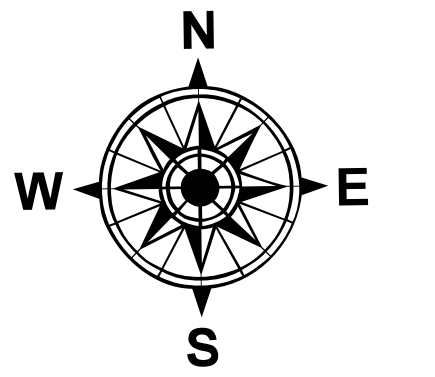
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

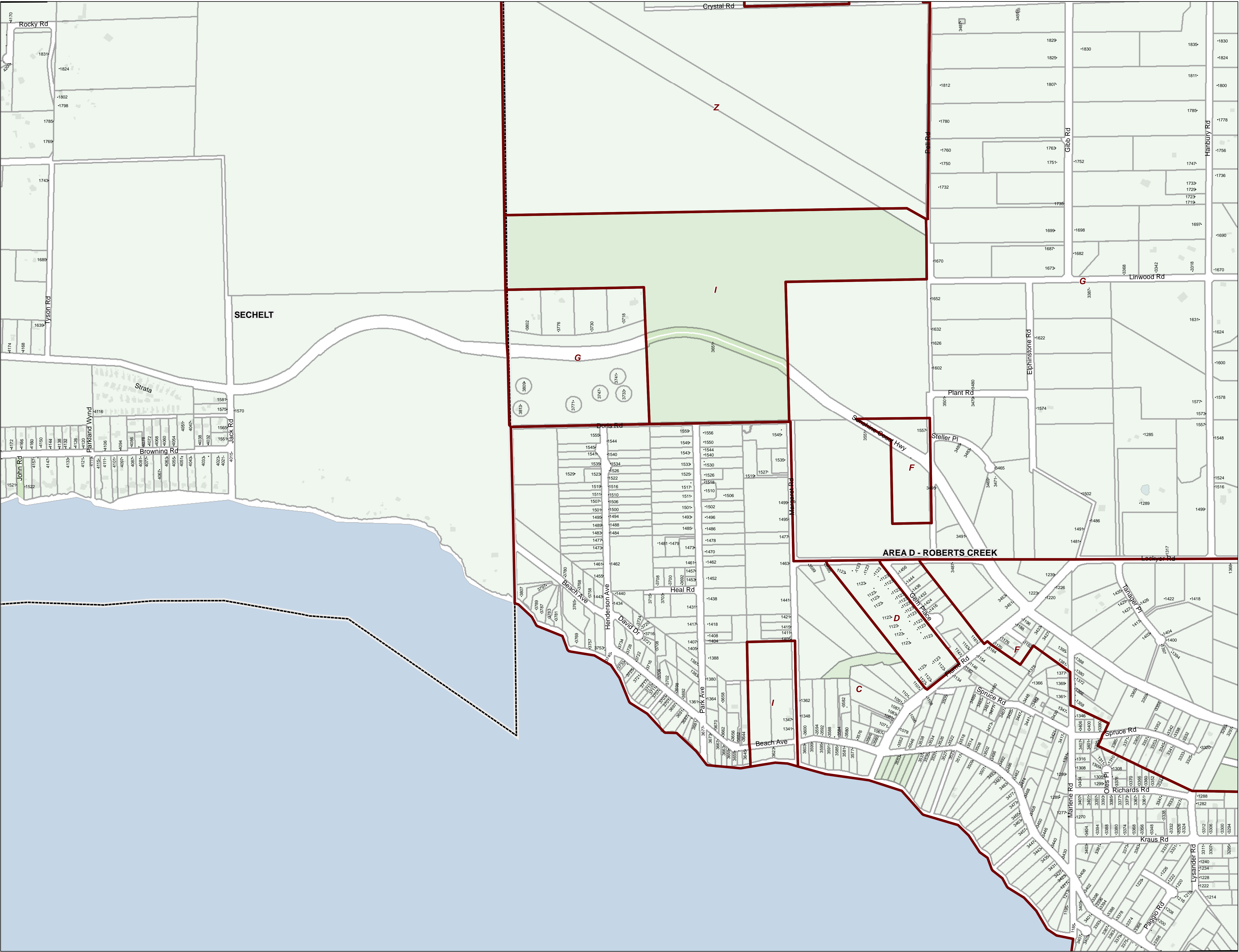
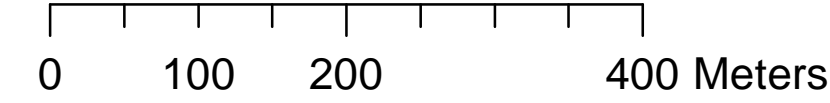
Map # 1204



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Date: 2022-05-12
Scale - 1:5,000

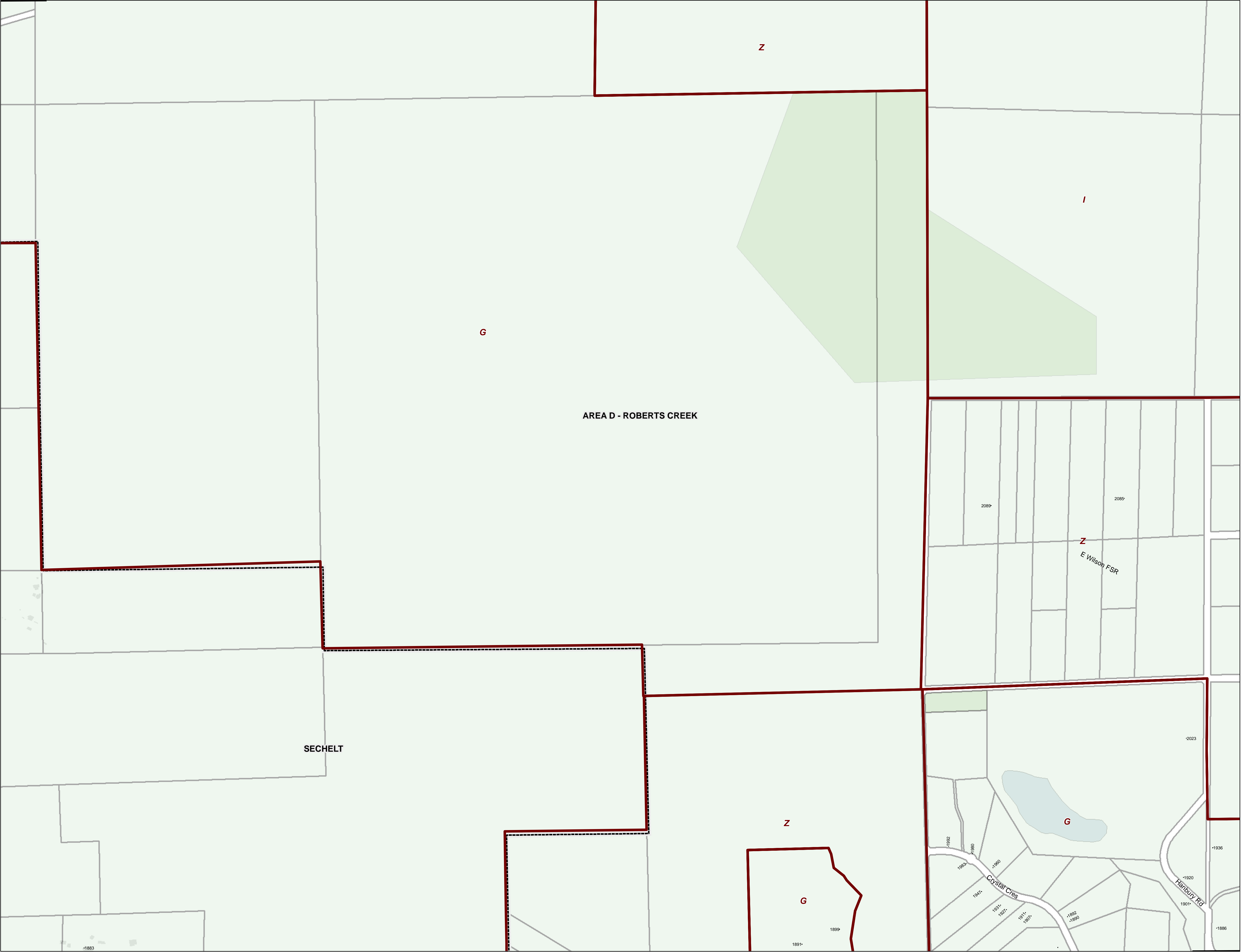


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

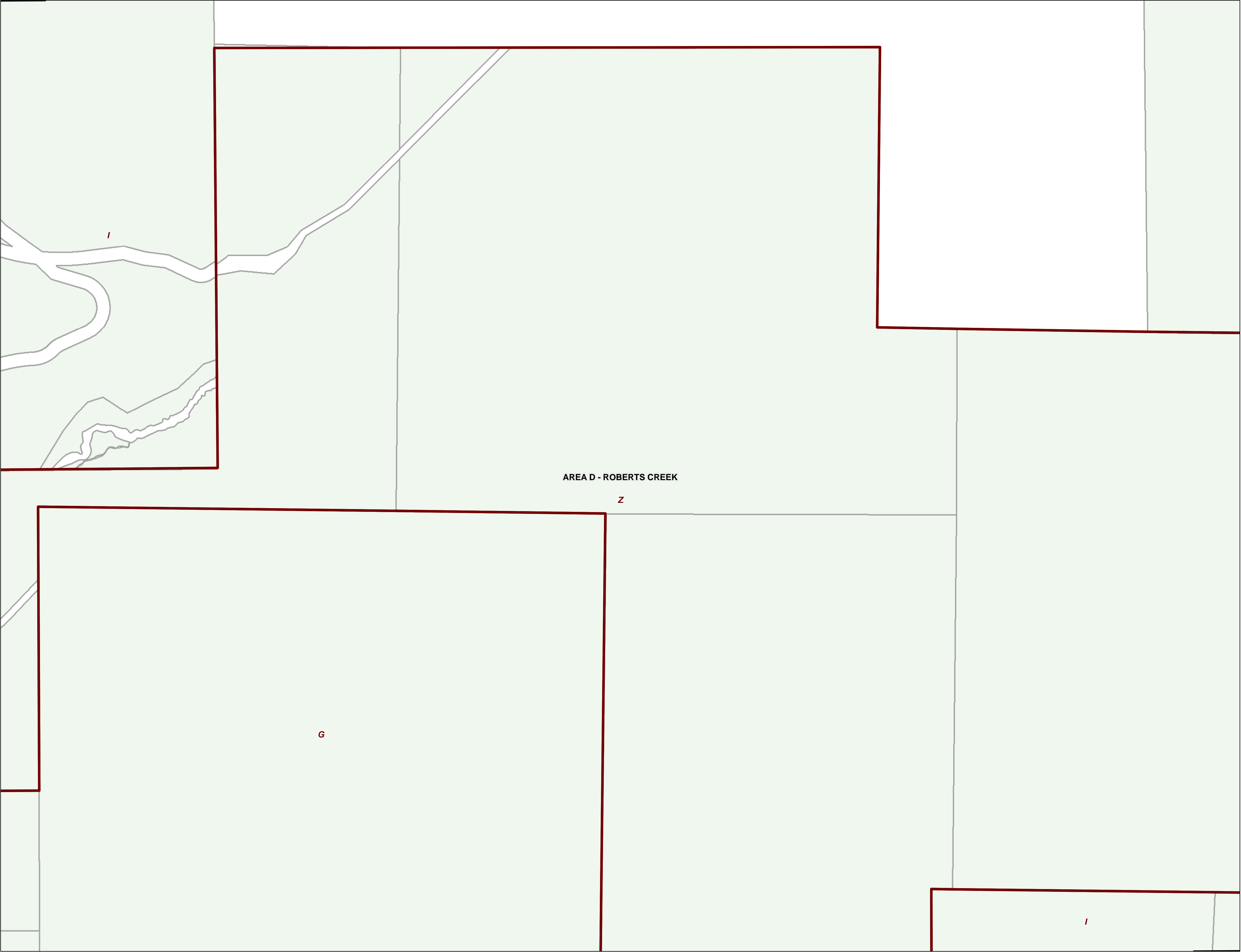
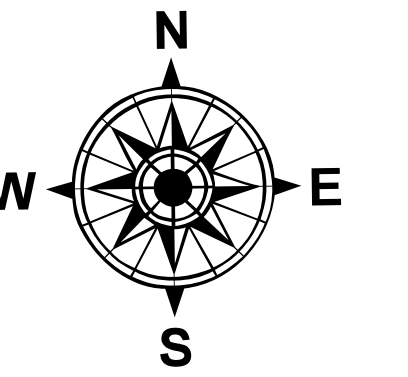
SUBDIVISION
LANDUSE ZONING

Map # 1205

The logo of the Sunshine Coast Regional District is a blue octagon. Inside the octagon, the words "SUNSHINE COAST" are written in white, uppercase letters along the top arc, and "REGIONAL DISTRICT" is written along the bottom arc. In the center of the octagon is a white, stylized sunburst or starburst design.

A horizontal number line with tick marks at 0, 100, 200, and 400. The label "400 Meters" is at the right end.

Map # 1206



This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-05-12
Scale - 1:5,000

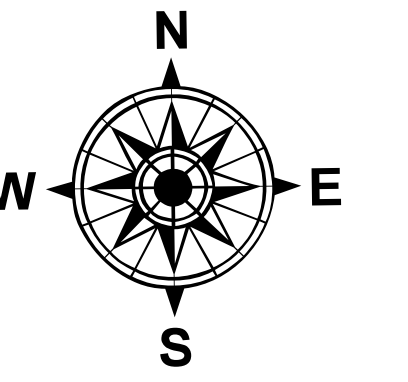
0 100 200 400 Meters

Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1207




This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-05-12
Scale - 1:5,000

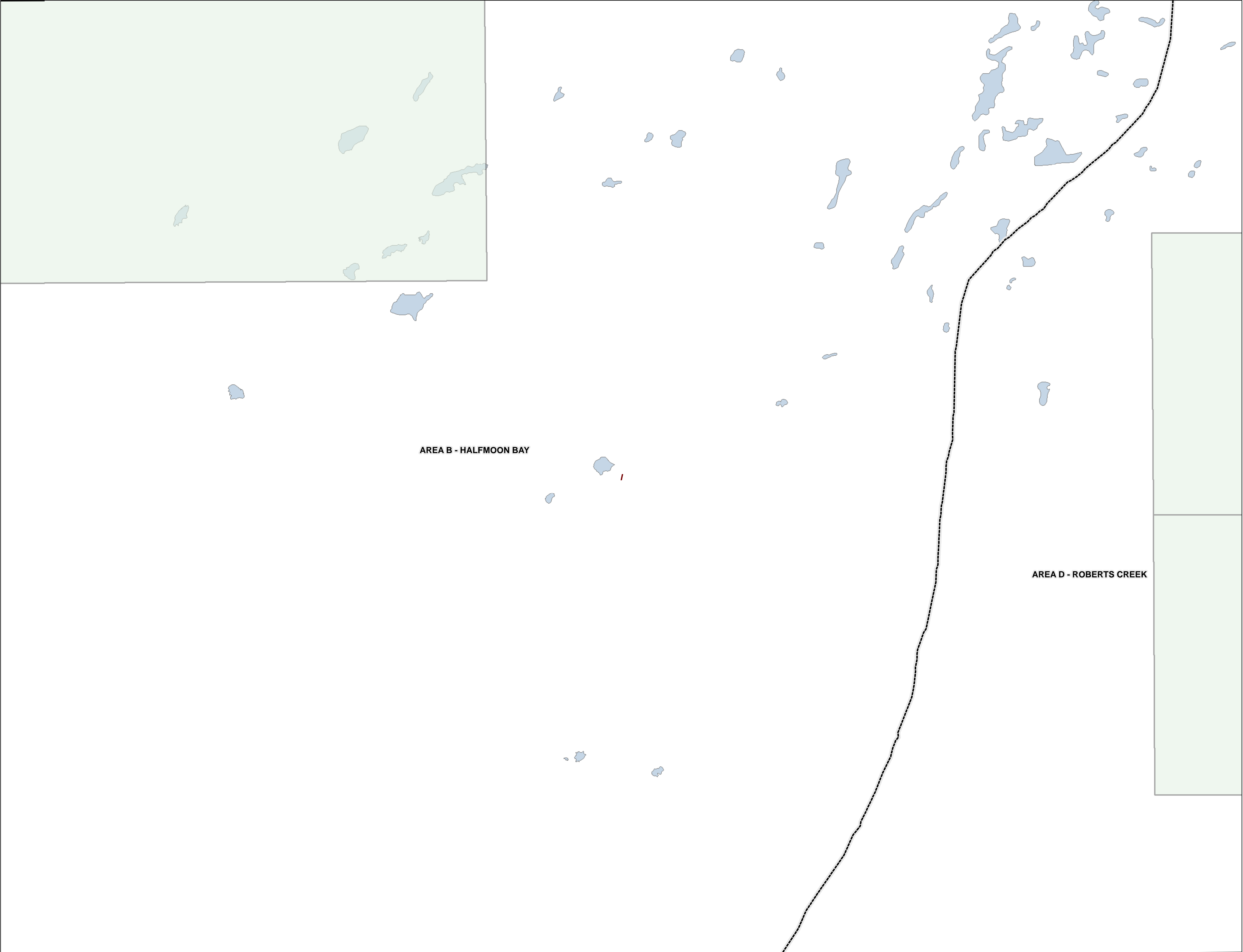
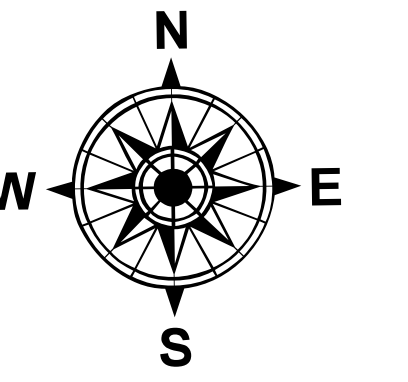
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1208



AREA B - HALFMOON BAY

AREA D - ROBERTS CREEK

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Date: 2022-05-12
Scale - 1:5,000

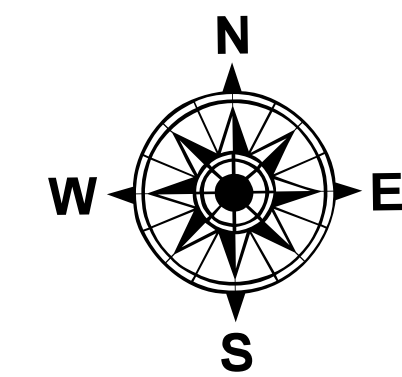
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1209

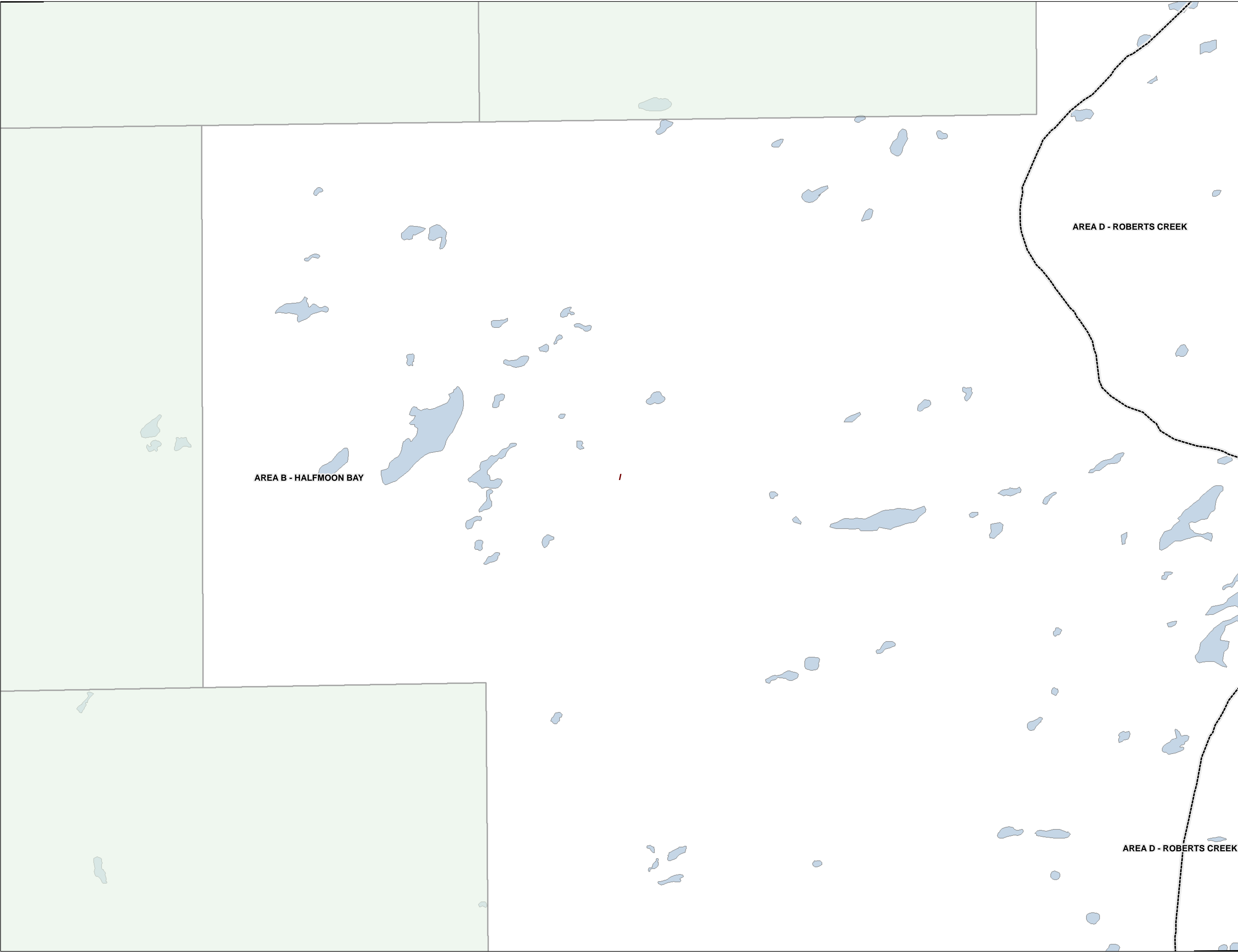



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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

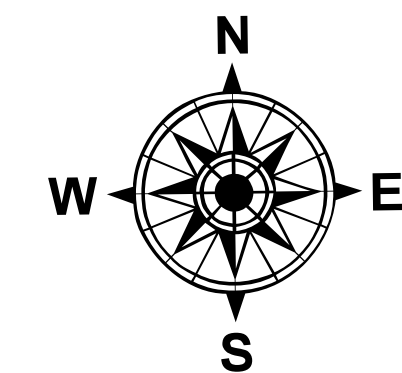


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1210



This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-05-12
Scale - 1:5,000

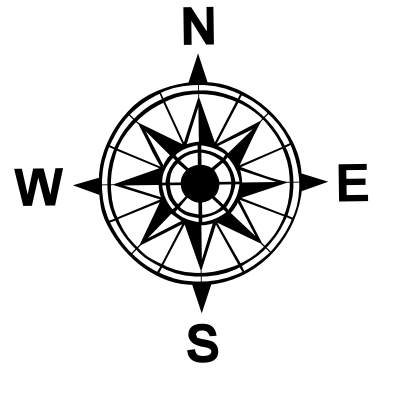
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

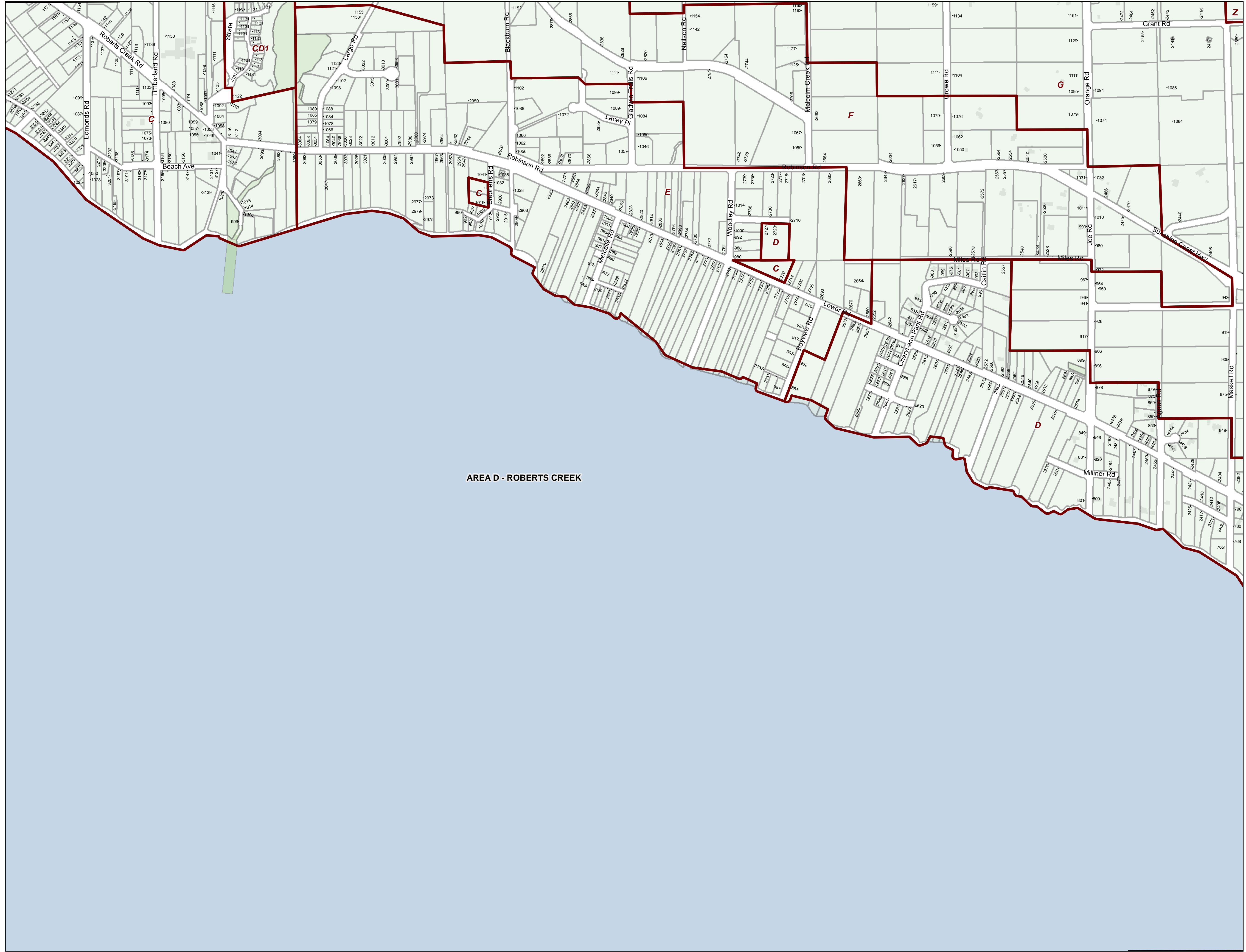
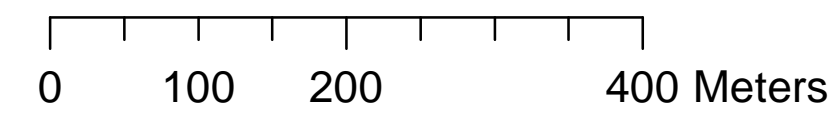
Map # 1211




This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-05-12
Scale - 1:5,000

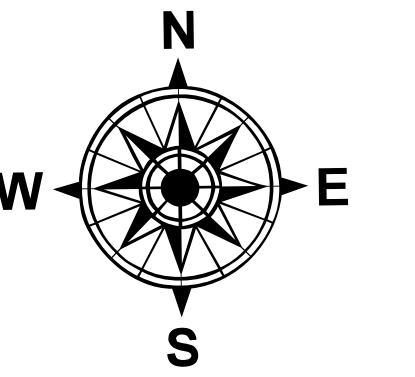


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

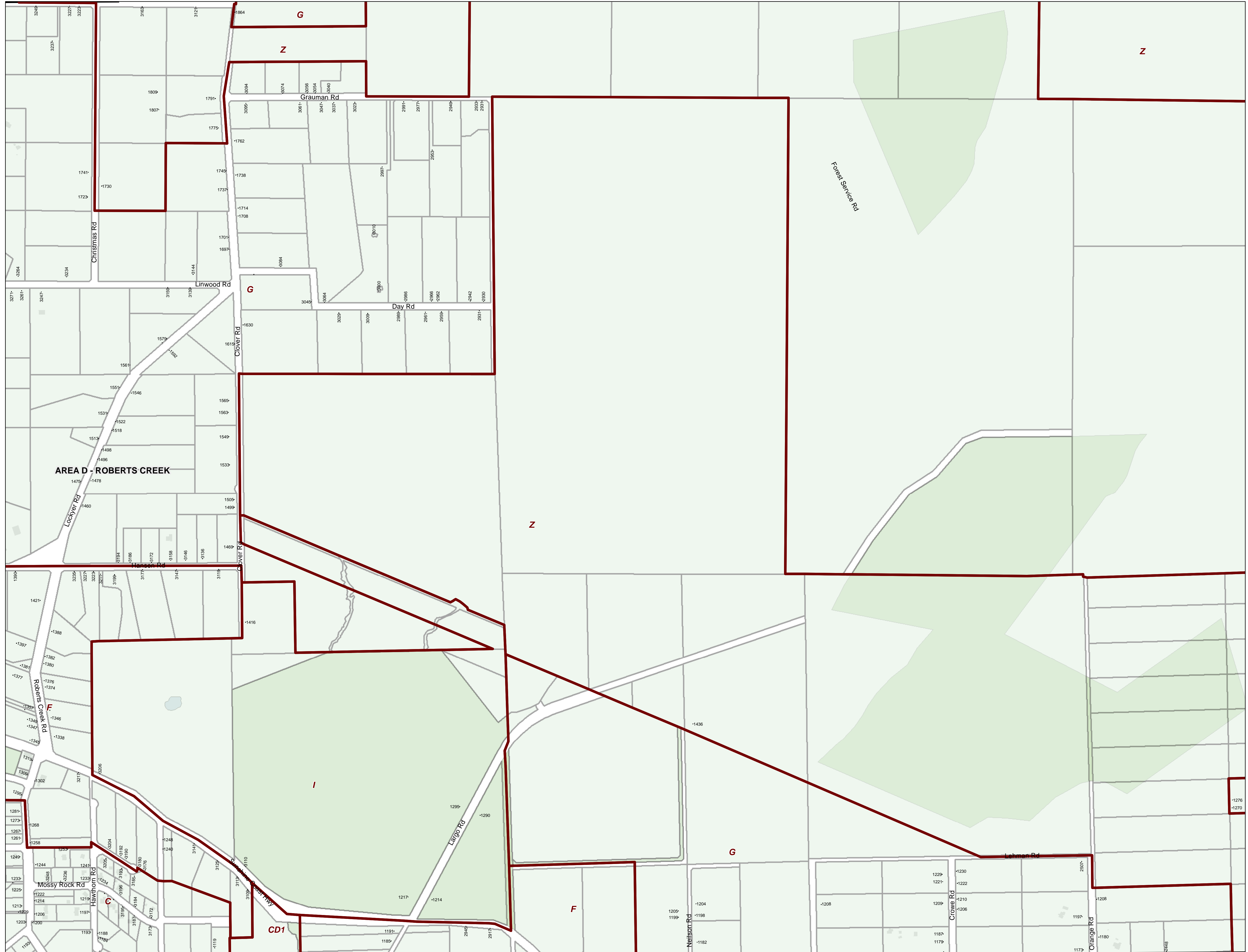
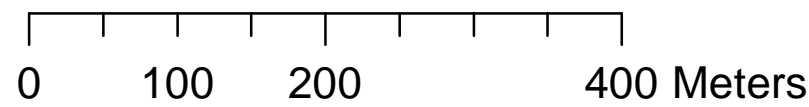
Map # 1304




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Date: 2022-05-12
Scale - 1:5,000

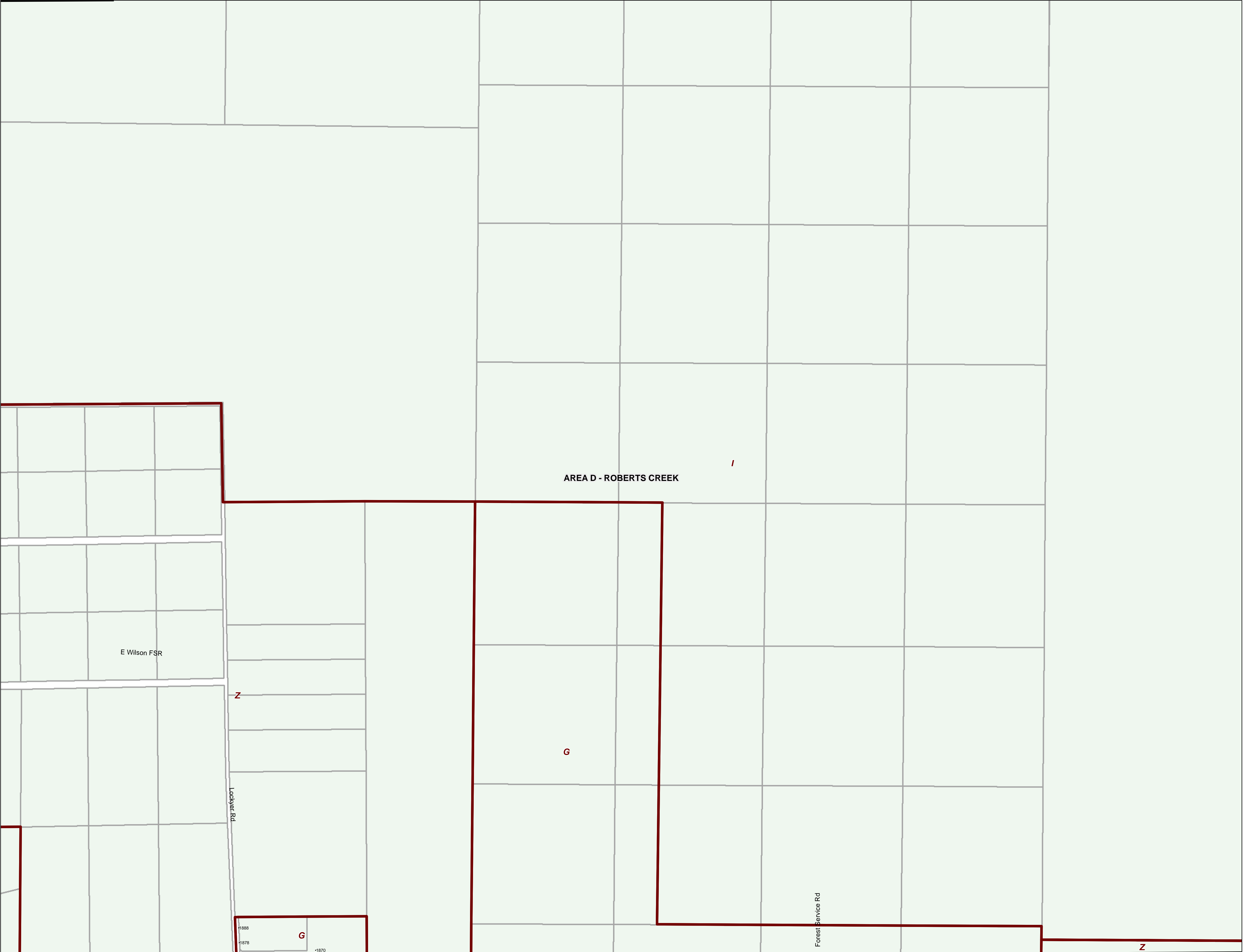
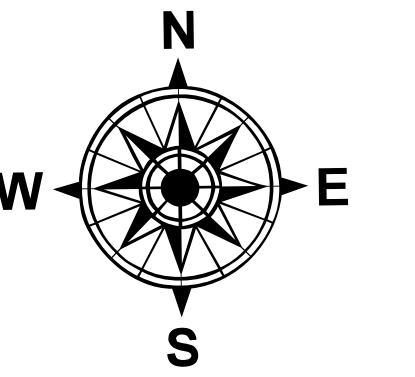


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

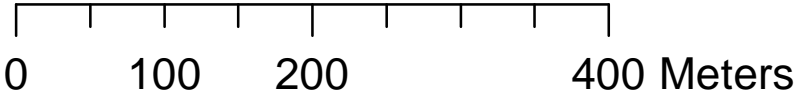
Map # 1305



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Date: 2022-05-12
Scale - 1:5,000

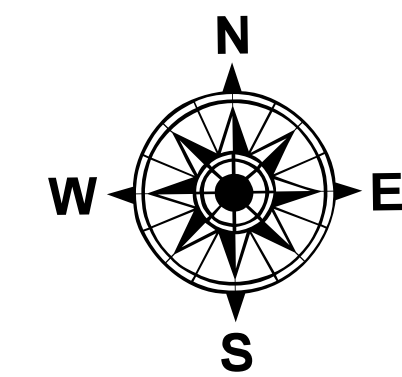


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1306

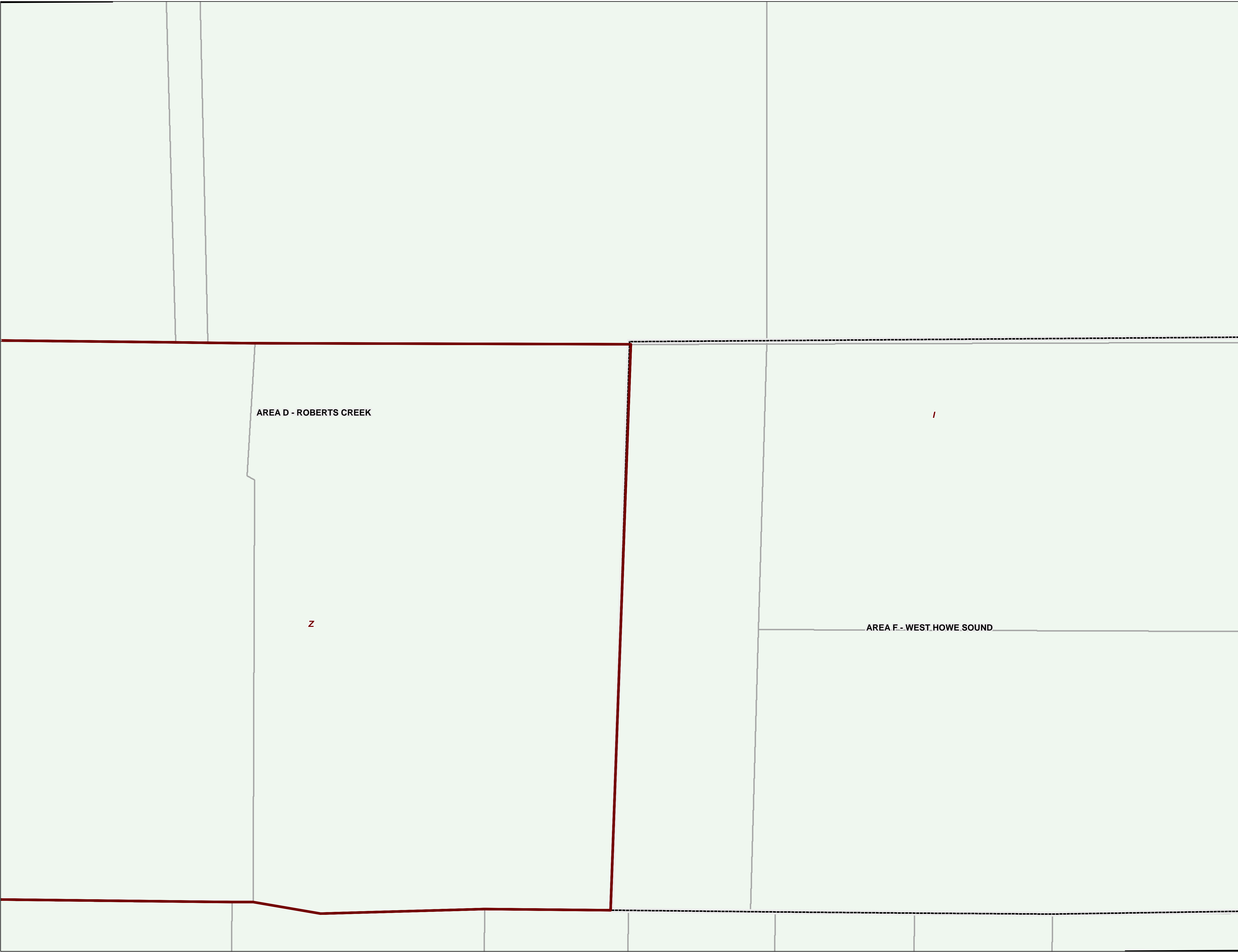


This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

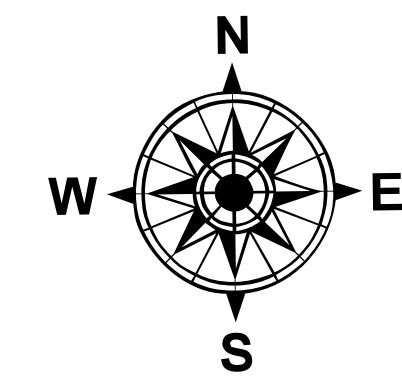


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1307



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Date: 2022-05-12
Scale - 1:5,000

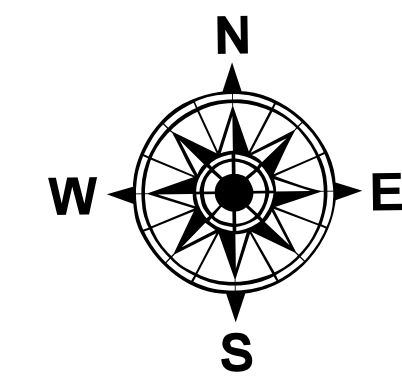
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1308




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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

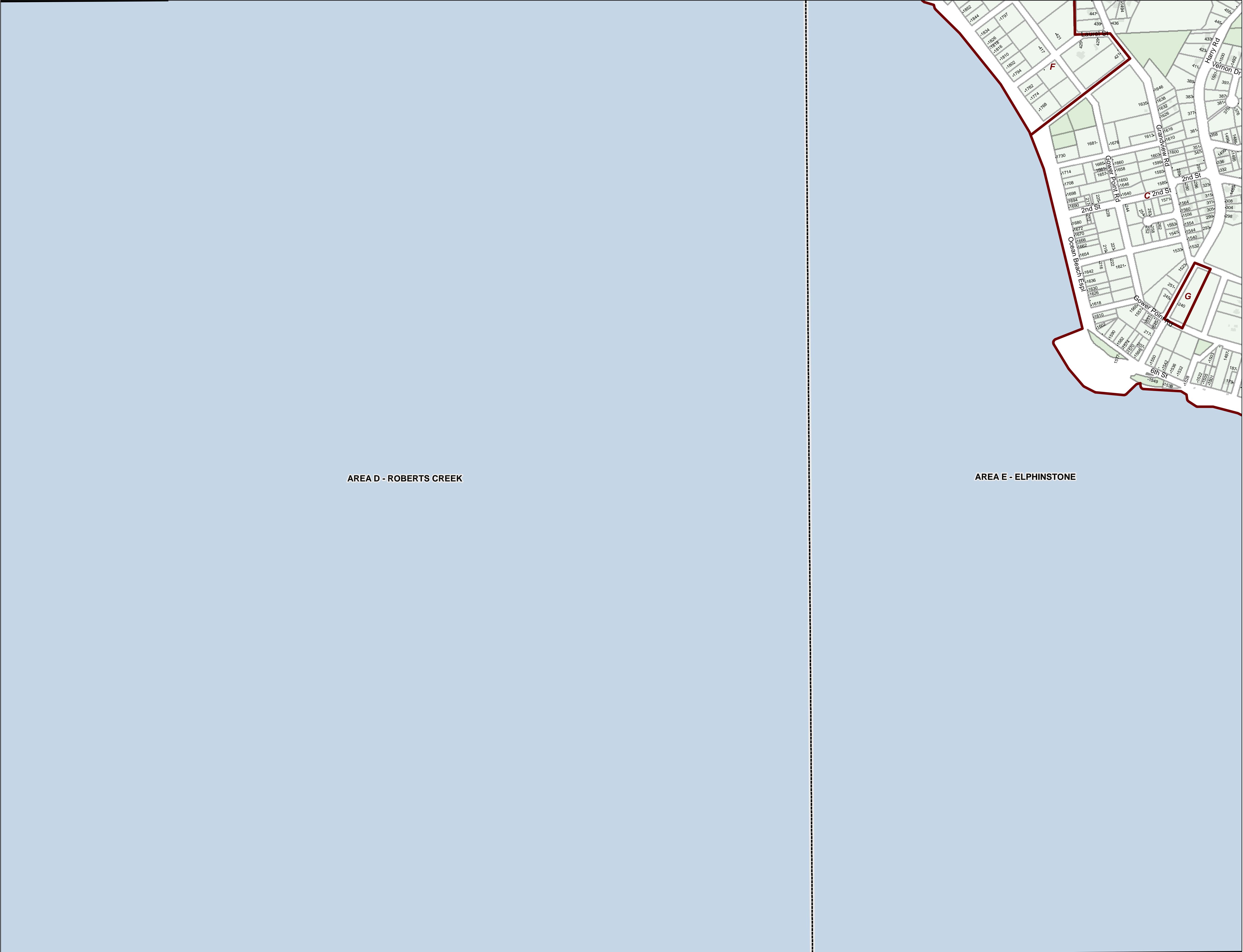
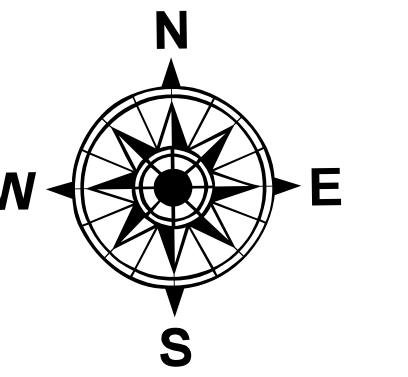


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1309



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Date: 2022-05-12
Scale - 1:5,000

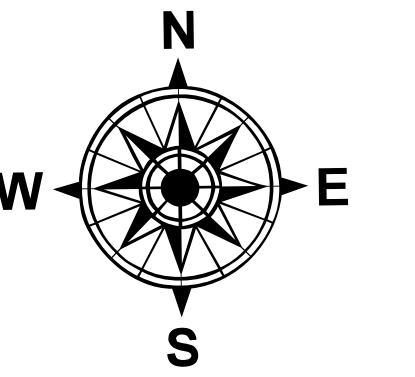
0 100 200 400 Meters

Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

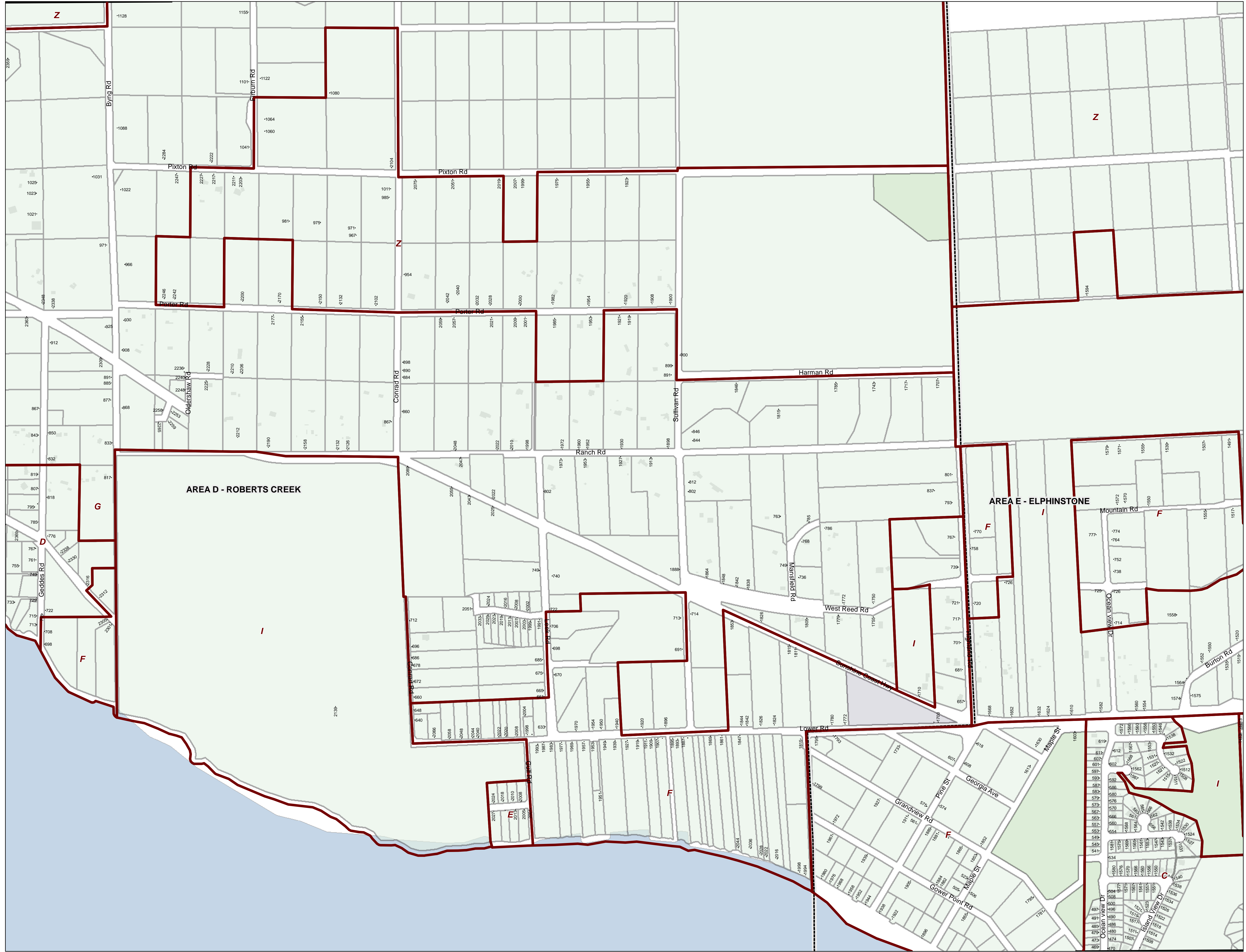
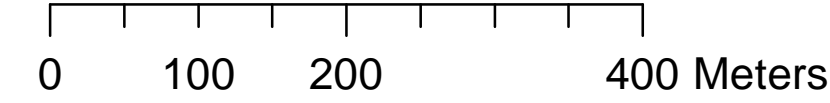
Map # 1403



This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-05-12
Scale - 1:5,000

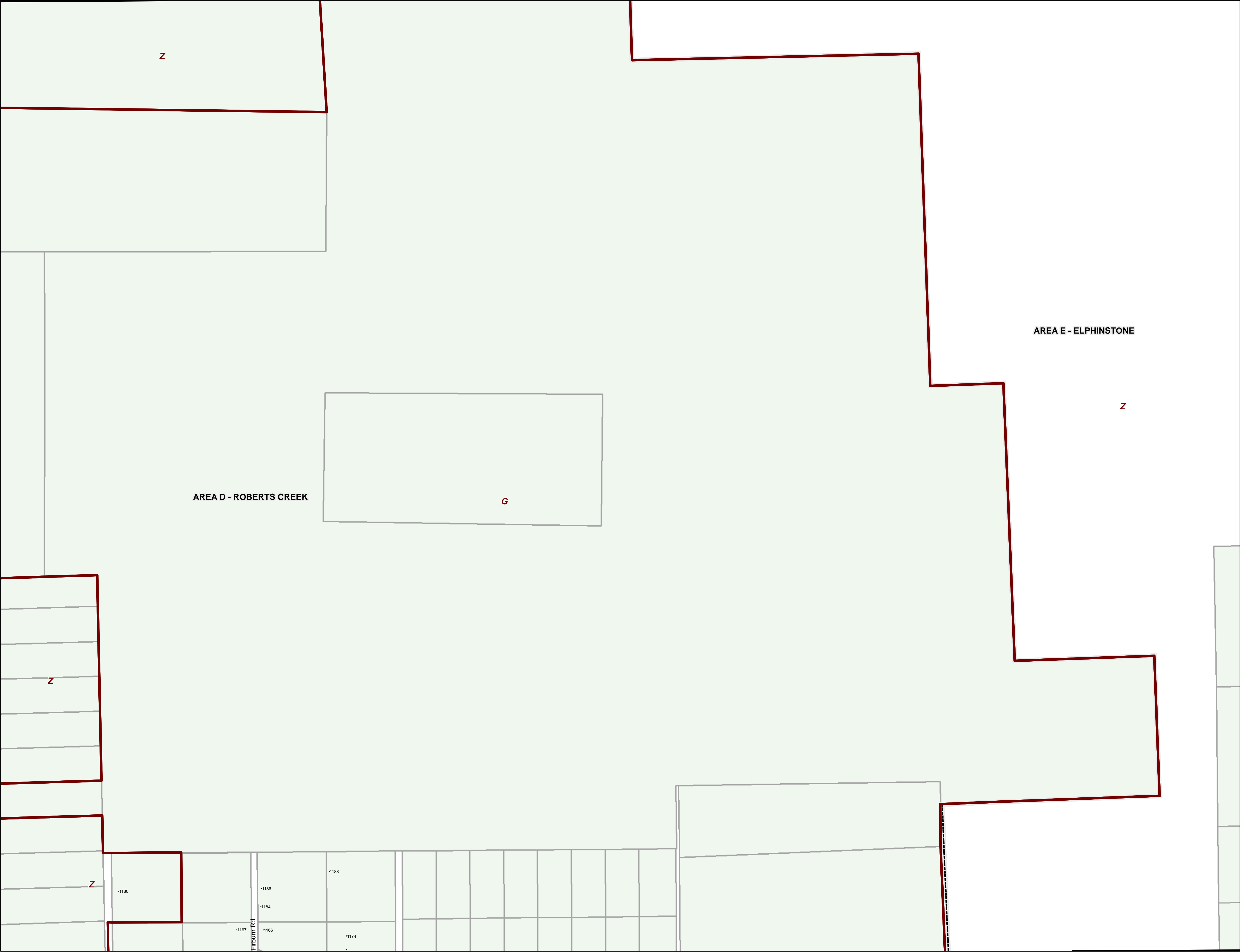
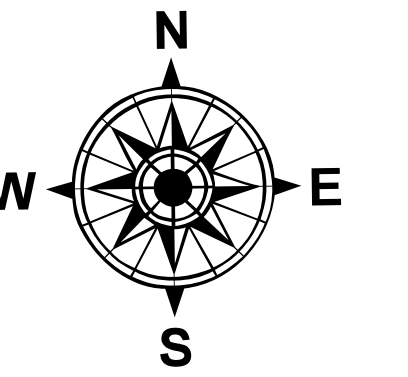


Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

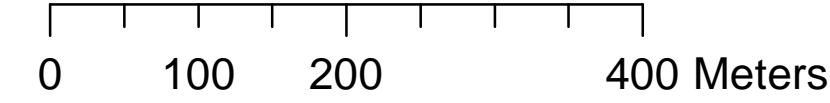
Map # 1404



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Date: 2022-05-12
Scale - 1:5,000

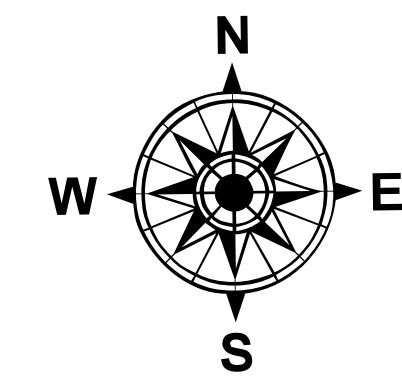


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1405

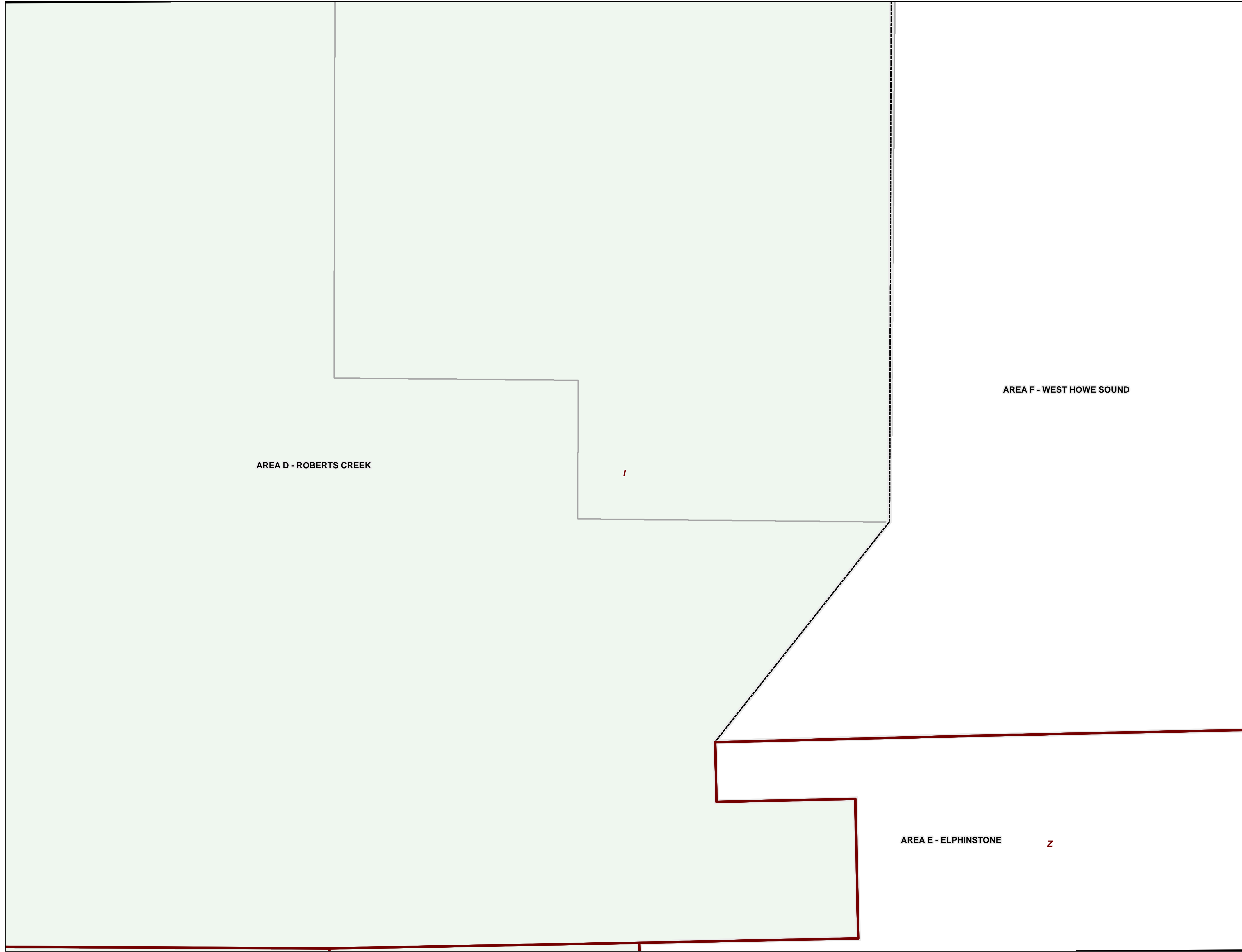



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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

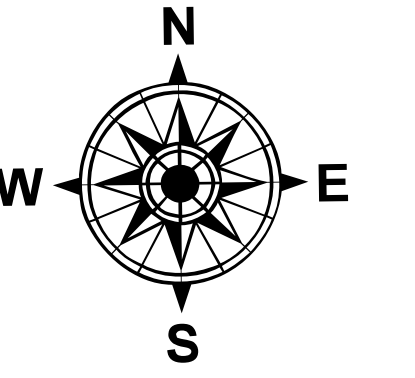


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

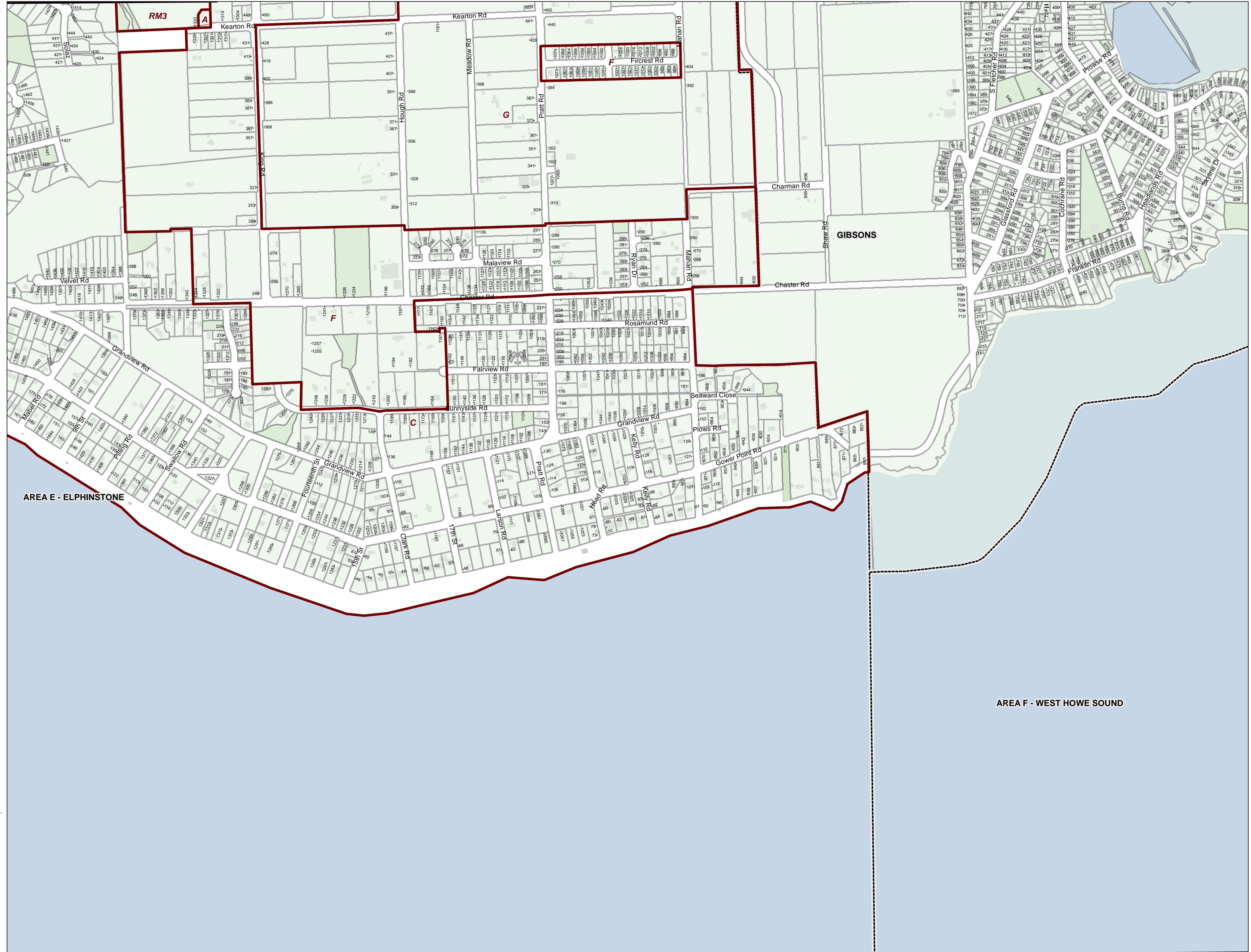
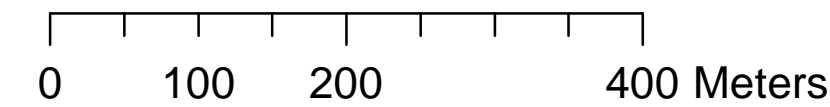
Map # 1406



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Date: 2022-05-12
Scale - 1:5,000

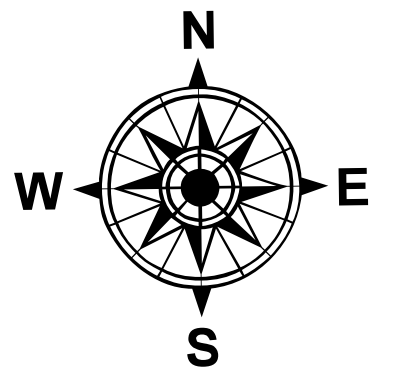


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1503

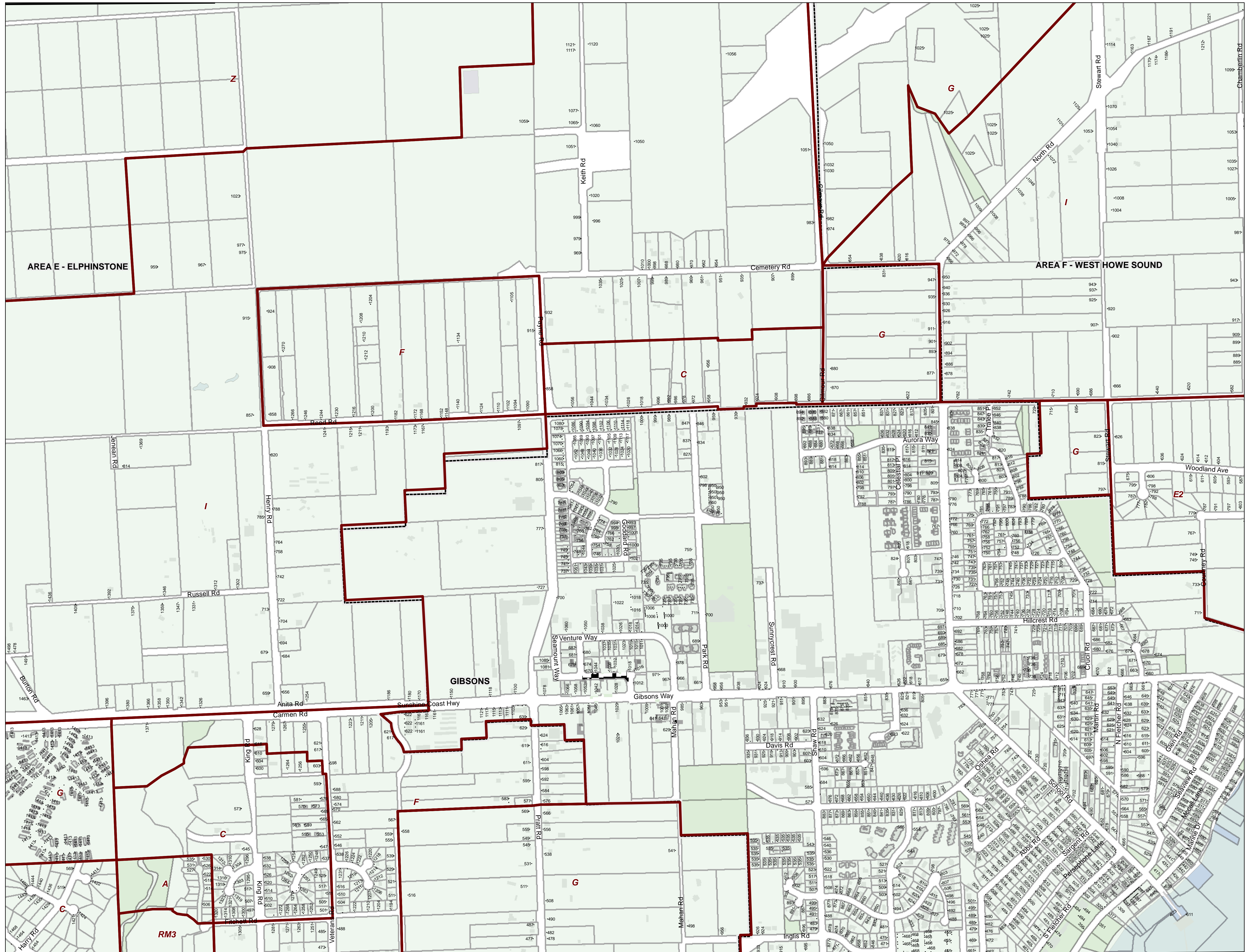


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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

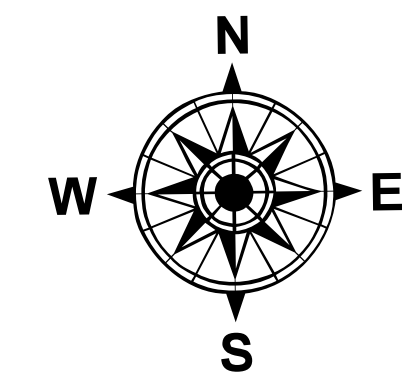


Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

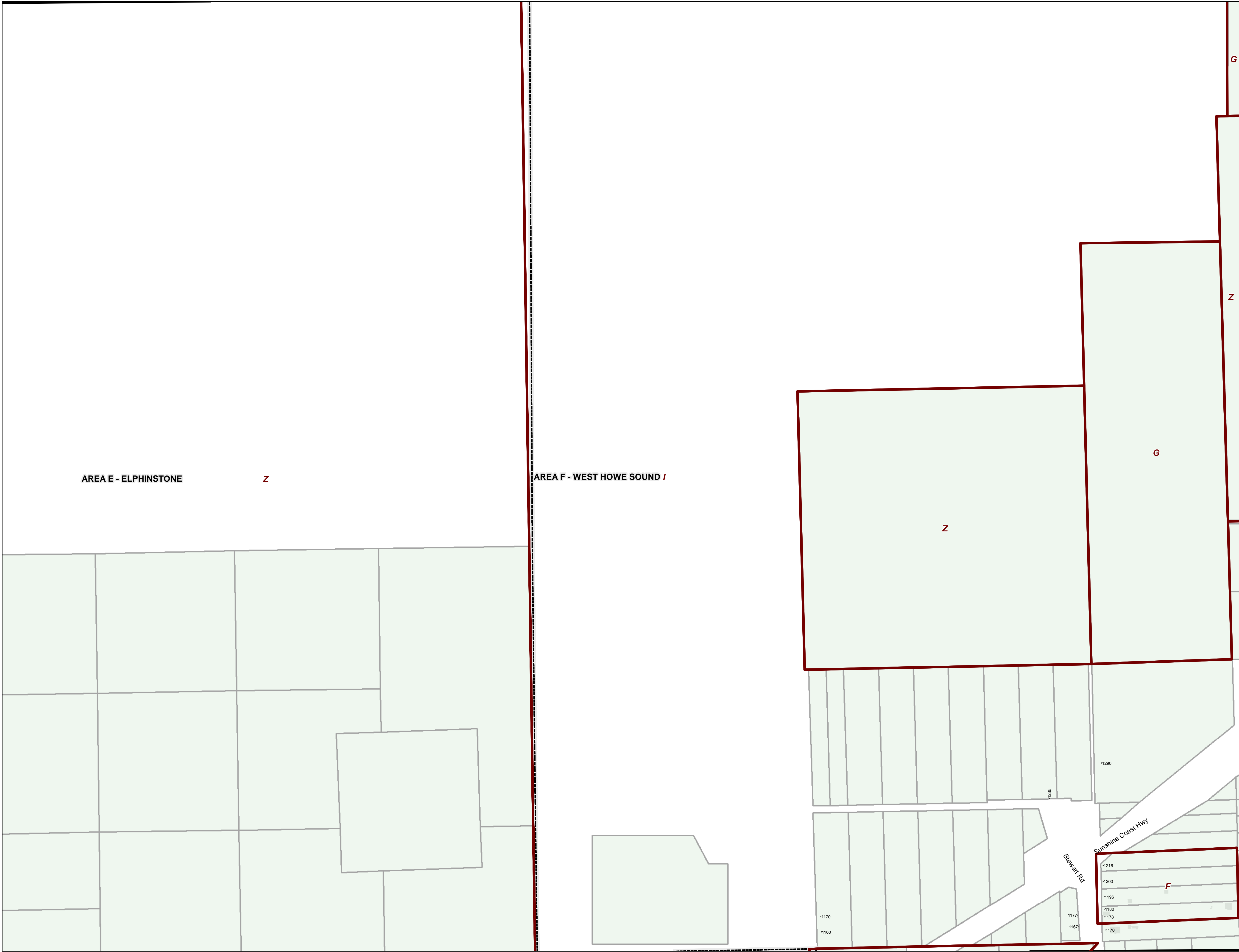
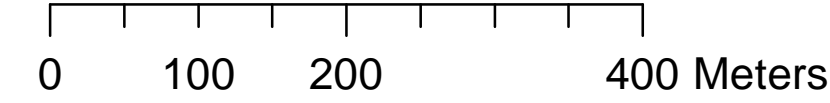
Map # 1504



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Date: 2022-05-12
Scale - 1:5,000

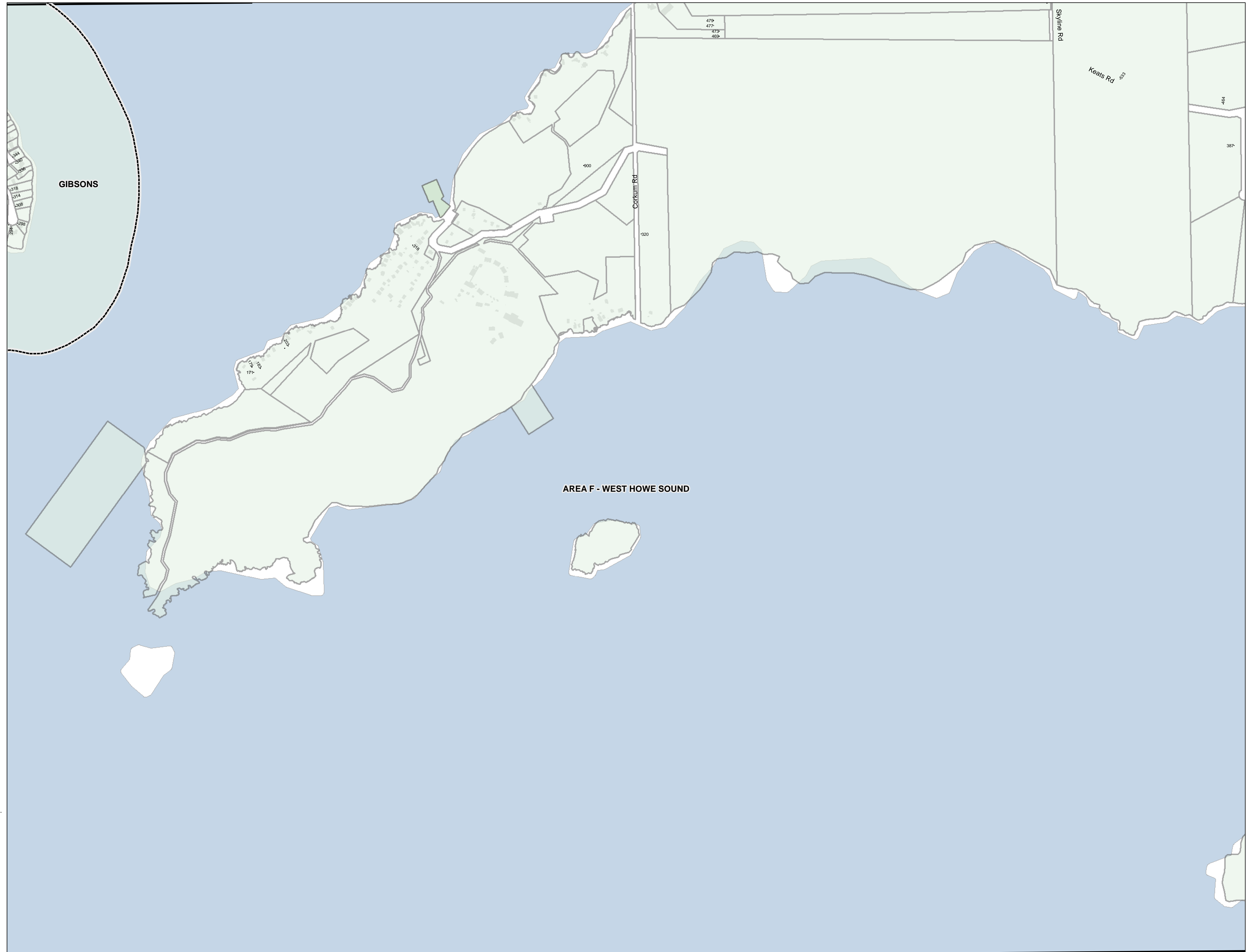


Zoning Subdivision

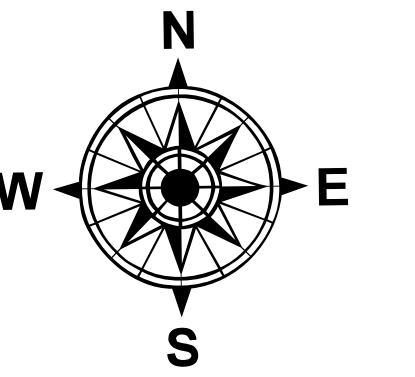
BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1505



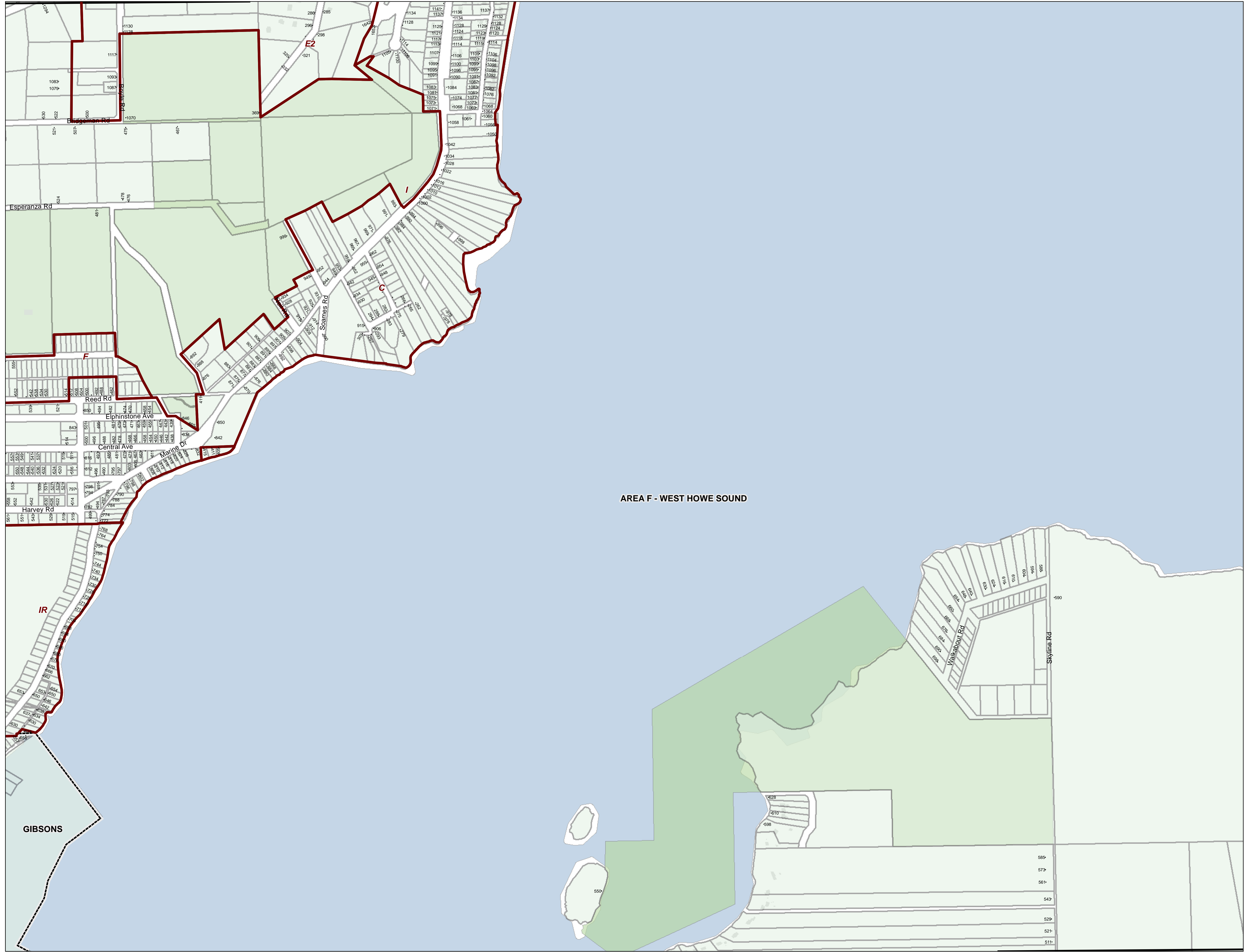
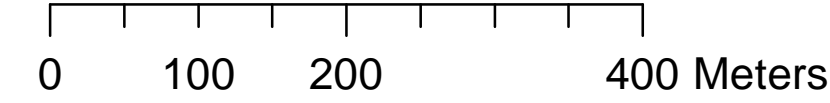
Map # 1603



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Date: 2022-05-12
Scale - 1:5,000

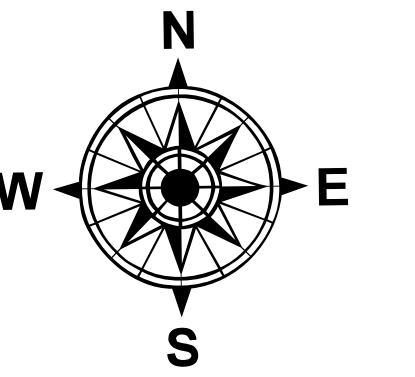


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1604

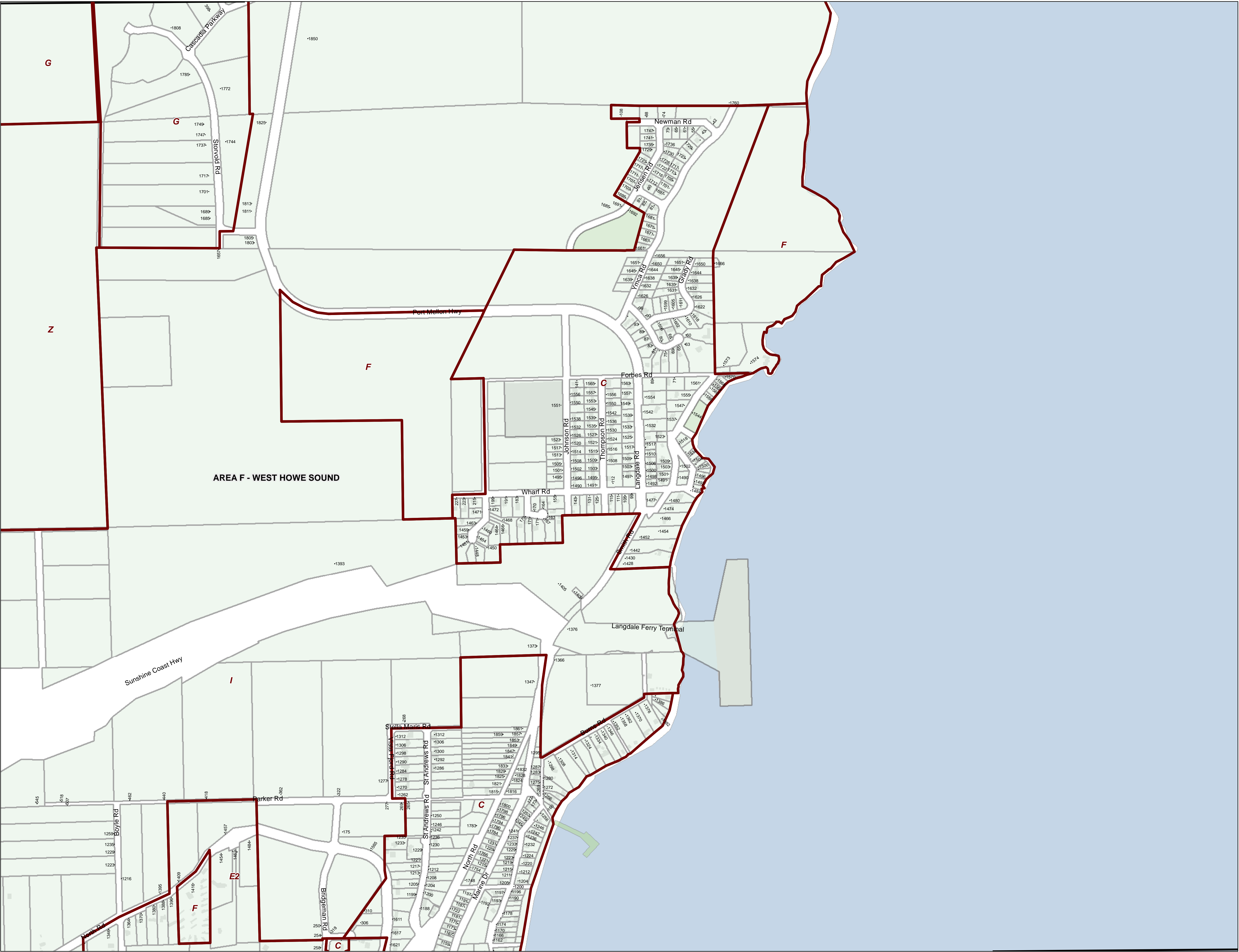


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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

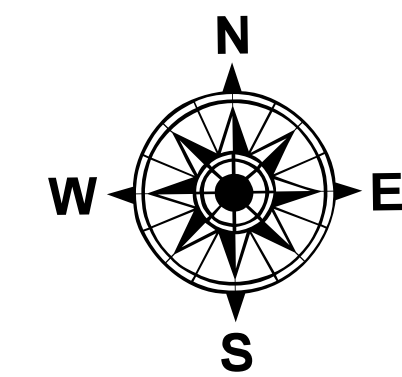


Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1605

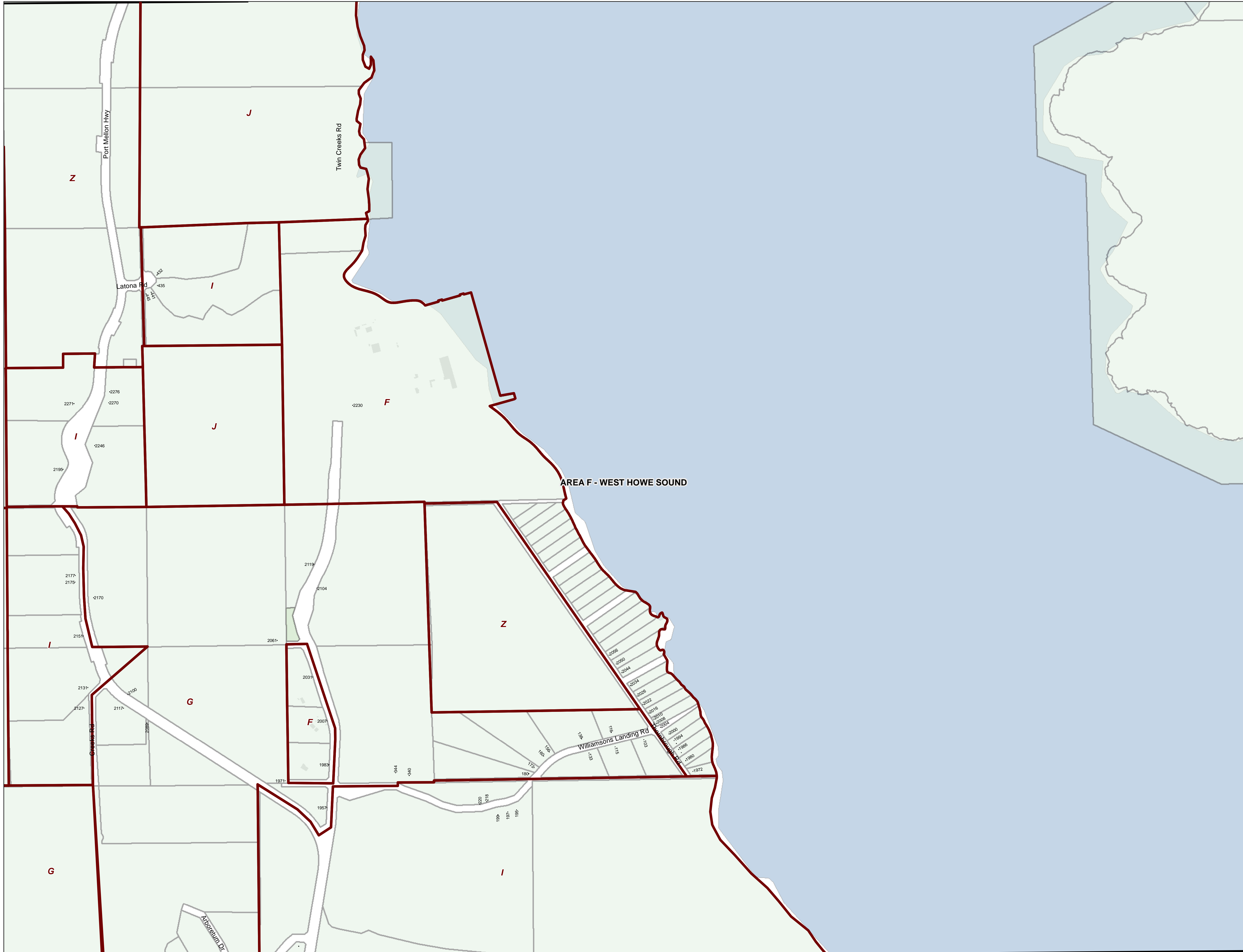


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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

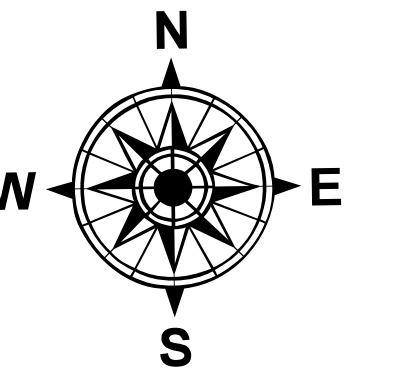


Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1606

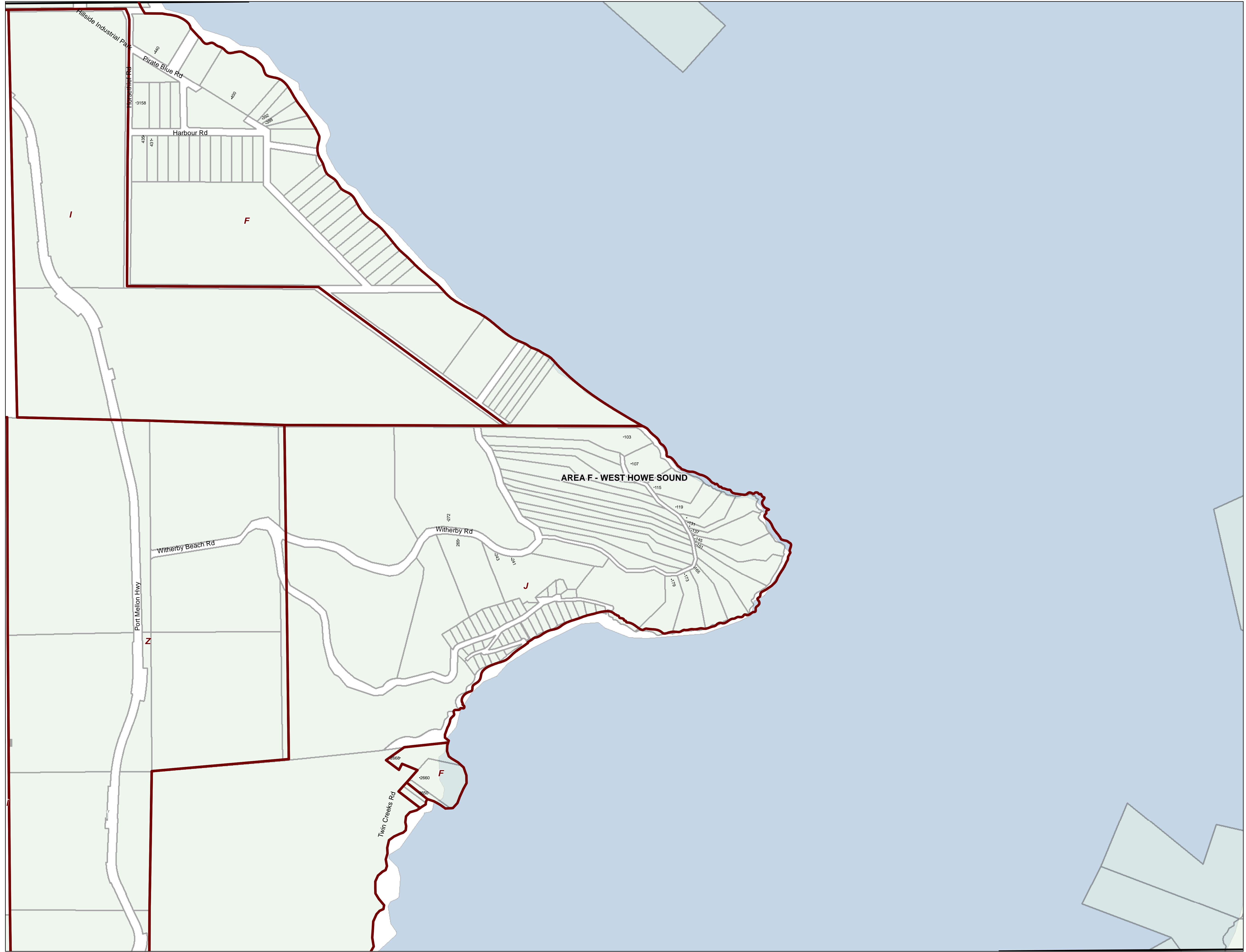


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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters



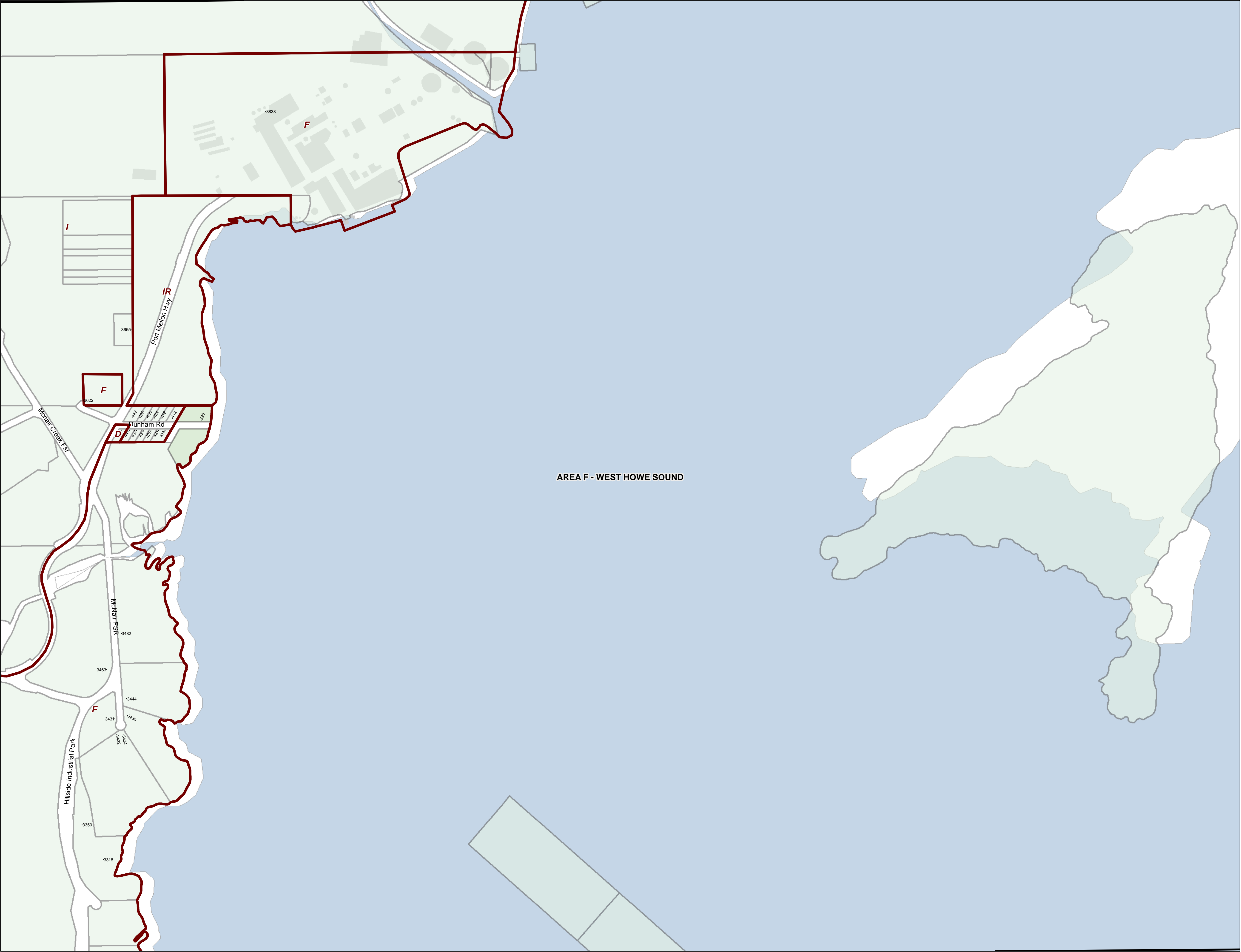
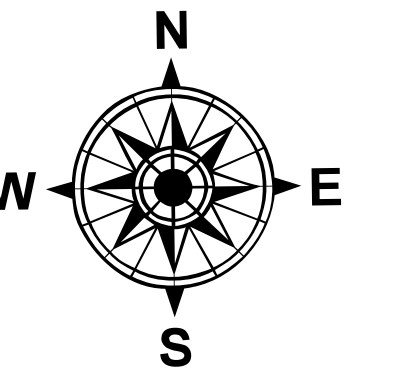
AREA F - WEST HOWE SOUND

Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1607



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Date: 2022-05-12
Scale - 1:5,000

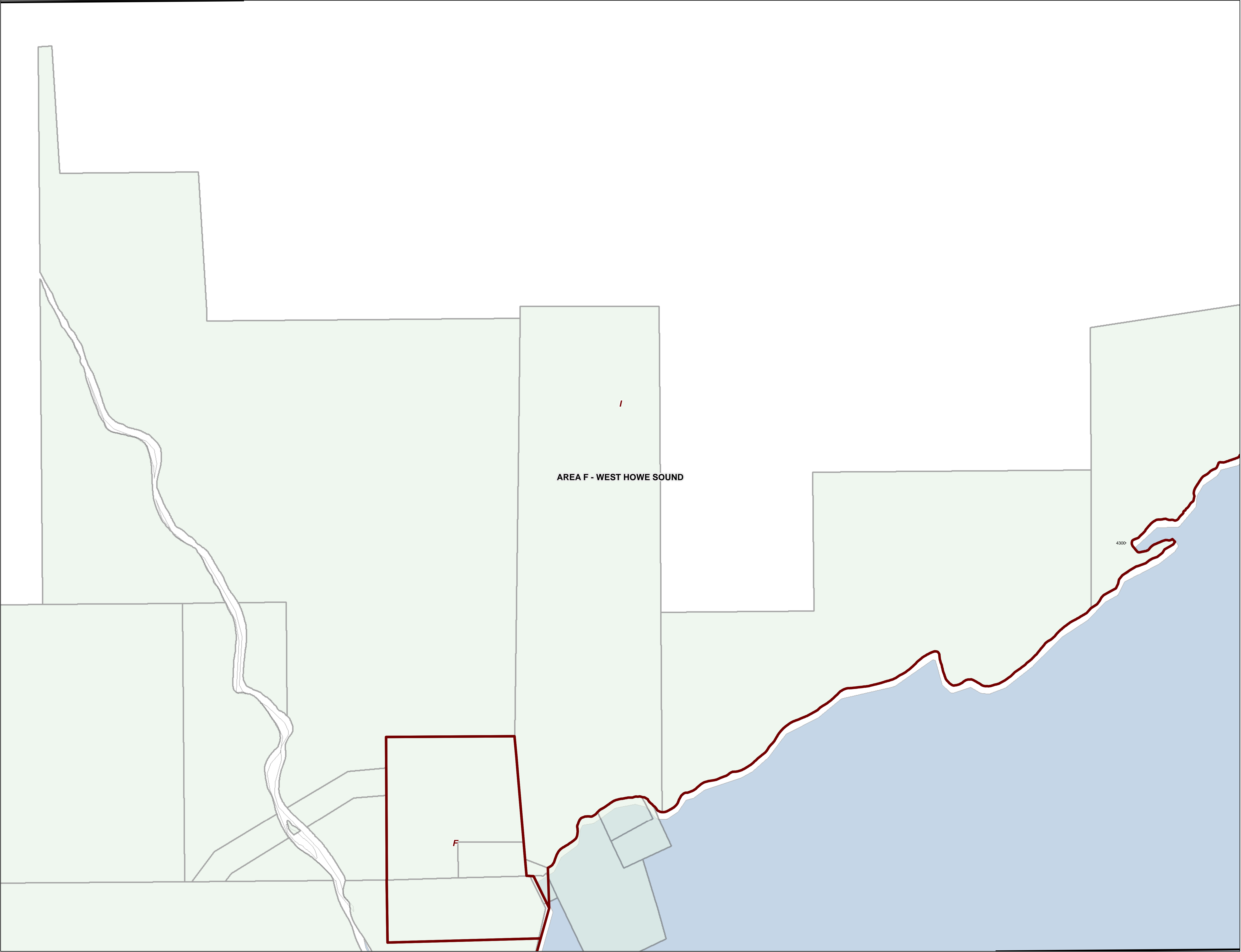
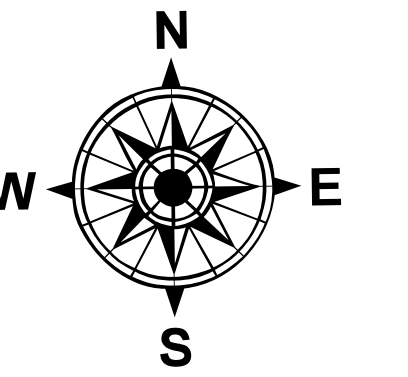
0 100 200 400 Meters

Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1608



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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

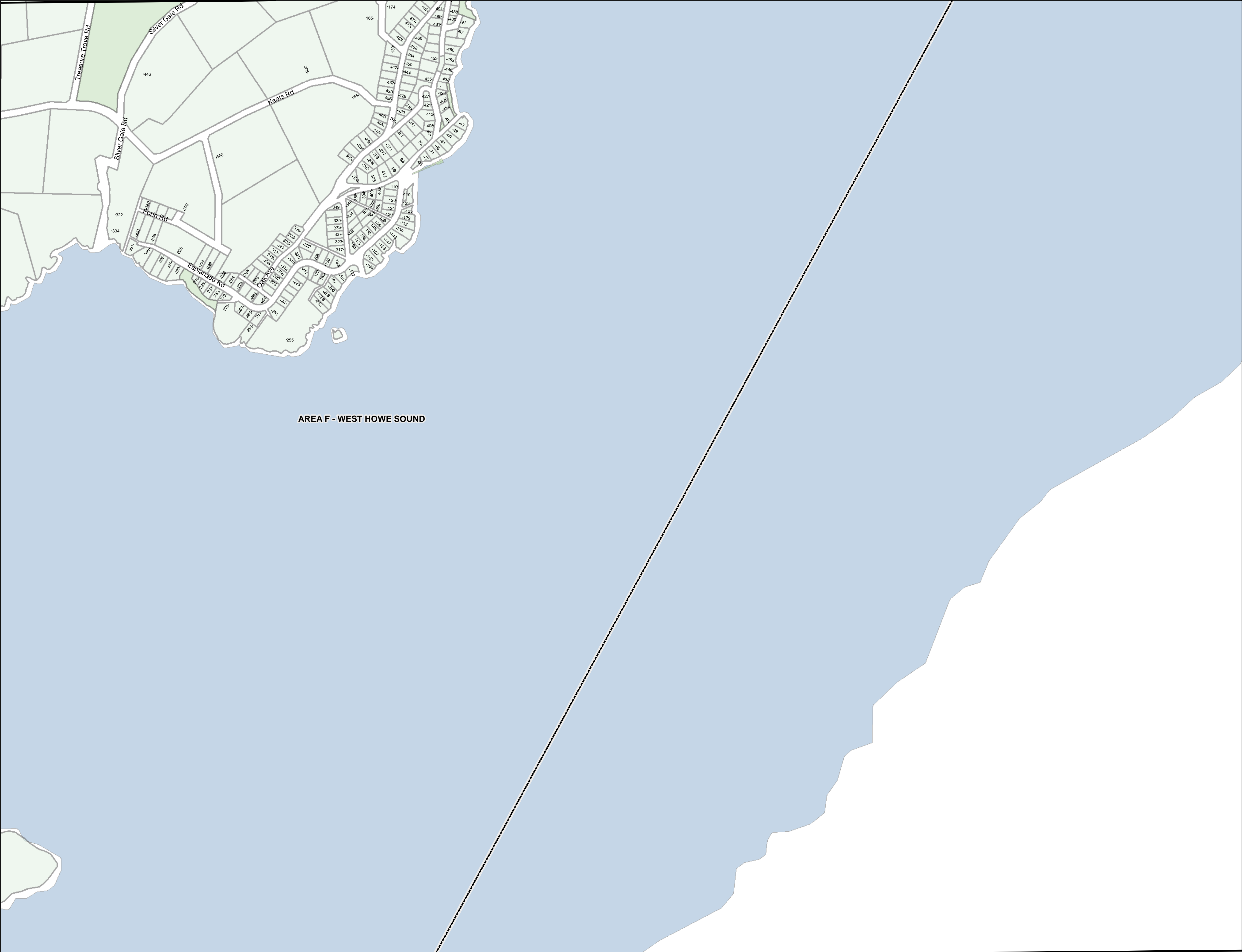
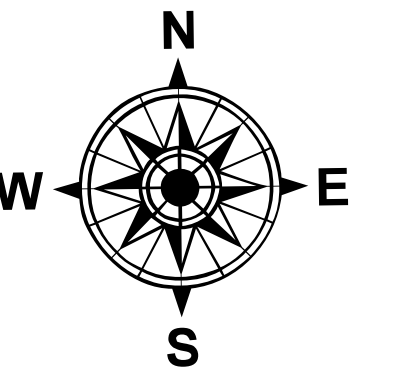
250

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1609



AREA F - WEST HOWE SOUND

This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-05-12
Scale - 1:5,000

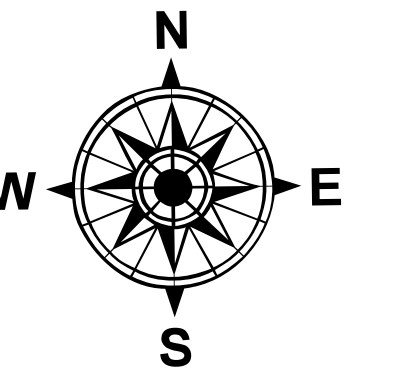
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1703



AREA F - WEST HOWE SOUND

This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-05-12
Scale - 1:5,000

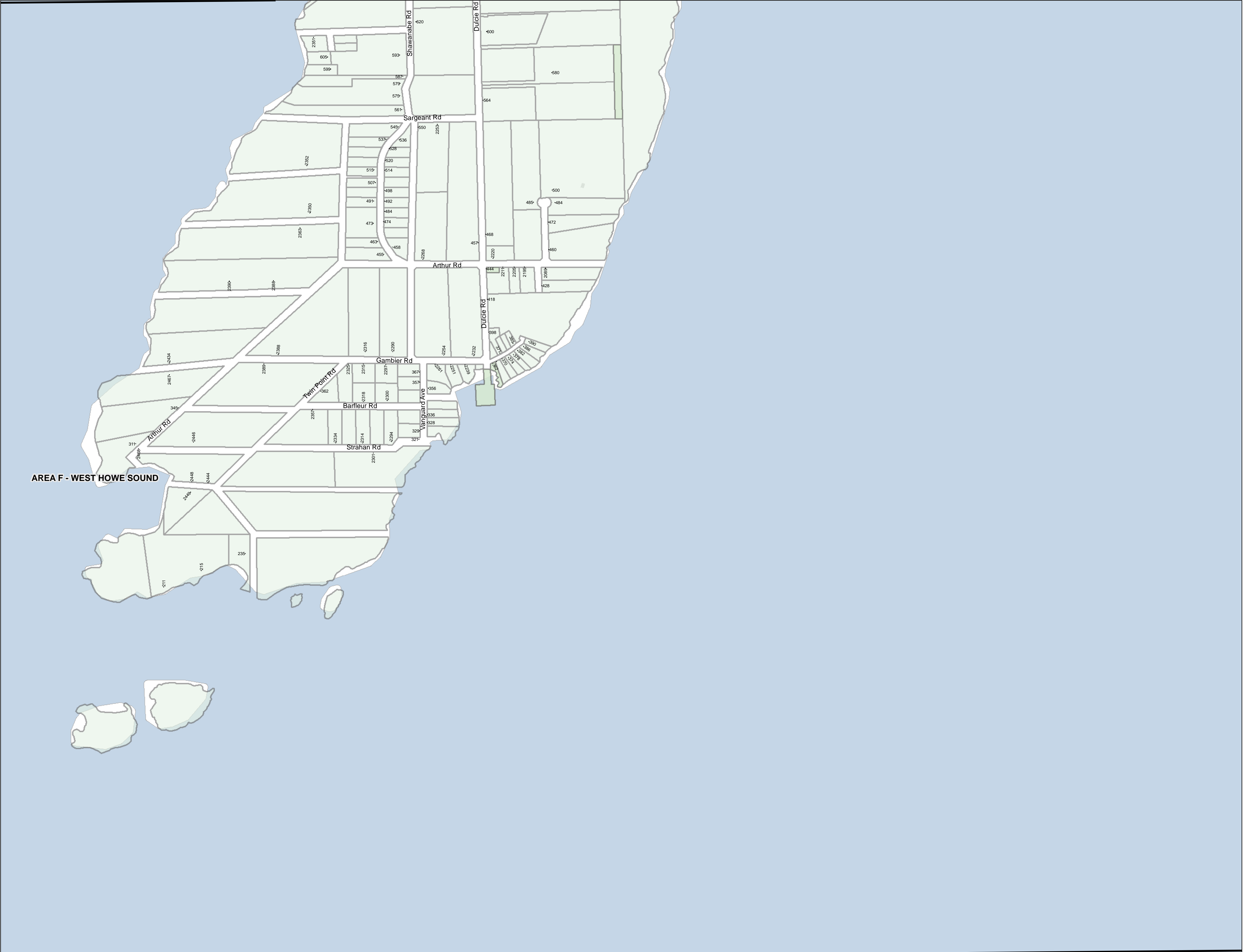
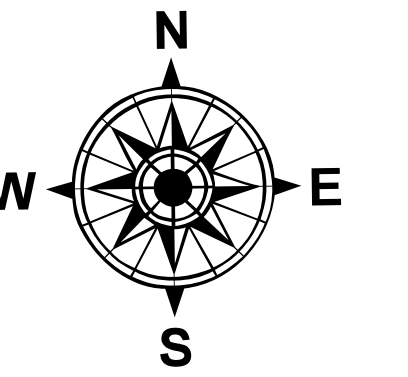
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

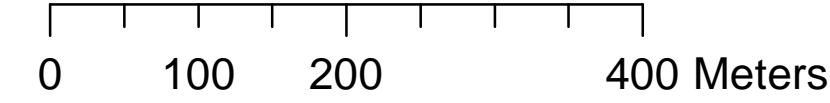
Map # 1704




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Date: 2022-05-12
Scale - 1:5,000

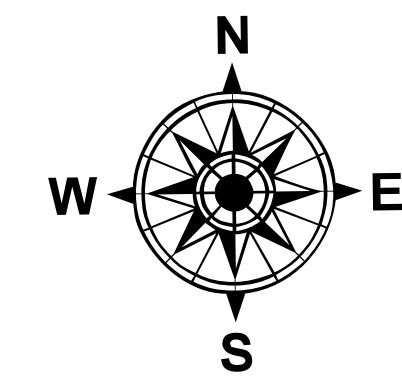


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1705

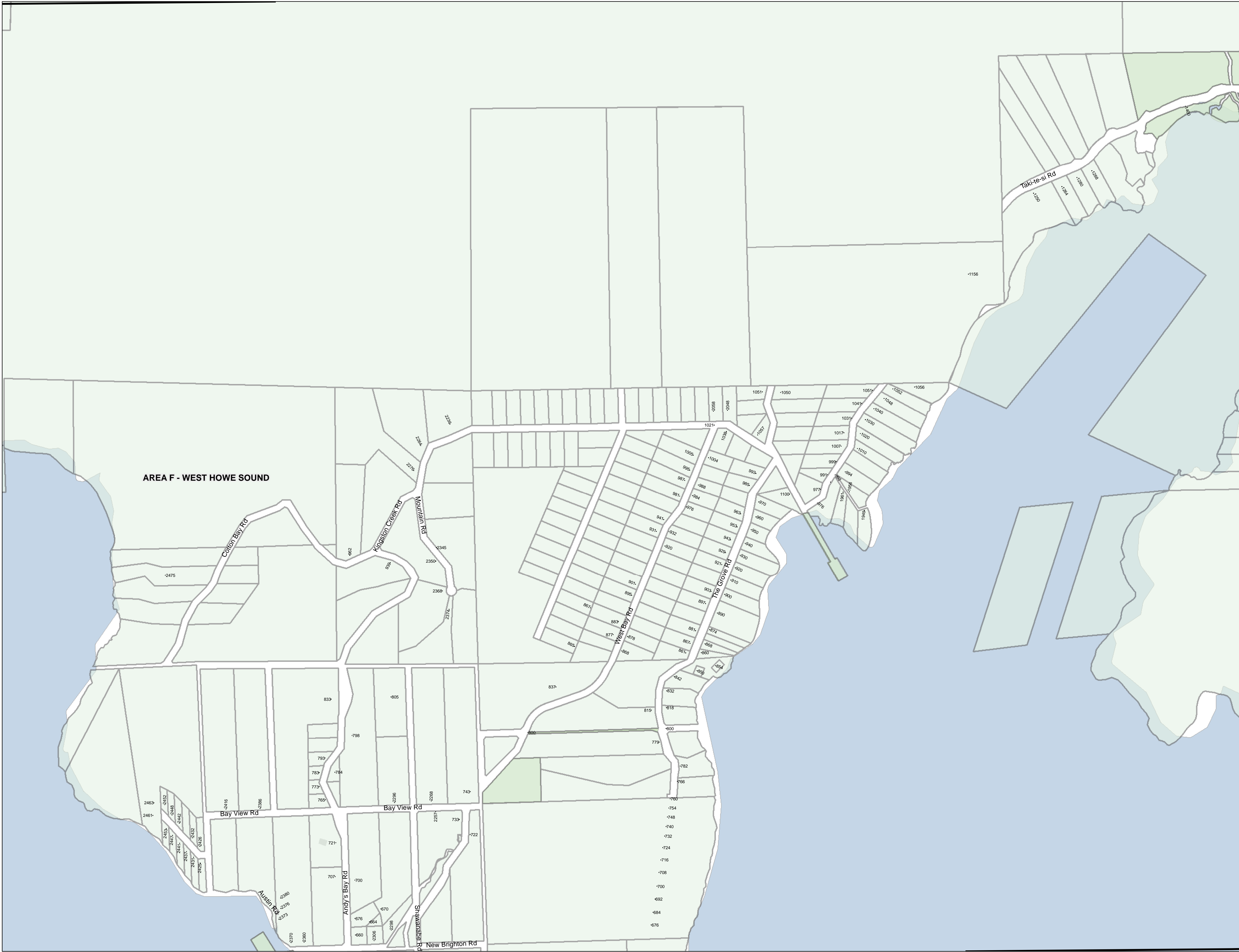



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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

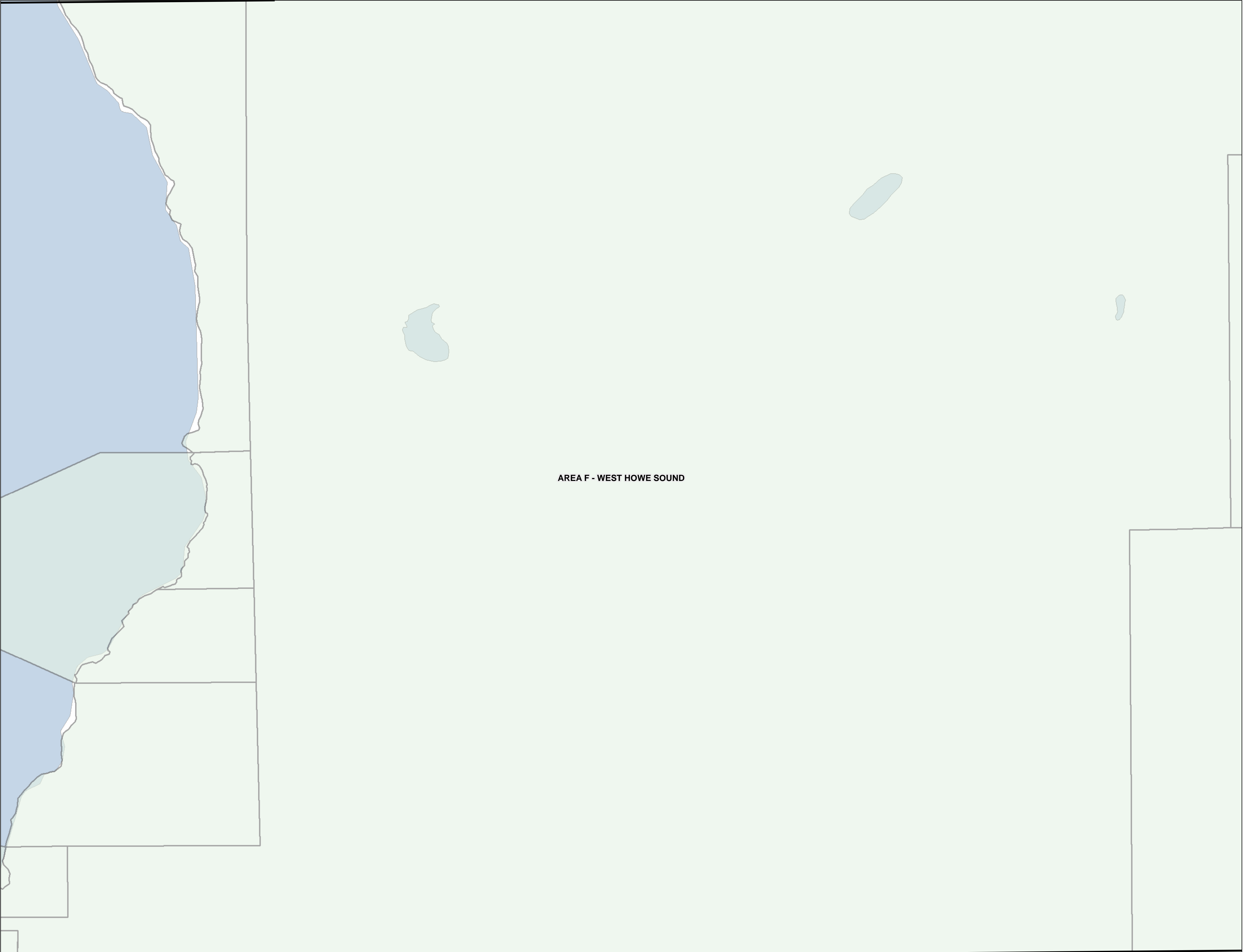
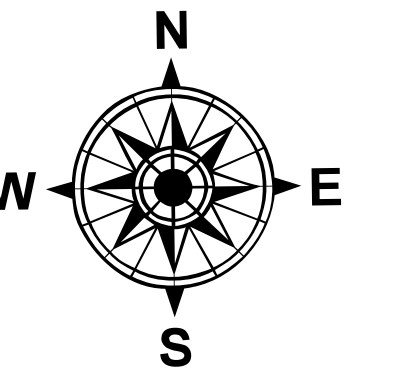


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1706



AREA F - WEST HOWE SOUND

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Date: 2022-05-12
Scale - 1:5,000

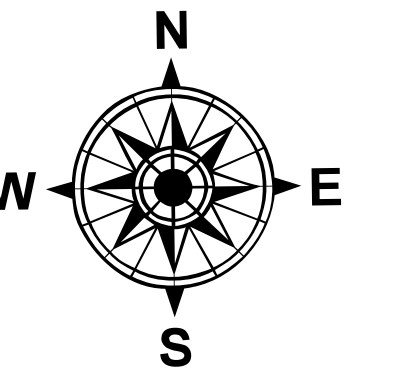
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1707



This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-05-12
Scale - 1:5,000

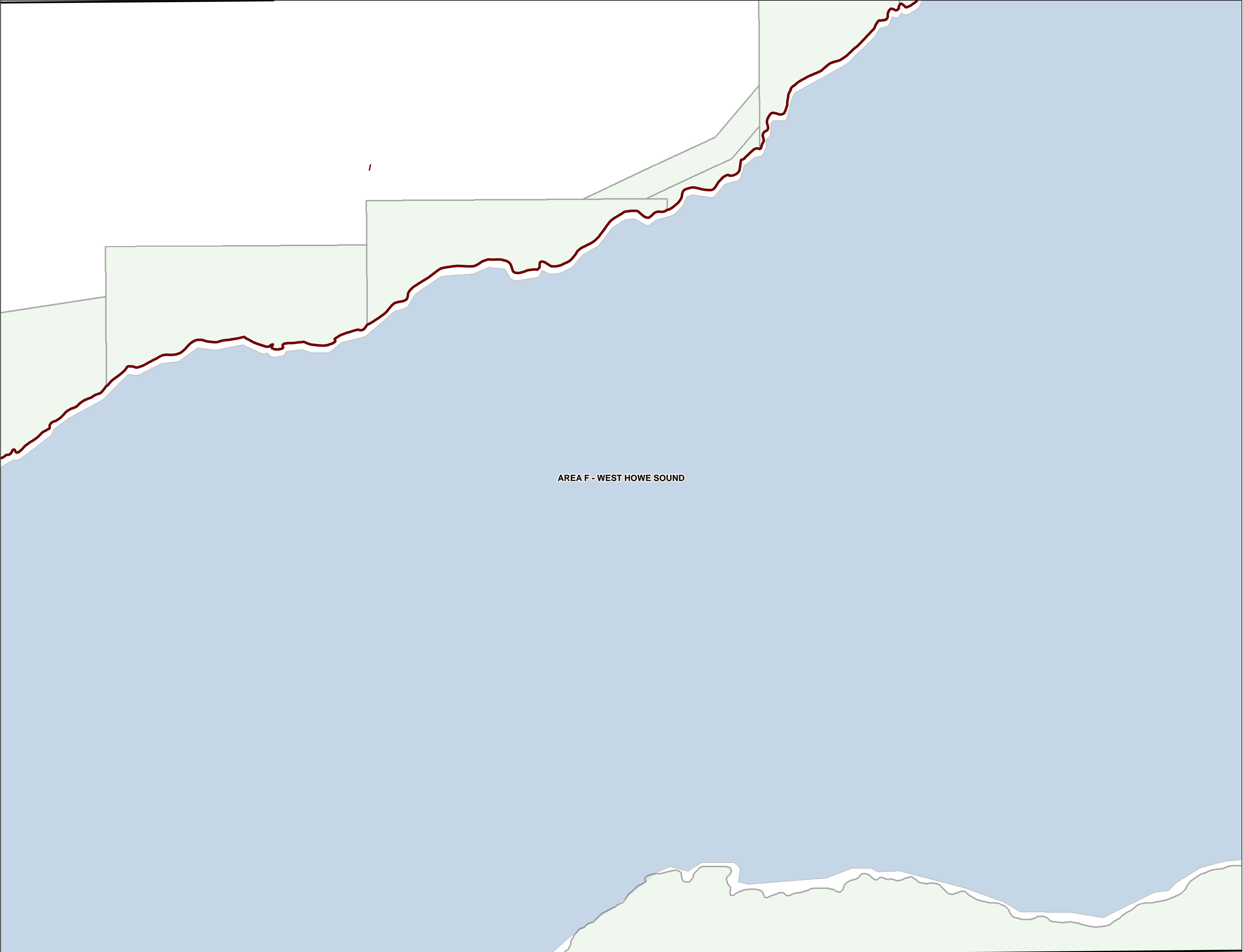
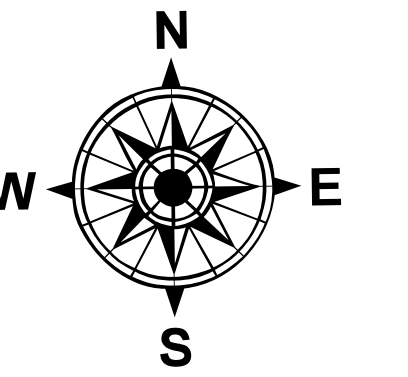
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1708



This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-05-12
Scale - 1:5,000

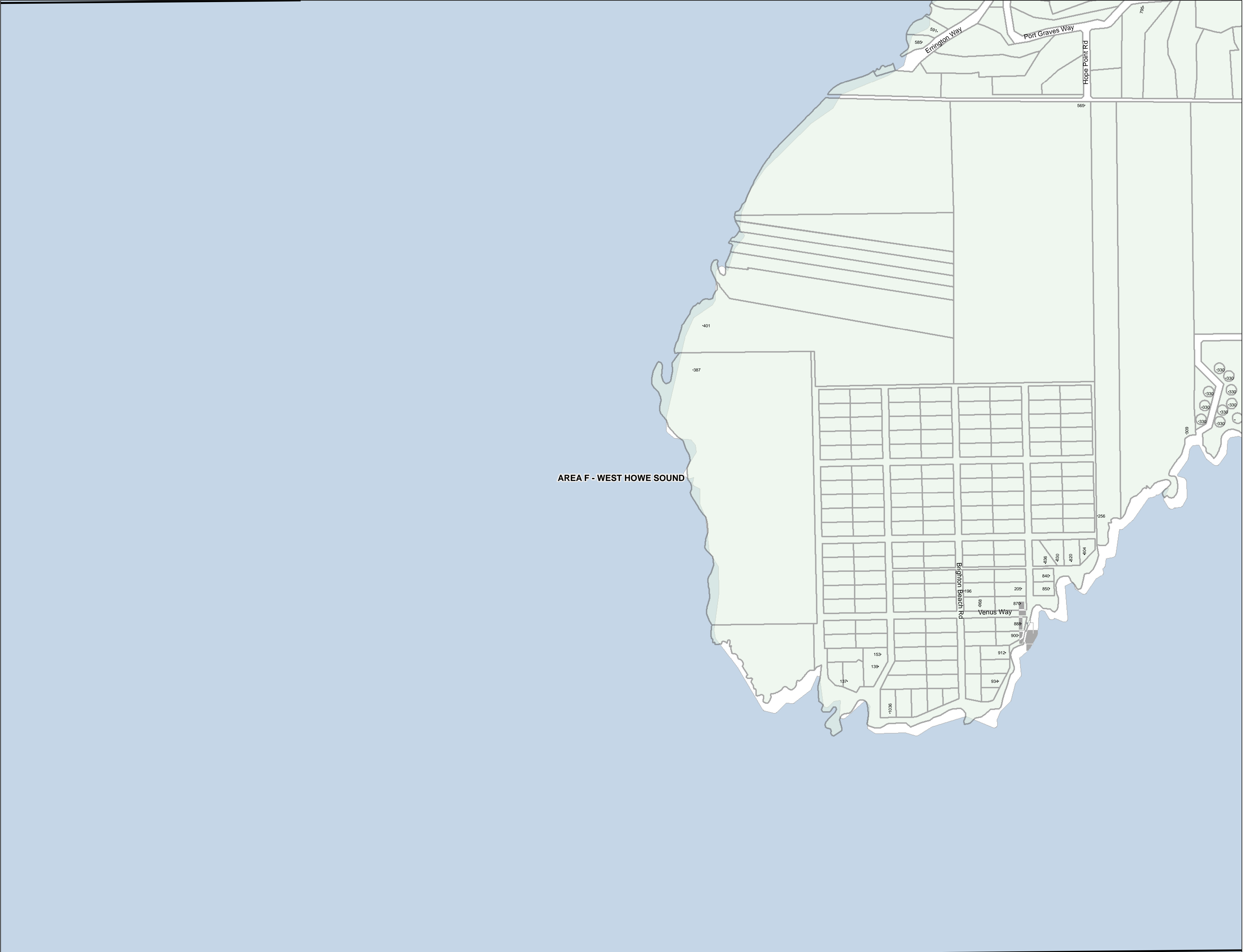
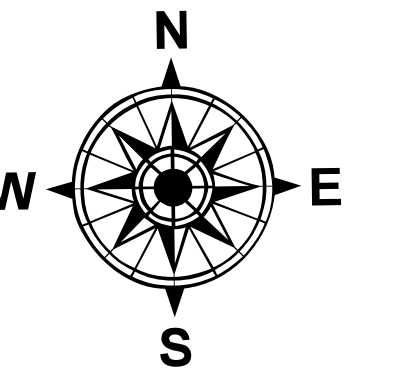
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1709

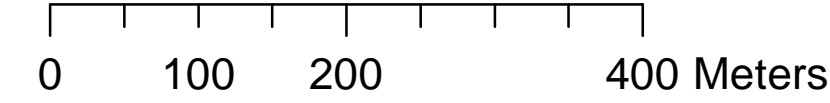



AREA F - WEST HOWE SOUND

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Date: 2022-05-12
Scale - 1:5,000

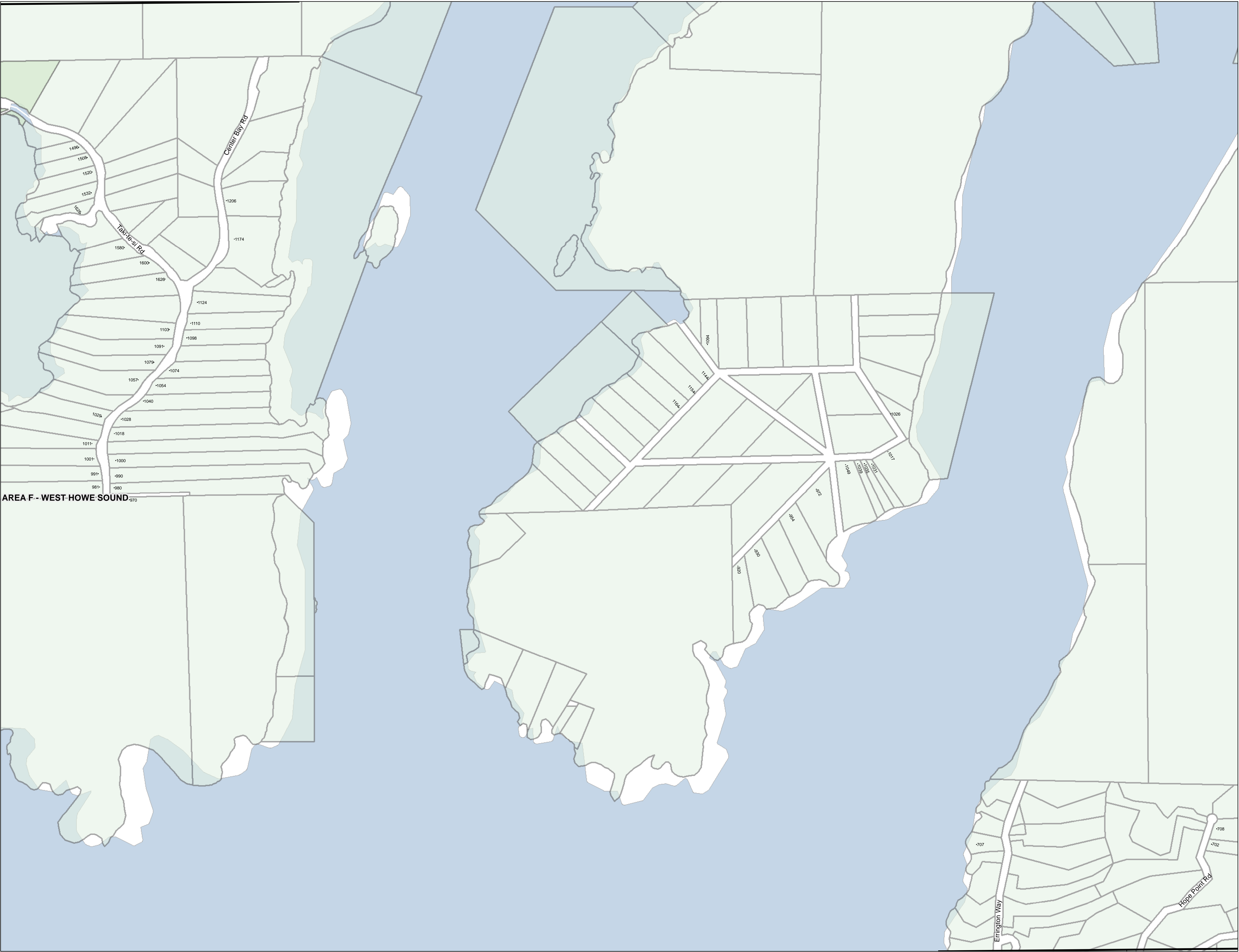
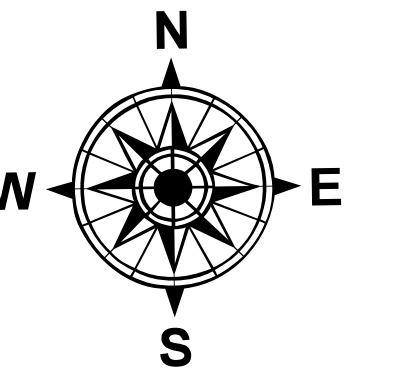


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1805

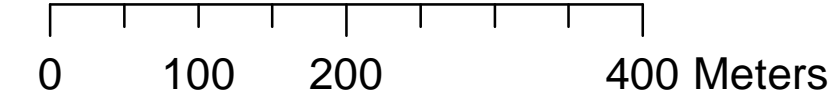


AREA F - WEST HOWE SOUND

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Date: 2022-05-12
Scale - 1:5,000

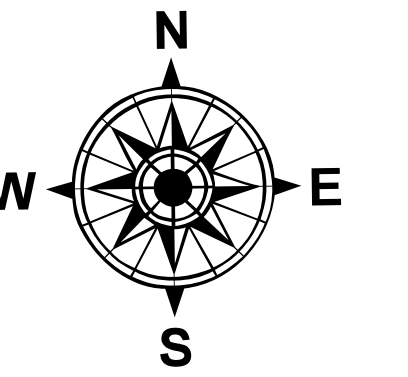


 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1806



This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

AREA F - WEST HOWE SOUND

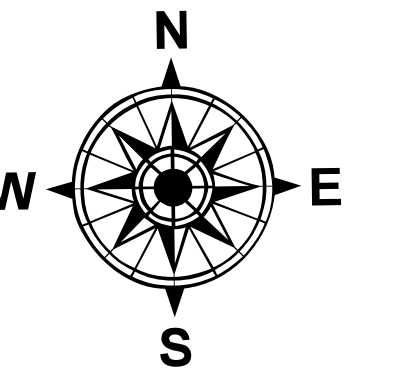
1432

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1807



AREA F - WEST HOWE SOUND

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Date: 2022-05-12
Scale - 1:5,000

0 100 200 400 Meters

 Zoning Subdivision

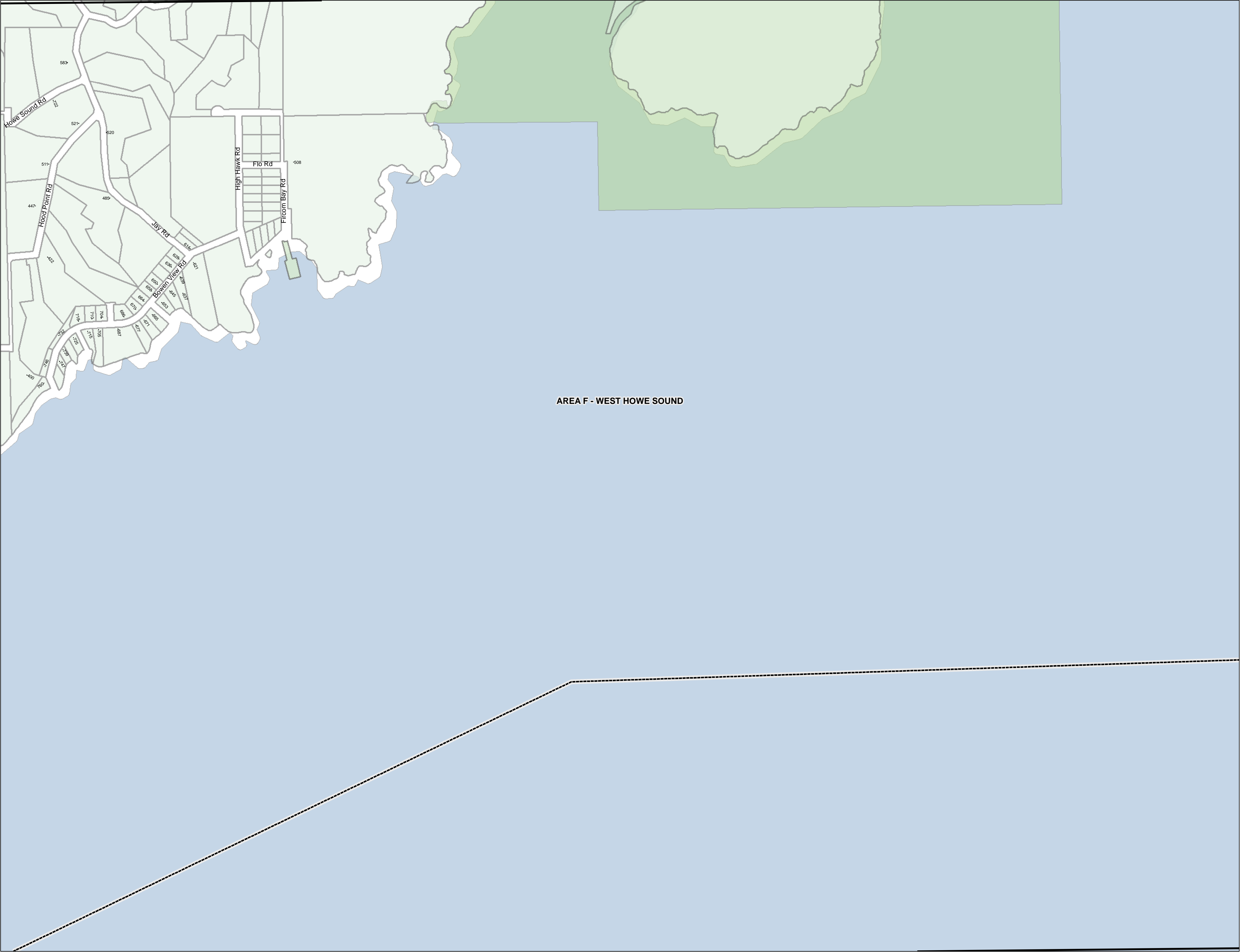
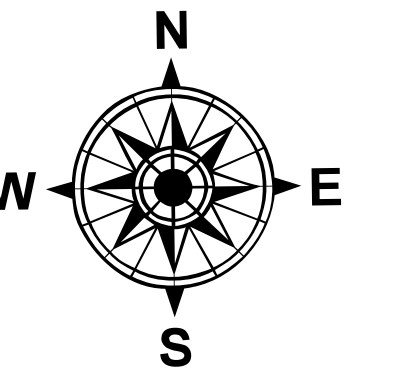
BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1808

The logo of the Sunshine Coast Regional District is a blue octagon. Inside the octagon, the words "SUNSHINE COAST" are written in white, uppercase letters along the top arc, and "REGIONAL DISTRICT" is written along the bottom arc. In the center of the octagon is a white, stylized sunburst or starburst design.

Map # 1809



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Date: 2022-05-12
Scale - 1:5,000

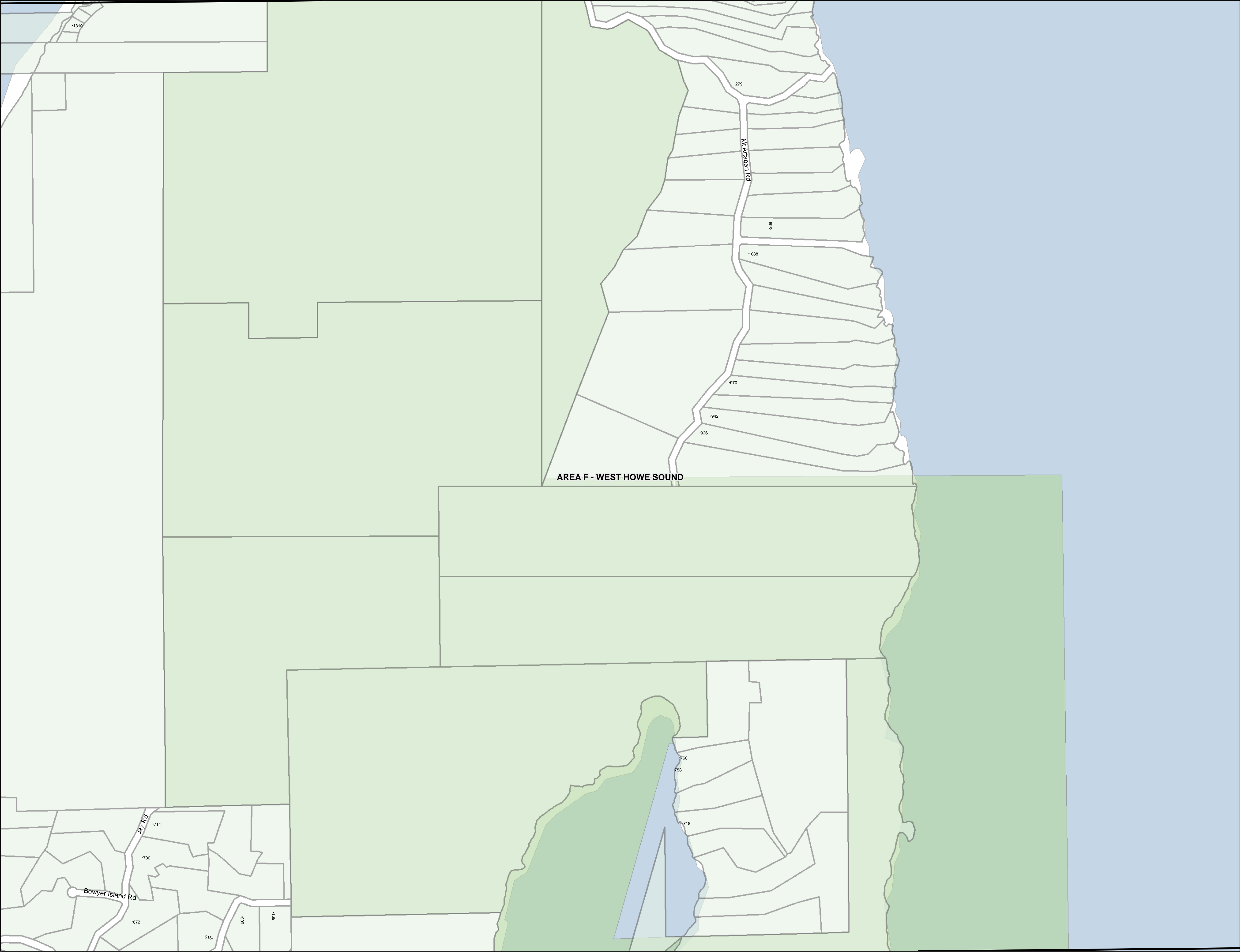
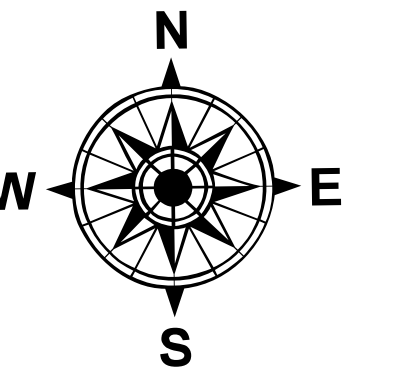
0 100 200 400 Meters

Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

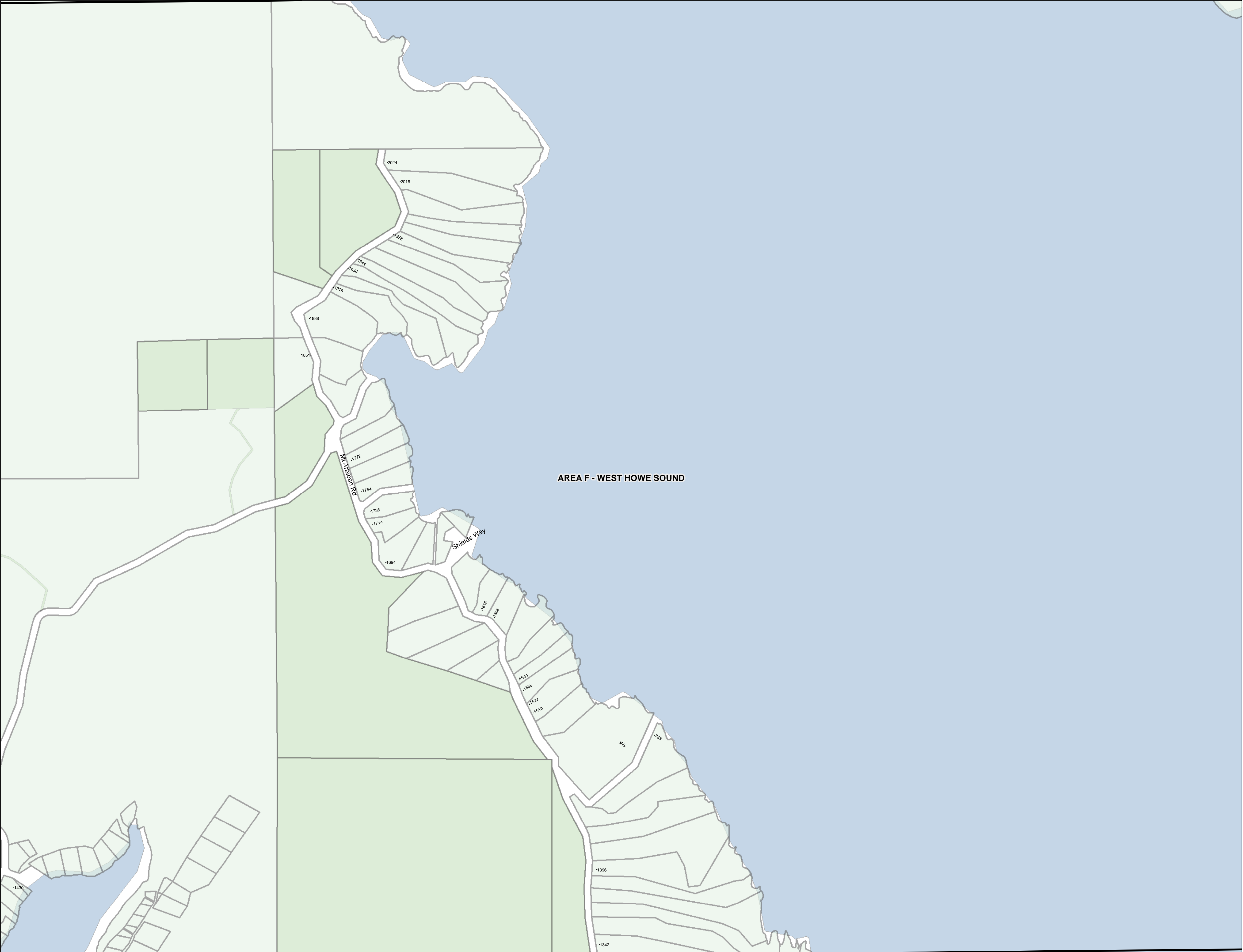
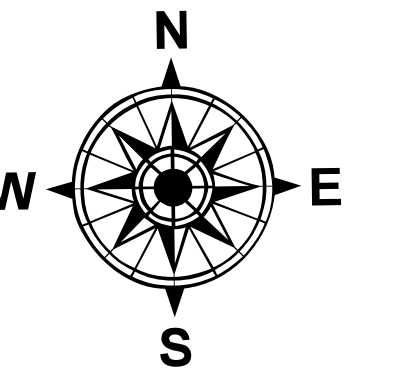
Map # 1905



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Date: 2022-05-12
Scale - 1:5,000



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Date: 2022-05-12
Scale - 1:5,000

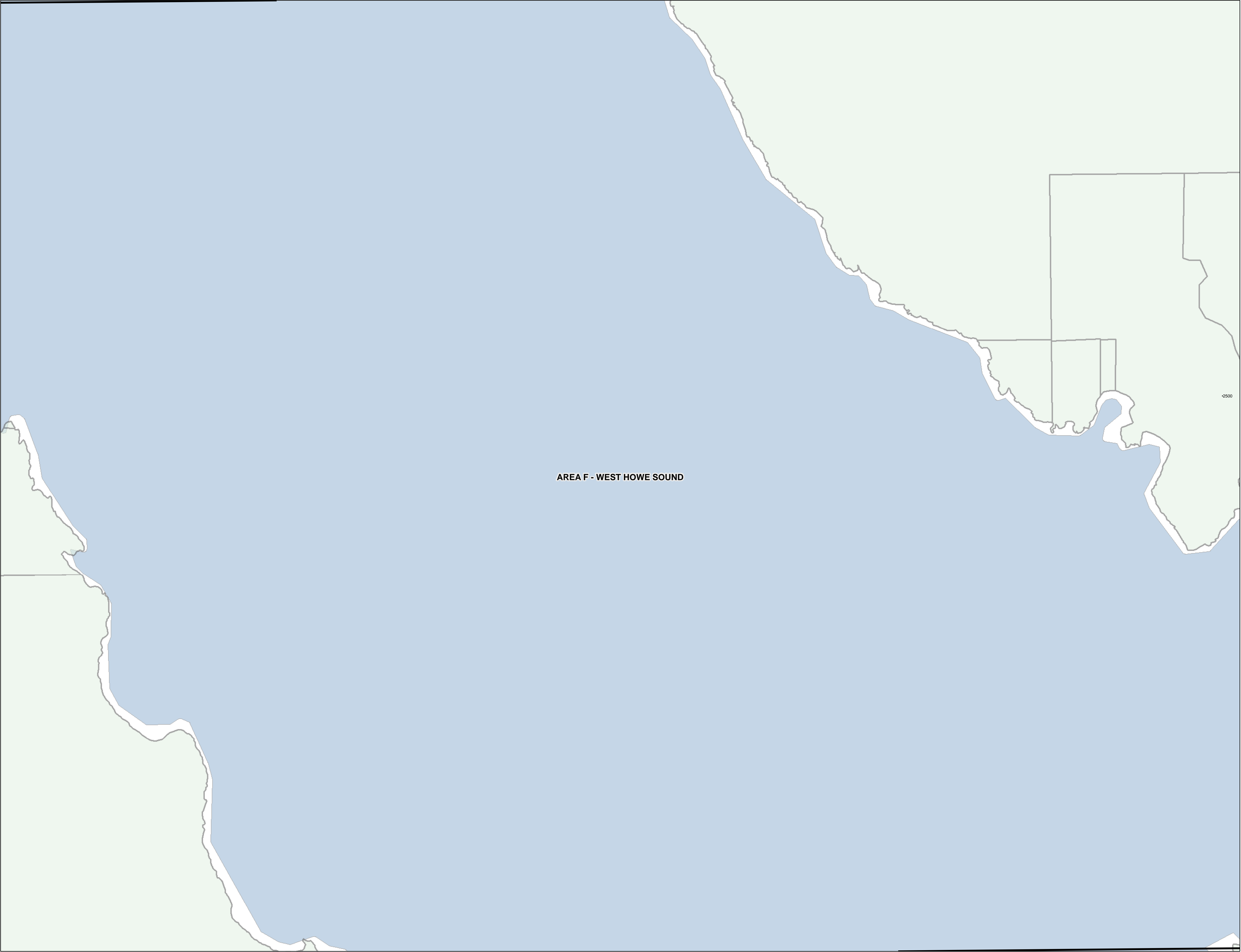
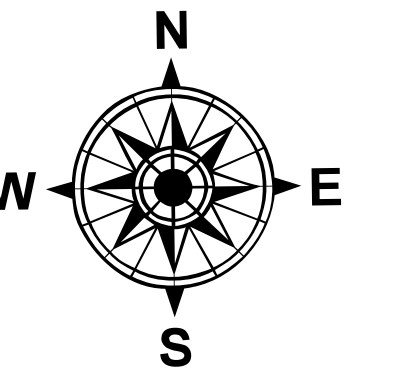
0 100 200 400 Meters

Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1907



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Date: 2022-05-12
Scale - 1:5,000

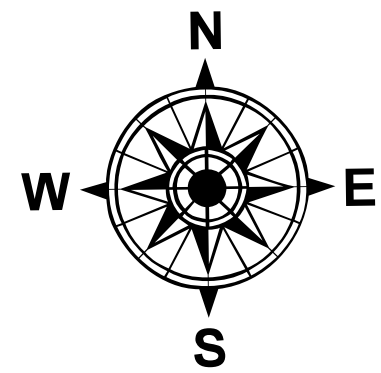
0 100 200 400 Meters

 Zoning Subdivision

BYLAW: 722
SCHEDULE: B

SUBDIVISION
LANDUSE ZONING

Map # 1908



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

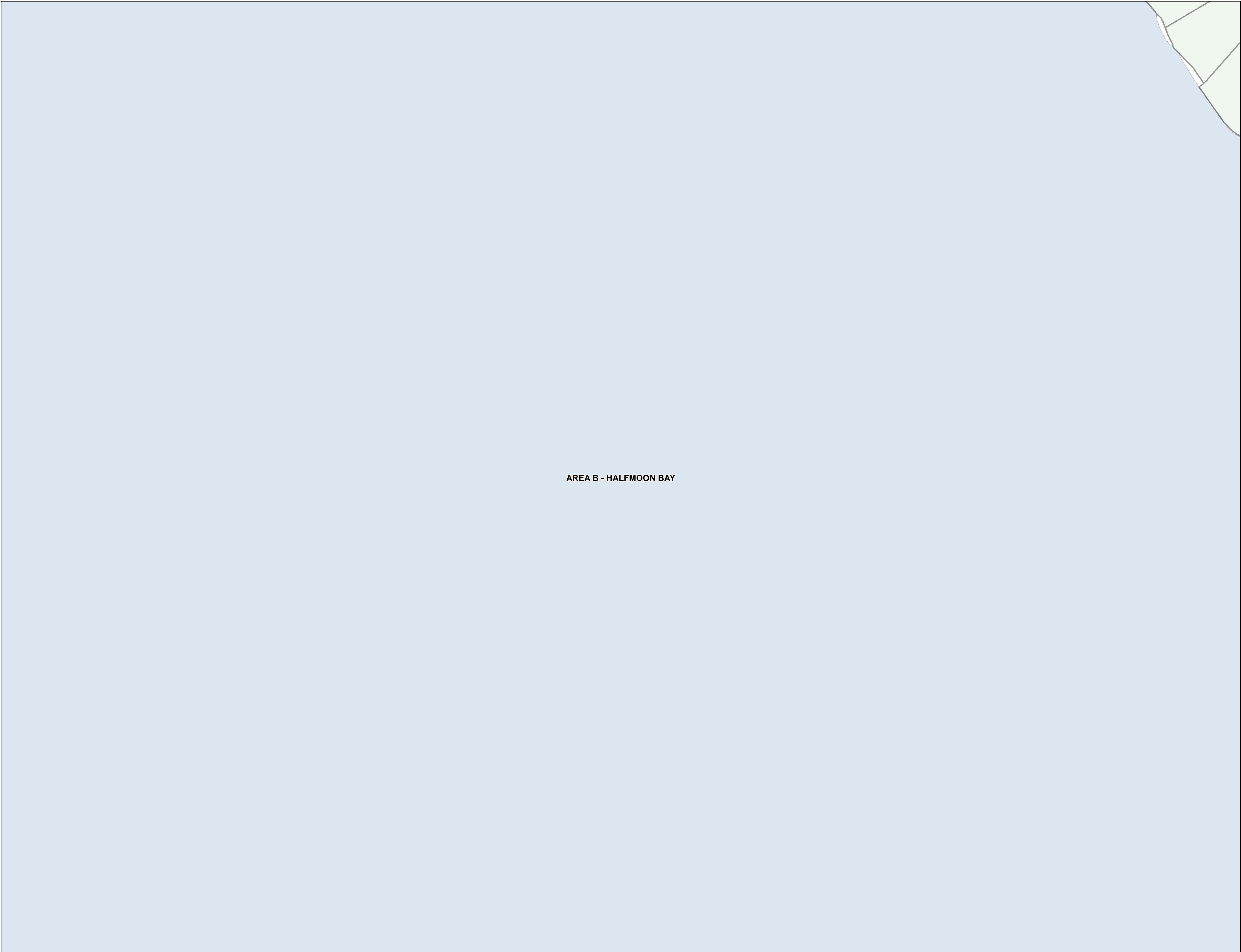
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 507

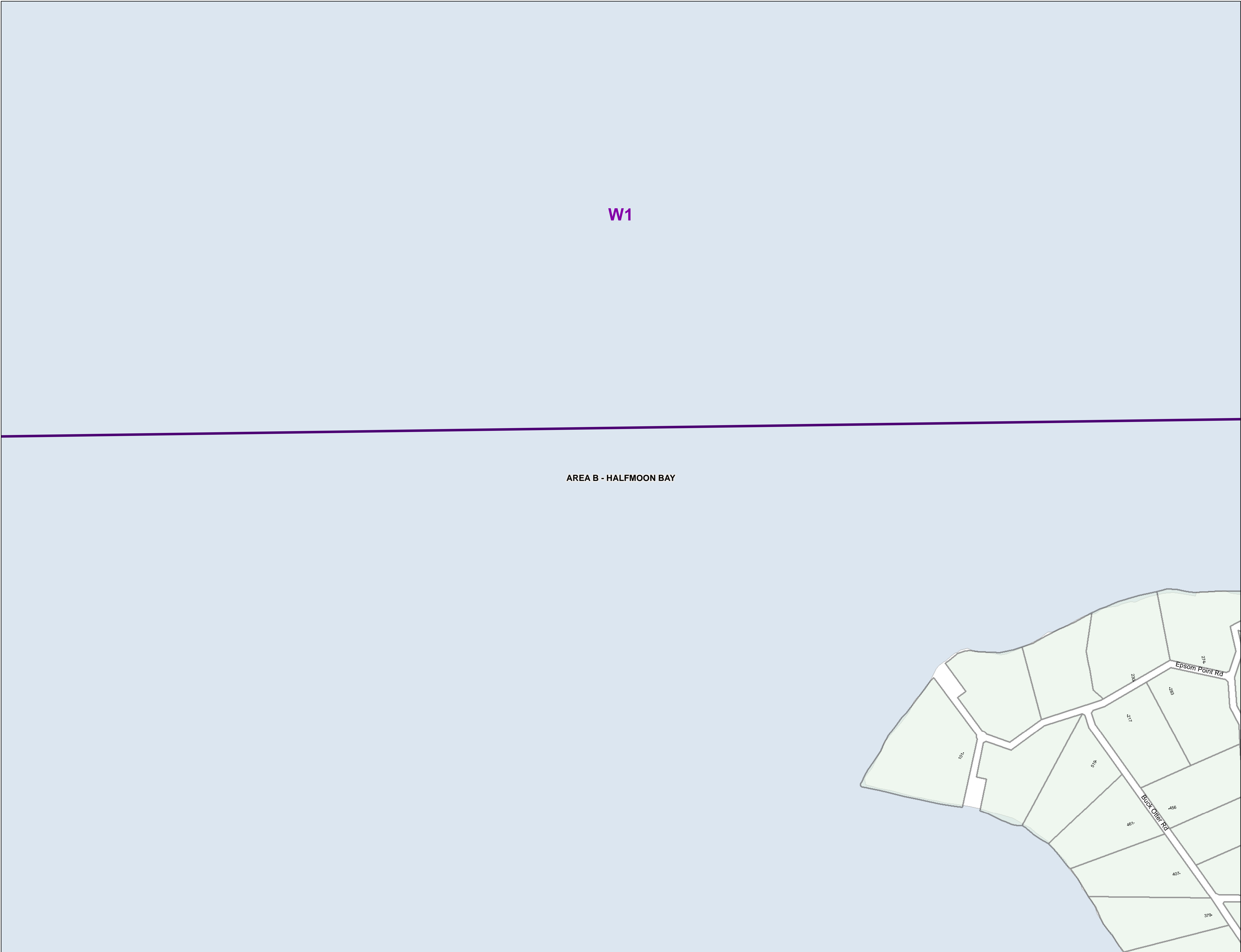


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Date: 2022-01-20
Scale - 1:5,000





Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

Water One	W1
Water Two	W2

Industrial One	11
Industrial Two	12
Industrial Three	13
Industrial Four	14
Industrial Five	15
Industrial Six	16
Industrial Seven	17
Industrial Eight	18
Industrial Nine	19
Industrial Ten	110
Industrial Eleven	111
Industrial Twelve	112
Industrial Thirteen	113

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 508

The logo of the Sunshine Coast Regional District is a blue octagon with a white star in the center. The words "SUNSHINE COAST" are written in white capital letters along the top inner edge, and "REGIONAL DISTRICT" is written along the bottom inner edge.

A horizontal scale bar with tick marks at 0, 100, 200, and 400 Meters.



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES


Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

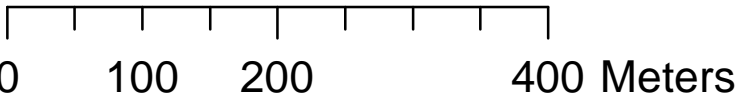
LAND USE ZONING
Map # 606

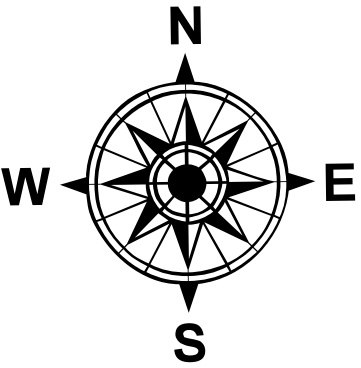


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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

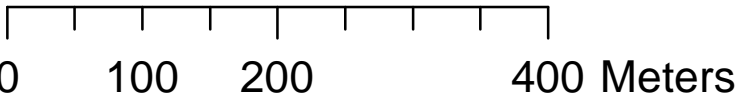
BYLAW: 722
SCHEDULE: A

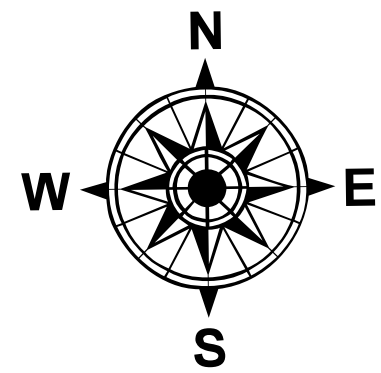
LAND USE ZONING
Map # 607

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

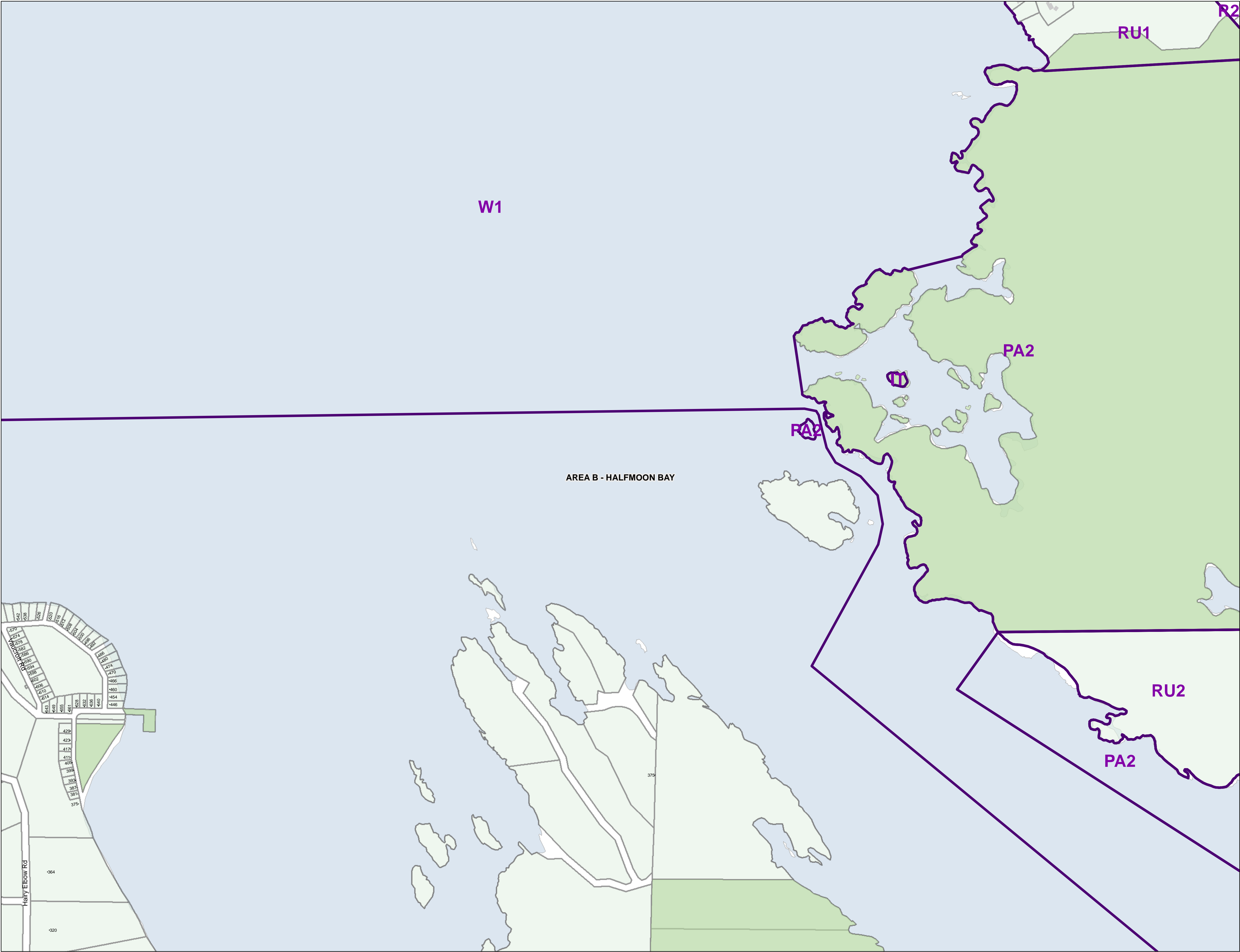
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 608

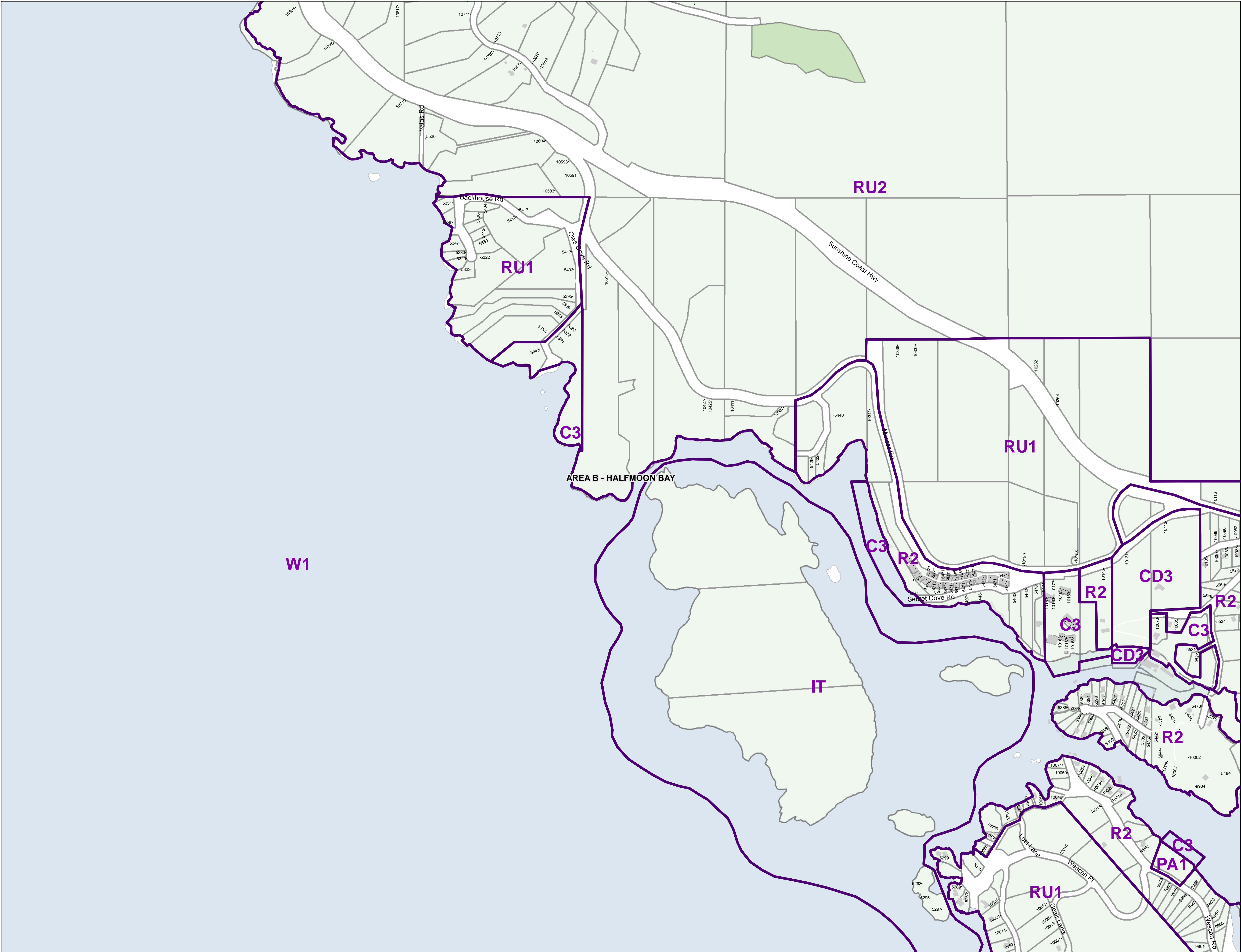
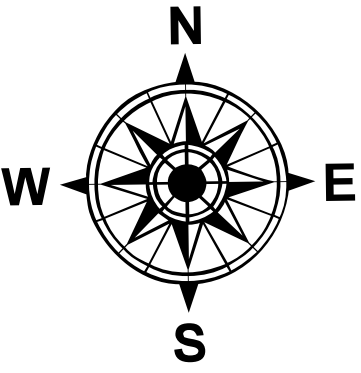


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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

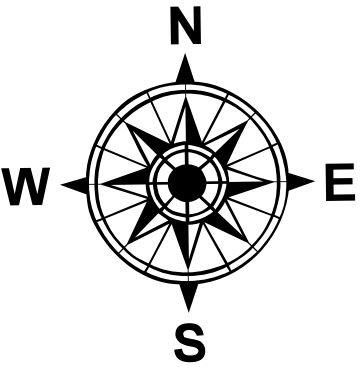
LAND USE ZONING
Map # 609

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Date: 2022-01-20
Scale: 1:5,000

0 100 200 400 Meters



W1

AREA B - HALFMOON BAY

RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

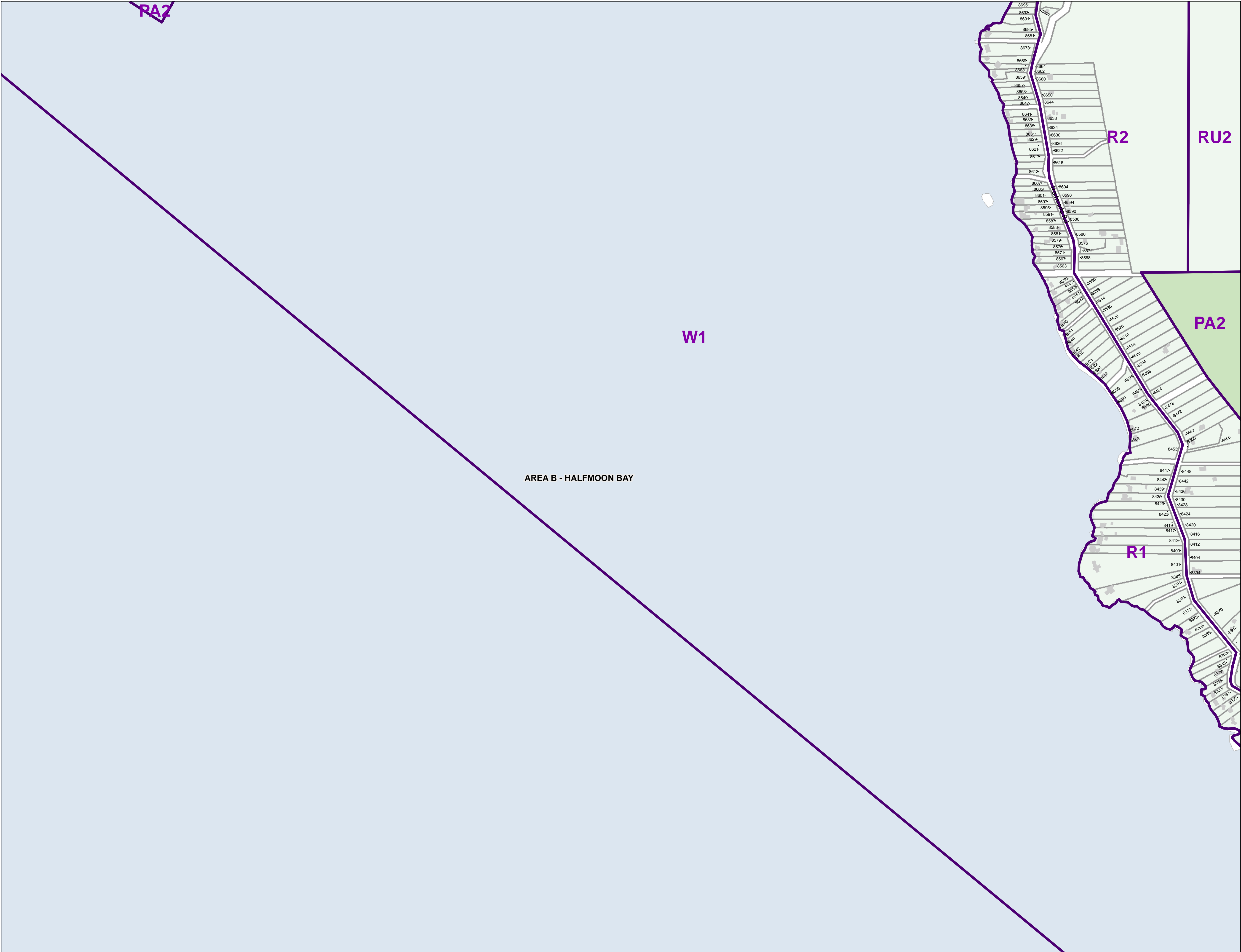
LAND USE ZONING
Map # 706

This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

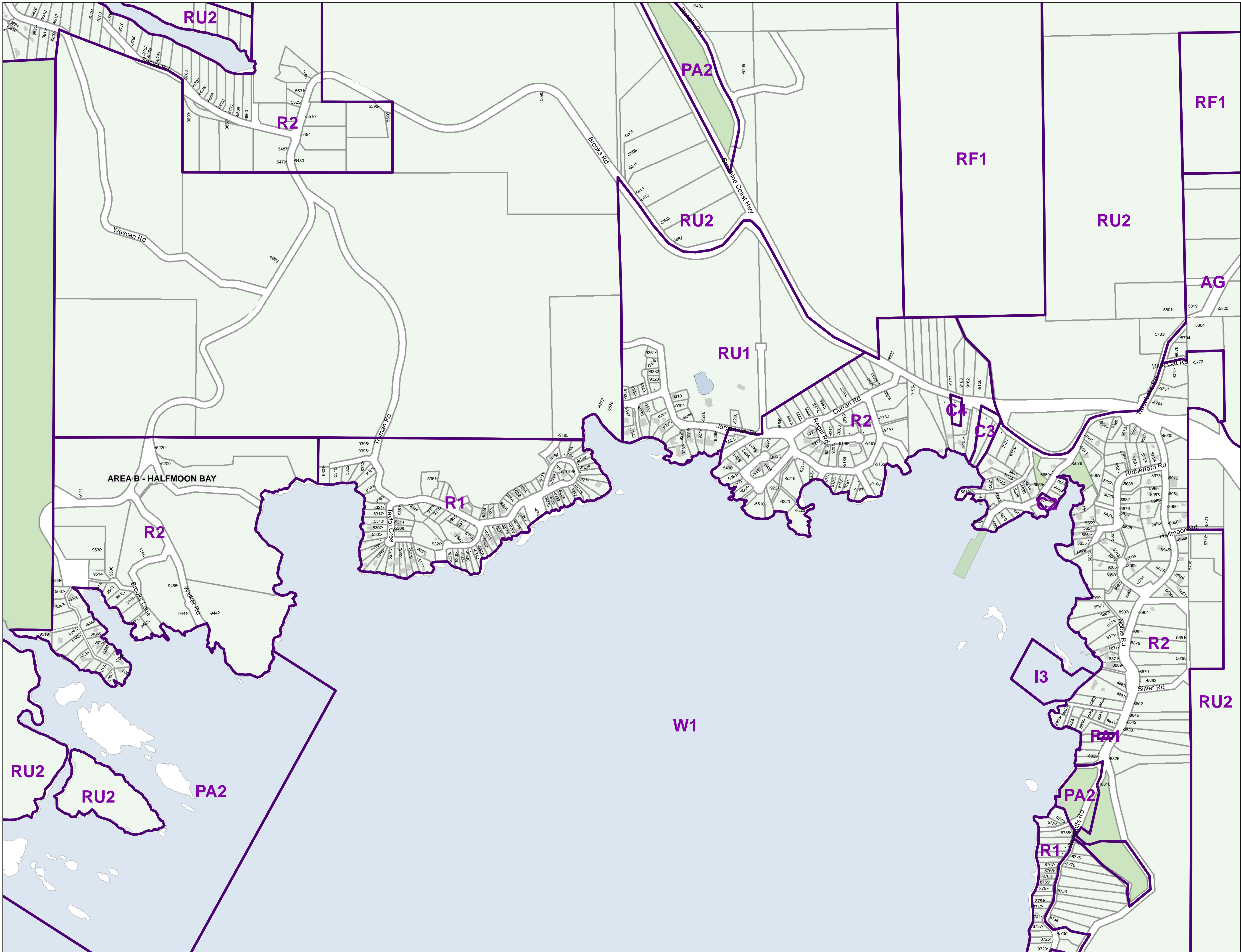
LAND USE ZONING
Map # 707

This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

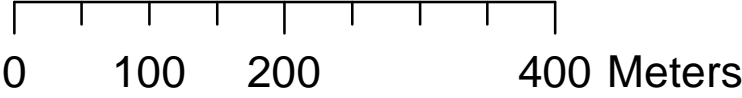
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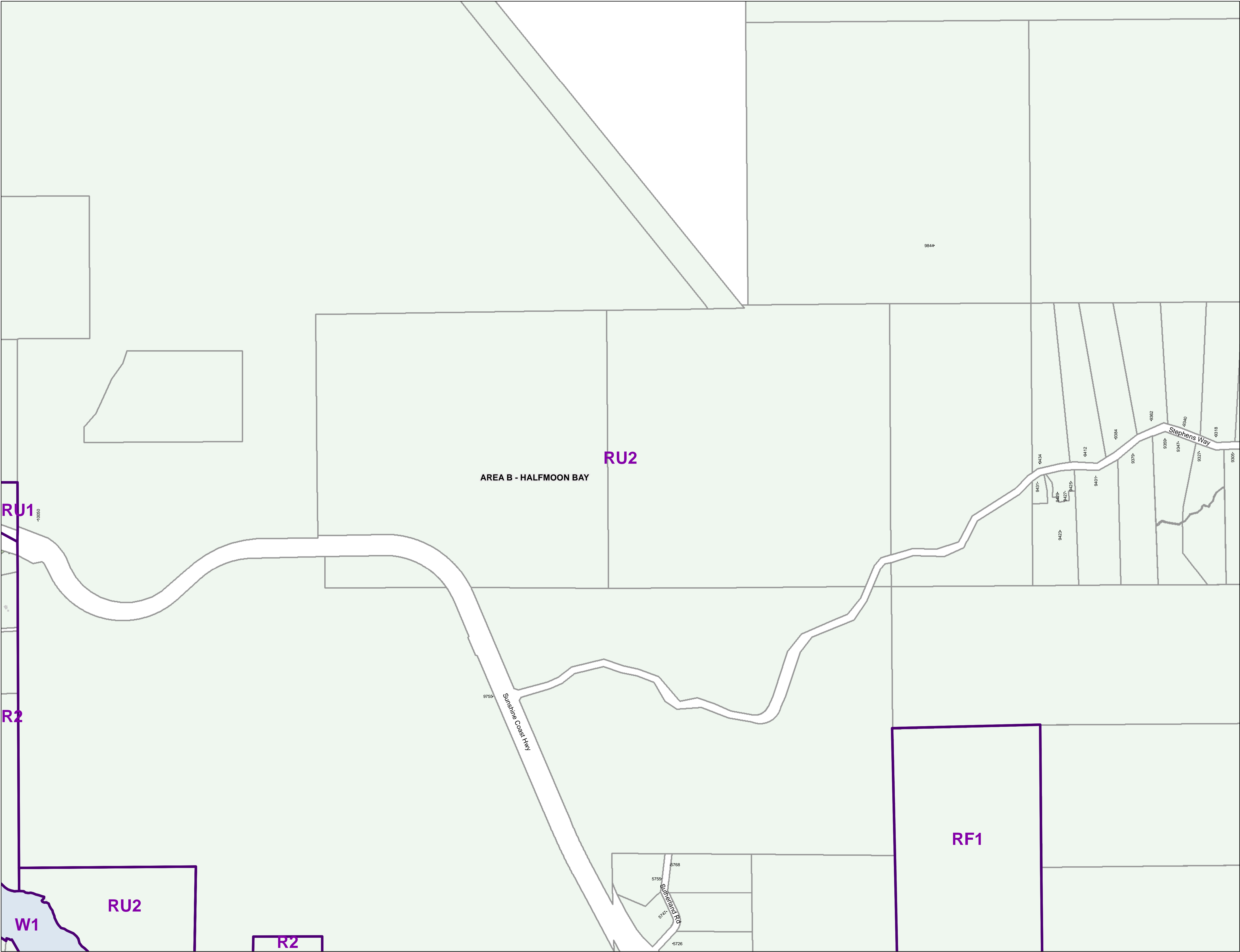
LAND USE ZONING
Map # 708

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

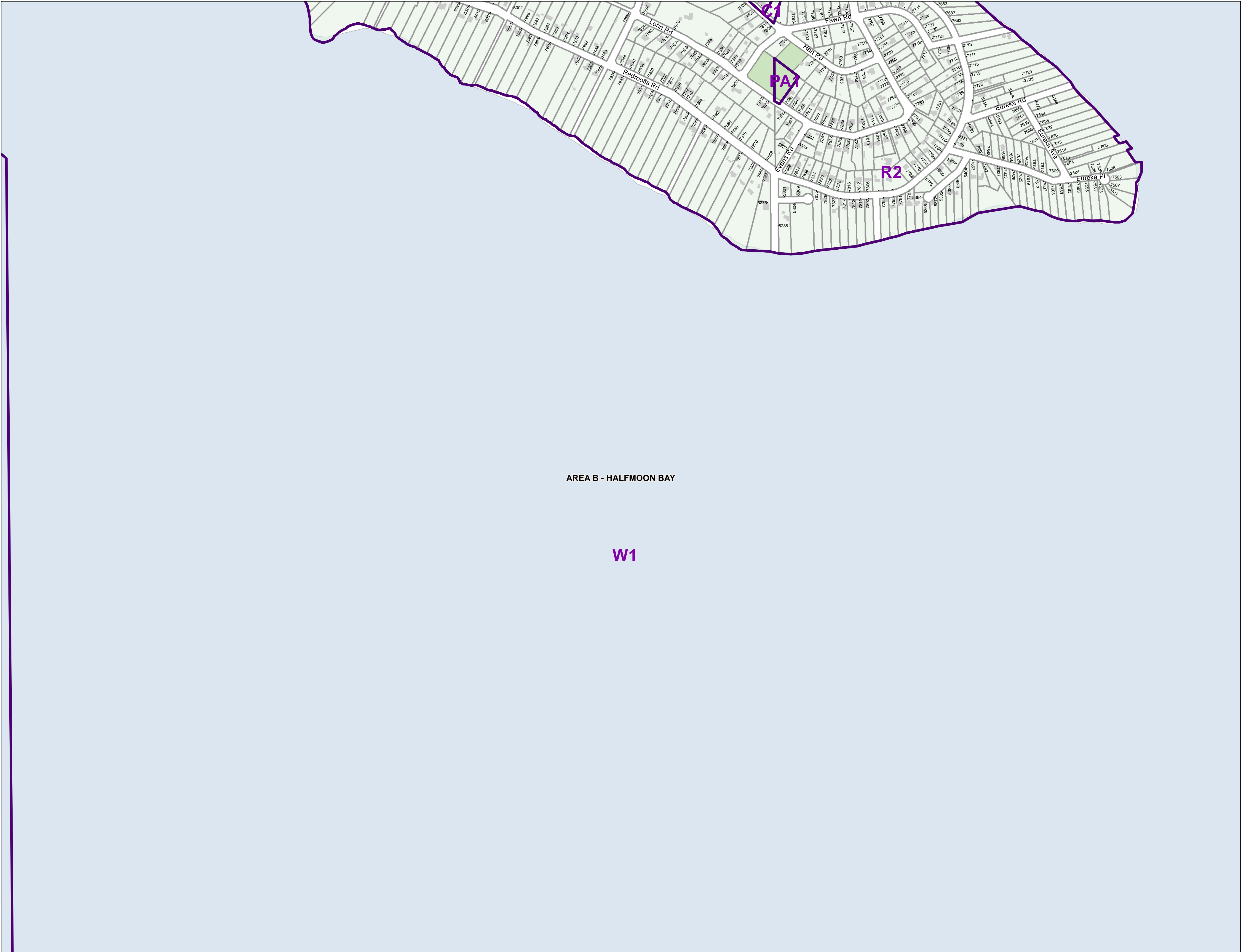
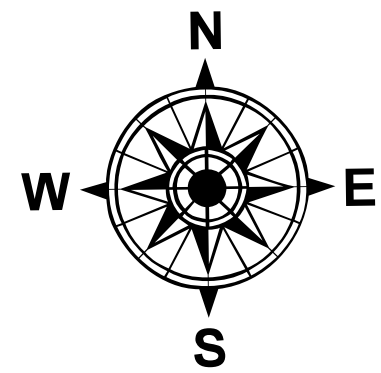
LAND USE ZONING
Map # 709

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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 806

This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

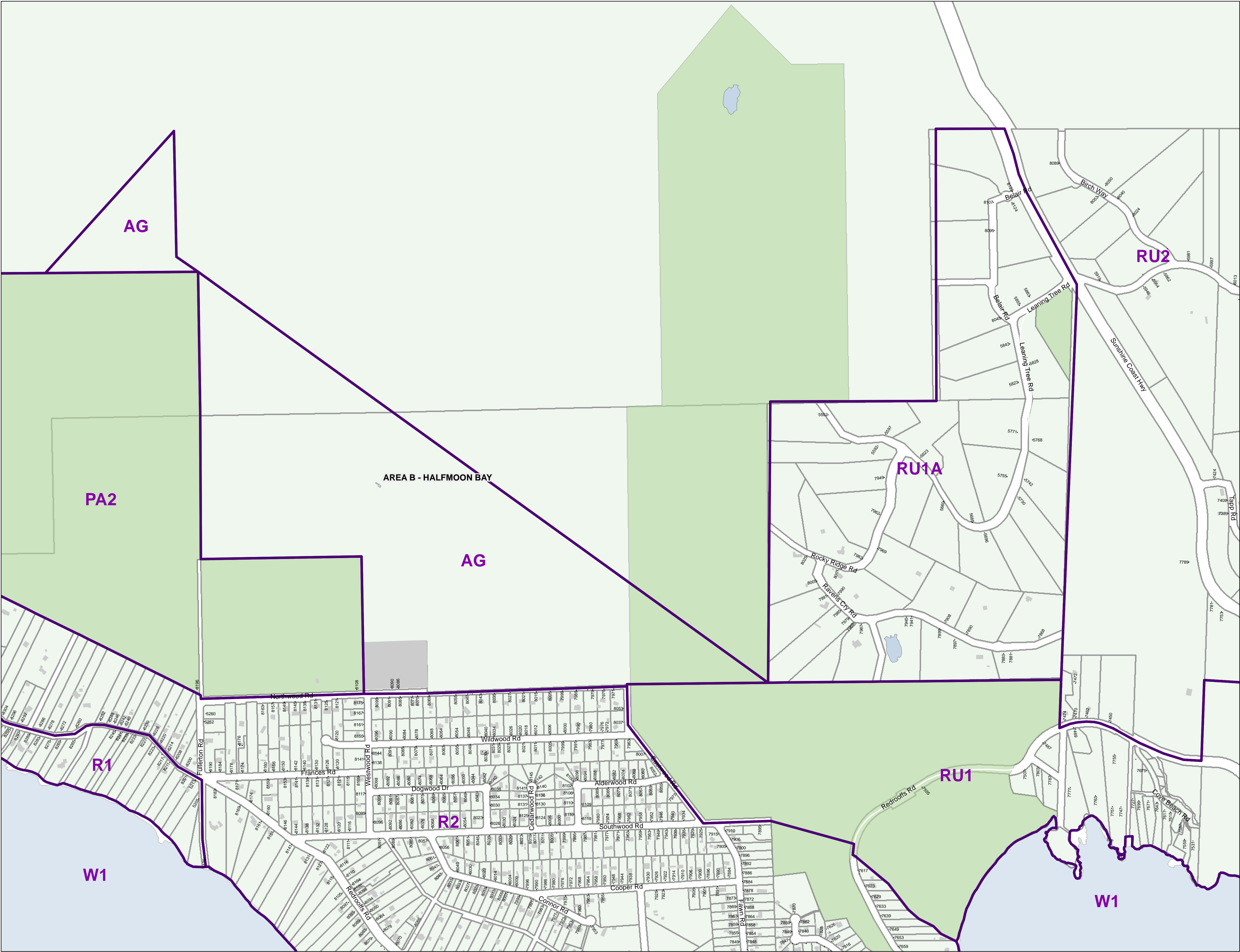
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 807

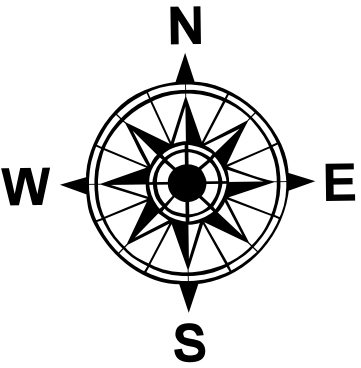


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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

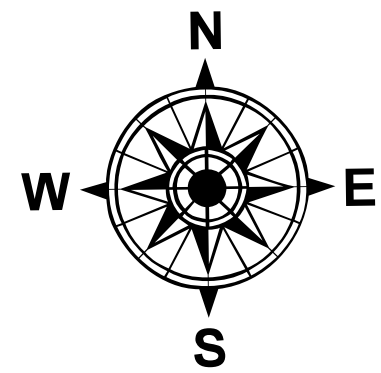
LAND USE ZONING
Map # 808

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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

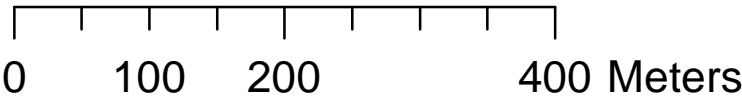
BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 906

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 907

This information has been compiled by the Sunshine Coast Regional District using data derived from a number of sources with varying levels of accuracy. The Sunshine Coast Regional District disclaims all responsibility for the accuracy or completeness of this information.



Date: 2022-01-20
Scale: 1:5,000

0 100 200 400 Meters



Residential One
Residential Two
Residential Three
Residential Multiple One
Residential Multiple Two
Residential Multiple Three

- Country Residential One
- Country Residential Two
- Rural One
- Rural One A
- Rural Two
- Rural Two A
- Rural Three
- Rural Three A
- Rural Three B
- Rural Forest One
- Rural Forest Two
- Rural Forest Three
- Rural Forest Four
- Rural Forest Five
- Agriculture

Comprehensive Development One
Comprehensive Development Two
Comprehensive Development Three
Comprehensive Development Four

Commercial One
Commercial Two
Commercial Three
Commercial Four
Commercial Five
Marine Transportation

Water One	W1
Water Two	W2

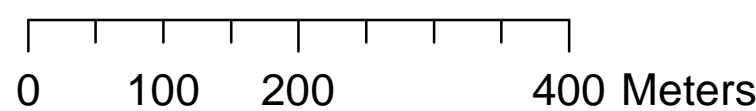
Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

Park and Assembly One	PA
Park and Assembly Two	PA
Park and Assembly Three	PA
Park and Assembly Four	PA

BYLAW: 722
SCHEDULE: A

The logo of the Sunshine Coast Regional District is a blue octagon with a white star in the center. The words "SUNSHINE COAST" are written in white capital letters along the top inner edge, and "REGIONAL DISTRICT" is written along the bottom inner edge.

Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

- | | |
|----------------------------|-----|
| Residential One | R1 |
| Residential Two | R2 |
| Residential Three | R3 |
| Residential Multiple One | RM1 |
| Residential Multiple Two | RM2 |
| Residential Multiple Three | RM3 |

RURAL ZONES

- | | |
|-------------------------|------|
| Country Residential One | CR1 |
| Country Residential Two | CR2 |
| Rural One | RU1 |
| Rural One A | RU1A |
| Rural Two | RU2 |
| Rural Two A | RU2A |
| Rural Three | RU3 |
| Rural Three A | RU3A |
| Rural Three B | RU3B |
| Rural Forest One | RF1 |
| Rural Forest Two | RF2 |
| Rural Forest Three | RF3 |
| Rural Forest Four | RF4 |
| Rural Forest Five | RF5 |
| Agriculture | AG |

COMPREHENSIVE DEVELOPMENT ZONES

- | | |
|---------------------------------|-----|
| Comprehensive Development One | CD1 |
| Comprehensive Development Two | CD2 |
| Comprehensive Development Three | CD3 |
| Comprehensive Development Four | CD4 |

COMMERCIAL ZONES

- | | |
|-----------------------|----|
| Commercial One | C1 |
| Commercial Two | C2 |
| Commercial Three | C3 |
| Commercial Four | C4 |
| Commercial Five | C5 |
| Marine Transportation | M1 |

WATER ZONES

- | | |
|-----------|----|
| Water One | W1 |
| Water Two | W2 |

INDUSTRIAL ZONES

- | | |
|---------------------|-----|
| Industrial One | I1 |
| Industrial Two | I2 |
| Industrial Three | I3 |
| Industrial Four | I4 |
| Industrial Five | I5 |
| Industrial Six | I6 |
| Industrial Seven | I7 |
| Industrial Eight | I8 |
| Industrial Nine | I9 |
| Industrial Ten | I10 |
| Industrial Eleven | I11 |
| Industrial Twelve | I12 |
| Industrial Thirteen | I13 |

PARK ZONES

- | | |
|-------------------------|-----|
| Park and Assembly One | PA1 |
| Park and Assembly Two | PA2 |
| Park and Assembly Three | PA3 |
| Park and Assembly Four | PA4 |

Land Use Zoning

BYLAW: 722
SCHEDULE: A

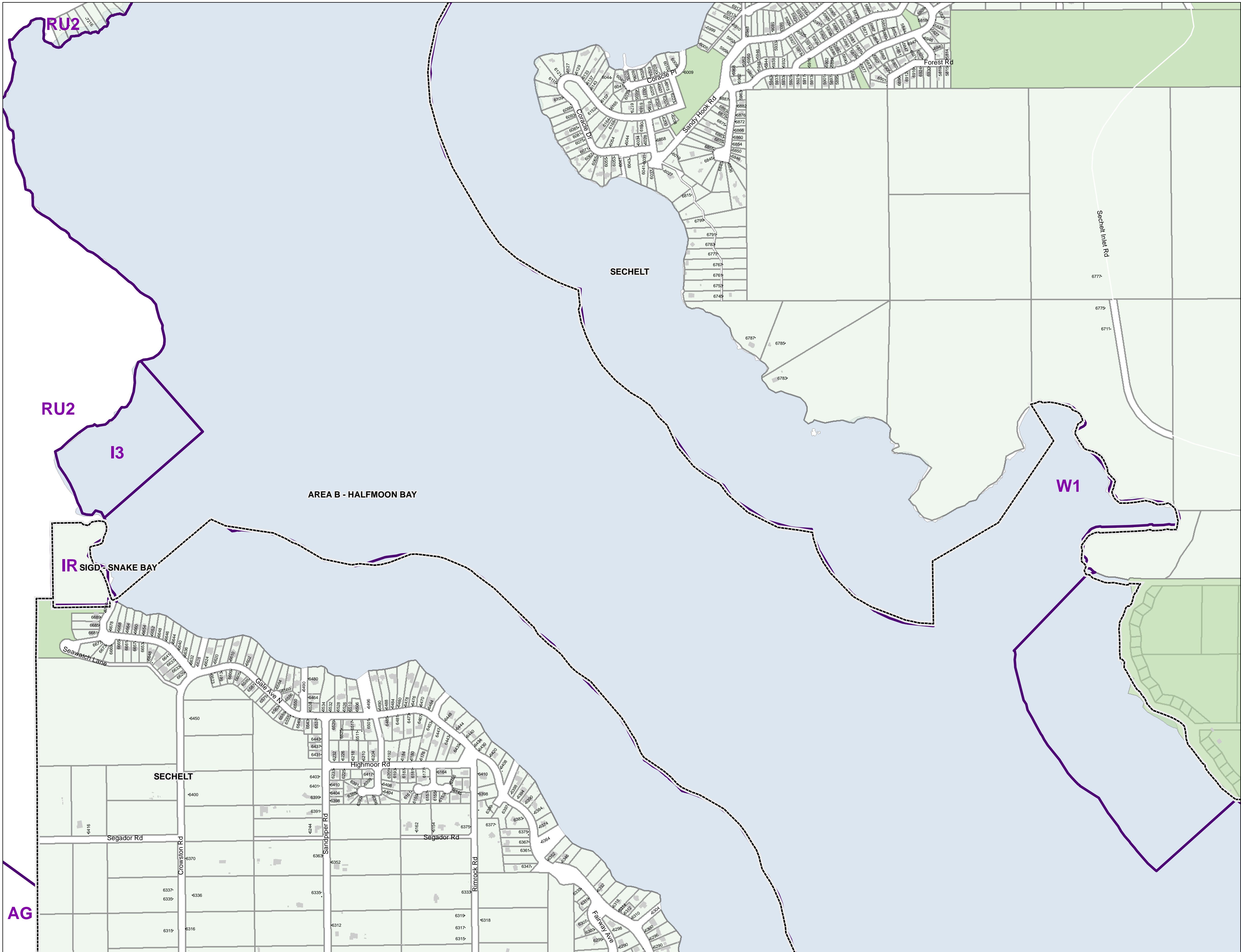
LAND USE ZONING
Map # 1007

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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

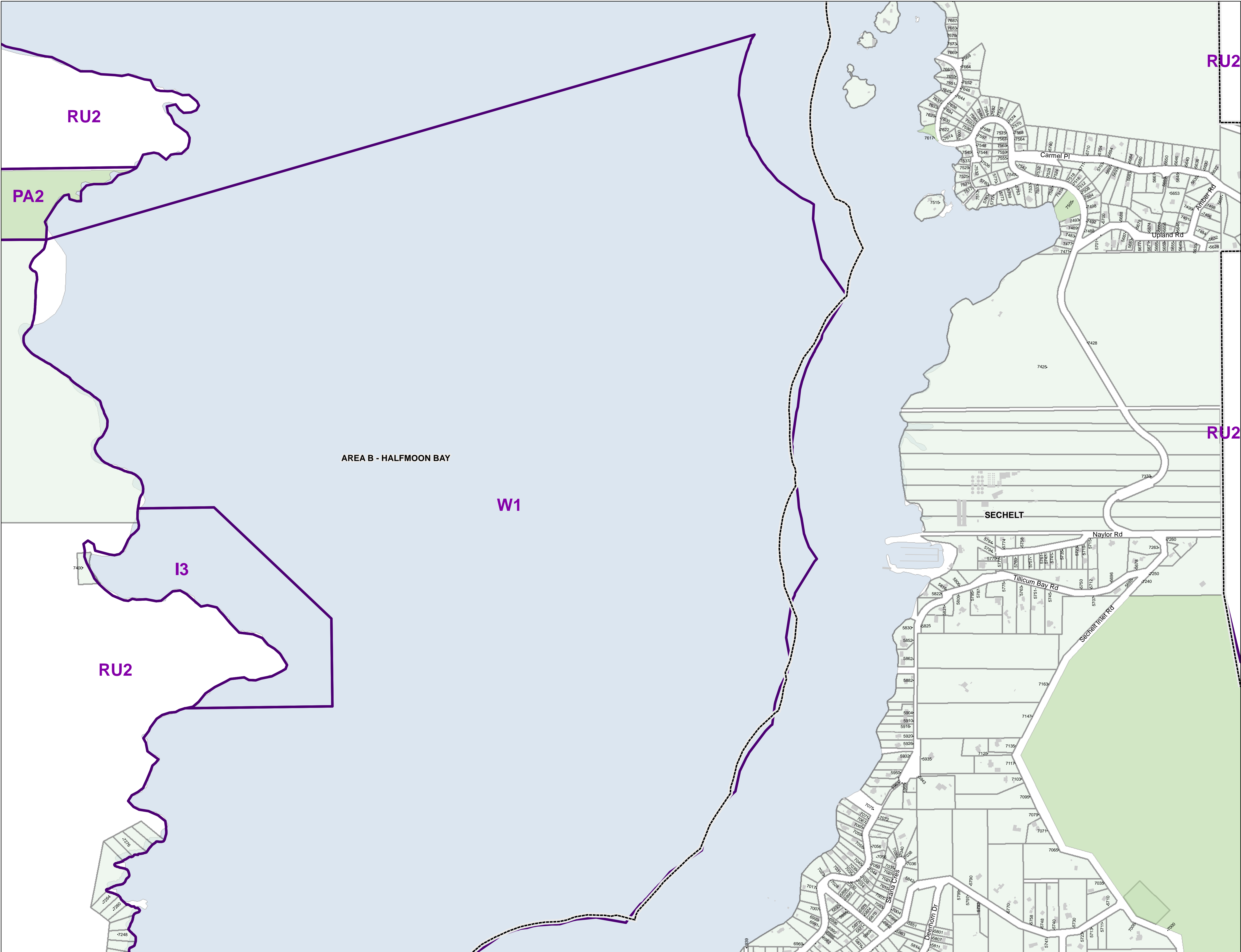
LAND USE ZONING
Map # 1008

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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

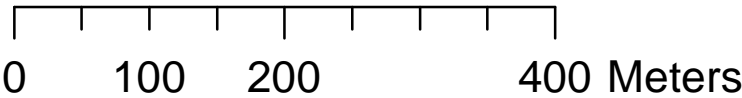
BYLAW: 722
SCHEDULE: A

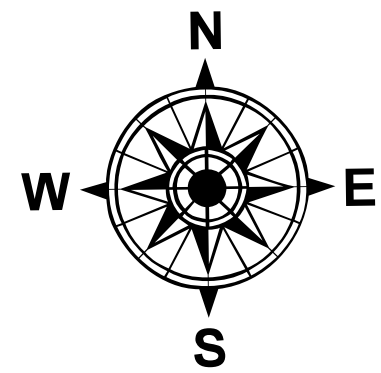
LAND USE ZONING
Map # 1009

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

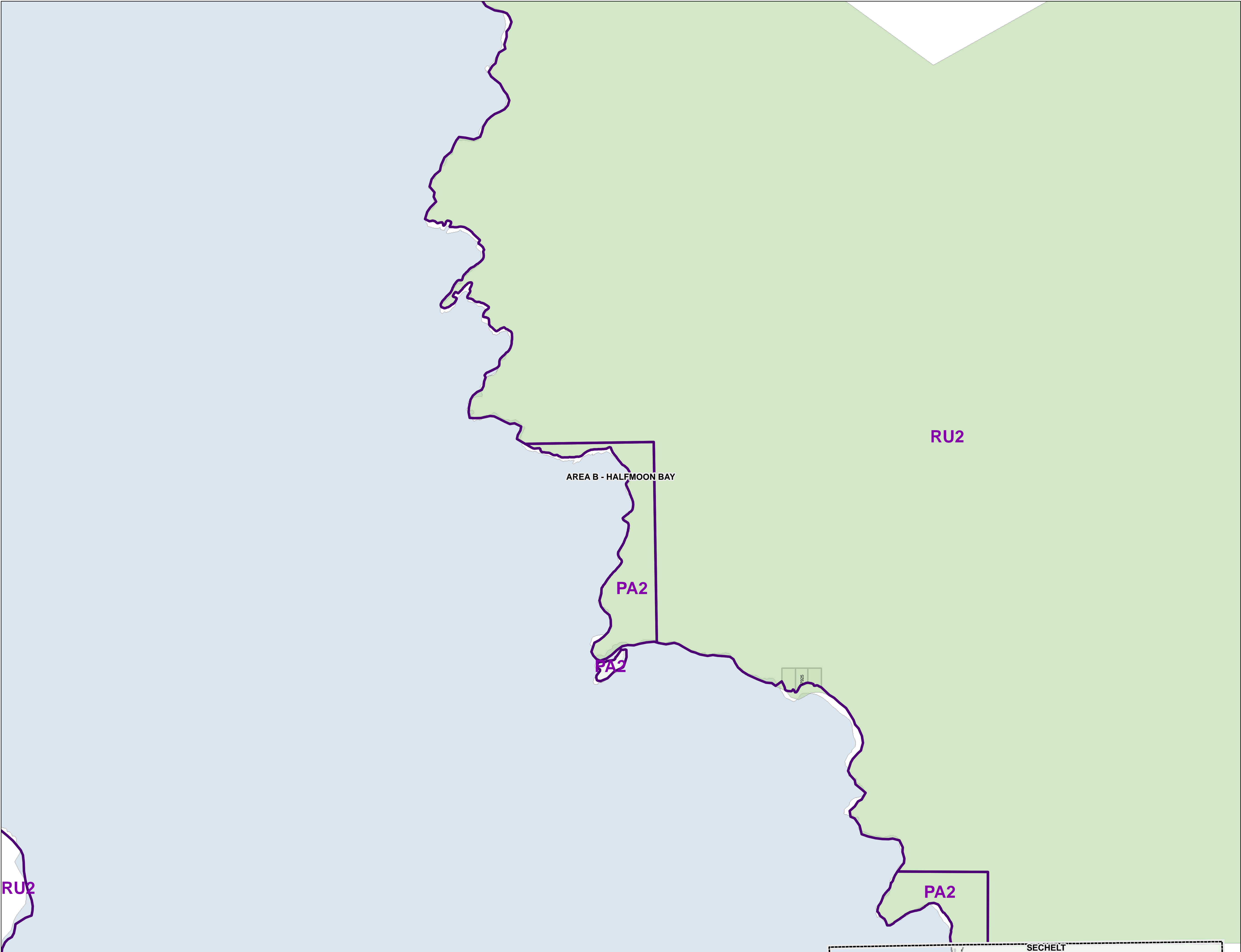
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1010



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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

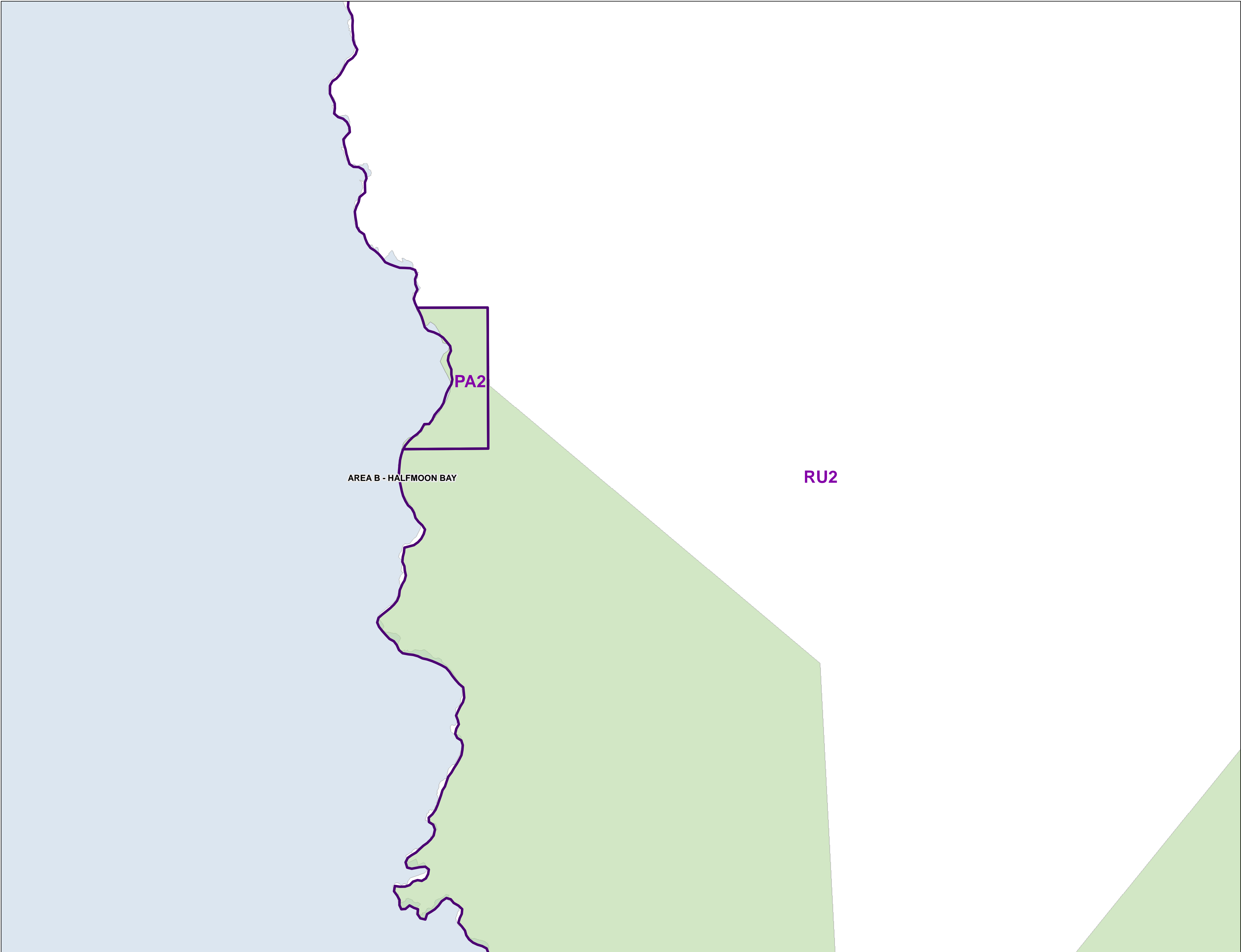
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1011



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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

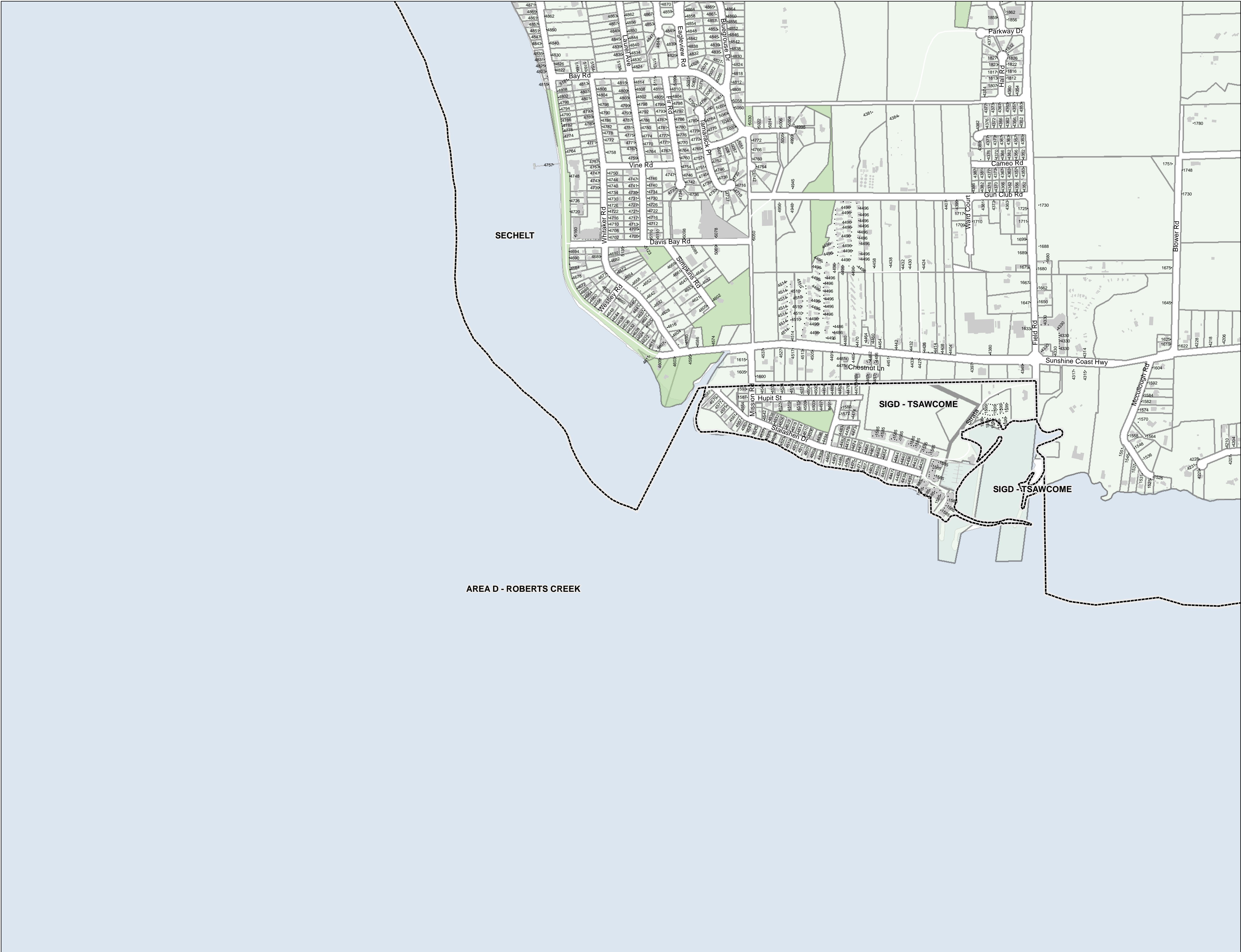
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

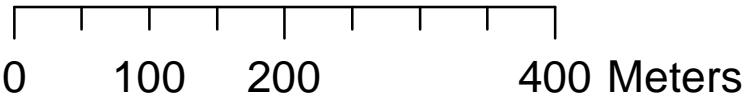
LAND USE ZONING
Map # 1105

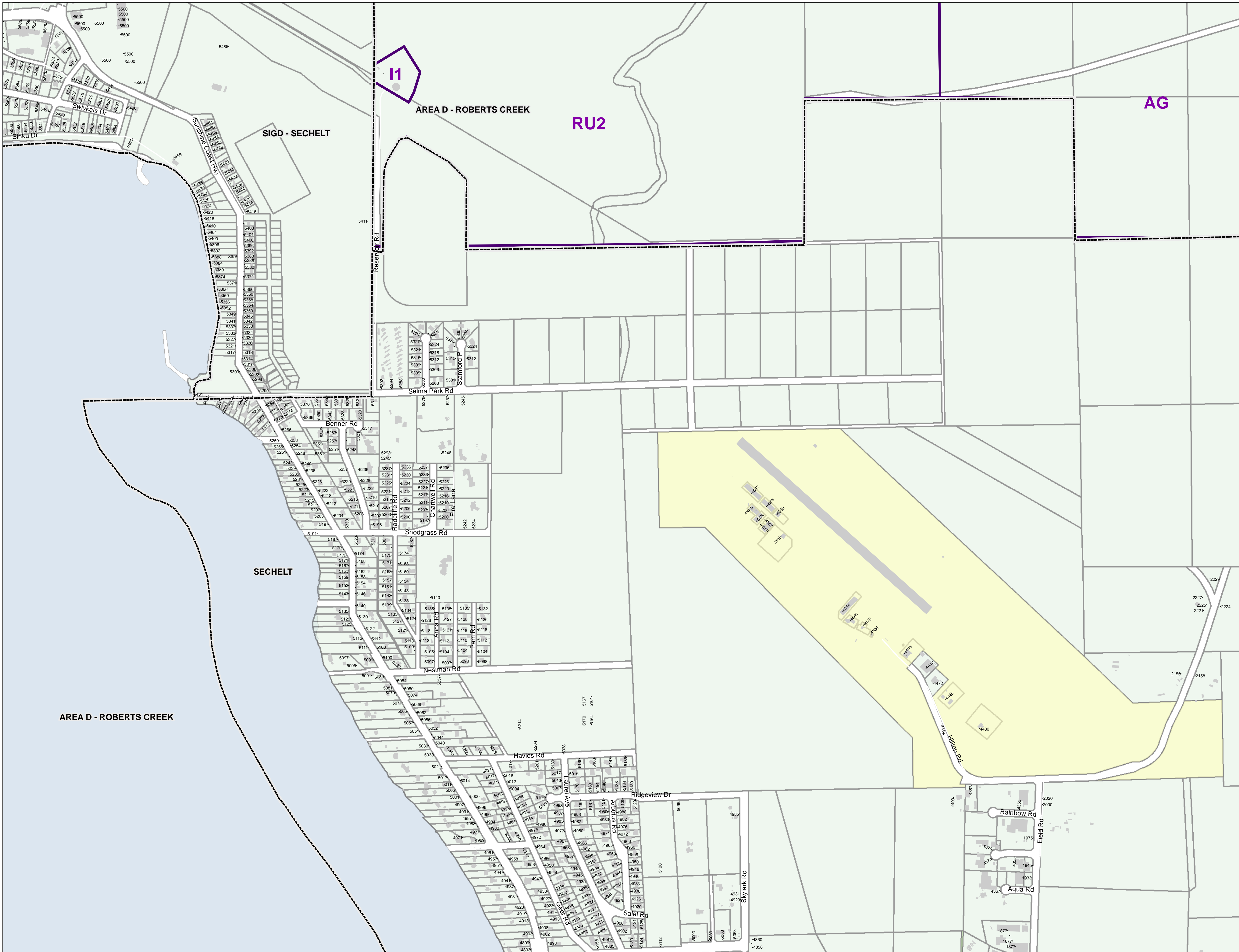


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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

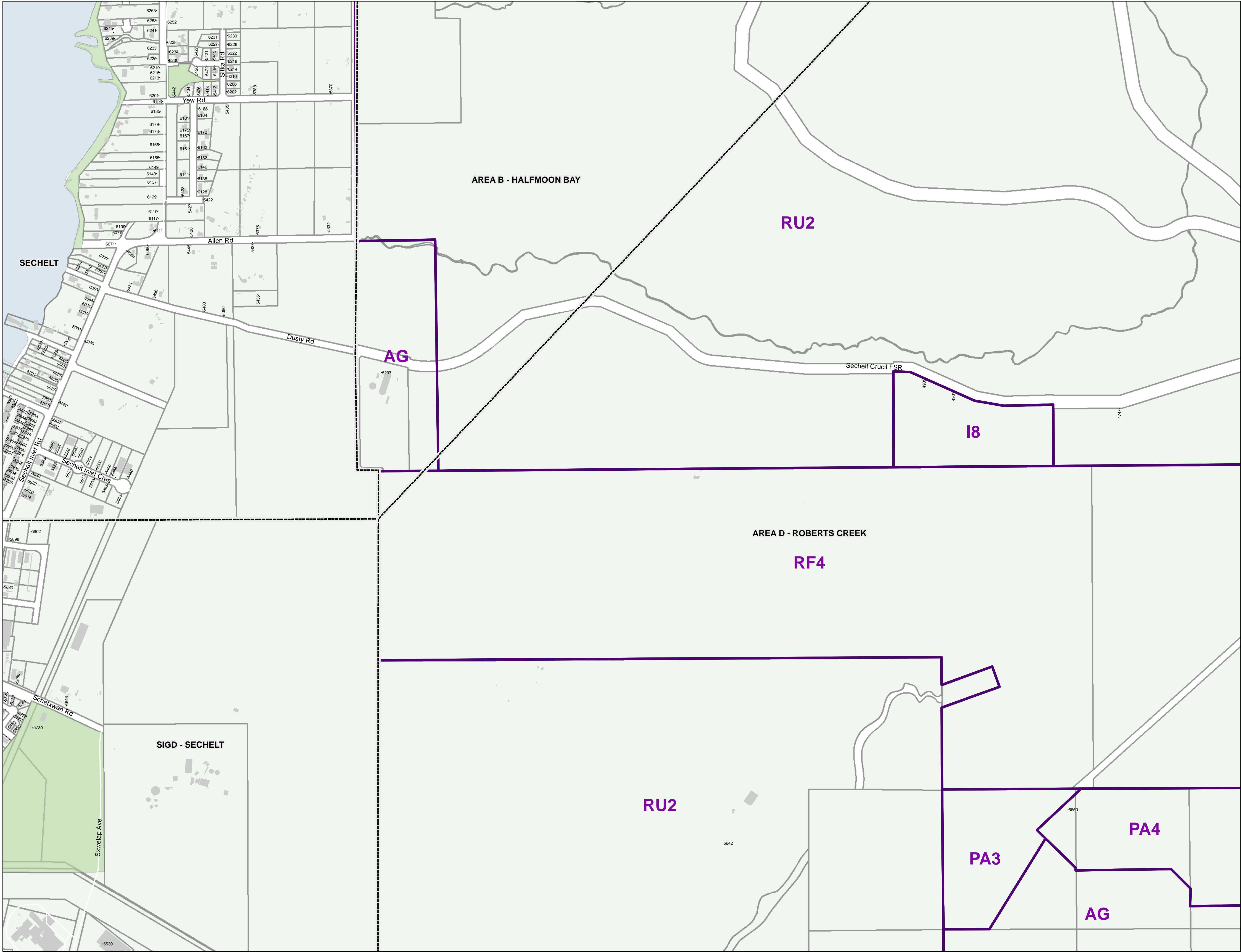
LAND USE ZONING
Map # 1106

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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

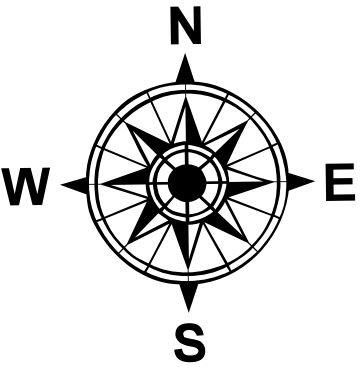
LAND USE ZONING
Map # 1107

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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

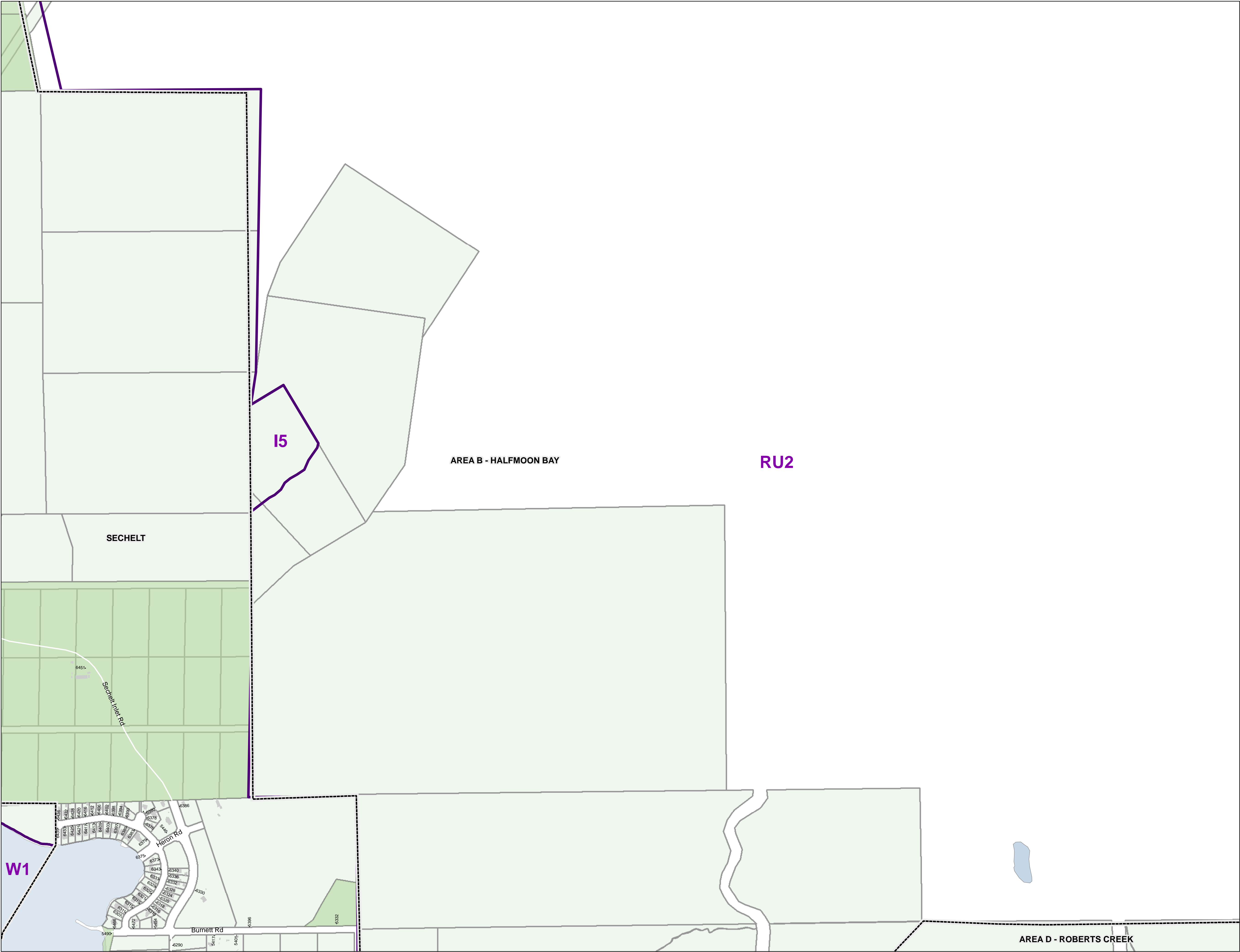
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1108



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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

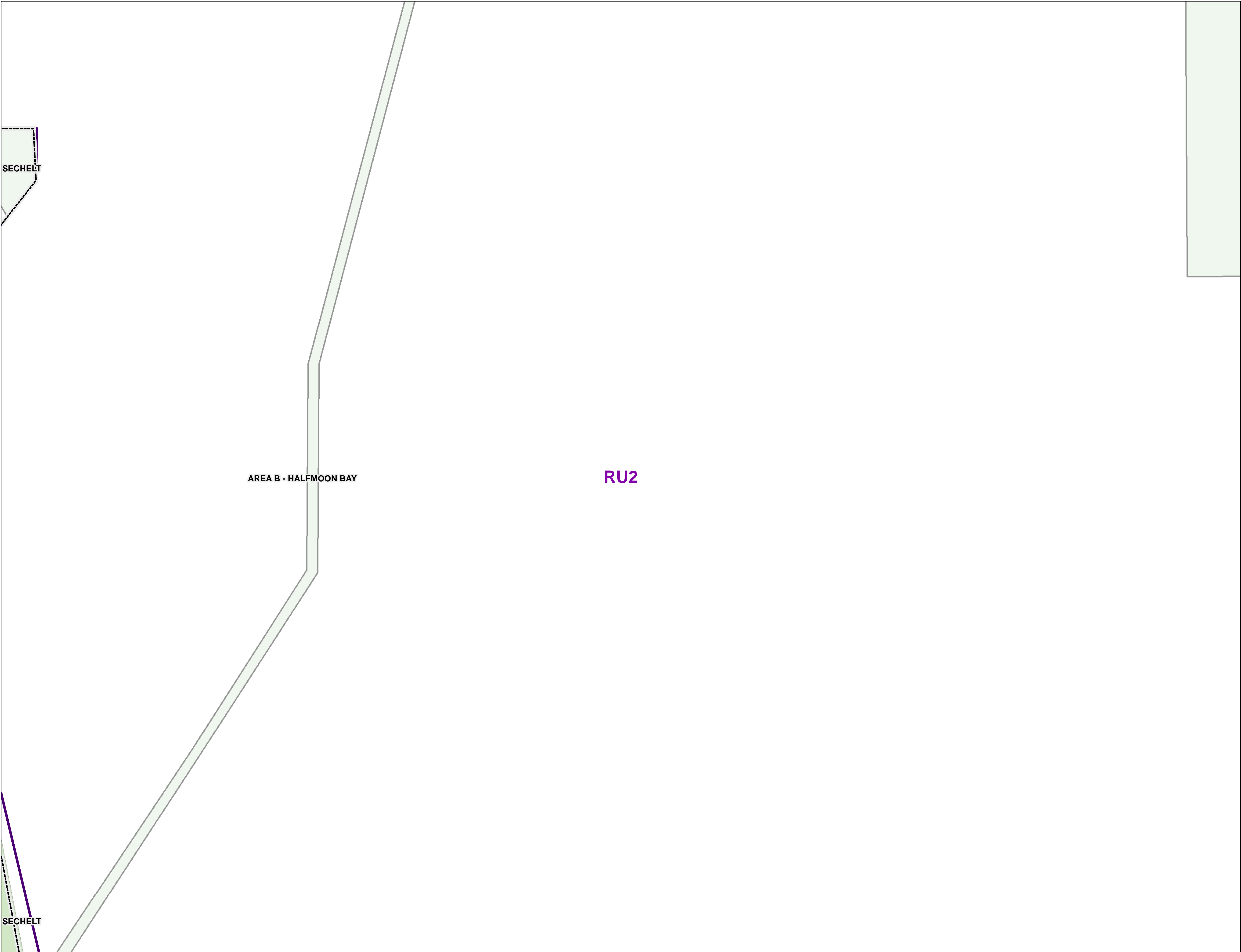
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

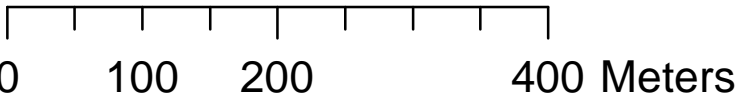
LAND USE ZONING
Map # 1109

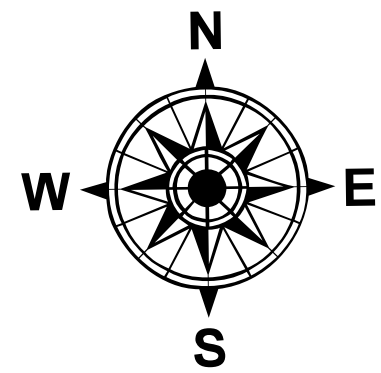


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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1110

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

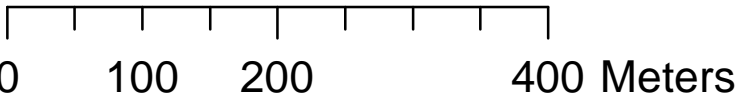
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SCHEDULE: A

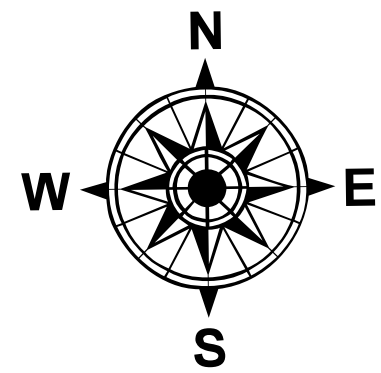
LAND USE ZONING
Map # 1111

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1204



AREA D - ROBERTS CREEK

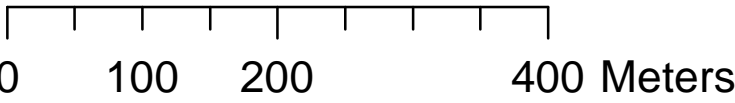
W1

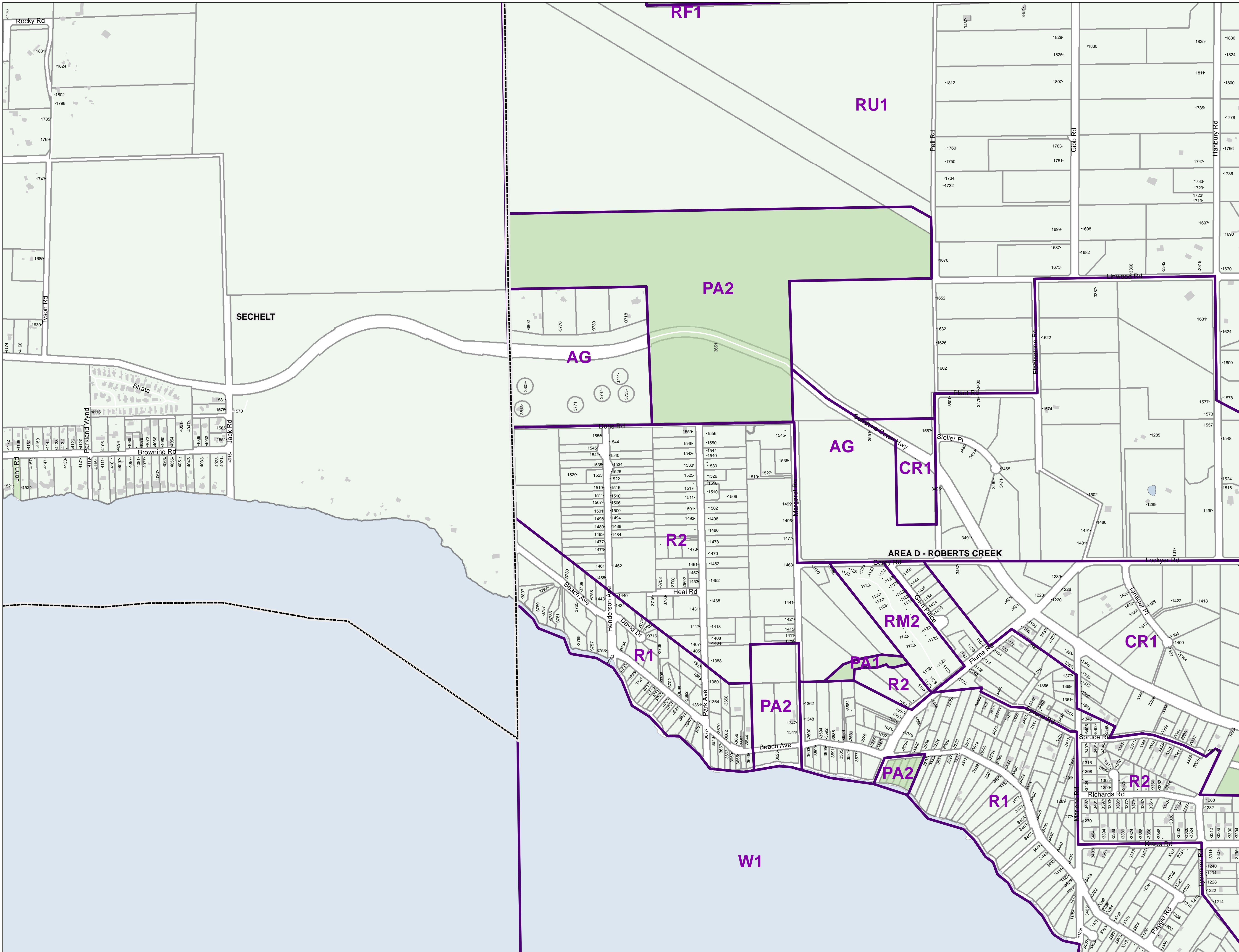
R1

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One
Residential Two
Residential Three
Residential Multiple One
Residential Multiple Two
Residential Multiple Three

R1
R2
R3
RM1
RM2
RM3

RURAL ZONES

Country Residential One
Country Residential Two
Rural One
Rural One A
Rural Two
Rural Two A
Rural Three
Rural Three A
Rural Three B
Rural Forest One
Rural Forest Two
Rural Forest Three
Rural Forest Four
Rural Forest Five
Agriculture

CR1
CR2
RU1
RU1A
RU2
RU2A
RU3
RU3A
RU3B
RF1
RF2
RF3
RF4
RF5
AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One
Comprehensive Development Two
Comprehensive Development Three
Comprehensive Development Four

CD1
CD2
CD3
CD4

COMMERCIAL ZONES

Commercial One
Commercial Two
Commercial Three
Commercial Four
Commercial Five
Marine Transportation

C1
C2
C3
C4
C5
M1

WATER ZONES

Water One
Water Two

W1
W2

INDUSTRIAL ZONES

Industrial One
Industrial Two
Industrial Three
Industrial Four
Industrial Five
Industrial Six
Industrial Seven
Industrial Eight
Industrial Nine
Industrial Ten
Industrial Eleven
Industrial Twelve
Industrial Thirteen

I1
I2
I3
I4
I5
I6
I7
I8
I9
I10
I11
I12
I13

PARK ZONES

Park and Assembly One
Park and Assembly Two
Park and Assembly Three
Park and Assembly Four

PA1
PA2
PA3
PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

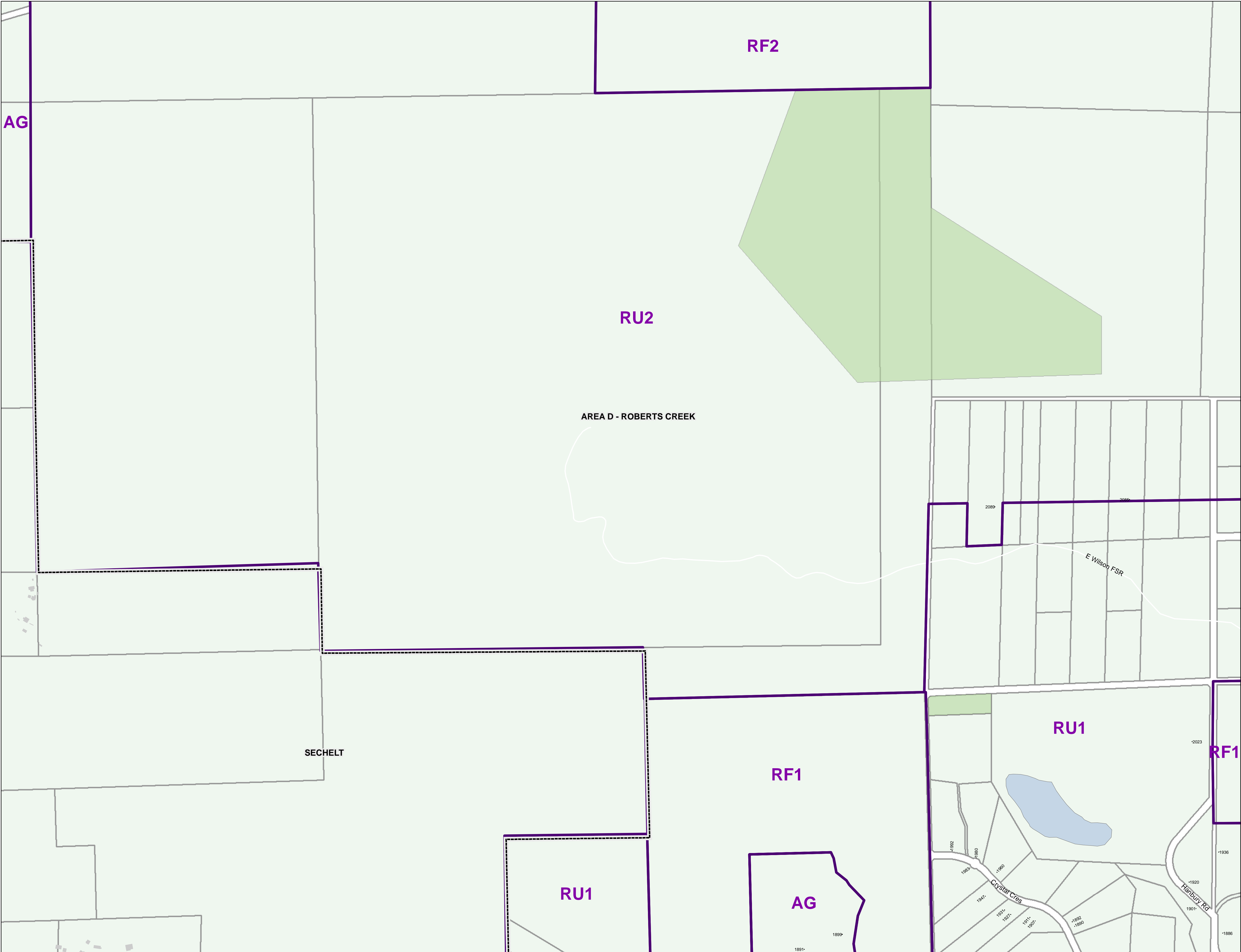
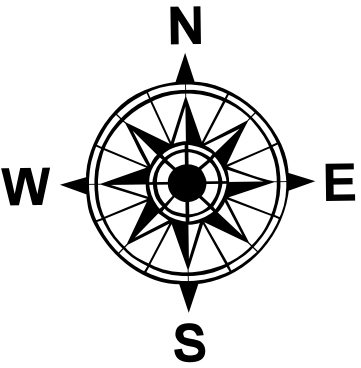
LAND USE ZONING
Map # 1205

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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

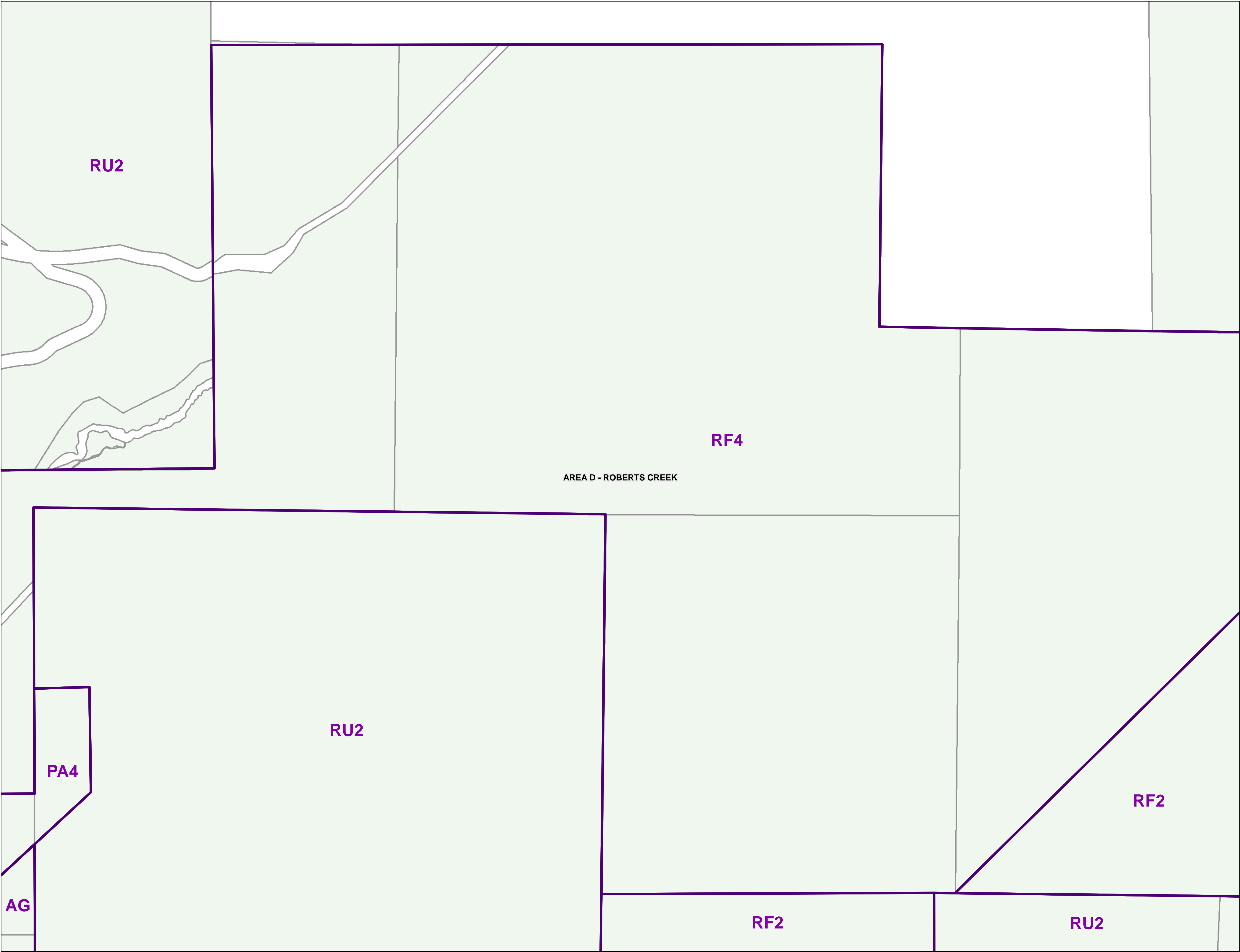
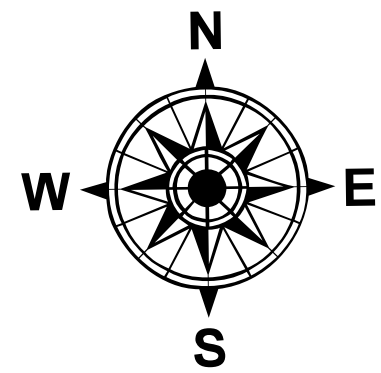
LAND USE ZONING
Map # 1206

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

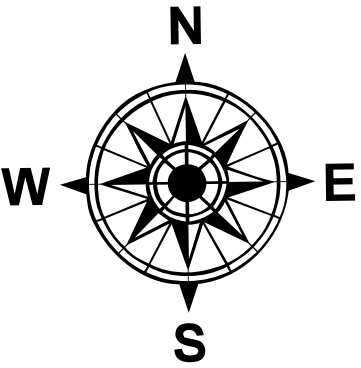
LAND USE ZONING
Map # 1207

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

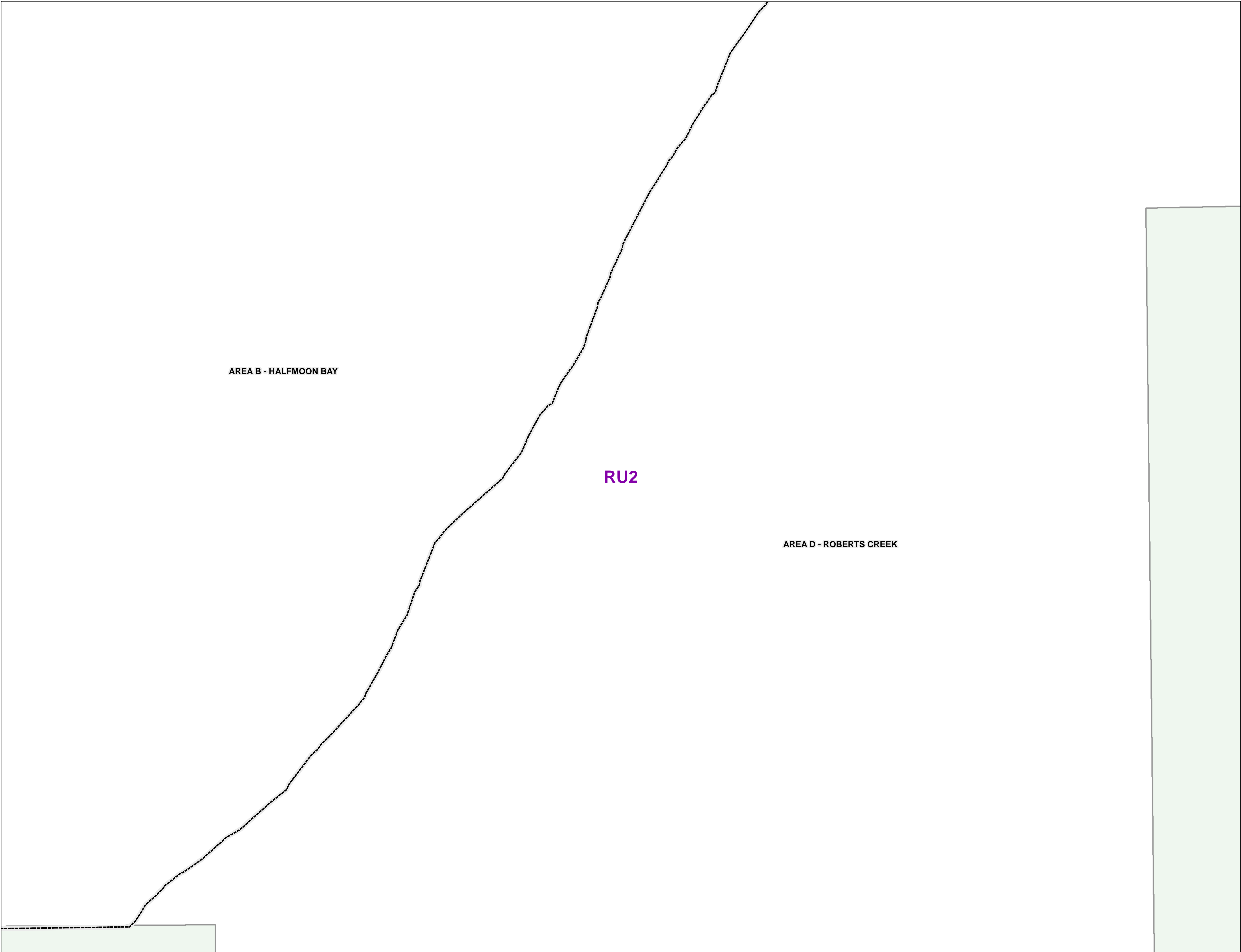
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1208



AREA B - HALFMOON BAY

RU2

AREA D - ROBERTS CREEK

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Date: 2022-01-20
Scale: 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

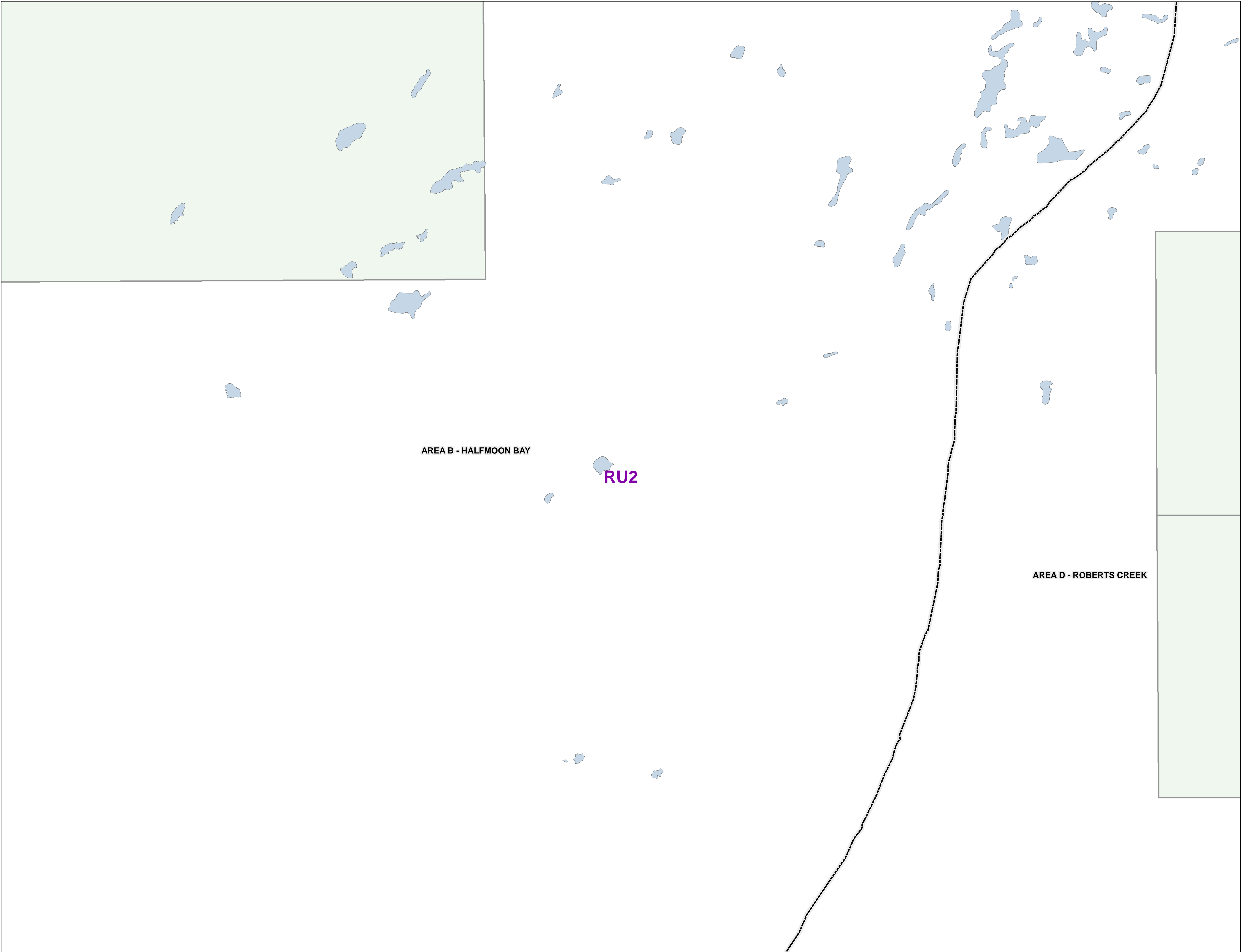
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1209



AREA B - HALFMOON BAY

RU2

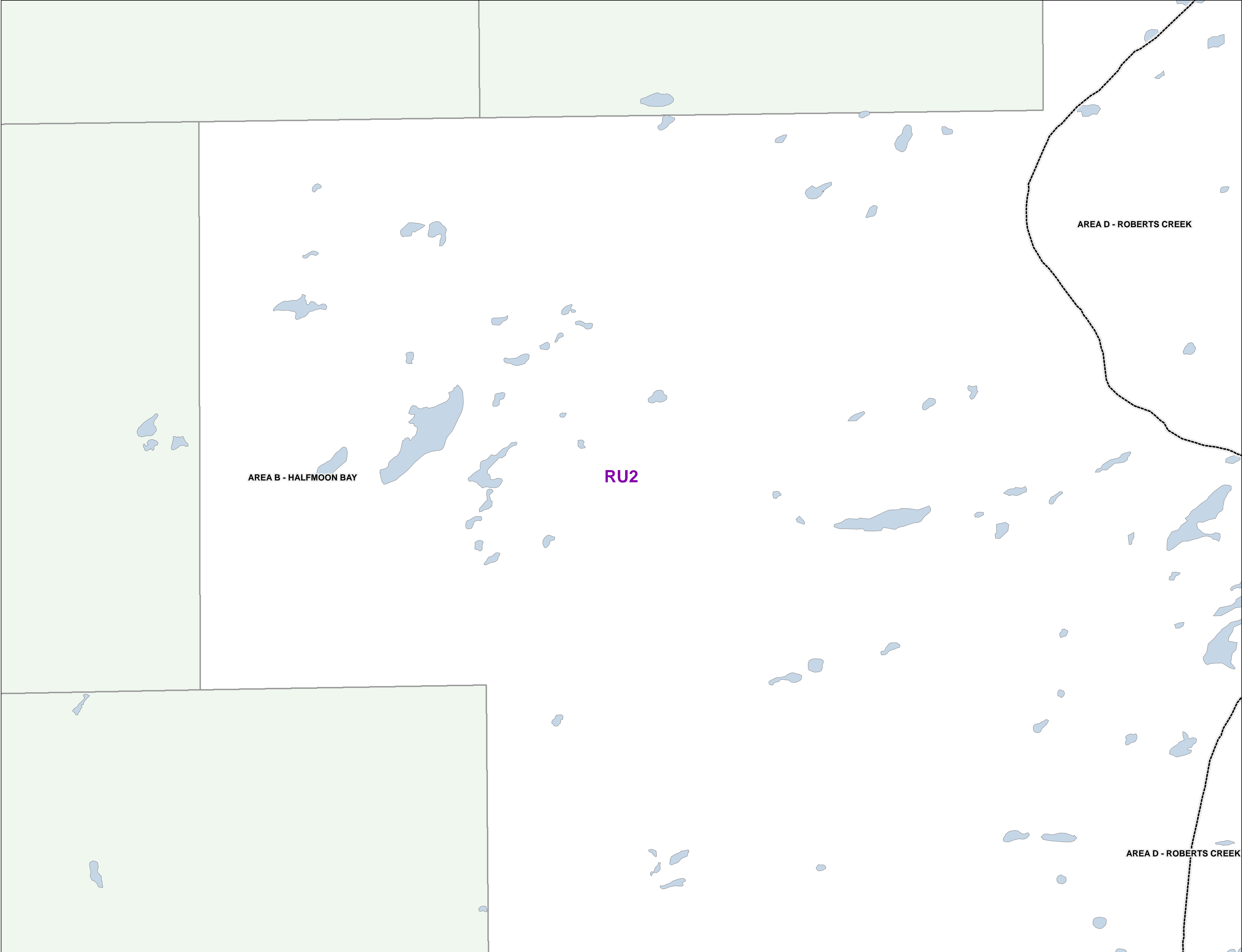
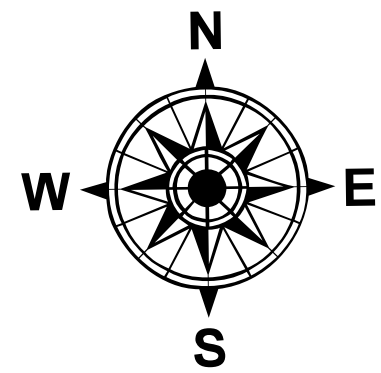
AREA D - ROBERTS CREEK

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

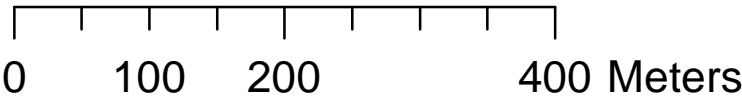
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SCHEDULE: A

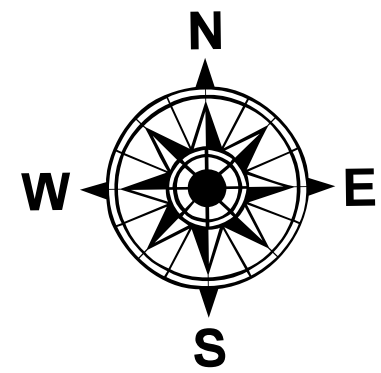
LAND USE ZONING
Map # 1210

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1211

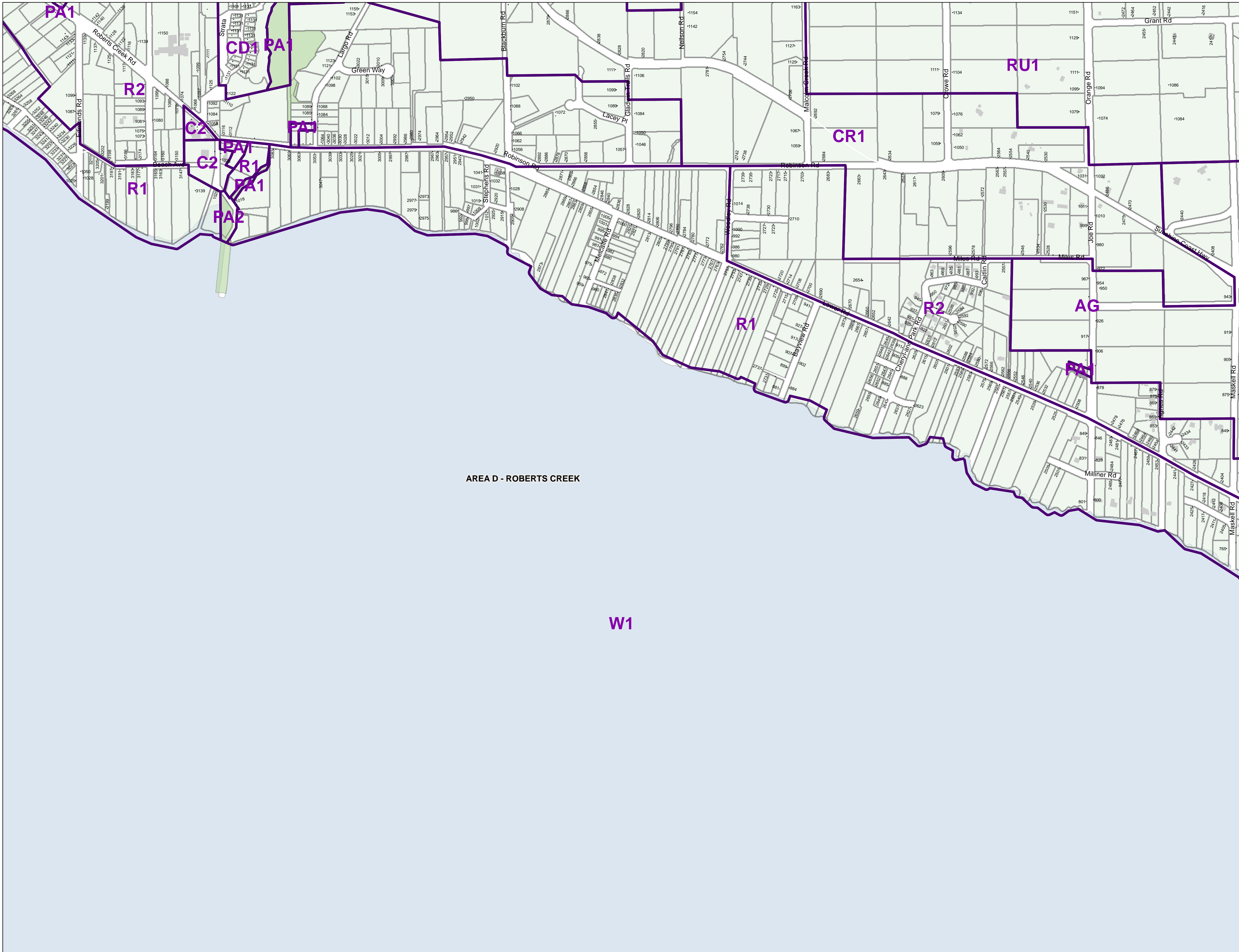


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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

- Residential One
- Residential Two
- Residential Three
- Residential Multiple One
- Residential Multiple Two
- Residential Multiple Three

- R1
- R2
- R3
- RM1
- RM2
- RM3

RURAL ZONES

- Country Residential One
- Country Residential Two
- Rural One
- Rural One A
- Rural Two
- Rural Two A
- Rural Three
- Rural Three A
- Rural Three B
- Rural Forest One
- Rural Forest Two
- Rural Forest Three
- Rural Forest Four
- Rural Forest Five
- Agriculture

- CR1
- CR2
- RU1
- RU1A
- RU2
- RU2A
- RU3
- RU3A
- RU3B
- RF1
- RF2
- RF3
- RF4
- RF5
- AG

COMPREHENSIVE DEVELOPMENT ZONES

- Comprehensive Development One
- Comprehensive Development Two
- Comprehensive Development Three
- Comprehensive Development Four

- CD1
- CD2
- CD3
- CD4

COMMERCIAL ZONES

- Commercial One
- Commercial Two
- Commercial Three
- Commercial Four
- Commercial Five
- Marine Transportation

- C1
- C2
- C3
- C4
- C5
- M1

WATER ZONES

- Water One
- Water Two

- W1
- W2

INDUSTRIAL ZONES

- Industrial One
- Industrial Two
- Industrial Three
- Industrial Four
- Industrial Five
- Industrial Six
- Industrial Seven
- Industrial Eight
- Industrial Nine
- Industrial Ten
- Industrial Eleven
- Industrial Twelve
- Industrial Thirteen

- I1
- I2
- I3
- I4
- I5
- I6
- I7
- I8
- I9
- I10
- I11
- I12
- I13

PARK ZONES

- Park and Assembly One
- Park and Assembly Two
- Park and Assembly Three
- Park and Assembly Four

- PA1
- PA2
- PA3
- PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1304

AREA D - ROBERTS CREEK

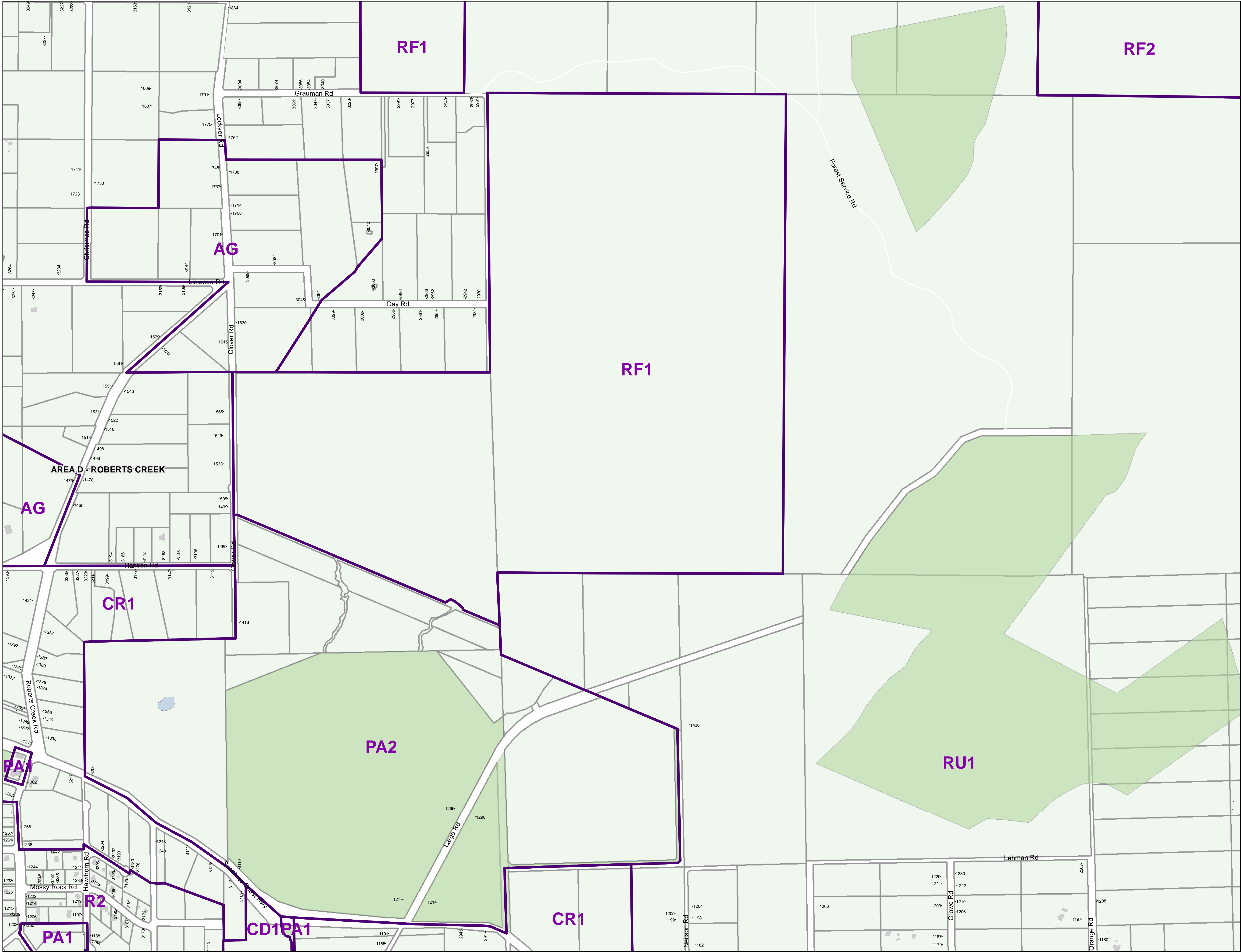
W1

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Date: 2022-01-20
Scale: 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

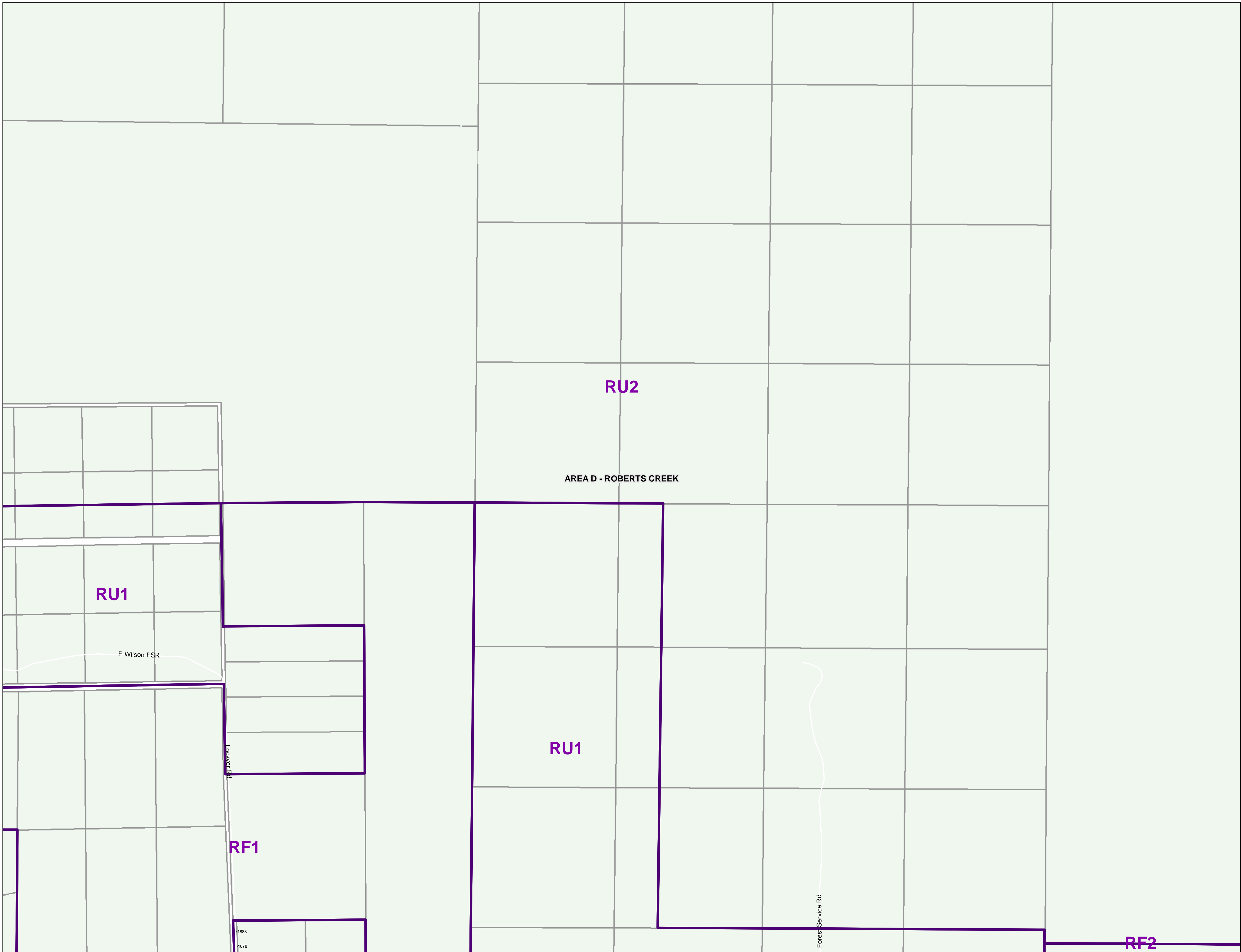
LAND USE ZONING
Map # 1305

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Date: 2022-01-20
Scale: 1:5,000

0 100 200 400 Meters



Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1
Rural Two	RU2
Rural Two A	RU2
Rural Three	RU3
Rural Three A	RU3
Rural Three B	RU3
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

Water One	W1
Water Two	W2

Industrial One	11
Industrial Two	12
Industrial Three	13
Industrial Four	14
Industrial Five	15
Industrial Six	16
Industrial Seven	17
Industrial Eight	18
Industrial Nine	19
Industrial Ten	110
Industrial Eleven	111
Industrial Twelve	112
Industrial Thirteen	113

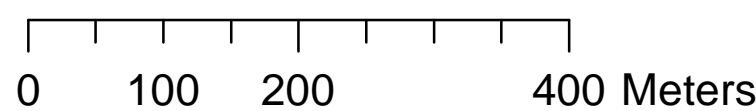
Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

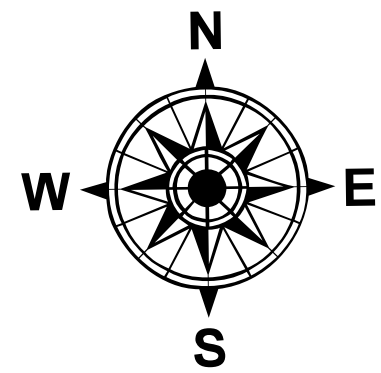
BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1306

The logo of the Sunshine Coast Regional District is a blue octagon. Inside the octagon, the words "SUNSHINE COAST" are written in white, uppercase letters along the top arc, and "REGIONAL DISTRICT" is written along the bottom arc. In the center of the octagon is a white, stylized eight-pointed star or compass rose.

Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

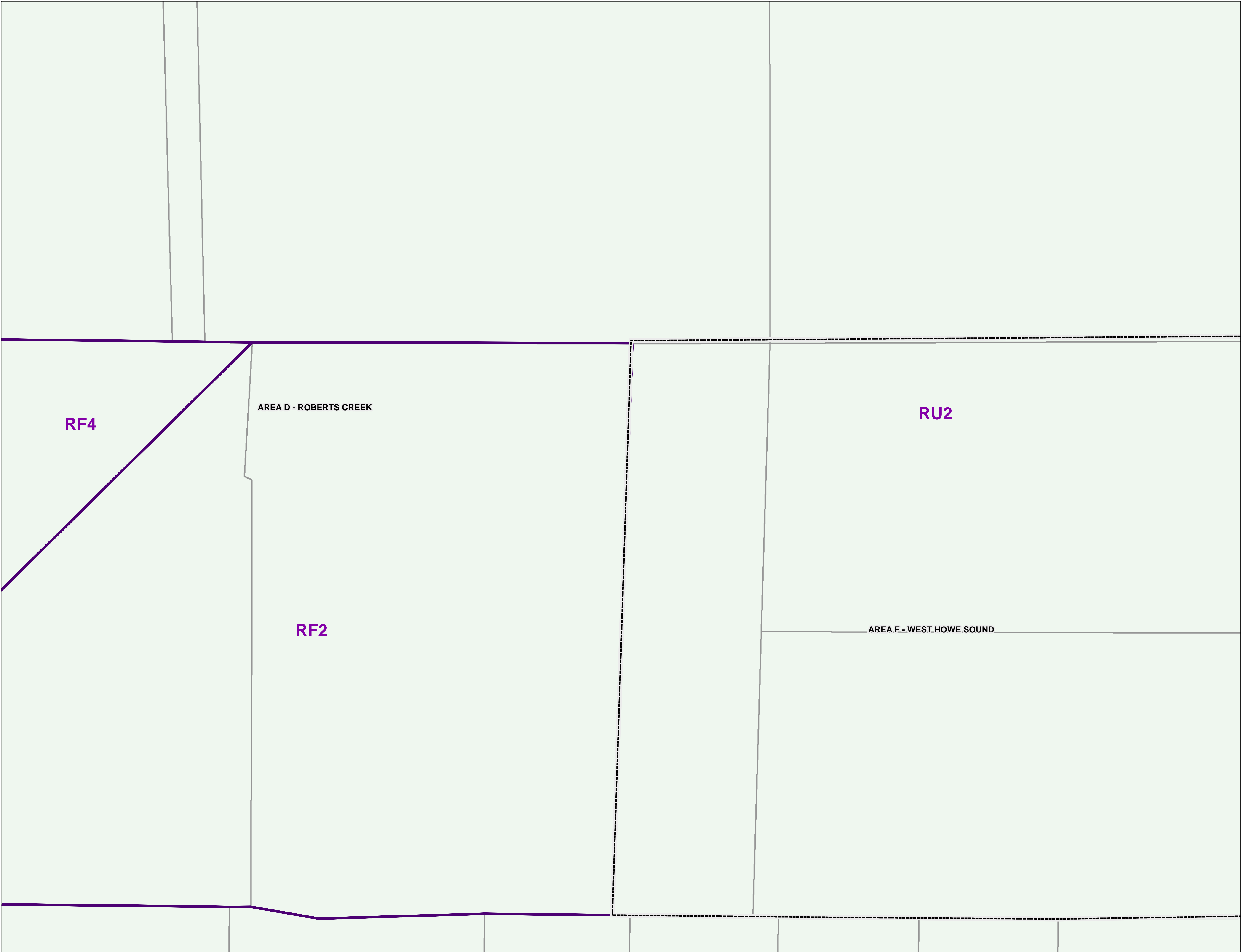
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1307

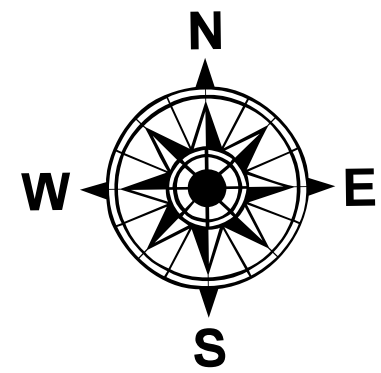


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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1308

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

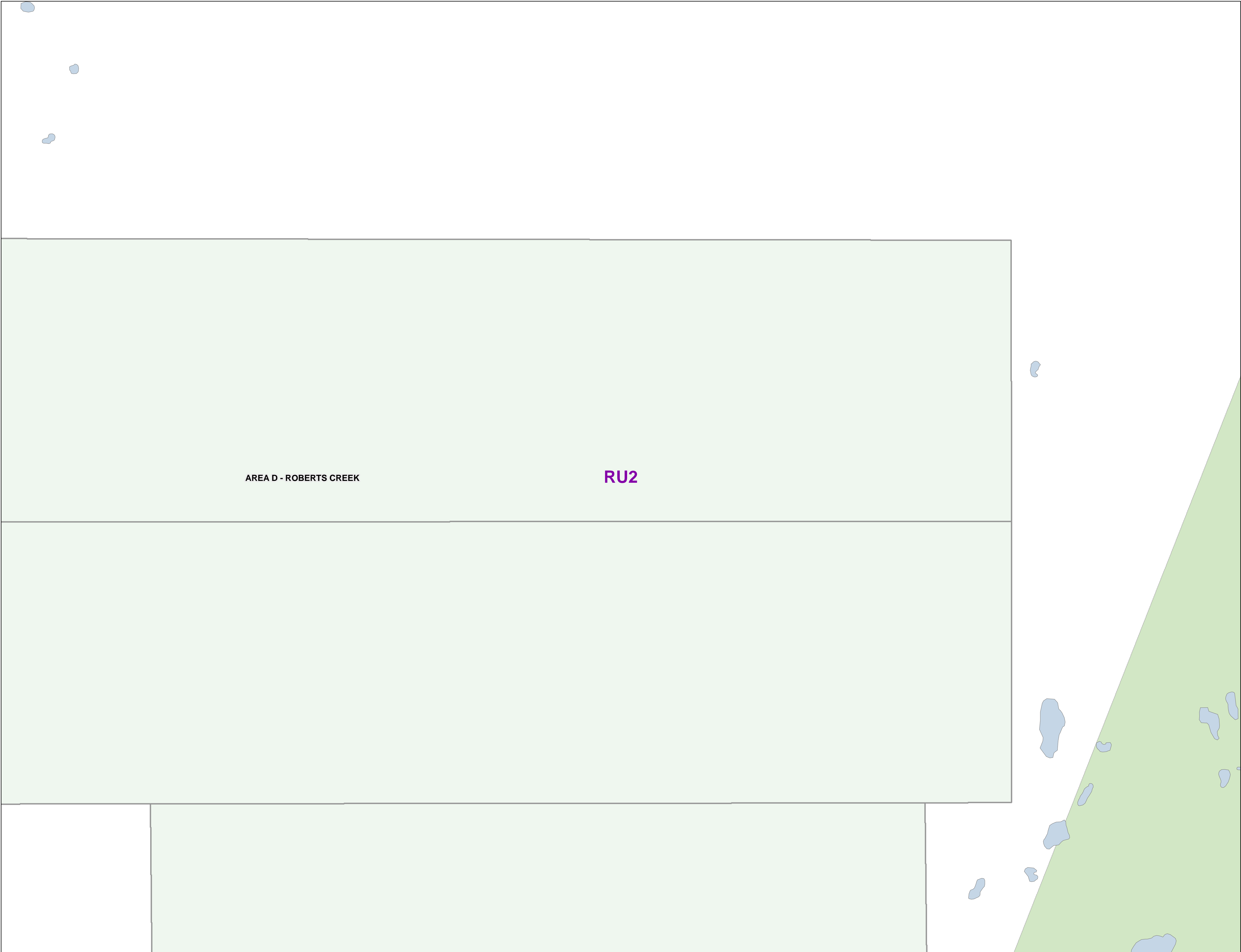
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1309

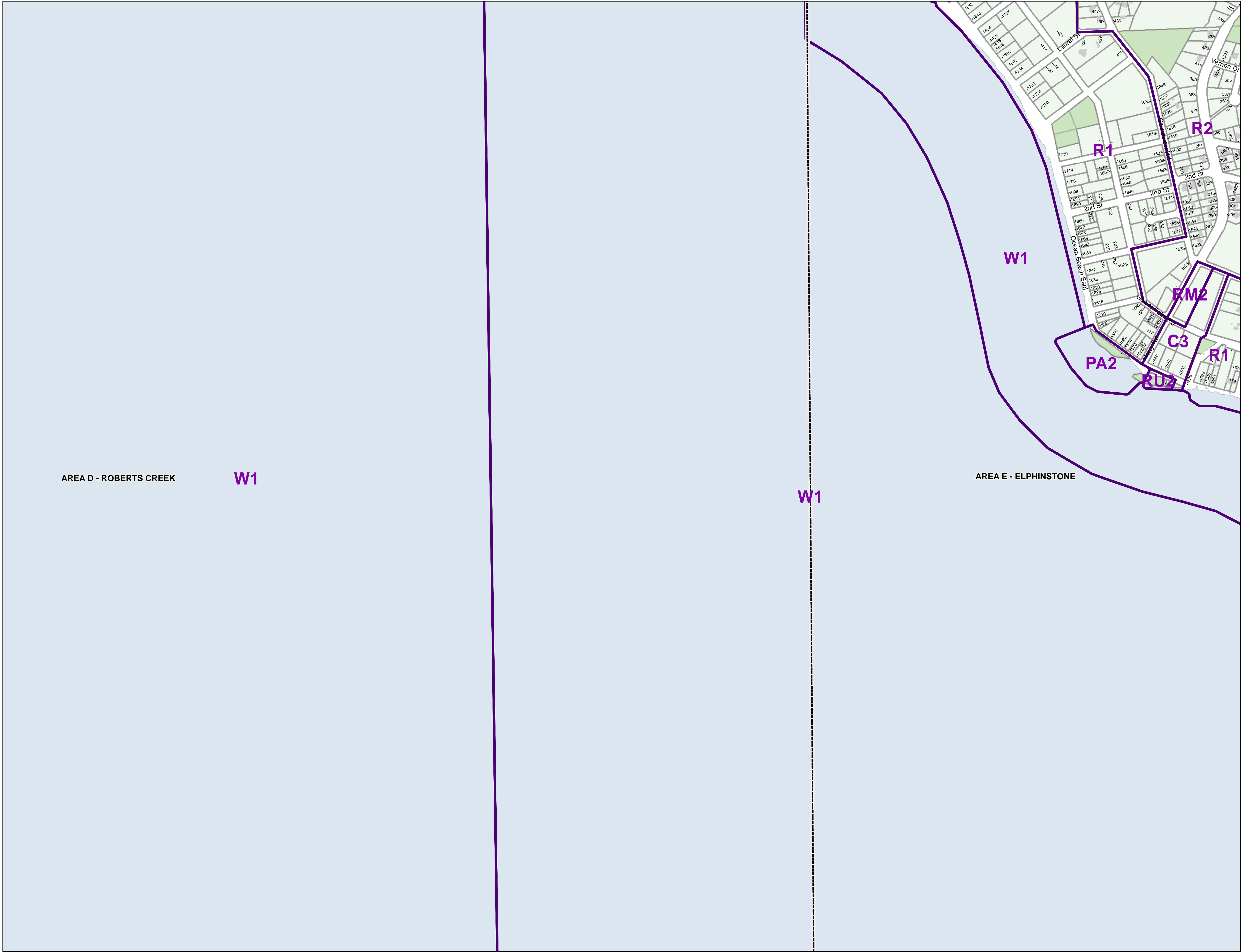


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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters

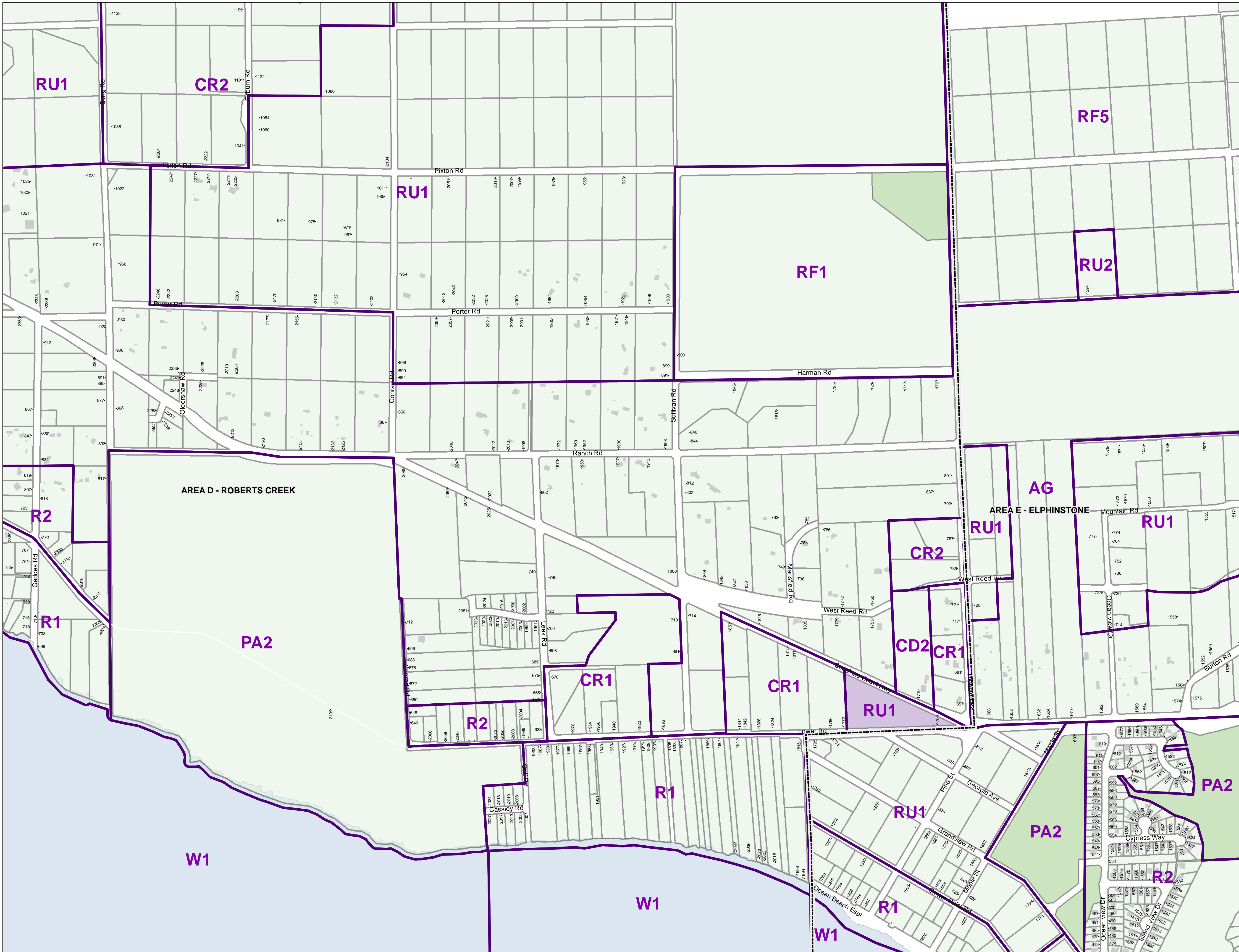


Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

LAND USE ZONING

Map # 1403

309



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

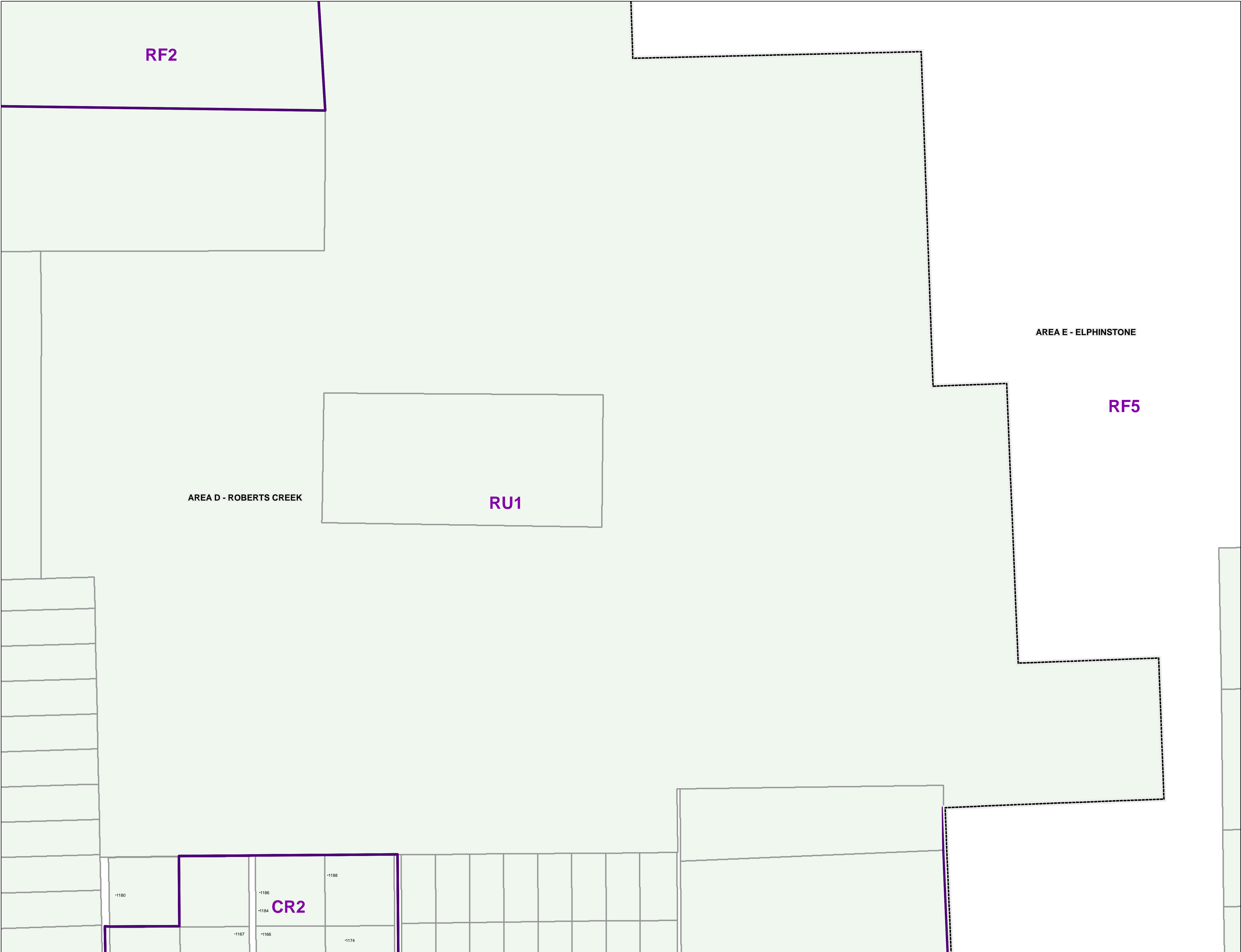
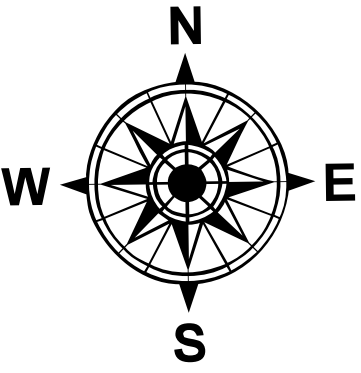
LAND USE ZONING
Map # 1404

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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

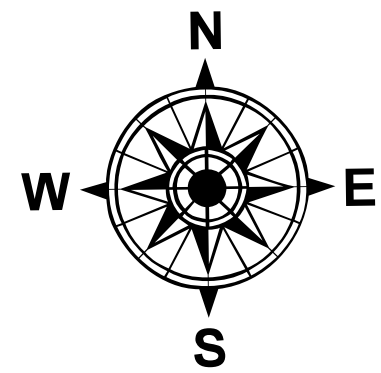
LAND USE ZONING
Map # 1405

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

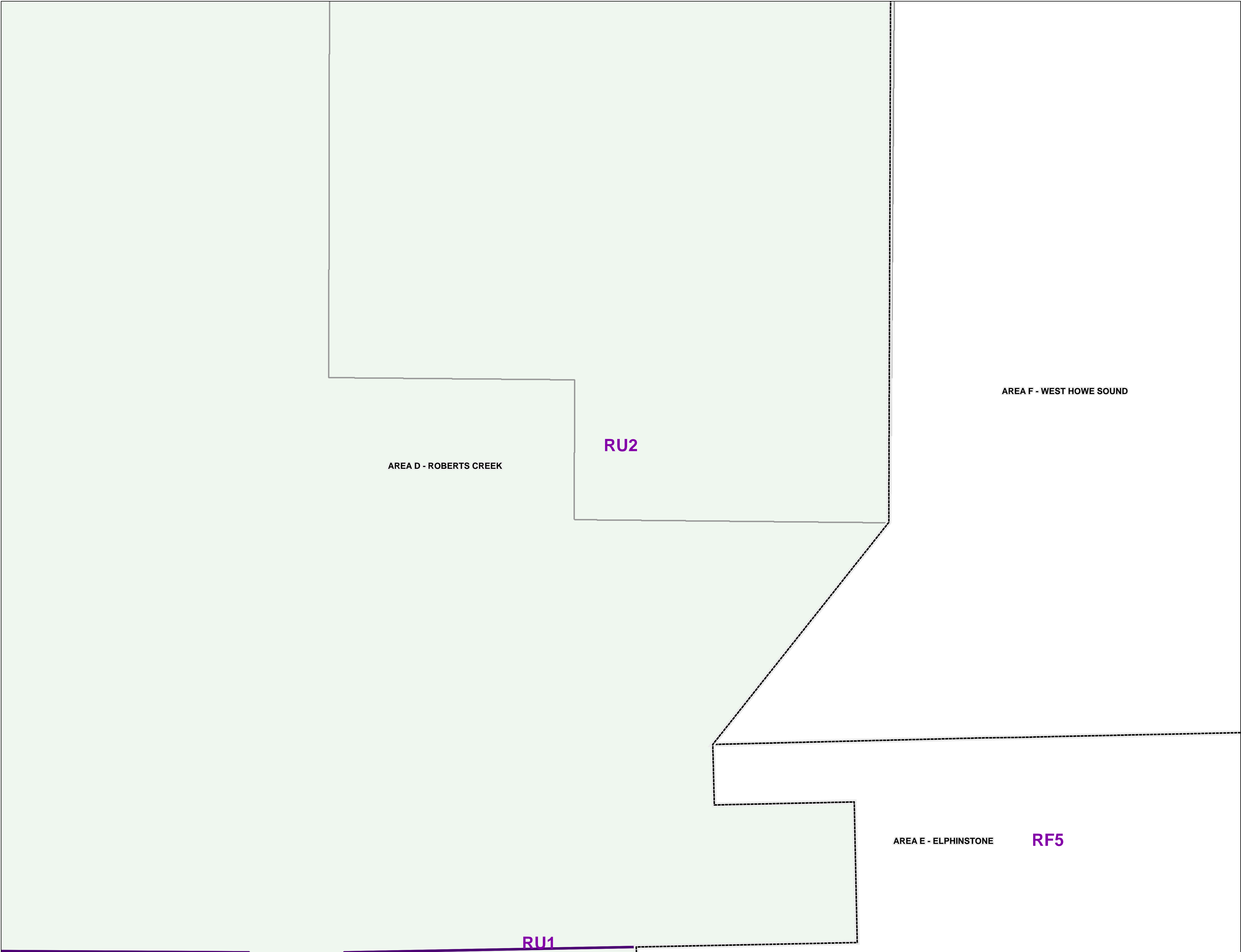
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1406

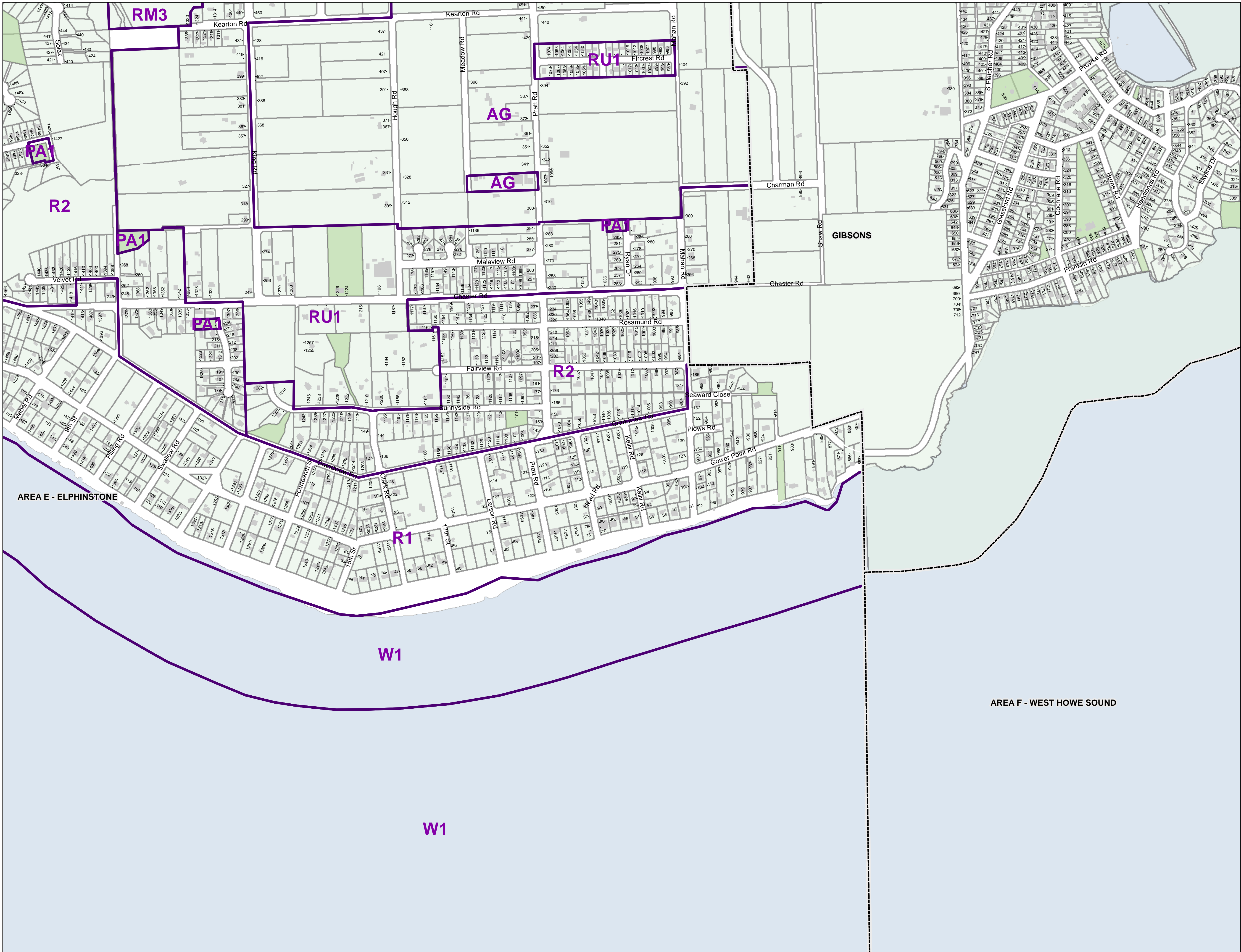


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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	RM1
Residential Multiple One	RM2
Residential Multiple Two	RM3
Residential Multiple Three	

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

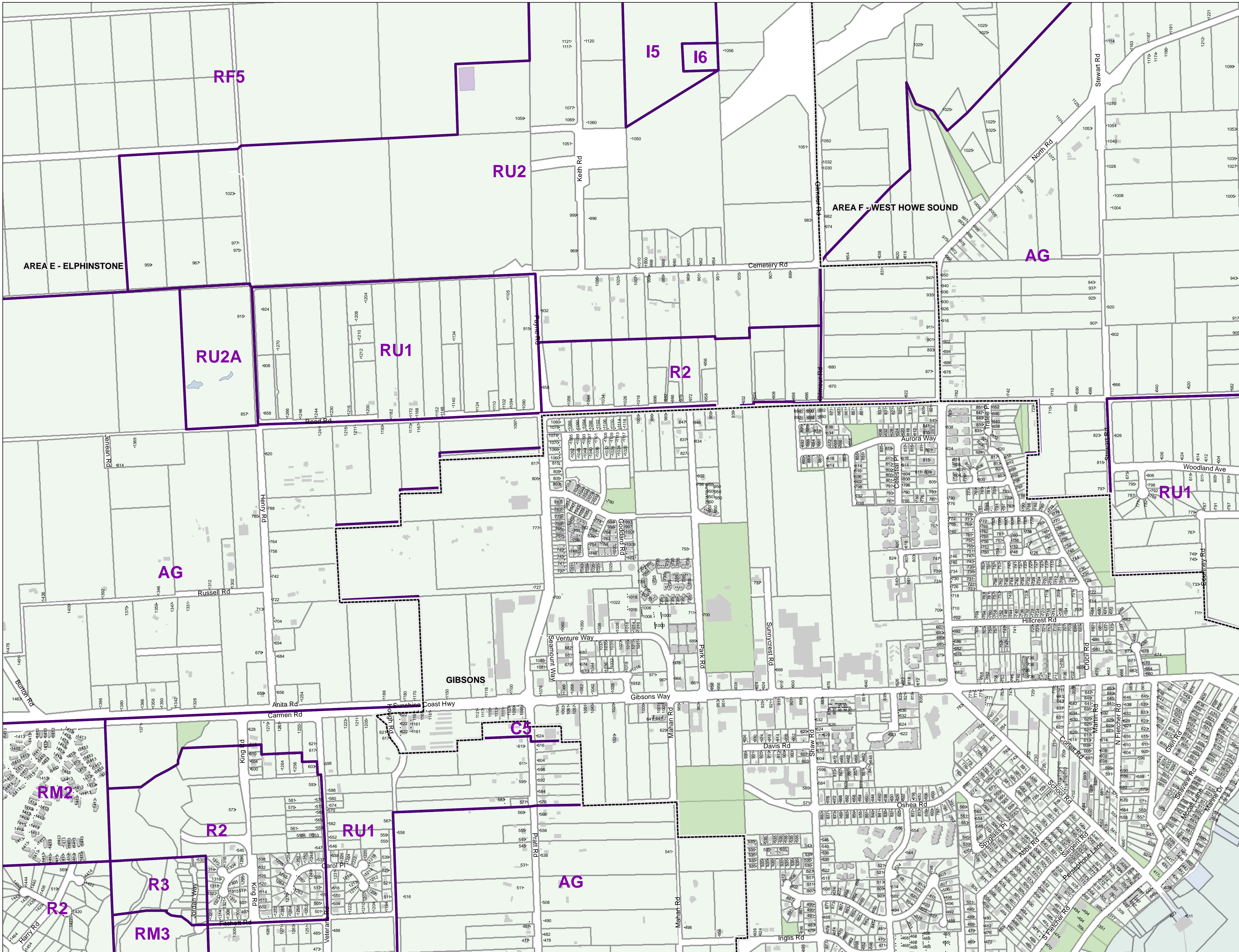
LAND USE ZONING
Map # 1503

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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One
Residential Two
Residential Three
Residential Multiple One
Residential Multiple Two
Residential Multiple Three

R1
R2
R3
RM1
RM2
RM3

RURAL ZONES

Country Residential One
Country Residential Two
Rural One
Rural One A
Rural Two
Rural Two A
Rural Three
Rural Three A
Rural Three B
Rural Forest One
Rural Forest Two
Rural Forest Three
Rural Forest Four
Rural Forest Five
Agriculture

CR1
CR2
RU1
RU1A
RU2
RU2A
RU3
RU3A
RU3B
RF1
RF2
RF3
RF4
RF5
AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One
Comprehensive Development Two
Comprehensive Development Three
Comprehensive Development Four

CD1
CD2
CD3
CD4

COMMERCIAL ZONES

Commercial One
Commercial Two
Commercial Three
Commercial Four
Commercial Five
Marine Transportation

C1
C2
C3
C4
C5
M1

WATER ZONES

Water One
Water Two

W1
W2

INDUSTRIAL ZONES

Industrial One
Industrial Two
Industrial Three
Industrial Four
Industrial Five
Industrial Six
Industrial Seven
Industrial Eight
Industrial Nine
Industrial Ten
Industrial Eleven
Industrial Twelve
Industrial Thirteen

I1
I2
I3
I4
I5
I6
I7
I8
I9
I10
I11
I12
I13

PARK ZONES

Park and Assembly One
Park and Assembly Two
Park and Assembly Three
Park and Assembly Four

PA1
PA2
PA3
PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

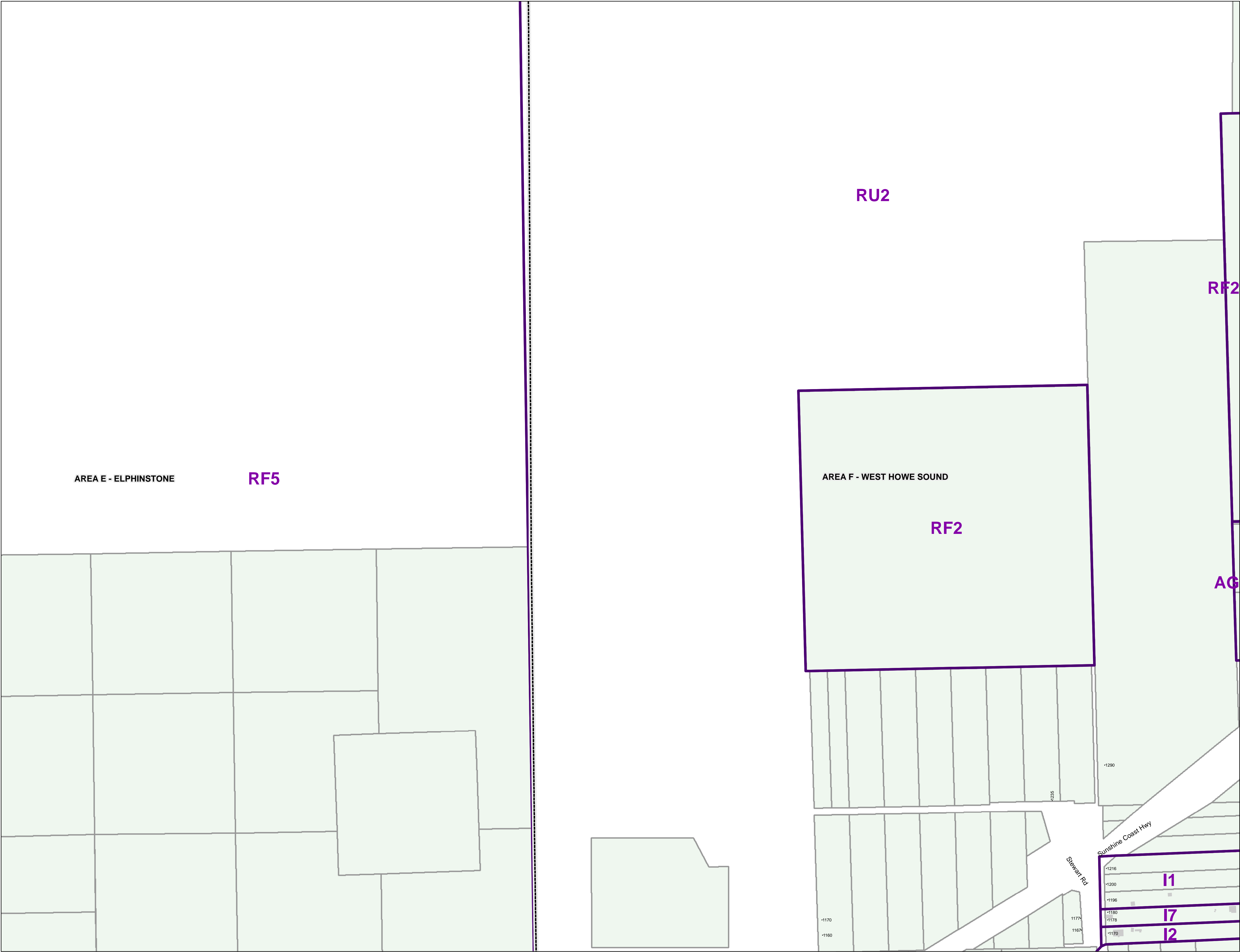
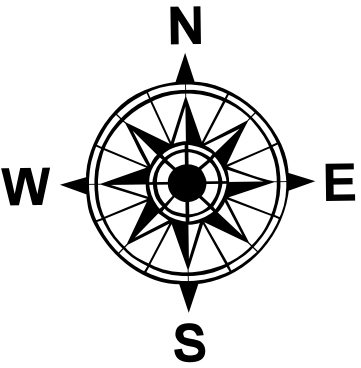
LAND USE ZONING
Map # 1504

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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

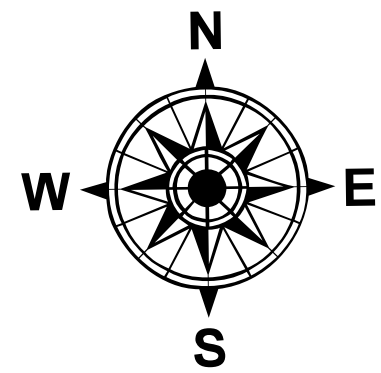
LAND USE ZONING
Map # 1505

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1603

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

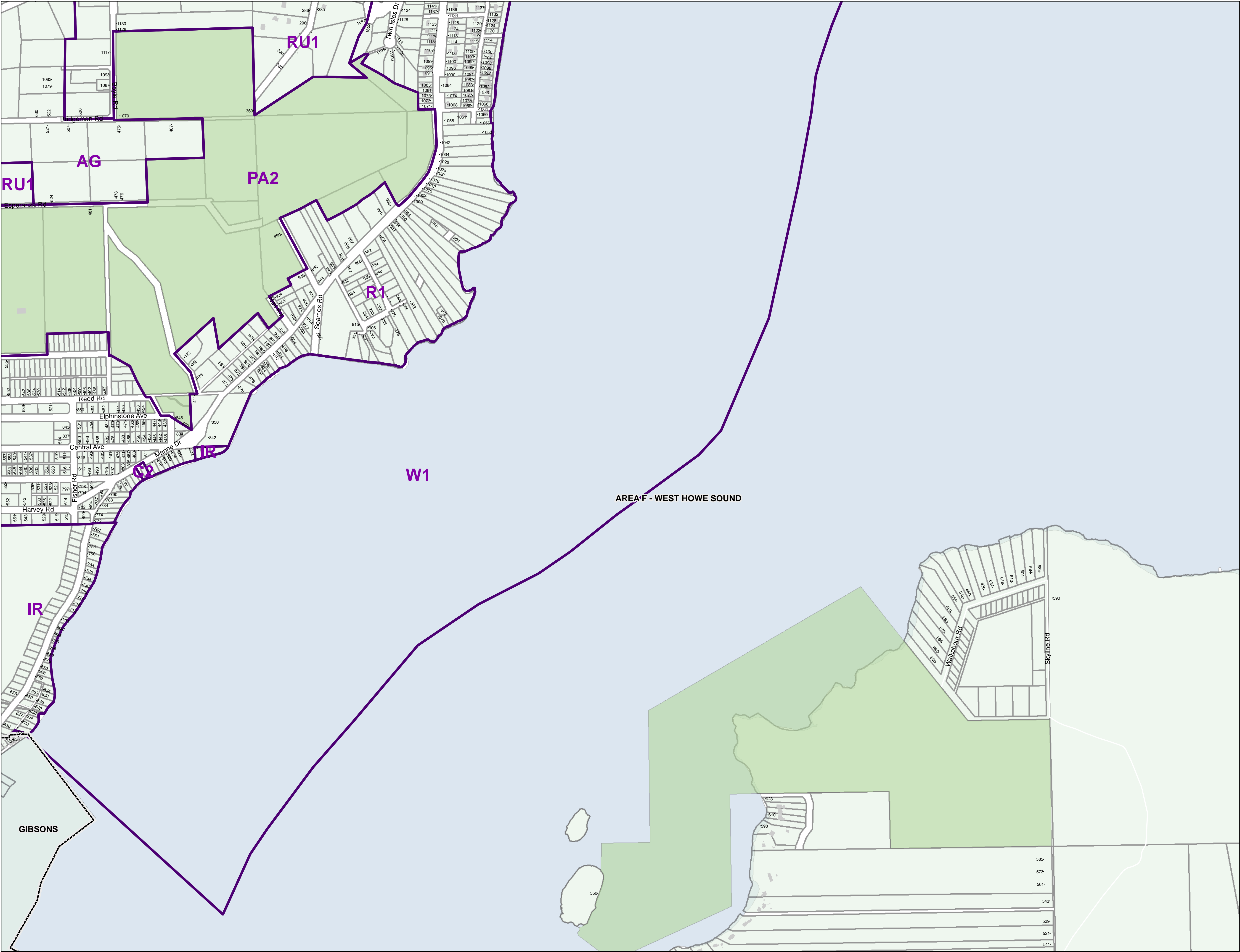
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1604

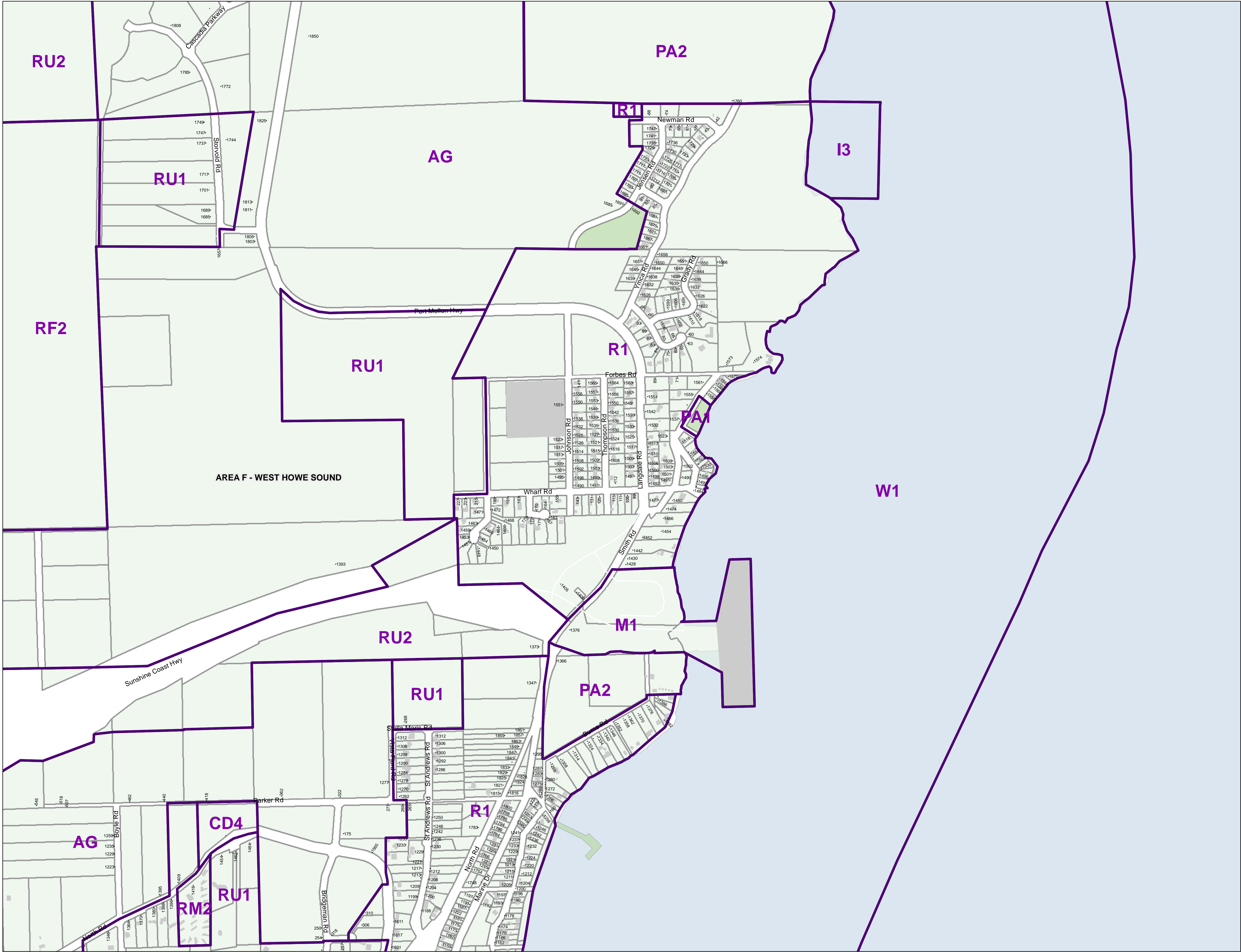


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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1605

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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

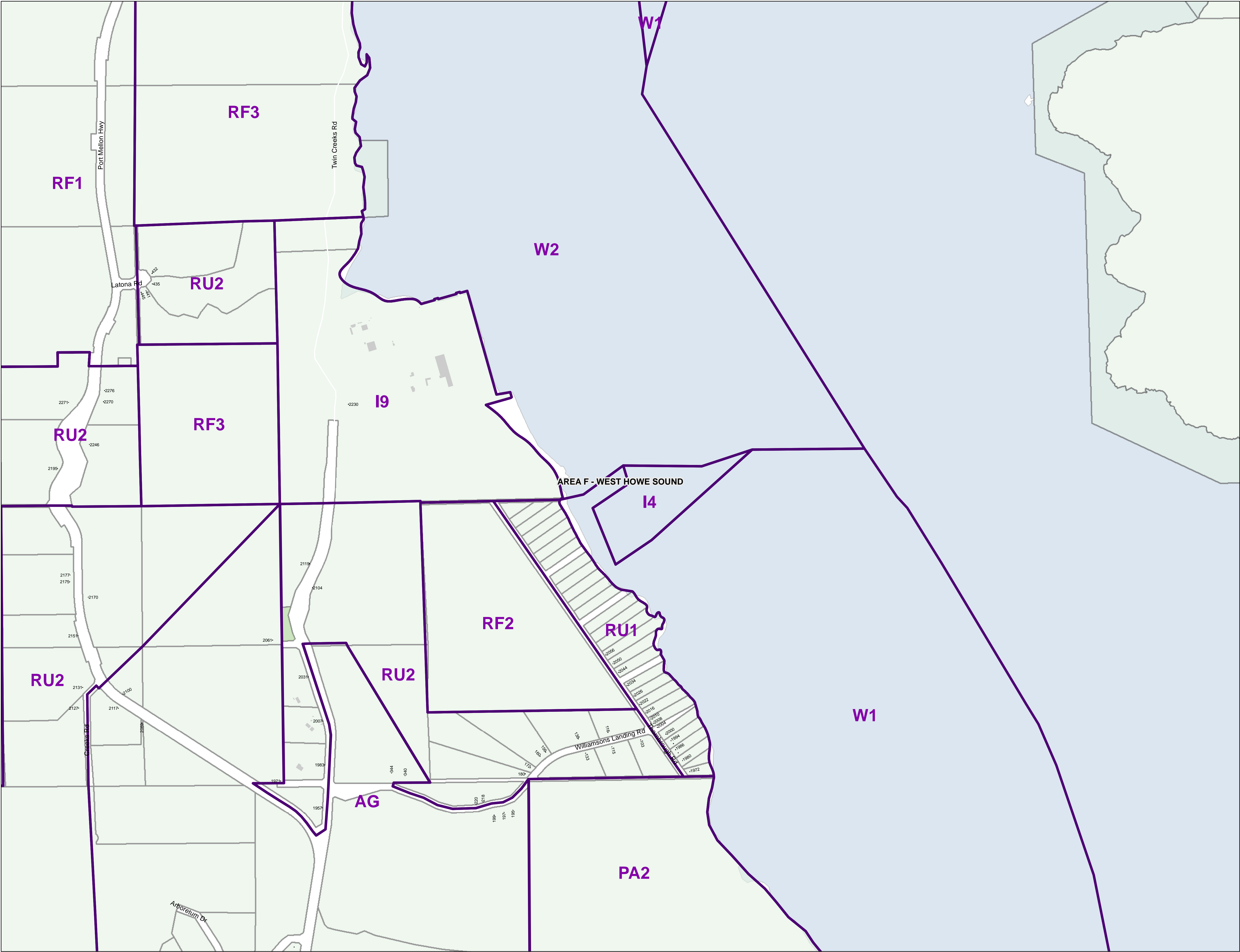
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1606



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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

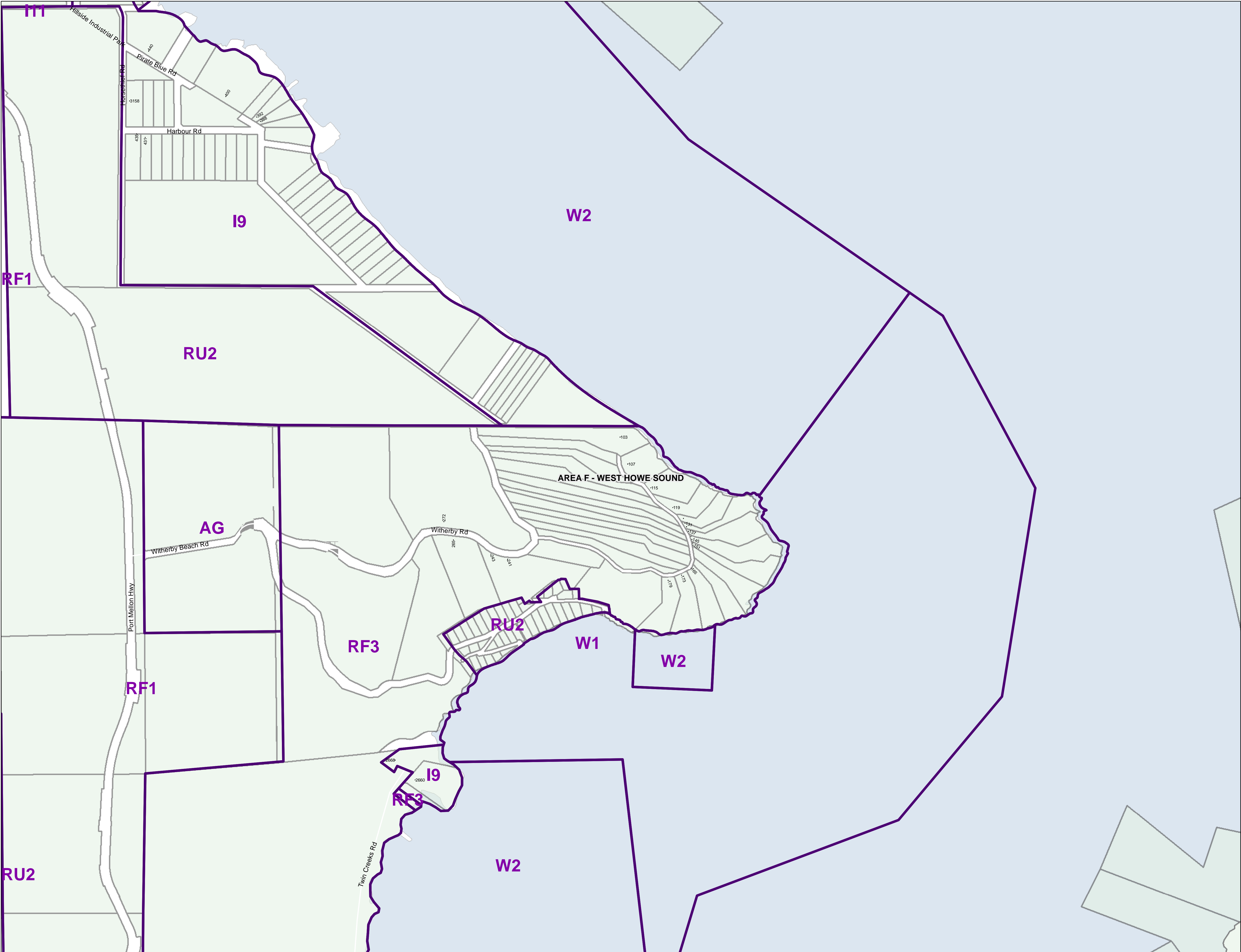
PARK ZONES

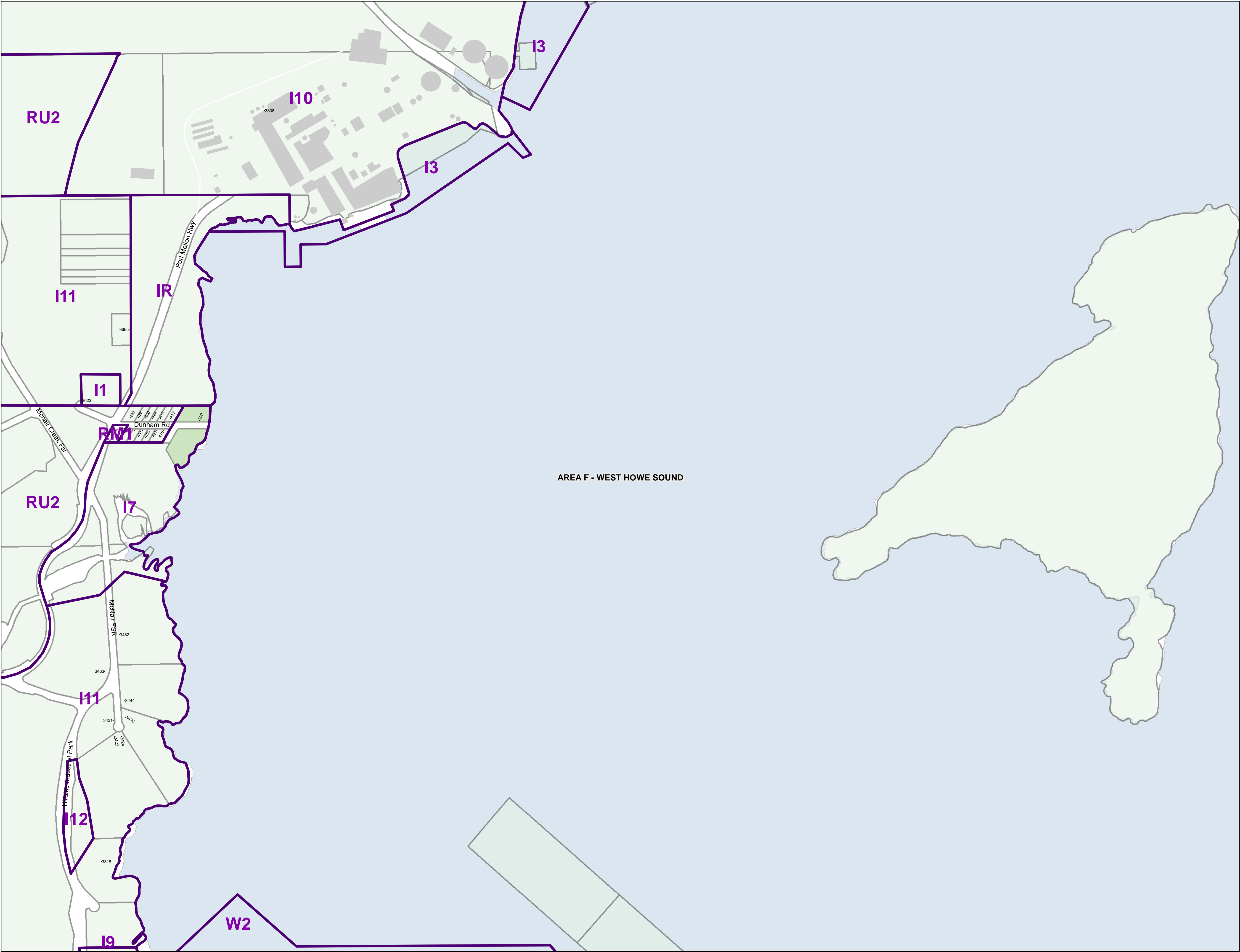
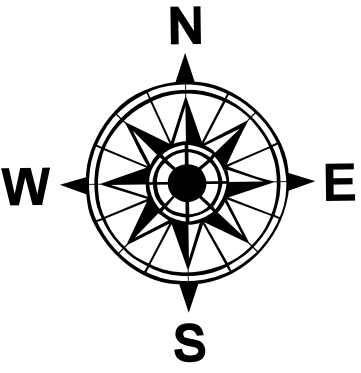
Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1607





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1608

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

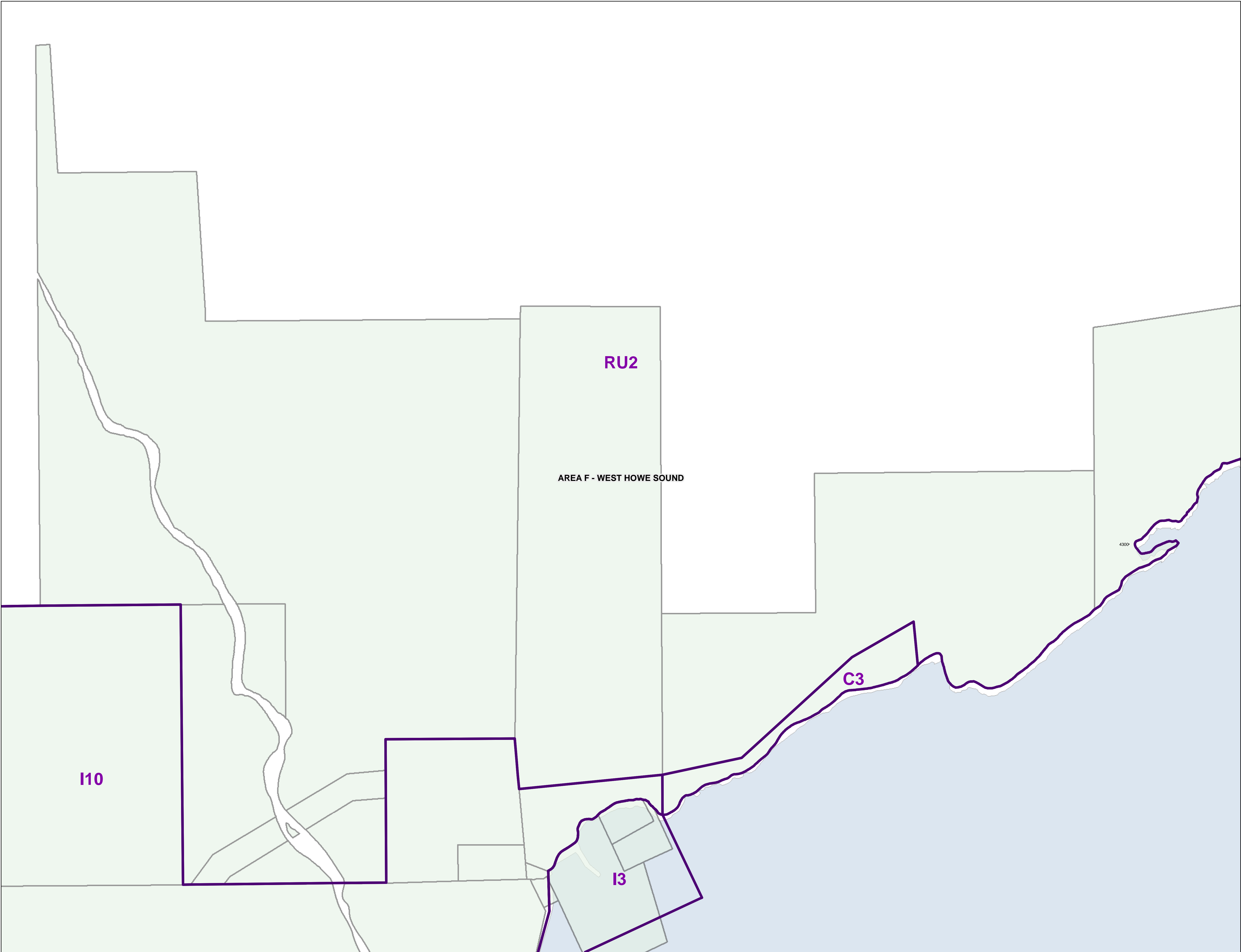
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1609

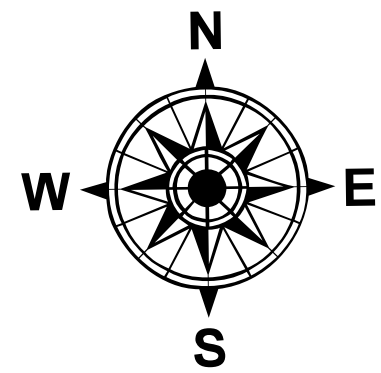


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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



Land Use Zoning

BYLAW: 722
SCHEDULE: A

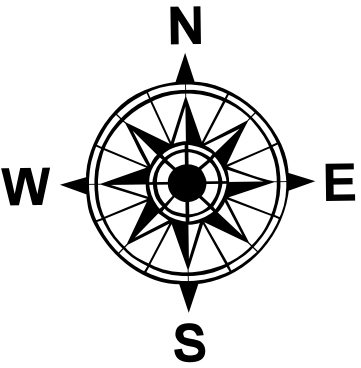
LAND USE ZONING
Map # 1703

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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

AREA F - WEST HOWE SOUND

Land Use Zoning

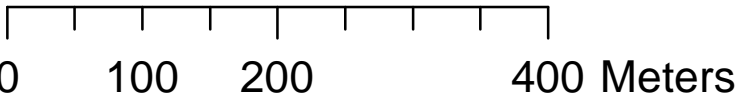
BYLAW: 722
SCHEDULE: A

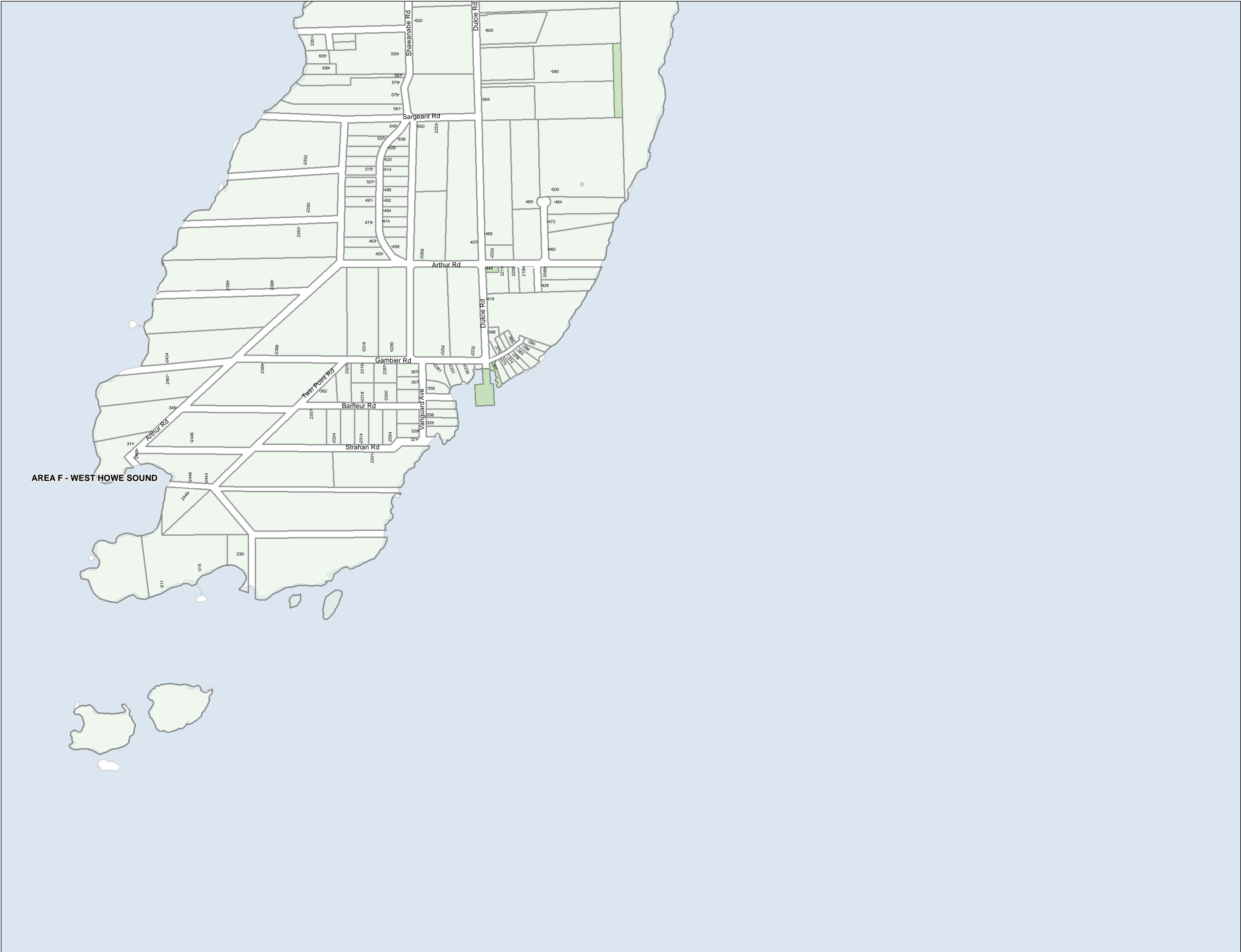
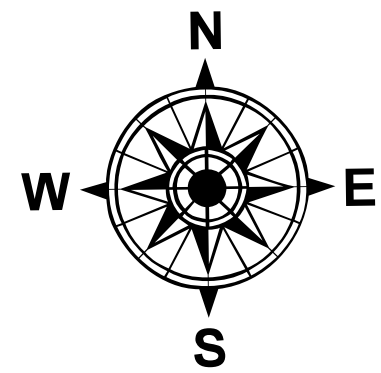
LAND USE ZONING
Map # 1704

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Date: 2022-01-20
Scale - 1:5,000





AREA F - WEST HOWE SOUND

RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

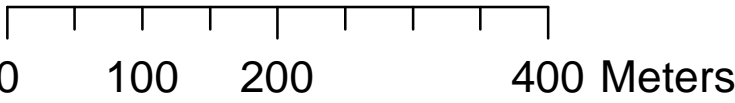
BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1705

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

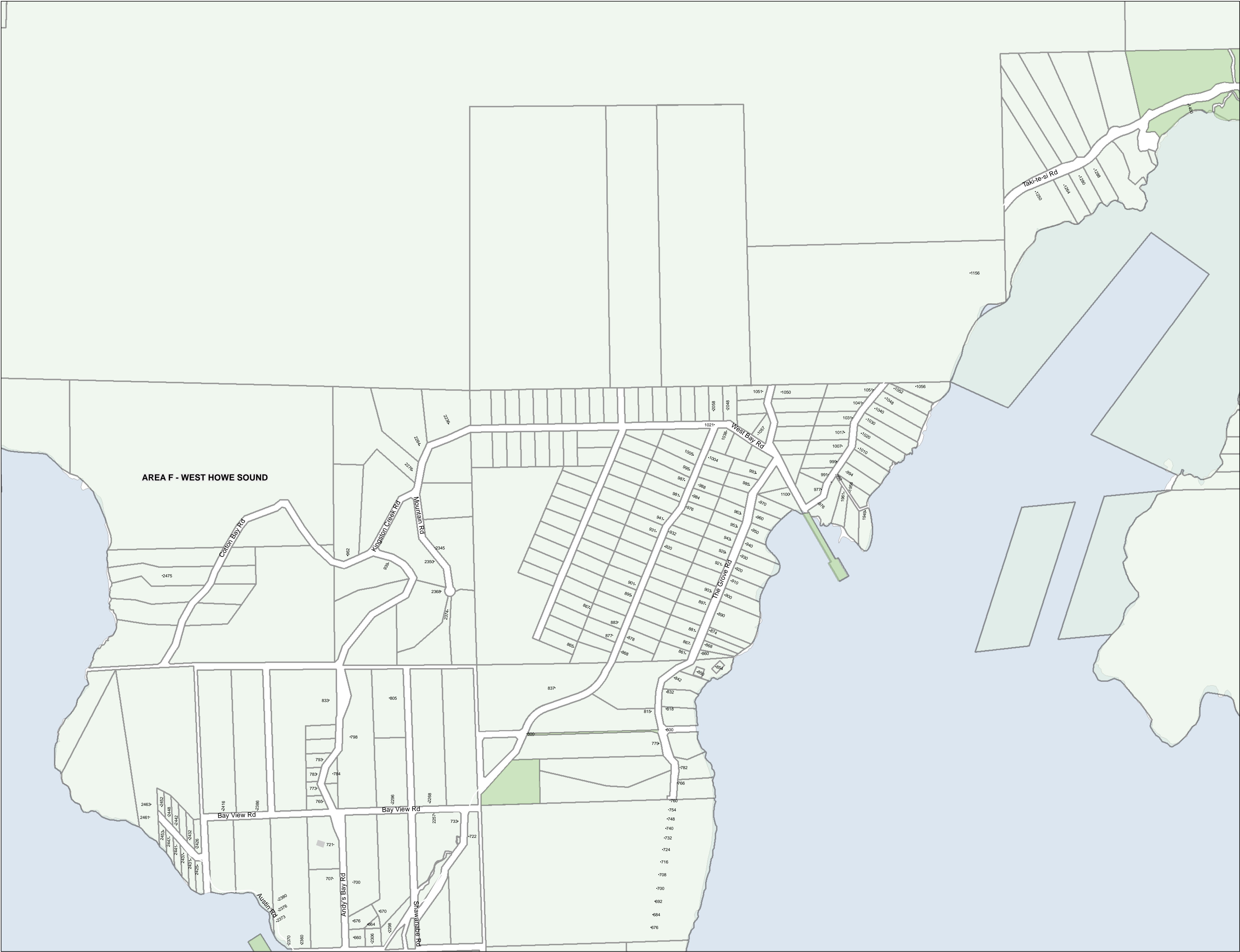
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1706



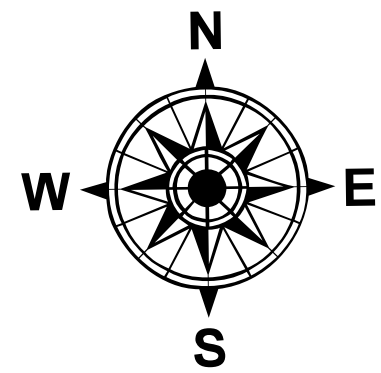
AREA F - WEST HOWE SOUND

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

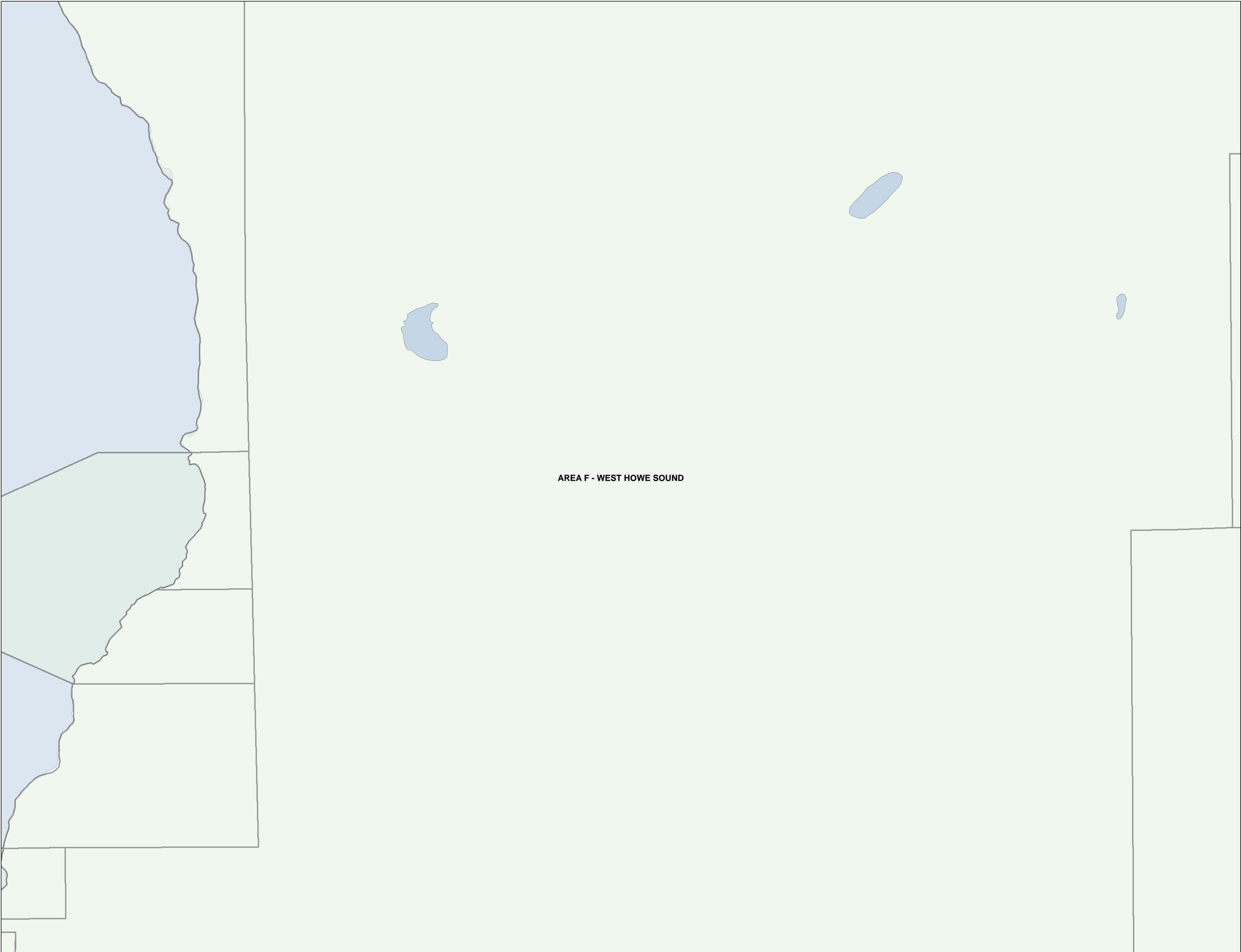
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1707



AREA F - WEST HOWE SOUND

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

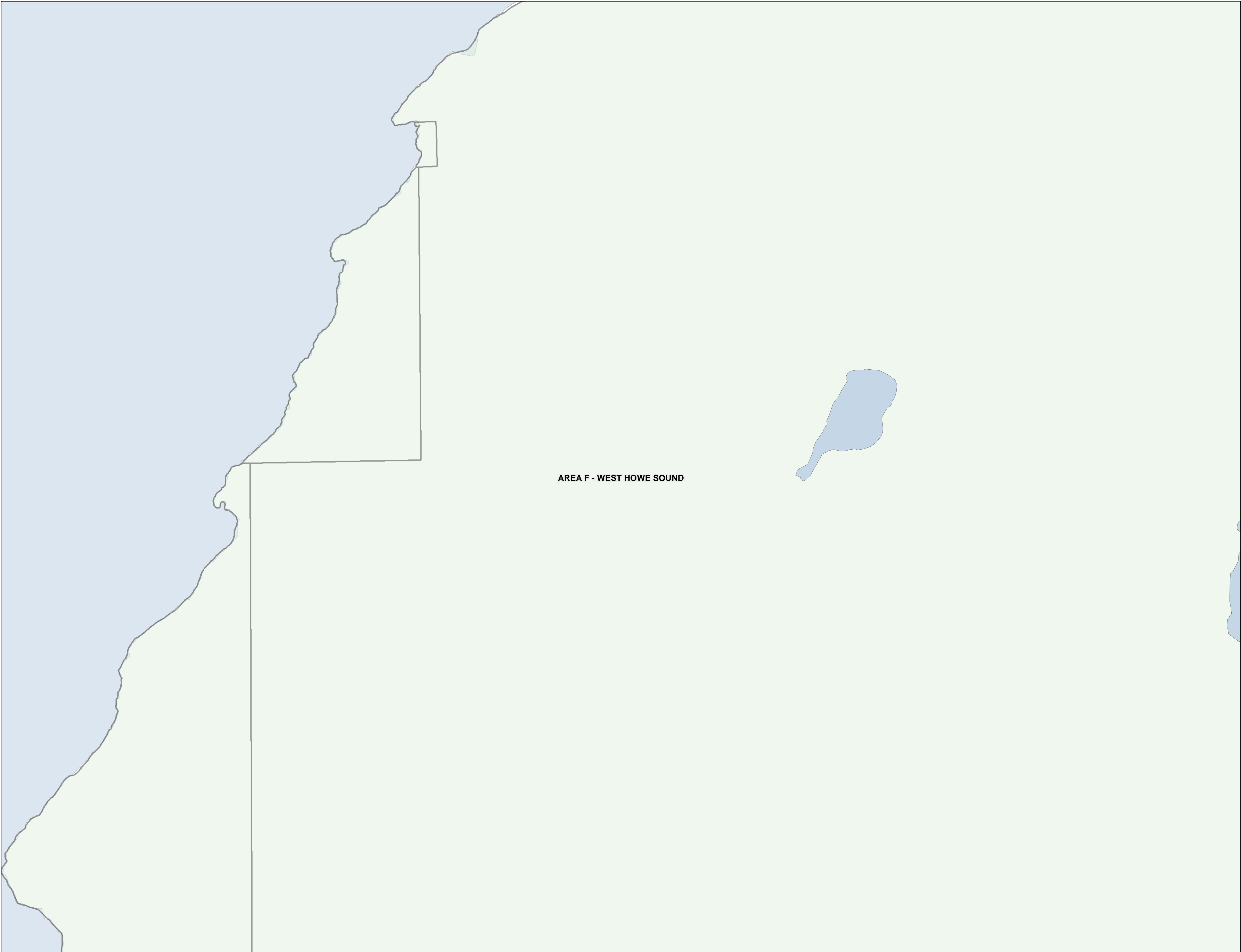
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

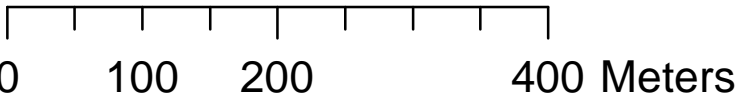
LAND USE ZONING
Map # 1708

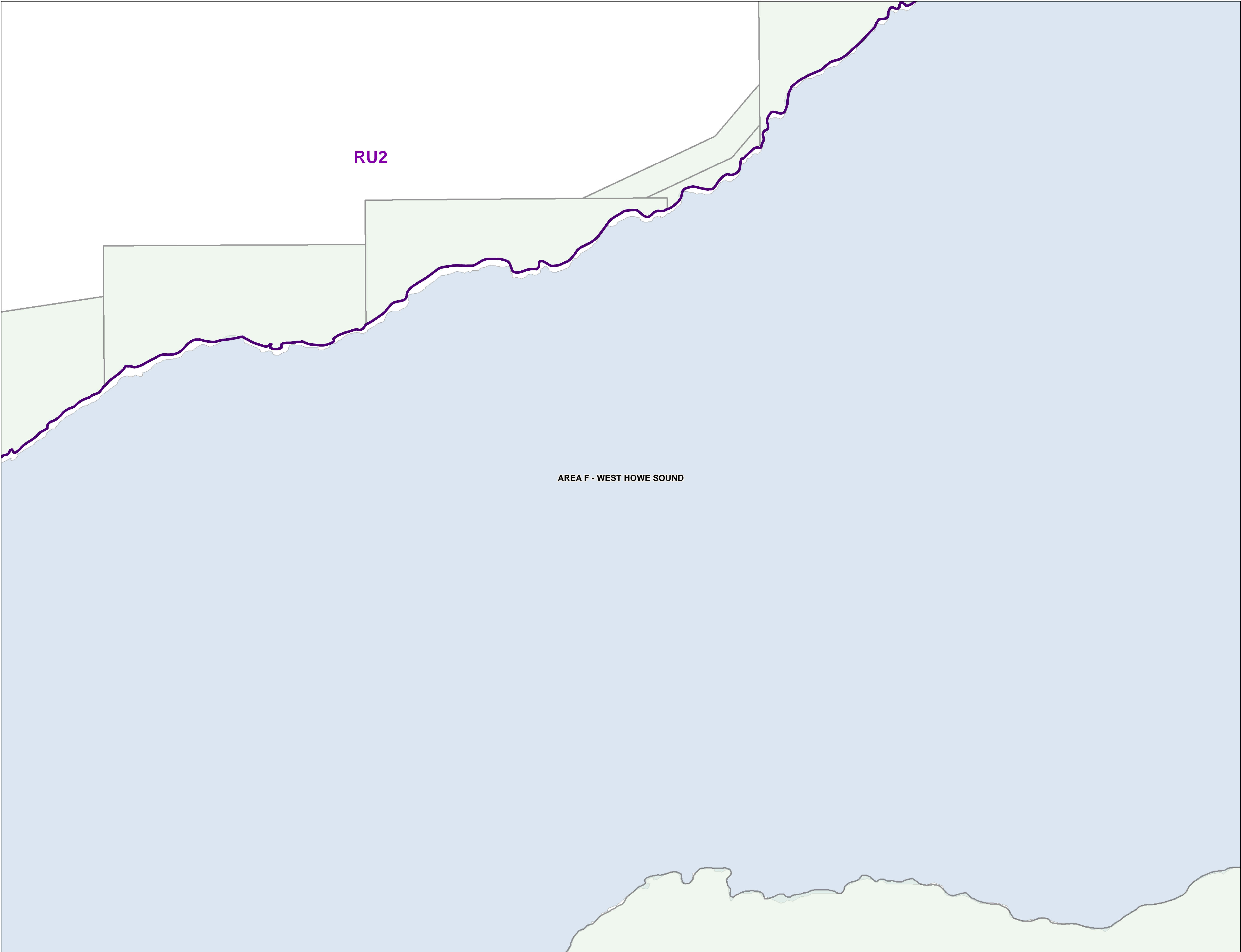
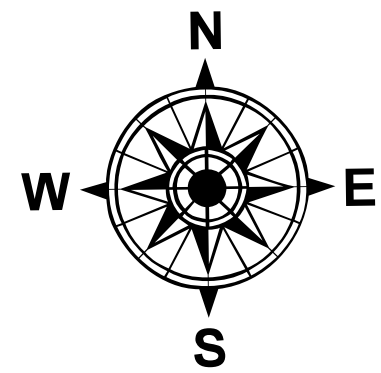


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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

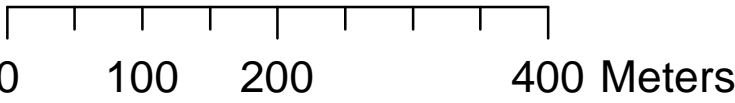
BYLAW: 722
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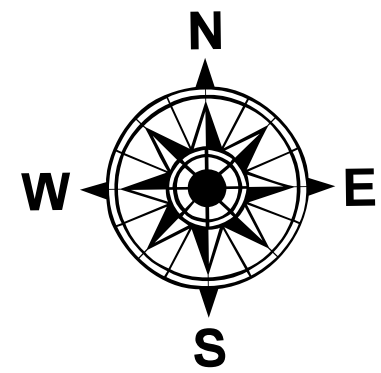
LAND USE ZONING
Map # 1709

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

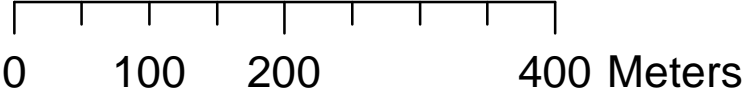
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SCHEDULE: A

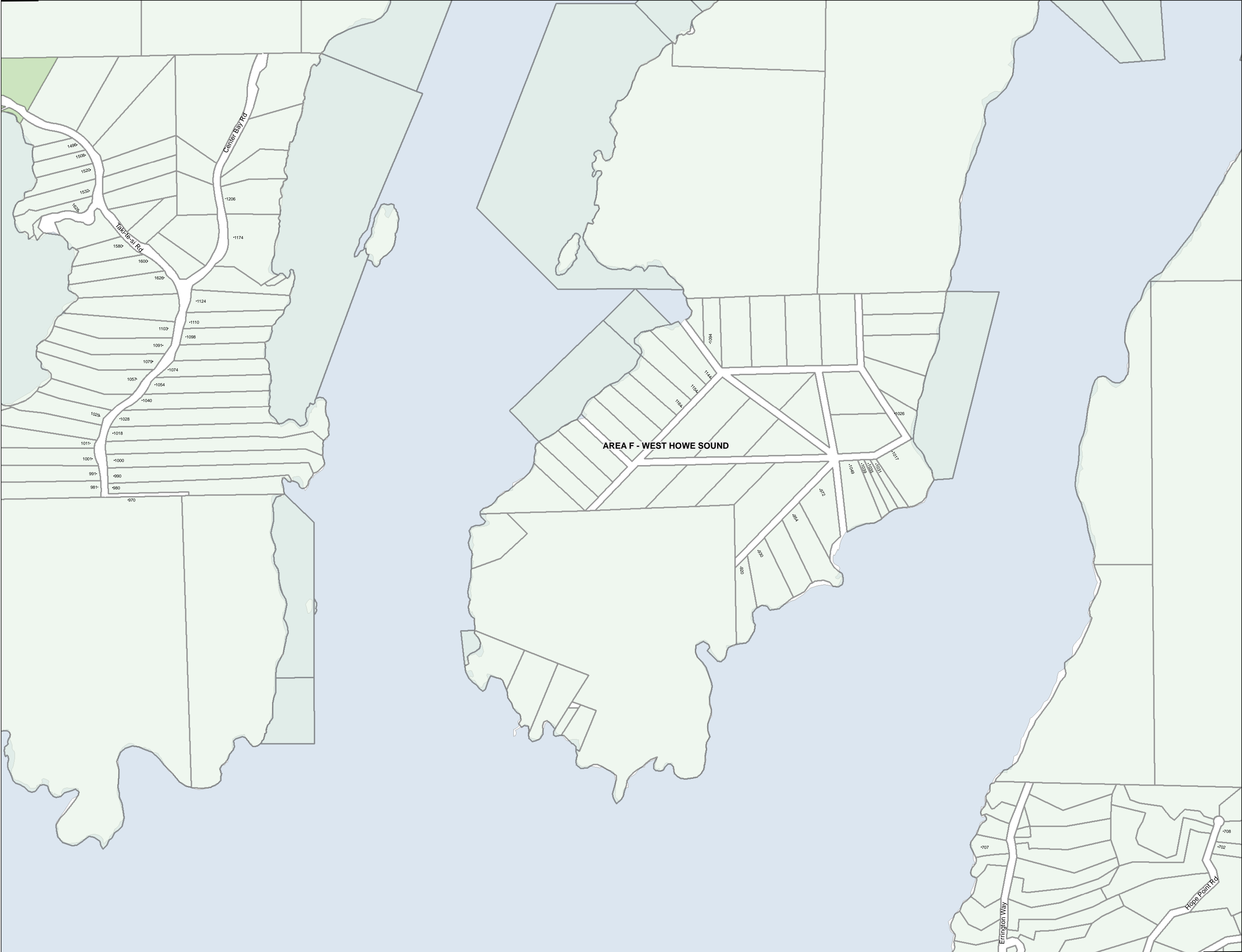
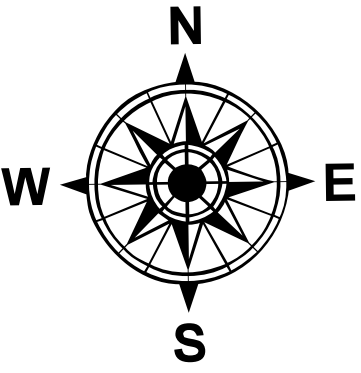
LAND USE ZONING
Map # 1805

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1806

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

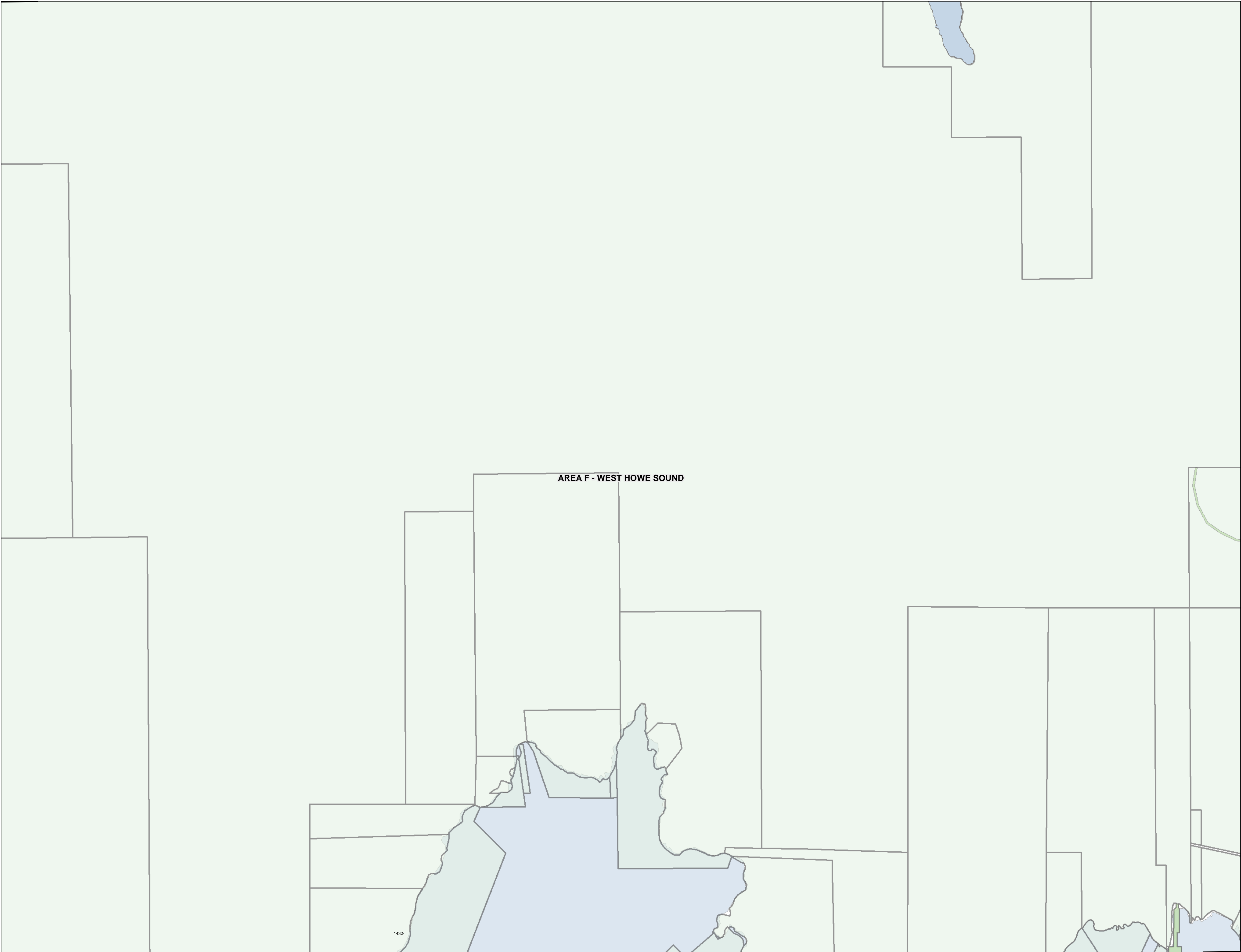
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

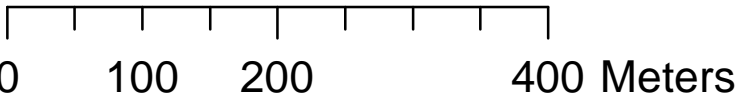
LAND USE ZONING
Map # 1807

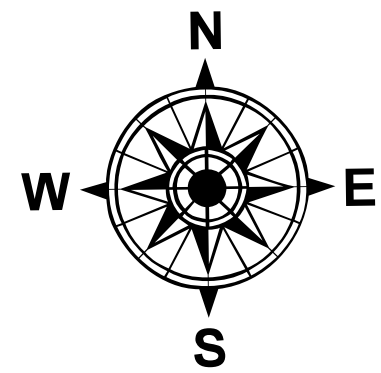


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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1808

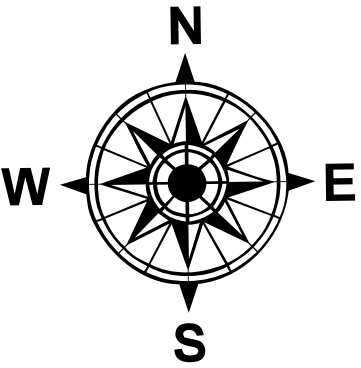


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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

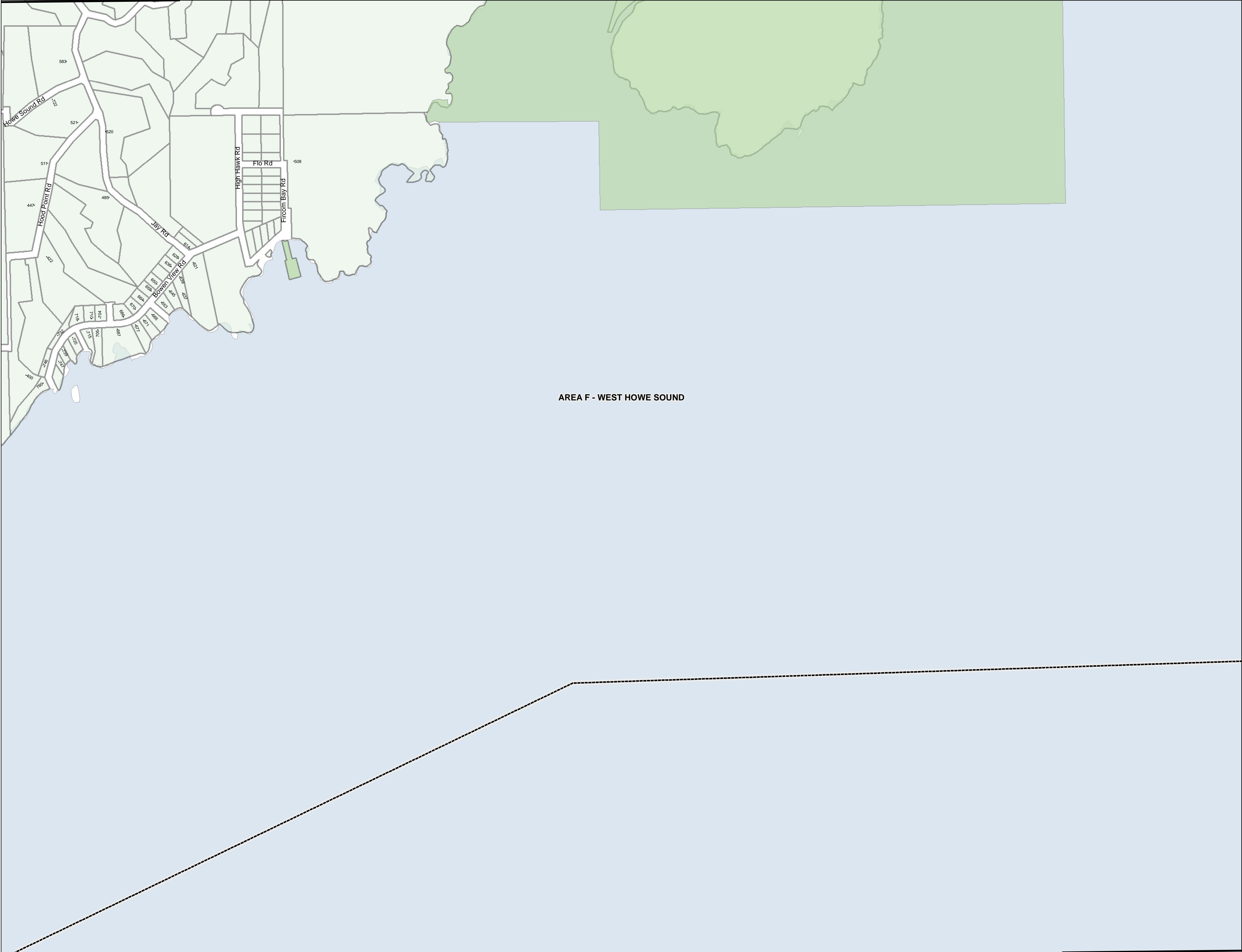
Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1809

AREA F - WEST HOWE SOUND





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1905

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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

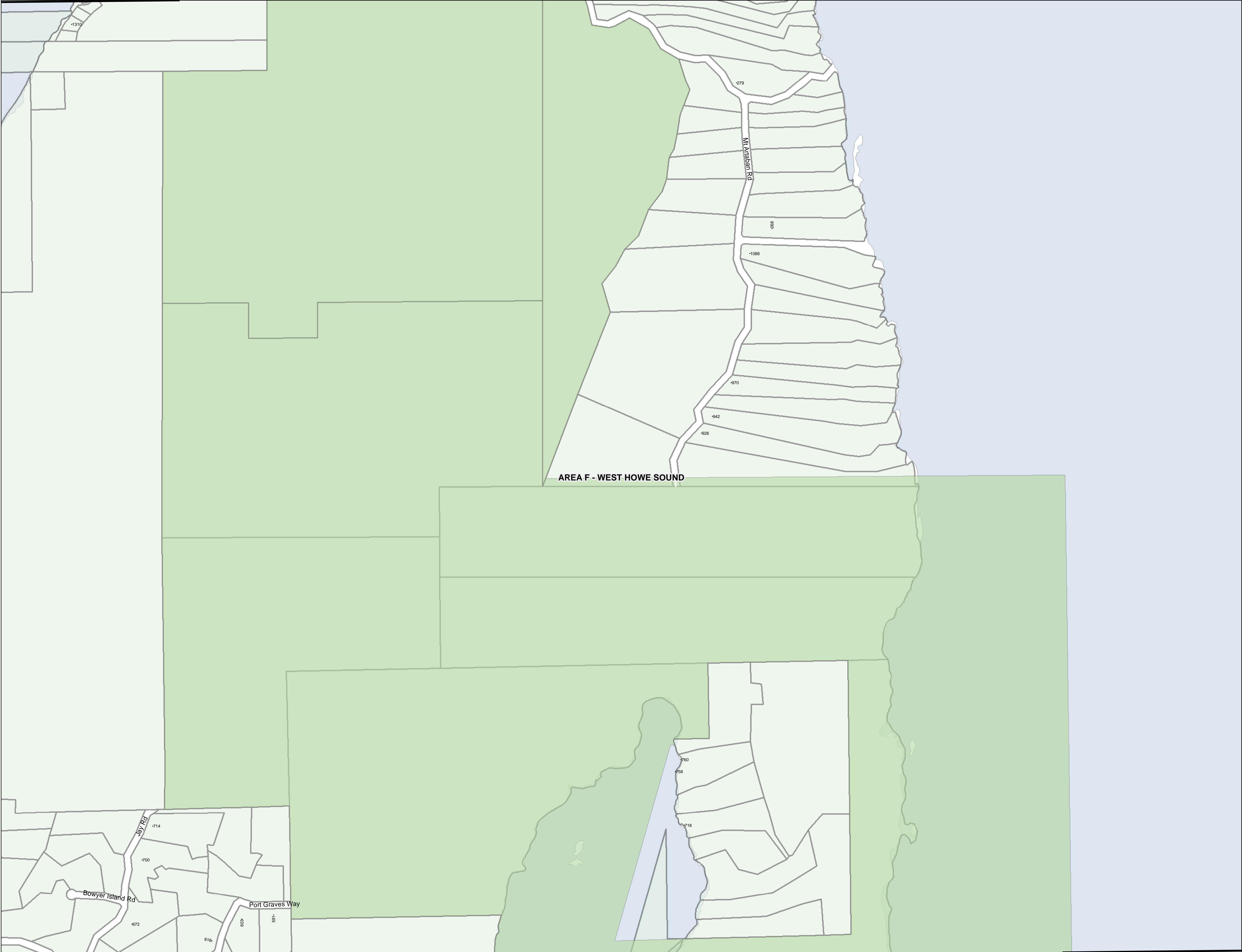
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1906

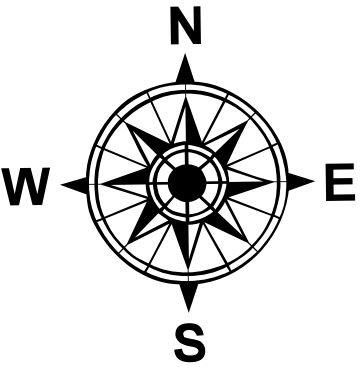


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Date: 2022-01-20
Scale - 1:5,000

0 100 200 400 Meters



RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

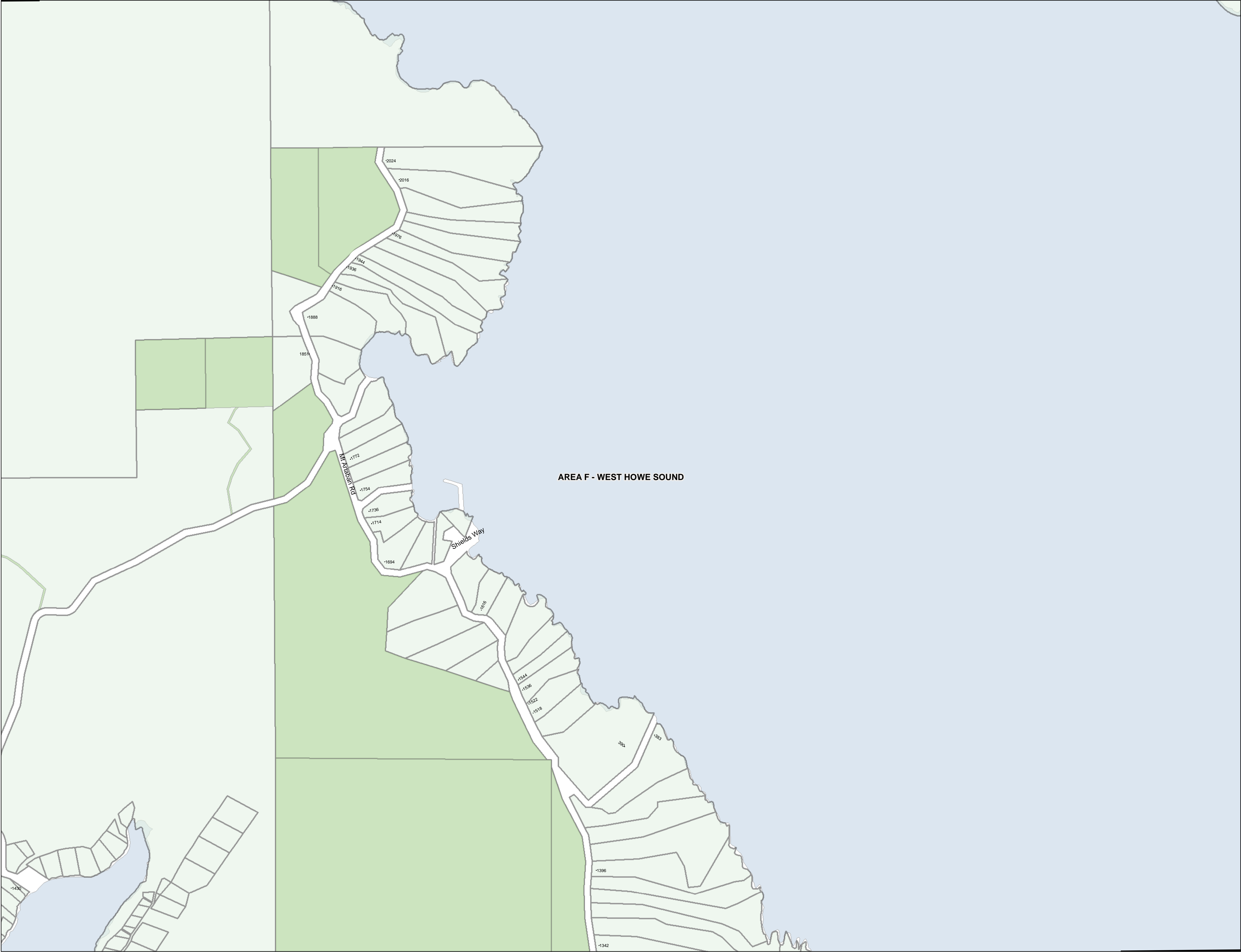
PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1907

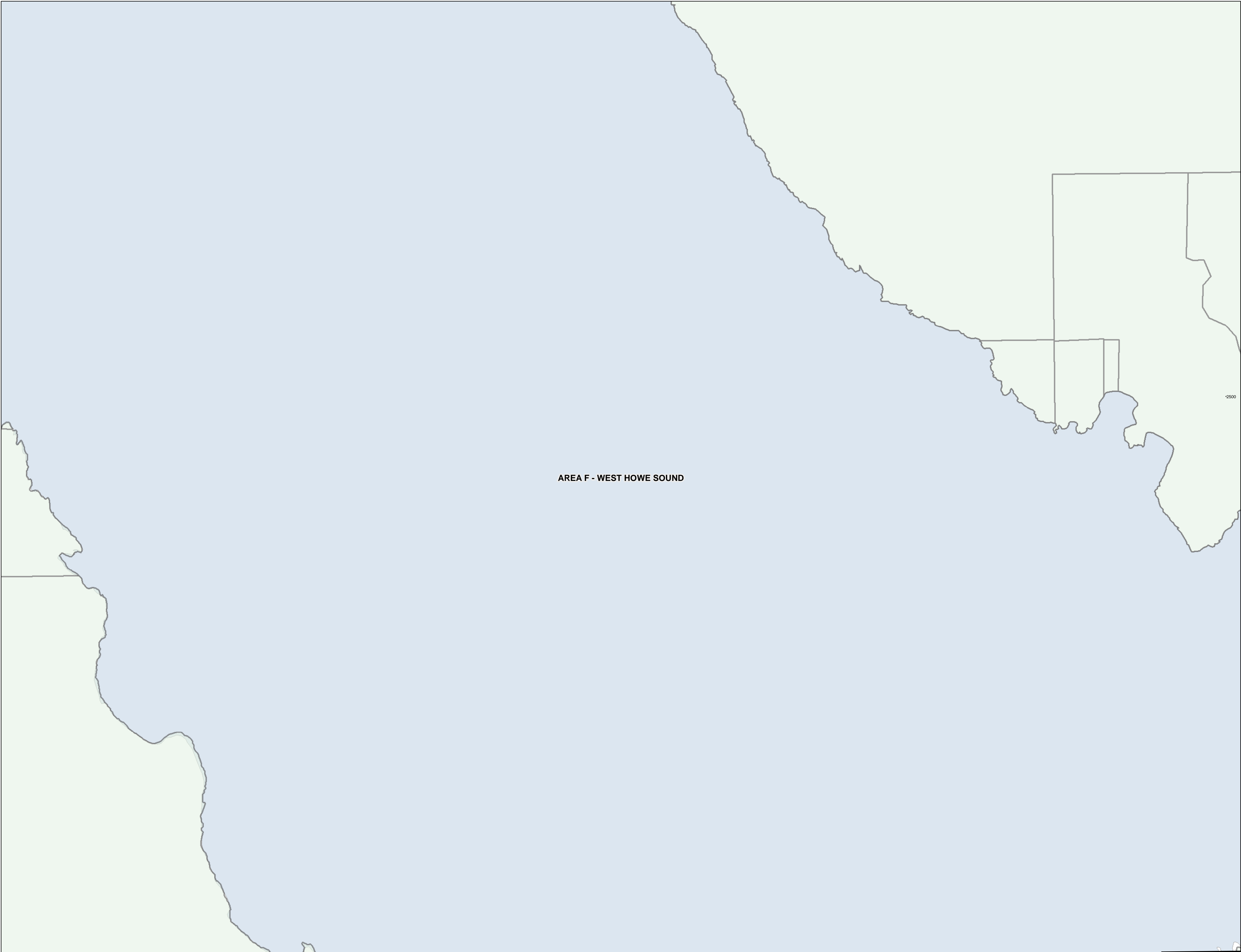
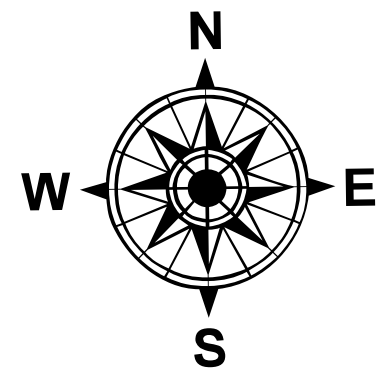


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Date: 2022-01-20
Scale - 1:5,000





RESIDENTIAL ZONES

Residential One	R1
Residential Two	R2
Residential Three	R3
Residential Multiple One	RM1
Residential Multiple Two	RM2
Residential Multiple Three	RM3

RURAL ZONES

Country Residential One	CR1
Country Residential Two	CR2
Rural One	RU1
Rural One A	RU1A
Rural Two	RU2
Rural Two A	RU2A
Rural Three	RU3
Rural Three A	RU3A
Rural Three B	RU3B
Rural Forest One	RF1
Rural Forest Two	RF2
Rural Forest Three	RF3
Rural Forest Four	RF4
Rural Forest Five	RF5
Agriculture	AG

COMPREHENSIVE DEVELOPMENT ZONES

Comprehensive Development One	CD1
Comprehensive Development Two	CD2
Comprehensive Development Three	CD3
Comprehensive Development Four	CD4

COMMERCIAL ZONES

Commercial One	C1
Commercial Two	C2
Commercial Three	C3
Commercial Four	C4
Commercial Five	C5
Marine Transportation	M1

WATER ZONES

Water One	W1
Water Two	W2

INDUSTRIAL ZONES

Industrial One	I1
Industrial Two	I2
Industrial Three	I3
Industrial Four	I4
Industrial Five	I5
Industrial Six	I6
Industrial Seven	I7
Industrial Eight	I8
Industrial Nine	I9
Industrial Ten	I10
Industrial Eleven	I11
Industrial Twelve	I12
Industrial Thirteen	I13

PARK ZONES

Park and Assembly One	PA1
Park and Assembly Two	PA2
Park and Assembly Three	PA3
Park and Assembly Four	PA4

 Land Use Zoning

BYLAW: 722
SCHEDULE: A

LAND USE ZONING
Map # 1908

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Date: 2022-01-20
Scale - 1:5,000



SUNSHINE COAST REGIONAL DISTRICT REPORT

TO: Electoral Area Services Committee – July 21, 2022

AUTHOR: Nick Copes, Planner 1

SUBJECT: Zoning Amendment Bylaw No. 310.195, 2022 (562 Veterans Road) –
Consideration of First, Second and Third Readings and Adoption

RECOMMENDATIONS

1. **THAT** the report titled Zoning Amendment Bylaw No. 310.195, 2022 (562 Veterans Road) – Consideration of First, Second and Third Readings and Adoption be received;
2. **AND THAT** Zoning Amendment Bylaw No. 310.195, 2022 be forwarded to the Board for First, Second and Third Readings and Adoption;
3. **AND FURTHER THAT** prior to adoption of Zoning Amendment Bylaw No. 310.195, the following conditions be met:

Notification in accordance with Section 467 of The *Local Government Act*

Approval by the Ministry of Transportation and Infrastructure pursuant to Section 52 of the *Transportation Act*

Registration of a Section 219 Restrictive Covenant to ensure adequate future land dedication for a possible Hough Road Trail connection

Background

An application was received to amend Zoning Bylaw 310 to change the subdivision district of the subject lot from “F” to “D” to facilitate a proposal to subdivide the lot into two parcels with respective proposed parcel areas of 0.598 ha and 0.405 ha.

Preliminary public consultation by means of a mailout was conducted by the applicant in coordination with the SCRD during December of 2021. The purpose of this report is to provide information and analysis of the application to the Board for consideration of first, second and third readings and adoption.

Table 1 - Application Summary

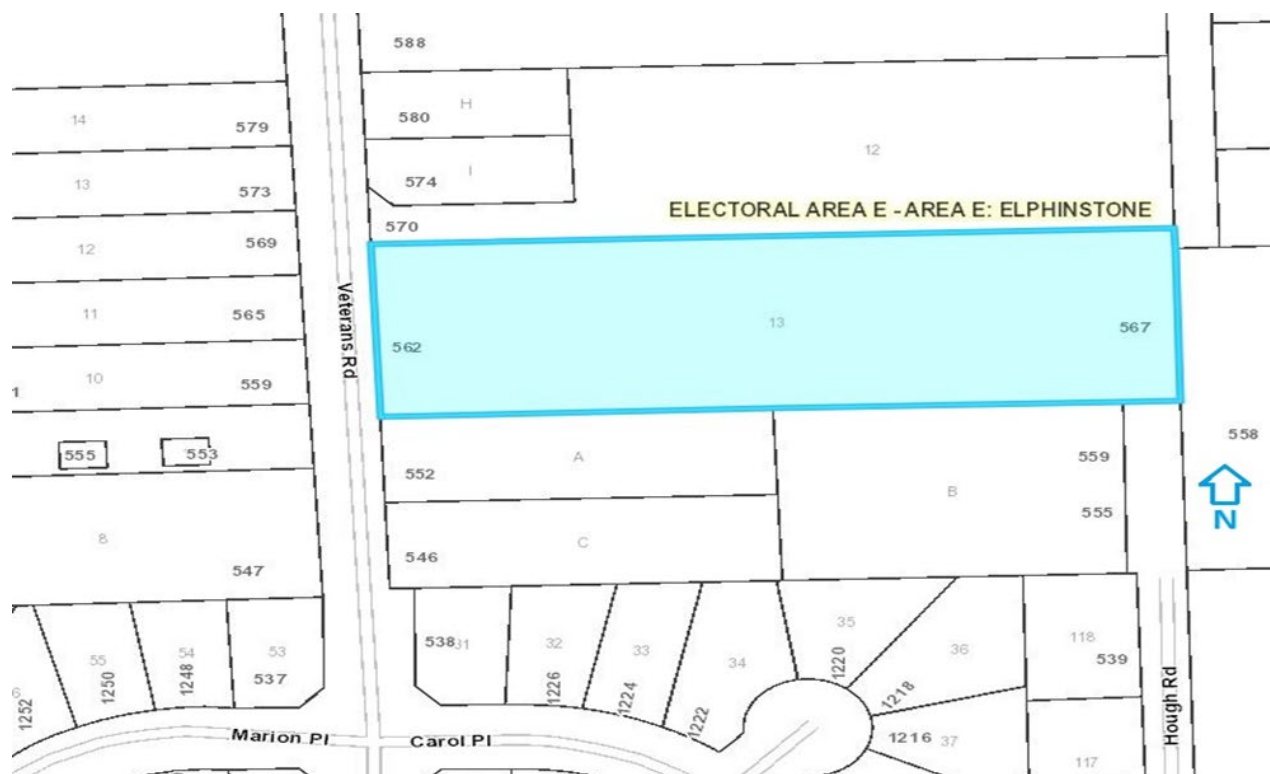
Owner / Applicant:	Christina Robinson
Legal Description:	LOT 13 NORTH EAST ¼ OF DISTRICT LOT 908 PLAN 9768
Electoral Area:	E – Elphinstone
Parcel Area:	Total: 1.03HA

OCP Land Use:	Rural Residential and Comprehensive Development Cluster Housing Areas (No.3)	
Zoning:	RU1 (Rural One)	
Subdivision District:	Existing - F (min. avg. 1 HA)	Proposed– D (min. avg. 3500 sq. metres)
Application Intent:	To create 2 parcels	

CURRENT CONDITIONS AND PROPOSED USES

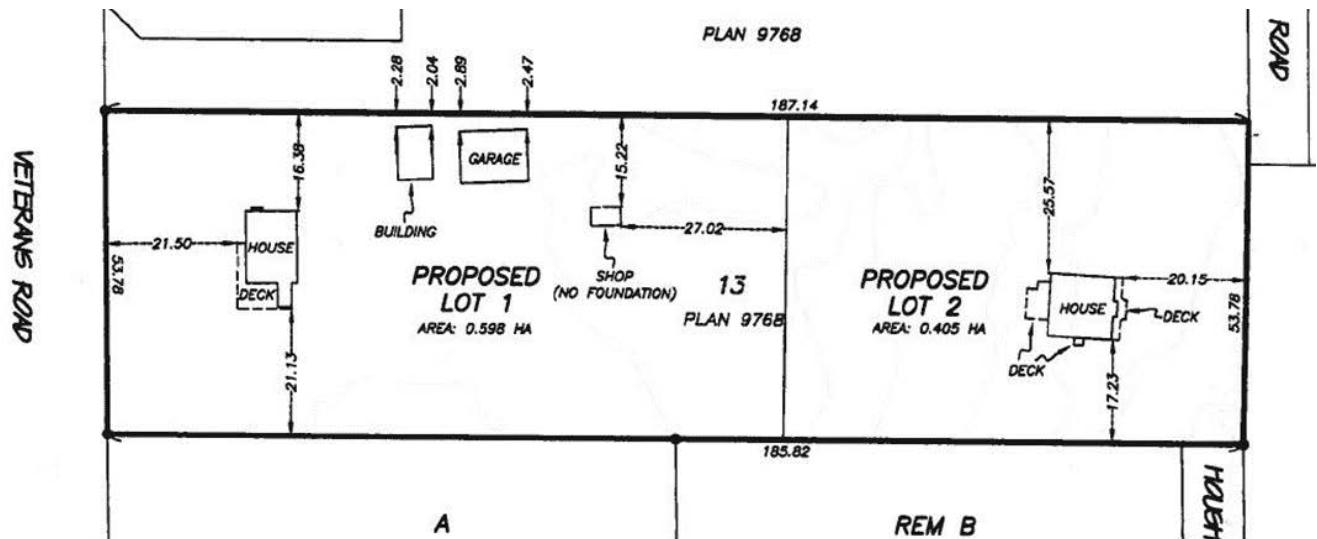
The subject property is within Elphinstone and is located in close proximity to the boundary with the Town of Gibsons and the Sunshine Coast Highway. The property contains two homes and some auxiliary buildings. The proposed subdivision conforms with the existing RU1 (Rural One) zoning and OCP land use designations; however, a zoning amendment is requested to the subdivision district from “F” to “D” to permit the 3500 square metre minimum average lot sizes necessary to allow this application to proceed. If approved, the applicant would be required to make a subsequent subdivision application with SCRD and Ministry of Transportation and Infrastructure (MOTI) to allow formal review of the proposed subdivision.

Figure 1 – Location Map



The applicant is applying for a zoning amendment to change the subdivision district from “F” to “D” to facilitate a two-lot subdivision as shown on the subdivision plan below.

Figure 2 – Draft subdivision plan



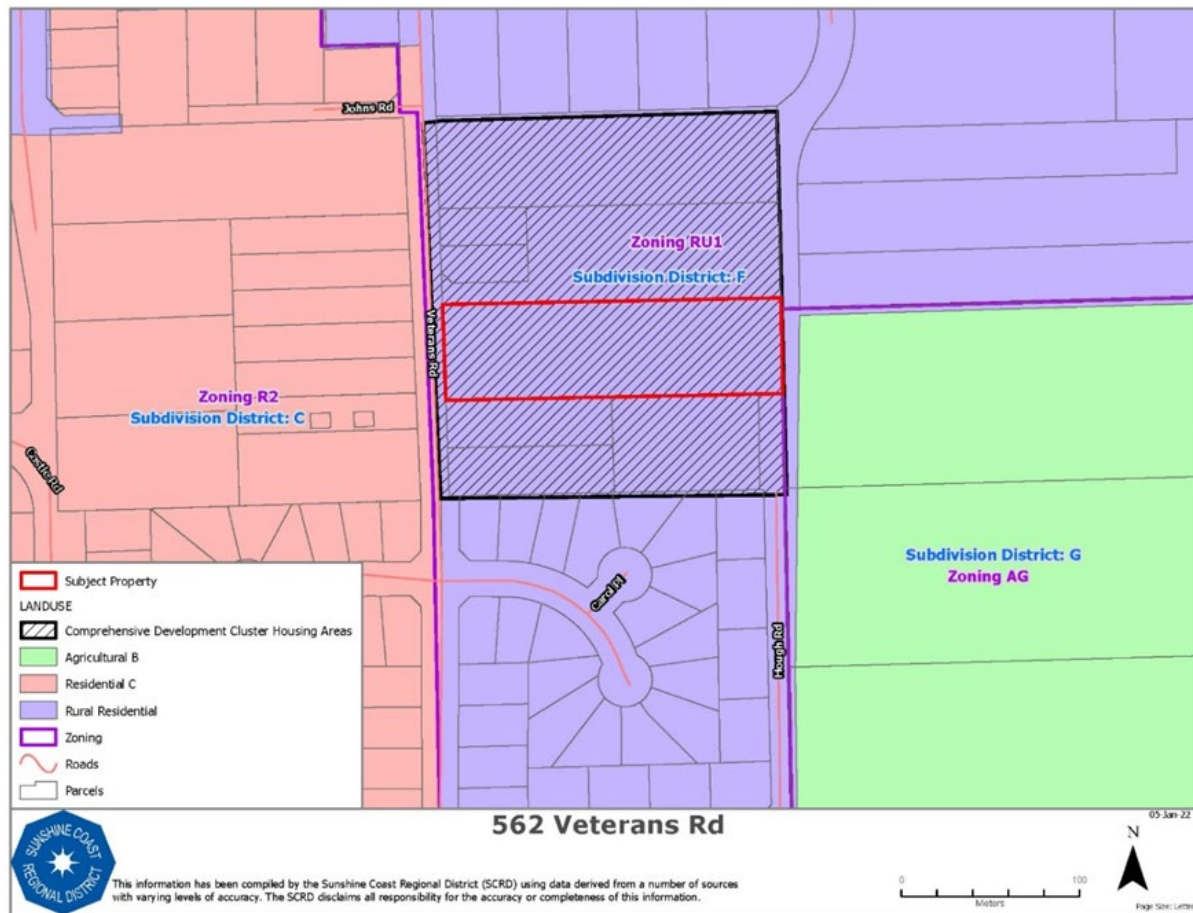
DISCUSSION

Planning Analysis

Elphinstone Official Community Plan

The parcel is within the Rural Residential and Comprehensive Development Cluster Housing Areas land use designations (Figure 3). Parcels to the north and south have the same land use designations. Parcels to the west are designated as Residential C and parcels to the east are designated Rural Residential and Agricultural B (within the Agricultural Land Reserve).

Figure 3 –OCP Land Use, Zoning and Subdivision District Map



The OCP establishes objectives for the Rural Residential Land Use to provide a buffer adjacent to the ALR and ensure non-compatible land uses and densities do not impact agricultural use. Another objective is to provide a mix of rural residential housing options, between those of a Residential and those of a Rural or Agriculture A or B designation. OCP policies state that a second dwelling may be permitted on parcels over 0.4 ha.

Section B-3.1.3(a) of the OCP states that subdivision may be permitted where:

All resultant parcels exceed 1.0 hectare (2.47 acres) in size and have a parcel depth of over 100 metres (328 feet) to any abutting land within the Agricultural A or Agricultural B land use designations.

Although the proposed parcels are below 1 ha, the proposed use would not change. The existing density is in conformance with the OCP, and future auxiliary dwelling units would be permitted by the OCP and zoning bylaw, although they are not proposed at this time. There is a buffer of 20 m from the existing house to the boundary with the ALR. Furthermore, MOTI has noted that a 10 m road dedication along the east side of the property would be required at time of subdivision, providing a buffer between the property and the ALR. Due to the road dedication requirement, the size of the parcels will likely be adjusted slightly at time of subdivision.

While the ALC's *Guide to Edge Planning* suggests new residential development should have a 30 m setback from the ALR boundary with a 15 m vegetated buffer, in this case there is existing site development at an approximately 20 m setback along with a partially-vegetated buffer. Staff consider that the spirit and intent of the *Guide to Edge Planning* is respected through this subdivision district change and again note that no new development is proposed at this time. Any future development proposals can be reviewed against the *Guide to Edge Planning*.

Furthermore, Section B-3.1.3(b) notes:

Subdivisions may be permitted where lands are within Comprehensive Development Cluster Housing Area Nos. 1 and 3 on Map 3, in which site rezonings may be considered to allow a density bonus for subdivisions creating smaller parcels averaging 2000 sq. m. (0.5 acres) (with a minimum size of 1500 sq. m. [0.38 acres]) if land comprising 50% of the subdivision's gross area is dedicated as park or is protected as publicly-accessible open space with a covenant and statutory right of way provided this area has a minimum depth of 60 metres (198 feet) where adjacent to the ALR.

As this area is designated as a Comprehensive Development Cluster Housing Area, future subdivision creating parcels with an average of 2000 m² could be permitted in the future, with park dedication. While the applicant does not wish to create such small lots and is not required to provide park dedication, the applicant's proposal for a two-lot subdivision would exceed the minimum lot size and allow for gentle densification by permitting auxiliary dwelling units on each new parcel (not currently proposed).

The applicant's proposal is generally compatible with the existing surrounding land use pattern given the smaller lot sizes in the vicinity and is considered appropriate given both the Rural Residential and Comprehensive Development Cluster Housing Areas (No. 3) designations in the OCP.

Section 464 of The *Local Government Act* notes that a local government is not required to hold a public hearing for a proposed zoning bylaw if the bylaw is consistent with the official community plan. Section 467 of The *Local Government Act* requires notification to neighbouring properties and newspaper advertisements prior to first reading if a public hearing is not held. Given the simple nature of the bylaw amendment and conformity with the OCP, staff recommend that a public hearing not be held.

Zoning Bylaw No. 310

The subject parcel is currently zoned RU1 (Rural One) which allows for agriculture and a variety of related uses, such as garden nursery or keeping of animals. An auxiliary dwelling unit is permitted on lots over 3500 m² and two single family dwellings are permitted on lots over 8000 m².

The subject parcel is currently 1.03 ha with two single family dwellings. The applicant does not plan to construct any additional dwellings at this time. As each new lot would be over 3500 m², an auxiliary dwelling unit would be permitted on each new lot in the future.

The subject parcel is currently in subdivision district F, which has a 1 ha parcel size average requirement. The applicant proposes to change to subdivision district D, which has a 3500 m² parcel size average requirement, in order to facilitate subdivision. Should the subdivision district

be changed to D, the applicant's proposal would still be in conformance with RU1 zoning regulations and the lots could not be further subdivided under this subdivision district.

Agency Referrals

The application has been referred to the Elphinstone Advisory Planning Commission (APC), Skwxwú7mesh Nation, Ministry of Transportation and Infrastructure (MOTI), Vancouver Coastal Health (VCH), Agricultural Land Commission (ALC), Gibsons Fire Department, building department and infrastructure department.

APC	APC is in support of the bylaw amendment as it conforms to OCP policies and zoning regulations. The APC advocates designation of a trail or access pathway included within the road allowance for community use.
MOTI	The Ministry has no concerns with the proposal, but would require a 10 m road dedication for Hough Road as part of subdivision.
VCH	VCH has no objection to the proposal.
Gibsons and District Volunteer Fire Dpt.	No comments or concerns.
Skwxwú7mesh Nation	No concerns for change in subdivision size change. Any future construction in this area will still go through the Squamish Nation referral process.
Building	No comments or concerns.
Infrastructure	No comments on rezoning. Water main extension along Hough Road to the north of the property would be required at time of subdivision.
ALC	No objection. The ALC recommends following the urban-side edge planning recommendations in the Ministry of Agriculture, Food and Fisheries' <i>Guide to Edge Planning (2015)</i> .
SCRD Parks	Recommend an agreement with MOTI be pursued for the purposes of future planning (possibility for the SCRД to build and maintain a community pathway on the dedicated MOTI right of way).

Preliminary Public Consultation Summary

Preliminary public consultation was conducted by the applicant in coordination with SCRД staff. Four comments were received from Elphinstone residents. Comments received were as follows:

- Three residents expressed a desire to see a trail built to connect both ends of Hough Road.
- One resident expressed concern that the lots could be further subdivided in the future.
- One resident stated they had no objection to the proposal.

Given the interest from the APC and neighbourhood residents, staff recommend that land dedication, via covenant, for a community pathway be completed. SCRД Parks notes that such a pathway would align with the SCRД Trail Network Plan, SCRД Parks and Recreation Master Plan and Integrated Transportation Study. Staff recommend that a covenant be registered to the subject property to ensure the future provision of sufficient right-of-way along the Hough Road parcel line to allow for the future construction of a pathway and vehicular access at an approximate corridor width of 13.5 m, prior to subdivision approval.

Additional conditions, such as constructing a fence along the boundary of the right of way could be placed in the covenant at the time of subdivision. Timing for construction would depend on a number of factors, including a resourcing decision made through a future annual budget process.

Timeline for Next Steps

If the Board recommends first, second and third readings and adoption of the bylaw, subject to conditions, the bylaw would be brought to a future Board meeting for consideration of first, second and third readings after the notification requirements have been met. Approval from the Ministry of Transportation and Infrastructure, in accordance with Section 52 of The *Transportation Act*, for a bylaw within 800 m of a controlled access highway, would be needed prior to adoption. The registration of a covenant would also be required prior to adoption.

STRATEGIC PLAN AND RELATED POLICIES

Consideration of this application supports the SCRD's strategy for engagement and collaboration.

CONCLUSION

The applicant's proposal to change the subdivision district conforms with the Elphinstone OCP policies and zoning bylaw regulations. This report provides an evaluation of the application based on initial public consultation and the specific site context. The application is appropriate given the Rural Residential and Comprehensive Development Cluster Housing Areas land use designations and the Rural One zoning. Staff recommend consideration of first, second and third readings and adoption, subject to conditions.

ATTACHMENT

Attachment A – Zoning
Amendment Bylaw No. 310.195

Reviewed by:			
Manager	X – J. Jackson	Finance	
GM	X – I. Hall X – S.Gagnon	Legislative	
CAO	X – D. McKinley	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Electoral Areas Services Committee – July 21, 2022

AUTHOR: Julie Clark, Senior Planner

SUBJECT: Agricultural Land Commission Application 64280 (SCRD ALR00016)

RECOMMENDATIONS

THAT the report titled Agricultural Land Commission Application 64280 (SCRD ALR00016) be received;

AND THAT Agricultural Land Commission Application 64280 for retroactive approval of placement of unauthorized fill be forwarded to the Agricultural Land Commission for review of decision with the following comments:

- 1. Based on the information provided, the proposal to retain the unauthorized fill does not comply with the Sunshine Coast Regional District Agricultural Area Plan, Regional Sustainability Plan or West Howe Sound Official Community Plan.**
-

BACKGROUND

SCRD has received a referral from the Agricultural Land Commission (ALC) regarding an application seeking retroactive approval for Non Farm Use for Removal of Soil and Placement of Fill at 1088 Chamberlin Rd in Area F, West Howe Sound.

SCRD has recently reviewed and denied a Non-Farm Use referral from ALC for retroactive, non-conforming commercial storage facility development on this property that contravened both SCRD bylaws and ALC legislation. This subject of this application is specifically focused on the fill that was placed under the non-conforming development, without ALC authorization. The application states the fill is sand.

The referral review process for ALC files requires the following steps:

- local government is the first agency to review the ALC application
- the application is reviewed as it relates to local policy and regulation
- local government has the first opportunity to decide if the application is supported or denied
- if local government does not support the application, the process ends
- if a resolution is forwarded to ALC, the application process proceeds to ALC review for decision

The purpose of this report is to provide information about the application for Removal of Soil and Placement of Fill ALC application 64280 for the Electoral Areas Services Committee to consider and make a decision.

Discussion

Analysis – Application review and Applicant rationale:

The applicant wishes to retain the unauthorized fill on the property, and this application is to request consideration of establishing compliance for the unauthorized fill previously brought to the site. A self storage facility was built on the eastern portion of the property, an unpermitted use in the ALR and in SCRD Agriculture zone. Fill was placed to facilitate this unlawful development.

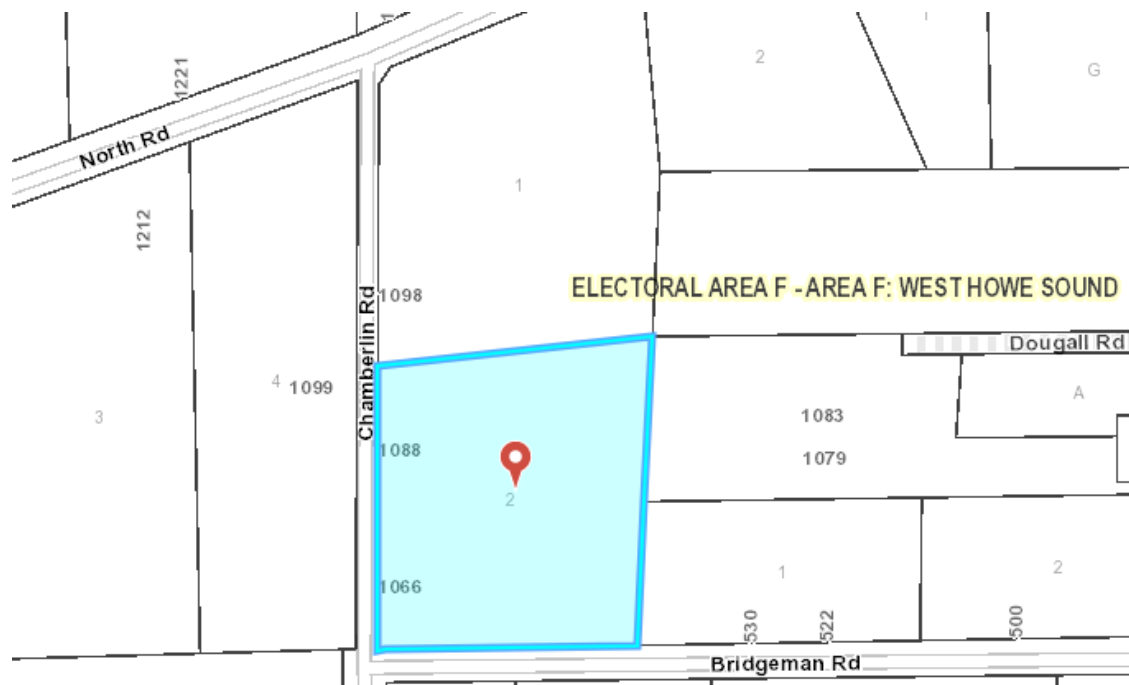


Figure 1 – location of 1088 Chamberlin Road.

File number:	ALC 64280 (SCRD File ALC00016)
Civic Address:	1088 Chamberlin Road
Legal Description:	LOT 2, BLOCK 9 DISTRICT LOT 695 PLAN 21710
Electoral Area:	F, West Howe Sound
Parcel Area:	4.36 acres
OCP Land Use:	Agricultural
Land Use Zone:	Agriculture (AG)
Application Intent:	To permit 250m3 of unauthorized fill to remain in place.

Table 1 - Application Summary

Analysis: Policy Review

Protecting future agricultural capability is supported by SCRD's Agricultural Area Plan, Regional Sustainability Plan and SCRD's West Howe Sound Official Community Plan. Protecting soil and protecting from conflicts with non-farm uses is inherent in protecting future agricultural capability. Key policy areas are copied below for reference.

SCRD does not currently have a soil and fill bylaw, nor zoning regulations pertaining to removal or placement of fill. This means that analysis of applications such as 64280 relies on evidence provided to SCRD by the ALC and the comparison of this evidence against other bylaws/policies.

Staff note that there was no supporting documentation or agrologist assessment submitted with this application. The application states that 50m³ of material was removed and that 250m³ of fill was added. There is no evidence submitted with the application (such as a survey) to confirm the exact location and volume of fill added, or a farm plan to explain its use or benefit for agriculture.

Agricultural Area Plan

The [Agricultural Area Plan](#) has six strategic goals to enable agriculture on the Sunshine Coast:

1. Protect farms, improve farming opportunities and expand access to land for agriculture
2. Secure a sustainable water supply for the Sunshine Coast
3. Develop a viable Coastal food system
4. Educate and increase awareness of Coastal food and agriculture
5. Advance and promote sustainable agricultural practices
6. Prepare for adaptation to climate change.

Strategic goals 1 and 6 relate to the importance of soil retention and enhancement for current and future agricultural capability.

Regional Sustainability Plan

The Regional Sustainability Plan, [We Envision](#), holds a set of nine (9) land use principles to guide future development on the Coast. One principle specifically relates to protecting agricultural land for its intended purpose: "protect and enhance agricultural lands, maintaining a secure and productive land base which conserves habitat, and provides food security and employment."

West Howe Sound Official Community Plan (OCP)

The [Area F Official Community Plan](#) designates this parcel as Agricultural. According to the OCP description "A bulk of the agricultural land base within the plan area has a soil rating of Class 3 and 4 within the Canada Land Inventory rating, with the potential to improve the soil to classes 2 and 3. Classes 2 to 4 are considered suitable for a wide range of agricultural production. Soil improvements can be achieved through irrigation, drainage management, removal of stones and sub-soiling (tilling the soil)."

Some of the Agricultural objectives noted in the OCP highlight the need to preserve and protect agricultural lands. Objectives 1, 5 and 6 note the following:

1. *To preserve agricultural land in the ALR by maintaining larger parcels on lands with higher quality agricultural soils, specifically those that have existing Canada Land Inventory ratings of class 2 through 4, or the capability to improve to those soil conditions.*
5. *To protect existing and future agricultural activities from potential conflicting non-agricultural uses within the Agricultural Land Reserve (ALR) and the Rural Residential designated lands adjacent to the ALR.*
6. *To support the Agricultural Land Commission in protecting agricultural lands and opportunities for present and future uses.*

Further, this parcel is within a Development Permit Area for Aquifer Protection and Stormwater Protection that specifically addresses industrial and commercial development. The land alteration, including fill placement on this parcel requires assessment and potential remediation as per the Development Permit 5 requirements of West Howe Sound OCP. A development permit will be required resulting from and monitored by standard SCR D bylaw enforcement process.

No evidence, such as an agrologist report or farm plan, was provided to SCR D by the ALC/applicant about how retaining the fill would enhance the agricultural potential on the parcel or meet the objectives of preserving land in the ALR for future agricultural use. The constructed use over the fill is not permitted in the Ag zone.

Options

On the basis of the referral, staff do not see a rationale to support the application. The proposal does not, when considering the information provided, comply with the Agricultural Area Plan, Regional Sustainability Plan or OCP. Unlike the ALC, SCR D does not have the mandate or expertise to request additional information or conduct agrological analysis.

1. Recommended: Forward the application to the ALC with the comment that based on the information provided, the proposal to retain the unauthorized fill does not comply with the Sunshine Coast Regional District Agricultural Area Plan, Regional Sustainability Plan or West Howe Sound Official Community Plan. ALC will review and make a decision. This approach utilizes the mandate and expertise of the ALC and responds to the lack of an SCR D bylaw regulating the placement of fill.
2. Deny the application. This is an option available to SCR D and would terminate the application. This approach may put SCR D in a position to defend or revisit the decision if further information is provided by the applicant.

Organization and Intergovernmental Implications

Staff are managing a growing number of applications related to unauthorized land alteration, including for removal or placement of fill in the ALR. At the time of authoring this report, planning staff currently has 3 more similar applications in queue already received from ALC, and are aware of several more pending ALC compliance investigations.

Staff would like to highlight the review process for retroactive fill applications on ALR land as area for upcoming process review. Retroactive fill referrals from ALC are new for SCR D in the last 2 years. To date, staff have reviewed these applications with the same review process as

proactive applications/referrals. Utilizing the same referral review process may be slowing the overall compliance efforts.

The resulting remediation work or compliance effort could be implemented more swiftly if staff could reduce the processing time for these reviews. For example, if staff were to provide a technical review directly to ALC without a 3-month process of referring to APC, SCRD Committee, then Board (estimated time is bare minimum if there is no queue) in order to respond, the ability to ensure a quicker response to resolve issues would be enhanced. Staff will undertake a process review of how retroactive applications to ALC (referrals to SCRD) are handled and provide information to a future Committee.

Timeline for next steps or estimated completion date

The current fill application has not been referred to APC for review. Staff are recommending that this referral not occur at this juncture, as the decision is focused on remediation of the unauthorized non-conforming non-farm use, aligned with aforementioned SCRD bylaws, plans and policies (which were all previously reviewed by APC). A referral would delay SCRD's response and hence ALC decision on this matter until sometime this fall.

However, it is planned that this report, including the preceding comments on how ALC referrals for retroactive development approval are managed, be referred to all APCs as part of an information package to support process review. Timing for this step is to be confirmed.

STRATEGIC PLAN AND RELATED POLICIES

Increase intergovernmental collaboration – SCRD and ALC have a shared mandate in ensuring compliance on this parcel.

CONCLUSION

SCRD received a referral from the ALC for retroactive approval of a non-farm use Removal of Soil and Placement of Fill.

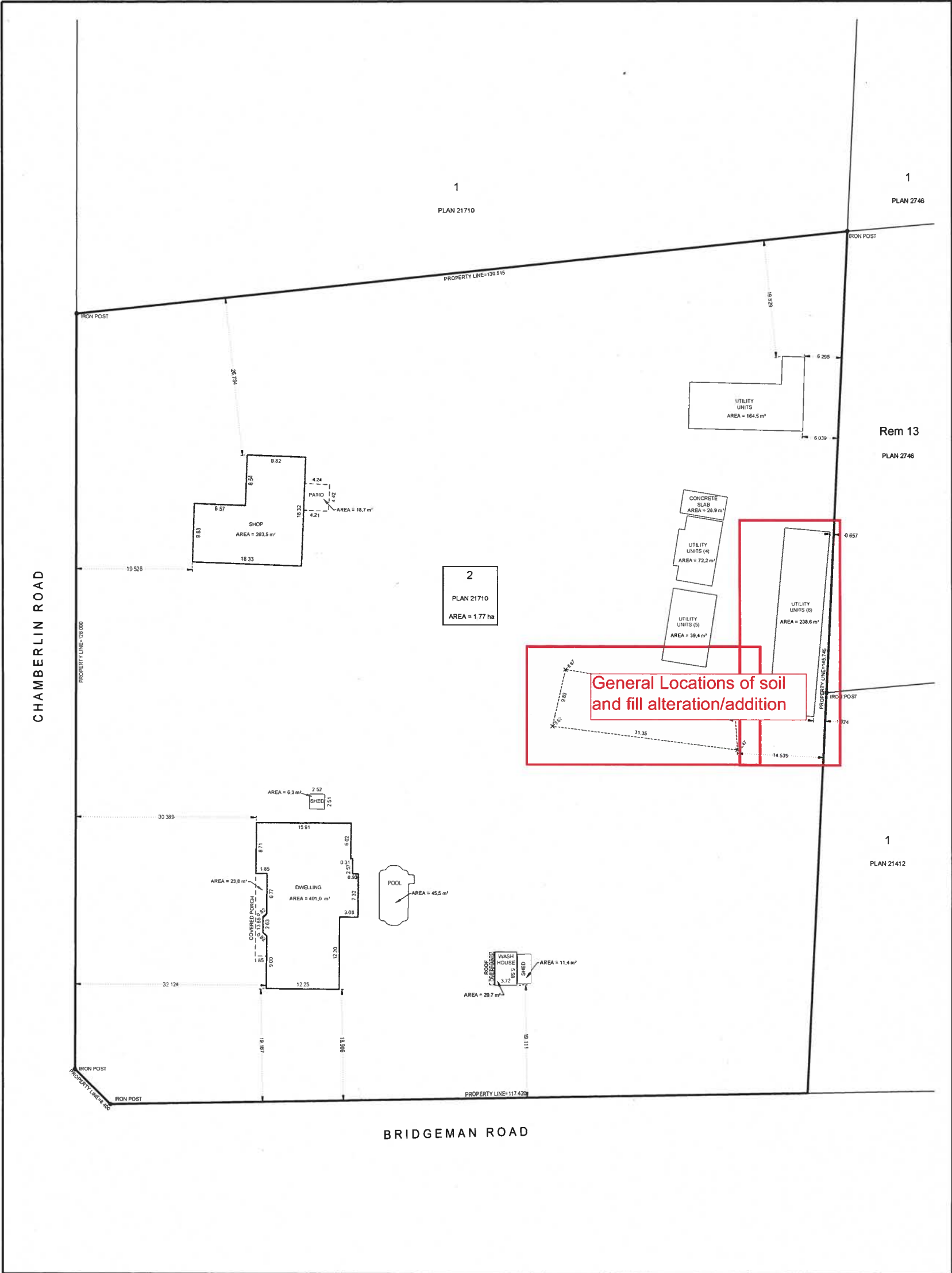
It is recommended to forward the application to the ALC for decision with the comment that based on the information provided, the proposal to retain the unauthorized fill does not comply with the Sunshine Coast Regional District Agricultural Area Plan, Regional Sustainability Plan or West Howe Sound Official Community Plan.

This approach utilizes the mandate and expertise of the ALC and responds to the lack of an SCRD bylaw regulating the placement of fill.

ATTACHMENTS

Attachment A – Site Plan

Reviewed by:			
Manager	X – J. Jackson	Finance	
GM	X – I. Hall	Legislative	
CAO	X – D. McKinley	Other	



**B.C. LAND SURVEYOR'S
CERTIFICATE OF LOCATION OF
DWELLING AND FEATURES ON
LOT 2 Bk 9 DL 695 Gp1 NWD
PLAN 21710**

TOWN OF GIBSONS

CIVIC ADDRESS: 1088/1066 CHAMBERLIN ROAD
PID: 010-805-877

SCALE 1:300

ALL DISTANCES ARE IN METRES AND DECIMALS THEREOF

LEGEND

- DENOTES STANDARD IRON POST FOUND
- + 8.82 DENOTES SPOT ELEVATION

PROPERTY:

PROPERTY DIMENSIONS SHOWN ARE DERIVED FROM FIELD SURVEY
OFFSETS TO PROPERTY LINES ARE NOT TO BE USED TO DEFINE
BOUNDARIES

REFER TO CURRENT CERTIFICATE(S) OF TITLE FOR
ADDITIONAL EXISTING OR PENDING CHARGES

GENERAL:

THIS PLAN SHOWS THE LOCATION OF VISIBLE FEATURES ONLY, AND DOES
NOT INDICATE BURIED SERVICES THAT MAY EXIST ON OR AROUND THE
SUBJECT SITE

FEATURES SHOWN WITHOUT DIMENSIONS SHOULD BE CONFIRMED WITH
BENNETT LAND SURVEYING LTD

FORM LOCATION BASED ON SURVEY TIES TO VISIBLE INTERIOR SURFACE
OF EXTERIOR FORM UNLESS OTHERWISE NOTED

TREE SPECIES AND DIMENSIONS SHOULD BE CONFIRMED BY A QUALIFIED
ARBORIST. SHADED AREA IS NOT AN INDICATION OF DRIP LINE LOCATION
UNLESS SPECIFICALLY LABELED

NOTE:

THIS PLAN HAS BEEN PREPARED FOR CONSTRUCTION PURPOSES
ONLY AND IS FOR THE EXCLUSIVE USE OF OUR CLIENT

ALL RIGHTS RESERVED. NO PERSON MAY COPY, REPRODUCE,
TRANSMIT OR ALTER THIS DOCUMENT IN WHOLE OR IN PART WITHOUT
THE CONSENT OF BENNETT LAND SURVEYING LTD.

BENNETT LAND SURVEYING LTD. ACCEPTS NO RESPONSIBILITY OR LIABILITY
FOR ANY DAMAGES THAT MAY BE SUFFERED BY A THIRD PARTY AS A RESULT
OF ANY DECISIONS MADE OR ACTIONS TAKEN BASED ON THIS DOCUMENT

CERTIFIED CORRECT

Javier Siu Digitally signed by
XWBW63 Javier Siu XWBW63
Date: 2021.04.26
11:07:41 -07'00'

FIELD SURVEY COMPLETED ON APRIL 14 2021
THIS DOCUMENT IS NOT VALID UNLESS ORIGINALLY SIGNED AND SEALED

B:\0010-GIBSONS FOLDERS\90793 00-1088-CHAMBERLIN-ROAD-GIBSONS\90793 00-DRAWING\90793 00-SKETCHES\90793 00-DWG

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Electoral Area Services Committee – July 21, 2022

AUTHOR: Yuli Siao, Senior Planner

SUBJECT: Amendment to Development Variance Permit DVP00029 (Persephone Brewery)

RECOMMENDATION

THAT the report titled Amendment to Development Variance Permit DVP00029 (Persephone Brewery) be received;

AND THAT Development Variance Permit DVP00029 be amended by modifying the following conditions contained in the covenant (CA7303479 and CA7303480) between Persephone Brewing Company and SCRD that forms part of the Permit:

Change the operating hours of the food and beverage service lounge from

“ From 10:00 hours to 21:00 hours from and including the Friday preceding the Victoria Day long weekend to and including the Monday of the Thanksgiving Day long weekend in each and every year; and

From 11:00 hours to 19:00 hours from and including the Tuesday following the Thanksgiving Day long weekend to and including the Thursday preceding the Victoria Day long weekend in each and every year.”

to

“ From 10:00 am to 9:00 pm daily year round.”

BACKGROUND

The SCRD issued Development Variance Permit DVP00029 (Attachment A) on January 21, 2019, to authorize the operation of a food and beverage service lounge with a seating capacity of 65 people in the Persephone Brewery, located at 1053 Stewart Road in West Howe Sound. The Permit was issued under conditions contained in a covenant between Persephone Brewing Company and SCRD respecting operating hours of the lounge, as follows:

Time of the Year	Operating Hours
Victoria Day to Thanksgiving Day (warm season)	10:00 – 21:00
Thanksgiving Day to Victoria Day (cool season)	11:00 – 19:00

Since the establishment of the lounge, Persephone has experienced the need for and is now requesting extension of the operating hours, particularly for the cool season to align with the warm season, making them 10:00 – 21:00 year round.

Applicant's Rationale

Persephone has been building a reputation as a community-friendly dining establishment. Within the Gibsons area, several restaurants close for an extended period of time over the winter months but Persephone opens throughout, offering residents and visitors an accessible option. Having another reliable, family-friendly eatery benefits the whole community: creates jobs, contributes to the economy, supports local farmers and adds appeal for tourists.

Persephone wants to extend operating hours to a longer daily duration of 10:00 – 21:00 to ensure that establishment can continue to be competitive, and grow by offering a full dinner service with farm-fresh, evening dining option year-round. The current close time of 19:00 in the cool season isn't conducive to dinner-hour business.

As an integral part of creating a diverse and dynamic community, Persephone wants to offer more small-scale events, such as staff parties, long table or themed dinners, fundraisers, corporate functions, film screenings, artist showcases, etc. There are limited venues on the Coast that can comfortably host 50 or more guests, but Persephone has the infrastructure to do so. Extending the hours can provide the community with more options.

Little to no impact is expected on neighbouring properties. As permitted, Persephone has been operating until 21:00 in the warm months for the past few years and has successfully mitigated impact on neighbours during those months, by monitoring parking and limiting outdoor music.

There are ample parking spaces on the property for indoor and outdoor customers. During peak hours or at any large events Persephone staff are dedicated to managing and assigning parking spots. Shortly after the DVP was approved Persephone installed dedicated bicycle parking stands, near the northern patio and picnic area. Many visitors come by bikes and Persephone has hosted community biking events with no problems.

As the proposed extended hours are for the cool season when outdoor seating is less desirable and guests are primarily indoors, noise is not expected to be a problem. Persephone hasn't received any complaints from neighbours or community with respect to its operation under current conditions and allowance.

Persephone has been maintaining the waste water treatment system of the facility. As required by the DVP, Persephone had provided SCRD with performance data and effluent testing lab reports of the waste water treatment system for the brewery facility for one year since the issuance of the DVP. The extended hours are not expected to impact the brewing procedures or volume and therefore no changes are required to the wastewater treatment system.

DISCUSSION

Analysis

The Development Variance Permit was issued to vary the indoor seating capacity of a food and beverage service lounge in the AG Zone, as required in Section 1021.7(3) of Zoning Bylaw 310, from 30 to 65, in conjunction with SCRD's endorsement of an LCRB (Liquor and Cannabis Regulation Branch) liquor license for the lounge and picnic area in Persephone Brewery.

Persephone has implemented conditions of the DVP.

SCRD has not received any complaints since the issuance of the Permit.

The proposed extension of operating hours during the cool season does not alter the seating capacity granted by the DVP, or other conditions on which the DVP is based, such as provision of vehicle and bike parking, restriction of amplified or outdoor music. Therefore the extended hours are not expected to have a significant impact on the neighbourhood.

Neighbourhood Consultation

Notifications about this proposal were sent to surrounding properties to request feedback as operation hours were one of the previous concerns when the DVP was approved. Those who consider their interests affected may attend the Electoral Area Services Committee meeting and speak at the call of the Chair.

Staff Comments

The proposal is acceptable to staff based on the analysis provided above.

Options / Staff Recommendation

Possible options to consider:

Option 1: Amend the permit

This would permit the proposed operation on the property to proceed. Planning staff recommend this option.

Option 2: Refer the application to the Area F APC

The APC would discuss the proposed amendment to the DVP and provide a recommendation to the EAS. Further notification is not required with this option. Considering the very local nature of the variance and the notification process already employed, this is not a default/recommended option.

Option 3: Deny the amendment to the permit

The existing conditions of the permit would continue to apply.

STRATEGIC PLAN AND RELATED POLICIES

N/A

CONCLUSION

The proposed extension of operating hours of the food and beverage service lounge at Persephone Brewery during the time from Thanksgiving Day and Victoria Day is not expected to have a negative impact on the neighbourhood.

Staff recommend amending DVP00029 through modification of the covenant between Persephone and SCRD to reflect the proposed operating hours.

ATTACHMENTS

Attachment A – DVP00029

Reviewed by:			
Manager	X – J. Jackson	Finance	
GM	X – I. Hall	Legislative	
CAO	X – D. McKinley	Other	



**SUNSHINE COAST REGIONAL DISTRICT
DEVELOPMENT VARIANCE PERMIT
DVP00029**

TO: Dion Whyte

ADDRESS: 1053 Stewart Rd, Gibsons, BC V0N 1V7

This Development Variance Permit is issued subject to compliance with all of the Bylaws of the Sunshine Coast Regional District applicable thereto, except those specifically varied or supplemented by this Permit.

This Development Variance Permit applies to those lands within the Sunshine Coast Regional District described below:

Legal Description: LOT A DISTRICT LOT 914 PLAN LMP20836

P.I.D.: 019-112-076

Civic Description: 1053 Stewart Road, Gibsons

The lands described herein shall be developed strictly in accordance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit which shall form a part thereof.

This Development Variance Permit is issued pursuant to Section 498 of the *Local Government Act* for the purpose of regulating the seating capacity of a food and beverage service lounge on those lands described herein, and *Sunshine Coast Regional District Zoning Bylaw No. 310, 1987* is specifically varied as follows:

To vary the indoor seating capacity, as required in Section 1021.7 (3) of Zoning Bylaw No. 310, 1987, from 30 to 65.

This Development Variance Permit is not a Building Permit. No construction shall commence without prior written consent of the Building Inspector.

If the Permittee does not commence the development permitted by this Permit within two years of the date of this permit, this Development Variance Permit shall lapse.

This Development Variance Permit is issued subject to compliance with the following terms and conditions:

1. Performance data and effluent testing lab reports of the wastewater treatment system for the brewery facility be provided to the SCRD and posted on the Persephone website on a quarterly basis for one year;
2. Adhere to conditions of the covenant CA7303479 and CA7303480, registered on January 18, 2019, attached to and forming part of this permit as Appendix A and dated January 18, 2019.

Except as specifically provided above, this Development Variance Permit in no way relieves the owner or occupier of the responsibility of adhering to all other legislation of responsible authorities, which may apply to the land.

AUTHORIZING RESOLUTION NO. 004/19 PASSED BY THE SUNSHINE COAST REGIONAL DISTRICT BOARD THE 10TH DAY OF JANUARY, 2019.

ISSUED THIS 21ST DAY OF JANUARY, 2019.

A handwritten signature in black ink, appearing to read "A. Legault", written over a horizontal line.

Ms. Angie Legault, Corporate Officer
SUNSHINE COAST REGIONAL DISTRICT

TERMS OF INSTRUMENT

BETWEEN:

PERSEPHONE BREWING COMPANY INC.
958 Reed Road
Gibsons, B.C.
V0N 1V7
(hereinafter called the "Covenantor")

OF THE FIRST PART

AND:

SUNSHINE COAST REGIONAL DISTRICT
1975 Field Road
Sechelt, B.C.
V0N 3A1
(hereinafter called the "Covenantee")

OF THE SECOND PART

WHEREAS:

A. The Covenantor is the registered owner of all and singular that certain tract of land laying, situate and being in the North Shore - Squamish Valley Assessment Area, Province of British Columbia, more particularly known and described as:

Parcel Identifier: 019-112-076.
Lot A District Lot 914 Plan LMP20836

(hereinafter called the "Lands")

B. Section 219 of the *Land Title Act* provides, interalia that there may be registered as a charge against the title to land a covenant, whether of a negative or positive nature, in respect of the use of the land or the use of a building on or to be erected on land, in favour of a Municipality, Regional District or the Crown.

C. The Covenantor has applied to the Covenantee to issue a Development Variance Permit DVP00029 to relax Section 1021.7 (3) (a) (ii) (indoor seating capacity) of Zoning Bylaw

No. 310 from 30 to 65 seats in a food and beverage service lounge ("Lounge") situated on the Lands.

D. As a condition of granting DVP00029 the Covenantee requires a covenant to be registered against the Lands to ensure adequate parking on the Lands and to regulate the hours of operation of the Lounge.

NOW THEREFORE THIS AGREEMENT WITNESSETH that pursuant to Section 219 of the *Land Title Act*, and in consideration of the sum of ONE DOLLAR (\$1.00) now paid to the Covenantor by the Covenantee (the receipt and sufficiency whereof is hereby acknowledged) the parties hereby covenant and agree with the other as follows:

1. The Covenantor shall construct and maintain on the Lands no less than 12 spaces providing adequate security for parking of unattended bicycles.
2. The Covenantor shall provide and maintain on the Lands no less than 80 parking spaces for the parking of automobiles.
3. The Covenantor shall not permit the Lounge to operate and be open for business except during the following days and hours:
 - (a) From 10:00 hours to 21:00 hours from and including the Friday preceding the Victoria Day long weekend to and including the Monday of the Thanksgiving Day long weekend in each and every year;
 - (b) From 11:00 hours on December 31 to 01:00 hours on the immediately following January 1 of each and every year; and
 - (c) From 11:00 hours to 19:00 hours from and including the Tuesday following the Thanksgiving Day long weekend to and including the Thursday preceding the Victoria Day long weekend in each and every year;
4. The Covenantor shall not permit any indoor amplified music nor outdoor non-amplified music on the Lands except from 12:00 hours noon to 18:00 hours on Saturday and Sunday of each week and from 12:00 hours noon on December 31 to 01:00 hours on the immediately following January 1.

5. The Covenantor will indemnify and save harmless the Covenantee and its servants and agents against all losses, damages, costs and expenses, including fees of solicitors and other professional advisers, arising out of any breach, violation, or non-performance of any term, condition, covenant, or other provision of this agreement.
6. No term, condition, covenant or other provision of this agreement will be considered to have been waived by the Covenantee unless the waiver is expressed in writing by the Covenantee. Any waiver by the Covenantee of any term, condition, covenant or other provision of this agreement or any waiver by the Covenantee of any breach, violation or non-performance of any term, condition, covenant or other provision of this agreement does not constitute and will not be construed as a waiver of any further or other term, condition, covenant or other provision of this agreement or any further or other breach, violation or non-performance of any term, condition, covenant or other provision of this agreement.
7. Subject to the provision of Section 219 of the Land Title Act the Covenantor's covenants contained in this Agreement shall burden and run with the Lands and shall enure to the benefit and be binding upon the Covenantor, his heirs, executors, administrators, successors and assigns and the Covenantee and his assigns.
8. Nothing in this Agreement shall prejudice or affect the rights, powers and remedies of the Covenantee in relation to the Covenantors or the Lands under any law, by-law, order or regulation or in equity all of which rights, powers and remedies may be fully and effectively exercised by the Covenantee as if this Agreement had not been made by the parties.
9. The Covenantor will do or cause to be done at his expense all acts reasonably necessary for the Covenantee to gain priority for this Agreement over all liens, charges and encumbrances which are or may be registered against the Lands save and except those in favour of the Covenantee and those specifically approved in writing by the Covenantee.
10. The parties agree that this Agreement shall not be modified or discharged except in accordance with the provisions of Section 219 (5) of the Land Title Act.

11. The Covenantor shall do or cause to be done all things and execute or cause to be executed all documents and give such further and other assurances which may be reasonably necessary to give proper effect to the intent of this Agreement.

12. Wherever the singular or masculine or neuter is used herein, the same shall be construed as including the plural, feminine, body corporate or politic unless the context requires otherwise.

13. If any section or any part of this Agreement is found to be illegal or unenforceable, then such sections or parts shall be considered to be separate and severable from this Agreement and the remaining sections or parts of this Agreement as the case may be shall be unaffected thereby and shall remain and be enforceable to the fullest extent permitted by law as though the illegal or unenforceable parts or sections has never been included in this Agreement.

14. This Agreement shall be interpreted according to the laws of the Province of British Columbia.

15. Where there is a reference to an enactment of the Province of British Columbia in this Agreement, that reference shall include a reference to any consequent enactment of the Province of British Columbia of like effect, and unless the context otherwise requires, all statutes referred to herein are enactments of the Province of British Columbia.

IN WITNESS WHEREOF the parties hereto hereby acknowledge that this Agreement has been duly executed and delivered by the Covenantor executing Form C (page 1) attached hereto.

Consent and Priority Agreement

GIVEN THAT the Sunshine Coast Credit Union (the "**Chargeholder**") is the holder of a mortgage and assignment of rents registered against the lands legally described (the "**Lands**") in the s. 219 covenant to which this Agreement is attached (the "**Covenant**"), which charges are registered in the Lower Mainland Land Title Office under instrument numbers CA3101766 and CA3101767 respectively (the "**Charge**"),

This Consent and Priority Agreement is evidence that in consideration of payment to it of \$1.00 by the Transferee described in item 6 of Part 1 of the Form C to which this Agreement is attached (the "**Transferee**"), the Chargeholder agrees with the Transferee as follows:

- (1) The Chargeholder consents to the granting and registration of the Covenant and the Chargeholder agrees that the Covenant binds its interest in and to the Lands.
- (2) The Chargeholder grants to the Transferee priority for the Covenant over the Chargeholder's right, title and interest in and to the Lands and the Chargeholder postpones the Charge, and all of its right, title and interest thereunder, to the Covenant as if the Covenant had been executed, delivered and registered prior to the execution, delivery and registration of the Charge.

As evidence of its agreement with the Transferee to be bound by this Consent and Priority Agreement, as a contract and as a deed executed and delivered under seal, the Chargeholder has executed and delivered this Agreement by executing Part 1 of the *Land Title Act* Form C to which this Agreement is attached and which forms part of this Agreement.

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Electoral Area Services Committee – July 21, 2022

AUTHOR: Remko Rosenboom, General Manager

SUBJECT: MANAGEMENT OF COMMUNITY SEWER SYSTEMS

RECOMMENDATION(S)

THAT the report titled **Management of Community Sewer Systems** be received for information;

AND THAT SCRD Subdivision Servicing Bylaw No. 320 be amended to remove the requirement that ownership of community sewer systems greater than 22.7m³/day be automatically taken over by the SCRD and instead require that ownership transfer to the SCRD of community sewer systems designed to accommodate over 22.7m³/day of effluent be decided by the SCRD Board on a case-by-case basis.

BACKGROUND

The Sunshine Coast Regional District (SCRD) is responsible for the management of 18 community sewer systems across the region. The *BC Municipal Wastewater Regulation* regulates community sewer systems that discharge over 22.7m³/day of domestic effluent, while smaller, onsite sewer systems, like septic tanks and fields, are covered by the *Sewerage System Regulation* under the *BC Public Health Act*.

Section 3.2 of the *SCRD Subdivision Servicing Bylaw No. 320, 1987* states that: “The Regional District shall assume ownership and operation of proposed community sewage systems designed to accommodate more than 22,700 litres/day of effluent from residential and other non-residential developments, except industrial uses on lands zoned industrial under the Regional District’s current zoning bylaws.” This means that the SCRD currently assumes ownership of Bylaw 320 compliant community sewer systems that service over 22.7m³/day of effluent. The existing legislation is further outlined in previous staff reports provided as Attachments A and B.

There is no provincial requirement for local governments to own community sewer systems designed to accommodate over 22.7m³/day of effluent. Generally, community sewer systems require more maintenance compared to on-site systems that service individual dwellings (i.e. septic systems) and more monitoring and enforcement¹ to meet environmental standards and service viability. For this reason, it is a recognized best practice for community sewer systems to be owned and operated by local government or strata². The process for the SCRD to discontinue the community sewer system service is outlined in Attachment A.

While the SCRD has more oversight when it owns and operates community sewer systems, there is also increased complexity associated with operating multiple smaller service areas while ensuring the effective provision of services and the protection of public health and safety. Without any changes to the listed section of Bylaw 320, the SCRD also recognizes it will likely

^{1,2} Ministry of Municipal Affairs and Housing, *Sewage/Subdivision Best Practice Guidelines*
https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/local-governments/finance/4612subdivision_bestpracticeguide.pdf

continue to assume ownership of more larger community sewer systems as development continues in the region. During the November 26, 2020 Corporate and Administrative Services Committee meeting, the SCRD Board directed staff to review current policy for acquiring, operating and maintaining community sewer systems, and that staff provide an update at a future Committee meeting (res. 404/20).

The purpose of this report is to outline potential options to improve the management of future community sewer system acquisitions and consider ways to better protect the SCRD and the residents that use and pay for system operation and maintenance.

DISCUSSION

Defining the Problem

Each community sewer system is managed under a distinct SCRD service with a separate budget and the maintenance and upgrades of each system is provided on a cost-recovery basis through service charges as per the *BC Local Government Act*. Bylaw 320 is a subdivision servicing bylaw that outlines requirements for how such systems are built and the ownership is taken over by the SCRD. The Bylaw sets very limited requirements for such ownership transfers and none related to the sustainable management of the wastewater facilities, rate of regulatory compliance, operating and maintenance plans and funding requirements, operating and capital reserve funding or long-term capital planning. Currently, once a transfer is completed, SCRD policy guides further decisions; for example, the SCRD Financial Sustainability Policy guides the financial management of these services to ensure *BC Local Government Act* requirements are met.

To date the long-term financial planning for the community sewer systems has not been fully implemented. Staff have for example developed Asset Management Plans for all systems but the rates as set by the Board are not fully supporting these plans. Consequently, many of the existing SCRD systems require further investment for replacement costs that have not previously been planned for or included in historical service charges. A previous report and study in 2019 (Attachment C) indicated that significant capital renewal is required for at least six community sewer systems to meet regulatory requirements. Besides, several systems require capital and operational investments to address performance issues that are resulting in regulatory non-compliances. As a result, in the past few years, some community sewer system service charges have increased. In 2019 and 2020, the SCRD held meetings with users from each community sewer system to discuss the existing funding strategy and projected capital expenditures, and presented potential funding strategies to mitigate future rate increases. As part of the 2022 budget, the SCRD Board approved additional staff time to pursue further engagement with residents in existing community sewer systems.

Through a review of Bylaw 320, provincial legislation, best practices and SCRD policies, the following options explore potential directions to help assess if the SCRD is in the best position to continue acquiring new community sewer systems, or if the SCRD should increase responsibilities of the developer prior to acquisition, decreasing SCRD resources, and increase stability and assurance for future users of these systems.

Options and Analysis

Staff analyzed the problem and developed the following options for the Board's consideration.

Option 1: Consider each takeover request of a larger community sewer system on its own merits (recommended)

Under this option Bylaw 320 would be amended such that the ownership of the community sewer systems greater than 22.7m³/day are not automatically taken over by the SCRD. Instead the SCRD Board would have to decide if it wants to take on the ownership for every newly developed larger community sewer system. This would allow the Board to consider if SCRD ownership is beneficial from a community perspective. In doing so they could consider the potential environmental and health impacts and the operational and financial implications for the SCRD and the future service participants.

Staff would develop an application guide to outline the review process and information requirements for any system the SCRD is requested to take over. This process would allow for the Board to make a preliminary and final decision on each application and it would be aligned with the process for approving development permits. The application guide would focus on identifying any potential to the community and the environment and the sustainable service delivery for these systems if the SCRD would take them over. This could include requirements for a preliminary and detailed engineering design, a build-out plan that guarantees the adequate performance of the system at SCRD takeover, a 10-year Capital Plan, an Operating and Maintenance Plan, a 5-year rate and Operational and Capital Reserve Plan and a performance bond. Based on staff's review of this information staff would provide recommendations to the Board whether or not to take over a proposed community sewer system, and if doing so, recommend terms and conditions.

Under this option any community sewer systems currently under development can be considered on its own merits.

Option 1 would allow for a change in the current process in a shorter timeframe then would be required to complete the full review and update of Bylaw 320, planned to be completed late 2023.

Staff recommend this option.

Option 2: Continue the automatic SCRD taking over larger community sewer systems

Under this option the automatic takeover of the larger community sewer systems will continue. However, as part of the scheduled review and update of Bylaw 320 in 2023, Staff would consider including more conditions that the developer would need to meet before the SCRD will take over the ownership of a community sewer system greater than 22.7m³/day.

Staff do not recommend Option 2 as any enhancements to the takeover process might not be completed until Q4 2023 at the earliest and might result in the SCRD having to take over several new larger sewer systems before the updated Bylaw is adopted.

Staff do not recommend this option.

Option 3: Discontinue the take over of larger sewer systems by the SCRD

Under this option Bylaw 320 would be updated to delete any reference to the SCRD automatically taking over the ownership of community sewer systems greater than 22.7m³/day. New community sewer systems of that size would subsequently by default be managed by the

owner(s) or strata and continue to be regulated by Bylaw 320 and the *BC Environmental Management Act*.

This option would result in decreased oversight by the SCRD. Failure of these systems, if not properly designed or maintained, could result in potential human exposure to untreated effluent and environmental degradation, particularly if there is groundwater or local surface water contamination.

Staff do not recommend this option.

It should be noted that Section 3.3 of Bylaw 320 reads: “The Regional District reserves the right to acquire any other existing or newly constructed community sewer system under this Bylaw that has been designed, constructed and maintained to the standards of the Regional District, and that meet the terms of the agreement set out in Schedule C.” This section currently enables the SCRD to take on any sewer system regardless of its size under the conditions listed in the Bylaw which have been confirmed to be inadequate to guarantee the long-term sustainable service delivery for these systems. Staff are recommending to keep this provision in the Bylaw until the Bylaw is reviewed and updated in 2023. The application guide proposed to be developed as part of the recommended Option 1 would improve the review of systems that the SCRD is requested to take over and allows staff to make comprehensive and adequate recommendations to the Board.

Financial Implications

Option 1 and 2 would ultimately reduce the financial risk for the SCRD and the service participants of the system taken over by the SCRD. The implementation of Option 1 and 2 would both benefit from the support of a consultant for the development of the information requirements and terms and conditions to be met.

Option 3 would have no financial implications to the SCRD.

Timeline for next steps

For Option 1 staff could bring forward a Bylaw amendment in late Q4 2022. The application guide will be completed by that time as well.

Under Option 2, staff would bring forward a budget proposal to retain a consultant to assist with the development of policy options and seek Board direction to engage with the community. This would mean that the earliest staff could bring forward an updated Bylaw 320 would be in Q4 2023. This bylaw amendment could be developed in parallel with broader amendments that would seek to update and modernize Bylaw 320.

STRATEGIC PLAN AND RELATED POLICIES

This report aligns with the 2019-2023 Board Strategic Plan, specifically the strategy to “continue to develop and implement comprehensive asset stewardship”. Other related corporate guiding documents are the Financial Sustainability Policy and the Corporate Asset Management Plan.

CONCLUSION

The Sunshine Coast Regional District (SCRD) is responsible for the management of 18 community sewer systems across the region. All sewer systems must be operated in accordance with *SCRD Subdivision Servicing Bylaw No. 320, 1987* (Bylaw 320) and provincial

regulations. Community sewer systems that service over 22.7m³/day of effluent currently are acquired and operated by the SCRD, as per Bylaw 320. The province does not require the SCRD to own community sewer systems, although it is considered a best practice for systems to be operated by a local government or strata to ensure proper operation and management, and in the case of the SCRD, for additional oversight for the protection of public health and the environment.

In recent years, there have been tax increases to users of some community sewer systems to achieve cost recovery for each service, and the SCRD Board directed staff to review current wastewater treatment policy to improve the management of these systems.

Staff recommend amending Bylaw 320 such that the automatic takeover by the SCRD of a community sewer system with an effluent of over 22.7m³/day is replaced with a requirement for the SCRD to decide on each requested takeover. Staff would develop an application guide to support the review process and allow for comprehensive recommendations to be made to the Board on the takeover of ownership of community sewer systems.

Attachments:

Attachment A - September 17, 2020 Corporate and Administrative Services Committee – Annex F – Process for Amending Established Wastewater Services

Attachment B - September 17, 2020 Corporate and Administrative Services Committee – Annex G – Review of Bylaw 320 with Respect to Wastewater Systems

Attachment C – November 28, 2019 Corporate and Administrative Services Committee – Annex B - Wastewater Service Review and Asset Management Plans

Reviewed by:			
Manager	X – S. Walkey X – K. Doyle	Finance	
GM	X – R. Rosenboom	Legislative	X - S. Reid
CAO	X – D. McKinley	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Corporate and Administrative Services Committee – September 17, 2020

AUTHOR: Sherry Reid, Corporate Officer

SUBJECT: PROCESS FOR AMENDING ESTABLISHED WASTEWATER SERVICES

RECOMMENDATIONS

THAT the report titled Process for Amending Established Wastewater Services be received for information.

BACKGROUND

The following resolution was adopted at the December 12, 2019 Regular Board Meeting (in part):

310/19 *...AND THAT a report be provided to a future Committee that includes whether Wastewater Treatment Plants currently serviced by the Regional District could be assumed by third parties, such as stratas, and that a process for such a transfer, including the possibilities to remove a lot from a wastewater service, be provided.*

The purpose of this report is to provide an overview of the legislative requirements and considerations that would need to be contemplated should the Regional District proceed with the transfer, disposition and/or amendment of an established wastewater service.

DISCUSSION

The Sunshine Coast Regional District (SCRD) has established local services for 15 community wastewater systems that are located in Electoral Areas A, B, D, E and F. These wastewater systems have been established by six separate bylaws as identified in Table 1 below. There are currently 10 distinct wastewater systems bundled within the service established by Bylaw 1026, while the remaining five wastewater systems have been separately established as stand-alone services.

Table 1: Overview of SCRD Wastewater Treatment Facilities Services

Service Establishing Bylaw	Wastewater Treatment Facility	Electoral Area	No. Parcels serviced	No. Participants in Service (Current to 2020)
1026	Greaves Road	A	6	5
1026	Merrill Crescent	A	14	12
1026	Lee Bay	A	179	113
1026	Canoe Road	A	10	6
1026	Jolly Roger	B	32	31
1026	Secret Cove	B	34	34
1026	Curran Road	B	70	57

1026	Roberts Creek Co-Housing	D	31	31
1026	Sunnyside	E	11	8
1026	Langdale	F	40	40
1022	Woodcreek Park	E	73	73
1076	Lily Lake Village	A	28	28
1080	Painted Boat	A	34	34
1085	Square Bay	B	93	80
1087	Sakinaw Ridge	A	19	8

Legislative Implications

In considering whether wastewater systems currently operated by the Regional District could be assumed by third parties, such as stratas, staff would look to the authority provided by the Local Government Act (LGA) as well as the service establishing bylaw to determine the appropriate process to transfer and dispose of the service. Any amendments or repeals of regional district service establishment bylaws are subject to provincial approval of the Inspector of Municipalities as well as participating area approval.

Section 288 of the LGA sets out the legislative requirements for the disposal/transfer of water systems, sewer systems and utilities. Before the disposition of a wastewater service occurs there must be in effect an agreement with the strata (or transferee) under which the wastewater service will continue for a period of time specified in the agreement. The intended disposition must also receive the assent of the electors.

Any disposition would need to happen individually for each wastewater system. For example, if the Board wishes to transfer a specific wastewater system to a strata, the Regional District will need to enter into an agreement with the strata and have the disposition receive assent of the electors. This has implications for the wastewater systems within Bylaw 1026 as the Ministry of Municipal Affairs and Housing has advised that the individual wastewater systems within Bylaw 1026 should be unbundled stand-alone services before they are considered for transfer of ownership. At a minimum, the individual wastewater systems that are being considered for transfer and dissolution should be separated from Bylaw 1026 in order to simplify the process for receiving assent of the electors and the necessary accompanying bylaw repeals/amendments. The financial impact of unbundling the service must also be considered. If doing so would have little or no financial effect on property owners then the Inspector of Municipalities may consider a bylaw amendment unbundling the service with Director consent.

Any of the stand-alone wastewater services, specifically those apart from Bylaw 1026, may be repealed in accordance with s. 349 of the LGA. The required assent vote for the disposition of the wastewater service could also address the repeal of the service establishing bylaw and serve as the necessary elector approval.

Finally, with respect to the possibilities of removing a lot from a local wastewater service area, this too is possible. The boundaries of a local service area may be amended through a petition process and consent of 2/3 of the participants. However, the Ministry has advised against allowing a lot to be removed from a wastewater service area mostly due to the cost implications for the properties that remain within the service boundary. As the number of participants in a

service is reduced, the cost must then be shared amongst fewer participants resulting in a greater financial burden for the remaining properties.

STRATEGIC PLAN AND RELATED POLICIES

This report aligns with the Strategic Focus Area of Infrastructure Management.

CONCLUSION

Wastewater systems currently operated by the Regional District may be assumed by third parties, such as stratas. The process for such a transfer, including the possibilities to remove a lot from a local wastewater service area, must follow the legislative requirements set out in the Local Government Act for the disposal/transfer of water systems, sewer systems and utilities, and consider the approval process required by the province for amending/repealing service bylaws. Changes to each service should be considered individually as the process for service bylaw amendment/repeal may vary due to differences in the way the initial service was established.

Reviewed by:			
Manager		CFO	X-T. Perreault
GM		Legislative	
CAO	X-D. McKinley	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Corporate and Administrative Services Committee – September 17, 2020

AUTHOR: Kyle Doyle, Manager, Asset Management

SUBJECT: REVIEW OF BYLAW 320 WITH RESPECT TO WASTEWATER SYSTEMS

RECOMMENDATIONS

THAT the report titled Review of Bylaw 320 With Respect To Wastewater Systems be received for information.

BACKGROUND

Staff presented a [Wastewater Service Review and Associated Asset Management Plans](#) (linked from Agenda) to the board at the November 28, 2019 Corporate and Administrative Services Meeting. A request was made for clarification on the mandate of the Regional District to provide management of community wastewater systems and to explore the steps required to dissolve an entire Local Service Area or for an individual parcel to remove itself from the Service Area.

Resolution 310/19 was passed at the subsequent Board Meeting:

THAT staff research Bylaw 320 for mechanisms that could be explored for determining when, how, and the criteria for the Regional District to assume wastewater systems;

AND THAT a report be provided to a future Committee that includes whether Wastewater Treatment Plants currently serviced by the Regional District could be assumed by third parties, such as stratas, and that a process for such a transfer, including the possibilities to remove a lot from a wastewater service, be provided.

The purpose of this report is to provide the Committee with an understanding of the existing internal legislative processes within Bylaw 320 that pertain to the assumption of wastewater systems in the rural area of the Sunshine Coast. A separate staff report has been prepared to address the administrative and legislative process associated with transfer of responsibility for services provided by regional districts.

DISCUSSION*Analysis*

The Sunshine Coast Regional District (SCRD) manages 18 wastewater systems which are all located within the six Electoral Areas (A-F). The authority to regulate the design, installation and operation of these facilities is granted to the Regional District by the *Local Government Act*. Table 1 presents an overview and some relevant details of these systems.

Table 1: Overview of SCRD Wastewater Systems

Wastewater Treatment Facility	Electoral Area	Constructed Date	SCRD assumed responsibility in	Number of parcels serviced
Greaves Road	A	Unknown	1983	6
Woodcreek Park	E	1999	1995	73
Sunnyside	E	1979	1983	11
Jolly Roger	B	1979	1985	32
Secret Cove	B	1981	1986	34
Lee Bay	A	1979	1986	179
Square Bay	B	1970/2018	1990	93
Langdale	F	1981	1990	40
Canoe Road	A	1982/83	1990	10
Merrill Crescent	A	Unknown	1990	14
Curran Road	B	1982/83	1992	70
Roberts Creek Co-Housing	D	2003	2004	31
Lily Lake Village	A	2005	2008	28
Painted Boat	A	2008	2012	34
Sakinaw Ridge	A	2007	2018	19
Pender Landing	A	2008	In Progress	41
YMCA	F	2011	In Progress	Youth Camp
Malibu Club	A	2007	In Progress	Youth Camp

The SCRD is responsible to meet the regulatory requirements under the provincial *Environmental Management Act*, *Public Health Act* or the federal *Fisheries Act* for all wastewater systems listed above.

The various wastewater systems are serving anywhere between 6 and 173 land parcels and are considered to be a small treatment facility for regulatory purposes. All facilities were constructed by developers or community associations before the SCRD assumed responsibility once fully commissioned. The SCRD assumed all facilities within the past 35 years.

The regulatory framework for new community sewer systems has evolved over the past several decades. Any new community sewer is required to comply with SCRD Subdivision Servicing Bylaw 320 as well as the current provincial and federal legislative requirements.

Existing Legislation

Local Government Act

Section 306 of the *Local Government Act* establishes the ability of a board, by bylaw, to “regulate and prohibit the design and installation of drainage and sewerage works provided by persons other than the regional district...”

Environmental Management Act (EMA)

Contains the Municipal Wastewater Regulations which apply to all wastewater systems discharging to water or with a design discharge greater than 22 700 litres of effluent daily.

Municipal Wastewater Regulation under the EMA

Establishes regulations around the design, registration and management of wastewater systems under its purview.

Provides distinction between requirements for privately managed wastewater systems and those managed by local governments. Of note is that privately operated wastewater systems must comply with *Division 4 – Operating Plans* and *Division 5 – Security and Assurance Plans*. These ensure correct operational and financial planning have been completed by private operators.

Public Health Act (PHA)

Contains the Sewerage System Regulations which generally apply to ground discharging wastewater facilities with a design discharge less than 22 700 litres of effluent daily.

Sewerage Systems Regulation under the PHA

Establishes regulations around the design, registration and management of wastewater systems under its purview.

SCRD Bylaw 320

SCRD Bylaw 320: Subdivision Servicing Bylaw (**Attachment A**) was originally adopted in 1987 and has since undergone 16 amendments. The most recent amendment (Bylaw 320.16) was adopted on September 6, 2007 and pertains to the replacement of Section 301: Subsection 3 'Community Sewer Systems' as well as the addition of Schedule C.

The purpose of Bylaw 320 is to regulate and control the subdivision of land within the SCRD. The bylaw prescribes regulations, technical specifications and financial obligations for newly constructed water and wastewater services intended to be owned and operated by the SCRD. Section 301 and Schedules B and C are specifically relevant to the directive above. A process flowchart published in 2009 during the review of the Halfmoon Bay Liquid Waste Management Plan has been provided (**Attachment B**).

Mechanisms within Bylaw 320 Regarding Assumption of Wastewater Service Management

The process of transferring responsibility for operation of wastewater systems can be initiated by the developer of a proposed subdivision, or by the regional district. In both scenarios, Bylaw 320 establishes that the assumption of operation and management of wastewater systems by the SCRD occurs *after* construction is completed and successful operation of the facility has been proven to be achievable.

Bylaw 320 Section 3 (3.2) states '*The Regional District shall assume ownership and operation of a proposed CSS designed to accommodate more than 22,700 litres/day of effluent from residential and non-residential developments, except industrial uses on lands zoned industrial..*'.

The SCRD is also empowered to unilaterally choose to acquire any other existing or newly constructed community sewage system (CSS) that meets the standards outlined within the bylaw.

After an 'Agreement for Transfer of Community Sewer Systems' is signed by both parties a period begins in which the original owner of the CSS is responsible for operation and maintenance to the satisfaction of the SCRD. At the end of this period of demonstrated capability to operate the wastewater facility within the design parameters the SCRD will assume responsibility of the CSS.

The necessary criteria to be satisfied prior to a CSS being assumed by the SCRD is multi-jurisdictional and it begins with subdivision approval processes established by the Ministry of Transportation and Infrastructure and supplemented by the Ministry of Health or Regional Health Authority. Bylaw 320 stipulates that a qualified professional must design the CSS, that the appropriate authorities are engaged, and that steps are taken to verify that both provincial and SCRD procedures/standards are met. A complete list of SCRD specifications can be found in Schedule B of Bylaw 320. Additionally a financial retainer is to be provided to the SCRD by the party transferring the CSS which is then released after successful two years of operation. A flowchart of the process can be found in **Attachment B**.

STRATEGIC PLAN AND RELATED POLICIES

This report aligns with the Boards Strategic Focus Areas of Infrastructure Management and Regional Collaboration and Engagement.

CONCLUSION

The purpose of this report is to facilitate dialogue and provide insight into the factors that influence decisions regarding wastewater management within the SCRD. With respect to the intent of the original Board directive, the key points are:

- The existing Bylaw 320 establishes the standards and specifications for sewerage constructed within the SCRD as well as the process for transferring utility assets to the SCRD once constructed.
- The transfer of operational management of wastewater systems designed for daily flows greater than 22 700 litres would require an amendment of Bylaw 320.

Attachments and Links

[Wastewater Service Review and Associated Asset Management Plans](#) (linked from November 28, 2019 Corporate and Administrative Services Committee Agenda Item #3 278 pages)

Attachment A – SCRD Bylaw 320

Attachment B – SCRD Bylaw 320 Process Flowchart

Reviewed by:			
Manager		CFO	X - T. Perreault
GM		Legislative	X – S. Reid
CAO	X - D. McKinley	Other	

Consolidated September 2007 to incorporate up to 320.16

SUNSHINE COAST REGIONAL DISTRICT

BYLAW NO. 320

SUBDIVISION SERVICING BYLAW

A bylaw to regulate or control the subdivision of
land pursuant to the provisions of
Division (7), Part 29 of the Municipal Act.

The Board of the Sunshine Coast Regional District in open meeting assembled enacts as follows:

100 **Interpretation and Administration**

101 Title

This Bylaw may be cited as the "Sunshine Coast Regional District Subdivision Servicing Bylaw No. 320, 1987".

102 Organization

This bylaw is divided into four parts dealing with the following subjects:

Part 100 - Interpretation and Administration

Part 200 - General Requirements

Part 300 - Servicing

Part 400 - Adoption

Attached to and hereby made an integral part of this bylaw are the following schedules:

Schedule `A' - Servicing Requirements

Schedule `B' - Subdivision Servicing Manual

Schedule `C' – Agreement for Transfer of Community Sewer Systems

103 Application

1. This bylaw shall be applicable to Electoral Areas A, B, D, E, and F of the Sunshine Coast Regional District, as defined in the letters patent.

104 Definitions

In this bylaw:

1. **APPLICANT** means a person who has made application to subdivide land or his duly appointed representative;
2. **APPROVAL** means approval in writing from the authority having jurisdiction;
3. **APPROVING OFFICER** means the approving officer appointed as such pursuant to the Land Title Act;
4. **COMMUNITY SEWER SYSTEM** means a common sewer or system of sewerage or sewage disposal which serves two or more parcels;
5. **COMMUNITY WATER SYSTEM** means a system of water works which serves two or more parcels;
6. **IMPROVEMENT DISTRICT** means an improvement district pursuant to the Water Act or Municipal Act;
7. **LOT OR PARCEL** means a piece of land registered in the Land Titles Office or with the Ministry of Forests & Lands under a separate title from all other lands;
8. **MEDICAL HEALTH OFFICER** means the Medical Health Officer appointed under the Health Act who has jurisdiction over the area in which a subdivision is located;
9. **NATURAL BOUNDARY** of a body of water means the visible high water mark of that body of water, where the presence and action of the water are so common, and so long continued in all ordinary years, as to mark upon the soil of the bed of the body of water a character distinct from that of the banks thereof, in respect to vegetation as well as in respect in the nature of the soil itself;
10. **REGIONAL DISTRICT** means the Sunshine Coast Regional District;
11. **ROAD** means a highway, constructed to the standards of the Ministry of Highways for the passage of motor vehicles, excluding lanes;
12. **SUBDIVISION** means the division of land into two or more parcels, whether by plan, apt descriptive words, or otherwise.

200 **General Requirements**

202 **Examination**

The approving officer shall examine each complete application for subdivision, and shall notify the applicant in writing either that the subdivision is approved, tentatively approved or disapproved.

For the purpose of carrying out his duties, the approving officer may:

1. Require the applicant to provide any additional relevant information, including but not limited to topographic and soil condition data;
2. Conduct inspections and tests in the vicinity of the site of the proposed subdivision;
3. Hear objections to the proposed subdivision from the owners of the neighbouring properties, other public bodies or officials, or utility companies.

203 **Maintenance Agreement**

Upon written notice that construction completion has been certified, the subdivider will enter into an agreement with the Regional District to maintain the said works for a period of one year from the date of certified completion. The subdivider will provide the Regional District with cash or a bond equal to 10% of the value of the works for the duration of the maintenance period, from which the Regional District may deduct the cost of maintaining the works remedying any defects or damages should the subdivider fail to do so.

300 **Servicing Requirements**

Works and service shall be provided in accordance with Schedule `A' of this bylaw and meet the subdivision regulations under the Local Services Act.

301 **Sewage Disposal**

1. **Prohibition of Sewage Ocean Outfalls within the Halfmoon Bay OCP Area and the Roberts Creek OCP Area**

- 1.1 No sewage ocean outfalls shall be constructed for the purpose of disposing of sewage effluent

- (a) within the area identified as the Halfmoon Bay Official Community Plan Area of Electoral Area B – Halfmoon Bay pursuant to “*Halfmoon Bay Official Community Plan Bylaw No. 325, 1989*”; or
- (b) within the area identified as the Roberts Creek Official Community Plan Area of Electoral D – Roberts Creek pursuant to “*Roberts Creek Official Community Plan Bylaw No. 375, 1990*”.

2. Independent Disposal

- 2.1 Where no community sewer system exists, or is proposed, soil and site conditions for on-site sewage disposal systems shall be subject to the approval of the Medical Health Officer or Public Health Inspector as required by the subdivision regulations pursuant to the *Local Services Act* and the sewage disposal regulations pursuant to the *Health Act*.

3. Community Sewer System

- 3.1 Each community sewer system shall be designed and constructed in compliance with the standards of the Regional District, Schedule ‘B’ of this bylaw, and in compliance with the *Environmental Management Act* and *Health Act* and regulations pursuant to both acts.
- 3.2 The Regional District shall assume ownership and operation of proposed community sewage systems designed to accommodate more than 22,700 litres/day of effluent from residential and other non-residential developments, except industrial uses on lands zoned industrial under the Regional District’s current zoning bylaws.
- 3.3 The Regional District reserves the right to acquire any other existing or newly constructed community sewer system under this bylaw that has been designed, constructed and maintained to the standards of the Regional District, and that meet the terms of the agreement set out in Schedule “C.”
- 3.4 Where a community sewer is to be acquired by the Regional District, every community sewer system design shall be submitted to the Regional District for approval prior to the commencement of construction as required by this bylaw.
- 3.5 Where the community sewer system will be constructed after final approval of

a subdivision or issuance of a building permit for a non-single family building, a servicing agreement shall be entered into as set out under Schedule “B” and shall, Notwithstanding Schedule “B,” have a security submitted by the developer that:

- a) is an automatically renewing, irrevocable letter of credit with a Canadian financial institution; and
- b) be based upon a cost estimate for the community sewage system prepared by the registered professional engineer (P.Eng.) of record for the design of the system to the satisfaction of the Regional District, and that includes a 10% contingency, 4% inflation and applicable GST.

3.6 Construction shall be carried out under periodic inspection by Regional District staff and supervision of the registered professional engineer (P. Eng.) of record prior to acceptance of substantial completion of the community sewer system by the Regional District.

3.7 Notwithstanding Schedule “B”, regardless of whether a servicing agreement is entered into under Section 3.5, twenty (20) percent of value of community sewer system as determined under Section 3.5 will be held until the end of a two (2) year maintenance period, commencing at the date of acceptance of substantial completion, and until such time that a written final inspection of the sewer system has been made by professional engineer of record to the satisfaction of the Regional District and the system has been inspected to the satisfaction of the Regional District.

302 Water Supply

1. Community Water Supply

1.1 Each water system shall be constructed and provide water quality in compliance with the Health Act and Ministry Health drinking water standards and to the standards of the Regional District, as set out in Schedule `B' of this Bylaw, and shall be approved by the Regional District prior to construction.

1.2 An extension to a water system shall only be connected to an existing community water system if the water sources used for the combined system are adequate to serve each parcel to be served by the combined system with at least 2,500 litres of water per day year round.

- 1.3 Where a new community water system is not to be connected to an existing system;
- (a) the water source to be used by the system shall be adequate to serve each parcel to be served by the system with at least 2,500 litres of water per day, and
 - (b) when the water source to be used comes under the terms of the Water Act, a licence to divert and use the amount of water required to serve the subdivision shall be obtained by the applicant and be in force at the time of final approval.
- 1.4 All works constructed or installed as part of a community water system shall become the property of the Regional District, or of any Improvement District having the function of water supply to the land being subdivided, as soon as the works have been satisfactorily installed and tested.

400 **Adoption**

READ A FIRST TIME this 25th day of August, 1988.

READ A SECOND TIME this 15th day of December, 1988.

READ A THIRD TIME this 23rd day of February, 1989.

APPROVED BY THE MINISTER OF MUNICIPAL AFFAIRS
this 30th day of May, 1989.

RECONSIDERED AND ADOPTED
this 8th day of June, 1989.

P. Connor, Chairman

L. Jardine, Secretary

SCHEDULE - A
SERVICING REQUIREMENTS

ZONING BYLAW 310 SUBDIVISION DISTRICT	COMMUNITY WATER REQUIRED
A (1000 m ²)	YES
B (1500 m ²)	YES
C (2000 m ²)	YES
D (3500 m ² average and 2800 m ² minimum)	YES
E (5000 m ² average and 4000 m ² minimum)	YES
CD1 (Comprehensive Development One) (360 m ²)	YES
F (10,000m ² and) (8000 m ² min)	NO
G (1.75 ha)	NO
I (4.00 ha)	NO
Z (100 ha)	NO

ZONING BYLAW 337
SUBDIVISION DISTRICT

COMMUNITY WATER REQUIRED

A (640 m ²)	YES
B (1000 m ²)	YES
C (2000 m ²)	YES
D (4000 m ²)	YES
CD1 (Comprehensive Development One) (2,000 m ²)	YES
CD2 (Comprehensive Development Two) (24,000 m ²)	YES
G (10,000m ² and) (8000 m ² min)	NO
G1(10,000 ha)	NO
H (1.75 ha)	NO
I (4.00 ha)	NO
J (2.75 ha)	NO
M (100 ha)	NO

SCHEDULE - B

SUNSHINE COAST REGIONAL DISTRICT

SUBDIVISION SERVICING STANDARDS

(WATER AND SEWER)

SCHEDULE B

OF

"SUNSHINE COAST REGIONAL DISTRICT SUBDIVISION SERVICING BYLAW NO. 320, 1987"

SUNSHINE COAST REGIONAL DISTRICT
P.O. Box 800
1248 Wharf Avenue
Sechelt, B.C.
V0N 3A0

SUNSHINE COAST REGIONAL DISTRICT

SUBDIVISION SERVICING STANDARDS
(WATER AND SEWER)

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SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER AND SEWER)

II

PROCEDURES TO EXTEND
WATER AND/OR SEWER SYSTEMS

1. Preliminary Application for System Extensions

The first step is to submit a Preliminary Application to the Works Superintendent.

The application will be given a reference number which is to appear on all subsequent drawings and correspondence. An examination fee in the amount of ten dollars (\$10.00) will be charged.

The Works Superintendent or his assistant should be consulted prior to making the application. In some cases, a feasibility report by a Professional Engineer will be required in support of the application.

If the Works Superintendent is satisfied that the application conforms to Long Term Regional Plans and Policies, he will grant Preliminary Acceptance of the Application.

2. Estimate of Construction Cost

Preliminary Acceptance will be generally granted after the Works Superintendent has prepared a preliminary estimate of the costs.

This estimate is made to confirm feasibility before any detailed engineering design has been done; the estimate is based on standard unit prices for assumed pipe sizes and depths which may vary considerably in the final design.

A final construction estimate will be prepared by the Works Superintendent after the engineering drawings are complete to determine the amount of the security required by the Regional District to ensure that all services required in the development will be completed.

A minimum \$250.00 is charged for inspection of the work by the Regional District and a minimum \$100.00 is charged for office administration.

The Developer is responsible for calling tenders, awarding contracts for construction, supervision of his contractors, progress payments to his contractors and for ensuring that all Regional requirements are carried out to a satisfactory conclusion within the time agreed.

Alternately, the Developer may request that the Regional District does the work.

The final construction cost estimate by the Regional District is not an offer to do the work. However, should the Developer wish the Regional District to construct the work, he may elect to request a price for such construction from the Regional District and the Regional District may or may not offer to do the work and submit its price for construction on a cost plus basis.

3. Engineering Design

All drawings and design of services shall be in accordance with Regional Standards for Design of Water and Sewer.

4. Submission of Engineering Drawings for Approval

Upon completion of the engineering drawings, two prints of each shall be submitted to the Regional District for approval. The drawings will be checked to ensure that they comply with current by-laws, policies and good engineering practice. If necessary, one copy of the drawings will be returned to the Developer's Engineer for revision. After the suggested revisions have been implemented, another two prints of each of the affected drawings shall be re-submitted, and this process shall be repeated until the drawings are satisfactory.

As soon as the Regional District is satisfied with the drawings, the Developer shall secure the necessary senior government permits.

The Regional District has the right to order additional works if required in the event that unforeseen conditions or circumstances are discovered after the drawings have been approved for construction.

5. Security Deposit

No security deposit is required at present.

6. Water and Sewer Servicing Agreement

Along with the delivery to the Regional District of the Security Deposit, the Developer shall enter into an Agreement with the Regional District, ensuring the completion of the work shown on the approved drawings within an agreed time limit. Should the Developer fail to abide by the terms of the Agreement, the Regional District will exercise its options under the Agreement as secured by the Security Deposit.

7. Legal Surveys

The Developer shall engage a registered British Columbia Land Surveyor to perform all legal surveys only after final approval. It shall be the responsibility of the Developer to ensure that all easements required by the Municipality are registered in the Land Registry Office. Plans of the legal survey shall be done in conformance with standards established by the Engineer.

8. Construction

All construction shall be done in accordance with Regional District Standard Specifications.

Prior to commencement of construction, a site meeting shall be arranged between the Public Works and the Contractor's superintendent in order to clarify the procedures for obtaining approval for each phase of the work.

9. Services

All underground sewer services crossing streets shall be completed before paving, or alternatively double servicing shall be installed to ensure that no cuts are made in new pavement. Water services must be installed or carrier pipes provided for future installation.

10. "As-Built" Drawings

Within ninety (30) days of the completion of the work, the Developer's Engineer shall make "as-built" revisions to the drawings. One full-sized positive transparency of each of the "as-built" drawings shall be delivered to the Regional District to a scale and to details prescribed by the Regional District.

11. One Year Maintenance Performance Bond

After acceptance of the work, the Developer shall be responsible for maintenance for a period of one year. A Letter of Credit or other acceptable security, in the amount of 10% of the value of the work, shall be deposited with the Regional District for the one year period.

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER AND SEWER)

III

WATER AND SEWER

SERVICING AGREEMENT

THIS AGREEMENT made this ____ day of _____ in the year 19 ____ by and between the Sunshine Coast Regional District, herein called the "Corporation", and _____, herein called the "Applicant".

WITNESSETH: That the Corporation and the Applicant, in consideration for the mutual covenants herein and for other good and valuable considerations, undertake and agree as follows:

ARTICLE 1. Upon delivery to the Corporation of a Security Deposit acceptable to the Corporation in the amount of the Corporation's Estimate of the cost of the work to be performed by the Applicant under this Agreement, the Corporation may grant final approval of the Servicing Extensions.

ARTICLE 2. Upon final approval, the Applicant shall:

- (i) provide all necessary materials, labour, supervision and equipment and perform all work shown on the Drawings and fulfill everything as set forth and in strict accordance with the Drawings and Contract Documents for the project entitled:

which have been signed in duplicate by the Corporation and the Applicant and which were prepared by:

- (ii) and commence to actively proceed with the work described in the Agreement within ____ days of the date on which the Corporation signs and dates the plan of Subdivision, and complete all of the said work within a period of ____ calendar months.

The time of completion of the work under the Contract may be extended at the discretion of the Corporation.

Initials: _____

- (iii) obtain and maintain in force during the term of this Agreement, insurance policies forming part of this Agreement. Certified copies of said policies shall be filed with the Corporation prior to commencement of the work.
- (iv) guarantee the work as specified in the General Conditions for a period of one (1) year from the date of Acceptance by the Corporation.
- (v) alternately request that the Corporation do the work at Developers cost plus overhead.

ARTICLE 3. The following is an exact list of the Drawings and Contract Documents referred to in ARTICLE 2 (i) and which are annexed hereto, marked as exhibits respectively and form part of this Agreement:

ARTICLE 4. The Corporation will release partial amounts from the Security Deposit on the percentage basis of the work satisfactorily completed once per month as work progresses.

Upon the expiration of forty (40) days after acceptance of the work by the Corporation and upon delivery by the Applicant to the Corporation of release from all known claims and liens and a statutory declaration, the Corporation may release ninety-five (95) percent of the Security Deposit. The remaining five (5) percent of the Security Deposit will be held until all of the Applicant's obligations under this Agreement have been discharged as specified.

ARTICLE 5. In the event that the Applicant should, in the sole judgement of the Corporation, fail to abide by any of the terms of this Agreement, the Corporation shall have the right to draw upon the Security Deposit at its sole discretion.

ARTICLE 6. All communications in writing between the Corporation and the Applicant shall be deemed to have been received by the addressee if delivered to the individual, or to a member of the firm, or to any officer of the Corporation for whom they are intended, or if sent by mail or by telegram addressed as follows:

Initials: _____

The Corporation at _____

(Address)

The Applicant at _____

(Address)

IN WITNESS WHEREOF the parties herein have hereunto set their respective hands the day and year first written, and where a party hereto is a corporate entity, the corporate seal was affixed in the presence of its duly authorized officers.

SIGNED, SEALED AND DELIVERED by the
Applicant in the presence of:

Witness

Address

Occupation

Signature of Applicant

The Corporation Seal of _____

was hereunto affixed in the presence of:

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER AND SEWER)

IV

GENERAL CONDITIONS OF CONTRACT

FOR CONSTRUCTION OF WATER AND SEWER
IN SUB-DIVISIONS, DEVELOPMENTS, AND
ON MUNICIPAL PROPERTIES

ARTICLE 1 DEFINITION OF TERMS

"THE OWNER"	is the Sunshine Coast Regional District.
"THE CORPORATION"	is the Sunshine Coast Regional District.
"THE CONTRACTOR"	is the "Applicant" named in the Agreement.
"THE ENGINEER"	is the Works Superintendent of the Corporation or his duly appointed representative.
"SUPPLY or PROVIDE"	shall mean supply and pay for or provide and pay for.
"THE WORK"	shall mean the whole of the work, materials, labour and all things required to be done, furnished or performed by the Contractor under this Contract.
"PROJECT SUPERVISOR"	is the person designated by the Applicant to coordinate all aspects of this project and to act as liaison man between the Owner and the Contractor.

ARTICLE 2 INTENT OF CONTRACT

The intent of the Contract is that the Contractor shall provide all necessary materials, equipment, labour and supervision and all else necessary for the proper execution of the work. The Contractor shall do all the work shown on the drawings and described in the specifications and all incidental work necessary to complete the project.

ARTICLE 3 UNFORESEEN CONDITIONS

If at any time after the drawings have been approved for construction, unforeseen conditions or circumstances become known which make it necessary that changes in the design or extra works be done in order to complete the project in a satisfactory manner, the Engineer shall have the right to order such changes or extra work as he deems necessary to complete the work in a satisfactory manner. All costs of such extra work shall be borne by the Contractor.

Initials: _____

ARTICLE 4 SUBCONTRACTS

The Contractor shall not sublet the work or any part thereof without the consent of the Corporation.

Nothing in the Contract Documents shall create any contractual relationship between any subcontractor and the Corporation. The Contractor shall bind every subcontractor by the terms of the Contract Documents. The Contractor is responsible to the Corporation for the acts and omissions of his subcontractors and their employees, to the same extent that he is responsible for the acts and omissions of his own employees.

ARTICLE 5 CONTRACT DOCUMENTS

The following constitutes a complete set of Contract Documents, and in case of any inconsistency between them, the provisions of such documents shall take precedence in the order in which they are listed below:

1. Agreement
2. Special Provisions
3. General Conditions
4. The Corporation's Standard Specifications
5. The Drawings listed in the Agreement
6. The Corporation's Estimate of the Cost of the Work
7. Letter of Credit
8. List of Subcontractors

In case of inconsistency between drawings, large scale drawings shall take precedence over those of smaller scale.

ARTICLE 6 SECURITY DEPOSIT

To ensure the faithful execution and proper fulfillment of this Contract, the Contractor shall provide the Owner with a Security Deposit in the amount of the Corporation's Construction Cost Estimate in the form of an irrevocable letter of clean credit or in cash. The Letter of Credit shall be in conformance with the Corporation's standard form. The expiry date shall be at least one (1) year after the date shown on the Agreement for the completion of the work.

ARTICLE 7 ENGINEER'S STATUS

The Engineer shall be the Owner's representative during the construction period and shall observe the work in progress on behalf of the Owner. He shall have authority to act on behalf of the Owner only to the extent expressly provided in the Contract Documents or otherwise in writing. The Engineer shall have the authority to stop the work whenever such stoppage may be necessary, in his reasonable opinion, to ensure the proper execution of the Contract.

The Engineer is, in the first instance, the interpreter of the Contract and the judge of its performance. The Contractor shall obey, perform and comply with the Engineer's orders or instructions with respect to the work, or concerning the conduct thereof, promptly, efficiently and to the satisfaction of the Engineer. However, should the Contractor hold such orders or instructions to be

at variance with the Contract Documents or to involve changes in work already done, ordered or underway in excess of the Contract, he shall notify the Engineer accordingly in writing within ten (10) days of the receipt of such orders or instructions and before proceeding to carry them out.

ARTICLE 8 INSPECTION OF WORK

The Contractor shall allow the Engineer and/or Owner access and provide adequate facilities for access to any part of the works at all times. If the specifications, Engineer's instructions, laws, ordinances, or any public authority requires any work to be specially tested or approved, the Contractor shall give the Engineer advance notice of his preparedness for such inspection, and if the inspection is by an authority other than the Engineer, of the date fixed for such inspection. The Engineer shall inspect the work promptly and without causing unreasonable delay to the Contractor.

For inspection work carried out during times other than the normal working hours of the Corporation all costs for inspection will be charged to the Contractor. The Contractor shall give the Engineer at least twenty-four (24) hours notice that work will be carried out at times other than normal working hours.

On request by the Engineer, the Contractor shall open for inspection any part of the work that has been covered up. If the Contractor refuses to comply with such request, the Owner may employ other persons to uncover the work. If the work is found to be in accordance with the Contract requirements, then the cost of uncovering and recovering the work shall be borne by the Owner. If any of the work was covered by the Contractor in contravention of the Engineer's instructions, or if the uncovered work is found not to be in accordance with Contract requirements, then the cost of uncovering and recovering the work shall be charged to the Contractor.

The acceptance, or the lack of comment on the part of the Engineer, of methods of construction employed by the Contractor shall not relieve the Contractor of his responsibility for any errors therein, and shall not be regarded as an acceptance for the work done by the Contractor.

ARTICLE 9 SUPERVISION AND LABOUR

The Contractor shall designate a Project Supervisor to receive and direct communication between the Owner and the Applicant, servants and agents, etc. and will ensure that the project is successfully completed within the specified time limit. The Project Supervisor shall ensure that each phase of the work has been adequately inspected by informing the Engineer twenty-four (24) hours in advance when inspection is required.

The Contractor shall keep on the work at all times during its progress a competent superintendent who is acceptable to the Engineer. The superintendent shall represent the Contractor in his absence and directions given to him shall be held to be given to the Contractor. The superintendent shall give efficient supervision to the work until its completion.

When competent personnel are available locally they shall, whenever possible, be employed by the Contractor.

The Contractor shall comply with the requirements of the Fair Wages and Hours of Labour Act of Canada, the Workmen's Compensation Act of The Province of British Columbia, and all other Federal and Provincial legislation regarding wages and labour regulations.

ARTICLE 10 LANDS AND EASEMENTS

The Contractor shall provide the lands upon which the work is to be performed. Where work is to be performed on lands owned by others, the Contractor shall obtain such easements or rights-of-way as are required by the Corporation. Easements shall be obtained and registered by the Contractor in the name of the Corporation.

It shall be the Contractor's responsibility to ascertain the boundaries of all lands and easements on which the work is to be performed. Any lands, other than those upon which the work is to be performed which may be required for temporary facilities, storage or access, shall be provided by the Contractor.

The Contractor shall not enter upon any lands owned by others without first obtaining written permission from the owners of such lands. The Contractor shall not enter upon lands owned by others on which the Corporation has easements or rights-of-way were granted. The Contractor shall abide by any special conditions on which easements or rights-of-entry have been granted to the Corporation.

The issuance of a Certificate of Acceptance by the Engineer may be withheld until the Contractor has obtained signed releases from the owner of all private lands entered upon by the Contractor for the purpose of fulfilling this contract, stating that they have no unsettled claims against the Contractor as a result of his entering upon such private lands if such entry became necessary to complete the work.

ARTICLE 11 RESTORATION OF LANDS OWNED BY OTHERS

Upon completion of the work, all lands owned by others which have been disturbed by the Contractor shall be restored to at least their original condition, and nothing shown or anything not shown on the drawings shall relieve the Contractor of this responsibility.

With the exception of replanting, returfing or reseeding, which may be deferred until favourable weather, the Contractor shall restore landscaping and other improvements to the satisfaction of the Engineer within a period of two weeks after completion of the backfilling. If the restoration is not completed within this time, the Corporation reserves the right to carry out and complete the restoration and to charge the cost of such work to the Contractor.

ARTICLE 12 CONNECTION TO EXISTING SERVICES

The Contractor shall not make connections to existing water or sewer mains. This work will be carried out by Corporation crews at cost to the

Contractor.

ARTICLE 13 LOCATION AND PROTECTION OF EXISTING SERVICES

The existing services shown on the drawings are not guaranteed to be accurate or complete. It shall be the responsibility of the Contractor to find and locate all existing services such as water, gas, electricity, telephone, sewers, drains and culverts, to preserve and protect them from damage during construction, and to arrange and pay for their relocation if necessary. All costs of finding, relocating or repairing existing services shall be borne by the Contractor. In addition, where a delay in the work has been occasioned by the necessity to find, relocate or repair existing services, the cost shall be borne by the Contractor.

ARTICLE 14 REJECTED WORK AND MATERIALS

All materials which do not conform to the requirements of the Contract Documents or are not approved by the Engineer or are in any way unsatisfactory or unsuited to the purpose for which they are intended, will be rejected. Any defective work, whether the result of poor workmanship or the use of defective materials, shall be removed within ten (10) days after written notice is given by the Engineer, and the work shall be re-executed by the Contractor. The fact that the Engineer may have previously overlooked such defective work shall not constitute an acceptance. The removal of rejected work and re-execution thereof shall be at the expense of the Contractor, and he shall pay the cost of replacing the work of others which may be damaged or destroyed by the removal of rejected work and subsequent replacement with acceptable work.

If, in the opinion of the Engineer, it is not expedient to re-execute the defective work, the Owner may charge the Contractor the difference in value between the work done and that called for by the Contract, the amount of such difference to be determined by the Engineer.

ARTICLE 15 OWNER'S RIGHT TO CORRECT DEFICIENCIES

Upon failure of the Contractor to perform the work in accordance with the Contract Documents, and after ten (10) day's written notice to the Contractor, or without notice if any emergency or danger to the work or public exists, correct such deficiencies. The cost of work performed by the Owner in correcting deficiencies shall be paid by the Contractor.

ARTICLE 16 PROGRESS ESTIMATES

Progress estimates of the quantity of work done under this Contract will be made by the Engineer at the end of each calendar month, and payments thereon shall be released from the Security Deposit by the Corporation to the Contractor on or about the 15th day of the next ensuing month. The amount of each such payments shall be determined by the Engineer as being the amount provided in his estimate for the completion of such work as is shown in the progress estimates, less ten (10) percent thereof and less all previous payment on account thereof. The Corporation shall retain the said ten (10) percent of the amount of the said monthly payments as additional security for the fulfillment of this Contract.

ARTICLE 17 ACCEPTANCE

Upon satisfactory completion of the work, the Engineer will issue a Certificate of Acceptance. Acceptance of the work shall mean acceptance for the purpose of releasing eighty (80) percent of the original amount of the Security Deposit but not for the purpose of extinguishing any covenant or agreement on the part of the Contractor to be performed or fulfilled at the time of such acceptance, all of which covenants and agreements shall continue to be binding on the Contractor until they have been fulfilled.

Provided there are no known liens or unsettled claims against the Contractor on account of the work done under the Contract, and upon delivery by the Contractor to the Corporation of a Statutory Declaration releasing the Corporation from all claims whatsoever arising out of the Contract, and certifying that all persons who have worked on or have provided materials or services for fulfillment of the Contract have been paid in full, the Corporation may release ninety-five (95) percent of the Security Deposit to the Contractor on the expiration of forty (40) days after the date of acceptance as shown on the Engineer's Certificate of Acceptance.

The remaining five (5) percent of the Security Deposit will be held by the Corporation until the end of the maintenance period.

ARTICLE 18 MAINTENANCE PERIOD AND GUARANTEE

The maintenance period shall be the one year period next ensuing from the date of acceptance shown on the Engineer's Certificate of Acceptance.

The Contractor shall guarantee the stability and sufficiency of the materials and workmanship supplied and the whole of the work performed and shall be responsible for and shall make good all defects, imperfections and settlements which become apparent during the maintenance period.

Should the Contractor fail to make good any defects after being given at least seven (7) days notice in writing during the maintenance period, the Owner shall be entitled to make alternative arrangements for the execution of the repairs and to recover the costs from the Contractor.

Should repairs be required in an emergency, the Owner shall be entitled to arrange for the repairs to be done immediately and to recover the costs from the Contractor.

ARTICLE 19 CORPORATION'S STANDARDS

Unless specifically shown to the contrary, all construction under this Contract shall be in accordance with the Corporation's Standard Specifications in effect on the date of this Agreement.

ARTICLE 20 INSURANCE

The Contractor shall, at his own expense, provide the following insurance. Each policy shall contain a clause stating that: This policy will not be cancelled or materially changed without the Insured giving at least fifteen (15) days notice

by registered mail to the Owner. Certified copies of these policies shall be filed by the Contractor with the Owner prior to commencement of the work. Wherever the word Owner or Engineer is to appear in these policies, the legal name shall be inserted.

Builder's Risk Course of Construction Insurance

The Contractor shall at all times during the currency of this Agreement and for a period not less than twelve (12) months after the date of acceptance by the Corporation keep all buildings, structures, works, equipment (other than Contractor's mobile equipment) and supplies, including materials which will form part of such building works or structure, which is the subject matter of this Contract, insured in the names of the Owner and the Contractor for an amount not less than the Contract price against the following perils:

"All risks of direct physical loss or damage from any cause whatsoever, including flood and earthquake, and subject to a maximum deductible of three (3) percent of the Contract price."

Such insurance shall be with Insurers and on forms acceptable to the Owner and shall contain the following clause:

"It is agreed that the right to subrogation against the Owner and the Engineer or any of their parent, subsidiary, affiliated, or associated companies or corporations is hereby waived."

The following exclusions shall be deemed permissible (additional or modified exclusions subject to permission of the Owner):

- (a) Any loss of use of occupancy caused.
- (b) Penalties for non-completion or delay in completion of Contract or non-compliance with Contract conditions.
- (c) Cost of making good faulty workmanship, construction, or design, but this exclusion shall not apply to damage resulting from such default workmanship, construction or design.
- (d) Wear, tear, normal upkeep and normal making good.
- (e) Loss, damage or liability occasioned by, happening through or in consequence of war, invasion, hostilities, acts of foreign enemies, civil war, rebellion, insurrection, military or usurped power or martial law or confiscation by order of any government or public authority.
- (f) Any weapon of war employing atomic fission or radioactive force whether in time of peace or war.
- (g) Claims or liability arising directly or indirectly from nuclear fission, nuclear fusion or radioactive contamination.
- (h) Loss or damage caused by frost or freezing unless resulting from damage occasioned by fire and/or lightning and/or windstorm and/or

hail and/or riot attending a strike and/or civil comotion and/or vehicles and/or smoke.

- (i) Loss due to disappearance or revealed by inventory shortage alone.
- (j) Mechanical breakdown, but this exclusion shall not be deemed to exclude loss or damage arising as a consequence of mechanical breakdown.
- (k) Infidelity of the Assured's employees.
- (l) Loss or damage to material and/or equipment while in the course of ocean marine shipment, but this exclusion shall not apply to shipments by regular coastwise vessels, regular ferry lines, or railway car transfer barges.
- (m) Automobiles or Contractor's equipment of every description.

Liability Insurance

The Contractor shall buy and keep in force from the commencement until twelve (12) months after the date of acceptance of the work, Personal Injury and Property Damage Liability Insurance. Such insurance shall be in the name of the Contractor and the Owner and shall include a Cross Liability of Severability of Interests clause. Such insurance shall be on a form and with an Insurer acceptable to the Owner. Both Bodily Injury and Property Damage sections are to provide coverage on an "Occurance Basis".

Exclusions pertaining to the following operations are to be deleted if such operations are to be performed by the Contractor or anyone on his behalf:

- (a) Blasting or use of explosives.
- (b) Pile driving.
- (c) Excavation.
- (d) Underpinning, shoring or removal or rebuilding of support.
- (e) Demolition.

Such insurance shall indemnify the Contractor for claims arising out of all premises, operations, subcontracted operations, elevators (if any), property damage assumed by the Contractor under any contract or agreement (including this Contract).

Such insurance shall be for the following minimum limits:

Bodily Injury and Property Damage - \$1,000,000 Inclusive.

Automobile Insurance

The Contractor shall buy and keep in force until all conditions of the Contract have been fully complied with, a Standard Automobile Policy covering all licensed vehicles owned by him, registered in his name or leased to him. Such insurance shall include Liability Insurance for the following minimum limits:

Bodily Injury and Property Damage - \$1,000,000 Inclusive.

Non-Owned Automobile Insurance

The Contractor shall buy and keep in force until all conditions of the Contract have been fully complied with, a Standard Non-Owned Automobile Insurance Policy including Standard Endorsement S.E.F. No. 96 Contractual Liability. Such insurance shall be for the following limits:

Bodily Injury and Property Damage - \$1,000,000 Inclusive.

Contractor's Equipment Insurance

Notwithstanding anything contained elsewhere herein, it is understood and agreed that the Owner and/or Engineer shall not be liable for any loss or damage to Contractor's equipment to be used on this project shall contain the following clause:

"It is agreed that the right to subrogation against the Owner and the Engineer or any of their parent, subsidiary, affiliated or associated companies or corporations is hereby waived."

ARTICLE 21 REPLACEMENT OF LEGAL SURVEY MARKERS

Upon completion of the work and before acceptance, the Contractor will provide, at his own expense, for the replacement by a B.C. Land Surveyor, of all legal survey markers which have been disturbed, destroyed, buried or otherwise moved during the course of construction.

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER & SEWER)

LETTER OF CREDIT

FOR CONSTRUCTION WORKS IN SUB-DIVISIONS, DEVELOPMENTS,
AND ON MUNICIPAL PROPERTIES

Name of Bank: _____
Branch: _____
Address: _____
Date: _____

We hereby authorize you to draw on (Bank) _____
for the account of (Applicant) _____ available by drafts
at sight for the construction and completion of (Title & Description of Work)

In accordance with the Agreement dated _____ between
the Sunshine Coast Regional District and _____.

This irrevocable Letter of Credit is subject to the following conditions:

1. Drafts are to be made in writing by the Sunshine Coast Regional District.
2. The Bank will not inquire as to whether or not the Corporation has a right to make demands on the Letter of Credit.
3. The Letter of Credit is irrevocable until released in writing by the Corporation of the Sunshine Coast Regional District or until _____ whichever occurs first.

We (Bank) _____ hereby agree with drawers, endorsers and bona fide holders of the bills drawn in compliance with the terms of this credit that the bills will be duly honoured upon presentation at the drawees bank.

Yours truly

Accountant

Manager

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER & SEWER)

V

STANDARDS FOR DESIGN
OF WATER AND/OR SEWER
SERVICES IN SUBDIVISIONS

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SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER & SEWER)

V

STANDARDS FOR DESIGN
OF
WATER AND/OR SEWER
SERVICES IN SUBDIVISIONS

1. DEFINITIONS

Throughout this document, the following words and terms shall have the meaning indicated below unless the context plainly indicates otherwise:

- a) "The Corporation" means the Sunshine Coast Regional District.
- b) "The Engineer" is the Works Superintendent of the Corporation or his duly appointed representative.
- c) "These Standards" means the Sunshine Coast Regional District Standards for Design of Water and Sewer Services in Subdivisions.
- d) "Approved" means approved by the Engineer.
- e) "The Developer" means the owner of the land to be subdivided or his agent.
- f) "Contract Drawings" means the detailed engineering drawings for a particular subdivision.

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER AND SEWER)

2. GENERAL REQUIREMENTS

2.01 Design and Construction

- a) Design shall be done by a professional engineer registered in the Province of British Columbia.
- b) The design shall be in accordance with these Standards.
- c) A preliminary plan shall have been submitted to the Corporation before starting detailed design.
- d) The Developer's Engineer shall discuss the design with the Superintendent before starting his design.
- e) Drawings shall be submitted to and approved by the Corporation before construction is started.
- f) Construction shall be in accordance with the Standards for Construction.

2.02 Sanitary Sewers

Except where the subdivision has previously been approved for septic tank installations by the Corporation and the District Medical Health Officer, all subdivisions shall be provided with a complete sanitary sewage collection system including service connections to each lot.

2.03 Waterworks

Water supply shall be provided in all subdivisions with 150 mm D.I. minimum sized watermains, 19 mm minimum service connections to each lot, and standard 150 mm fire hydrants spaced not more than 150 metres apart.

Water services are not required until connection is required and the connection fee paid, except as noted in Section II - 10 for the crossings of roads.

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER AND SEWER)

3. CONTRACT DRAWINGS

3.01 General Requirements

All drawings shall be sized to facilitate filing. The Corporation will supply the required number of blank drawing sheets with the Corporation's standard title blocks to the Developer's engineer upon request for a nominal charge.

The Corporation's subdivision reference number shall be shown on the title block of all contract drawings.

The drawings shall be neat and legible and they shall clearly describe the work in sufficient detail.

Lettering on drawings must conform to American Standards Association (ASA 214-1-1946) with dimensions, etc., to minimum size equivalent of 80 CL Leroy and street names to minimum size equivalent of 200 CL Leroy.

Standard drafting procedures are to be used for line density, arrow heads, radio, dimensions, etc.

Provisions are to be made on all drawings for insertion of District's numbering system with a lettering size 350 CL Leroy.

All elevations shown on drawings shall be based on Geodetic datum.

A complete set of contract drawings shall consist of a general plan, key plan, plan and profile of roads and services, and additional plans showing any special details.

Standard details such as manholes, hydrants, etc., are shown and described in the Corporation's Standard Construction Specifications and these need not be shown in detail on the contract drawings. Standard symbols for the various facilities as attached to these Standards shall be used on all drawings.

The General Plan of the whole subdivision shall be to a scale not less than 1:1000. All mains shall be indicated on the General Plan. More than one drawing may be required to cover the area of the subdivision.

A key plan to a smaller scale (1:5000 is often used), showing the location of the subdivision in relation to major streets and trunk sewers, shall be provided in relation to major streets and trunk sewers, shall be provided for the benefit of the Provincial Ministry of the Environment. Normally, the key plan will drawn on one corner of the General Plan drawing.

Gas mains shall be shown on the General Plan.

In general, Plan and Profile drawings shall be to the scale:

Horizontal	1:500
Vertical	1:50

3.02 Sanitary Sewers

The plan shall show centre line of the sewer together with pipe size, manholes, service connections in relation to street, easement and adjacent property lines. The sewer shall be located by dimensions from adjacent property lines. Dimensions of easements and invert elevations of service connections shall be shown on the plan. Elevations of the existing ground 15 M back from street line, at 15 M intervals along the sewer line, shall be shown on the plan.

The profile of existing ground on centre line, the finished ground on centre line, and the invert of the proposed sewer shall be shown. The invert elevation of each pipe entering and leaving each manhole shall be written on the profile together with the distance between manholes and the percent slope of the pipe between manholes.

3.03 Waterworks

The plan shall show pipe centre line, pipe size and type, service connections, hydrants, valves, fittings, and all related appurtenances in relation to street, easement and adjacent property lines. The profile shall show the existing grade, the finished grade and the invert of the pipe. Except where the pipe is to be laid at a constant grade over a longer distance, the invert elevation shall be shown on the profile at 15 M intervals.

3.04 "As-Built" Drawings

All service connections shall be accurately shown on the "as-built" drawings. All revisions made during construction shall be made on the "as-built" drawings.

Upon completion of the work, a set of full sized positive transparency drawings shall be delivered to the Corporation.

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER AND SEWER)

4. DESIGN PRINCIPLES

4.01 Sanitary Sewers

(a) General

Sanitary sewers shall be designed in accordance with the requirements of the Waste Management Branch of the Government of British Columbia. These include Recommended Standards for Sewage Works more commonly referred to as "The Ten Standards" and published by:

The Health Education Service
P.O. Box 7283
Albany, N.Y. 12224

(b) Design Flow

The design flow in sanitary sewers for new subdivisions shall be calculated on the basis of the following criteria:

Average daily flow	270	lpcpd
Infiltration allowance	2270	lpcpd

The ratio $\frac{\text{Peak Flow}}{\text{Average Flow}}$, known as the Peak Factor, shall be taken from Drawing No. 1.

The Peak Factor shall be applied to the sanitary contribution only and not to the infiltration allowance.

(c) Pipe Sizes

Minimum pipe sizes shall be:

Mains	200 mm
Service Connections	100 mm

The pipes shall be designed, using the Manning formula with roughness coefficient $n = .013$, to flow full (or less than full) at the design flow with a velocity not less than 0.76 M per second.

(d) Depth of Mains

Mains shall be designed to connect all possible basements on the assumption that the service pipe leaves the building at the closest point to the sewer at a crown elevation 0.46 M below the basement floor level and runs at a slope of not less than 2.0% to connect crown to crown to the sanitary sewer main.

Minimum cover for sanitary sewers shall be 1.5 M under roadways and 1 M elsewhere.

(e) Sanitary Sewer Manholes

Manholes shall be spaced not more than 122.0 M apart.

The standard manhole riser shall be 1.07 M inside diameter.

Outside drop connections shall be installed wherever the drop exceeds 0.61 M.

(f) Service Connections

Four inch sanitary sewer services shall be installed to a point 6.0 M from the downstream corner on the side of all lots abutting the main.

(g) Curved Sewers

The radius of curvature of curved sewers shall not be less than 61.0 M. Manholes shall be spaced at 91.4 M maximum on curved sewers.

4.02 Waterworks

(a) Design Pressure

Generally, water systems shall be designed for pressures in the range 205 - 1035 kPa.

Water systems shall also be checked to ensure that a flow of not less than 3637 lpm is available at any hydrant at a pressure not less than 205 kPa coincident with a general demand throughout the system of maximum design day.

Fire protection shall be provided to obtain minimum fire flows of 3637 lpm for a one hour duration.

(b) Pipe Size

Minimum pipe sizes shall be:

Mains	150 mm
Services	19 mm

*(except in dead end situations where the main cannot be extended when 100 mm not exceeding a length of 152.4 M may be allowed.)

(c) Fire Hydrants

Fire hydrants shall be located within 76.2 M of all possible building sites.

(d) Gate Valves

Gate valves shall be located at all junctions of mains as required by the Engineer. Generally at least two gate valves will be required at TEE junctions and at least three will be required at CROSS junctions.

For continuous mains, gate valves will be required every 304.8 M.

(e) Air Valves

Air release valves shall be provided at all summit points on mains.

(f) Blowoffs

Blowoffs shall be provided at all dead ends.

(g) Cover

Minimum cover over the crown of ductile iron watermain shall be 1.0 M.

(g) Slope

Minimum slope of watermain shall be 0.1%.

(i) Clearance

Minimum vertical clearance between watermain and sanitary sewers shall be 300 mm with the watermain on top. Minimum horizontal separation between watermain and sanitary sewer shall be 3.0 M.

Minimum clearance with all other pipe shall be 150 mm.

If for any reason the watermain must pass underneath a sanitary sewer, the sanitary sewer shall be concrete encased.

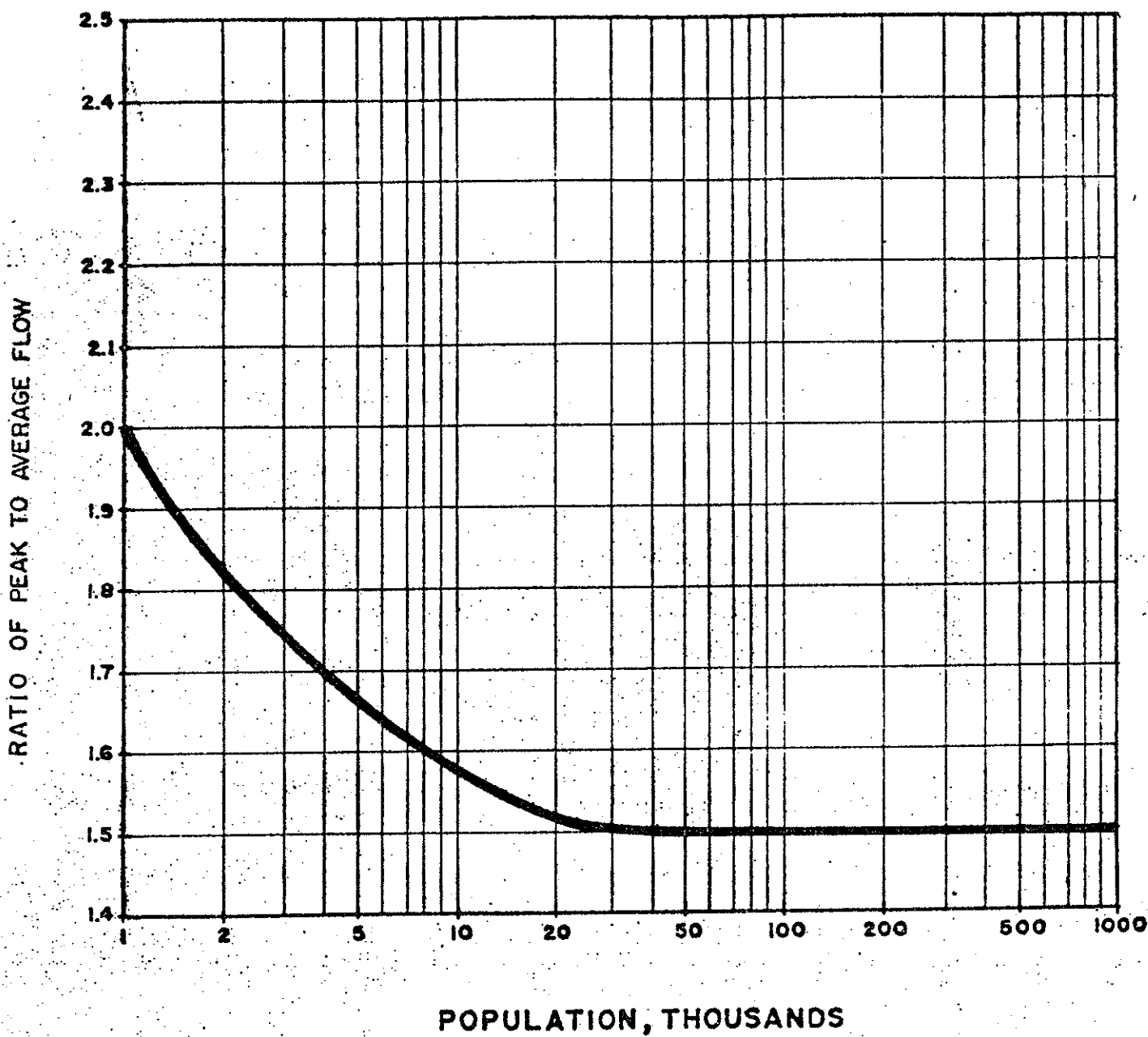
(j) Service Connections

Minimum 19 mm shall be provided by owner at time of building permit.

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER AND SEWER)

5. STANDARD DESIGNS DRAWINGS

<u>Description</u>	<u>Drawing No.</u>
Peaking Factors for Sanitary Sewer Flow	G-1



No.	DATE	REVISIONS	DWG. - G - 1
PEAKING FACTORS FOR SANITARY SEWER FLOW			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER & SEWER)

VI

STANDARD SPECIFICATIONS FOR CONSTRUCTION
OF
WATERWORKS FACILITIES

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SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER & SEWER)

VI

STANDARD SPECIFICATIONS FOR
THE CONSTRUCTION OF WATERWORKS FACILITIES

1. GENERAL

1.01 Definitions

In these Standard Specifications the following words and terms have the meaning indicated below, unless the context plainly indicates different meanings:

- (a) "These Standards" means the Sunshine Coast Regional District Standard Specifications for Construction of Waterworks Facilities.
- (b) "The Corporation" means the Sunshine Coast Regional District.
- (c) "The Engineer" means the Works Superintendent or his representative.
- (d) "AWWA" means the American Water Works Association.
- (e) "Approved Equal" shall mean a substitute brand or article which may be installed in place of the one named where such substitute has been approved in writing by the Engineer.

1.02 Scope and Use of These Standards

These Standards shall apply to all waterworks installations constructed by or for the Corporation.

The phrase "in accordance with S.C.R.D. Standards" on a waterworks plan or specifications shall have the effect of incorporating all of the provisions of these Standards.

1.03 Revisions to These Standards

Changes to these Standards will be made from time to time as conditions and improvements warrant. The most up to date issue of these Standards shall supersede all previous issues. Contracts in progress shall be completed in accordance with the Standards in effect at the time the work was started.

1.04 List of Standard Drawings

The attached list of Standard Drawings, dated the same as these Standards, is hereby incorporated into and made a part of these Standards.

1.05 AWWA Standards

All details not specifically covered in these Standards shall be in accordance with the appropriate AWWA Standards as directed by the Engineer.

1.06 Connections to Existing Mains

Connections to existing mains will be made by the Corporation and charged to the Contractor.

Arrangements for interruptions to existing services shall be approved by the Engineer and all property owners affected shall be notified 24 hours before the proposed service interruption.

In built up areas as directed by the Engineer, it may be necessary to provide temporary service while the existing service is interrupted. Provision of such temporary water service shall be the sole responsibility of the Contractor.

All existing pipe and appurtenances removed and not reinstalled shall be delivered to the Corporation's Works Yard or as directed by the Engineer.

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER AND SEWER)

2. MATERIALS

2.01 General Requirements

All materials and equipment incorporated into work covered by these Standards shall conform to these Standards and to the latest edition of the pertinent AWWA Standard Specifications for the material or equipment. All material shall be new and of the best quality available. Alternative materials shall be covered by up to date specifications of the AWWA. All material must be approved by the Provincial Department of Health for use in public water supply systems.

2.02 Handling

Tools, trucks and other equipment as well as methods of handling and hauling the material shall be such that pipes and other materials will not be dropped or damaged. In no case shall materials be allowed to drop, roll freely, or bump against other materials or objects of any kind. The use of hooks on pipe ends will not be permitted, and special care shall be exercised to prevent damage to machined ends. If pipes or other materials are damaged, they shall be replaced by the Contractor at his own expense. The interior of pipe, valves and fittings shall be kept clean.

2.03 Pipe

Pipe in size 150 mm and larger shall be ductile iron (ductile). Alternatively, Sclairpipe with the approval from S.C.R.D. may be used.

Ductile Iron Pipe shall conform to AWWA Standard C150 with the following particular requirements:

- (a) Class - The pipe wall thickness shall be designed for each application in accordance with AWWA H3.
- (b) Standard Length - The standard length of pipe shall be 5.5 M.
- (c) Lining - Ductile iron pipe shall be cement-mortar lined in accordance with AWWA Standard C104.
- (d) Pipe Joints - Pipe joints shall be a rubber gasket type conforming to AWWA C111, such as Bell-tite, Tyton or approved equal.
- (e) Cast Iron Fitting Hubs - Hub connections shall be Bell-tite, Tyton, Ter-Mech or approved equal.

2.04 Main Line Valves

Line valves from 100 mm to 300 mm sizes shall be Terminal City or approved equivalent gate valves conforming to AWWA Standard C500. Valves

shall be iron-body, bronze-mounted, solid wedge or double-disc gate, non-rising stem with flanged or hubbed ends to suit. Flanges shall have Class 125 standard drilling. Valve stems shall be fitted with a standard AWWA nut and they shall turn clockwise to close. Line valves in sizes 14 inch and larger shall be rubber seated butterfly valves conforming to AWWA C504.

All valves shall have the manufacturer's name and catalogue number molded as an integral part of the valve body.

2.05 Cast Iron Fittings

Cast iron fittings such as bends, tees, crosses, adaptors, end caps, etc., shall conform to AWWA Standard C110. Ends of fittings shall be flanged or hubbed to suit. Flanges shall be standard Class 125 cast iron flanges.

2.06 Fire Hydrants

All hydrants shall be sliding gate type Terminal City Ironworks No. 20P. Hydrants shall be of the post type with 112 mm pumper outlet locked and leaded or screwed in place. Each outlet shall be safeguarded against blowing out, turning or backing out.

Hose and pumper outlet threads shall be manufactured to the B.C. Fire Hose Thread Specifications except in west Howe Sound Fire Improvement District where threads are to suit.

All working parts shall be arranged so that they may be removed without disturbing the barrel or base of the hydrant without excavation.

The hydrant shall be so designed that its top section may, without excavation, be rotated 45, 90 or 135 degrees to the right or left or 180 degrees from the inlet pipe, if desired, and bolted or locked in place without decreasing its strength or causing it to leak when under pressure. All stems shall open counter-clockwise, as viewed from the top.

All hydrants shall be subject to a hydrostatic pressure test of 2,070 kilopascals certified by the manufacturer. The main operating screw shall be stainless steel.

All hydrants shall be painted red prior to acceptance by the Corporation.

2.07 Valve Boxes

Valve boxes shall be telescopic Robar No. 37-72, R-C Nelson Valve boxes.

2.08 Service Connections

Service connection pipe up to 25 mm diameter shall be Type K soft copper tube conforming to ASTM specification B88.

All bushings, reducers, unions and nipples shall be standard brass.

2.09 Air Valves

Air Valves shall be Terminal City Ironworks double acting air valves or approved equal.

2.10 Pipe Bedding Material

The material immediately under the pipe and on each side of the pipe up to the springline is defined as pipe bedding material.

Sand may be used for pipe bedding in dry trenches where the sand can be successfully compacted.

In wet trenches pipe bedding material shall be a well graded mixture of gravel or crushed stone and sand 100% passing a 19 mm screen.

2.11 Select Backfill

The material placed on each side of the pipe and above the pipe to a level of 300 mm above the top of the pipe shall be select backfill.

For ductile iron pipe, select backfill may consist of trench excavated material free from material and particles larger than 75 mm.

2.12 Nuts and Bolts

All nuts and bolts for flanged or mechanical joints shall be cadmium plated to resist corrosion. All bolts shall be correctly sized and otherwise be in accordance with AWWA Specifications.

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER AND SEWER)

3. INSTALLATION

3.01 General Requirements

All work shall be installed to the lines and grades shown on the drawings using the materials designated on the drawings and in these Standards.

Unless specifically directed otherwise by the Engineer, all material shall be handled and installed in accordance with the manufacturer's instructions.

3.02 Preparation for Excavation

(a) Cutting of Pavement

Where excavation is required through existing pavement, it shall be cut along neat straight lines with a cutting tool and care shall be taken to confine the width of pavement disturbed to a minimum.

(b) Clearing

Where watermain are to be installed through uncleared land, a strip shall be cleared of sufficient width to permit proper excavation of the trench and to accommodate the excavated material during construction. Stumps which lie within 3.0 M of a vertical plane passing through the centre line of pipe shall be completely removed. Stumps outside this area shall be cut off within one diameter of ground level. All brush, stumps, roots, etc., shall be disposed of by burning or removal to an approved disposal area. Trench excavation shall not be started until the Engineer has approved the clearing.

(c) Removal of Topsoil

Topsoil shall be kept separate from other excavated material and preserved for later surface restoration.

3.03 Excavation

Trenches shall be excavated to the precise line and grades shown on the drawings. Control markers shall be set out in the field at a maximum of 15.0 M apart along pipe lines.

Care shall be taken to avoid disturbing or softening the trench bottom below the required grade and any such disturbed, softened or loosened material shall be removed and replaced with bedding material thoroughly compacted.

Roads and entrances to properties shall not be blocked by trench spoil unless permission has been obtained to close or place material on such roads or entrances.

Where the use of excavating machines would cause damage to trees, buildings or existing structures, excavation shall be done by hand.

For ductile iron, trenches shall be excavated to at least 100 mm below the invert elevations shown on the drawings.

In unstable soil conditions, trenches shall be excavated to a greater than normal depth as directed by the Engineer and backfilled with approved granular material.

Trenches shall be excavated to provide a minimum clearance of 150 mm on each side of the pipe at springline and a maximum width of 375 mm on each side of the pipe at springline.

3.04 Timbering

Trench timbering shall be installed where required in accordance with the regulations of the Workmen's Compensation Act. All timbering shall be removed before completing the backfilling but not before the pipes have been sufficiently covered to protect them.

3.05 Drainage of Excavation

Trenches shall be kept free of water during pipe laying and backfilling by pumping or other means. Water shall be discharged from the excavation in such a manner as not to cause a nuisance.

3.06 Rock Excavation

Where rock is encountered in trenches, it shall be removed to a minimum clearance of 150 mm around the outside of pipes.

3.07 Pipe Laying and Bedding

(a) General

Pipes and accessories shall be inspected for defects before lowering into the trench. Pipes shall be cleaned inside before laying and any foreign material that may enter the pipe during laying shall be removed. Open ends of pipe lines shall be plugged when pipe joining is not in progress. Proper tools and equipment shall be provided for handling the joining of pipes and accessories. All pipes and accessories shall be carefully lowered into the trench using ropes or crane in such a manner as to prevent damage to pipe and fittings. No material shall be dropped or dumped into the trench.

Wood blocking shall not be used for setting pipes to grade.

(b) Ductile Iron Pipe

Two mounds of bedding material shall be placed and tamped in the trench bottom 1.06 M from each end of the pipe to be laid. The pipe shall then be laid on the mounds and adjusted to true line and grade. The pipe shall then be moved back and joined to the previously laid pipe. Any high or low spots in the trench

bottom, other than the two mounds, shall then be levelled to maintain an even clearance under the remainder of the pipe and under the bells. Bedding material shall be worked underneath the pipe with hand tampers taking care not to disturb the position of the pipe. The remainder of the pipe bedding material shall then be placed uniformly on both sides of the pipe in 100 mm layers and compacted firmly to provide uniform support along the full length of the pipe.

3.08 Pipe Joining

Pipes shall be joined together in strict accordance with the pipe manufacturer's instructions. Particular care shall be taken to remove any foreign material from the gasket and pipe ends before joining.

3.09 Fire Hydrants

Hydrants shall be installed in accordance with the Standard Drawings. Before hydrants are installed, drain valves shall be carefully examined and put in working order and the hydrants shall be so installed that the drain valves cannot become plugged or damaged.

3.10 Backfilling

After the pipe has been laid and bedded up to springline, select backfill shall be deposited by hand to a level 300 mm above the top of the pipe. Backfill shall be placed in 150 mm layers and compacted on each side of the pipe but not compacted in the zone immediately on top of the pipe. Succeeding layers of backfill may contain coarser material but shall be free from organic or other material which may prevent proper consolidation and cause subsequent settlement of the backfill. Backfill pushed into the trench by bulldozer must be rolled down a slope, not pushed directly over the edge of the trench and allowed to drop. No rocks larger than 200 mm will be permitted in the backfill. Backfill shall be mounted on top to allow for settlement.

Along road shoulders and other places where vehicles may otherwise travel, appropriate warning signs and lights satisfactory to the Engineer shall be placed and maintained until the backfill is capable of carrying the traffic.

Where the water main is laid in the travelled portion of the road, the compaction in the trench shall be 95% of maximum density at optimum moisture content as per ASTM D698.

3.11 Gate Valves

Gate valves shall be supported independently of the pipe on concrete blocking in accordance with the Standard Drawing.

3.12 Air Valves

Air valves shall be installed at all high points on mains in accordance with the Standard Drawing.

3.13 Blowoff

Blowoffs shall be installed in accordance with the Standard Drawings. Drainage branches shall not be connected to any sewer, submerged in any stream, or installed in any other manner that will permit back-syphoning into the distribution system.

3.14 Thrust Blocking

Reaction or thrust blocks shall be placed as shown on the Standard Drawing. Concrete shall be placed so that it bears against undisturbed trench walls, hand trimmed to a vertical face. Concrete shall be kept away from the bells of fittings and shall not be allowed to run around the pipe or into pipe joints.

3.15 Temporary Ends

Thrust blocking of temporary ends of watermains shall be made in accordance with the Standard Drawing.

3.16 Service Connections

Service connections are defined as the installation from the connection at the main up to and including the shut off valve at the property line.

Service connections in new subdivisions shall be installed in accordance with the Standard Drawings. Water service connections shall be at least 3.0 M away from parallel sewer service connections.

The size of service connections will be determined by the Engineer based on available pressure and estimated demand. The standard house service connection shall be 19 mm.

Service shall be connected to the main by a Corporation cock screwed into the main.

Service connection larger than 50 mm diameter require a cast iron tee fitting and valve.

3.17 Flushing

Before testing, all mains shall be flushed out with water to remove all foreign material.

3.18 Leakage Testing

Test sections shall include not more than 30 metres of completed main. Temporary test plugs and thrust blocking shall be installed where required. All hydrants and service connections shall be included in the test.

Each section of pipe line to be tested shall be slowly filled with water and all air shall be expelled.

After the test section has been filled and air expelled, the pressure at the lowest point in the section shall be raised to 1,380 kPa. The pressure shall be maintained at 1,380 kPa for a period of two (2) hours by pumping additional water into the system to maintain the pressure at 1,380 kPa which shall be accurately measured.

No pipe installation will be accepted if the rate of leakage so measured is more than _____.

Should any section of the pipe line fail to meet the above requirements, the Contractor shall take whatever steps are necessary to locate the leaks and correct them. The test procedure shall be repeated as often as necessary to locate the leaks and correct them. The test procedure shall be repeated as often as necessary until the leakage rate is within the permissible amount.

3.19 Disinfection

Before being placed in service, the water system shall be chlorinated for a period of at least 24 hours, in accordance with AWWA C601.

Water from the existing distribution system shall be made to flow at a constant measured rate into the newly laid pipe line. The water shall receive the required dose of chlorine, also fed at a constant measured rate. The two rates shall be proportioned so that the chlorine concentration in the water in the new main is a minimum of 50 ppm/L available chlorine.

The amount of chlorine required to produce 50 ppm/L concentration in 30.5 M of pipe of various sizes is given by the following table:

Pipe Size mm	100 Percent Chlorine grams	1 Percent Chlorine Solution litres
100	7.7	1.5
150	27.7	3.3
200	49.1	5.9
250	77.3	9.3
300	109.1	13.1

A one percent (1%) chlorine solution can be prepared with high test calcium hypochlorite (70% free chlorine) by first making a paste and then diluting with water in the following proportions:

High test calcium hypochlorite	454.5 g
Water	34.1 l

During the application of chlorine, valves shall be manipulated to prevent the treatment dosage from flowing back into the line supplying the water. Chlorine application shall not cease until the entire main and service connections to be treated are filled with 50 ppm/L chlorine solution. To assure that this concentration has been attained throughout, the chlorine residual shall be

measured at a number of points along the main. The chlorinated water shall be retained in the main for at least 24 hours during which time all valves and hydrants in the section treated shall be operated in order to disinfect them thoroughly.

At the end of the 24 hours period, the residual chlorine shall be measured at several spots along the main. If the residual chlorine measured at several locations averages less than 25 ppm/L the main shall be re-chlorinated.

After completion of chlorination, the heavily chlorinated water shall be flushed from the system and hydrants until the chlorine concentration in the water remaining is less than 1 ppm/L.

3.20 Clean-up

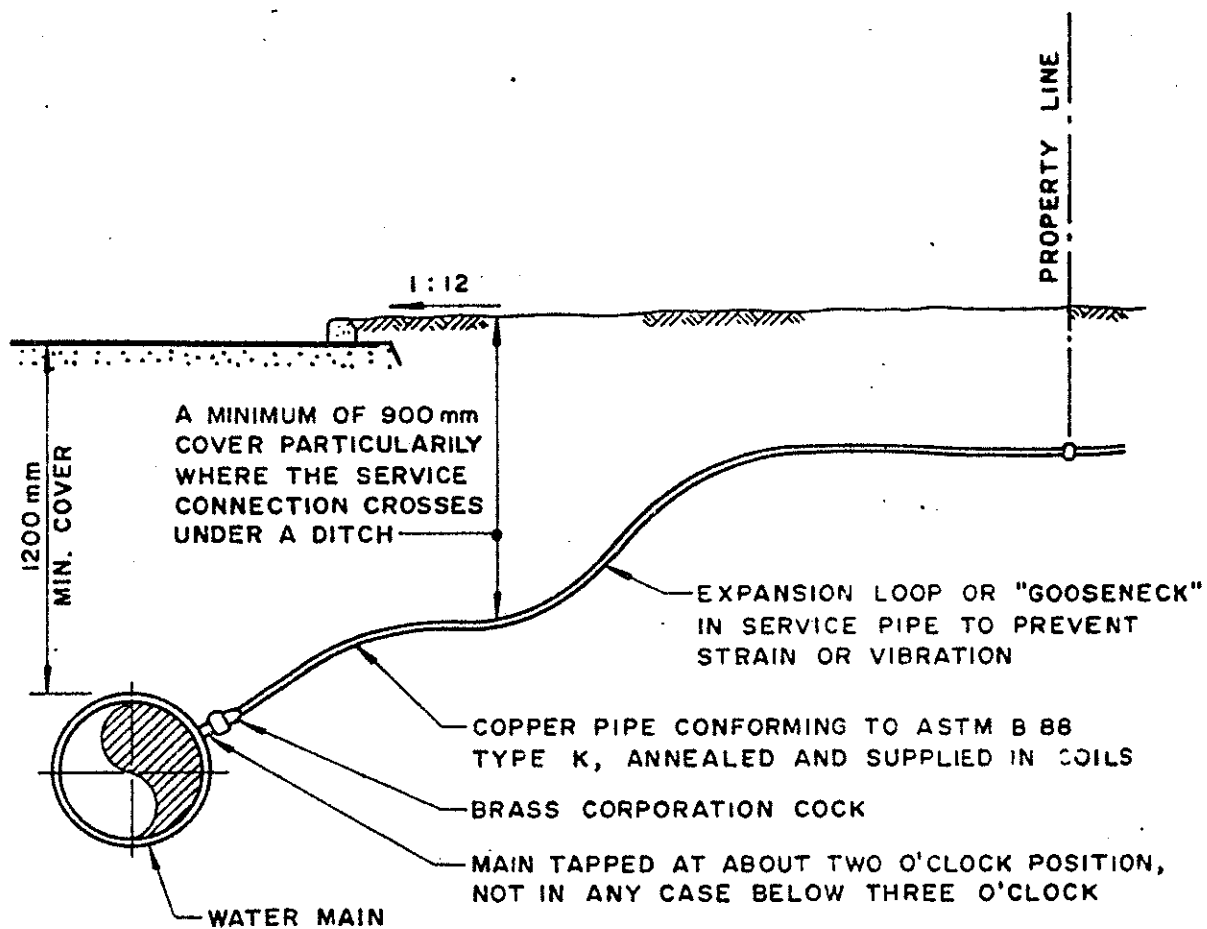
Clean-up shall be completed promptly to the satisfaction of the Engineer.

Where excavated material has been temporarily placed on pavement, after backfilling the pavement shall be cleaned up promptly by sweeping or hosing with water. Likewise, spillage on public roads from trucks engaged in the work shall be cleaned up promptly.

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER AND SEWER)

4. LIST OF WATER DRAWINGS

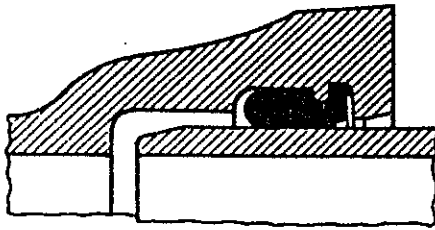
<u>Description</u>	<u>Drawing No.</u>
Typical Water Connection between Main and Property Line	W-1
Types of Hub Connections in Fittings	W-2
Temporary End of Watermain	W-3
Typical Hydrant Assembly	W-4
Typical Gate Valve Cover Installation	W-5
Typical Air Valve Installation	W-6
Typical Blow Off at Watermain End Point	W-7
Concrete Blocking	W-8
Suggested Thrust Blocks Locations	W-9
Standard Symbols	W-10
Typical Cross Section Watermain Trench (For Ductile Pipe)	W-11



20 mm ϕ OR 25 mm ϕ CONNECTION

No.	DATE	REVISIONS	DWG. W-1
TYPICAL WATER SERVICE CONNECTION BETWEEN MAIN & PROPERTY LINE 426			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEER DATE

FOR USE WITH CAST IRON PIPE

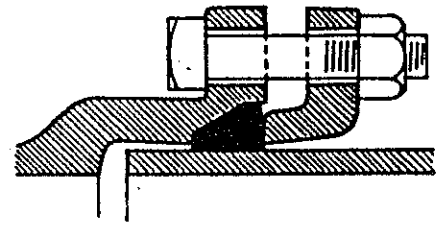


TYTON (TYP)

FOR INSTALLATION WITH ALL TYPES OF RUBBER-RING-JOINT CAST IRON PIPE. LAYING LENGTH AND METAL THICKNESS TO AWWA SPECIFICATIONS C110-77. METAL SPECIFICATIONS TO ASTM A126. AVAILABLE IN FITTING SIZES 100mm TO 300mm INCLUSIVE. SUPPLIED WITH NECESSARY RUBBER GASKETS. TIE ROD LUGS AVAILABLE IN FITTING SIZES 100mm TO 300mm INCLUSIVE.

FLANGED ENDS

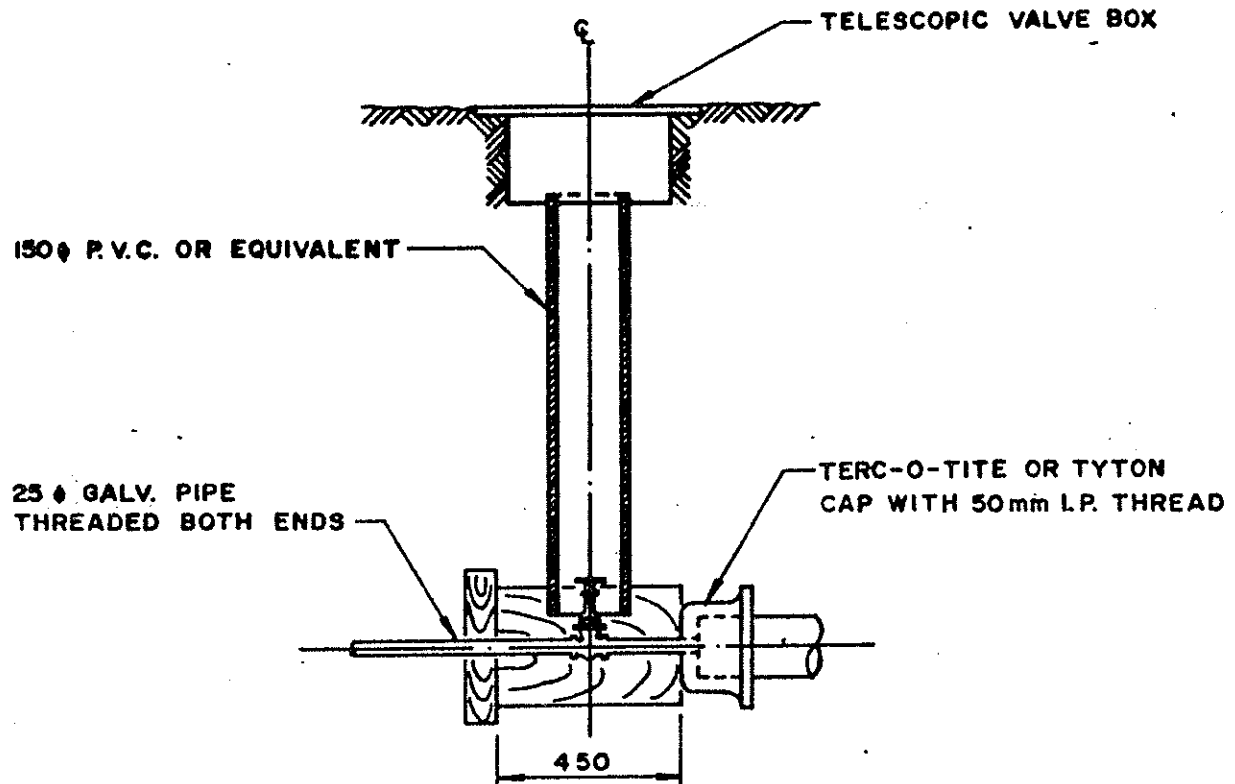
AVAILABLE IN VALVES AND FITTINGS 50mm TO 750mm INCLUSIVE; HYDRANTS 100mm AND 150mm. LAYING LENGTHS AND DRILLING TO AMERICAN STANDARD. FOR CAST IRON FLANGED FITTINGS CLASS 125 (B16.1-1975) METAL THICKNESS TO ASTM SPECIFICATIONS (B16.1-1975) METAL SPECIFICATIONS TO ASTM SPECIFICATION A126



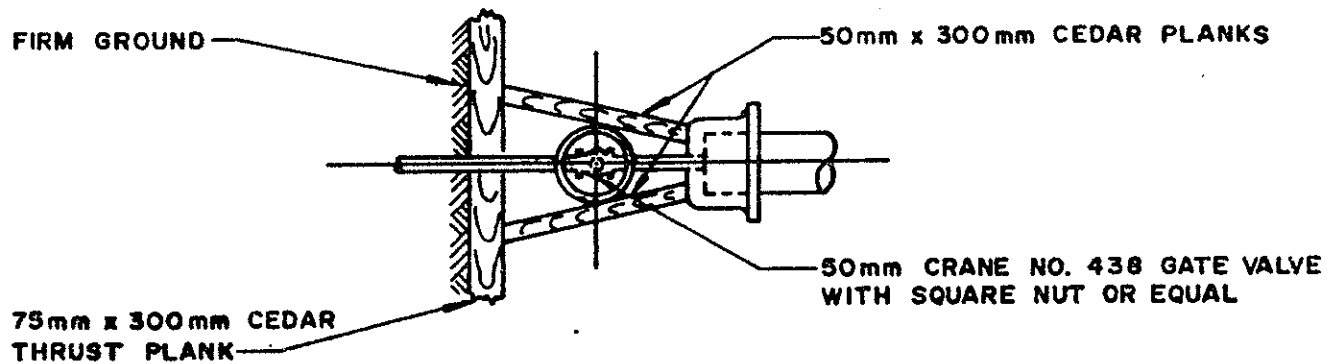
TER-MECH (MJ)

FOR USE WITH CANADIAN, AMERICAN AND BRITISH MECHANICAL JOINT OR GROOVED HUB TYPE CAST IRON PIPE. LAYING LENGTHS AND METAL THICKNESS TO AWWA SPECIFICATION C110-77. METAL SPECIFICATIONS TO ASTM A126. AVAILABLE IN VALVES AND FITTING 100mm TO 500mm INCLUSIVE, HYDRANTS 100mm AND 150mm. SUPPLIED WITH AWWA RUBBER GASKETS, CORROSION RESISTANT BOLTS AND NUTS, "SORBO-MAT" CAST IRON GLANDS. TIE ROD LUGS AVAILABLE ON VALVES AND HYDRANTS 100mm AND 150mm AND ON FITTINGS 100mm TO 300mm.

No.	DATE	REVISIONS	DWG. W-2
TYPES OF HUB CONNECTIONS IN FITTINGS			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE
425			



ELEVATION

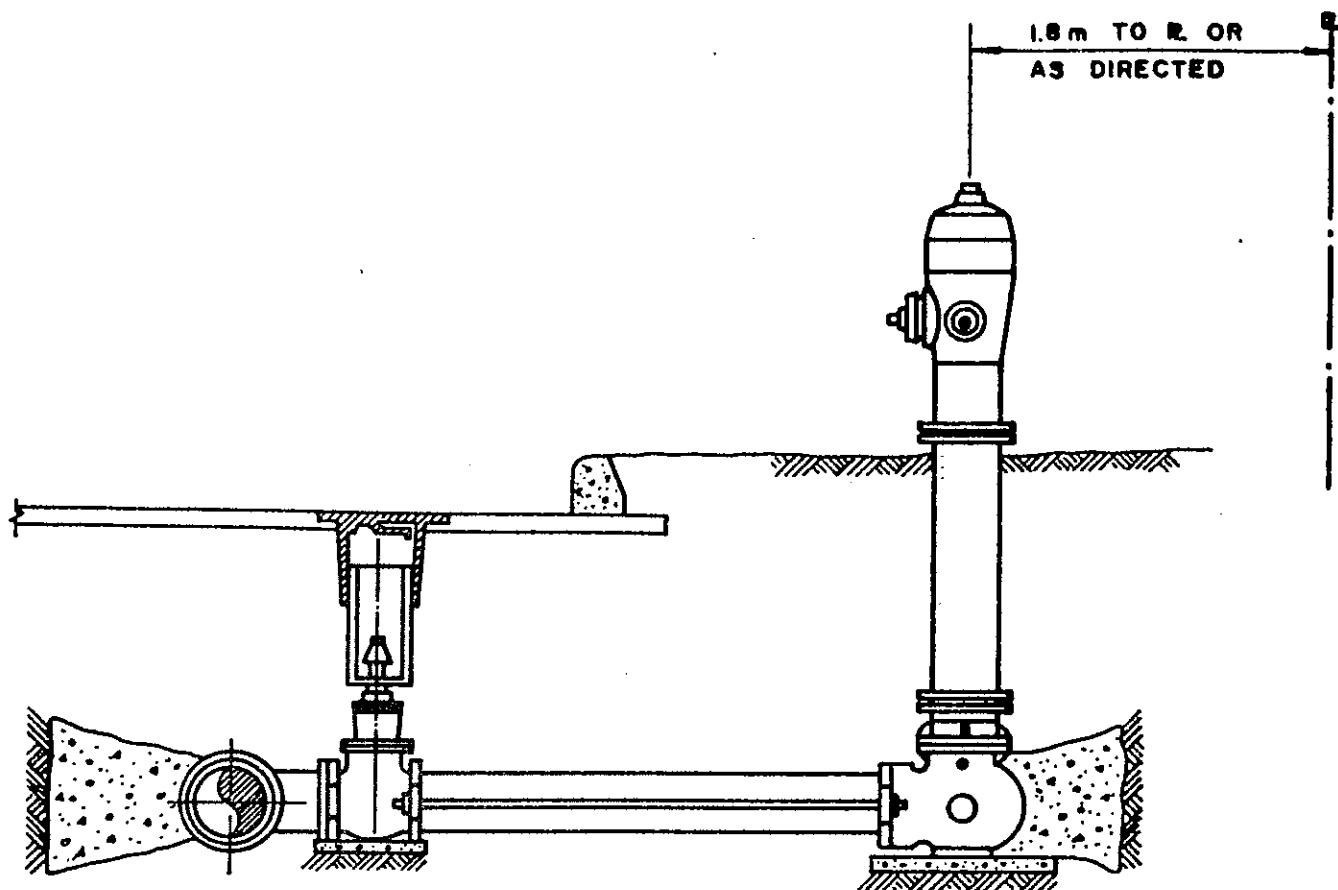


PLAN

ALTERNATE:

MASS CONCRETE TIED BACK

No.	DATE	REVISIONS	DWG. W-3
TEMPORARY END OF WATERMAIN			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE

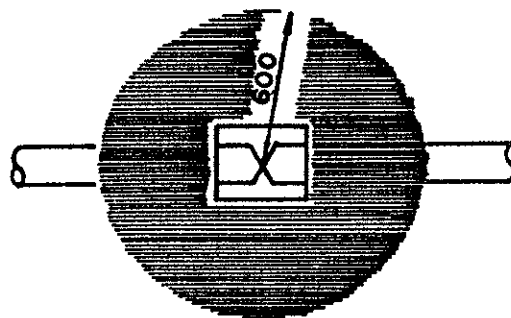
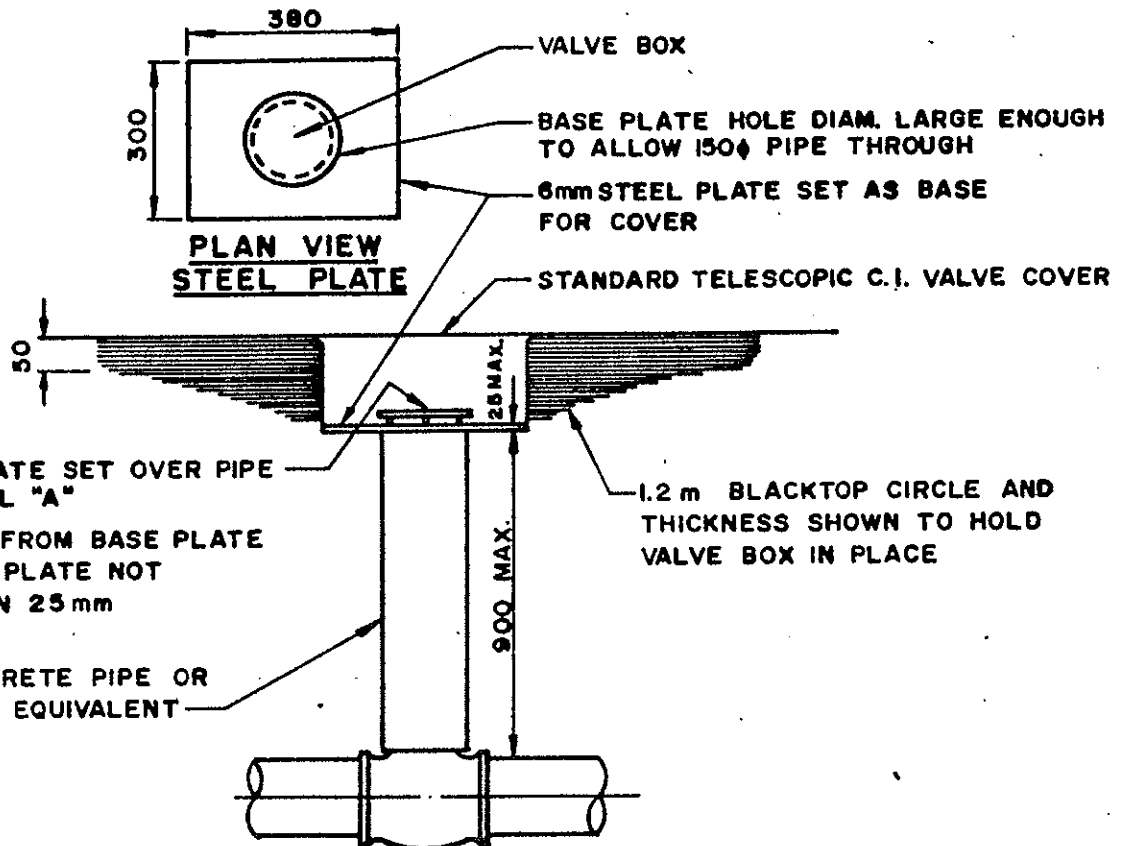
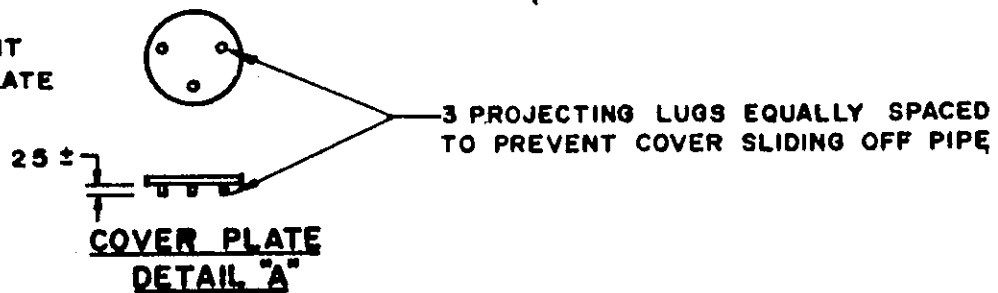


NOTES:

1. STANDARD HYDRANT WITH LUGS FOR TIE BACK RODS (TYPE T.C. 20P)
2. 0.45 m DEEP x 0.61 m DIA. CIRCLE (0.13 m²) OF 40mm DRAIN ROCK TO SURROUND HYDRANT DRAIN
3. CONCRETE THRUST BLOCKS, SIZED AND PLACED AGAINST UNDISTURBED VERTICAL FACE. ENCLOSE FITTING IN POLY BEFORE POURING BLOCK
4. TEE AT WATERMAIN-BRANCH SIZE 150 mm DIA., WITH LUGS FOR TIE BACK RODS
5. NIPPLE-SIZE 150 mm DIA. x 600 mm LONG (VARIED IF NECESSARY)
6. HYDRANT CONTROL VALVE - 150 mm C.I. GATE VALVE, HUB ENDS, WITH LUGS FOR TIE-RODS
7. NIPPLE-SIZE 150 mm DIA. x MINIMUM OF 300 mm IN LENGTH
8. TIE RODS-15 mm DIA. x 100 mm LONGER THAN THE NIPPLE, THREADED BOTH ENDS AND COATED WITH COAL-TAR ENAMEL FOR CORROSION PROTECTION. OMIT RODS IF OVER 6 m
9. CONCRETE VALVE EXTENSION PIPE - 200 mm INSIDE DIA.
10. CRUSHED GRAVEL BACKFILL FOR VALVE EXTENSION PIPE AND VALVE BOX BASE
11. TELESCOPIC VALVE BOX
12. 450 mm x 450 mm x 50 mm CONCRETE PAD ON UNDISTURBED GROUND
13. CONCRETE SUPPORT BLOCK (MIN. 150 mm x 300 mm x 50 mm) TO UNDISTURBED TRENCH BOTTOM
14. DRAIN HOLE FROM BASE OF HYDRANT-MUST BE PROTECTED DURING THE POURING OF THE THRUST BLOCK.

No.	DATE	REVISIONS	DWG. W - 4
TYPICAL HYDRANT ASSEMBLY			SUNSHINE COAST REGIONAL DISTRICT
			PREPARED BY
			DAYTON & KNIGHT LTD. CONSULTING ENGINEERS
			DATE

DIAMETER TO SUIT
HOLE IN BASE PLATE



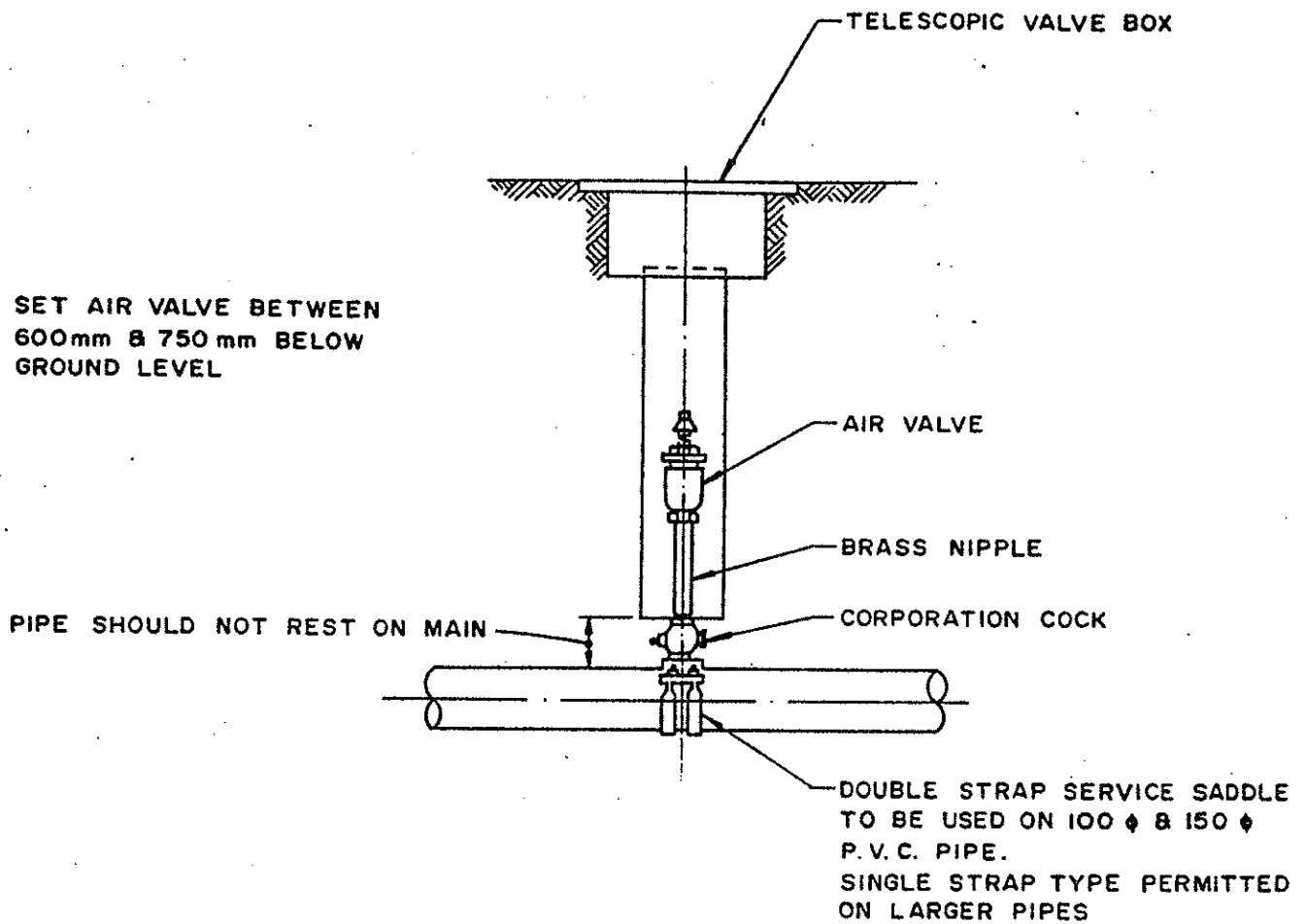
**PLAN OF BLACKTOP AND VALVE BOX
ALIGNMENT WITH WATERMAIN**

NOTE:

VALVE BOXES TO BE SET
WITH RUN OF WATERMAIN
SO THAT LENGTHWISE,
COVER IS PARALLEL WITH
WATERPIPE
BLACKTOP AROUND COVERS
APPLICABLE TO ALL
VALVES ON BOULEVARDS
AND PAVEMENTS

No.	DATE	REVISIONS	DWG. W - 5
TYPICAL GATE VALVE COVER INSTALLATION			SUNSHINE COAST REGIONAL DISTRICT
			PREPARED BY
			DAYTON & KNIGHT LTD. CONSULTING ENGINEERS
			DATE

SET AIR VALVE BETWEEN
600mm & 750 mm BELOW
GROUND LEVEL

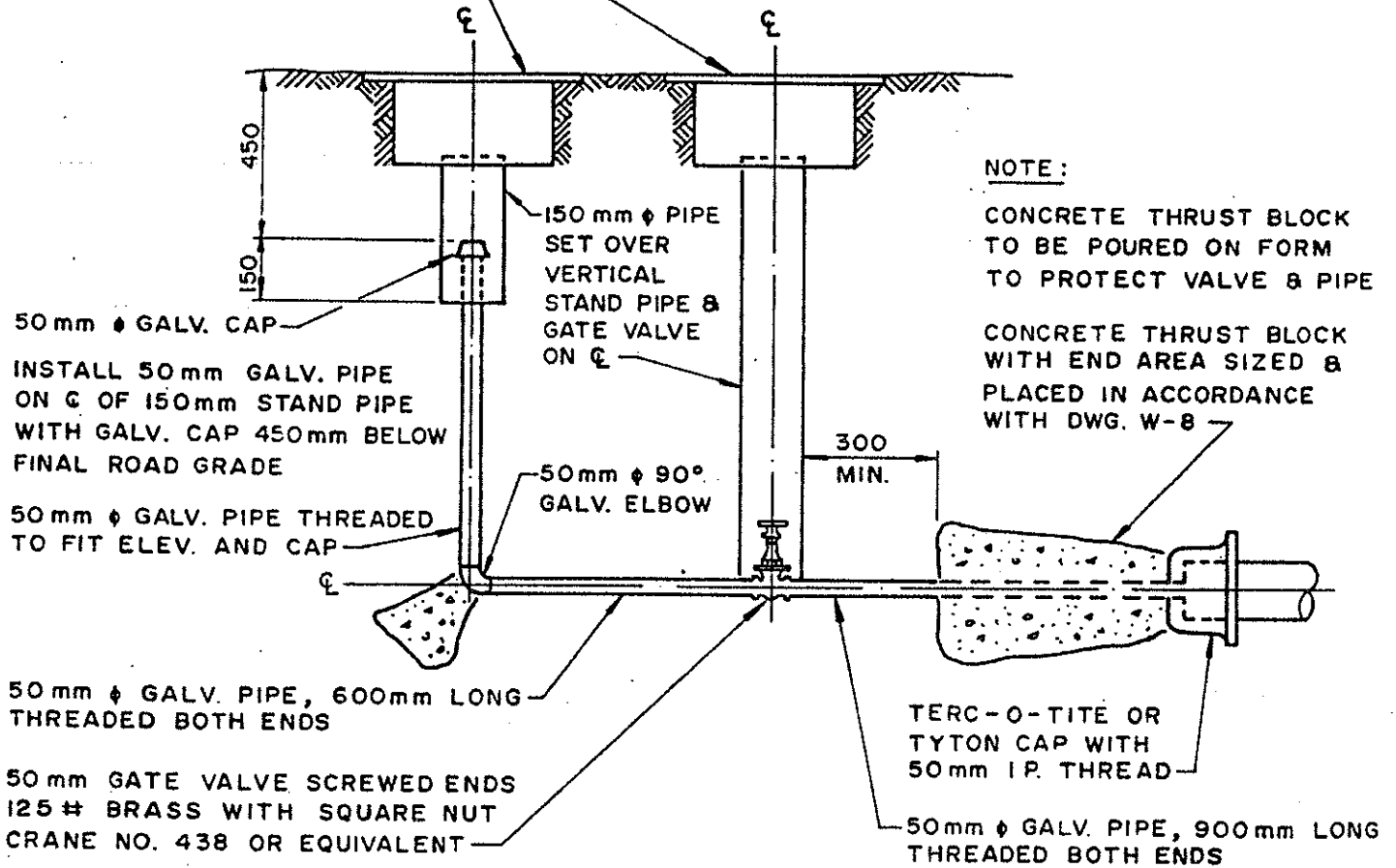


NOTE :

ALL AIR VALVES TO BE OF THE
DOUBLE ACTING TYPE. TERMINAL
CITY IRON WORKS A.V. 22, A.V. 24
OR EQUIVALENT

No.	DATE	REVISIONS	DWG. W - 6
TYPICAL AIR VALVE INSTALLATION			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD, CONSULTING ENGINEERS DATE
439			

TELESCOPIC VALVE BOX



No. DATE

REVISIONS

DWG. W - 7

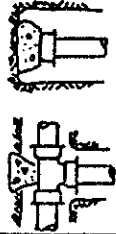
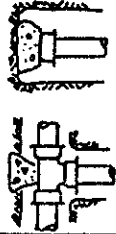
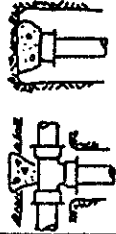
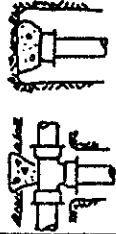
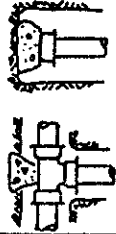
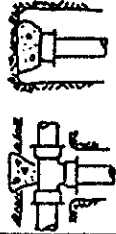
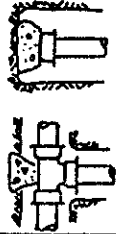
TYPICAL BLOW OFF AT
WATERMAIN END POINT

SUNSHINE COAST REGIONAL DISTRICT

PREPARED BY

DAYTON & KNIGHT LTD. CONSULTING ENGINEERS

DATE

	CAPS, PLUGS & TEES	90° ELBOWS		45° ELBOWS		22 1/2° ELBOWS		11 1/4° ELBOWS		VERTICAL BENDS
		THRUST KN	MINIMUM BLOCK BASE AREA m ²	THRUST KN	MINIMUM BLOCK BASE AREA m ²	THRUST KN	MINIMUM BLOCK BASE AREA m ²	THRUST KN	MINIMUM BLOCK BASE AREA m ²	
191.5 -SOFT CLAY-		16	0.019	23	0.023	12	0.009	6	0.007	SEE 22 1/2° ELBOW
		33	0.037	47	0.046	25	0.023	13	0.009	
		57	0.056	81	0.084	44	0.046	22	0.023	
		122	0.130	172	0.177	93	0.093	48	0.046	
574.6 -SAND- COURSE, LOOSE		16	0.056	23	0.084	12	0.046	6	0.019	SEE 22 1/2° ELBOW
		33	0.112	47	0.093	25	0.093	13	0.046	
		57	0.195	81	0.279	44	0.149	22	0.074	
		122	0.418	172	0.604	93	0.316	48	0.167	
1149.1 - HARD CLAY-		16	0.023	23	0.037	12	0.019	6	0.009	SEE 22 1/2° ELBOW
		33	0.056	47	0.084	25	0.046	13	0.019	
		57	0.102	81	0.140	44	0.074	22	0.037	
		122	0.214	172	0.297	93	0.158	48	0.084	
1915.2 - HARD PAN OR SHALE -		16	0.019	23	0.023	12	0.009	6	0.007	SEE 22 1/2° ELBOW
		33	0.037	47	0.046	25	0.023	13	0.009	
		57	0.056	81	0.084	44	0.046	22	0.023	
		122	0.130	172	0.177	93	0.093	48	0.046	
574.6 -SAND- COURSE, LOOSE		16	0.056	23	0.084	12	0.046	6	0.019	SEE 22 1/2° ELBOW
		33	0.112	47	0.093	25	0.093	13	0.046	
		57	0.195	81	0.279	44	0.149	22	0.074	
		122	0.418	172	0.604	93	0.316	48	0.167	
1149.1 - HARD CLAY-		16	0.023	23	0.037	12	0.019	6	0.009	SEE 22 1/2° ELBOW
		33	0.056	47	0.084	25	0.046	13	0.019	
		57	0.102	81	0.140	44	0.074	22	0.037	
		122	0.214	172	0.297	93	0.158	48	0.084	
1915.2 - HARD PAN OR SHALE -		16	0.019	23	0.023	12	0.009	6	0.007	SEE 22 1/2° ELBOW
		33	0.037	47	0.046	25	0.023	13	0.009	
		57	0.056	81	0.084	44	0.046	22	0.023	
		122	0.130	172	0.177	93	0.093	48	0.046	

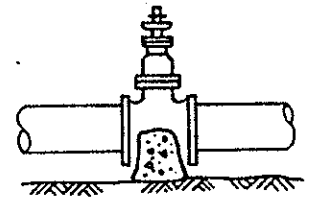
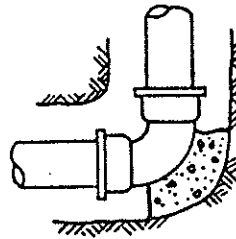
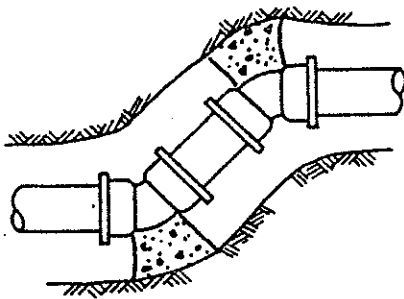
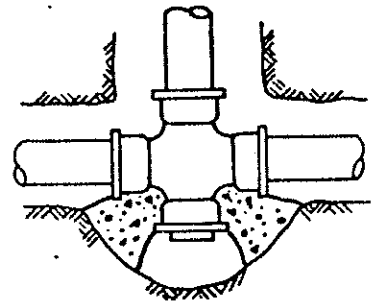
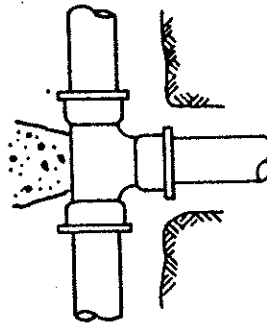
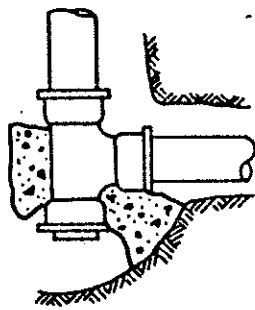


SEE NOTE 5

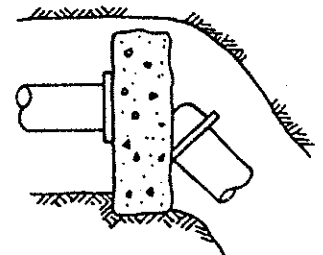
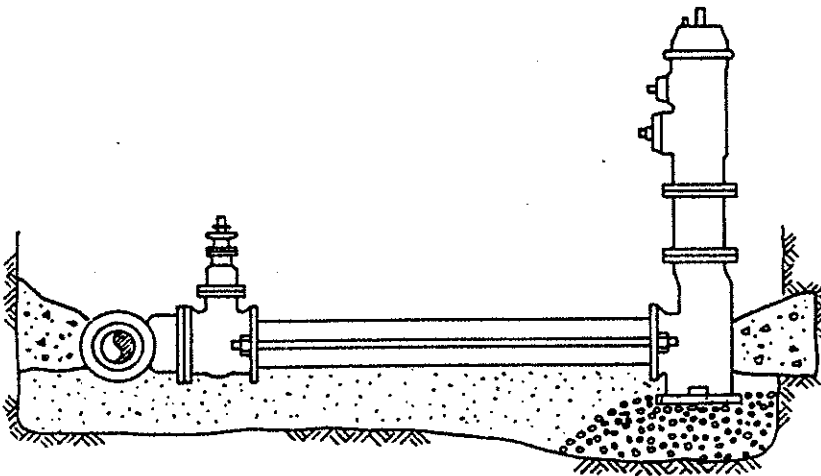
1. CONCRETE THRUST BLOCKS SHALL EXTEND INTO UNDISTURBED SOIL. THRUST IN SOFT UNSTABLE SOILS WILL REQUIRE REMOVAL OF SOIL AND REPLACEMENT WITH COMPACTABLE FILL OR SUFFICIENT STABILITY TO RESIST THRUST OR SPECIAL ANCHOR BLOCK AS DIRECTED BY THE CITY ENGINEER.
2. BLOCKING WILL BE REQUIRED FOR ALL ELBOWS, TEES, PLUGS, CAPS, PIPE DEFLECTIONS AND OTHER FITTINGS ON LIVE MAINS WHERE ANCHOR RODS ARE NOT PRACTICAL.
3. THRUST BLOCKS SHALL BE OF AT LEAST 15 MPa 28 DAYS CONCRETE OR HIGH EARLY STRENGTH CONCRETE IF REQUIRED.
4. AT VERTICAL BENDS BLOCKING SHALL BE OF SUFFICIENT WEIGHT TO RESIST OUTWARD THRUST.

5. BLOCKING SHALL BE KEPT CLEAR OF BELLS WHEN POSSIBLE.
6. FOR SPECIFICATIONS OF LARGER DIA PIPES, SEE ENGINEER.

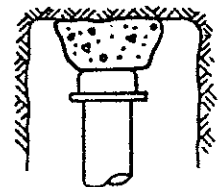
No.	DATE	REVISIONS	DWG. W-8
CONCRETE BLOCKING			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE



ALL BLOCKING TO EXTEND
INTO UNDISTURBED SOIL












































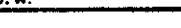


ELEVATION



No.	DATE	REVISIONS	DWG. W - 9
SUGGESTED THRUST BLOCK LOCATIONS			SUNSHINE COAST REGIONAL DISTRICT
422			PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE

STANDARD SYMBOLS

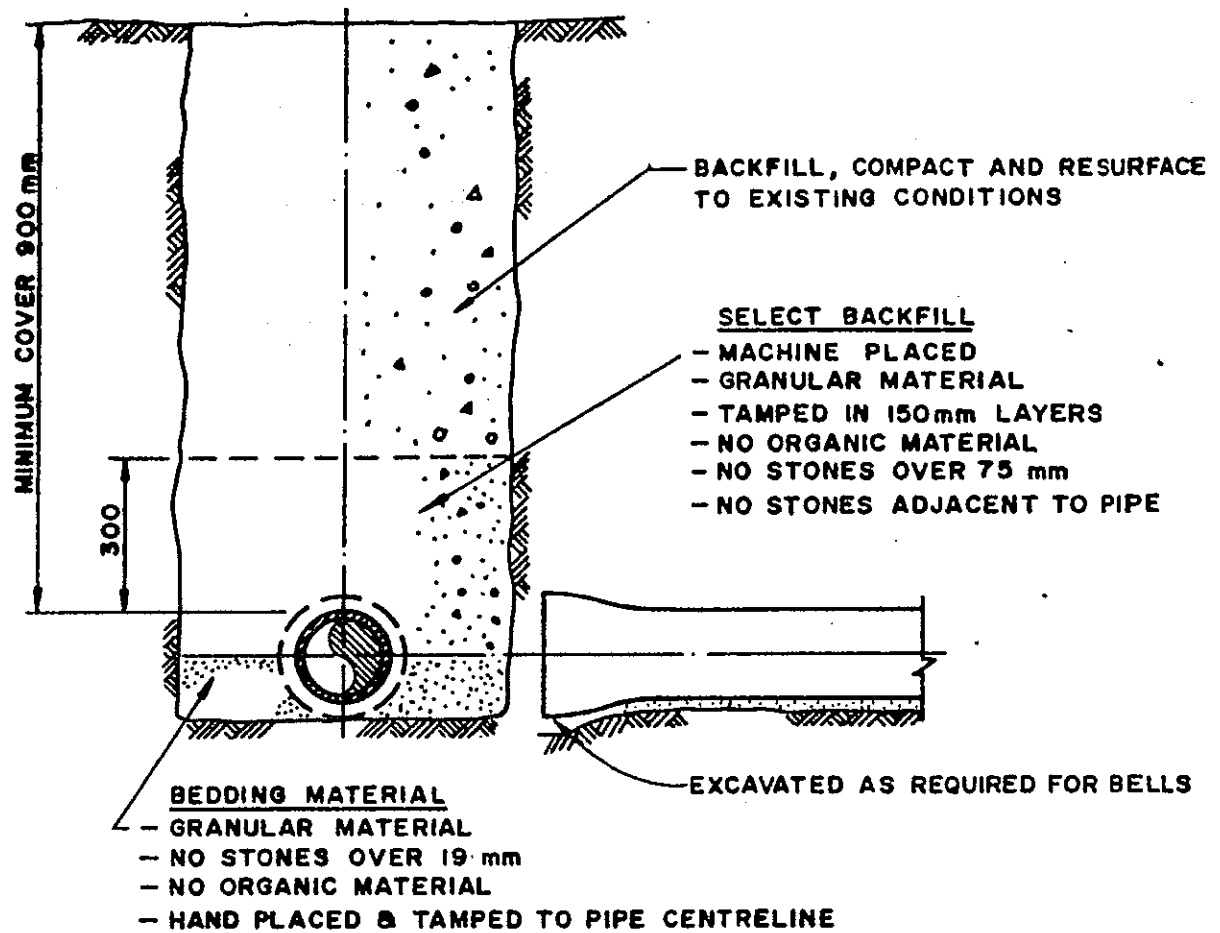
(FOR USE ON CONTRACT DRAWINGS)

	S		EXISTING SANITARY SEWER
	D		EXISTING STORM DRAIN
	W		EXISTING WATER MAIN
	G		EXISTING GAS MAIN
	E		EXISTING UNDERGROUND WIRING
			PROPOSED WATER MAIN
			PROPOSED GAS MAIN
			PROPOSED SANITARY SEWER
			PROPOSED STORM DRAIN
			PROPOSED UNDERGROUND WIRING
	G.V.		GATE VALVE
	C.V.		CHECK VALVE
	A.V.		AIR VALVE
	PRV		PRESSURE REDUCING VALVE
	M		METER
			FIRE HYDRANT
			CAPPED END WITH FLUSHOUT
			CAPPED END
	M.H.		MANHOLE
	D.W.		DRAIN WELL
	c.o.		CLEAN OUT
	C.B.		CATCH BASIN

STANDARD ABBREVIATIONS

TT	—	TERC-O-TITE
TM	—	TER-MECH
TYT	—	TYTON
C.I.	—	CAST IRON
D.I.	—	DUCTILE IRON
A.C.	—	ASBESTOS CEMENT
S	—	STEEL
P	—	PLASTIC
F	—	FLANGE

No.	DATE	REVISIONS	DWG. W-10
STANDARD SYMBOLS			SUNSHINE COAST REGIONAL DISTRICT
425			PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE



FOR DUCTILE PIPE

No.	DATE	REVISIONS	DWG. W - II
TYPICAL CROSS SECTION WATERMAIN TRENCH (FOR DUCTILE PIPE) 426			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER & SEWER)

VII

STANDARD SPECIFICATIONS FOR CONSTRUCTION
OF
SANITARY SEWERS

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SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER & SEWER)

VII

STANDARD SPECIFICATIONS FOR THE
CONSTRUCTION OF SANITARY SEWERS

1. GENERAL

1.01 Definitions

In these Standard Specifications the following words and terms have the meaning indicated below, unless the context plainly indicates different meanings:

- | | | |
|-----|-------------------|---|
| (a) | "These Standards" | means the Corporation of Sunshine Coast Regional District Standard Specifications for Construction of Sanitary Sewers. |
| (b) | "The Corporation" | means the Corporation of the Sunshine Coast Regional District. |
| (c) | "The Engineer" | means the Works Superintendent or his representative. |
| (d) | "Approved" | means approved by the Engineer. |
| (e) | "ASTM" | American Society for Testing Materials. |
| (f) | "CSA" | Canadian Standards Association. |
| (g) | "CGSB" | Canadian Government Specification Board. |
| (h) | "USBS" | U.S. Bureau of Standards. |
| (i) | "Contractor" | means the person, partnership or corporation who has contracted with the Corporation of the Sunshine Coast Regional District to provide the works described in the contract documents or any of their sub-contractors or employees engaged on the said works. |

1.02 Scope and Use of Standards

These Standards shall apply to all sewers constructed by or for the Sunshine Coast Regional District.

1.03 Revisions to these Standards

Changes to these Standards will be made from time to time as conditions and improvements warrant. The most recent issue of these Standards shall

supersede all previous issues. Contracts in progress shall be governed by the Standards in effect at the time the Contract was entered into.

1.04 Standard Drawings

The Standard Drawings listed on the attached List of Standard Drawings, dated the same as these Standards, are hereby incorporated into and made a part of these Standards.

1.05 Maintenance and Restoration of Existing Drainage

If the work or any part thereof requires the disturbance of existing drainage, the Contractor shall be responsible for the provision of any temporary drainage facilities necessary to accommodate the drainage in a satisfactory manner.

All existing drainage facilities disturbed by the Contractor in carrying out the work shall be promptly restored to their original condition as the work advances. On completion of the work, the drainage facilities shall have at least the same flow capacity as before and shall be left in a stable condition to the satisfaction of the Engineer.

1.06 Location and Protection of Existing Utilities

The existing underground services shown on the drawings are not guaranteed to be accurate or complete. It shall be the responsibility of the Contractor to find and locate all existing services such as water, gas, oil, electricity, telephone, sewers, drains and culverts, to preserve and protect them from damage during construction and to arrange and pay for their relocation if necessary.

Where sewer lines cross existing utilities which cannot readily be relocated, the Contractor shall determine whether any direct conflict exists sufficiently in advance of construction to allow changes to be made to the design of the work to avoid such conflict with the existing utilities. No claim for damages by the Contractor will be entertained by the Corporation for the cost of locating utilities, adjusting lines and grades to avoid conflict, relaying pipe to avoid conflict, or any delays occasioned thereby.

1.07 Curtailment of Existing Utility Service

Where existing utilities such as water, electricity, telephone and gas are serving the public, work shall be planned and executed so that there shall be no curtailment of the service provided by these utilities, unless the Contractor has first obtained the approval of the authorities responsible for the provision and maintenance of these utilities.

If the Contractor, after receiving approval of the responsible authorities, is to temporarily shut off service of an existing utility, he shall notify individual users of the utility who will be affected by the shut-off at least one hour prior to the time of shut-off.

If the Contractor is going to shut off a watermain, he shall, in addition to

notifying individual users, notify the fire department one hour prior to the time of the shut-off.

If a utility has to be shut off by the Contractor in an emergency, he shall immediately notify the authority responsible for its maintenance.

1.08 Connection to Existing Sewers

The Contractor shall make no connection to existing downstream receiving sewers. No connection to existing downstream receiving sewers will be permitted until all sewers to be constructed by the Contractor have been completed, including testing and flushing. The Contractor shall pay all costs of making connections to downstream receiving sewers.

1.09 Public Access and Safety

During the progress of the work all streets shall be kept open for public travel, unless prior arrangements have been made by the Contractor with the Engineer.

Barricades, warning lights, traffic signs and all traffic control devices shall be provided and used by the Contractor, in accordance with the "Manual for Uniform Traffic Control Devices for Canada".

At no time shall access be cut off completely from any houses or buildings although private driveways may be cut off temporarily for periods up to twenty-four hours. Before cutting off access to any houses or buildings, the Contractor shall give at least four hours' notice to the owner of the property.

The Contractor shall effectively warn and protect the public from any danger as a result of the work being done.

No material or equipment shall be stored where it will interfere with the free and safe passage of public traffic, or in such a manner that it creates a hazard for the public. At the end of each day's work and at other times when work is suspended, the Contractor shall remove all equipment and other obstructions from that portion of roadway open for use by traffic.

The Contractor shall ensure that fire hydrants, valve boxes, manhole covers, meter boxes, fire or police call boxes, and all other utility controls are accessible at all times.

The Contractor shall provide temporary pedestrian bridges across the trench at all street intersections and at access points to houses and buildings unless alternative convenient pedestrian access is available.

1.10 Site Clean-up

The Contractor shall maintain the site in a neat and orderly condition free from rubbish and unnecessary hazards during the course of construction. Any accumulation of rubbish shall be promptly removed from the site. Surplus materials shall be cleaned up promptly so as not to cause a nuisance or obstruction.

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER AND SEWER)

VII

STANDARD SPECIFICATIONS FOR THE
CONSTRUCTION OF SANITARY SEWERS

2. MATERIALS

2.01 General Requirements

Materials incorporated into the work and not specified herein shall be of the best quality available and approved by the Engineer. Otherwise, all materials incorporated into the work shall conform to these specifications.

2.02 Testing and Samples

Testing of materials shall be carried out by an approved testing laboratory and paid for by the Contractor. Certified copies of all test results shall be submitted by the testing laboratory directly to the Engineer.

The method of selecting samples of materials proposed to be incorporated into the work shall be determined by the Engineer.

2.03 Storage and Care

Materials shall be handled and stored so as to ensure the preservation of their quality and fitness for the work. When considered necessary by the Engineer, they shall be placed on wooden sills or platforms or stored under cover. In particular, rubber gaskets shall not be left exposed to the sun.

2.04 Handling

Tools, trucks and other equipment as well as methods of handling and hauling material shall be such that pipes, manhole sections and other materials will not be dropped, rolled, bumped or damaged. The use of hooks on pipe ends will not be permitted, and special care shall be exercised to prevent damage to machined ends.

2.05 Pipe

The following types of pipe will be acceptable for sanitary sewers:

- (a) PVC, SDR 35, ASTM D3034 (maximum size 300 mm).
- (b) Concrete, minimum Class 3, non-reinforced ASTM C14, maximum size 450 mm.

2.06 Pipe Joints and Jointing Material

Pipe joints shall be of the bell and spigot or sleeve coupling type. They shall be supplied with rubber gaskets or other pre-formed, factory manufactured gasket of approved material conforming to an ASTM standard for sewer pipe jointing material.

Before installing any sanitary sewers, the Contractor shall ensure that the pipe joints have been approved by the Engineer. Any other type of pipe joints proposed by the Contractor shall be subjected to leakage tests at the Contractor's expense to be witnessed by the Engineer as follows:

(a) Pipes in Straight Alignment

Four lengths of pipe shall be selected at random by the Engineer and these shall be connected together in accordance with the pipe supplier's instructions. Suitable bulkheads shall be provided at the ends of the joined sections and the assembly shall be subjected to an internal water pressure of 70 kPa for one hour. No leakage shall be noticeable at the joints.

(b) Pipes in Deflected Position

Upon completion of the test for pipes in straight alignment, the pipes shall be deflected so that there is at least 10 millimetres of deflection per pipe diameter from the straight line position, and then subjected to an internal water pressure of 35 kPa for one hour. Again, no leakage shall be noticeable. Beads of water on the surface of the joints will not be considered as leakage.

2.07 Pipe Fittings

(a) Y-Branched

The axis of branches shall be at 45 degrees from the longitudinal axis of the main pipe, measured from the bell end.

(b) Bends

The radius of curvature of the centre line of pipe bends up to 200 mm diameter shall be at least two-and-a-half (2½) times the nominal pipe diameter.

2.08 Pipe Bedding Material

Pipe bedding material shall be 19 mm minus crushed gravel, or rock approved by the Engineer, evenly graded from coarse to fine particles. Not more than 10 percent by weight shall pass through a No. 40 USBS square mesh sieve.

2.09 Trench Bottom Stabilization Gravel

Material for stabilization of trench bottom shall be 50 mm minus crushed gravel or rock not more than 10 percent of which by weight shall pass through a No. 40 USBS square mesh sieve.

2.10 Imported Backfill

Imported backfill material shall be pit run sand or mixed sand and gravel free from stones larger than 150 mm maximum dimension, and free from organic material of any kind. Not more than 10 percent of the material by weight shall pass through a NO. 100 USBS square mesh sieve.

2.11 Select Backfill for Pipe Zone

Select backfill material used for backfilling in the pipe zone shall be well graded inorganic trench excavation material placed by hand by the Contractor and carefully selected to exclude any particles larger than 38 mm maximum dimension. Material which, in the opinion of the Engineer, contains too much silt or clay shall not be used as select backfill in the pipe zone.

2.12 Native Backfill Material

Native backfill material shall be material excavated from the trench which has been approved by the Engineer for backfill from which all rocks larger than 200 mm maximum dimension, roots, or other objectionable materials that would impede consolidation of the backfill, have been removed by the Contractor.

2.13 Road Gravel

Road gravel shall conform to Highway Standard Specifications.

2.14 Asphalt Concrete

Asphalt concrete shall conform to Highway Standard Specifications for Roads, Streets and Lanes.

2.15 Precast Concrete Manhole Sections

Precast concrete manhole sections shall be 1.07 M inside diameter with 112.5 mm wall thickness, reinforced concrete pipe of at least Class II in accordance with ASTM Standard C76 with tongue and groove mortar joints. Manhole sections shall be 19 mm galvanized steel steps cast in the concrete as shown on the Standard Drawings.

Cover slabs for manholes and drain wells shall be reinforced to withstand H20 highway loading conditions.

2.16 Cast Iron Manhole Frames and Covers

Covers and frames shall be cast iron of an approved pattern to withstand H20 loading. The clear opening of the frame shall be 500 mm in diameter. The cover shall have a weight of 65.8 kg. The frame shall be of the round base pattern having a weight of 83.9 kg. Bearing faces of the cover to frame shall be machined for a non-rocking fit. Covers shall have 2 only 22 mm diameter lifting holes with bolt plug assembly as shown on the drawings. Frames shall have 3 only 22 mm diameter levelling holes as shown on the drawings. Covers and frames shall be Dobney Foundry Pattern C-20, or as approved. Covers shall

have the following wording as required permanently embossed thereon:

"SUNSHINE COAST REGIONAL DISTRICT SANITARY SEWERS"

2.17 Cleanout Frames and Covers

Cleanout frames and covers shall be 200 mm diameter cast iron, Terminal City Drawing D-473, or as approved.

2.18 Manhole Filler Rings

Filler rings below cast iron frames shall be precast 20.7 MPa concrete rings or brick of 600 mm diameter, 750 mm outside diameter and 50 mm thick.

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS

VII

STANDARD SPECIFICATIONS FOR THE
CONSTRUCTION OF SANITARY SEWERS

3. INSTALLATION

3.01 Preparations for Excavation

(a) Cutting of Pavement

Existing asphaltic concrete pavement shall be cut along neat straight lines along both edges of proposed trenches with an approved cutting tool prior to excavation of the trenches.

(b) Clearing

Where construction is to be performed on private or public property which has been improved as orchard, garden or other cultivated area, the work shall be performed in a manner which will cause minimum damage and which will facilitate restoration. On improved or cultivated property trees shall not be removed or cut without the permission of the owner of the land and the Engineer. When branches or roots must be cut, they shall be sawn neatly and saw cuts on trees shall be painted with an approved tree seal. Shrubs and other cultivated plants which have to be removed shall be preserved if possible for replanting.

On unimproved areas that have not been cleared, the Contractor shall clear sufficient space to complete the work and shall burn or otherwise dispose of the debris before starting the trench excavation. If Municipal restrictions do not permit burning of debris on the site, it shall be hauled to an approved location for burning or disposal.

All stumps which are removed in the course of excavating shall be disposed of by the Contractor away from the site in an approved manner.

(c) Removal of Turf

Unless the Contractor proposes to import turf or reseed disturbed lawn areas, turf shall be neatly cut, removed in sections of uniform thickness, and stacked grass to grass for later replacement.

(d) Removal of Topsoil

No topsoil shall be removed from the site; it shall be kept separate from other excavated material and preserved for later restoration of the surface.

3.02 Excavation

Excavation of trenches shall be between the minimum and maximum lines shown on the drawings. Excavation for structures shall be sufficient to erect concrete formwork, except that manhole bases may be cast against the wall of the excavation if the soil conditions are suitable.

Trenches shall be excavated only as far in advance of the pipe laying operation as safety, traffic, and weather conditions permit and shall in no case exceed 61.0 M. Caution shall be exercised with respect to structures, piping or other man-made obstacles that may exist within the working area and due consideration given to the protection and support of such properties and structures.

Where excavating machines would cause damage to trees, buildings or other improvements that are close to the trench, or whenever the owners of private property do not permit the use of excavating machines on their property, the excavation shall be done by hand.

Unless the excavated material is declared unsuitable for backfill by the Engineer, sufficient quantity of excavated material for backfilling the trench and structures shall be retained at the site.

Where sewers are installed on public roadways, the length of sewer trench which may be left open shall not exceed 61.0 M. The length of trench left open for inspection shall at no time be less than four (4) pipe lengths. Backfilling of the sewer trench shall be completed within five (5) days from starting the excavation. Backfilling around manholes shall be completed within ten (10) days from starting the excavation for the manhole.

The Contractor shall exercise care to avoid spillage on public roadways over which trench spoil or backfill material is hauled, and any such spillage shall be cleaned up promptly by sweeping. Where excavated material has been temporarily placed on pavement, the pavement shall likewise be cleaned upon its removal.

3.03 Blasting

Should blasting be required for the excavation, the Contractor shall exercise extreme care and shall limit the use of explosives to such charges that will not cause damage to structures, pipelines and other utilities. Blasting shall be done by men qualified for the work under Provincial and Municipal regulations and the blasting shall be done in accordance with such regulations.

3.04 Lines and Grades

All of the work shall be done to the lines and grades shown on the approved contract drawings or as directed by the Engineer. All lines and grades shall be established on the ground before excavation for sewers is commenced. Stakes shall be set at 15.0 M intervals along a line offset from the proposed pipeline and it shall be the Contractor's responsibility to preserve and protect them until completion of construction. All costs incurred by the Engineer for replacing

markers prematurely destroyed shall be charged to the Contractor. The Contractor shall erect at least three batter boards, based on the offset stakes, and he shall ascertain that they are in correct alignment before starting to lay pipe on any new grade. Laser assisted line and grade set and will be acceptable.

The locations of service connections shall be staked in the field before excavation for the mains is commenced. The depth of service connections at property line shall be given from offset stakes at property line before excavation for the service connection is commenced.

Sewers shall be laid on line and grade in accordance with the Engineer's stakes.

Where the line and/or grade of pipe laid deviates by more than 30 mm from the true line and/or grade, as shown on the approved drawings, the pipe shall be taken up and relaid.

3.05 Sheeting and Bracing of Excavations

Trenches shall be sheeted and braced as recommended by the Workmen's Compensation Board or as may be necessary to protect life, property and structures adjacent to the work, the work itself or to maintain trench widths within the specified limits. Trench setting and bracing shall be located not closer than 150 mm to the pipeline being installed.

Where sheeting or timber is removed from a trench in which backfill is to be compacted, it shall be removed in a manner which permits compaction of the backfill in the manner specified; otherwise it shall be left in place.

3.06 Dewatering

Ground and surface water shall be controlled to the extent that excavation and pipe installation can proceed in the specified manner and such that the trench bottom is not disturbed to the detriment of the pipe installation. Trench water shall not be permitted to enter the pipe being installed unless approval is received from the Engineer.

The necessary pumps, well points or other equipment shall be employed to keep excavations free of water. Caution shall be exercised to make sure that foundation problems with existing structures and works under construction do not result from the selected method of dewatering excavations. Discharge from pumps, well points or other dewatering equipment shall be located and controlled in such a manner that loss, damage, nuisance or injury to the public does not result.

3.07 Trench Bottom Conditions

Trenches shall be maintained such that pipe can be installed without water, muck, silt, gravel or other foreign material entering the pipe. Upon completion of machine excavation, material remaining in the trench bottom, which has been disturbed or softened by workmen or by trench water, shall be removed before bedding material is placed. The trench bottom shall be firm and capable of supporting the pipe to be installed, otherwise the bottom shall be stabilized by

means of overexcavation or special foundation designed to support the pipe as hereinafter described.

When the material in the trench bottom is found to be unstable or otherwise unsuitable for pipe support of appurtenant structures, one of the following methods of stabilizing the trench bottom shall be adopted as directed by the Engineer:

- (a) The trench shall be overexcavated to the level at which stable material is encountered and the excavation backfilled to the level of normal bedding with 50 mm minus base gravel material. This material shall be compacted with approved mechanical compactors in lifts having a maximum depth of 0.30 M to provide a thoroughly consolidated pipe base. Bedding material, as specified for normal pipe bedding, may be employed for this purpose to a maximum depth of 300 mm below the normal depth of bedding.
- (b) If the unstable material extends to a depth at which it is uneconomical to overexcavate as in (a), then piles or other structural supports shall be installed in accordance with the Engineer's instructions.

3.08 Pipe Bedding

The pipe bedding shall extend from at least 100 mm below the bottom of the pipe barrel to at least 25 mm above the pipe springline.

Prior to installing pipe, a cushion of bedding material shall be placed in the trench bottom and compacted to grade by approved hand tampers or mechanical means to form a firm pipe base. This cushion shall cover the full width of the trench bottom and have a minimum depth of 100 mm on completion of compaction. In rock excavations, the minimum depth of bedding below the pipe shall be 150 mm. Bell or coupling holes shall be dug such that the full barrel of the pipe is supported throughout its length to grade. After the pipe is in position, bedding material shall be placed and firmly compacted in 150 mm layers using hand tampers on both sides of the pipe.

3.09 Pipe Installation

Pipe shall be checked before being lowered into the trench to ensure that no foreign material, manufacturer's defects or cracks exist that might prevent proper jointing of the pipe or its operation as a sewer. Pipe and fittings shall be carefully lowered into the trench by means of derricks, ropes or other approved tools or equipment in a manner that will prevent damage to the pipe and injury of workmen.

Pipe shall be jointed in strict accordance with the manufacturer's recommendations. Sufficient pressure shall be applied in making the joint to assure that the distance between the end of the pipe installed and the pipe in place is within the tolerances recommended by the pipe manufacturer. Once the joint is home, restraint shall be applied to the pipe by tamping of backfill or placement of temporary blocking to ensure that the pipe does not creep and dislodge the joint. At the end of the day's work, or if the work is shut down for an extended period during the day, the last pipe shall be blocked to prevent creep

in the pipeline and plugged to prevent entry of foreign material.

3.10 Service Connection Junctions

Service connection junctions to sewer mains shall be made with pre-fabricated 45-degree Y-branch fittings at the locations shown on the drawings or staked in the field. All such fittings shall be provided with watertight plugs or caps.

3.11 Backfilling in the Pipe Zone

The pipe zone is defined as extending from the bottom of the pipe bedding to 300 mm above the top of the installed pipe.

After the pipe has been installed and bedded, select backfill material as defined elsewhere in these Specifications shall be placed by hand and thoroughly compacted in 150 mm layers by hand tamping or with approved mechanical compactors up to a level of 300 mm above the top of the installed pipe.

If the Contractor is unable to find sufficient quantity of suitable select backfill material from the excavated material as determined by the Engineer, he shall import suitable material and backfill the pipe zone as directed by the Engineer.

3.12 Backfilling above the Pipe Zone

Materials and methods employed in backfilling trenches above the pipe zone shall depend on the type of surface in which the trench is excavated.

Travelled surfaces are defined as gravelled or paved roadways, lanes, driveways, parking areas, road shoulders, walkways or other gravelled or paved surfaces over which vehicular or pedestrian traffic normally travels.

Backfill above the pipe zone and surface restoration of trenches shall be carried out in accordance with the following paragraph:

Where compaction of the backfill is specified, compaction shall be obtained by using approved, mechanical, power-driven compactors. Compaction shall be carried out with the soil at optimum moisture content such that compaction to 95% of Modified Proctor Density (ASTM D1557) is obtained. Backfill shall be thoroughly compacted in layers not greater than 300 mm thick.

(a) Untravelled Surfaces

In untravelled surfaces, unless otherwise specified, trench backfill above the pipe zone shall be native backfill material. Backfill may initially be built up to a height above original ground level equal to 10% of the trench depth and allowed to settle. Prior to acceptance, however, the trench surface shall be restored to its original level and to a condition which at least is equivalent to that which existed prior to construction unless the approval of the Engineer is given to leaving trench surfaces in a bermed condition.

(b) Gravel Travelled Surfaces

In travelled surfaces which were originally gravel surfaces, trench backfill above the pipe zone to a level of 300 mm below the original ground surface shall, unless otherwise specified, be native backfill material. The top 300 mm of backfill shall be road base gravel in accordance with Department of Highways standards.

Backfill in trenches located in gravel travelled surfaces need not be compacted except in locations where compaction is considered necessary by the Engineer. Compaction of backfill will not be ordered solely for the purpose of reducing the Contractor's maintenance requirements.

(c) Paved Travelled Surfaces

When trenches have been excavated in existing paved surfaces which are to be repaved, trench backfill shall be mechanically compacted native backfill material (unless it is declared unsuitable for backfill by the Engineer) to a level 350 mm below finished surface grade. The remainder of the trench shall be backfilled with 300 mm of compacted 31 mm road base gravel and finished with a minimum thickness of 50 mm of compacted hot-mix asphaltic concrete.

Where pavement adjacent to the excavation is destroyed or subsides as a result of the construction operation, the Contractor shall cut out and remove the destroyed or subsided pavement, compact all backfill beneath, place the 300 mm course of road base gravel and replace the paved surface.

(d) Trench Cuts Across Existing Roads

Where trenches have been cut across existing roads, these trenches shall be restored to their original condition as soon as possible. Backfill shall be fully compacted and paved surfaces shall be patched immediately with hot-mix asphaltic concrete. If weather conditions preclude immediate repaving with hot-mix, then a temporary cold-mix patch shall be installed and replaced later with hot-mix.

(e) New Roads in Subdivisions

In subdivisions where roads are to be constructed and paved within one year of backfilling, all trenches under roads or within 1.0 M of the edge of pavement shall be backfilled with native backfill material (unless it is declared unsuitable for backfill by the Engineer) and compacted as specified hereinafter.

Wherever native material is not suitable for backfill, in the opinion of the Engineer it shall be hauled away and disposed of and imported backfill material shall be provided by the Contractor.

Where compaction of the backfill is specified, compaction shall be obtained by using approved, mechanical, power-driven compactors.

3.13 Support for Neighbouring Pipes and Structures

Existing structures shall be protected against damage from settlement by

means of timber support and compaction of backfill. Where necessary, timber support shall remain in place following backfill of excavations.

Backfill which is placed or adjacent to existing structures, which have been undermined during excavation, shall be compacted in a manner which will prevent damage of the structure from settlement. Such backfill shall be of approved granular material thoroughly compacted in layers not more than 150 mm thick. Under existing piping this material shall horizontally a minimum distance of 0.61 M on both sides of pipe at the top of pipe level and shall slope down from this point at 1½ horizontal to one vertical to meet the bottom of the excavation.

3.14 Disposal of Surplus Excavated Material

Surplus excavated material shall be deposited as fill on or around the site of the work as directed by the Engineer, or, if no fill is required at the site, it shall be disposed of away from the site by the Contractor. No soil shall be removed from the site without the Engineer's written permission. No material shall be deposited on private property unless the Contractor has first obtained the written permission of the owner or on public property unless the Contractor has obtained written permission of the Engineer.

3.15 Service Connections

Service connections from the mains to property lines shall be installed at the locations and to the elevations shown on the drawings or as directed by the Engineer.

Service connections shall, as far as possible, be installed in a straight line and at uniform grade from the terminus at property line to the Y-branch fitting on the main.

The ends of service connections shall be not more than 300 mm short of property line; otherwise they shall be dug up and extended by the Contractor. The ends of all service connections shall be sealed with watertight plugs or caps and marked with 50 mm x 100 mm stakes placed vertically with one end in the bottom of the trench and in contact with the watertight plug or cap and the other end protruding at least 0.61 M above ground level. The depth of the service pipe invert below the top of the 50 mm x 100 mm marker stake shall be marked on the stake.

When the sewer main is 3.65 M or more in depth, service risers may be installed close to the mains as shown on the Standard Drawings.

Service Connections shall be at least 100 mm diameter and shall be laid at not less than two (2) percent slope.

The ends of sewer services will in general be located at a point 6.0 M from the downstream corner of each lot.

Inspection chambers shall be provided as shown in the standard sewer connection drawings.

3.16 Manholes

Precast concrete manholes shall conform to the details shown on the Standard Drawings.

The bottom of excavations for manholes shall be treated as specified for trench bottom conditions elsewhere in these Specifications.

All water shall be removed from the excavation prior to placing manhole base concrete.

Concrete for manhole bases shall be Class A2 in accordance with S.C.R.D. Standard Specifications for Ready-mixed Portland Cement Concrete.

Manhole channelling shall be constructed as shown on the Standard Drawings. Wherever possible, channelling shall be formed using half sections of pipe or fittings. Particular care shall be taken when constructing manhole bases to ensure that the invert levels of pipe entering and leaving the manhole are set at the elevations established by the Engineer. Invert levels or pipe at the manhole shall be checked by the Contractor prior to and following placement of base concrete around the pipe. Pipes which are embedded in concrete manhole bases at one end shall be bedded in concrete to within 150 mm of the other end. Pipes which are embedded in concrete manhole bases shall not be more than 1.2 M long.

Blind stub sections for connection of future sewers and service connections to the manholes shall be installed where shown on the drawings and as directed by the Engineer. The stub shall consist of one short length of the specified size of pipe installed in the manhole and plugged with a removable, watertight plug as shown on the drawings. Where stubs are installed, the bottom of the manhole shall be channelled to the stub entrance.

Manhole drop structures shall be constructed as shown on the drawings, where vertical drop into the manhole exceeds 0.61 M.

Precast sections shall be placed plumb with joints mortared to exclude any entrance of ground water.

Frames shall be set on a minimum of one (1) and maximum of four (4) precast concrete filler rings. Rings shall be mortared in an approved manner to exclude any entrance of ground water. Frames shall be firmly embedded in mortar and shall be set accurately to provide a cover surface which is even with and true to the contour of the surface.

Levelling screws shall be applied on the frames where necessary to provide correct adjustment for the frames and covers under roads.

Manhole steps shall be placed as shown on the drawings or as directed by the Engineer.

Cone manholes shall be constructed as shown on the Standard Drawings wherever the manhole depth is 1.2 M or less.

3.17 Cleanouts

Cleanouts shall conform to the details shown on the Standard Drawings. The quality of construction shall in all respects be equal to that specified for manholes.

3.18 Tunnelling, Jacking and Augering

No tunnelling, jacking or augering shall be done without the written permission of the Engineer. At least seven (7) days before commencing any tunnelling or jacking or augering operations, the Contractor shall submit full details of his proposed operation to the Engineer.

Jacking of the actual sewer pipe will not be permitted. Rather, a conductor pipe shall be jacked and the sewer pipe installed therein. The space between the conductor and the sewer pipe shall be filled with sand or concrete in a manner satisfactory to the Engineer.

3.19 Leakage Testings of Sanitary Sewers

Leakage tests shall be made by the Contractor and witnessed by the Engineer on all installed sewers and appurtenances. Each run of sewer between manholes shall be tested immediately upon completion of the manholes.

Tests for leakage will be either infiltration or exfiltration tests. The type of test employed will be determined by the Engineer. Where the surface level of existing ground water in the backfilled trench is 1.0 M or more above the top of the pipe over the entire test section, an infiltration test may be used to determine leakage into the pipe. Where the ground water surface level is less than 1.0 M above the top of the pipe, or where ground water at the time of testing is not apparent, the Contractor shall carry out an exfiltration test.

The Contractor shall provide test water, equipment and all materials necessary to conduct leakage tests as specified herein.

On an exfiltration test, the test section shall be sealed at its lower extremity by means of a watertight plug. The test section shall be filled with water such that a minimum hydrostatic head of 0.61 M is placed on the pipe at its upper extremity. The head of water on the pipe shall be taken as the distance from the top of the pipe to water surface at the point of measurement. The test pressure shall be maintained above the 0.61 M minimum head for a period of not less than one hour, and unless excess exfiltration requires further testing, not greater than eight (8) hours. The rate of exfiltration shall be calculated from the amount of water which must be added to maintain the original water level at the upper end.

3.20 Surface Restoration in Easements

Topsoil, shrubs, small trees, lawn, fences and other items removed prior to or during the construction operations shall be replaced to at least equal the original condition. Items which have been destroyed shall be replaced to the satisfaction of the property owner.

Prior to acceptance of the work, the Contractor shall obtain a written release from each owner of easement property certifying that the owner is satisfied with the restoration of the working area and trench surface. A copy of such releases shall be submitted to the Engineer.

3.21 Surface Maintenance during Construction

The Contractor shall maintain all trench surfaces and working surfaces affected by his operation throughout the construction period and until such time as the project is accepted by the Owner. Maintenance during this period shall be as follows:

(a) Trench Surfaces

Surfaces of backfilled trenches which have been temporarily bermed shall be maintained at, or above, the level of the original ground and shall be finished as specified prior to acceptance. Material shall be provided and placed to fill depressions resulting from settlement of backfill.

Gravelled surfaces of backfilled trenches shall be maintained at the original ground level and free of pot holes and washboard conditions. Additional surfacing gravel shall be provided and placed to fill any surface depressions resulting from settlement of the trench backfill and surfaces shall be graded to eliminate depressions, pot holes and washboard conditions as often and as soon as they occur.

Backfilled trenches which, due to weather conditions, cannot immediately be reinstated to the specified standard and which are hazardous to traffic, shall be marked with 300 mm x 300 mm reflectorized hazard markers projecting three 1.0 M above ground, so that traffic is warned of the presence of the traffic hazard.

Bumps or other road hazards shall be adequately marked with lanterns, flashers and suitable signs until such time as road defects are rectified.

(b) Working Surfaces

In addition to maintenance of backfilled trench surfaces, working surfaces which have been disturbed during construction shall be maintained until final acceptance of the work.

3.22 Flushing and Final Inspection

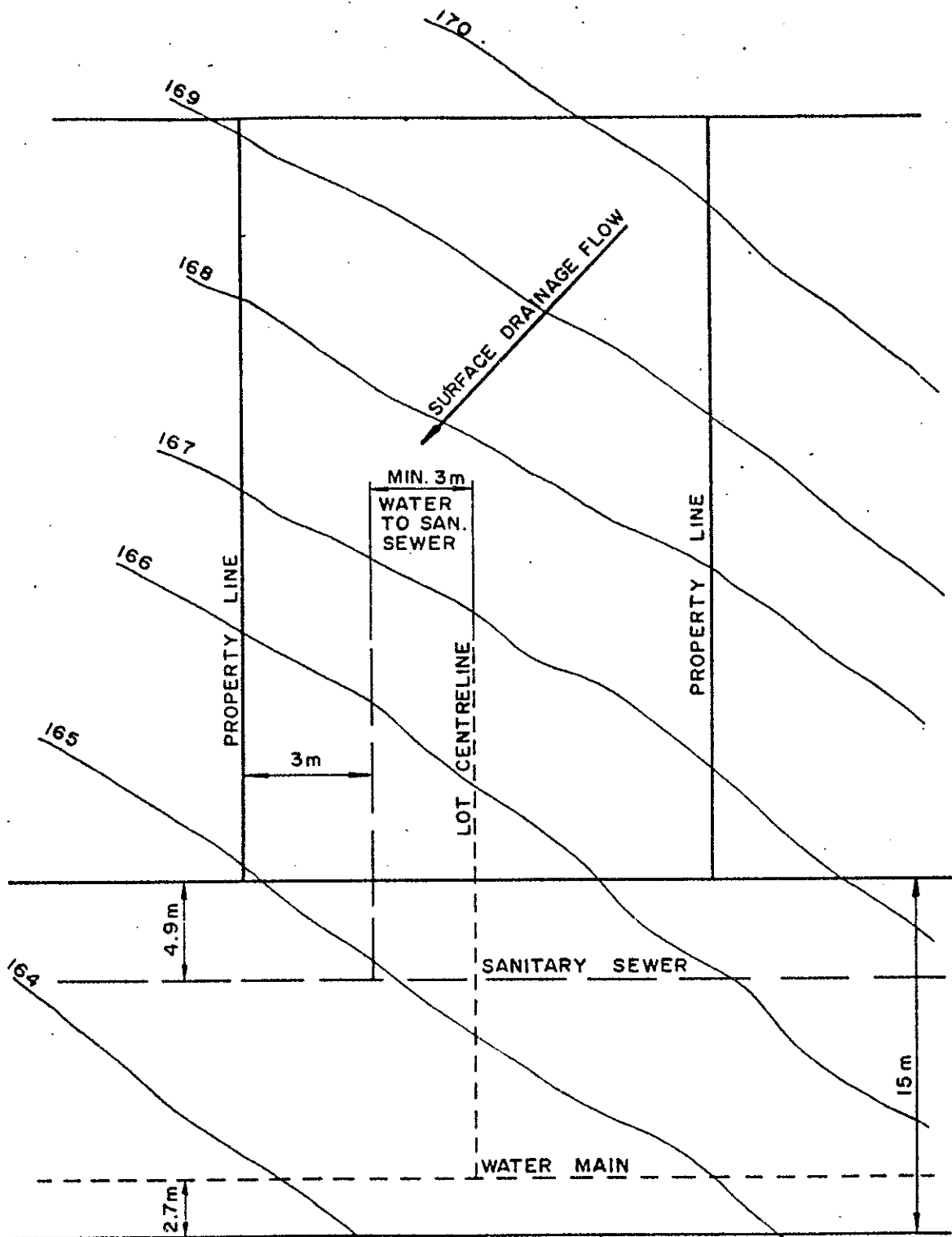
Prior to final inspection of sewers, the Contractor shall flush each run between manholes, by use of a high pressure water jet cleaner. The Contractor shall remove all foreign material found in the sewers.

The Engineer will then carry out final inspection of the sewers and appurtenances. Each run of sewers between manholes shall be lamped to check alignment, grade and cleanliness. Manhole construction and invert elevations and the elevation of blind stubs shall be checked. Any deficiencies found during the final inspection or at any time after until the end of the maintenance period shall be promptly rectified by the Contractor.

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS (WATER AND SEWER)

4. LIST OF SEWER DRAWINGS

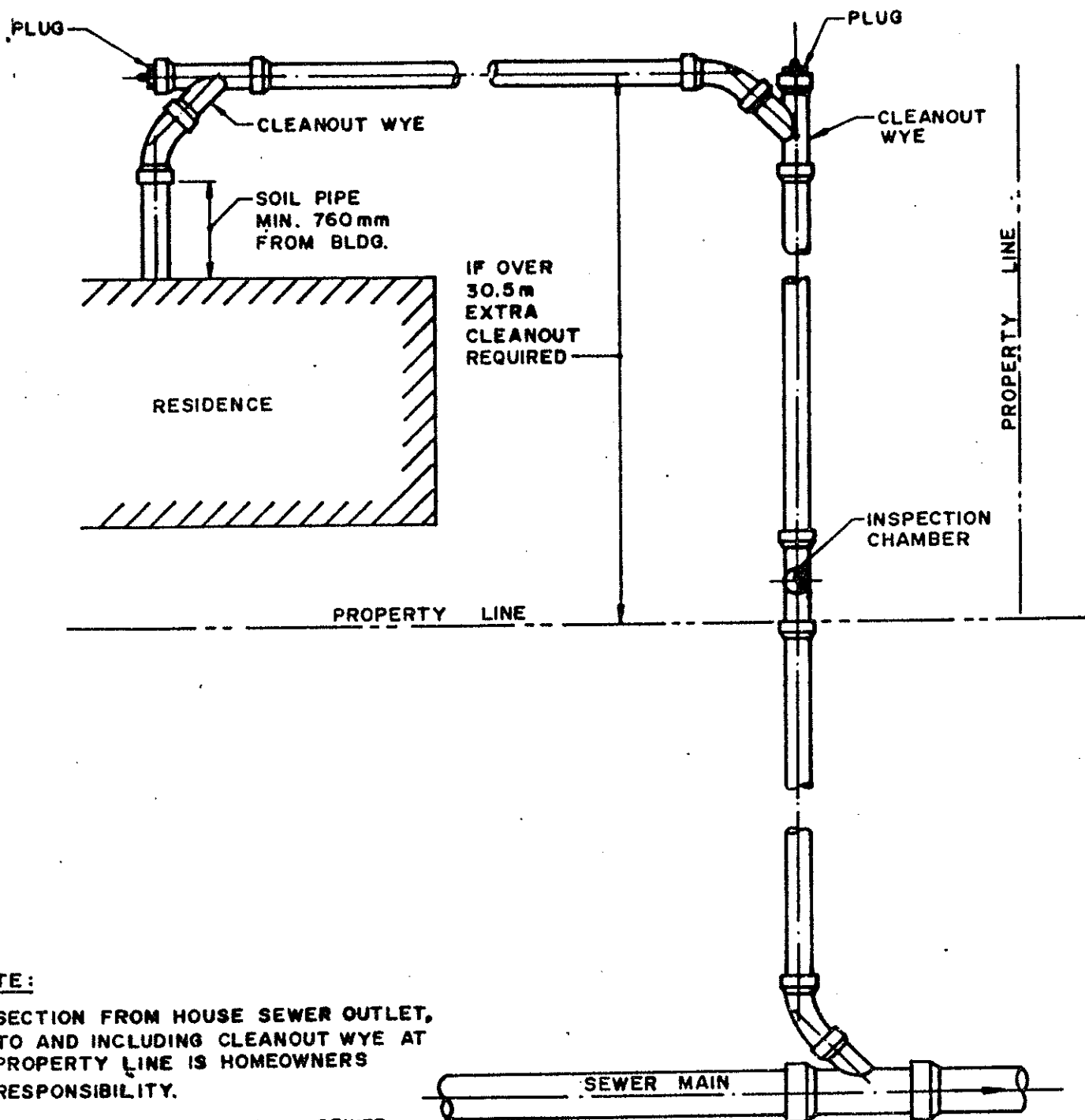
<u>Description</u>	<u>Drawing No.</u>
Typical Location of Service Connections to Residential Vacant Lots	S-1
Typical Residential Sewer Connection	S-2
Service Connection - Riser Type	S-3
Service Connection - Non-Riser Type	S-4
Trench Details - Section in Greavelled Surface	S-5
Trench Details - Section in Paved Surface	S-6
Bedding Backfill and Cradling in Pipe Zone	S-7
Manhole Details - Standard Precast Type	S-8
Sanitary Sewer Cleanout Structure	S-9
Manhole Cover and Frame	S-10



NOTE:

SANITARY SEWER SERVICES TO BE INSTALLED
ON THE LOWER SIDE OF THE LOT

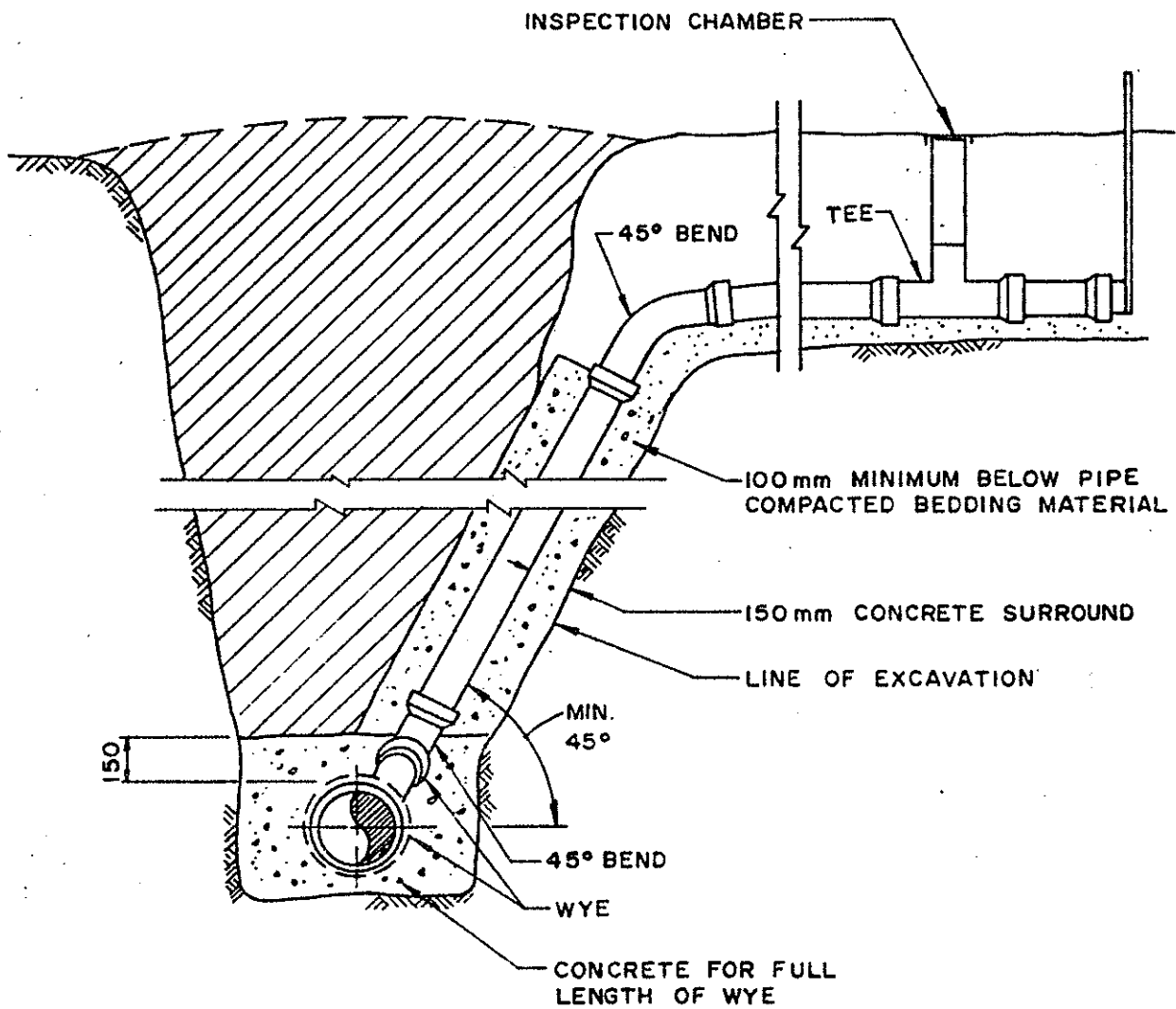
No.	DATE	REVISIONS	DWG. S - I
TYP. LOCATION OF SERVICE CONNECTIONS TO RESIDENTIAL VACANT LOTS			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE



NOTE:

1. SECTION FROM HOUSE SEWER OUTLET, TO AND INCLUDING CLEANOUT WYE AT PROPERTY LINE IS HOMEOWNERS RESPONSIBILITY.
2. MINIMUM GRADE FOR 100 mm SEWER LINE IS 1 mm PER 50 mm.
IN EXCEPTIONAL CASES A GRADE OF 1 mm PER 100 mm MAY BE USED, PROVIDING THIS IS AUTHORIZED AND APPROVED BY THE MUNICIPAL ENGINEER.
3. ANY CHANGE IN DIRECTION TO BE MADE WITH WYES OR 45° BENDS ONLY.
4. PLUGS TO BE REMOVABLE, WATERTIGHT TYPE.

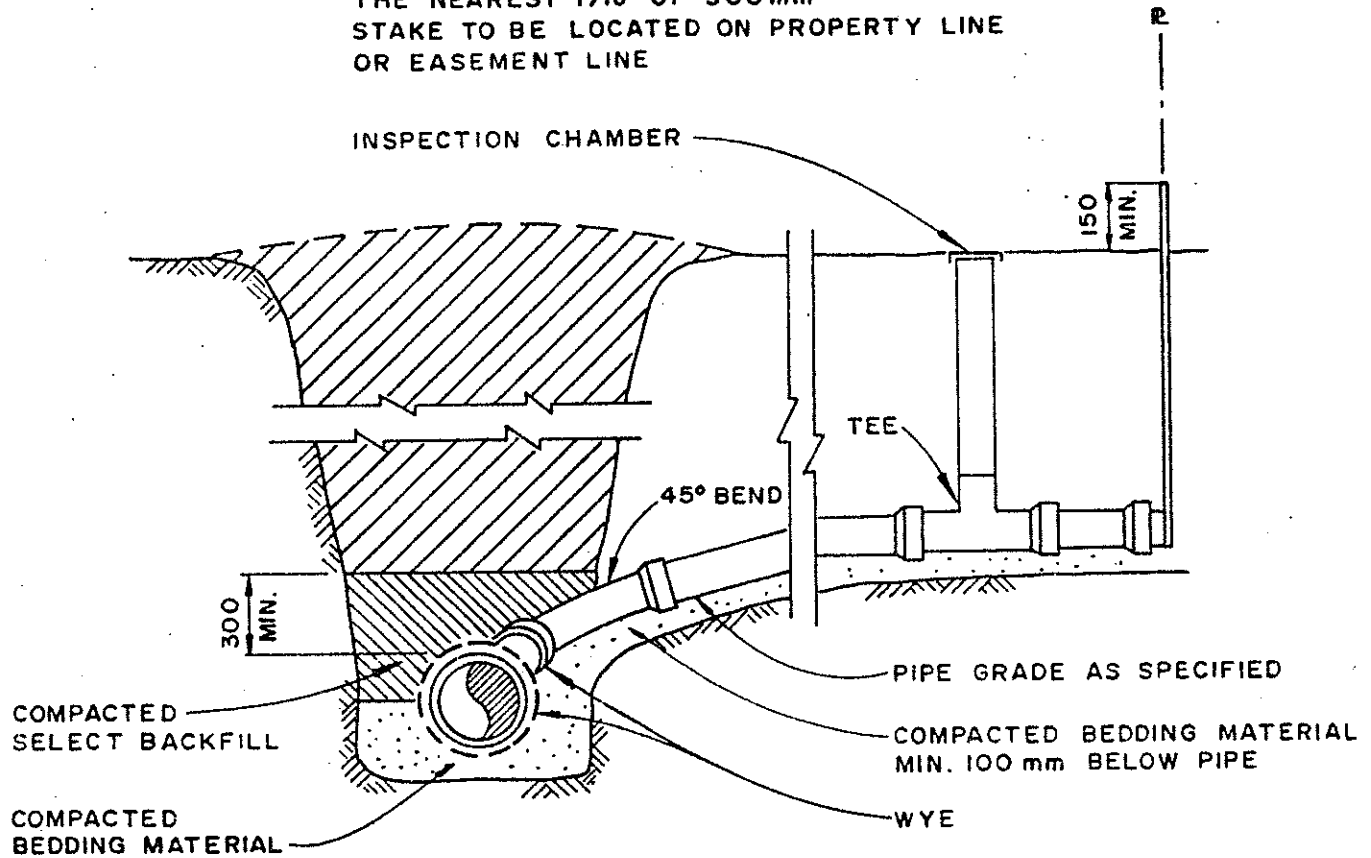
No.	DATE	REVISIONS	DWG. S - 2
TYP. RESIDENTIAL SEWER CONNECTION			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE



No.	DATE	REVISIONS	DWG. S - 3
SERVICE CONNECTION RISER TYPE FOR SEWERS OVER 3.66m TO INVERT			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE

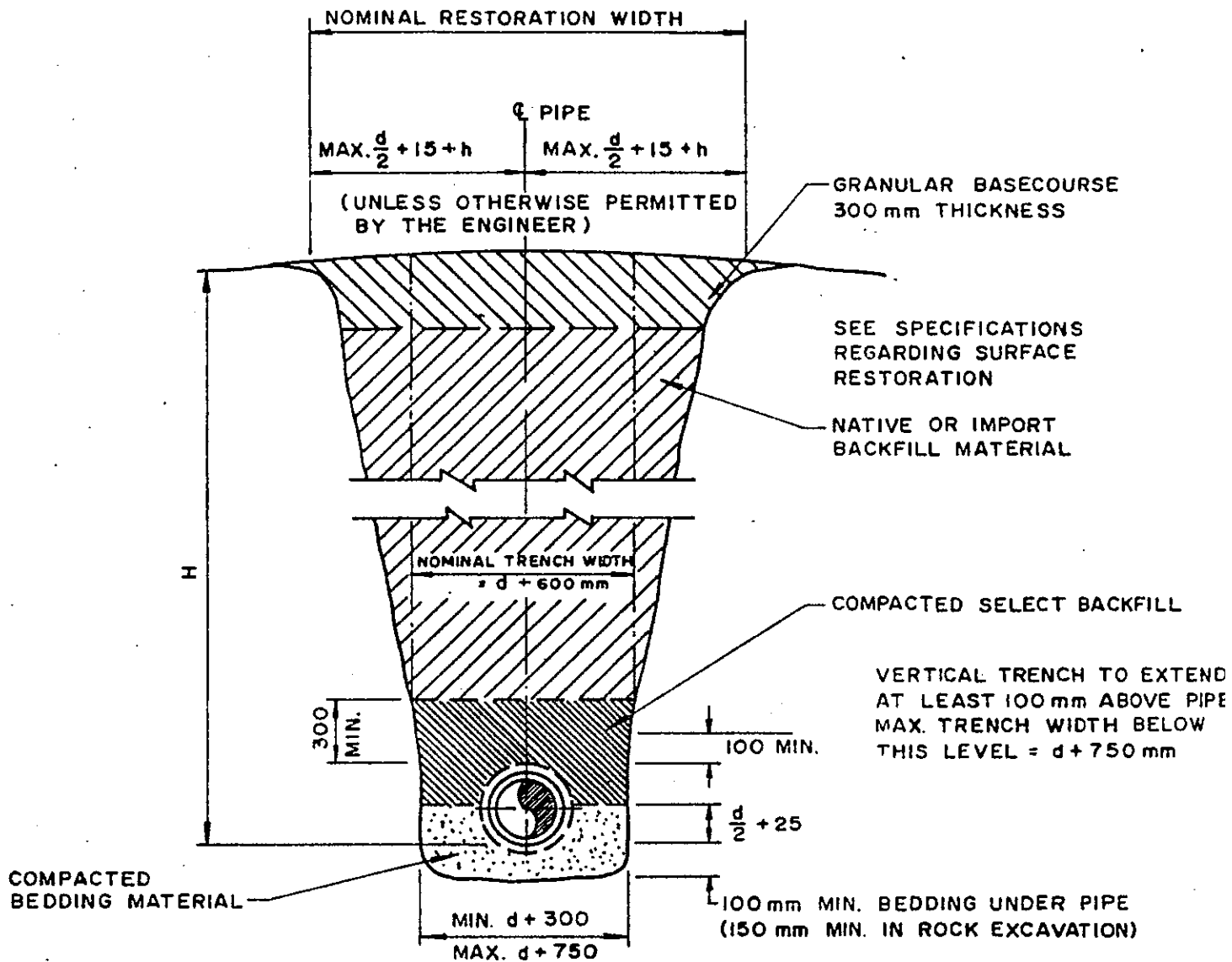
IF THE SERVICE IS IN A LOCATION WHERE THE STAKE
MAY BE A HAZARD TO PEDESTRAIN OR VEHICULAR TRAFFIC,
IT SHALL ONLY BE BROUGHT TO GROUND SURFACE

50mm x 100 mm, PAINTED YELLOW FOR SANITARY OR
GREEN FOR STORM, WITH DEPTH FROM TOP OF
STAKE TO INVERT OF SERVICE, PAINTED ON TO
THE NEAREST 1/10 OF 300mm
STAKE TO BE LOCATED ON PROPERTY LINE
OR EASEMENT LINE

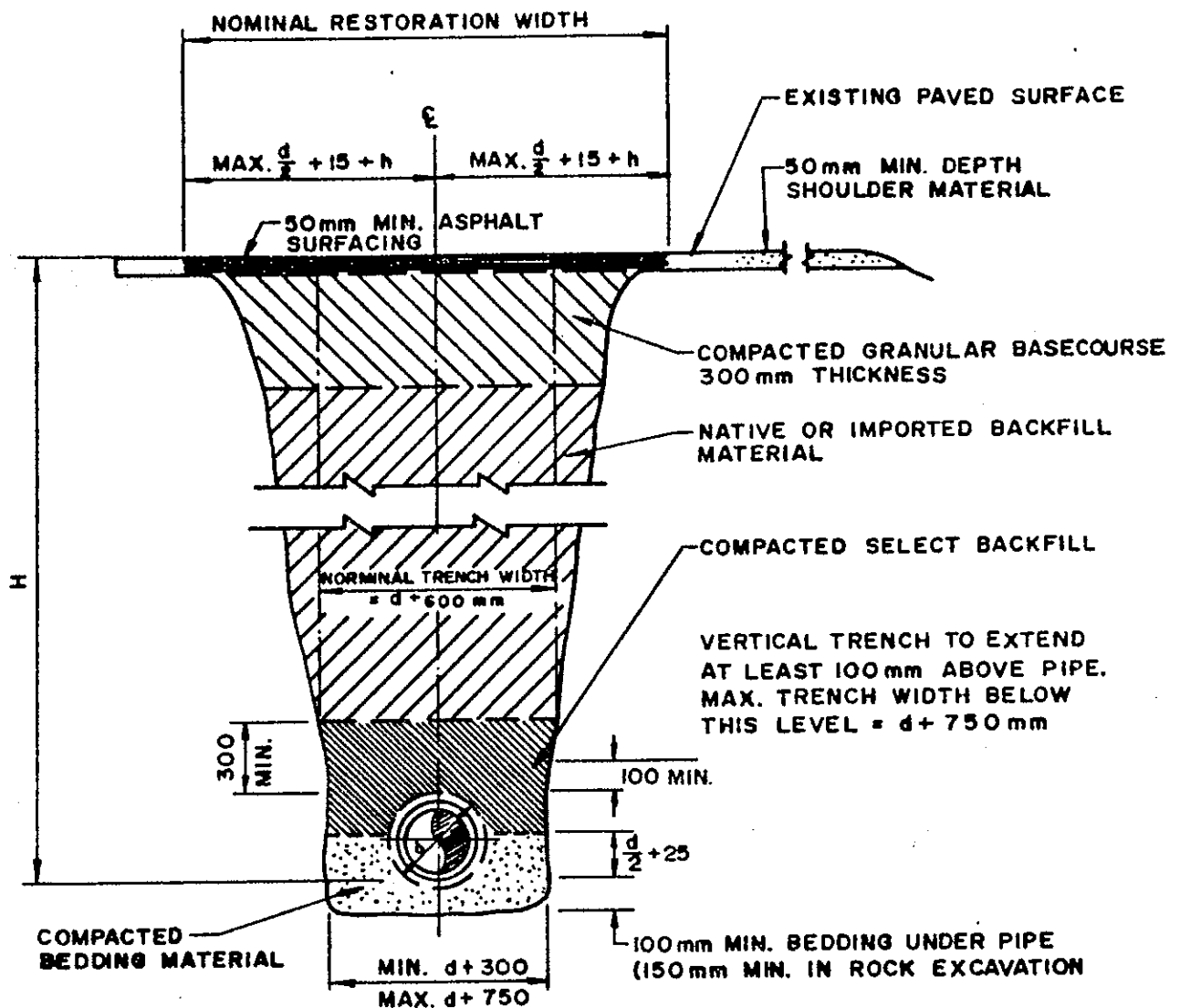


No.	DATE	REVISIONS	DWG. S - 4
SERVICE CONNECTION NON-RISER TYPE FOR SEWERS LESS THAN 3.66m TO INVERT			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE

NOTE: "h" IS NUMERICALLY EQUAL TO "H" & THE ANSWER IS IN MILLIMETRES
 d = OUTSIDE DIAMETER OF THE PIPE
 AT ITS LARGEST SECTION



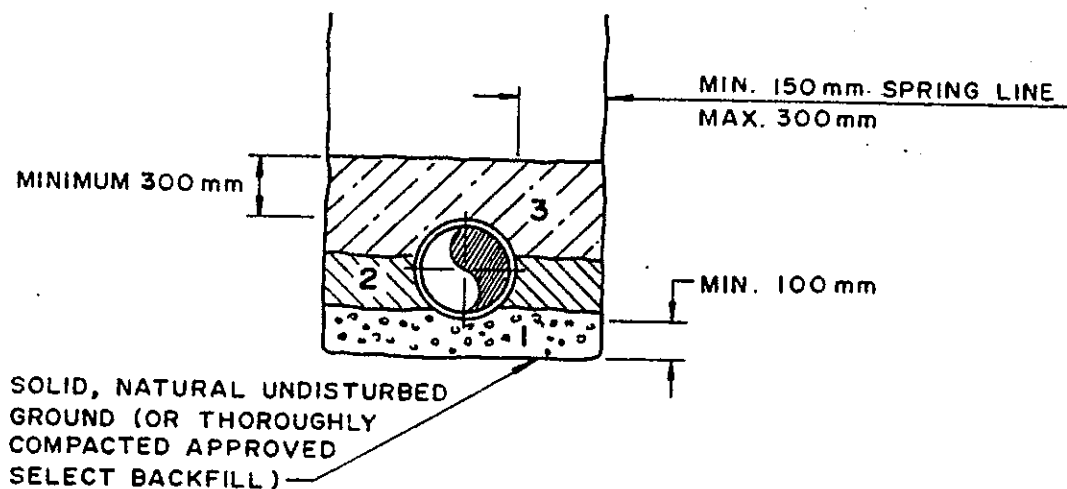
No.	DATE	REVISIONS	DWG. S - 5
TRENCH DETAILS SECTION IN GRAVELLED SURFACE			SUNSHINE COAST REGIONAL DISTRICT
			PREPARED BY
			DAYTON & KNIGHT LTD. CONSULTING ENGINEERS
			DATE



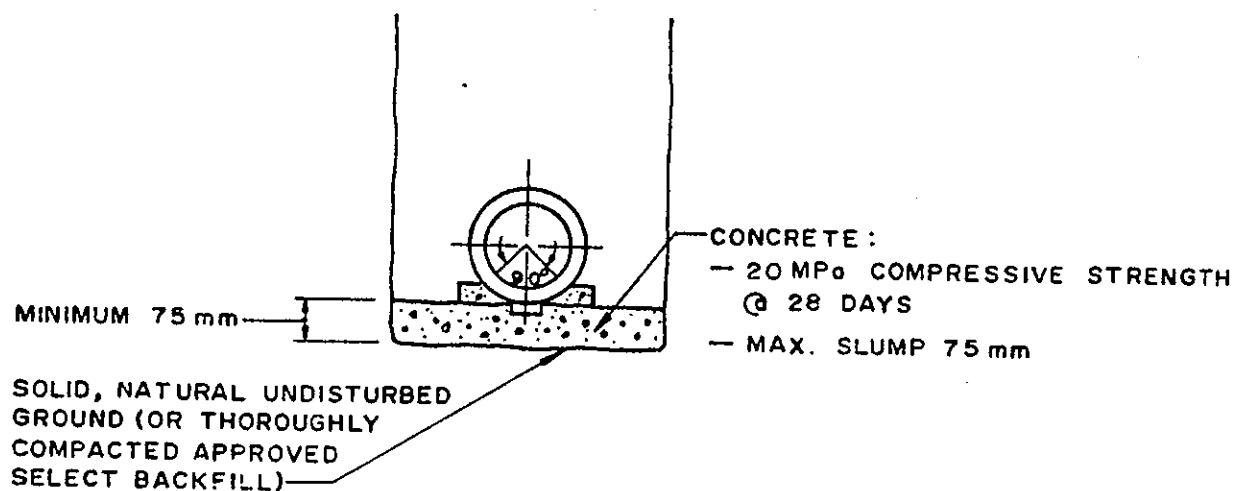
NOTE: "h" IS NUMERICALLY EQUAL TO "H" & THE ANSWER IS IN MILLIMETRES
 d = THE OUTSIDE DIAMETER OF THE PIPE
 AT ITS LARGEST SECTION.

No.	DATE	REVISIONS	DWG. S - 6
TRENCH DETAILS			SUNSHINE COAST REGIONAL DISTRICT
SECTION IN PAVED SURFACE			PREPARED BY
			DAYTON & KNIGHT LTD. CONSULTING ENGINEERS
			DATE

1. THOROUGHLY COMPACTED HAND-PLACED BEDDING GRAVEL OR CRUSHED STONE
2. HAND PLACED MATERIAL AS ABOVE THOROUGHLY HAND COMPACTED IN 150mm LIFTS PLACED TO AN ELEVATION 25mm ABOVE THE SPRING LINE OF THE PIPE AFTER LAYING
3. HAND PLACED & HAND TAMPED APPROVED BEST OF EXCAVATED MATERIALS IN 150mm LIFTS TO CONTAIN NO STONES OVER 75 mm IN LARGEST DIMENSION



CONCRETE CRADLING FOR ALL TYPES OF PIPE



No. DATE

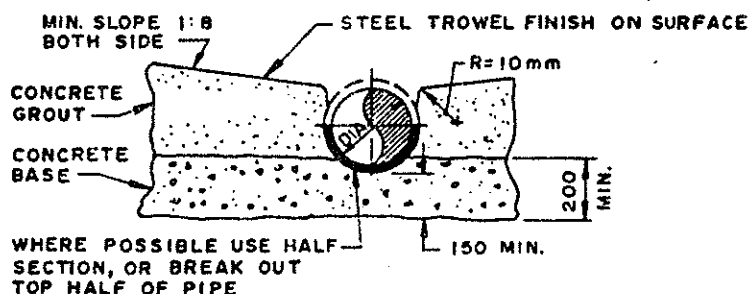
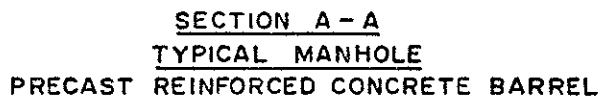
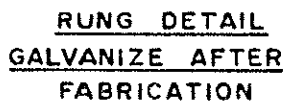
REVISIONS

DWG. S-7

BEDDING BACKFILL AND
CRADLING IN PIPE ZONE

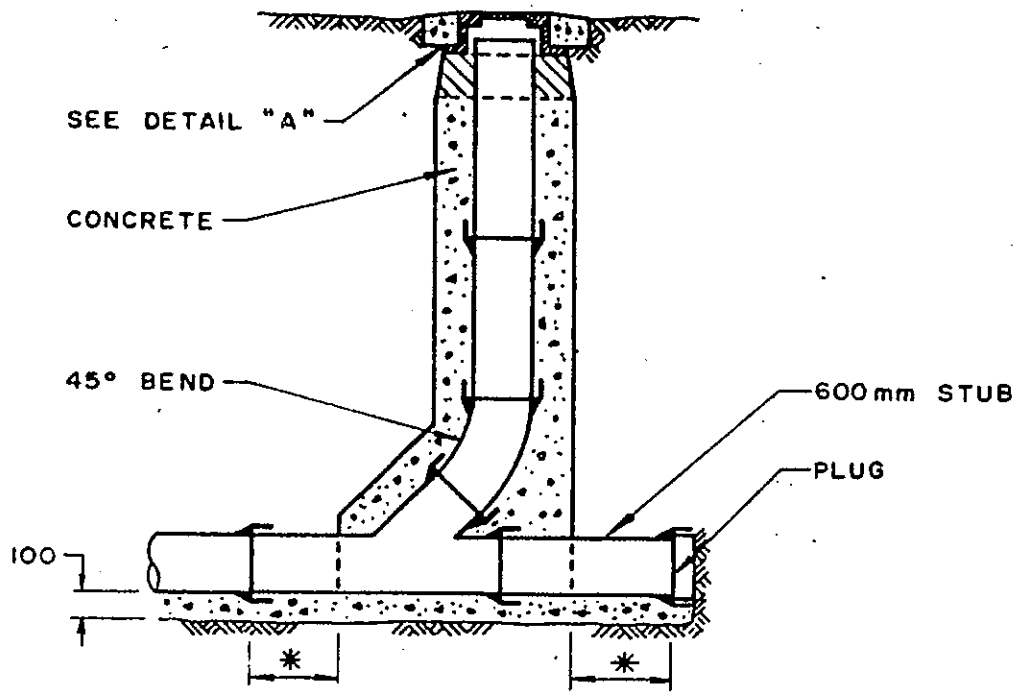
SUNSHINE COAST REGIONAL DISTRICT

PREPARED BY
DAYTON & KNIGHT LTD. CONSULTING ENGINEERS
DATE

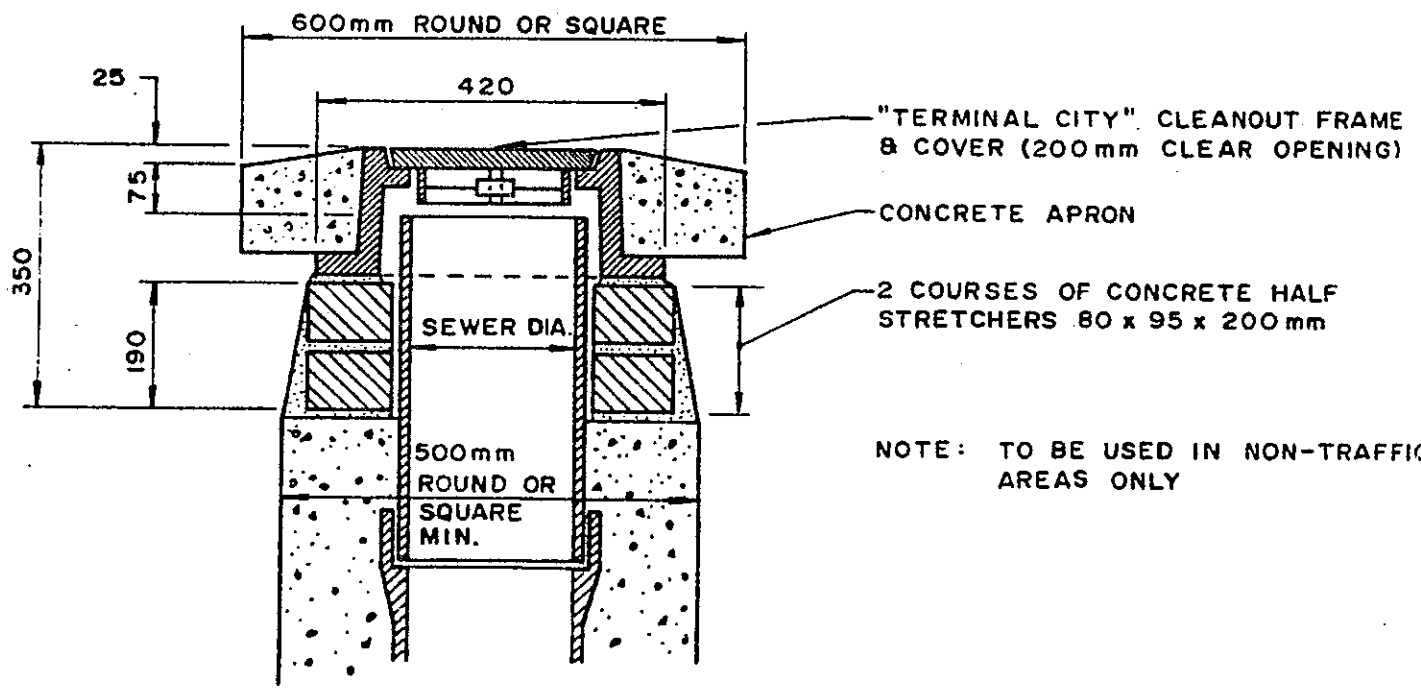


INVERT CHANNELLING IN MANHOLE

No.	DATE	REVISIONS	DWG. S-8
<p align="center">MANHOLE DETAILS STANDARD PRECAST TYPE FOR SEWERS 380mm DIA. OR LESS & OVER 1.37m IN DEPTH</p>			<p align="center">SUNSHINE COAST REGIONAL DISTRICT</p> <p align="center">PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE</p>



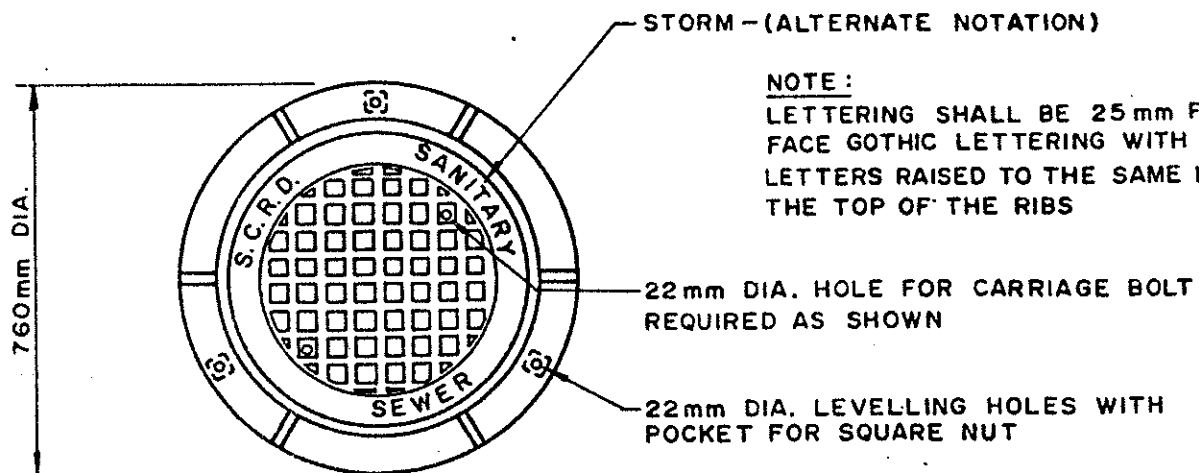
NOTE : * MAXIMUM PROJECTION NO MORE THAN ONE PIPE DIAMETER



NOTE : TO BE USED IN NON-TRAFFIC AREAS ONLY

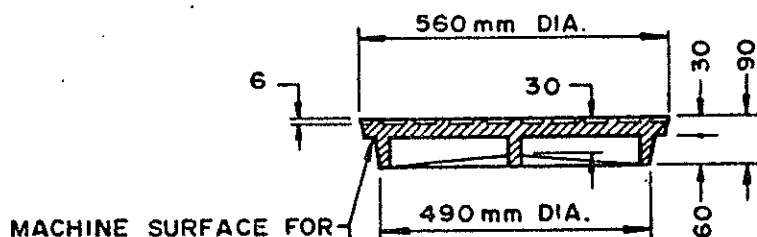
COVER DETAIL "A"

No.	DATE	REVISIONS	DWG. S - 9
SANITARY SEWER CLEANOUT STRUCTURE 465			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD., CONSULTING ENGINEERS DATE



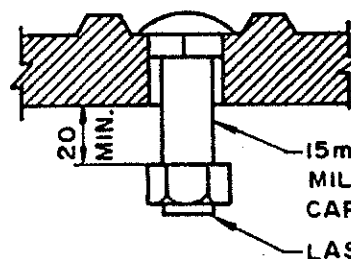
NOTE:
 LETTERING SHALL BE 25mm FLATTENE
 FACE GOTHIC LETTERING WITH FACE OF
 LETTERS RAISED TO THE SAME LEVEL AS
 THE TOP OF THE RIBS

PLAN

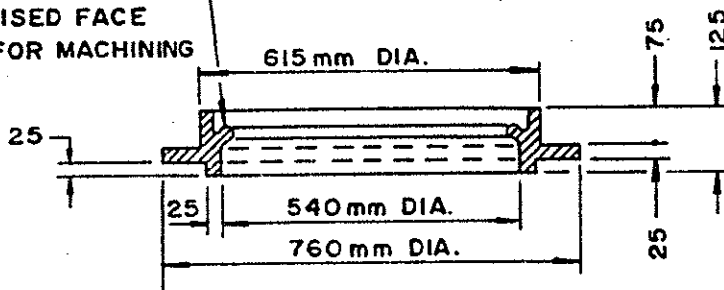


MACHINE SURFACE FOR
 NON ROCKING FIT IN
 ALL POSITIONS. ALLOW
 1.5mm RAISED FACE
 IN CAST FOR MACHINING

COVER



CARRIAGE BOLT DETAIL



FRAME

APPROXIMATE WEIGHTS

COVER - 66 Kg

FRAME - 84 Kg

TYPE - DOBNEY FOUNDRY NO. C-20 OR EQUIVALENT

No	DATE	REVISIONS	DWG. S-10
MANHOLE COVER & FRAME			SUNSHINE COAST REGIONAL DISTRICT
466			PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE

SUNSHINE COAST REGIONAL DISTRICT
SUBDIVISION SERVICING STANDARDS
(WATER AND SEWER)

METRIC CONVERSION TABLE

(APPROXIMATIONS)

WHEN YOU KNOW	MULTIPLY BY	TO FIND
LENGTH		
millimetres	.04	inches
metres	3.30	feet
kilometres	0.60	miles
inches	2.54	centimetres
feet	0.305	metres
miles	1.60	kilometres
AREA		
square metres	10.80	square feet
hectares	2.50	cubic feet
square feet	0.09	square metres
acres	0.4	hectares
VOLUME		
litres	0.22	imperial gallons
cubic feet	35.00	cubic feet
imperial gallons	4.50	litres
cubic feet	0.03	cubic metres

RELATED SENIOR ACT/REGULATION INFORMATION

APPENDIX

The following senior Act/regulation portions are reprinted and attached to the bylaw for convenience only. This information does not form part of Bylaw 320 and is intended to supplement the bylaw. It should be noted that the particulars of the senior Act/regulations are liable to change by the Province of B.C. from time to time. It should also be noted that the following is a selected and incomplete compilation of related senior government act or regulation portions.

Development Cost Charges

983. (2) A local government may, by bylaw, for the purpose of providing funds to assist the local government to pay the capital costs of
- (a) providing, constructing, altering or expanding sewage, water, drainage and highway facilities, other than off-street parking facilities, and
 - (b) providing park land to service, directly or indirectly, the development for which the charge is being imposed, impose development cost charges on every person who obtains
 - (c) approval of a subdivision, or
 - (d) a building permit authorizing the construction, alteration or extension of a building or structure.

Subdivision Servicing Requirements

989. (1) A local government may by bylaw regulate and require the provision of works and services in respect of the subdivision of land, and for that purpose may
- (a) regulate and prescribe minimum standards for the dimensions, locations, alignment and gradient of highways in connection with subdivisions of land, and may make different regulations for different uses and for different zones in the municipality or regional district,

- (b) require that within a subdivision, highways, sidewalks, boulevards, boulevard crossings, transit bays, street lighting or underground wiring be provided, and be located and constructed in accordance with the standards prescribed by the bylaw, and the bylaw may prescribe different standards for different zones and highway classifications and for different abutting uses of land, and
 - (c) require that within a subdivision, a water distribution system, a fire hydrant system, a sewage collection system, a sewage disposal system, a drainage collection system or a drainage disposal system be provided, located and constructed in accordance with the standards prescribed in the bylaw, and the bylaw may prescribe different standards for different zones.
- (2) Where a local government, an improvement district or greater board operates a community water or sewer system, or a drainage collection or disposal system, the local government may by bylaw require that a system referred to in subsection (1) (c) be connected to the local government, improvement district or greater board system, in accordance with standards prescribed in the bylaw.
 - (3) Where there is no community water system, the local government may by bylaw require that each parcel to be created by the subdivision have a source of potable water having a flow capacity at a rate prescribed in the bylaw.

Completion of Works and Services

991. All works and services required to be constructed and installed at the expense of the owner of the land being subdivided or developed shall be constructed and installed to the standards prescribed in the bylaw before the approving officer approves of the subdivision or the building inspector issues the building permit, unless the owner of the land

- (a) deposits with the municipality or regional district a security in the form and amount prescribed in the bylaw or, if there is no bylaw, in a form and amount satisfactory to the approving officer or building inspector having regard to the cost of installing and paying for all works and services required under the bylaw, and
- (b) enters into an agreement with the municipality or regional district to construct and install the required works and services by a specified date or forfeit to the municipality or regional district the amount secured under paragraph (a).

Provision of Park Land

992. (1) An owner of land being subdivided shall, at his option,
- (a) provide, without compensation, park land of an amount and in the location acceptable to the local government, or
 - (b) pay to the municipality or regional district an amount that equals the market value of the land that may be required for park land purposes under this section determined under subsection (6).
- (2) Where an official community plan or a rural land use bylaw contains policies and designations respecting the location and type of future parks, the local government may, notwithstanding subsection (1), determine whether the owner shall provide land under subsection (1) (a) or money under subsection (1) (b).
- (3) Where a regional district is not, under its letters patent, authorized to exercise a community parks function, the owner shall, notwithstanding the option provided in subsection (1), provide land.
- (4) The amount of land that may be required under subsection (1) (a) or used for establishing the amount that may be paid under subsection (1) (b) shall not exceed 5% of the land being proposed for subdivision.
- (5) Subsection (1) does not apply to a
- (a) subdivision where fewer than 3 additional lots would be created,
 - (b) subdivision where the smallest lot being created is larger than 2 ha, or
 - (c) consolidation of existing parcels.
- (6) Where an owner opts to pay money under subsection (1) (b), the value of the land is calculated on the basis of the average market value of all land in the subdivision, as that value would be on the date of the final approval of the subdivision by the approving officer, minus the costs of designing, surveying, engineering and servicing.
- (7) Where, for the purpose of subsection (6), an owner and a local government do not agree on the market value, it shall be determined in the manner prescribed in the regulations that the minister may make for the purpose.

- (8) Where an area of land has been used to calculate the amount of land or money provided or paid under this section, that area shall not be taken into account for a subsequent entitlement under subsection (1) in respect of any future subdivision of the land.
- (9) Land or payment referred to in subsection (1) shall be provided or paid to a municipality or regional district before final approval is given or the owner and the local government may enter into an agreement that the land or payment be provided or paid by a date, specified in the agreement, after final approval has been given.
 - (9.1) Notwithstanding subsection (9), the minister may, by regulation, authorize the payment that may be required by this section be made by instalments and may prescribe the conditions under which instalments may be paid.
- (10) Notice of this agreement shall be filed with the registrar in the same manner as a permit may be filed and section 980 (8) to (11) applies.
- (11) Where the owner pays money for park land under this section, the municipality or regional district shall deposit this in a reserve fund established for park land acquisition purposes, and sections 378 and 387 apply, but the approval of the minister under section 378 is not required.
- (12) Where land is provided for park land under this section, the land shall be shown as park on the plan of subdivision.

Parcel Frontage on Highway

- 994. (1) Where a parcel being created by a subdivision fronts on a highway, the minimum frontage on the highway shall be the greater of
 - (a) 1/10 of the perimeter of the lot that fronts on the highway, or
 - (b) the minimum frontage that the local government may, by bylaw, provide.
- (2) The local government may exempt a parcel from the statutory or bylaw minimum frontage provided for in subsection (1).
- (3) The local government may delegate its powers under subsection (2) to an approving officer.

Highway Provision and Widening

995. (1) An approving officer may require that the owner of the land being subdivided provide, out of the land that is being subdivided and without compensation, land not exceeding
- (a) 20 m in depth, for a highway within the subdivision, or
 - (b) the lesser of
 - (i) 10 m in depth, or
 - (ii) the difference between the current width of a local highway and 20 m, to widen an existing local highway that borders or is within the subdivision.
- (2) Where the approving officer believes that, due to terrain and soil conditions, a roadway of a width of 8 m cannot, within the 20 m limit referred to in subsection (1), be adequately supported, protected or drained, he may determine that the owner provide, without compensation, land of a greater width than that referred to in subsection (1) (a) or (b) that, in the approving officer's opinion, would permit the local highway to be supported, protected or drained.

Residence for Relative

996. (1) Notwithstanding a bylaw under this Act or a regulation under the Local Services Act, an approving officer may approve under this section a subdivision of any parcel of land that has been owned by the person applying for the subdivision for not less than 5 years before he makes the application, to provide a separate residence for the owner, or for his father, mother, father-in-law, mother-in-law, son, daughter, son-in-law, daughter-in-law or grandchild.
- (2) A parcel created by a subdivision under this section shall be not less than 1 ha, unless a smaller area, in no case less than 2500 m, is approved by the medical health officer.
- (3) This section does not apply where the parcel being subdivided is classified as farm land for assessment and taxation purposes, and the remainder of the parcel, after the subdivision, would be less than 2 ha.

- (4) The use of a parcel subdivided under this section is restricted to residential use for a period of 5 years, and the use of the remainder of the parcel shall not be changed for 5 years.
- (5) An owner shall not subdivide more than one parcel from a parcel under this section in any 5 year period.

Land Title

Requirements as to subdivision and reference plans

67. Every plan tendered for deposit, other than an explanatory plan or sketch plan, shall
- (a) be based on a survey made by a British Columbia land surveyor; and
 - (b) comply with the regulations respecting surveys and plans issued by the Surveyor General for the purposes of this section,

and shall comply with the following additional requirements:
 - (c) the plan shall have a title that includes the legal description, in accordance with the register, of the land subdivided and indicate whether the whole or part of that land is being subdivided;
 - (d) the land intended to be dealt with by the plan shall be shown on it surrounded by a line in red ink or another method that may be prescribed by the Surveyor General;
 - (e) where a whole district lot, section or parcel is subdivided, the plan shall show the boundaries of the district lot, section or parcel;
 - (f) where a portion of a district lot, section or parcel is subdivided, the plan shall show the boundaries of that portion; and
 - (i) such number of angular and line measurements to indicate its inclusion within the boundaries of the district lot, section or parcel and its connection with one or more of those boundaries as may be necessary to determine its location; and
 - (ii) such number of similar measurements to indicate its connection with any other parcel forming a portion of the same district lot, section or parcel as may be necessary to determine the relative location of the several parcels and of the highways serving them;

- (g) every plan shall indicate the district lots, sections or parcels adjacent to the land dealt with;
- (h) where the plan is of a resubdivision of a parcel shown on a previously deposited plan, or of a parcel described on the register by metes and bounds as a portion of a larger parcel, there shall be shown in a distinct manner on the plan the numbers of distinguishing letter, if any, of the parcel subdivided, and the boundary lines of that parcel;
- (i) there shall be marked on the plan the dimensions and courses of the boundaries of each parcel into which the land is divided, or there shall be shown on the plan a sufficient number of angular and linear measurements and bearings from which the dimensions can be deduced;
- (j) where there are curved lines on a plan, the plan shall indicate the radius, point of curvature and point of tangency of the curved lines;
- (k) where the rights of all affected parties are not prejudiced, a terminal curve may be substituted for a transition curve referred to in section 116 (1) (e) and (g);
- (l) all bearings shall refer to the astronomical meridian, and the point of observation for the meridian shall be indicated on the plan, and where an observation cannot be conveniently obtained, information as to the derivation of the meridian used shall be given on the plan;
- (m) each angle of each parcel shall be defined on the ground by a post or monument of a durable character, and the manner in which each angle is defined on the ground and the exact position of all posts and monuments placed in or on the ground shall be shown on the plan, and if any offset is made it shall be shown on the plan;
- (n) unless the registrar is satisfied that convenience of reference will be served by adopting a particular method of marking, each parcel into which the land is divided shall be marked with a distinct number or letter on the plan, and shall continue an existing series or commence with "1" or "A" and shall number or letter consecutively or alphabetically; but in no case shall the parcels be designated as sections or ranges;
- (o) on every parcel created with an area of 0.5 ha or more, the area shall be shown on the plan and shall be expressed in hectares to 4 significant digits;

- (p) every highway, park or public square appropriated or set apart for public use shall be shown as such, and distinctly delineated with its measurements marked on the plan;
- (q) where a watercourse is included in the land shown on the plan as surrounded by a red line; and
 - (i) is owned by the Crown; or
 - (ii) by dedication is returned to the Crown on the subdivision of land; and
 - (iii) lies within the boundaries of a parcel of one hectare or more in area being created by the plan; and
 - (iv) is less than 1/10 of the area of the parcel it passes through, the natural boundaries of the watercourse may be indicated on the plan, without dimensions, by photogrammetric means, compass and stadia, or other similar method approved by the Surveyor General;
- (r) each plan shall be prepared on tracing linen or on such other material approved by the Surveyor General and shall not exceed 0.75 m in width without the prior consent of the Surveyor General;
- (s) except where colours are necessary or the Surveyor General previously approved another process, all lettering, drawing or figures on the plan shall be made in black India ink or printed in black printer's ink;
- (t) where the use of colours is necessary, the colours used shall be of a permanent character;
- (u) unless otherwise provided by regulation, the plan shall be accompanied by a duplicate linen tracing and white print on print cloth or, in lieu of the duplicate tracing, by one ozalid transparency or other machine made copy of a type approved by the Surveyor General, together with the number of other white prints that may be necessary for the purpose of taxing authorities, the Surveyor General, the Ministry of Transportation and Highways and the regional board of the regional district in which the land is situated;
- (v) all abbreviations or symbols used and all necessary particulars not otherwise expressed shall be explained by a legend on the face of the plan;

- (w) the correctness of the survey and plan shall be verified by the surveyor by his statement in the prescribed form.

Restrictions on subdivision

- 73. (1) Except on compliance with this Part, no person shall subdivide land into smaller parcels than those of which he is the owner for the purpose of
 - (a) transferring it; or
 - (b) leasing it, or agreeing to lease it for a life, or for a term exceeding 3 years.
- (2) Except on compliance with this Part, no person shall subdivide land for the purpose of a mortgage or other dealing that may be registered under this Act as a charge if the estate, right or interest conferred on the transferee, mortgagee or other party would entitle him in law or equity under any circumstances to demand or exercise the right to acquire or transfer the fee simple.
- (3) Subsection (1) of this section does not apply to a subdivision for the purpose of leasing a building or part of a building.
- (4) No instrument executed by a person in contravention of this section confers on the party claiming under it a right to registration of the instrument or a part of it.

Requirements as to Subdivisions

- 75. (1) A subdivision shall comply with the following, and all other, requirements in this Part:
 - (a) necessary and reasonable access
 - (i) to all new parcels; and
 - (ii) through the land subdivided to land lying beyond or around the subdivided land shall to the extent of the owner's control be provided by a sufficient highway, and all existing highways provided for in subdivision plans of adjoining land or otherwise legally established shall be continued without unnecessary jogs;

- (b) where the land subdivided borders
 - (i) on a body of water, the bed of which is owned by the Crown;
 - (ii) on the boundary of a strip of land established as the boundary of a water reservoir, and the strip of land and reservoir are owned by the Crown; or
 - (iii) on a strip of Crown land 20 m or less in width contiguous to a natural boundary as defined in the Land Act, access shall be given by highways 20 m wide to the body of water and to the strips at distances not greater than 200 m between centre lines, or, in a rural area where the parcels into which the land is subdivided all exceed 0.5 ha, at distances not greater than 400 m between centre lines;
- (c) where
 - (i) the land subdivided borders on a body of water, the bed of which is owned by a person other than the Crown; and
 - (ii) in the case of a lake or pond, where the surface of the body of water at mean annual high water is at least 1.5 ha, and the mean depth at mean annual high water is at least 0.6 m; or
 - (iii) in the case of a river, creek or watercourse, where the average width at mean annual high water is at least 6 m and the average depth at mean annual high water is at least 0.6 m, access shall be given by highways 20 m wide to the body of water and to the strips at distances not greater than 200 between centre lines, or, in a rural area where the parcels into which the land is subdivided all exceed 0.5 ha, at distances not greater than 400 m between centre lines; but subparagraph (ii) does not apply to a reservoir or pond where the bed is owned by a public body other than the Crown and used for the purpose of domestic or industrial water supply;
- (d) suitable lanes shall be provided in continuation of existing lanes and in every case where lanes are considered necessary by the approving officer.

- (2) In considering the sufficiency of a highway shown on a plan and to be dedicated to the Crown, the approving officer shall consider
- (a) the location and width of the highway;
 - (b) the suitability of the highway in relation to the existing use of the subdivided land and the use intended by the subdivision;
 - (c) the configuration of the land subdivided;
 - (d) the relation of the highway to be dedicated to an existing main highway or approach, whether by land or water, and local circumstances;
 - (e) on the question of width, the extent of the use, present and future, to which the highway may be put; and
 - (f) the likely or possible role of the highway in a future highway network serving the area in which the subdivided land is situated.
- (3) An approving officer may, in circumstances that may be defined by regulation, grant relief in whole or in part from a compliance with the provisions of subsection (1) (a).

Matters to be considered by approving officer on application for approval

86. (1) Without affecting the generality of section 85 (3), in considering an application before him for subdivision approval in respect of land not within a municipality, the approving officer may
- (a) at the cost of the subdivider, personally examine or have an examination and report made on the subdivision;
 - (b) hear from all persons who, in his opinion, are affected by the subdivision; and
 - (c) refuse to approve the subdivision plan, if he considers that
 - (i) the anticipated development of the subdivision would injuriously affect the established amenities of adjoining or reasonably adjacent properties;

- (ii) the plan does not comply with the provisions of this Act relating to access and the sufficiency of highway allowances shown in the plan, and with all regulations of the Lieutenant Governor in Council relating to subdivision plans;
 - (iii) the highways shown in the plan are not cleared, drained, constructed and surfaced to his satisfaction, or unless, in circumstances he considers proper, security in an amount and in a form acceptable to him is provided;
 - (iv) the land has inadequate drainage installations;
 - (v) the land is subject, or could reasonably be expected to be subject, to flooding, erosion, land slip or avalanche;
 - (vi) after due consideration of all available environmental impact and planning studies, the anticipated development of the subdivision would adversely affect the natural environment to an unacceptable level; or
 - (vii) the cost to the Province of providing public utilities or other works or services would be excessive.
- (2) The Lieutenant Governor in Council may, by regulation, amend, add to, substitute or repeal any of the grounds for refusal enumerated in this section or stated in section 85 (3).

Matters to be considered by approving officer in respect of land within municipality or regional district

87. Without affecting the generality of section 85 (3), in considering an application before him for subdivision approval in respect of land within a municipality or a regional district, the approving officer may refuse to approve the subdivision plan if he considers that the subdivision does not conform to
- (a) all applicable provisions of the Municipal Act;
 - (b) the respective municipal or regional district bylaws regulating the subdivision of land and zoning; and
 - (c) the official settlement plan, if any, adopted pursuant to the Municipal Act.

SCHEDULE “C ”

AGREEMENT FOR TRANSFER OF COMMUNITY SEWER SYSTEMS

“The Owner and the SCRD hereby sets out their understanding and agreements in this matter with respect to community sewer system (CSS) as follows:

1. Collection System

The land owner, developer, strata corporation or other legal entities (collectively referred to as the “Owner”) who have constructed or have ownership of a CSS for a strata subdivision, subdivision, non-residential or multi-family building (a “Development”), will at the Regional District’s option, be responsible for any repairs or maintenance of the sewage collection system from the building connections to the sewage treatment plant.

2. Operation and Transfer of CSS to SCRD

- a. The SCRD will take over operation and maintenance of the CSS commencing that day (the “Takeover Date”) at such time that the CSS is substantially completed and commissioned, and subsequently operated by the owner for a period of two (2) years from date of completion to the satisfaction of the SCRD.
- b. Upon registration of the strata subdivision or subdivision at the Land Title Office or issuance of an occupancy permit for non-residential or multi-family building (specify one or more as applicable), the Owner will transfer the fee simple title of the lot housing the CSS (the “Lot”) to the SCRD. The SCRD will not be responsible for any of the costs of such transfer including applicable taxes and transfer costs. If _____ (insert Owner name)_____ and this Development connect in the future to a public sewer system supplied by the SCRD or another entity, thereby eliminating the need for the CSS, then the SCRD will, upon request, transfer the Lot back to the Owner, such transfer to be at the sole cost of the Owner.
- c. The Owner will be responsible for all operation, maintenance and repairs costs of the CSS incurred by the SCRD during the first two years of its operation.

- d. The Owner will provide or cause to be provided for a period of two years following the Takeover Date (the “Year”) an irrevocable letter of credit in favour of the SCRD for \$_____ (the “Letter of Credit”), constituting twenty percent (20%) of the total construction cost of the CSS to ensure payment of operation, insure against construction defects, and ensure maintenance and repair of the CSS during the first year of its operation. If the costs of operation, repairs or maintenance to the CSS incurred by the SCRD are not reimbursed by the Owner within 30 days upon invoice by the SCRD during the 2-year period, then the SCRD may draw down funds from the Letter of Credit. The SCRD shall use its best efforts to ensure that the costs of such maintenance or repairs are reasonable.

3. Maintenance Frontage Fees

Upon the issuance of an Occupancy Permit for the building or buildings on a lot within the Development, and after the first year of operation by the Owner, the owner of each lot or strata lot within the Development will be required to pay an annual maintenance fee to the SCRD, in an amount to be determined by the SCRD, for operation, repairs and maintenance of the CSS. For partial year charges, the rate shall be pro-rated, based on the date of occupancy of such lot or strata lot, and paid in advance for the remainder of the year. A sewer frontage fee, in an amount to be determined by the SCRD, will also be imposed on each or lot or strata lot in this after the first year of operation.

The above fees may be adjusted from time to time, according to the actual costs of operation of the CSS and will include an appropriate amount for operating contingent and capital replacement reserve funds.

4. Service Bylaws

Following the Takeover Date, the SCRD will amend Bylaws Nos. 1026 and 428, to include this Development as an area serviced by an SCRD Sewage Treatment Facility and to impose charges against the owners of the strata lots for the use and operation of the CSS.

5. Term of the Agreement

This agreement shall expire one year after the Takeover Date when the SCRD will assume full responsibility of the CSS; and the remaining Letter of Credit, if not totally expended, as per item 2 d, shall be returned to the Owner.

DATED at Sechelt, British Columbia, the ____ day of _____.

SUNSHINE COAST REGIONAL DISTRICT,

Per:

(Insert Name of Owner)

Per:

End of Agreement

SCRD Infrastructure Services Department

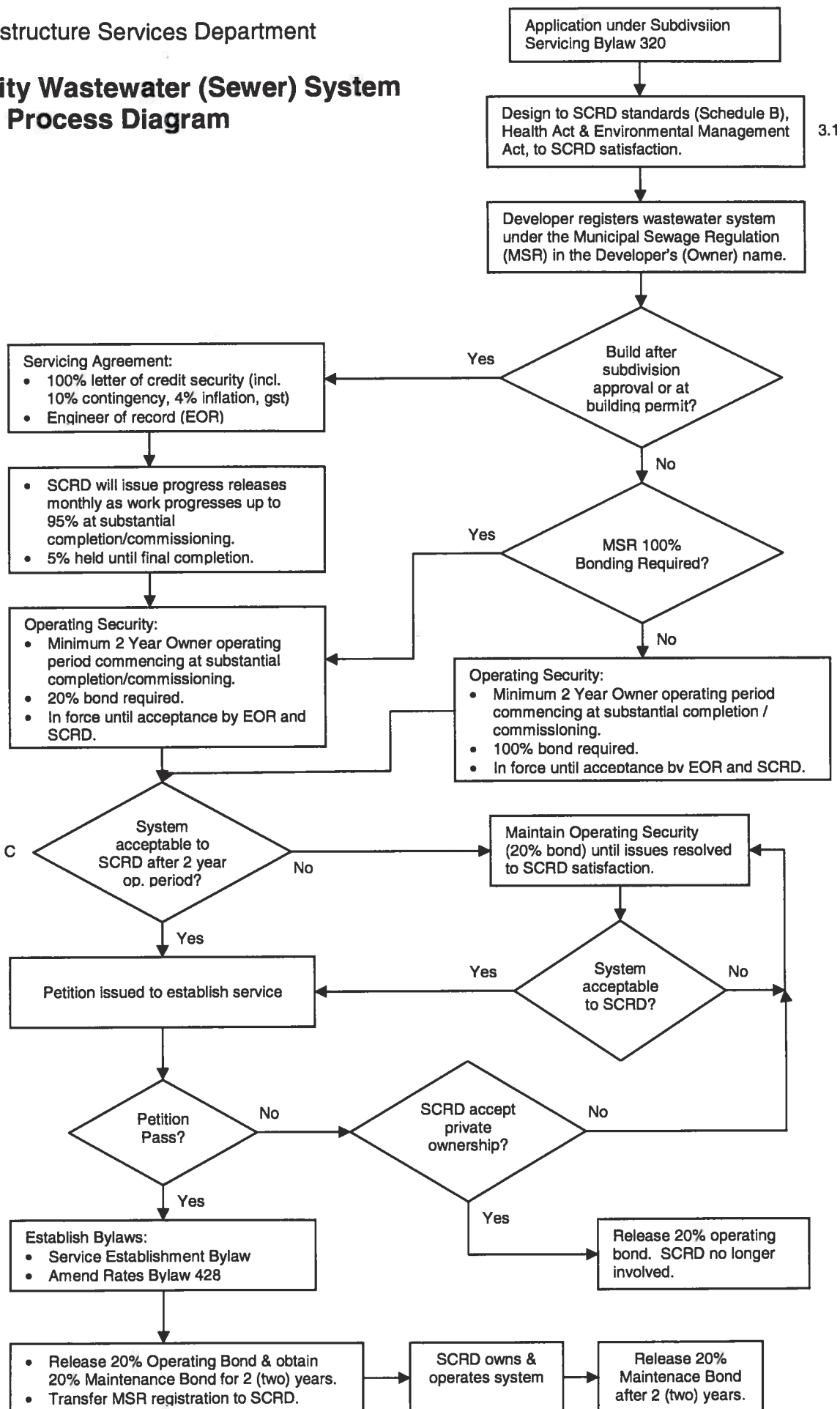
Community Wastewater (Sewer) System
Approval Process Diagram

June 2009

Schedule B
III, Article 4

3.5

3.7

3.3 &
Schedule CSchedule C
Item 4

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Corporate and Administrative Services Committee – November 28, 2019

AUTHOR: Kyle Doyle, Manager, Asset Management
Darren Joseph, Asset Management Coordinator

SUBJECT: WASTEWATER SERVICE REVIEW AND ASSET MANAGEMENT PLANS

RECOMMENDATIONS

THAT the report titled Wastewater Service Review and Asset Management Plans be received for information.

BACKGROUND

The Sunshine Coast Regional District (SCRD) manages 17 wastewater treatment facilities. Through the establishment of local service areas the SCRD has accepted responsibility for the operation of these facilities, the establishment of sustainable funding models, and ensuring compliance with environmental regulations.

One of the areas identified internally as an opportunity to do thorough asset management and service reviews was for the wastewater facilities. Many of these facilities or certain components of the systems were coming to the end of their useful life (Square Bay) or were not functioning to the standard intended. The SCRD also had grant funding available through the Federal Gas Tax-Strategic Priorities Fund for asset management, in which the scope of the grant was changed to fund certain aspects required to do a thorough review of the wastewater facilities. This was beneficial as some of these services had funding constraints to otherwise do analysis such as condition assessments.

Pursuant to a Ministry of Environment Warning Letter dated July 24, 2018, outlining non-compliance at the Woodcreek wastewater treatment facility, the SCRD received the Chief Administrative Officer's report on September 27, 2018 acknowledging 'a significant gap in the delivery of services' for wastewater treatment facilities (Attachment A). The report indicated the development of an action plan to address these issues.

A staff report at the November 15, 2018 Infrastructure Services Committee meeting titled 'SCRD Electoral Wastewater Treatment Review' provided an overview of the SCRD's Wastewater facilities including a summary table of the facilities, relevant regulatory guidelines, status of ongoing internal analysis, and the potential significant increases to rates associated with the wastewater services (some over 100% increase) (Attachment B).

A universal rate increase for all Wastewater facilities was proposed at the January 24, 2019 Corporate and Administrative Services (CAS) Committee meeting accompanied with the indication that further rate reviews and potentially increases were forthcoming (Attachment C).

A February 4, 2019 Special CAS Committee staff report outlined additional staffing necessary to meet operation requirements in order to satisfy regulatory demands for SCRD Wastewater facilities (Attachment D).

DISCUSSION

An internal review was conducted on wastewater treatment services for 17 local service areas across the regional district. Condition assessments of the majority of the components has been completed. An effort to catalogue existing inventory based on remaining years of useful life has been undertaken. Replacement costs for all systems were estimated using the most appropriate comparable available. The results of this review suggests at least 6 wastewater treatment systems require significant capital renewal within the next 10 years to meet regulatory requirements and that current revenues are not financially sustainable.

Additionally a review of the existing level of service provided by SCRD wastewater facilities was compared to optimal levels of service to determine the current degree of service deficit. It was determined that the service deficit was reduced, but remains despite the creation of a new Wastewater Coordinator Technician position.

Capital funding shortfalls are anticipated without revenue adjustments. Models are presented illustrating potential funding requirements for each local service area over 10, 20, 50 and 80 years (Attachment E). The models present the severity of the financial impact on subject parcels for each local service area.

STRATEGIC PLAN AND RELATED POLICIES

This report aligns with the Boards Strategic focus area of Infrastructure Management and Engagement and Communication.

Financial Sustainability Policy – Sections 4.2.1, 4.2.2, 4.2.4, 4.6.1 and 4.6.2

Corporate Asset Management Plan V. 1.1

CONCLUSION

The SCRD manages 17 wastewater treatment facilities. The SCRD is responsible for the operation of these facilities, the establishment of sustainable funding models, and ensuring compliance with environmental regulations.

An internal review was conducted on wastewater treatment services for 17 local service areas across the regional district. Condition assessments of the majority of the components has been completed. An effort to catalogue existing inventory based on remaining years of useful life has been undertaken. Replacement costs for all systems were estimated using the most appropriate comparable available. The results of this review suggests at least 6 wastewater treatment systems require significant capital renewal within the next 10 years to meet regulatory requirements and that current revenues are not financially sustainable.

Specific local service areas face imminent financial shortfalls due to aging infrastructure. User Fees and Parcel Taxes are not currently sufficient to meet operational requirements for many of the SCRD managed Wastewater facilities.

Attachments

Attachment A – Chief Administrative Officer’s Report – Sep. 27/18

Attachment B – Staff Report - SCRD Electoral Areas Wastewater Review – Nov. 15/18

Attachment C – Staff Report - Wastewater Asset Management and Rate Review – Jan. 31/19

Attachment D – 2019 R1 Budget Proposals For Wastewater Treatment – Feb. 4/19

Attachment E – Wastewater Treatment Review and Local Service Area Management Plans

Reviewed by:			
Manager		CFO	X - T. Perreault
GM	X - R. Rosenboom	Legislative	
Interim CAO	X - M. Brown	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: SCRD Board – September 27, 2018

AUTHOR: Janette Loveys, Chief Administrative Officer

SUBJECT: CHIEF ADMINISTRATIVE OFFICER'S REPORT

RECOMMENDATION(S)

THAT the report titled Chief Administrative Officer's Report be received for information.

BACKGROUND

This report provides information on the activities of the Chief Administrative Officer (CAO).

DISCUSSION

Administration:

As staff continue to work on preparing for the 2019 budget by reviewing the 2018 departmental work plans, associated resources and initiating the development of Service Plans as referenced in earlier reports; staff have identified a significant gap in the delivery of the services for the wastewater treatment facilities and drinking water facilities.

The SCRD holds permits under the *Environmental Management Act* for 18 wastewater treatment facilities and is responsible for meeting the conditions of these permits. This is also one of the statutory mandates of the Regional District as set by the *Local Government Act*.

The SCRD owns and operates nine drinking water treatment facilities, including the distribution systems associated with providing drinking water to the community. This requires the SCRD to meet the permit requirements as set under the *Drinking Water Protection Act* and *Water Sustainability Act*.

Staff are continuing to develop an action plan and associated Service Plan to address performance issues, asset management plans, appropriate rate structures, reserve levels and qualified staffing levels. This information will be a key focus for the new Board in the Pre-Budget meetings in November.

As a follow up to UBCM meetings, the CAO continues to work collaboratively with other CAOs and Association of Vancouver Island Coastal Communities (AVICC) staff with respect to the AVICC Special Committee on Solid Waste Management and; the Ministry of Transportation and Infrastructure to discuss the joint active transportation planning (bike and walkways).

On September 24, staff met with BC Transit staff to discuss the 2019/2020 AOA as referenced in recent reports. This information will be brought to the new Board in the Pre-Budget meetings in November.

On October 2, 2018 the SCRD Fire Chiefs and staff are scheduled to meet to share updates, next steps related to the draft strategic plan and the Fire Underwriter site visits.

Information Technology and Legislative Services staff are exploring cost effective opportunities to share audio recordings of the SCRD Standing Committee and Board meetings through a link on the SCRD website.

SCRD Staff Development and Engagement:

- September 25, 2018 Leadership Forum theme is “Preparing for the 2019 Budget”.
- Launch of a series of Lunch and Learns with the first one on water supply.
- “CAO on the Go” staff meetings across all the work locations is scheduled for late October/early November.
- CAO and SLT continue to work on the Board orientation and strategic planning process for the new Board.

External Engagements:

- Participated in FCM consultation on their strategic plan.
- Participated in consultation for the Auditor General for Local Government Act and Office.
- Meeting with *shíshálh* Nation staff on our continued reconciliation work.
- Town of Gibsons staff meeting the coming week to discuss water initiatives.
- Joint local government staff meeting on Wednesday, September 26 to discuss curbside services and procurement.
- Sechelt Library on Tuesday, September 25 to discuss process related to the upcoming MOU.
- At the end of October, a joint meeting will be held with ice and dry floor groups to discuss the facility allocation process, how it can be more inclusive of all the users and focus discussions on a shared interested approach.

STRATEGIC PLAN AND RELATED POLICIES

The Strategic Plan is a key document for the CAO's office and provides the overall administrative guidance for the business of the SCRD.

Strategic Priority: Ensure Fiscal Sustainability

Strategic Priority: Embed Environmental Leadership

Strategic Priority: Support Sustainable Economic Development

Strategic Priority: Enhance Collaboration with the *shíshálh* and Skwxwú7mesh Nations

Strategic Priority: Facilitate Community Development

Strategic Priority: Enhance Board Structures and Processes

Strategic Priority: Recruit, Retain and Acknowledge Staff and Volunteers

Strategic Priority: Enhance Board Structures and Processes

CONCLUSION

The CAO provides a written report summarizing key initiatives which align to the priorities of the Strategic Plan and Board's direction.

SUNSHINE COAST REGIONAL DISTRICT- STAFF REPORT

TO: Infrastructure Services Committee – November 15, 2018

AUTHOR: Remko Rosenboom – General Manager, Infrastructure Services

SUBJECT: SCRD ELECTORAL AREAS WASTEWATER TREATMENT REVIEW

RECOMMENDATION(S)

THAT the report titled SCRD Electoral Areas Wastewater Treatment Review be received for information.

BACKGROUND

The Sunshine Coast Regional District (SCRD) manages 18 wastewater treatment facilities which are all located within the Electoral Areas. The management of these facilities is one of the statutory mandates of the Regional District as set by the *Local Government Act*. Table 1 presents an overview and some key details of these facilities.

Table 1: Overview wastewater treatment facilities

Wastewater Treatment Facility	Electoral Area	Constructed in	SCRD assumed responsibility in	Number of parcels serviced
Greaves Road	A	Unknown	1983	6
Woodcreek Park	E	1999	1995	73
Sunnyside	E	1979	1983	11
Jolly Roger	B	1979	1985	32
Secret Cove	B	1981	1986	34
Lee Bay	A	1979	1986	179
Square Bay	B	1970/2018	1990	93
Langdale	F	1981	1990	40
Canoe Road	A	1982/83	1990	10
Merrill Crescent	A	Unknown	1990	14
Curran Road	B	1982/83	1992	70
Roberts Creek Co-Housing	D	2003	2004	31
Lily Lake Village	A	2005	2008	28
Painted Boat	A	2008	2012	34
Sakinaw Ridge	A	2007	2018	19
Pender Landing	A	2008	In Progress	41
YMCA	F	2011	In Progress	Youth Camp
Malibu Club	A	2007	In Progress	Youth Camp

The SCRD is responsible to meet the regulatory requirements under the provincial *Environmental Management Act*, the *Local Health Authority Act* or the federal *Fisheries Act* for all these wastewater treatment facilities.

Each facility consists of a collection system, a wastewater treatment plant and a disposal system. Every facility has a different combination of collection system (mains, manholes), service connections, treatment system (plant and tanks), and effluent disposal system (drain field or ocean outfall). Facilities are serving anywhere between 6 and 173 land parcels and are considered to be a small treatment facility for regulatory purposes. All facilities were constructed by developers and community associations before the SCRD assumed responsibility once fully commissioned. The SCRD assumed all facilities within the past 35 years.

The regulatory framework for new community sewer system has changed over the past several decades. Currently, any new community sewer is required to comply with SCRD Subdivision Servicing Bylaw 320 and the current provincial and federal legislative requirements. In accordance with this bylaw, persons seeking to construct a community sewer system to serve two or more parcels in the SCRD must first apply and receive approval in writing from the SCRD. Then further process steps are required to be followed before the SCRD can actually take over the full management of a facility.

The Chief Administrator Officers' Report for the September 27, 2018 Board Meeting states that *"staff have identified a significant gap in the delivery of the services for the wastewater treatment facilities and drinking water facilities"* and that *"Staff are continuing to develop an Action Plan and associated Service Plan to address performance issues, asset management plans, appropriate rate structures, reserve levels and qualified staffing levels. This information will be a key focus for the new Board in the Pre-Budget meetings in November."*

This report presents the preliminary findings of the internal review of all SCRD Electoral Areas wastewater treatment facilities, in conjunction with the ongoing corporate asset management planning work in these areas.

DISCUSSION

Regulatory Regime

The SCRD is responsible to meet provincial and federal regulatory requirements for the following 18 wastewater treatment facilities (Functional Area numbers are listed between brackets):

- | | |
|------------------------|----------------------------------|
| - Greaves Road (381) | - Merrill Crescent (390) |
| - Woodcreek Park (382) | - Curran Road (391) |
| - Sunnyside (383) | - Roberts Creek Co-Housing (392) |
| - Jolly Roger (384) | - Lily Lake Village (393) |
| - Secret Cove (385) | - Painted Boat (394) |
| - Lee Bay (386) | - Sakinaw Ridge (395) |
| - Square Bay (387) | - Pender Landing |
| - Langdale (388) | - YMCA |
| - Canoe Road (389) | - Malibu Club |

Operating these facilities involves regular inspection and maintenance of the collection system, treatment system, and effluent disposal system. This includes daily, weekly, and monthly

monitoring and reporting of various components of each facility depending on facility type and size.

While the majority of these facilities are regulated by the provincial *Environmental Management Act* (EMA), six plants are regulated under the federal Wastewater Systems Effluent Regulations under the *Fisheries Act*.

In addition to effluent water quality monitoring, the SCRD is also responsible for ensuring that staff are qualified to operate these facilities and that operational and contingency plans are monitored and up-to-date.

On July 24, 2018 the SCRD received a Warning letter under the EMA from the Ministry of Environment and Climate Change Strategies (MOE) for repeatedly being in non-compliance with the water quality requirements for effluent water of the Woodcreek wastewater treatment facility. Subsequently, staff initiated a review of the SCRD's management of all 18 wastewater treatment facilities.

Specific to the Warning letter for the Woodcreek wastewater treatment facility, steps have been initiated to address the facility's operational issues in the short-term.

This Warning letter triggered the review of the compliance rates for a number of facilities. The results of this review indicated that there are several other SCRD facilities that are also of concern given the effluent quality. Consequently, the SCRD is at risk of receiving further Warning letters for other wastewater treatment facilities. Failing to comply with any regulatory requirements could result in the issuance of legally binding Orders, financial penalties and the suspension or cancellation of permits. Further analyses and inspections of all facilities is needed to determine the entire scope of the steps required to meet all regulatory requirements and will be part of reports presented at Committee in Q1 & Q2 2019.

Asset Management Planning

Staff are currently working on developing a comprehensive Asset Management Plan for the wastewater treatment facilities, which was identified as a priority for the organization due to the high level of risk associated with the service. This project was initiated as a result of funding available through the SCRD's Gas Tax-Strategic Priorities Fund (SFP) Grant for the development of an Enterprise Asset Management System. The scope of the grant was changed in early 2018 to accommodate this and other asset management projects, as funding constraints within the service would have made it difficult to do any of the necessary engineering and technical reviews needed to gather the data.

As a first step, a condition assessment of the assets for 15 of the 18 wastewater facilities was completed. Preliminary findings conclude that the majority of these facilities do not have sufficient funding to cover the operational or capital needs of the services. Staff plan to present these findings as part of the 2019 Pre-Budget deliberations and will result in recommendations for rate adjustments for these services. For example, rates for some of the facilities will need to increase over 100% or by several hundreds of dollars to be financially sustainable. Understanding this will also require public consultation with the various communities as these changes are contemplated.

The development of a Comprehensive Asset Management Plan for the wastewater treatment facilities will continue and will be the subject of future board reports in Q1 and Q2 2019.

Binding Agreements

The review concluded that several of the wastewater treatment facilities lack the legally binding access and ownership agreements, or management agreements with third parties. Without these agreements in place, the SCRD has not secured full control over the facilities or their management, while still being legally responsible for meeting their regulatory requirements. This is a risk to the SCRD which must be addressed. The SCRD intends to have made significant progress on updating its binding agreement for all wastewater treatment facilities by Q4 2019.

Bylaws

The SCRD established bylaws for the Service Areas for all but three facilities (Pender Landing, YMCA, and Malibu Club). The internal costs for the facilities with Service Areas are recovered through parcel taxes and user fees by only the benefiting properties with the service areas. The internal costs for the facilities with no established Service Areas are charged to the facility owners. The review concluded that several bylaws are outdated and the overall bylaw structure for wastewater facilities needs to be updated. This will also require public consultation and part of the implementation plan for addressing the various issues with the service.

Operational budget implications

There currently is insufficient funding to cover current operational requirements of the plants, nor enough operational funding to cover infrastructure planning such as, the agreements or bylaw revisions described above.

The shortage in qualified and skilled staff combined with an insufficient Asset Management Plan are contributing to the high amount of non-compliances with legislative requirements. Staff are currently addressing the high number of immediate performance issues on a case by case bases, however, this requires a significant amount of staff resources, which are not available. Therefore, this results in resources from other systems such as the water utility systems to assist outside of their regular working hours. This results in more overtime pay-outs and also puts strains on the existing staff and budgets. This ad-hoc process has resulted in a wage and operational deficits in many of the systems over the years.

An assessment of staffing levels and operational budgeting are ongoing as part of the overall Asset Management and Service Planning for the wastewater facilities. Staff plan to present these findings as part of the 2019 Pre-Budget deliberations and rate reviews in Q1 & Q2 2019.

STRATEGIC PLAN AND RELATED POLICIES

Addressing the issues identified in the review of the wastewater treatment facilities will result in increased regulatory compliance. The recommended development and implementation of the SCRD's Wastewater Asset Management Plan and reviews of current rate structures for all water treatment facilities would contribute to the SCRDs financial sustainability.

CONCLUSION

A recent review of all 18 wastewater treatment facilities managed by the SCRD identified several critical issues that could pose a risk to the SCRD. These include the lack of legally binding agreements, non-compliance with regulatory permits, insufficient number of staff holding the required certifications to manage the facilities, and replacement of these facilities according to the SCRD's Asset Management Plan.

Preliminary modules of the Comprehensive Asset Management Plan for the wastewater treatment facilities conclude that current rates are not sufficient to cover both the operational and capital requirements to maintain the assets. Financial implications of the new resources will be incorporated into the ongoing asset management planning and rate structure reviews for the water and wastewater services. Staff plan to present these findings as part of the 2019 Pre-Budget deliberations and will most likely result in a proposal for rate adjustments for these services. The findings of the more detailed inspections and analyses of all the facilities will be subject of future board reports.

Reviewed by:			
Manager		CFO	X -T. Perreault
GM		Legislative	
CAO	X – J. Loveys	Other	

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Corporate and Administrative Services Committee – January 31, 2019

AUTHOR: Tina Perreault, General Manager, Corporate Services / Chief Financial Officer
Ben Smale, Asset Management Coordinator

SUBJECT: **WASTEWATER ASSET MANAGEMENT AND RATE REVIEWS**

RECOMMENDATIONS

THAT the report titled Wastewater Asset Management and Rate Reviews be received;

AND THAT the Sewage Treatment Facilities Service Bylaw 428, Schedule C be amended to increase the Wastewater System User Fees by 25.0% in 2019;

AND THAT the Sewage Treatment Facilities Service Bylaw 428, Schedule B be amended to increase the Wastewater System Frontage Fees by 2.0% in 2019;

AND THAT the Woodcreek Park Sewer User Rates Bylaw 430, Schedule A be amended to increase the Wastewater System User Fees by 25.0% and the Frontage Fees by 2.0% in 2019;

AND THAT the Painted Boat Sewage Treatment Facilities Fees and Charges Bylaw 644, Schedule A be amended to increase the Wastewater System User Fees by 25.0% in 2019;

AND THAT the Sakinaw Ridge Community Sewage Treatment System Bylaw 714, Schedule A be amended to increase the Wastewater System User Fees by 25.0% and the Frontage Fees by 2.0% in 2019;

AND THAT Bylaws 428, 430, 644 and 714 be amended to include:

- **Invoices are due on the due date specified on the invoice and payments must be received by 4:30pm PST;**
- **No rebate, refund or credit on any fees collected in error after two years from the date of payment will be issued;**

AND FURTHER THAT the 2019-2023 Financial Plan be amended accordingly.

BACKGROUND

The bylaws to regulate the rates and operation of the Wastewater treatment facilities for the Sunshine Coast Regional District (SCRD) include:

- Bylaw 428 – Sewage Treatment Facilities Service
- Bylaw 430 – Woodcreek Park Sewer User Rates
- Bylaw 644 – Painted Boat Sewage Treatment Facilities Fees and Charges
- Bylaw 714 – Sakinaw Ridge Community Sewage Treatment System

Each year as part of the Financial Planning process, the rates are reviewed for each Wastewater service area and the respective rate schedules are amended. Copies of the Bylaws can be found on the SCRD website at: [Bylaws: Infrastructure](#).

The SCRD currently operates 15 Wastewater treatment facilities. These 15 facilities collect, treat, and dispose of wastewater from defined service areas comprised of 541 users and 682 parcels. The current user fees and frontage fees per single family residential dwelling are provided in Table 1 and Table 3, respectively.

The Wastewater service areas are moving towards a rate strategy similar to the water service areas. With this funding strategy, user fees fund operational costs and frontage fees (parcel taxes) fund capital costs. This funding strategy creates a more clearly defined and equitable distinction between properties that are fully developed (active system users), and properties that have not yet been developed (potential system users).

DISCUSSION

Options and Analysis

In 2018, the SCRD initiated an asset management review of its inventory, condition, operational funding, capital funding, and organizational strategy in the wastewater service areas. This review is ongoing, but has identified several key operational issues that require further attention:

1. Operational funding for field staff in the Wastewater service areas is not sufficient to meet all legislated requirements of facility operation.
2. Operational funding for office staff in the Wastewater service areas is not sufficient to fund planning, proactive maintenance requirements of facility operation, and appropriate corporate record keeping.
3. Operational funding for a vehicle in the Wastewater service areas was previously pooled as part of water operations in nearby areas, but this is no longer feasible due to growing operational requirements in Wastewater.
4. Operational funding for tools in the Wastewater service areas is not sufficient, and is commonly supplemented by tools and equipment used for water operations.

Based on historical financial results for these services, generally, surpluses have been generated year over year. However, this is due to the deferral of maintenance due to a staffing deficiency.

All of the SCRD Wastewater treatment facilities are assets received as a result of development. These facilities vary in size, technology cost and age. With the completion and finalization of the asset management review, information regarding requirements for each Wastewater treatment facility will be provided.

User Fees

Option 1: User fee increase of 25%

The current user fees for the Wastewater systems are provided in Table 1. A user fee increase of 25% would generate an additional \$51,626 in revenue to address some of the operational issues noted above. Staff are recommending a formalized maintenance program for the Wastewater systems. Budget proposals will be presented as part of Round 1 budget.

Based on some preliminary results from the asset management review, each Wastewater treatment facility requires a minimum increase to its operational budget of 25%. All Wastewater service areas have some requirement for administrative and capital projects within the next five years. Accordingly, staff recommend that the application of a 25% rate increase will effectively improve our ability to address these projects. A complete listing of these projects will be provided as part of the asset management review.

Accordingly, staff recommend a user rate increase of 25% for 2019. This rate increase is intended to make a material impact to operational funding while keeping rate increases equitable and achievable for the users. This will also allow for more time for staff to develop the comprehensive Asset Management Plan, including the capital needs, scheduled to be complete in Q3/Q4 2019.

Option 2: User fee increase of 50%

The current user fees for the Wastewater systems are provided in Table 2. A user fee increase of 50% would generate an additional \$103,000 in revenue to address the operational issues noted above and ensure legislative requirements are being met. Staff are recommending a formalized maintenance program for the Wastewater systems. Budget proposals will be presented as part of Round 1 Budget.

Staff do not recommend this option at this point because each Wastewater treatment facility is unique and has various cost requirements that are still to be determined as part of the asset management review.

Frontage Fees

The current frontage fees for the Wastewater systems are provided in Table 3. Frontage fees will be reviewed as part of the asset management plan. Until that time, staff recommend that frontage fees be increased annually to account for Canadian inflationary cost of construction, at minimum. The current five year moving average for infrastructure construction price index (2012 to 2017) indicates a 2.0% inflation rate for infrastructure costs. Therefore, frontage fees should be increased by 2.0% for 2019.

Table 1: Wastewater service area proposed user fee rate increase 25%

Function	Description	# of Users	2018 (Existing)		2019 (25% Increase)	
			Res. User Fee	Total	Res. User Fee	Total
381	Greaves	5	\$ 204.00	\$ 1,020.00	\$ 255.00	\$ 1,275.00
382	Woodcreek	73	\$ 400.00	\$ 29,200.00	\$ 500.00	\$ 36,500.00
383	Sunnyside	8	\$ 100.00	\$ 800.00	\$ 125.00	\$ 1,000.00
384	Jolly Roger	31	\$ 330.00	\$ 10,230.00	\$ 412.50	\$ 12,787.50
385	Secret Cove	32	\$ 330.00	\$ 11,970.00	\$ 412.50	\$ 14,962.50
386	Lee Bay	106	\$ 330.00	\$ 34,980.00	\$ 412.50	\$ 43,725.00
387	Square Bay	79	\$ 330.00	\$ 26,070.00	\$ 412.50	\$ 32,587.50
388	Langdale	40	\$ 450.00	\$ 18,000.00	\$ 562.50	\$ 22,500.00
389	Canoe	5	\$ 175.00	\$ 875.00	\$ 218.75	\$ 1,093.75
390	Merrill	12	\$ 545.00	\$ 6,540.00	\$ 681.25	\$ 8,175.00
391	Curran	51	\$ 380.00	\$ 19,380.00	\$ 475.00	\$ 24,225.00
392	Roberts Creek	31	\$ 450.00	\$ 13,950.00	\$ 562.50	\$ 17,437.50
393	Lilly's Lake	28	\$ 450.00	\$ 12,600.00	\$ 562.50	\$ 15,750.00
394	Painted Boat	32	\$ 430.00	\$ 16,490.00	\$ 537.50	\$ 20,612.50
395	Sakinaw Ridge	8	\$ 575.00	\$ 4,600.00	\$ 718.75	\$ 5,750.00
Total		541		\$ 206,705.00		\$ 258,381.25

Table 2: Wastewater service area proposed user fee rate increase 50%

Function	Description	# of Users	2018 (Existing)		2019 (50% Increase)	
			Res. User Fee	Total	Res. User Fee	Total
381	Greaves	5	\$ 204.00	\$ 1,020.00	\$ 306.00	\$ 1,530.00
382	Woodcreek	73	\$ 400.00	\$ 29,200.00	\$ 600.00	\$ 43,800.00
383	Sunnyside	8	\$ 100.00	\$ 800.00	\$ 150.00	\$ 1,200.00
384	Jolly Roger	31	\$ 330.00	\$ 10,230.00	\$ 495.00	\$ 15,345.00
385	Secret Cove	32	\$ 330.00	\$ 11,970.00	\$ 495.00	\$ 17,955.00
386	Lee Bay	106	\$ 330.00	\$ 34,980.00	\$ 495.00	\$ 52,470.00
387	Square Bay	79	\$ 330.00	\$ 26,070.00	\$ 495.00	\$ 39,105.00
388	Langdale	40	\$ 450.00	\$ 18,000.00	\$ 675.00	\$ 27,000.00
389	Canoe	5	\$ 175.00	\$ 875.00	\$ 262.50	\$ 1,312.50
390	Merrill	12	\$ 545.00	\$ 6,540.00	\$ 817.50	\$ 9,810.00
391	Curran	51	\$ 380.00	\$ 19,380.00	\$ 570.00	\$ 29,070.00
392	Roberts Creek	31	\$ 450.00	\$ 13,950.00	\$ 675.00	\$ 20,925.00
393	Lilly's Lake	28	\$ 450.00	\$ 12,600.00	\$ 675.00	\$ 18,900.00
394	Painted Boat	32	\$ 430.00	\$ 16,490.00	\$ 645.00	\$ 24,735.00
395	Sakinaw Ridge	8	\$ 575.00	\$ 4,600.00	\$ 862.50	\$ 6,900.00
Total		541		\$ 206,705.00		\$ 310,057.50

Table 3: Wastewater service area proposed frontage fee increase

Function	Description	# of Frontage	2018 (Existing)		2019 (2% Increase)	
			Frontage Fee	Total	Frontage Fee	Total
381	Greaves	6	\$ 100.00	\$ 600.00	\$ 102.00	\$ 612.00
382	Woodcreek	73	\$ 100.00	\$ 7,300.00	\$ 102.00	\$ 7,446.00
383	Sunnyside	11	\$ 50.00	\$ 550.00	\$ 51.00	\$ 561.00
384	Jolly Roger	32	\$ 20.00	\$ 640.00	\$ 20.40	\$ 652.80
385	Secret Cove	30	\$ 100.00	\$ 3,000.00	\$ 102.00	\$ 3,060.00
386	Lee Bay	178	\$ 100.00	\$ 17,800.00	\$ 102.00	\$ 18,156.00
387	Square Bay	93	\$ 100.00	\$ 9,300.00	\$ 102.00	\$ 9,486.00
388	Langdale	40	\$ 100.00	\$ 4,000.00	\$ 102.00	\$ 4,080.00
389	Canoe	10	\$ 150.00	\$ 1,500.00	\$ 153.00	\$ 1,530.00
390	Merrill	14	\$ 260.00	\$ 3,640.00	\$ 265.20	\$ 3,712.80
391	Curran	70	\$ 150.00	\$ 10,500.00	\$ 153.00	\$ 10,710.00
392	Roberts Creek	31	\$ 200.00	\$ 6,200.00	\$ 204.00	\$ 6,324.00
393	Lilly's Lake	29	\$ 200.00	\$ 5,800.00	\$ 204.00	\$ 5,916.00
394	Painted Boat	34	\$ -	\$ -	\$ -	\$ -
395	Sakinaw Ridge	31	\$ 410.00	\$ 12,710.00	\$ 418.20	\$ 12,964.20
Total		682	\$83,540.00		\$85,210.80	

Other Administrative Updates

The current Bylaws specify that invoices (other than annual invoices) are due within 30 days of the date of billing. It is recommended that the Bylaws be amended to specify that the invoice is due on the due date as specified which is generally 30 days from the date of billing. Additionally, it is recommended that the Bylaw specify that payments must be received by 4:30 pm PST.

The current Bylaws do not include a statement about how rebates, refunds or credits are handled. It is recommended that the Bylaws be amended to include that refunds or adjustments on any fees collected in error will only be issued up to two years from the payment date. This aligns with other utility bylaws.

Future Rate Reviews

Further rate reviews will be required to balance the operational shortfall in all of the Wastewater service areas. The target for operational and capital funding is still being determined as part of the asset management plan. However, staff suggest that the current recommended user fee increase of 25% will be required by every function area to balance their operational costs. Many of the service areas will require the user fee increase of at least 50%, but not all service areas may require 50% increase to operational funding. This is part of the rationale behind the recommendation for 25% rather than 50%.

It should be noted that several Wastewater service areas, such as Woodcreek (382), Square Bay (387), Canoe (389), and Merrill (390) have capital projects in progress that will affect their funding and will require subsequent rate review during the 2019 fiscal year.

Financial Implications

It is recommended that user fees be increased by 25% and frontage fees be increased by 2% in 2019. The historic rates, relative fee increases, and total impact on fees is provided in Attachment A of this report.

As Table 1 above outlines, this increase will collectively generate \$51,676 from all the Wastewater services for 2019, which is also in support of the upcoming Budget Proposals to address regulatory and operational issues for the facilities.

Communications Strategy

A Communication Plan has been developed to inform homeowners of the rate increases. Information regarding rate changes will be communicated via print advertising, social media and on the on utility invoices sent to customers. The rate changes are also included in the public presentations for the budget process.

Further community consultation is planned as part of the Wastewater asset management process in the second quarter of 2019.

STRATEGIC PLAN AND RELATED POLICIES

Annual reviews and adjustments of fees and charges are consistent with Section 4.2.2 of the Financial Sustainability Policy.

CONCLUSION

The Wastewater service areas are currently under asset management review to determine the operational and capital funding requirements. The results of the review completed to date indicates that both operational and capital funding are in a shortfall position.

Until the asset management review is completed and due to inflationary cost of construction, staff also recommend that parcel taxes be increased by 2% in 2019.

Further increases to both user fees and frontage fees should be expected for 2020. The results of the asset management review in these services will be summarized in an asset management plan for the service areas. This will be completed in 2019.

Staff recommend an incremental increase to user rates of 25%, which will address some of the operational issues identified to date. Budget proposals will be brought forward with Round 1 Budget.

Reviewed by:			
Manager		Finance	X – S. Zacharias
GM	X-R.Rosenboom	Legislative	X - A. Legault
CAO	X-J. Loveys	Other:	

Attachment A: Historic Rates by Wastewater Service Area

Historical Rates: 381 - Greaves							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	204.00	204.00	204.00	204.00	204.00	204.00	255.00
Frontage Fee	100.00	100.00	100.00	100.00	100.00	100.00	102.00
Total	304.00	304.00	304.00	304.00	304.00	304.00	357.00
Total \$ Increase	0.00	0.00	0.00	0.00	0.00	0.00	53.00
Total % Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.4%

Historical Rates: 382 - Woodcreek							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	400.00	400.00	400.00	400.00	400.00	400.00	500.00
Frontage Fee	100.00	100.00	100.00	100.00	100.00	100.00	102.00
Total	500.00	500.00	500.00	500.00	500.00	500.00	602.00
Total \$ Increase	0.00	0.00	0.00	0.00	0.00	0.00	102.00
Total % Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.4%

Historical Rates: 383 - Sunnyside							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	100.00	100.00	100.00	100.00	100.00	100.00	125.00
Frontage Fee	50.00	50.00	50.00	50.00	50.00	50.00	51.00
Total	150.00	150.00	150.00	150.00	150.00	150.00	176.00
Total \$ Increase	0.00	0.00	0.00	0.00	0.00	0.00	26.00
Total % Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.3%

Historical Rates: 384 - Jolly Roger							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	330.00	330.00	330.00	330.00	330.00	330.00	412.50
Frontage Fee	20.00	20.00	20.00	20.00	20.00	20.00	20.40
Total	350.00	350.00	350.00	350.00	350.00	350.00	432.90
Total \$ Increase	0.00	0.00	0.00	0.00	0.00	0.00	82.90
Total % Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.7%

Historical Rates: 385 - Secret Cove							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	330.00	330.00	330.00	330.00	330.00	330.00	412.50
Frontage Fee	100.00	100.00	100.00	100.00	100.00	100.00	102.00
Total	430.00	430.00	430.00	430.00	430.00	430.00	514.50
Total \$ Increase	0.00	0.00	0.00	0.00	0.00	0.00	84.50
Total % Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.7%

Historical Rates: 386 - Lee Bay							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	330.00	330.00	330.00	330.00	330.00	330.00	412.50
Frontage Fee	100.00	100.00	100.00	100.00	100.00	100.00	102.00
Total	430.00	430.00	430.00	430.00	430.00	430.00	514.50
Total \$ Increase	0.00	0.00	0.00	0.00	0.00	0.00	84.50
Total % Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.7%

Historical Rates: 387 - Square Bay							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	330.00	330.00	330.00	330.00	330.00	330.00	412.50
Frontage Fee	100.00	100.00	100.00	100.00	100.00	100.00	102.00
Total	430.00	430.00	430.00	430.00	430.00	430.00	514.50
Total \$ Increase	0.00	0.00	0.00	0.00	0.00	0.00	84.50
Total % Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.7%

Historical Rates: 388 - Langdale							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	450.00	450.00	450.00	450.00	450.00	450.00	562.50
Frontage Fee	100.00	100.00	100.00	100.00	100.00	100.00	102.00
Total	550.00	550.00	550.00	550.00	550.00	550.00	664.50
Total \$ Increase	0.00	0.00	0.00	0.00	0.00	0.00	114.50
Total % Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.8%

Historical Rates: 389 - Canoe							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	125.00	125.00	125.00	175.00	175.00	175.00	218.75
Frontage Fee	100.00	100.00	100.00	150.00	150.00	150.00	153.00
Total	225.00	225.00	225.00	325.00	325.00	325.00	371.75
Total \$ Increase	0.00	0.00	0.00	100.00	0.00	0.00	46.75
Total % Increase	0.0%	0.0%	0.0%	44.4%	0.0%	0.0%	14.4%

Historical Rates: 390 - Merrill							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	456.00	456.00	456.00	545.00	545.00	545.00	681.25
Frontage Fee	200.00	200.00	200.00	260.00	260.00	260.00	265.20
Total	656.00	656.00	656.00	805.00	805.00	805.00	946.45
Total \$ Increase	0.00	0.00	0.00	149.00	0.00	0.00	141.45
Total % Increase	0.0%	0.0%	0.0%	22.7%	0.0%	0.0%	17.6%

Historical Rates: 391 - Curran							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	330.00	330.00	330.00	380.00	380.00	380.00	475.00
Frontage Fee	100.00	100.00	100.00	150.00	150.00	150.00	153.00
Total	430.00	430.00	430.00	530.00	530.00	530.00	628.00
Total \$ Increase	0.00	0.00	0.00	100.00	0.00	0.00	98.00
Total % Increase	0.0%	0.0%	0.0%	23.3%	0.0%	0.0%	18.5%

Historical Rates: 392 - Roberts Creek							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	375.00	375.00	450.00	450.00	450.00	450.00	562.50
Frontage Fee	100.00	200.00	200.00	200.00	200.00	200.00	204.00
Total	475.00	575.00	650.00	650.00	650.00	650.00	766.50
Total \$ Increase	0.00	100.00	75.00	0.00	0.00	0.00	116.50
Total % Increase	0.0%	21.1%	13.0%	0.0%	0.0%	0.0%	17.9%

Historical Rates: 393 - Lilly's Lake							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	450.00	450.00	450.00	450.00	450.00	450.00	562.50
Frontage Fee	200.00	200.00	200.00	200.00	200.00	200.00	204.00
Total	650.00	650.00	650.00	650.00	650.00	650.00	766.50
Total \$ Increase	0.00	0.00	0.00	0.00	0.00	0.00	116.50
Total % Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.9%

Historical Rates: 394 - Painted Boat							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee	430.00	430.00	430.00	430.00	430.00	430.00	537.50
Frontage Fee	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	430.00	430.00	430.00	430.00	430.00	430.00	537.50
Total \$ Increase	0.00	0.00	0.00	0.00	0.00	0.00	107.50
Total % Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%

Historical Rates: 395 - Sakinaw Ridge							
	2013	2014	2015	2016	2017	2018	Proposed 2019
User Fee						575.00	718.75
Frontage Fee						410.00	418.20
Total						985.00	1136.95
Total \$ Increase						985.00	151.95
Total % Increase						0.0%	15.4%

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Special Corporate and Administrative Services Committee – February 4, 2019

AUTHOR: Remko Rosenboom, General Manager, Infrastructure Services

SUBJECT: 2019 R1 BUDGET PROPOSAL FOR WASTEWATER TREATMENT SERVICES [381-395]

RECOMMENDATION(S)

THAT the report titled 2019 R1 Budget Proposal for [381-395] Wastewater Treatment Services [381-395] be received.

BACKGROUND

As part of the Budget Process, staff are to report potential budget adjustments, approved at pre-budget, to the Board. Budget Proposals provide the detail to support the potential adjustment and allow the Board to make informed decisions regarding funding projects or service enhancements, as well as ways to reduce the budget.

The following proposed initiatives were presented at the November 29, 2018 Special Corporate and Administrative Services (Pre-Budget) Committee Meeting and approved to be incorporated into the 2019 Budget as Categorized Mandatory items:

- [391] – Curran Road – Marine Outfall Anchor Weights Replacement - \$40,000 funded through Operating Reserves (Imminent Asset Failure);

DISCUSSION

2019 R1 Budget Proposals by Category

A- MANDATORY / BUSINESS CONTINUITY

1	<i>Function Number – Project Name:</i>	***NEW [381-395] – Wastewater Technician Coordinator 1.0 FTE
	<i>Rating:</i>	Enhancement to Service
	<i>Areas Affected (A-F, Regional, Islands):</i>	A, B, D, E, and F
	<i>2019 Funding Required:</i>	\$39,000 hiring anticipated in Q3 2019
	<i>Funding Source(s):</i>	User Fees
	<i>Asset Management Plan Implications:</i>	N/A

	<i>Rational / Service Impacts:</i>	<p>- Staff report provided</p> <p>** New staff position would be responsible for the coordination of and assist with the day to day operations of the 15 facilities the SCRD current operates. This position will take an operational leadership role in addressing the issues in the SCRD's management of its wastewater treatment facilities as outlined in the November 15, 2018 report titled SCRD Electoral Wastewater Treatment Review.</p>
	<i>Energy Saving Potential (if applicable):</i>	N/A
	<i>Future Funding Implications (if applicable):</i>	Increase to Base Budget of \$104,000

2	<i>Function Number – Project Name:</i>	[382] – Woodcreek Park Sand Filter Remediation – Engineering Design
	<i>Rating:</i>	Status Quo Service
	<i>Areas Affected (A-F, Regional, Islands):</i>	Area E
	<i>2019 Funding Required:</i>	\$40,000
	<i>Funding Source(s):</i>	Reserves (Operating)
	<i>Asset Management Plan Implications:</i>	Condition assessment and engineering review associated with asset replacement.
	<i>Rational / Service Impacts:</i>	<p>The Woodcreek Park wastewater treatment plant is frequently not meeting all regulatory requirements. This has resulted in the SCRD receiving a Warning letter from the Ministry of Environment and Climate Change Strategies on July 24, 2018. It has been determined that one of the essential components of the treatment system, the recirculating sand filter, is not functioning properly and possibly requires a replacement system.</p> <p>Staff recommend that an engineering review and detailed design for a remediation solution to the Woodcreek</p>

		Park Wastewater treatment system be conducted in 2019. This will involve a condition review of the existing system and evaluation of replacement solution options, a Class C construction estimate and recommendations for funding options for construction.
	<i>Energy Saving Potential (if applicable):</i>	N/A
	<i>Future Funding Implications (if applicable):</i>	Upon receipt and internal review of the above recommended engineering report, staff will bring forward recommendations for funding the construction of a replacement system in 2020 budget discussions. Staff estimate the cost to construct a replacement system to be approximately \$300,000 (2020 dollars).
3	<i>Function Number – Project Name:</i>	[387] – Square Bay infiltration reduction
	<i>Rating:</i>	Status Quo Service
	<i>Areas Affected (A-F, Regional, Islands):</i>	Area B
	<i>2019 Funding Required:</i>	\$25,000
	<i>Funding Source(s):</i>	Reserves (Capital)
	<i>Asset Management Plan Implications:</i>	Asset Replacement
	<i>Rational / Service Impacts:</i>	<p>The newly constructed wastewater treatment plant at Square Bay is currently classified at a Class 3 facility under the Municipal Wastewater Regulation. Based on the amount of sewage this plant is to treat, this plant could become classified as a Class 2 plant; however due to the high amount of drainage and groundwater that infiltrates the collection system, and hence is processed by the plant, the plant is currently classified as a Class 3 plant.</p> <p>During recent rain events the infiltration into the collection system resulted in two non-compliance situations with our <i>Environmental Management Act</i> permit.</p>

		<p>A Class 3 treatment facility requires a higher certification of operating staff compared to a Class 2 and will result in higher wages for operators of this facility.</p> <p>It is recommended the openings of manholes in the collection system be raised and other system components be repaired to reduce the infiltration of drainage and groundwater.</p>
	<i>Energy Saving Potential (if applicable):</i>	N/A
	<i>Future Funding Implications (if applicable):</i>	A reduction in classification of this treatment plant would reduce the total wages for operating staff.

B- OTHER or NOT CURRENTLY CLASSIFIED

3	<i>Function Number – Project Name:</i>	Wastewater Services Vehicle Replacement
	<i>Rating:</i>	Status Quo Service
	<i>Areas Affected (A-F, Regional, Islands):</i>	A, B, D, E, and F
	<i>2019 Funding Required:</i>	<p>\$45,000 for Vehicle Purchase</p> <p>\$7,000 for Operational, Maintenance and Borrowing Costs for ½ year of 2019.</p>
	<i>Funding Source(s):</i>	<p>\$45,000 MFA 5-Year Equipment Financing Loan</p> <p>\$7,000 User Fees - Operational Budgets Wastewater services [381-395]</p>
	<i>Asset Management Plan Implications:</i>	The truck will be incorporated into the fleet inventory.
	<i>Rational / Service Impacts:</i>	<p>It is recommended that the following vehicle be replaced in 2019:</p> <p>Unit #435 – 2008 Ford Ranger w/Service Body (Mileage: 144,067 kms)</p> <p>Replacement of this truck with another light duty truck with service body</p>

		equipped for the management of the SCRD wastewater facilities.
	<i>Energy Saving Potential (if applicable):</i>	The replacement of older inefficient vehicles with modern vehicles will improve fuel efficiency and reduce overall carbon emissions.
	<i>Future Funding Implications (if applicable):</i>	Based on the current daily floating rate of 2.63% offered by MFA, a 5-year loan would result in \$801 per month of combined principal/interest payments for 60-months. The total interest and principle of \$9,612 would be paid over the course of the loan period. Annual increase to Base budget of \$17,500 required for annual operational and maintenance of the vehicle including debt servicing as above.

Financial Implications

Woodcreek Park Wastewater Service Area						
Five-Year Capital Reserve Plan (or longer, if applicable)						
	2019	2020	2021	2022	2023	
Item	Amount	Amount	Amount	Amount	Amount	
Opening Balance in reserve	\$ 24,431	\$ 24,431	\$ 24,431	\$ 24,431	\$ 24,431	
Contributions Surplus	\$ -	\$ -	\$ -	\$ -	\$ -	
Building	\$ -	\$ -	\$ -	\$ -	\$ -	
Other	\$ -	\$ -	\$ -	\$ -	\$ -	
Closing Balance in Reserve	\$ 24,431	\$ 24,431	\$ 24,431	\$ 24,431	\$ 24,431	

Woodcreek Park Wastewater Service Area						
Five-Year Operating Reserve Plan (or longer, if applicable)						
	2019	2020	2021	2022	2023	
Item	Amount	Amount	Amount	Amount	Amount	
Opening Balance in reserve	\$ 151,236	\$ 111,236	\$ 111,236	\$ 111,236	\$ 111,236	
Contributions Surplus	\$ -	\$ -	\$ -	\$ -	\$ -	
Building	\$ -	\$ -	\$ -	\$ -	\$ -	
Other	-\$ 40,000	\$ -	\$ -	\$ -	\$ -	
Closing Balance in Reserve	\$ 111,236	\$ 111,236	\$ 111,236	\$ 111,236	\$ 111,236	

Square Bay Wastewater Service Area					
Five-Year Capital Reserve Plan (or longer, if applicable)					
	2019	2020	2021	2022	2023
Item	Amount	Amount	Amount	Amount	Amount
Opening Balance in reserve	-\$ 31,132	-\$ 31,132	-\$ 31,132	-\$ 31,132	-\$ 31,132
Contributions Surplus	\$ -	\$ -	\$ -	\$ -	\$ -
Building	\$ -	\$ -	\$ -	\$ -	\$ -
Other		\$ -	\$ -	\$ -	\$ -
Closing Balance in Reserve	-\$ 31,132	-\$ 31,132	-\$ 31,132	-\$ 31,132	-\$ 31,132

Square Bay Wastewater Service Area					
Five-Year Operating Reserve Plan (or longer, if applicable)					
	2019	2020	2021	2022	2023
Item	Amount	Amount	Amount	Amount	Amount
Opening Balance in reserve	-\$ 92,663	-\$ 117,663	-\$ 117,663	-\$ 117,663	-\$ 117,663
Contributions Surplus	\$ -	\$ -	\$ -	\$ -	\$ -
Building	\$ -	\$ -	\$ -	\$ -	\$ -
Other	-\$ 25,000	\$ -	\$ -	\$ -	\$ -
Closing Balance in Reserve	-\$ 117,663	-\$ 117,663	-\$ 117,663	-\$ 117,663	-\$ 117,663

Reviewed by:			
Manager		CFO-Finance	X-T. Perreault
GM		Legislative	
CAO	X-J. Loveys	Other	X-G. Parker

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Special Corporate and Administrative Services Committee – February 4, 2019

AUTHOR: Remko Rosenboom – General Manager, Infrastructure Services

SUBJECT: WASTEWATER TREATMENT FACILITIES – ORGANIZATIONAL CAPACITY

RECOMMENDATION(S)

THAT the report titled Wastewater Treatment Facilities – Organizational Capacity be received.

BACKGROUND

The Utility Division within the Infrastructure Services department is responsible for the management of the collection, treatment and discharge at wastewater infrastructure.

The November 15, 2018 staff report titled SCRD Electoral Areas Wastewater Treatment Review concluded that:

A recent review of the management of all wastewater treatment facilities identified several critical issues that could pose significant risk to the SCRD, including regulatory action, asset failure and one or more of the services not being financially sustainable.

The overall conclusion of the review is that the SCRD's current organizational capacity to address these issues is insufficient. A staffing proposal to address the significant risks to the SCRD associated with its current management of the wastewater treatment facilities will be part of the 2019 Pre-Budget deliberations.

The purpose of this report is to provide a detailed rationale on the budget proposals for additional staff resources presented at Round 1 Budget for [381-395] Wastewater Treatment Services.

DISCUSSION

Wastewater Technician Coordinator

The November 15, 2018 report concluded that the current staffing levels and skills are insufficient to operate and maintain the 15 wastewater treatment facilities within the regulatory, environmental requirements and standards of the Sunshine Coast Regional District's (SCRD) Asset Management Plan. This is resulting in a high number of legislative non-compliances that are currently being addressed on a case by case basis. This requires a significant amount of staff resources, including outside of the regular work hours, resulting in more overtime pay-outs, banked time and the resultant time off that also puts a strain on the availability of staff.

The November 15, 2018 report also identified that only one staff is certified to manage the most complex of the 15 wastewater treatment facilities operated by the SCRD.

The Utility Technician Coordinator is currently coordinating the day to day operation of all water supply and wastewater facilities. Given that the management of the water treatment and distribution systems has become increasingly demanding, the Utility Technician Coordinator is unable to provide the coordination and oversight required to address the identified issues with the wastewater treatment facilities.

Staff recommend the creation of a new 1.0 FTE Wastewater Technician Coordinator position to lead the Wastewater technicians section. This coordinator would be responsible for the coordination of and assist with the day to day operations of the 15 wastewater treatment facilities the SCRD current operates.

This Wastewater Technician Coordinator would be required to have the technical certification to operate the most complex facilities currently operated by the SCRD.

The 2019 work plan for this position would include the preparation of an action plan for each facility. Any budgetary requirements for the implementation of these action plans would be included in a 2020 or 2021 budget proposal.

The creation of a Wastewater Technician Coordinator position would allow the Utility Technician Coordinator to focus on the management of the water supply and distribution infrastructure.

Financial implications

For 2019, it is anticipated the position could not be hired until Q3 2019. Therefore, only a portion of the estimated cost has been included. The proposed funding allocation for this position is through User Fees.

The proposed cost allocations and associated funding implications for 2019 and 2020 are as follows:

	# FTE	2019	2020
<i>Funding Required:</i>		\$39,000	\$104,000
<i>Wastewater Technician Coordinator</i>	1.0	\$39,000	\$104,000
<i>User Fees [381-395] Wastewater treatment facilities</i>		\$39,000	\$104,000

STRATEGIC PLAN AND RELATED POLICIES

N/A

CONCLUSION

The purpose of this report is to provide background to support the business case for the 2019 Budget Proposal for additional resources for the wastewater treatment facilities [381-395].

Reviewed by:			
Manager		CFO/Finance	X-T. Perrault
GM		Legislative	
CAO	X-J. Loveys	Other	X-G. Parker

November 2019

Wastewater Service Review and Asset Management Plans



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Area A – Canoe Road Wastewater Local Service Asset Management Plan

Area A – Greaves Road Wastewater Local Service Asset Management Plan

Area A – Lee Bay Wastewater Local Service Asset Management Plan

Area A – Lily Lake Village Wastewater Local Service Asset Management Plan

Area A – Merrill Crescent Wastewater Local Service Asset Management Plan

Area A – Painted Boat Resort Wastewater Local Service Asset Management Plan

Area A – Pender Landing Wastewater Local Service Asset Management Plan

WASTEWATER SERVICES REVIEW AND ASSET MANAGEMENT PLANS

Area A – Sakinaw Ridge Wastewater Local Service Asset Management Plan

Area B – Curran Road Wastewater Local Service Asset Management Plan

Area B – Jolly Roger Wastewater Local Service Asset Management Plan

Area B – Secret Cove Wastewater Local Service Asset Management Plan

Area B – Square Bay Wastewater Local Service Asset Management Plan

Area D – Roberts Creek Co-Housing Wastewater Local Service Asset Management Plan

Area E – Sunnyside Wastewater Local Service Asset Management Plan

Area E – Woodcreek Park Wastewater Local Service Asset Management Plan

Area F – Langdale Wastewater Local Service Asset Management Plan

Area F – YMCA Camp Elphinstone Wastewater Local Service Asset Management Plan

Executive Summary

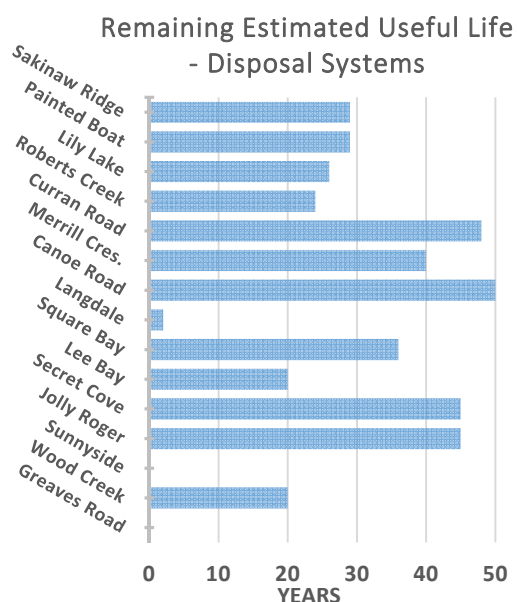
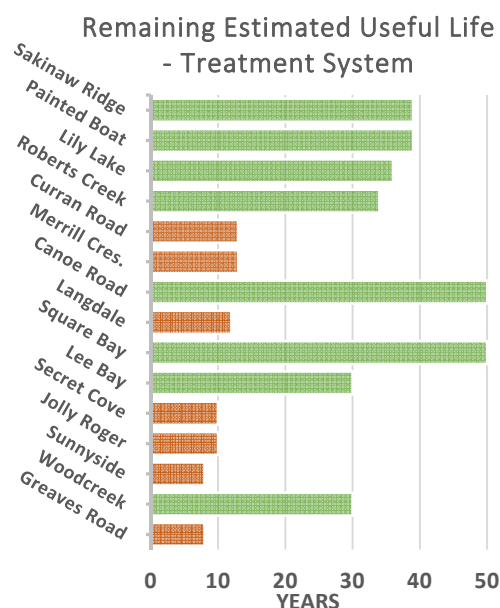
The Sunshine Coast Regional District (SCRD) has been responsible for the management of community wastewater services since 1979. Community wastewater services are necessary where individual parcels are not suited for individual septic systems. Limitations on parcel size or unfavorable soil conditions typically dictate when community wastewater service is necessary. A local service area is adopted for every community wastewater service that includes only pre-identified parcels benefitting from the service.

Wastewater services are typically comprised of three systems; collection, treatment, and disposal. Each has a different estimated useful life. The following two charts illustrate the estimated remaining life of the treatment and disposal system (drainfield or outfall) for each wastewater system operated by the SCRD. The SCRD owns 15 treatment systems with seven of them approaching the end of their estimated useful life (shown in orange in the chart); three of those service areas (Langdale, Sunnyside, and Greaves Road) also have disposal systems nearing the end of, or exceeding, their estimated useful life.

None of the wastewater collection systems are approaching the end of their useful lives. With an average expected life of 85 years, only two of the local services have a collection system that is currently over 40 years old.

Wastewater services are funded through parcel taxes and user fees; parcel taxes are collected from all parcels within the local service area boundary and user fees are collected from parcels utilizing the service.

A SCRD policy regulating the minimum contribution of revenue into a dedicated capital reserve does not exist. Currently unspent revenue is contributed annually to either capital or operational reserves specific to each local service area. As of the end of 2018, the reserve balances at the local service areas ranged from 0% to 6.4% of the estimated replacement value.



WASTEWATER SERVICES REVIEW AND ASSET MANAGEMENT PLANS

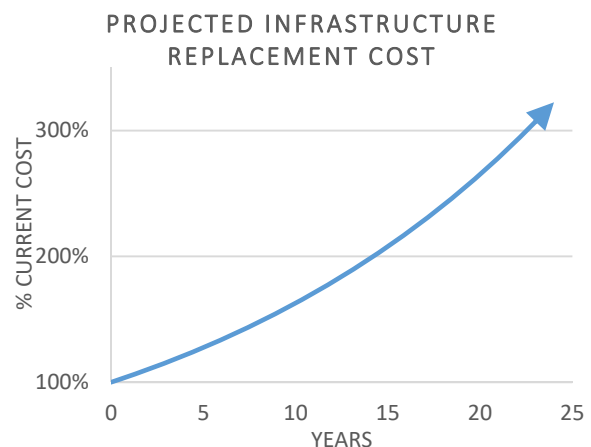
Review and analysis of all wastewater local service areas was undertaken to identify potential funding shortfalls and establish funding levels required to address the shortfalls. The attached Wastewater Local Service Asset Management Plans (WAMPs) consider a rate structure similar to SCRD water service areas where user fees fund operational costs and parcel taxes fund capital costs.

A review of existing user fees was conducted during the development of the WAMPs by comparing current levels of service to an optimal level of service. In order to achieve the optimal level of service, an increase of fulltime staff from two to three would be required. A second maintenance vehicle is also necessary to accommodate the additional staff. The potential user fee increase based on optimal levels of service ranges from -1% to 433%. The severity of the increase directly relates to the number of users in each service area. Currently eight of the 15 local service areas do not have a full complement of users. With a full complement of users the increase would significantly reduce for those eight local service areas, with the maximum increase lowered to 162%.

The WAMPs demonstrate that parcel tax rates are dependent on the duration of the capital model and the systems that require replacement within that model. Four capital models were prepared for each local service area to consider anticipated funding requirements over 10, 20, 50, and 80 year periods.

The capital budgets used for the models consider future infrastructure replacement while establishing a more robust reserve fund equal to 10% of the replacement value of the existing infrastructure by the final year of each model. Potential third-party funding to offset the cost of infrastructure replacement, from development fees or government grants, was not considered as there is no certainty that this funding will be available.

The estimated replacement cost of all existing wastewater collection, treatment, and disposal assets within the SCRD is approximately \$31.3 million. The average cost per parcel to replace the existing infrastructure in their local service area ranges from approximately \$8,000 to \$131,000. Assuming a 5% construction inflation, the wastewater infrastructure replacement costs can be expected to triple in under 25 years.



The WAMPs apply to a relatively small number of residential properties on the Sunshine Coast. For those property owners any increase to user fees or parcel taxes will be significant, but implementing a sustainable asset management policy will ensure continuous and reliable service for users while mitigating the potential for unanticipated levies to fund infrastructure replacement.

1. Introduction

This document serves as a summary of the Sunshine Coast Regional District's (SCRD) Wastewater Services Review and the fifteen Wastewater Local Service Asset Management Plans. The plans are intended to provide information required to make informed decisions regarding operations and maintenance as well as capital renewal and replacement. The site specific plans are also intended to assist in development of budgets required to provide sustainable service delivery to all users of SCRД wastewater systems.

This document also provides general information regarding the SCRД's wastewater systems and the planned operation and management of these facilities.

These plans have been prepared in accordance with the BC Framework of the Asset Management for Sustainable Service Delivery (Asset Management BC, 2017).

2. Background

2.1 Overview of the SCRД

The SCRД is a regional district situated on the Sunshine Coast, 30 km west of Vancouver. The SCRД manages resources in eight electoral areas (see Figure 1 below) including five districts, two member municipalities, and one First Nations government:

- Area A: Pender Harbour & Egmont
- Area B: Halfmoon Bay
- Area D: Roberts Creek
- Area E: Elphinstone
- Area F: West Howe Sound
- The District of Sechelt
- The Town of Gibsons
- shíshálh Nation (Sechelt Indian Government District)

The SCRД has an overall population of approximately 30,000 (Sunshine Coast Regional District, 2018). The SCRД supplies several major services to its districts and member municipalities including, but not limited to, municipal water services, isolated wastewater services, community park facilities, community recreation facilities, public transit services, and dock services. The SCRД's assets are valued at over \$300,000,000 and are funded by various means.

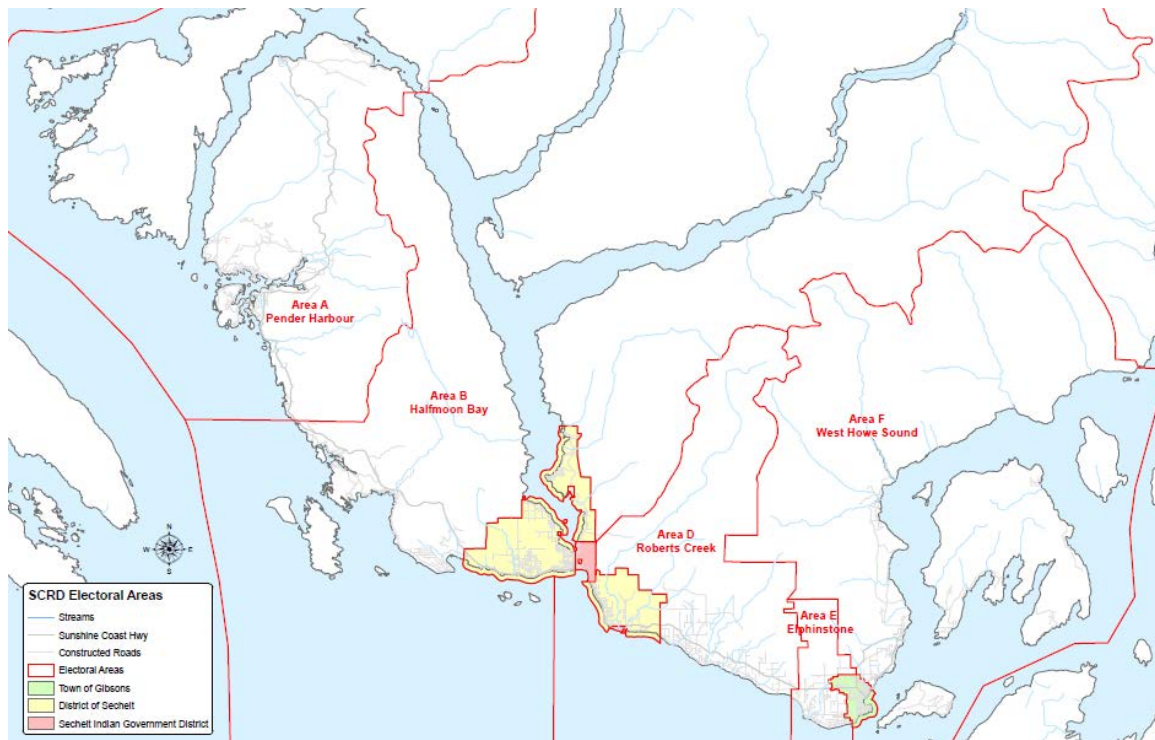


Figure 1: Sunshine Coast Regional District Electoral Areas.

2.2 Asset Management at the SCRD

In 2015 the SCRD initiated an asset management program to help deliver sustainable services in accordance with best practices established by Asset Management BC. Asset Management BC created guiding documents for use by local governments to assist in the development of asset management processes.

Following initiation of the program, the SCRD prepared its own Corporate Asset Management Plan. That document provided a summary of the assets owned by the SCRD and an action plan for the SCRD to begin implementation of asset management best practices.

The progress to date has included inventory collection, implementation of 'Cityworks' software to track work order activity and assist with decision making, and the completion of several condition assessment programs to accurately determine the remaining useful life of certain SCRD's assets.

The preliminary results of the completed work highlight the shortcomings of the strategies previously employed to provide sustainable service delivery within the SCRD. Many of the challenges experienced by the SCRD are common among local governments; rapid population growth across a largely rural community combined with aging foundational infrastructure. Meeting these challenges requires coordinated effort to ensure adequate service levels are maintained

WASTEWATER SERVICES REVIEW AND ASSET MANAGEMENT PLANS

while encouraging sustainable growth. The variety of the services provided by the SCRD also requires adequate staffing to ensure it is possible to conduct the necessary maintenance for all existing and future assets owned by the SCRD.

2.3 Wastewater Services

The SCRD organizes the operation and taxation of its wastewater services as local service areas. Each wastewater service tracks its own operating and capital costs individually. The wastewater services are funded through individual bylaw structures that establish taxation for a local service area. A separate Asset Management Plan was prepared for each local service area as funding and maintenance requirements are unique to each.

Table 1: Summary of SCRD wastewater treatment service areas.

Service Area	Treatment Facility Address	Electoral Area	Added
Canoe Road	12676 Canoe Rd	Egmont / Pender Harbour (Area A)	1994
Greaves Road	12545 Greaves Rd	Egmont / Pender Harbour (Area A)	1984
Lee Bay	4336 Orca Rd	Egmont / Pender Harbour (Area A)	1986
Lily Lake Village	12708 Lagoon Rd	Egmont / Pender Harbour (Area A)	2005
Merril Crescent	12683 Merrill Cres	Egmont / Pender Harbour (Area A)	1994
Painted Boat	12819 Lagoon Rd	Egmont / Pender Harbour (Area A)	2008
Pender Landing ¹	13321 Pender Landing Rd	Egmont / Pender Harbour (Area A)	2008 ²
Sakinaw Ridge	4300 Milne Rd	Egmont / Pender Harbour (Area A)	2014
Curran Road	5521 Curran Rd	Halfmoon Bay (Area B)	1994
Jolly Roger	10177 Highway 101	Halfmoon Bay (Area B)	1985
Secret Cove	5475 Secret Cove Rd	Halfmoon Bay (Area B)	1985
Square Bay	5320 Susan Way	Halfmoon Bay (Area B)	1981
Roberts Creek Co-Housing	1127 Emery Rd	Roberts Creek (Area D)	2004
Sunnyside	1101 Sunnyside Rd	Elphinstone (Area E)	1983
Woodcreek Park	534 Oceanview Dr	Elphinstone (Area E)	1992
Langdale	42 Newman Rd	West Howe Sound (Area F)	1989
YMCA Camp Elphinstone ¹	1765 YMCA Rd	West Howe Sound (Area F)	2014 ²

¹ Not currently a local service area however it is anticipated the SCRD will establish one in the near future.

² Year that the SCRD agreed to start maintaining the treatment and disposal systems.

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The rapid growth of the number of wastewater local service areas managed by the SCRD has outpaced funding and maintenance capacity. Approximately one third of the wastewater systems currently maintained by the SCRD were added in the last 15 years. Due to stricter treatment requirements and new technology (e.g. ultraviolet disinfection), an increase in operation and maintenance hours may be required once wastewater treatment systems are replaced, as experienced with two recently replaced treatment systems.

A Capital Planning Review for wastewater services was initiated in 2018 to establish the optimal level of service, operational activities, staffing levels, capital renewal and replacements, and to determine the funding necessary to meet these operational and capital targets. The service review soon identified a need for more staff to operate and maintain the wastewater systems. A new Wastewater Technician Coordinator position was created, increasing the full-time wastewater staffing from one to two.

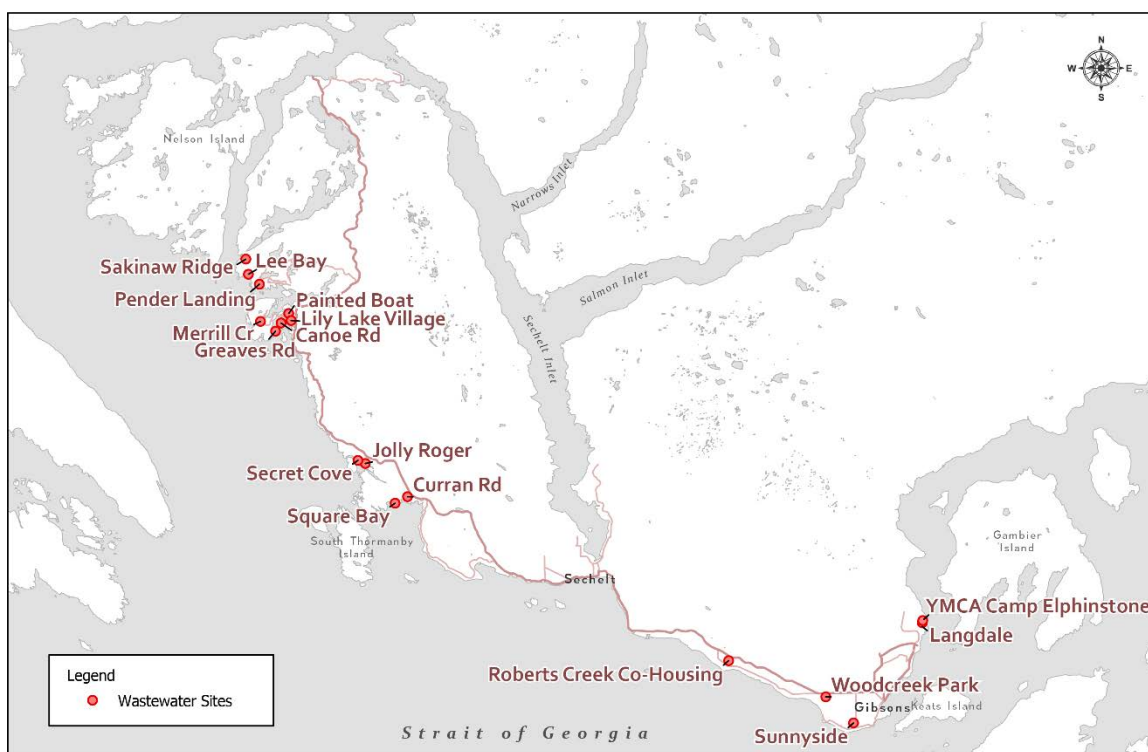


Figure 2: Location of SCRD wastewater treatment service areas.

3. Wastewater Systems Overview

3.1 Wastewater Collection

Wastewater collection is the process of collecting wastewater from users and conveying it to the wastewater treatment facility. The collection components include:

- *Service Connections:* Wastewater created by toilets, tubs, sinks, dishwashers, laundry machines, and other residential and commercial activities is conveyed from the source through a service connection. The service connection (lateral) links the user to the main piping network of the system (mains).
- *Gravity Mains and Manholes:* Gravity mains convey wastewater using pipes sloped down towards the treatment system. They run between connection points called manholes. The main can be accessed from inside of the manhole to clean, inspect, and repair mains. The majority of the mains in the SCRD wastewater systems are gravity mains.
- *Pressurized Mains:* Where the topography does not allow for gravity to convey the wastewater, pressurized mains are used. Grinder pumps, located on the user's property, connect to a small-diameter, low pressure main. The low pressure main delivers the wastewater to a manhole that connects to an adjoining gravity main.
- *Force Mains:* Force mains are large-diameter, high pressure mains that move the wastewater from a lift station to a manhole that connects to an adjoining gravity main.
- *Lift Stations:* Lift stations provide a point of collection and pumping for wastewater where force mains are required. A typical lift station contains a large collection basin, grinder pumps, pump control instrumentation, and connection to a force main.

3.2 Wastewater Treatment

Wastewater treatment is the process of removing residential contaminants from influent wastewater collected from the users to create an effluent wastewater that can be disposed of in either an ocean outfall or a drainfield with minimal environmental impact. That process involves:

- *Solids Removal:* Large solid particles (plastics, metals, cloth, etc.) are removed from the wastewater usually by a bar screen.
- *Primary Treatment:* Smaller settling solids (silt, large biological matter, etc.) are removed from the wastewater by reducing the flow velocity and allowing particles to settle.
- *Secondary Treatment:* Organic matter in the wastewater is broken down by a biological process. Most wastewater processes are defined by their secondary treatment methods since that's when the most variation in wastewater treatment occurs (other portions of the treatment process are relatively consistent among plant types).
- *Clarification:* Settling solids from the secondary process are removed from the wastewater by reducing the velocity allowing the solids to settle out.
- *Filtration:* Fine solids are removed by filtration. Not all processes require filtration depending on the final target quality of the effluent.
- *Disinfection:* Pathogens in the water on (viruses, bacteria, parasites, etc.) are killed or sterilized typically by ultraviolet (UV) treatment. The type of disposal method and the effluent quality standard typically dictates whether or not disinfection is required as part of the process.

3.3 Treated Effluent and Disposal

When wastewater has been treated sufficiently it can be considered effluent, or of disposal quality. The standard of disposal quality depends on the disposal method. There are two types of disposal methods utilized in the SCRD – ocean outfall and drainfield.

- *Ocean Outfall:* The treated effluent is conveyed to a distance away from shore where it is disposed in the ocean. The disposal location is located in the dilution zone that is established by distance from shore, distance from ocean surface and ocean currents to prevent effluent ingestion by the general population, water fowl, or other sensitive receptors.
- *Drainfield:* The treated effluent is discharged to a field where perforated pipe is installed underground. The perforated pipes evenly distribute the treated effluent into the ground where soil microbes naturally continue treatment before effluent reaches the groundwater.

3.4 Natural Assets

Natural assets are not available as an equivalent to engineered wastewater infrastructure and therefore are not included in the wastewater local service asset management plans.

In the absence of natural assets, the Utility Services Division will consider opportunities to incorporate climate resilient and adaptable infrastructure when infrastructure renewal and replacement is required.

4. Wastewater Budget Review

4.1 Current Budget & Revenue

The current revenue for wastewater services is collected through two streams – user fees, which are paid by the existing users of the service, and parcel taxes, which are paid by all properties within the established service area. The total revenue is combined and is available to cover the cost of the total annual expenditures. Revenue remaining at the end of the year is transferred to either a capital reserve or an operating reserve.

In order for reserve funds to be accessed, a budget proposal must be prepared and approved by the Board of Directors. Reserves can be used to fund maintenance and repairs that are not typically budgeted for and would exceed the actual annual revenue or to contribute towards capital renewals or replacements as required.

As part of the Wastewater Services Review and the funding requirements of each wastewater local service area, it is recommended that wastewater services adopt a rate structure similar to water service areas, where user fees will fund operational costs and parcel taxes will fund capital costs.

Potential user fees and parcel tax options for 2020 and beyond have been included in each wastewater treatment local service plan.

4.2 Potential Budget & Revenue

Historically, user rates and parcel taxes were determined without the benefit of condition assessments or an approved asset management plan. This led to limited reserves for infrastructure renewal and replacement and the inability to complete effective preventative maintenance programs.

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The potential user fees were determined based on detailed evaluations of the needs of each system based on its age, condition, and industry best practice. The operating budgets are largely based on the required hours that it would take to complete the necessary preventative maintenance work.

Estimated replacement costs of the wastewater systems components and creating a capital reserve policy that maintains a robust capital reserve formed the basis of the proposed parcel taxes. This would ensure that wastewater systems and components were replaced in a timely manner and that there is sufficient reserves in place to deal with emergencies.

Consideration to amalgamate two or more local services was not considered when determining replacement costs. Amalgamation of local services may lead to more cost-effective management of the wastewater services and potentially lower individual user fees and parcel taxes. As the treatment systems near the end of the useful lives, benefits of amalgamation with nearby service areas should be considered.

In order to ensure reliable wastewater collection, treatment and disposal in the future, decisions will need to be made regarding the implementation of new user fees and parcel taxes that more accurately represent the cost of owning and maintaining wastewater infrastructure.

Table 2: Summary of potential wastewater local service user fees and parcel taxes based on 50-year model.

Local Service Area	2019 User Fees	2019 Parcel Tax	2019 Total	2020 User Fees ³	2020 Parcel Taxes ⁴	2020 Total
Canoe Road	\$ 218.75	\$ 153.00	\$ 371.75	\$ 956	\$ 1,652	\$ 2,608
Greaves Road	\$ 255.00	\$ 102.00	\$ 357.00	\$ 400	\$ 2,093	\$ 2,493
Lee Bay	\$ 412.50	\$ 102.00	\$ 514.50	\$ 407	\$ 2,000	\$ 2,407
Lily Lake Village	\$ 562.50	\$ 204.00	\$ 766.50	\$ 949	\$ 1,920	\$ 2,869
Merrill Crescent	\$ 681.25	\$ 265.20	\$ 946.45	\$ 1,766	\$ 2,238	\$ 4,016
Painted Boat	\$ 537.50	\$ 0.00	\$ 537.50	\$ 548	\$ 2,045	\$ 2,593
Pender Landing	N/A	N/A	N/A	\$ 4,585	\$ 2,451	\$ 7,036
Sakinaw Ridge	\$ 718.75	\$ 418.20	\$ 1,136.95	\$ 3,832	\$ 3,952	\$ 7,784
Curran Road	\$ 475.00	\$ 153.00	\$ 628.00	\$ 837	\$ 3,241	\$ 4,078
Jolly Roger	\$ 412.50	\$ 20.40	\$ 432.90	\$ 679	\$ 2,682	\$ 3,361

³ Potential user fees based on optimal level of service delivery for operating and maintenance the wastewater systems

⁴ Potential parcel taxes based on Budget Plan 3 (50-Year Model with an even annual contribution) from each of the Wastewater Local Service Asset Management Plans

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Local Service Area	2019 User Fees	2019 Parcel Tax	2019 Total	2020 User Fees ³	2020 Parcel Taxes ⁴	2020 Total
Secret Cove	\$ 412.50	\$ 102.00	\$ 514.50	\$ 733	\$ 2,806	\$ 3,539
Square Bay	\$ 412.50	\$ 102.00	\$ 514.50	\$ 820	\$ 4,776	\$ 5,596
Roberts Creek Co-Housing	\$ 562.50	\$ 204.00	\$ 766.50	\$ 1,339	\$ 2,052	\$ 3,391
Sunnyside	\$ 125.00	\$ 51.00	\$ 176.00	\$ 427	\$ 2,663	\$ 3,090
Woodcreek Park	\$ 500.00	\$ 102.00	\$ 602.00	\$ 671	\$ 3,330	\$ 4,001
Langdale	\$ 562.50	\$ 102.00	\$ 664.50	\$ 1,002	\$ 3,001	\$ 4,003
YMCA Camp Elphinstone	N/A	N/A	N/A	\$ 26,731	\$103,880	\$130,611

5. Wastewater Asset Management Further Development

The 2015 Corporate Asset Management Plan (AMP) identified the following topics to be included in future revisions of the AMP or any other infrastructure asset management plans.

- Condition Assessment;
- Current Level of Service and Desired Level of Service;
- Risk and Criticality Modelling;
- Lifecycle Management; and
- Long-Term Financial Planning.

Each of these topics were considered in the Wastewater Local Service Asset Management Plans. Progress on each of these topics is described below.

5.1 Condition Assessments

In 2018 the SCRD began conducting condition assessments through CCTV inspections of the wastewater mains and visual inspections of the manholes. The information gathered through these inspections will assist with forming future capital work plans. Staff will address the repair of defects discovered during the inspection based on the severity rating of the defect, as noted in Table 3.

Condition assessments of the treatment systems and drainfields were also completed in 2018 and will continue to be conducted by staff throughout the year during scheduled inspections. Third-party inspections of the ocean outfalls are completed on a five year cycle.

WASTEWATER SERVICES REVIEW AND ASSET MANAGEMENT PLANS

The summary of the CCTV inspection results and links to the video and inspection report are now available in the 'Cityworks' software for staff to easily access the inspection results and to identify the pipe segments with the most severe deficiencies.

Table 3 – SCRD Plan to Repair CCTV Inspection Defects

Severity Rating	Immediate Defect	Risk of Failure	Plan to Repair
5	Pipe segment has failed or will likely fail within the next five years	Requires immediate action	Staff will investigate and prepare a budget proposal with the intention of repairing the defect in one to three years from receiving the CCTV inspection report.
4	Pipe segment has severe defects	Risk of failure within the next five to ten years	Staff will investigate and prepare a budget proposal with the intention of repairing the defect in one to three years from receiving the CCTV inspection report.
3	Pipe segment has moderate defects	Deterioration may continue, at 10 to twenty year timeframe	Staff will investigate and prepare a budget proposal with the intention of repairing the defect in three to five years from receiving the CCTV inspection report.
2	Pipe has minor defects	Unlikely to fail for at least 20 years	Staff will monitor the defect in future CCTV inspections.
1	Pipe has minor defects	Unlikely to fail in the foreseeable future	Staff will monitor the defect in future CCTV inspections.

5.2 Current Level of Service and Desired Level of Service

The current level of service (LOS), as stated in the AMP, is typically a reflection of how an organization plans maintenance and responds to emergencies or requests from the public. For wastewater infrastructure, the LOS has too often been dictated by staff availability. Historically there was one staff member assigned to conduct inspections, maintenance, and repair of the treatment and disposal systems at all of the wastewater areas. Adhering to a scheduled maintenance program while also responding to emergency repairs was not always possible with these staffing levels. This can result in the treatment systems that are in the worst condition receiving the most attention, while delaying scheduled maintenance at the remaining treatment systems. This style

of reactive asset management is unsustainable and may result in increased costs associated with delivery of service. It is beneficial to proactively maintain existing infrastructure before critical repairs are required.

The desired LOS, as stated in the AMP, is based on an understanding of community expectations. As it relates to wastewater, it is understood that the community expects continuous and reliable wastewater collection, treatment, and disposal. To achieve this desired LOS, cycled maintenance schedules were developed to ensure the infrastructure is inspected and maintained at regular intervals. Each wastewater service area has a set of defined tasks that require completion at predetermined frequencies. Completion of these routine tasks will improve the performance of wastewater systems, and increase awareness of developing issues within the treatment or disposal systems. This should enable the SCRD to maximize the useful life of all wastewater infrastructure.

Based on the task frequency and the estimated time to complete each task, a total number of working hours and required staff was determined. In addition to the time required to complete the operational and maintenance tasks, additional time was allocated to each local service for technical assistance and administration of the systems. The staffing required to meet the desired LOS includes the two current staff and one additional Technician. The new Wastewater Technician Coordinator position mentioned in Section 2.3 addresses some of this staffing shortfall. There will also be a need to increase the available maintenance vehicles from one to two to accommodate the staffing increase.

5.3 Risk and Criticality Modelling

Risk and criticality modelling was not completed with the development of the wastewater local service asset management plans.

The probability of asset failure in the collection system can now be determined using the CCTV condition assessment results. Discussion on how to identify and assign consequence of failure is needed to complete the criticality modelling for the collection system.

Significantly more effort would be required to complete this topic for the treatment and disposal systems.

5.4 Lifecycle Management

Lifecycle Management for wastewater infrastructure is challenging due to the extended lives of the assets (i.e. 50 years for treatment systems, 85 years for collection systems, and between 40 and 85 years for disposal systems).

WASTEWATER SERVICES REVIEW AND ASSET MANAGEMENT PLANS

Considering that wastewater infrastructure is taken over by the SCRD years after it has been constructed, it can be difficult to determine the entirety of costs incurred against an asset beginning from design and procurement. As infrastructure is replaced this information is easier to record, however the difficulty of carrying out this exercise with numerous staff involved over the years may make this a challenging topic to complete. A robust series of Asset Management processes and policies are required to establish accurate lifecycle management for the long-term assets that are transferred to SCRD ownership.

5.5 Long-Term Financial Planning

The information provided in the wastewater local service asset management plans is intended to prompt discussion on long-term financial planning. These summaries of individual wastewater systems are the most in-depth review on the state of this infrastructure to date. Ideally the information will facilitate a conversation about addressing long-term funding requirements for these assets.

A significant factor to be considered is the rapid growth of construction costs, averaging 5% annually over the last 20 years according to historical cost indexes⁵. This rate of increase in costs across the EUL of the system will result in a drastically higher replacement cost compared to the original installation cost.

It is important to recognize that as the wastewater infrastructure starts to require replacement, there is a potential that long-term debt can overlap for the various systems replaced. As shown in Figure 3, in the period that occurs 40 to 100 years after original construction, some local service areas may be faced with debt repayment of drainfield that overlaps with the debt repayment of a treatment or collection system.

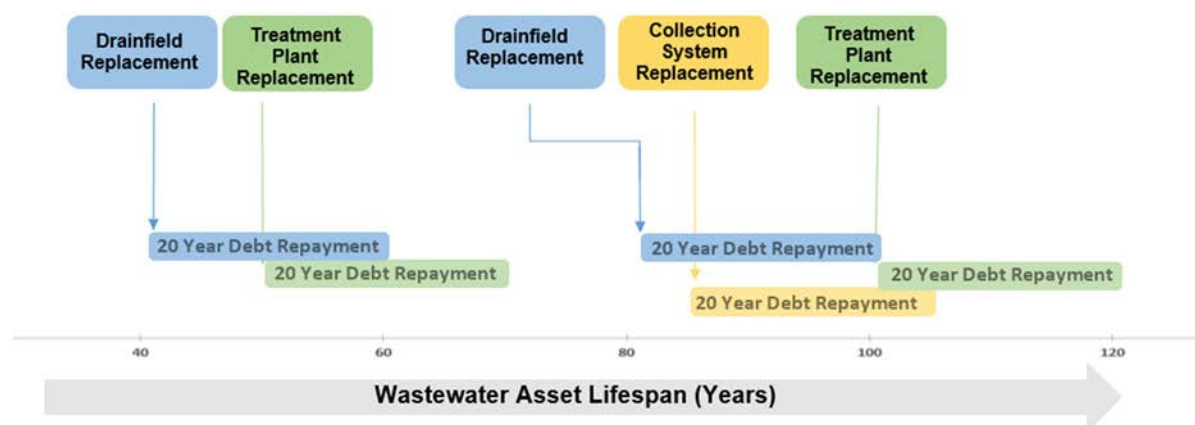


Figure 3: Wastewater infrastructure replacement and debt repayment timeline.

⁵ RSMeans Data (2018) *Historical City Cost Indexes (Vancouver, Canada)*. Retrieved from rsmeansonline.com/ReferenceItems/DetailInfo/2

6. Conclusion

Since the SCRD first began managing wastewater services, the number of local service areas has increased substantially. SCRD Utility Services staff have done a commendable job of maintaining the infrastructure at the 17 wastewater service areas, which feature seven different wastewater treatment methods, and are spread out across 75 km of the Sunshine Coast. Through the additions of new service areas, stricter treatment regulations, and new technologies, they have upheld their primary goal of delivering a continuous and reliable service to the residents in the local service areas.

The wastewater collection, treatment, and disposal systems have been deemed to be in good/fair condition on a collective evaluation. While the majority of the systems are in good or excellent condition, the evaluation scoring is depressed by the few aging systems that are either nearing or are past their expected useful life. For those systems in fair or poor condition, a near-term plan should be formulated for their impending repairs, renewals, or replacements. A long-term management plan has been prepared for consideration for all systems; including a review of the current allocation of revenue to ensure sufficient revenues are collected to account for foreseeable future costs associated with capital renewal and replacement, while ensuring operations and maintenance activities are funded adequately.

The effort to provide sustainable wastewater service within the SCRD is necessitated by the age of the infrastructure and the technical challenges that exist at many of the services. Consideration of complete lifecycle costs will ensure that appropriate levels of service are maintained for future residents.

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November 2019

Canoe Road Wastewater Local Service Asset Management Plan



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CANOE ROAD WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Version Log

This document was carefully prepared so that it can be maintained as a living document; a document that is continually edited and updated. Through the various edits and updates, this document may evolve and be expanded as needed. This may be as a result of infrastructure replacement or could be due to changes in regulatory requirements, technology, staffing, or environmental conditions. Regardless of the reason, updates to this asset management plan will be key to the ongoing operation of the Canoe Road wastewater local service.

Version	Revised By	Date	Description
1	D. Joseph	November 28, 2019	Final report for Board of Directors approval

Acknowledgements

Completion of this Asset Management Plan would not have been possible without contributions and support from the following staff:

Darren Joseph	Asset Management Coordinator	Corporate Services
Brad Wing	Financial Analyst	Corporate Services
Tina Perreault	General Manager, Corporate Services	Corporate Services
Cheryl Trent	GIS Administrator	Corporate Services
Emilia Walton	GIS Technician	Corporate Services
Shane Walkey	Manager, Utility Services	Infrastructure Services
Bobby Rebner	Operations Support Technician	Infrastructure Services
Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

CANOE ROAD WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1. Local Service Information

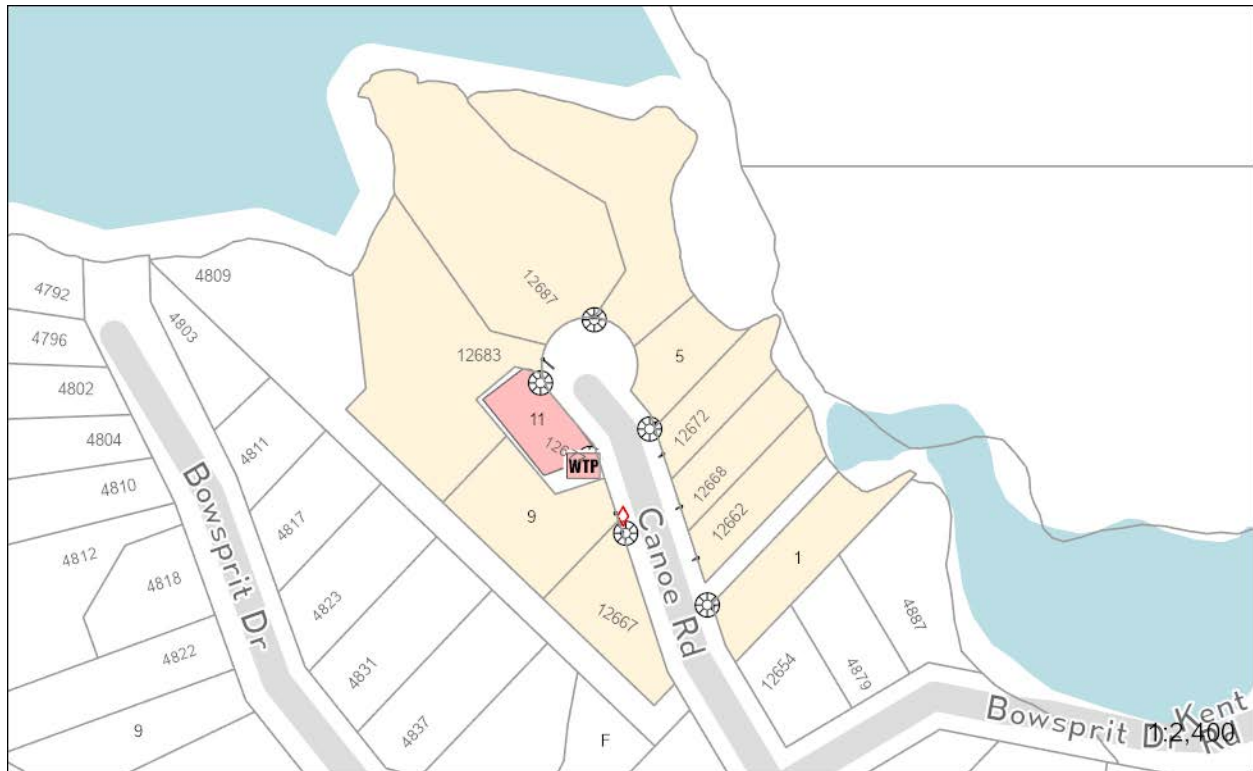


Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 12677 Canoe Road
- Original Construction: 1982
- Taken over by Sunshine Coast Regional District (SCRD): 1994
- Establishment of Local Service: 1996
- Major Upgrades: 2018 (Replacement of treatment and disposal systems)
- Treatment System Owner: SCRD
- Number of Fronting Parcels: 10 Residential
- Number of Users: 5
- Treatment Process: EcoFlo® Coco Filters
- Treatment Permit #: Not required
- Permitted Discharge Amount: < 22.7 m³/day
- Regulatory Authority: Public Health Act
- Effluent Receiving: Ground
- EOCP Classification: Unclassified
- Statutory Right of Ways: None required

CANOE ROAD WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1.1. Development Details

The Canoe Road wastewater local service area is located in the Egmont / Pender Harbour Electoral Area (Area A) of the SCRD. The treatment and disposal systems are located in a vacant parcel of land used exclusively for the processing of wastewater.

The community wastewater systems were constructed in 1982 to assist with the development of new single-family dwellings in the neighbourhood. The parcels in this service area were identified as having insufficient land to construct an onsite drainfield. The system was managed by the developer until 1994 when the SCRD began overseeing the service.

1.2. Established Bylaws

There have been various bylaws adopted by the SCRD Board of Directors that are relevant to the Canoe Road wastewater local service, as listed in Table 1.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
232A.4	Package Plants Service Unit (1994)	Established a designated area for the purpose of providing sewage collection, treatment and disposal within Areas A, B and E.
1026	Sewage Treatment Facilities Local Service (1996)	Converted the Package Plants Service Unit to a local service.
428	Sewage Treatment Facilities Service Unit (2019)	Establishment of, and subsequent updates thereto, sewage treatment facilities frontage and user charges.
512	Sewage Treatment Facilities Reserve Fund (2001)	Established a capital reserve fund for sewage treatment facilities.
608	Sewage Treatment Facilities Service Operating Reserve Fund (2007)	Established an operating reserve fund for sewage treatment facilities.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

Primary treatment of the influent takes place in individual household septic tanks located on the residents' properties. Each property's grey water is individually pumped directly to a distribution box on the wastewater treatment property, which then flows into the community treatment tank.

The community treatment tank, which acts as secondary treatment, is an underground concrete septic tank located in south side of the lot. The pump chamber sends the wastewater to a diverter, which evenly distributes to the three coconut husk treatment modules. After being processed through the filter media, the effluent is disposed of in an open (trenchless) drainfield.

Additional modules can be installed on the wastewater treatment property should they be required to accommodate an expansion of the existing number of users.

2.2. Collection System

A collection system has been in place since the original construction however it has never been operational.

There have been several issues with the privately installed lines that the SCRD has repaired over the years. In the Proposed Capital Budget section later in this plan, there is a recommendation to install a single line collection system. The main would be approximately 65 m with two manholes, one on either end of the line. This collection system would provide a reliable and safer service to the users.

2.3. Asset Accessibility

There are no accessibility concerns regarding the assets at Canoe Road

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

Both the new treatment and disposal systems have been operating in accordance with the design parameters. The treatment and disposal systems are in excellent condition.

The existing service connections, installed by the homeowners, are in poor condition and need to be replaced with a reliable collection system.

2.5. Asset Replacement Value

The treatment and disposal systems at Canoe Road were replaced and put into service in 2019. It is assumed that this method of treatment and disposal will continue to be acceptable in future years.

Replacement value for the collection system was estimated based on individual component replacement values.

CANOE ROAD WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 77,800	2019	50	50
Drainfield	\$ 0 ¹	2019	50	50
Collection System	\$ 139,753	N/A ²	85	N/A

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Canoe Road wastewater local service are charged user fees of \$218.75 per year (including a 25% increase in user fees in 2019) and those properties within the service area boundary as outlined in Bylaw No. 1026 are charged \$153.00 in parcel tax per year (including a 2% parcel tax increase in 2019).

3.2. Current O&M Budget

The budgeted and actual expenditures of the Canoe Road wastewater local service from 2015 to 2018 are shown in Table 3.

¹ The treatment system and drainfield have been assigned a single replacement cost. Both systems were constructed at the same time and it is anticipated that both will be replaced at the same time and have the same estimated useful life.

² Collection system installation date is still to be determined.

CANOE ROAD WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 994.00	\$ 952.00	\$ 872.00	\$ 949.00	\$ 941.75
Actual	\$ 4,658.00	\$ 409.00	\$ 3,418.00	\$ 3,190.53	\$ 2,918.88
Variance	\$ (3,664.00)	\$ 543.00	\$ (2,546.00)	\$ (2,241.53)	\$ (1,977.13)

Overall, the operations budget decreased by 5% between 2015 and 2018. The actual expenditure averaged in excess of three times the budgeted amount during the same period of time. The majority of the actual expenditure (92%) was to pay for staffing expenses of operational and administrative staff.

Actual expenditure overages in the last four years all relate to the replacement of the treatment and disposal systems. It was in 2015 that it was first noticed that the drainfield had failed and work was completed to temporarily resolve the problem. Then, in 2017 and 2018, preliminary work began to design and prepare for the construction of the new systems.

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Canoe Road local service area. Similar to the existing O&M budget, staff wages account for the majority of the potential annual O&M budget for Canoe Road. The required monthly and annual tasks are primarily completed by a Utility Technician. Due to the relative simplicity of the infrastructure, the hours required to complete an optimal level of service are much less than other treatment systems with mechanical equipment.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Proportioned charges for non-annual materials and supplies replacement;
- Proportioned charges for non-annual contracted services;
- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

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With the inclusion of ancillary charges, the potential operating budget for Canoe Road wastewater local service is \$5,736. The potential user fee for the five users in this local service area is \$956, a 337% increase from 2019 rates. This increase is primarily attributed to the separation of property tax revenue from the operating budget and the newly installed treatment system requiring a greater amount of effort to maintain than the system it replaced.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Canoe Road.

4.1. Investment of Reserves

As of the end of 2018, there was \$3,126.07 in capital reserves and \$197.58 contributed to operating reserves. Under the existing method of revenue collection and use, these reserves could be combined to invest in capital renewal or replacement projects if required.

There is currently no requirement for Canoe Road to have a set level, by either denomination or percentage, of reserves in place. Based on the current reserve balance, 2019 budget transfers, and short-term debt required to pay for the treatment and disposal systems, Canoe Road's reserves are 2% of the estimated replacement value of the infrastructure.

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a

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reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the shortest term in which all infrastructure (i.e. the treatment, disposal, and collection systems) will need to be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (1) Drainfield (1) Collection System (1)	Even Annual Contribution	\$ 1,234,400	\$ 1,543
Plan 2	80-Year	Treatment System (1) Drainfield (1) Collection System (1)	10% Increase Every Five Years	\$ 1,779,512	\$ 990
Plan 3	50-Year	Treatment System (1) Drainfield (1) Collection System (1)	Even Annual Contribution	\$ 826,000	\$ 1,652
Plan 4	50-Year	Treatment System (1) Drainfield (1) Collection System (1)	10% Increase Every Five Years	\$ 957,839	\$ 1,202
Plan 5	20-Year	Treatment System (0) Drainfield (0) Collection System (1)	Even Annual Contribution	\$ 305,600	\$ 1,528
Plan 6	20-Year	Treatment System (0) Drainfield (0) Collection System (1)	10% Increase Every Five Years	\$ 312,803	\$ 1,348
Plan 7	10-Year	Treatment System (0) Drainfield (0) Collection System (1)	Even Annual Contribution	\$ 251,700	\$ 2,517
Plan 8	10-Year	Treatment System (0) Drainfield (0) Collection System (1)	10% Increase Every Five Years	\$ 252,840	\$ 2,408

In addition to the replacement of the wastewater systems, other items that appear in the capital budget include:

- Payment of the short-term debt, between 2020 and 2024, to cover the SCRD's share of eligible project expenditures, and the project's ineligible expenditures, relating to the replacement of the treatment and disposal

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systems. (The Clean Water and Wastewater Fund grant funded 83% of the project.); and

- Proportioned short-term debt payments for the purchase and replacement of two service vehicles.

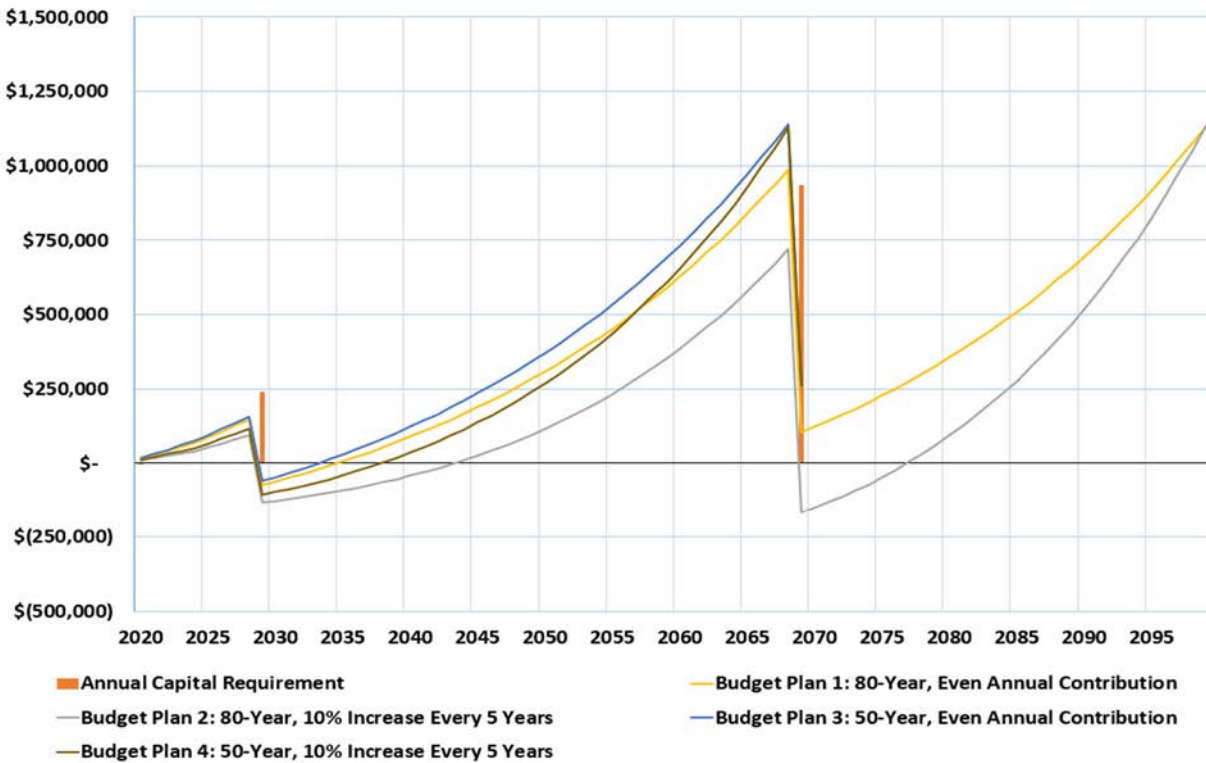


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

CANOE ROAD WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

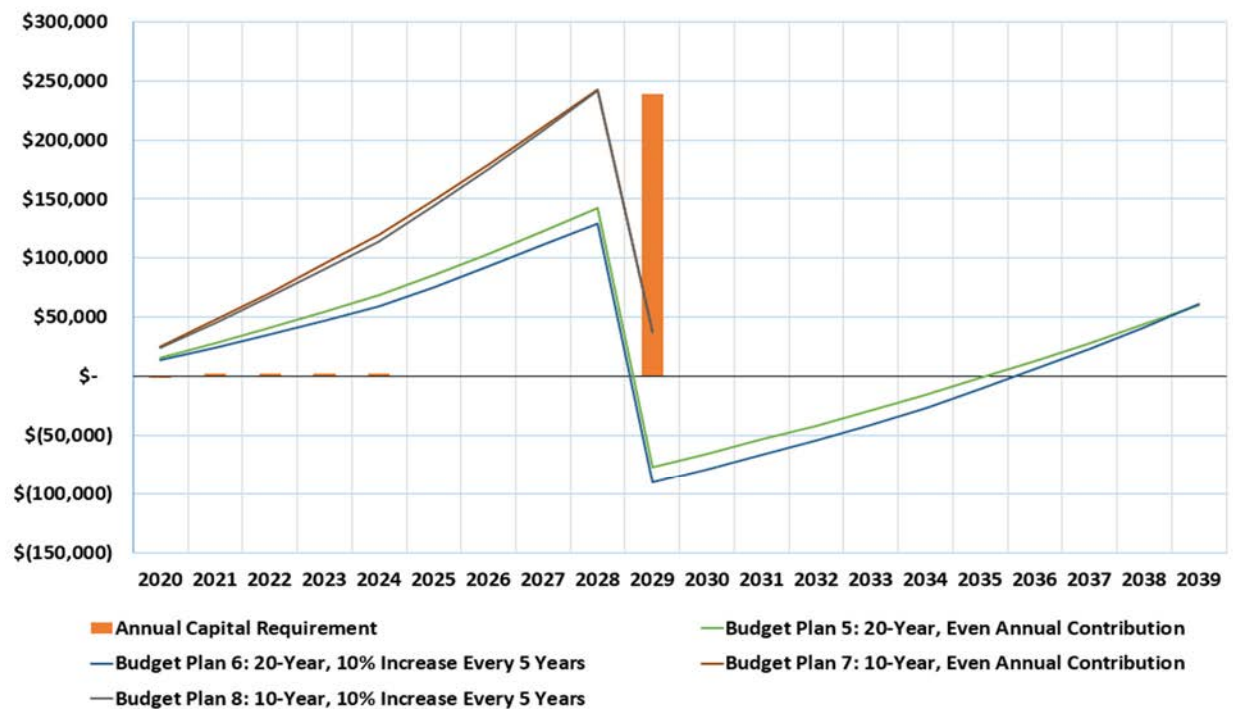


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

There are no local service improvement actions regarding the assets at Canoe Road at this time.

November 2019

Greaves Road Wastewater Local Service Asset Management Plan



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Version Log

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Version	Revised By	Date	Description
1	D. Joseph	November 28, 2019	Final report for Board of Directors approval

Acknowledgements

Completion of this Asset Management Plan would not have been possible without contributions and support from the following staff:

Darren Joseph	Asset Management Coordinator	Corporate Services
Brad Wing	Financial Analyst	Corporate Services
Tina Perreault	General Manager, Corporate Services	Corporate Services
Cheryl Trent	GIS Administrator	Corporate Services
Emilia Walton	GIS Technician	Corporate Services
Shane Walkey	Manager, Utility Services	Infrastructure Services
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Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

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1. Local Service Information



Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 12545 Greaves Road
- Original Construction: 1977
- Taken over by Sunshine Coast Regional District (SCRD): 1984
- Establishment of Local Service: 1996
- Major Upgrades: None to date
- Treatment System Owner: SCRD
- Number of Fronting Parcels: 6 Residential
- Number of Users: 5
- Treatment Process: Septic tank
- Treatment Permit #: Not required
- Permitted Discharge Amount: < 22.7 m³/day
- Regulatory Authority: Public Health Act
- Effluent Receiving: Ground
- EOCP Classification: Unclassified
- Statutory Right of Ways: None required

GREAVES ROAD WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1.1. Development Details

The Greaves Road wastewater local service area is located in the Egmont / Pender Harbour Electoral Area (Area A) of the SCRD. The treatment and disposal systems are located in a vacant parcel of land used exclusively for the processing of wastewater.

This community septic system was constructed in 1977 to assist with the development of new single-family dwellings in the neighbourhood. The parcels in this service area were identified as having insufficient land to construct an onsite drainfield. The system was managed by the developer until 1984 when the SCRD began overseeing the service.

1.2. Established Bylaws

There have been various bylaws adopted by the SCRD Board of Directors that are relevant to the Greaves Road wastewater local service, as listed in Table 1.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
232A	Package Plants Service Unit (1983)	Established a designated area for the purpose of providing sewage collection, treatment and disposal within Areas A, B and E.
1026	Sewage Treatment Facilities Local Service (1996)	Converted the Package Plants Service Unit to a local service.
428.19	Sewage Treatment Facilities Service Unit (2019)	Establishment of, and subsequent updates thereto, sewage treatment facilities frontage and user charges.
512	Sewage Treatment Facilities Reserve Fund (2001)	Established a capital reserve fund for sewage treatment facilities.
608	Sewage Treatment Facilities Service Operating Reserve Fund (2007)	Established an operating reserve fund for sewage treatment facilities.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment System

Primary treatment of the influent takes place in individual household septic tanks located on the residents' properties. Each property's grey water is individually pumped directly to the wastewater treatment property and to the community treatment tank.

The community treatment tank, which acts as secondary treatment, is an underground concrete septic tank located in west side of 12545 Greaves Road. There is a single outlet from the tank that splits in two directions, allowing the effluent to be diverted to two separate fields. The fields provide effluent disposal through a combined 215 m of perforated drainage pipe.

2.2. Collection System

There is currently no collection system in place on Greaves Road. A 50 mm pressurized line was originally proposed but never constructed.

There have been several issues with the privately installed lines that the SCRD has repaired over the years. In the Proposed Capital Budget section later in this plan, there is a recommendation to replace the collection system approximately ten years after the new treatment and disposal systems. This collection system would provide a reliable and safer service to the users.

2.3. Asset Accessibility

There are no accessibility concerns regarding the assets at Greaves Road.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;

- Age of system; and
- Ability to regularly meet effluent quality regulations

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

Based on the estimated useful life (EUL), the septic tank has approximately 16% of its lifespan remaining. The tank has not been pumped out since 2005 and therefore there is no recent inspection completed on the tank. A visual inspection of the tank during its next pump out will provide staff with a better understanding of its current condition and whether it may exceed its EUL. The treatment system is in fair condition.

A percolation test on the drainfield was conducted in 2019 to assess the condition of the perforated pipe (the test determines the water absorption rate at an exposed section of the pipe). While there has been no surface issues noted with the drainfield, it is now beyond its EUL and poses a concern for potential failure in the near future. The results of the percolation test revealed no issues with percolation over three of the runs tested, however there is root infiltration in the perforated drainage pipe nearest to the surrounding trees. The disposal system is in poor condition.

The existing service connections are in poor condition and need to be replaced with a reliable collection system.

2.5. Asset Replacement Value

It is expected that the treatment process that was installed 42 years ago will not be permitted once the community treatment tank is due for replacement. A replacement value was estimated based on the treatment and disposal systems at Canoe Road wastewater local service area.

At Canoe Road, influent is pumped to elevated treatment modules where it is processed through filter media and disposed of in a trenchless drainfield. This process was chosen for determining a replacement cost for Greaves Road based on a similar number of users and relatively low construction cost. However, to determine which treatment process is best suited for the conditions at Greaves Road wastewater local service, a feasibility study should be completed by a professional engineer.

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Installation cost for the collection system was estimated based on individual component installation values.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 108,920	1977	50	8
Drainfield	N/A ¹	1977	40	-2 ²
Collection System	\$ 100,056	N/A ³	85	N/A

3. Operations & Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Greaves Road wastewater local service are charged user fees of \$255.00 per year (including a 25% increase in user fees in 2019) and those properties within the service area boundary as outlined in Bylaw No. 1026 are charged \$102.00 in parcel tax per year (including a 2% parcel tax increase in 2019).

¹ The treatment system and drainfield have been assigned a single replacement cost. Both systems are anticipated to be replaced at the same and have the same estimated useful life.

² A negative Remaining Useful Life indicates that the asset has lasted longer than the expected norm. It is not necessarily directly related to asset condition or that the asset has failed.

³ Collection system installation date is still to be determined.

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3.2. Current O&M Budget

The budgeted and actual expenditures of the Greaves Road wastewater local service from 2015 to 2018 are shown in Table 3.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 1,501.00	\$ 1,439.00	\$ 1,326.00	\$ 1,399.00	\$ 1,416.25
Actual	\$ 371.00	\$ 503.00	\$ 4,679.00	\$ 628.93	\$ 1,545.48
Variance	\$ 1,130.00	\$ 936.00	\$ (3,353.00)	\$ 770.07	\$ (129.23)

Overall, the operations budget decreased by 7% between 2015 and 2018, while the actual expenditure increased by 70% during the same period of time. Regardless of the increase in expenditure, the actual expenditure remained significantly under budget in each year other than 2017. The majority of the actual expenditure (82%) was to pay for staffing expenses of operational and administrative staff.

The irregularity in this budget review, 2017, incurred costs 3.5 times the budgeted amount due to failures in the service connections on the west side of Greaves Road. Contracted services required to assist with the infrastructure repair accounted for almost half of the actual annual expenditures.

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Greaves Road local service area. Similar to the existing O&M budget, staff wages account for the majority of the potential annual O&M budget for Greaves Road. The required monthly and annual tasks are primarily completed by a Utility Technician. Due to the relative simplicity of the infrastructure, the hours required to complete an optimal level of service are much less than treatment systems with mechanical equipment.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;

- Proportioned charges for non-annual contracted services; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

Future replacement of the treatment system may result in an increased O&M budget. The treatment system mentioned in the Section 2.5 would increase the required O&M hours by as much as 140%. Other expenses relating to that type of treatment system include B.C. Hydro utility charges and scheduled filter media and equipment replacement.

With the inclusion of all ancillary charges, the potential operating budget for Greaves Road wastewater local service is \$2,000.00. The potential user fee for the five users in this service area is \$400.00, a 57% increase from 2019 rates. The separation of the property tax revenue from the operating budget is the primary contributing factor for the significant increase in user fees.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Greaves Road.

4.1. Reserve Balances

As of the end of 2018, there was \$2,558.85 in capital reserves and \$7,622.21 contributed to operating reserves. Under the existing method of revenue collection and use, these reserves could be combined to invest in capital renewal or replacement projects if required.

There is currently no requirement for Greaves Road to have a set level, by either denomination or percentage, of reserves in place. Based on the current reserve balance and 2019 budget transfers, Greaves Road's reserves are 5% of the estimated replacement value of the infrastructure.

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax

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and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the model in which all infrastructure (i.e. the treatment, disposal, and collection systems) will be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (2) Drainfield (2) Collection System (1)	Even Annual Contribution	\$ 1,625,200	\$ 3,386
Plan 2	80-Year	Treatment System (2) Drainfield (2) Collection System (1)	10% Increase Every Five Years	\$ 2,341,226	\$ 2,171
Plan 3	50-Year	Treatment System (1) Drainfield (1) Collection System (1)	Even Annual Contribution	\$ 627,750	\$ 2,093
Plan 4	50-Year	Treatment System (1) Drainfield (1) Collection System (1)	10% Increase Every Five Years	\$ 733,520	\$ 1,534
Plan 5	20-Year	Treatment System (1) Drainfield (1) Collection System (1)	Even Annual Contribution	\$ 376,900	\$ 3,141
Plan 6	20-Year	Treatment System (1) Drainfield (1) Collection System (1)	10% Increase Every Five Years	\$ 386,015	\$ 2,773
Plan 7	10-Year	Treatment System (1) Drainfield (1) Collection System (1)	Even Annual Contribution	\$ 310,650	\$ 5,178
Plan 8	10-Year	Treatment System (1) Drainfield (1) Collection System (1)	10% Increase Every Five Years	\$ 312,060	\$ 4,953

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In addition to the replacement of main wastewater systems, the capital budget also includes proportioned short-term debt payments for the purchase and replacement of two service vehicles.

As mentioned in Section 2.3, replacement costs and timing were based on the infrastructure recently constructed at Canoe Road. Different treatment and disposal systems may have different replacement times than noted in Table 4. For example, the proposed trenchless drainfield was assigned a longer EUL than a drainfield with perforated pipe. If a piped drainfield were to be installed it is assumed that, based on its EUL, it would need to be replaced in the 50-Year model, prior to the treatment system replacement.

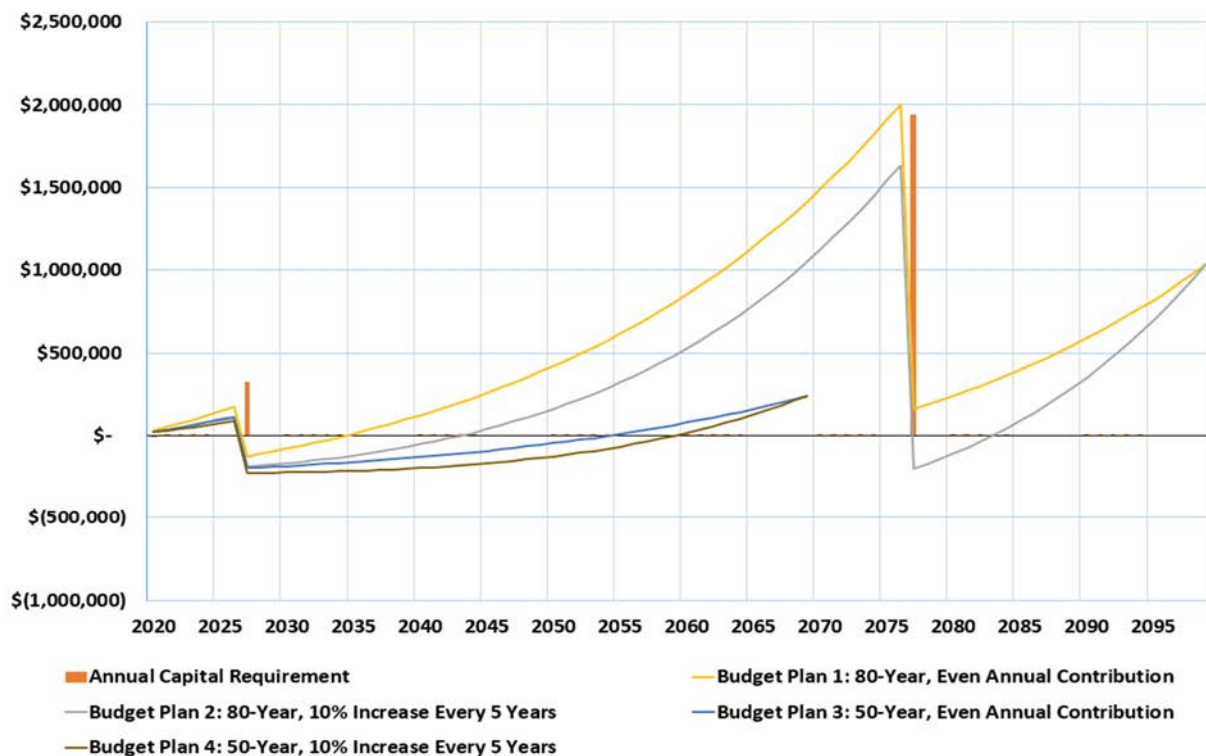
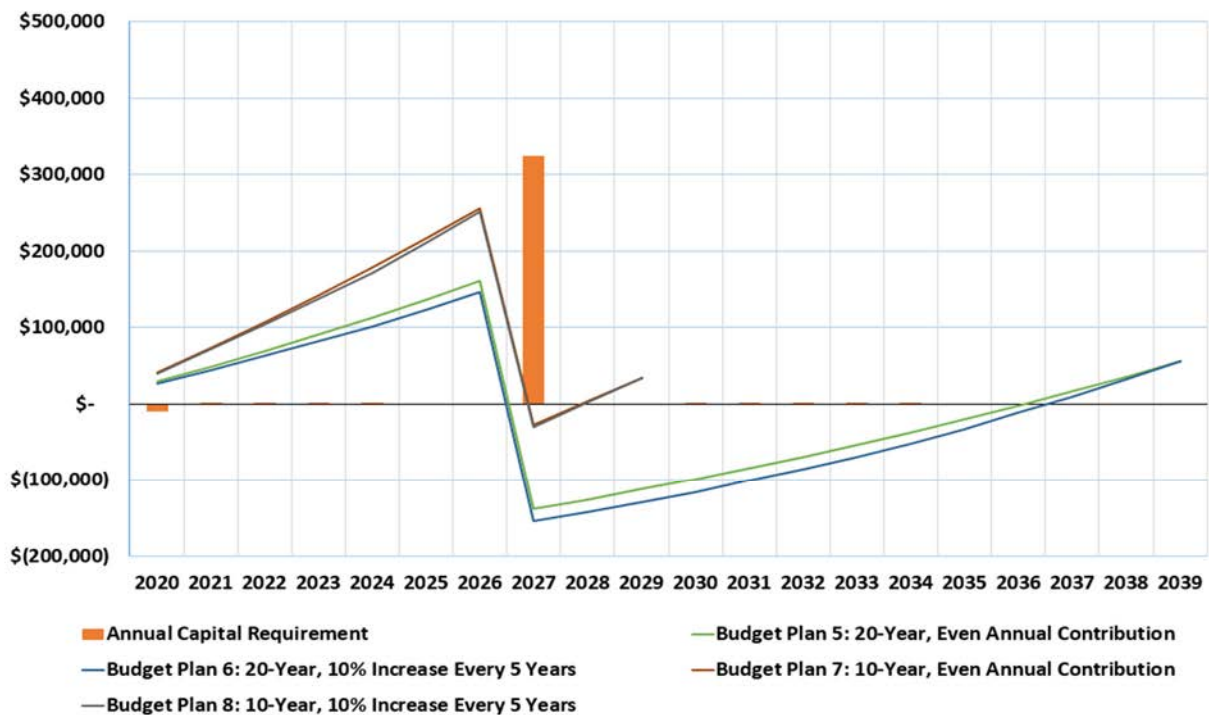


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

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5. Additional Local Service Improvement Actions

Additional operational work is required in the Greaves Road wastewater local service area that falls outside of the typical operational and maintenance plan. These items have been listed due to the potential financial impact that they may have on the users and fronting properties of the local service.

Table 5 – Local Service Improvement Actions

Action Item	Target Year	Cost Estimate	Result
Engage consulting services to complete a feasibility study on potential options for treatment replacement.	2020	\$ 7,500	To be determined.
Review Bylaw No. 1026 to ensure fronting properties in the local service area have been correctly identified.	2020	Staff time to review.	To be determined.

November 2019

Lee Bay Wastewater Local Service Asset Management Plan

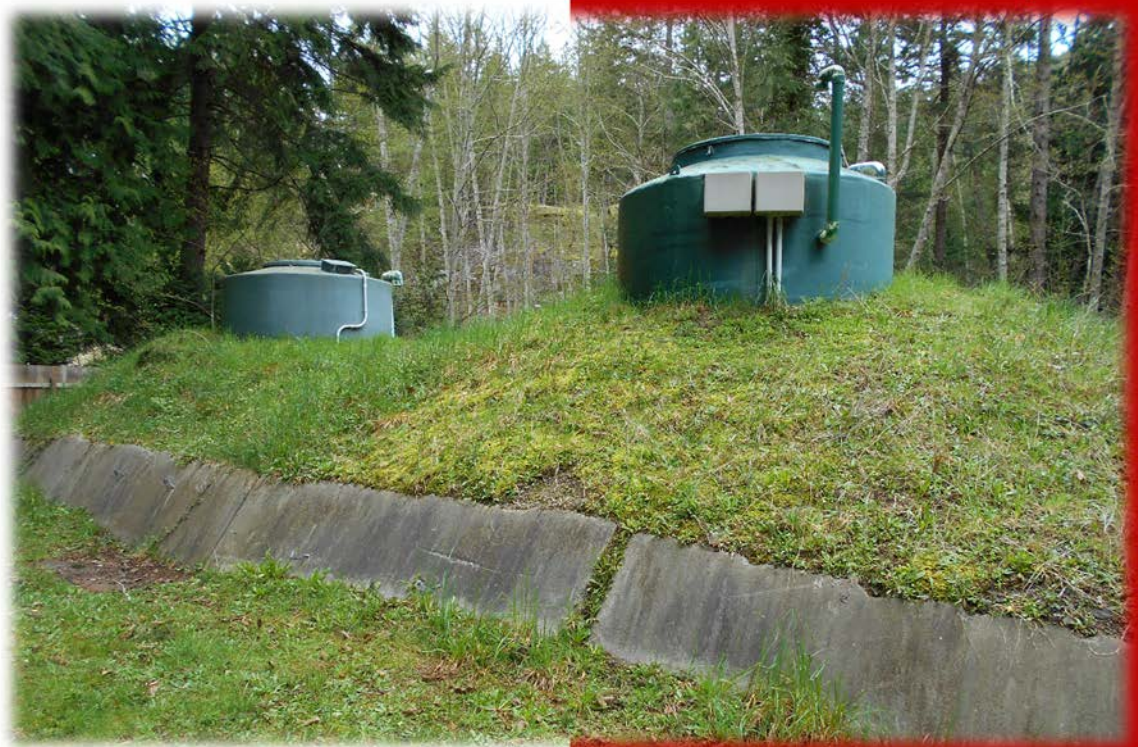


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Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

1. Local Service Information



Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 4336 Orca Road
- Original Construction: 1982
- Major Upgrades: 1999 (Replacement of treatment and disposal systems)
- Taken over by Sunshine Coast Regional District (SCRD): 1986
- Establishment of Local Service: 1996
- Treatment System Owner: SCRD
- Number of Fronting Parcels: 178 Residential
- Number of Users: 106
- Treatment Process: Bioclere® Trickle Filter
- Treatment Permit #: PE-5450
- Permitted Discharge Amount: 135 m³/day
- Regulatory Authority: Ministry of Environment Permit
- Effluent Receiving: Ground
- EOCP Classification: SWWS-M (Small Wastewater Systems – Mechanical)
- Statutory Right of Ways: BX307829 (registered February 4, 2005, for collection system connection from Backstrom Drive to Lee Road)

1.1. Development Details

The Lee Bay wastewater local service area is located in the Egmont / Pender Harbour Electoral Area (Area A) of the SCRD. The treatment and disposal systems are located in separate parcels of land, which are both used exclusively for the processing of wastewater.

The community wastewater systems were constructed in 1982 to assist with the development of new single-family dwellings in the neighbourhood. The ground conditions in this area are very rocky and were identified as having insufficient pervious soil material in their yards for constructing an onsite drainfield. The service area was expanded in 1997 and again in 2005 as additional house in the area were developed. The systems were managed by the developer until 1986 when the SCRD began overseeing the service.

1.2. Established Bylaws

There have been various bylaws adopted by the SCRD Board of Directors that are relevant to the Lee Bay wastewater local service, as listed in Table 1.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
232A.3	Package Plants Service Unit (1986)	Established a designated area for the purpose of providing sewage collection, treatment and disposal within Areas A, B and E.
1026	Sewage Treatment Facilities Local Service (1996)	Converted the Package Plants Service Unit to a local service.
428.19	Sewage Treatment Facilities Service Unit (2019)	Establishment of, and subsequent updates thereto, sewage treatment facilities frontage and user charges.
512	Sewage Treatment Facilities Reserve Fund (2001)	Established a capital reserve fund for sewage treatment facilities.
608	Sewage Treatment Facilities Service Operating Reserve Fund (2007)	Established an operating reserve fund for sewage treatment facilities.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

Treatment of the influent takes place in an underground cast-in-place concrete tank with a series of divider walls forming individual treatment sections within. The top of the tank is a concrete with built-in ground level access lids. Adjacent to the tank is a site building that houses the electrical and mechanical equipment, and a backup generator.

Wastewater enters the septic tanks which flows into an equalization chamber. Flow from the equalization tank is dosed to the trickle filters. Flow from the trickling filters goes into the final clarifier for settling and discharge to the fields.

Once the effluent has been pumped from the discharge chamber, it is conveyed in a pressurized main to the drainfields. Effluent can be diverted to one of two parcels; the primary disposal site has eight separate drainfields while the backup disposal site has four separate drainfields. The primary disposal site was constructed in 1999 during the second phase of development, while the backup disposal site was constructed as part of the original development. The fields provide effluent disposal through a combined 1,950 m of perforated drainage pipe on the main parcel and 1,010 m on the backup parcel.

2.2. Collection System

The collection system has approximately 1,610 m of 2000 mm diameter, polyvinyl chloride (PVC) gravity mains, 1,870 mm of 50 mm and 75 mm pressure mains, and 37 manholes. The infrastructure depth varies between 1.25 m and 3.40 m below grade.

2.3. Asset Accessibility

For the most part, the infrastructure at Lee Bay is accessible. There is one segment of the collection system that is located through two parcels, between Backstrom Drive and Lee Road.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

There have been no performance issues with the treatment system. The treatment system is in good condition.

There have been issues with the operation of the primary drainfield since its construction. The backup disposal site has been used consistently and has met the operational requirement. Work is ongoing to resolve the issues with the primary drainfield as the backup drainfield is nearing the end of its estimated useful life (EUL). The disposal system is in fair condition and can be upgraded once the effluent is being directed to the primary field.

The condition of the collection system was assessed in 2018 through CCTV inspections. During the inspection one pipe segment and one manhole were observed to have severe defects. The collection system is in good condition but can be downgraded if the necessary defects are not repaired in the near future.

2.5. Asset Replacement Value

It is expected that the treatment process that was installed 20 years ago will not meet regulatory requirements once the treatment plant is due for replacement. A replacement value was estimated using the replacement value of the treatment and disposal systems at Square Bay wastewater local service area.

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At Square Bay, the wastewater treatment process is a single sludge denitrification, extended aeration activated sludge process that incorporates Upflow Sludge Blanket Filtration (USBF®), an anoxic selector zone and sludge pre-thickening. Downstream processes include sand filtration and UV disinfection before effluent disposal.

Replacement values for the drainfield and collection system were estimated based on individual component replacement values. Only the primary drainfield was considered for replacement.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 2,685,393	1999	50	30
Drainfield	\$ 1,055,469	1999	40	20
Collection System	\$ 825,453	1982	85	48
Collection System	\$ 2,270,050	1997	85	63
Collection System	\$ 1,115,466	2005	85	71

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Lee Bay wastewater local service are charged user fees of \$412.50 per year (including a 25% increase in user fees in 2019) and those

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properties within the service area boundary as outlined in Bylaw No. 1026 are charged \$102.00 in parcel tax per year (including a 2% parcel tax increase in 2019).

3.2. Current O&M Budget

The budgeted and actual expenditures of the Lee Bay wastewater local service from 2015 to 2018 are shown in Table 3. The breakdown between expenditure related to the collection system and the treatment and disposal systems has not been recorded. As there have been no recent issues identified with the collection system, all expenditures are assumed to have been allocated to the treatment and disposal systems.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 44,561.00	\$ 43,468.00	\$ 41,340.00	\$ 41,909.00	\$ 42,819.50
Actual	\$ 22,160.00	\$ 22,799.00	\$ 23,800.00	\$ 58,699.23	\$ 31,864.56
Variance	\$ 22,401.00	\$ 20,669.00	\$ 17,540.00	\$(16,790.23)	\$ 10,954.94

Overall, the operations budget decreased by 6% between 2015 and 2018, while the actual expenditure increased by 165% during the same period of time. The majority of the actual expenditure (48%) was to pay for staffing expenses of operational and administrative staff, while other significant expenditures include equipment repairs and maintenance (19%) and contracted services (17%).

The irregularity noted in this budget review, 2018, incurred costs in excess of the budgeted amount due to the cost of providing a new service connection to a parcel that was missed by the developer.

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Lee Bay local service area. Similar to the existing O&M budget, staff wages account for the majority of the potential annual O&M budget for Lee Bay. The required weekly, bi-weekly, monthly, quarterly, semi-annual, and annual tasks are primarily completed by a Utility Technician.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Proportioned charges for non-annual contracted services;
- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

With the inclusion of all ancillary charges, the potential operating budget for Lee Bay wastewater local service is \$43,142.00. The potential user fee for the 106 users in this local service area is \$407.00, a 1% decrease from 2019 rates. The nominal change in user fees reveals that the optimal level of service is consistent with the service currently provided at this local service area.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Lee Bay.

4.1. Reserve Balances

As of the end of 2018, there was \$233,555.60 in capital reserves and \$254,966.66 contributed to operating reserves. Under the existing method of revenue collection and use, these reserves could be combined to invest in capital renewal or replacement projects if required.

There is currently no requirement for Lee Bay to have a set level, by either denomination or percentage, of reserves in place. Based on the current reserve balance and 2019 budget transfers, Lee Bay's reserves are 6% of the estimated replacement value of the infrastructure.

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the value of the infrastructure in the last year of the model.

The highlighted budget plans represent the model in which all infrastructure (i.e. the treatment, disposal, and collection systems) will all be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (2) Drainfield (2) Collection System (1)	Even Annual Contribution	\$ 57,955,200	\$ 4,070
Plan 2	80-Year	Treatment System (2) Drainfield (2) Collection System (1)	10% Increase Every Five Years	\$ 82,952,204	\$ 2,593
Plan 3	50-Year	Treatment System (1) Drainfield (1) Collection System (1)	Even Annual Contribution	\$ 17,799,500	\$ 2,000
Plan 4	50-Year	Treatment System (1) Drainfield (1) Collection System (1)	10% Increase Every Five Years	\$ 20,577,606	\$ 1,451
Plan 5	20-Year	Treatment System (0) Drainfield (1) Collection System (0)	Even Annual Contribution	\$ 2,945,600	\$ 827
Plan 6	20-Year	Treatment System (0) Drainfield (1) Collection System (0)	10% Increase Every Five Years	\$ 3,012,705	\$ 729

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Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 7	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	Even Annual Contribution	\$ 659,500	\$ 371
Plan 8	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	10% Increase Every Five Years	\$ 662,445	\$ 354

In addition to the replacement of the wastewater systems, other items that appear in the capital budget include:

- Replacement of the privacy fence between the residential properties and the treatment system;
- Replacement of the emergency standby generator; and
- Proportioned short-term debt payments for the purchase and replacement of two service vehicles.

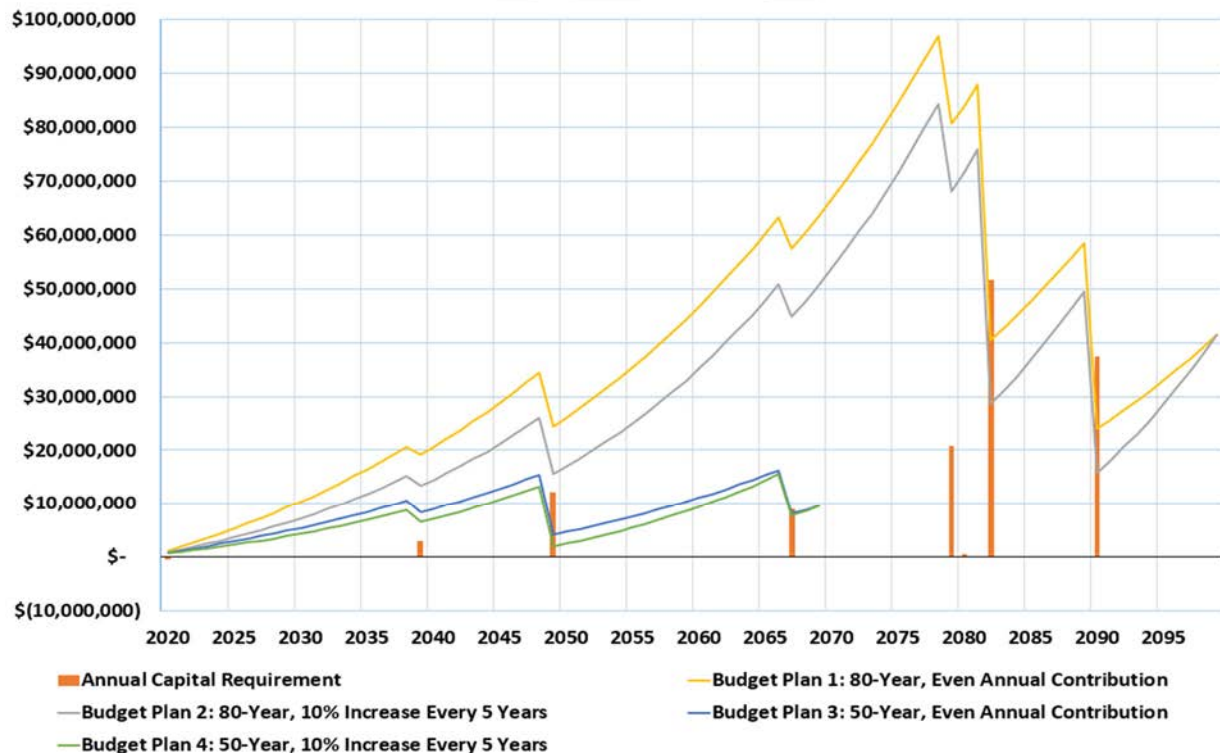


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

LEE BAY WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

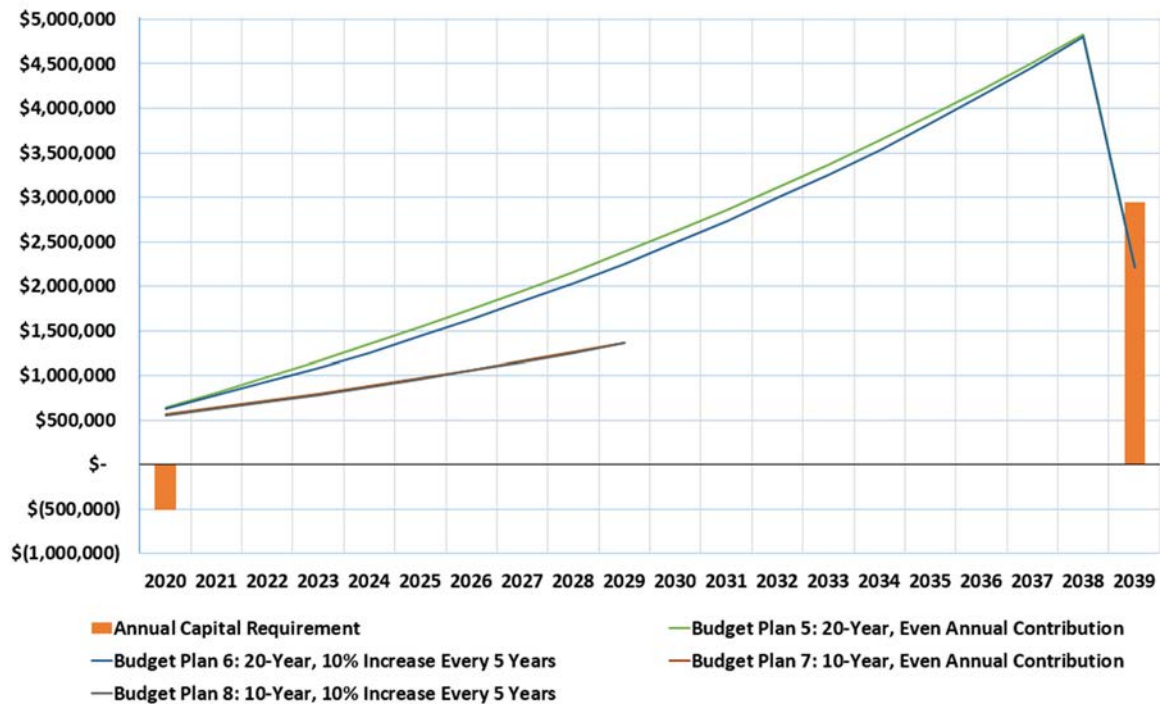


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

Additional operational work is required in the Lee Bay wastewater local service area that falls outside of the typical operational and maintenance plan. These items have been listed due to the potential financial impact that they may have on the users and fronting properties of the local service.

Table 5 – Local Service Improvement Actions

Action Item	Target Year	Cost Estimate	Result
Repair the severe rated defects in the collection system noted in the CCTV inspection.	2020-2021	\$ 20,000	To be determined.

November 2019

Lily Lake Village Wastewater Local Service Asset Management Plan



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LILY LAKE VILLAGE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Version Log

This document was carefully prepared so that it can be maintained as a living document; a document that is continually edited and updated. Through the various edits and updates, this document may evolve and be expanded as needed. This may be as a result of infrastructure replacement or could be due to changes in regulatory requirements, technology, staffing, or environmental conditions. Regardless of the reason, updates to this asset management plan will be key to the ongoing operation of the Lily Lake Village wastewater local service.

Version	Revised By	Date	Description
1	D. Joseph	November 28, 2019	Final report for Board of Directors approval

Acknowledgements

Completion of this Asset Management Plan would not have been possible without contributions and support from the following staff:

Darren Joseph	Asset Management Coordinator	Corporate Services
Brad Wing	Financial Analyst	Corporate Services
Tina Perreault	General Manager, Corporate Services	Corporate Services
Cheryl Trent	GIS Administrator	Corporate Services
Emilia Walton	GIS Technician	Corporate Services
Shane Walkey	Manager, Utility Services	Infrastructure Services
Bobby Rebner	Operations Support Technician	Infrastructure Services
Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

LILY LAKE VILLAGE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1. Local Service Information

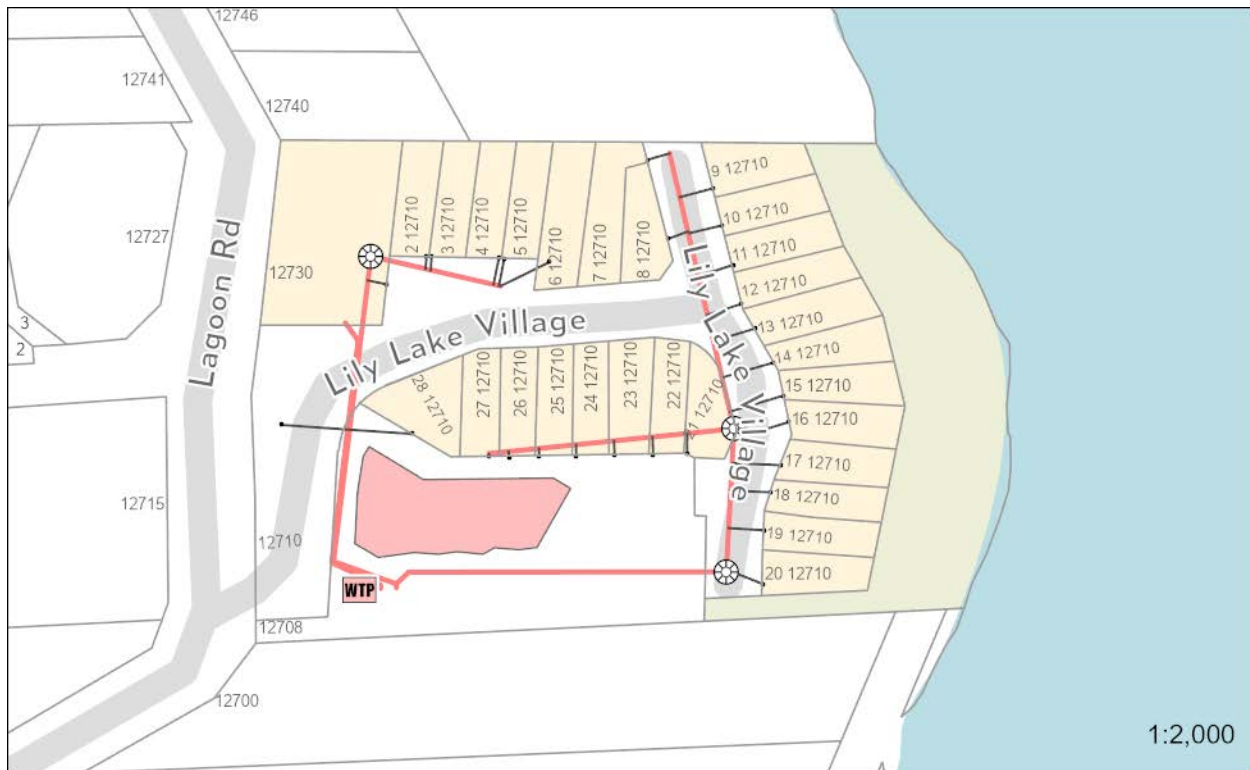


Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 12708 Lagoon Road
- Original Construction: 2005
- Major Upgrades: None to date
- Taken over by Sunshine Coast Regional District (SCRD): 2005
- Establishment of Local Service: 2009
- Treatment System Owner: SCRD
- Number of Fronting Parcels: 28 Residential, 1 Seniors Housing Facility
- Number of Users: 28
- Treatment Process: BioMicrobics FAST® 9.0 (1) and 3.0 (1) plants
- Treatment Permit #: RE-17782
- Permitted Discharge Amount: 38.2 m³/day
- Regulatory Authority: Municipal Wastewater Regulation (MWR)
- Effluent Receiving: Ground
- EOCP Classification: SWWS-M (Small Wastewater Systems – Mechanical)
- Statutory Right of Ways: None in place; required for access on to strata common property

LILY LAKE VILLAGE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1.1. Development Details

The Lily Lake Village wastewater local service area is located in the Egmont / Pender Harbour Electoral Area (Area A) of the SCRD. The treatment and disposal systems are located in a vacant parcel of land used for the processing of wastewater, and are located to the south of the houses within the service area.

The community wastewater systems were constructed in 2005 to assist with the development of new single-family dwellings in the strata development. The individual strata parcels in the Lily Lake Village development are too small for an onsite septic system. The systems were managed by the developer until 2009 when the SCRD began overseeing the service.

1.2. Established Bylaws

There have been various bylaws adopted by the Sunshine Coast Regional District (SCRD) Board of Directors that are relevant to the Lily Lake Village wastewater local service, as listed in Table 1.

Lily Lake Village does not currently have a bylaw that establishes a capital reserve fund. As discussed in the Wastewater Services Review, parcel taxes collected will be invested in a reserve fund for future renewal and replacement projects.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
1076	Lillies Lake Village Community Sewage Treatment System Service (2009)	Establishes a service to provide sewage treatment services.
428	Sewage Treatment Facilities Service Unit (2019)	Establishment of, and subsequent updates thereto, sewage treatment facilities frontage and user charges.
667	Lillies Lake Village Waste Water Plant Operating Reserve Fund (2012)	Established an operating reserve fund.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

Treatment of the influent takes place in an underground cast-in-place concrete tank with a series of divider walls forming individual treatment sections within. The top of the tank is a concrete with built-in ground level access lids. Adjacent to the tank is a site building that houses the electrical and mechanical equipment.

Wastewater enters the septic tanks where primary solids settle (effluent from the proposed seniors housing will have a separate septic tank than the residential homes). Aeration occurs as aerated water is cascaded over honeycomb media. Effluent from the trickle filter is pumped through sand filters into the final clarifier before discharge to the drainfield.

The final pumps provide treated effluent to be sent to one of three fields. The fields provide effluent disposal through a combined 380 m of perforated drainage pipe.

2.2. Collection System

The collection system has approximately 482 m of 200 mm diameter, polyvinyl chloride (PVC), gravity mains, and three manholes. The infrastructure depth varies between 1.39 m and 1.70 m below grade.

2.3. Asset Accessibility

The collection system is located on strata common property. A Statutory Right of Way or memorandum of understanding could not be located that authorizes the SCRD to enter the property to construct, install, maintain, and operate the wastewater system.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

LILY LAKE VILLAGE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

There have been no performance issues noted with the treatment and disposal systems. The treatment and disposal systems are in good condition.

The condition of the collection system was assessed in 2018 through CCTV inspections. During the inspection no defects were observed. The collection system is in good condition.

2.5. Asset Replacement Value

It is expected that the treatment process and drainfield configuration that were installed 14 years ago will still be permitted once the systems are due for replacement.

Replacement value for the collection system was estimated based on individual component replacement values.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 565,648	2005	50	36
Drainfield	\$ 134,583	2005	40	26
Collection System	\$ 341,021	2005	85	71

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL.

These activities include routine inspections and readings, unforeseen repairs,

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effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Lily Lake Village wastewater local service are charged user fees of \$562.50 per year (including a 25% increase in user fees in 2019) and are charged \$204.00 in parcel tax per year (including a 2% parcel tax increase in 2019).

3.2. Current O&M Budget

The budgeted and actual expenditures of the Lily Lake Village wastewater local service from 2015 to 2018 are shown in Table 3. The breakdown between expenditure related to the collection system and the treatment and disposal systems has not been recorded. As there have been no recent issues identified with the collection system, all expenditures are assumed to have been allocated to the treatment and disposal systems.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 18,956.00	\$ 18,450.00	\$ 15,825.00	\$ 16,222.00	\$ 17,363.25
Actual	\$ 14,781.00	\$ 13,806.00	\$ 9,132.00	\$ 11,736.06	\$ 12,363.77
Variance	\$ 4,175.00	\$ 4,644.00	\$ 6,693.00	\$ 4,485.94	\$ 4,999.48

Overall, the operations budget decreased by 14% between 2015 and 2018, while the actual expenditure increased by 21% during the same period of time. The majority of the actual expenditure (46%) was to pay for staffing expenses of operational and administrative staff, while other significant expenditures include B.C. Hydro utility charges (27%) and contracted services (15%).

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Lily Lake Village local service area. Similar to the existing O&M budget, staff wages account for the majority of the potential annual O&M budget for Lily Lake Village. The required weekly, monthly, quarterly, semi-annual, and annual tasks are primarily completed by a Utility Technician.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Proportioned charges for non-annual contracted services;
- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

With the inclusion of all ancillary charges, the potential operating budget for Lily Lake Village wastewater local service is \$26,572.00. The potential user fee for the 28 users in this local service area is \$949.00, a 69% increase from 2019 rates. This increase is primarily attributed to the separation of property tax revenue from the operating budget and improving the level of service delivered to this local service area.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Lily Lake Village.

4.1. Reserve Balances

As of the end of 2018, there were no capital reserves and \$45,275.95 contributed to operating reserves. Under the existing method of revenue collection and use, reserves could be combined to invest in capital renewal or replacement projects if required.

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There is currently no requirement for Lily Lake Village to have a set level, by either denomination or percentage, of reserves in place. Based on the current reserve balance and 2019 budget transfers, Lily Lake Village's reserves are 5% of the estimated replacement value of the infrastructure.

4.2. Proposed Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the shortest term in which all infrastructure (i.e. the treatment, disposal, and collection systems) will all be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (1) Drainfield (2) Collection System (1)	Even Annual Contribution	\$ 7,677,600	\$ 3,309
Plan 2	80-Year	Treatment System (1) Drainfield (2) Collection System (1)	10% Increase Every Five Years	\$ 10,989,832	\$ 2,108
Plan 3	50-Year	Treatment System (1) Drainfield (1) Collection System (0)	Even Annual Contribution	\$ 2,784,000	\$ 1,920
Plan 4	50-Year	Treatment System (1) Drainfield (1) Collection System (0)	10% Increase Every Five Years	\$ 3,219,360	\$ 1,393

LILY LAKE VILLAGE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 5	20-Year	Treatment System (0) Drainfield (0) Collection System (0)	Even Annual Contribution	\$ 143,400	\$ 247
Plan 6	20-Year	Treatment System (0) Drainfield (0) Collection System (0)	10% Increase Every Five Years	\$ 146,656	\$ 218
Plan 7	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	Even Annual Contribution	\$ 98,600	\$ 340
Plan 8	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	10% Increase Every Five Years	\$ 99,015	\$ 325

In addition to the replacement of the wastewater systems, other items that appear in the capital budget include proportioned short-term debt payments for the replacement of two service vehicles.

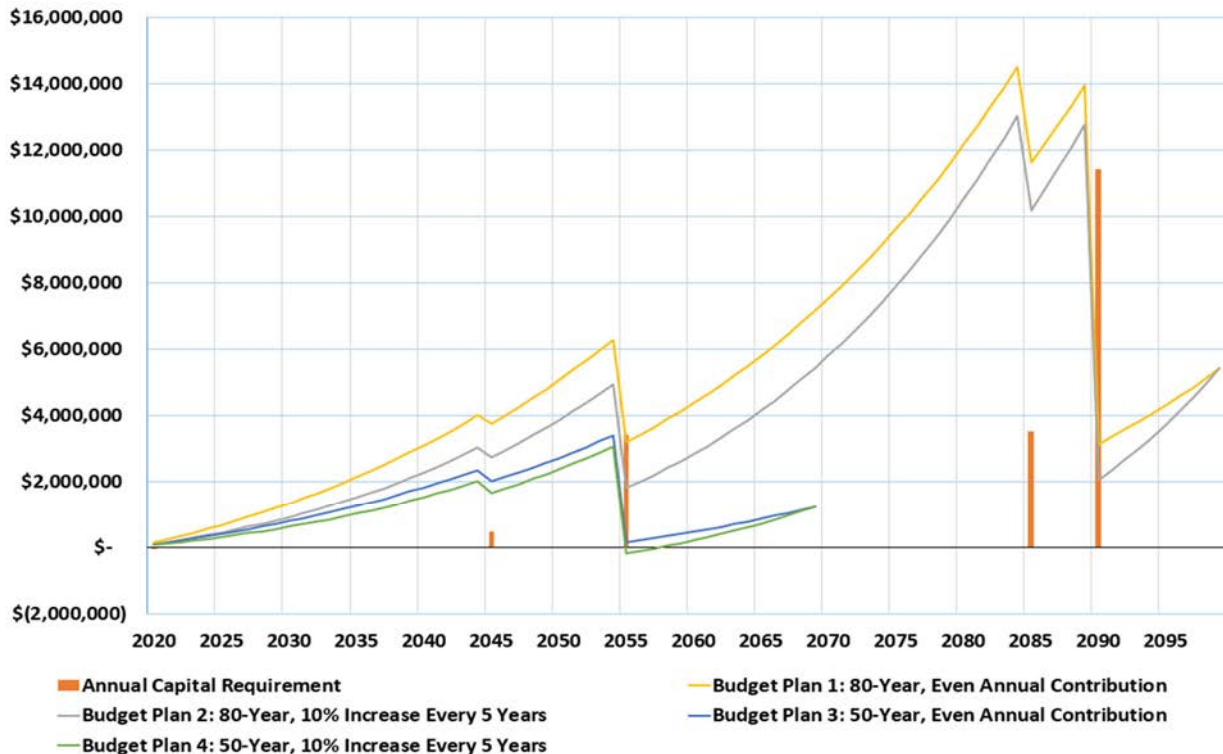


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

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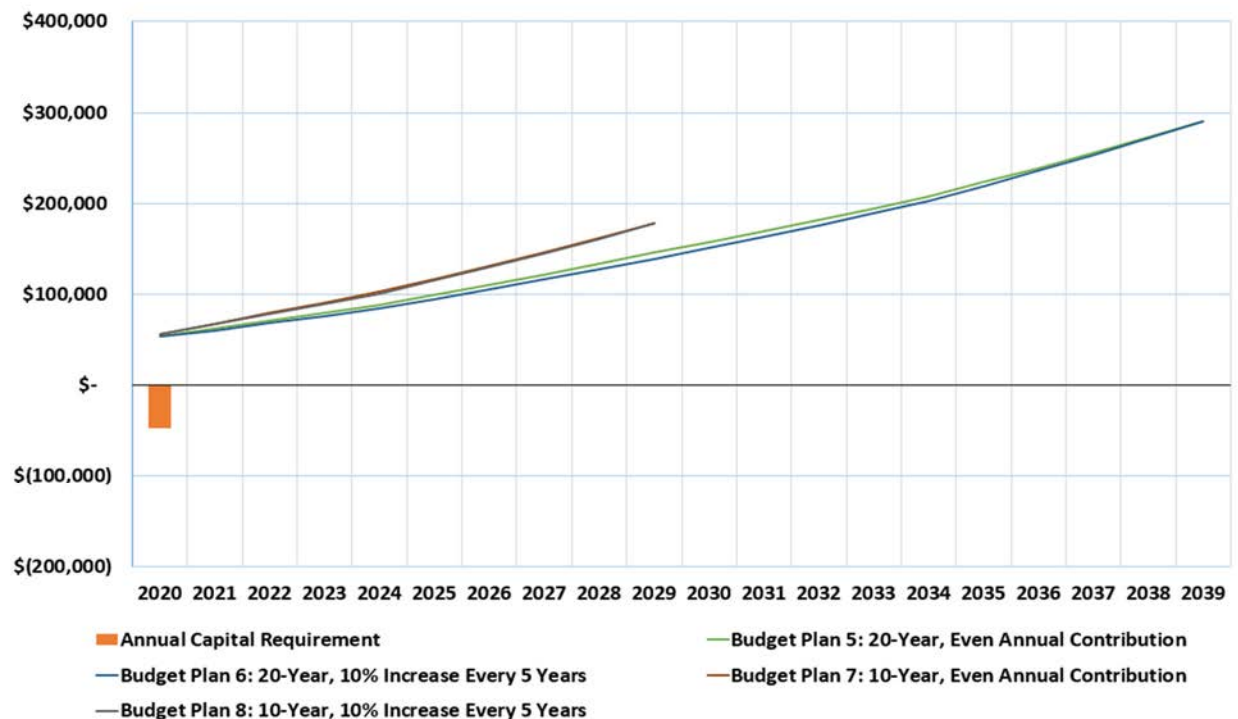


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

Additional operational work is required in the Lily Lake Village wastewater local service area that falls outside of the typical operational and maintenance plan. These items have been listed due to the potential impact that they may have on the users and fronting properties of the local service.

Table 5 – Local Service Improvement Actions

Action Item	Target Year	Cost Estimate	Result
Create capital reserves bylaw.	2020	Staff time only.	To be determined.
Obtain a Statutory Right of Away over portion of common property for the operation, maintenance, and replacement of the wastewater collection system.	2021	\$ 1,300	To be determined.

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Merrill Crescent Wastewater Local Service Asset Management Plan



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MERRILL CRESCENT WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Version Log

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Version	Revised By	Date	Description
1	D. Joseph		Final report for Board of Directors approval

Acknowledgements

Completion of this Asset Management Plan would not have been possible without contributions and support from the following staff:

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Emilia Walton	GIS Technician	Corporate Services
Shane Walkey	Manager, Utility Services	Infrastructure Services
Bobby Rebner	Operations Support Technician	Infrastructure Services
Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

MERRILL CRESCENT WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1. Local Service Information

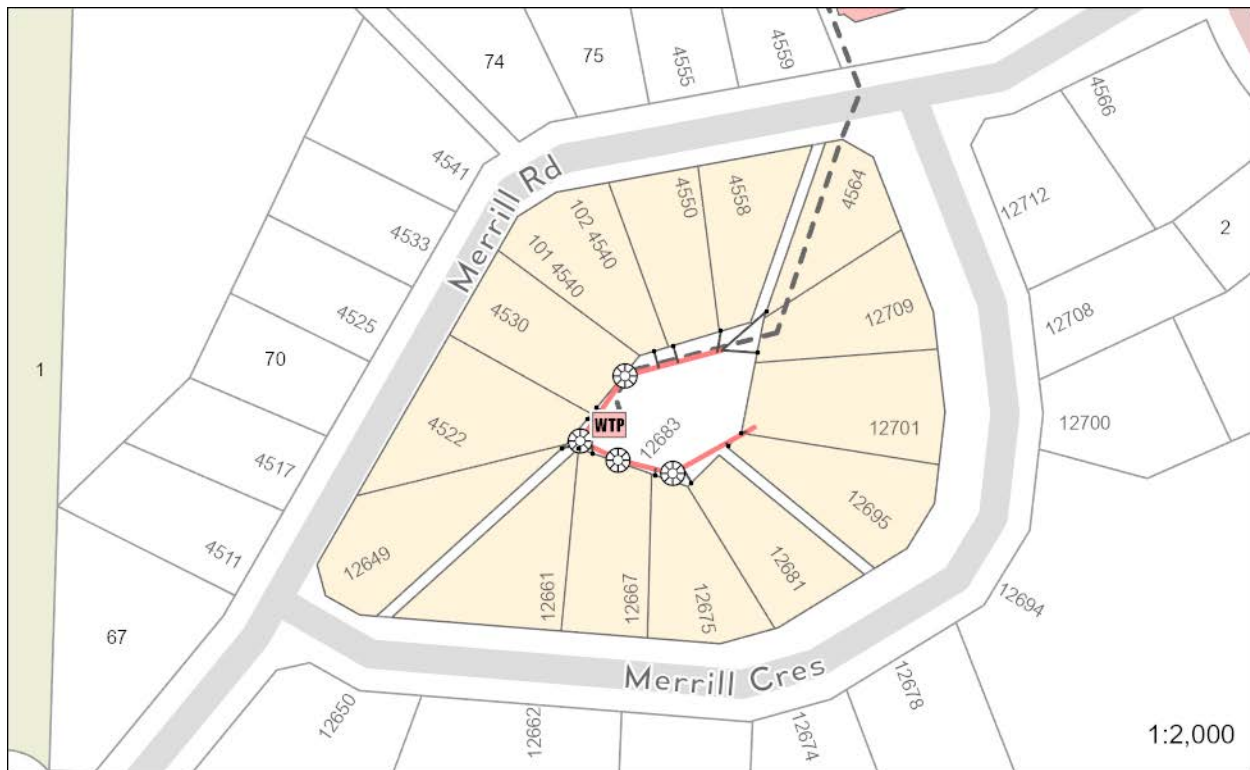


Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 12683 Merrill Crescent
- Original Construction: 1982
- Taken over by Sunshine Coast Regional District (SCRD): 1994
- Establishment of Local Service: 1996
- Major Upgrades: 2018 (Replacement of disposal system)
- Treatment System Owner: SCRD
- Number of Fronting Parcels: 14 Residential
- Number of Users: 12
- Treatment Process: NPS sequencing batch reactor
- Treatment Permit #: Not required
- Permitted Discharge Amount: < 22.7 m³/day
- Regulatory Authority: Public Health Act
- Effluent Receiving: Ground
- EOCP Classification: Unclassified
- Statutory Right of Ways: None required

MERRILL CRESCENT WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1.1. Development Details

The Merrill Crescent wastewater local service area is located in the Egmont / Pender Harbour Electoral Area (Area A) of the SCRD. The treatment and disposal systems are located in separate parcels of land, which are both used exclusively for the processing of wastewater. The parcel with the treatment plant on it is located behind the rear yards of the service area's parcels and has three points of access from Merrill Road and Merrill Crescent.

These community wastewater systems were constructed in 1982 to assist with the development of new single-family dwellings in the neighbourhood. The parcels in this service area were identified as having insufficient pervious soil material in their rear yards for constructing an onsite drainfield. The systems were managed by the developer until 1994 when the SCRD began overseeing the service.

1.2. Established Bylaws

There have been various bylaws adopted by the SCRD Board of Directors that are relevant to the Merrill Crescent wastewater local service, as listed in Table 1.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
232A.4	Package Plants Service Unit (1994)	Established a designated area for the purpose of providing sewage collection, treatment and disposal within Areas A, B and E.
359	Sunshine Coast Sewage Service Unit Sewer Rates (Merrill Crescent) (1994)	To provide for the imposition of a charge against the owners for the use of the sewage system.
1026	Sewage Treatment Facilities Local Service (1996)	Converted the Package Plants Service Unit to a local service.
428.19	Sewage Treatment Facilities Service Unit (2019)	Establishment of, and subsequent updates thereto, sewage treatment facilities frontage and user charges.
512	Sewage Treatment Facilities Reserve Fund (2001)	Established a capital reserve fund for sewage treatment facilities.
608	Sewage Treatment Facilities Service Operating Reserve Fund (2007)	Established an operating reserve fund for sewage treatment facilities.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

Treatment of the influent takes place in an above ground poured in place concrete tank with a series of divider walls forming individual treatment sections within. The top of the tank is a fiberglass lid with fiberglass hatches that open, allowing access to each section.

Wastewater enters into a solids retention tank where fluid has to pass through a screened section into the aeration tank. Treatment is conducted in batches controlled by float switches, timers and wall levels. After aeration treatment, effluents are transferred into final clarifier for settling and discharge to the dosing tank.

There are two outlets from the dosing tank which allows the effluent to be diverted to separate drainfields in the same parcel. The fields provide effluent disposal through a combined 290 m of perforated drainage pipe.

2.2. Collection System

The collection system has approximately 250 m of 150 mm diameter, polyvinyl chloride (PVC), gravity mains, and four manholes. The infrastructure depth varies between 1.76 m and 3.80 m below grade.

All of the collection system infrastructure is located within the same parcel of land as the treatment plant.

2.3. Asset Accessibility

There are multiple accessibility concerns regarding infrastructure maintenance and replacement at Merrill Crescent.

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- General, everyday access to the treatment plant can be challenging due to the narrow path off of Merrill Road. and
- Access to the wastewater collection system will require the removal of the existing vegetation, including various bushes and trees.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

Based on the Estimated Useful Life (EUL), the community septic tank has approximately 26% of its lifespan remaining. There were no reported structural concerns noted when the tank was last pumped out in 2018. The treatment system is in fair condition.

The pumps at Merrill Crescent frequently get plugged, burn out, and require replacement. Inappropriate materials have been deposited in the wastewater mains that cannot be managed by the pumps. Residents have been reminded on best wastewater practices in hopes that a change in practices may alleviate this problem and improve the overall condition of the pumping equipment.

The new disposal system is in excellent condition and has been operating in accordance with the design parameters.

The condition of the collection system was assessed in 2018 through CCTV inspections. During the inspection two pipe segments were observed to have minor defects. The collection system is in good condition.

MERRILL CRESCENT WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

2.5. Asset Replacement Value

It is expected that the treatment process that was installed 37 years ago will not meet regulatory requirements once the treatment system is due for replacement. A replacement value was estimated using the replacement value of the treatment and disposal systems at Canoe Road wastewater local service area.

At Canoe Road, influent is pumped to elevated treatment modules where it is processed through filter media and disposed of in a trenchless drainfield. The drainfield at Merrill Crescent was replaced in 2018 but it is unknown whether it will continue to be acceptable regardless of the new treatment process.

The treatment process from Canoe Road was chosen for determining a replacement cost for Merrill Crescent based on a similar number of users and relatively low construction cost. A feasibility study should be completed by a professional engineer to determine the treatment and disposal process best suited for the conditions at Merrill Crescent wastewater local service.

Replacement value for the collection system was estimated based on individual component replacement values. Additional costs for the removal and replacement of bushes and trees were factored into the replacement cost.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 240,754	1982	50	13
Drainfield	N/A ¹	2018	40	40
Collection System	\$ 169,030	1982	85	48

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL.

These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

¹ The treatment system and drainfield have been assigned a single replacement cost. Both systems are anticipated to be replaced at the same and have the same estimated useful life.

MERRILL CRESCENT WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Merrill Crescent wastewater local service are charged user fees of \$681.25 per year (including a 25% increase in user fees in 2019) and those properties within the service area boundary as outlined in Bylaw No. 1026 are charged \$265.20 in parcel tax per year (including a 2% parcel tax increase in 2019).

3.2. Current O&M Budget

The budgeted and actual expenditures of the Merrill Crescent wastewater local service from 2015 to 2018 are shown in Table 3. The breakdown between expenditure related to the collection system and the treatment and disposal systems has not been recorded. As there have been no recent issues identified with the collection system, all expenditures are assumed to have been allocated to the treatment and disposal systems.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 8,347.00	\$ 8,182.00	\$ 7,845.00	\$ 8,015.00	\$ 8,097.25
Actual	\$ 16,623.00	\$ 7,227.00	\$ 8,772.00	\$ 18,827.43	\$ 12,862.36
Variance	\$(8,276.00)	\$ 955.00	\$ (927.00)	\$(10,812.43)	\$ (4,765.11)

Overall, the operations budget decreased by 4% between 2015 and 2018. The actual expenditure averaged in excess of 1.5 times the budgeted amount during the same period of time. The majority of the actual expenditure (60%) was to pay for staffing expenses of operational and administrative staff, while other significant expenditures include equipment repairs and maintenance (18%) and B.C. Hydro utility payment (15%).

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The irregularities noted in this budget review, 2015 and 2018, incurred costs approximately double the budgeted amount due to failures in the electrical panel and pumps, and operational wages relating to the drainfield replacement.

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Merrill Crescent local service area. Similar to the current O&M budget, staff wages account for the majority of the potential annual O&M budget for Merrill Crescent. The required weekly, monthly, quarterly, and annual tasks are primarily completed by a Utility Technician.

Significant expenses included in the budget are:

- Staffing expenses, including
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Proportioned charges for non-annual contracted services;
- Proportioned charges for non-annual equipment replacement;
- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

Future replacement of the treatment system may result in an increased O&M budget. The treatment system mentioned in the Section 2.5 would increase the required O&M hours by as much as 25%. As mentioned in the Section 2.4, continued deposits of inappropriate material in the collection system will keep equipment and repair charges high and could add to the estimated required hours.

With the inclusion of ancillary charges, the potential operating budget for Merrill Crescent wastewater local service is \$21,192.00. The potential user fee for the 12 users in this local service area is \$1,766, a 159% increase from 2019 rates. This increase is primarily attributed to the separation of property tax revenue from the operating budget and improving the level of service delivered to this local service area.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the

topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Merrill Crescent.

4.1. Reserve Balances

As of the end of 2018, there were no capital reserves and \$886.77 contributed to operating reserves. Under the existing method of revenue collection and use, these reserves could be combined to invest in capital renewal or replacement projects if required.

There is currently no requirement for Merrill Crescent to have a set level, by either denomination or percentage, of reserves in place. Based on the current reserve balance and 2019 budget transfers, Merrill Crescent's reserves are 1% of the estimated replacement value of the infrastructure.

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the shortest term in which all infrastructure (i.e. the treatment, disposal, and collection systems) will all be replaced.

MERRILL CRESCENT WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (2) Drainfield (2) Collection System (1)	Even Annual Contribution	\$ 3,984,800	\$ 3,558
Plan 2	80-Year	Treatment System (2) Drainfield (2) Collection System (1)	10% Increase Every Five Years	\$ 5,705,222	\$ 2,267
Plan 3	50-Year	Treatment System (1) Drainfield (1) Collection System (1)	Even Annual Contribution	\$ 1,575,000	\$ 2,250
Plan 4	50-Year	Treatment System (1) Drainfield (1) Collection System (1)	10% Increase Every Five Years	\$ 1,822,445	\$ 1,634
Plan 5	20-Year	Treatment System (1) Drainfield (1) Collection System (0)	Even Annual Contribution	\$ 530,800	\$ 1,896
Plan 6	20-Year	Treatment System (1) Drainfield (1) Collection System (0)	10% Increase Every Five Years	\$ 543,229	\$ 1,672
Plan 7	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	Even Annual Contribution	\$ 78,400	\$ 560
Plan 8	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	10% Increase Every Five Years	\$ 78,750	\$ 536

In addition to the replacement of the wastewater systems, other items that appear in the capital budget include:

- Payment of the short-term debt for the new disposal system. (The Clean Water and Wastewater Fund grant funded 83% of the project.); and
- Proportioned short-term debt payments for the purchase and replacement of two service vehicles.

As mentioned in Section 2.3, replacement costs and timing were based on the infrastructure recently constructed at Canoe Road. Different treatment and disposal systems may have different replacement times than noted in Table 4. For example, the proposed trenchless drainfield was assigned a longer EUL than a drainfield with perforated pipe. If the piped drainfield were to still be usable it is assumed that, based on its EUL, it would need to be replaced in the 50-Year model, prior to the treatment system replacement.

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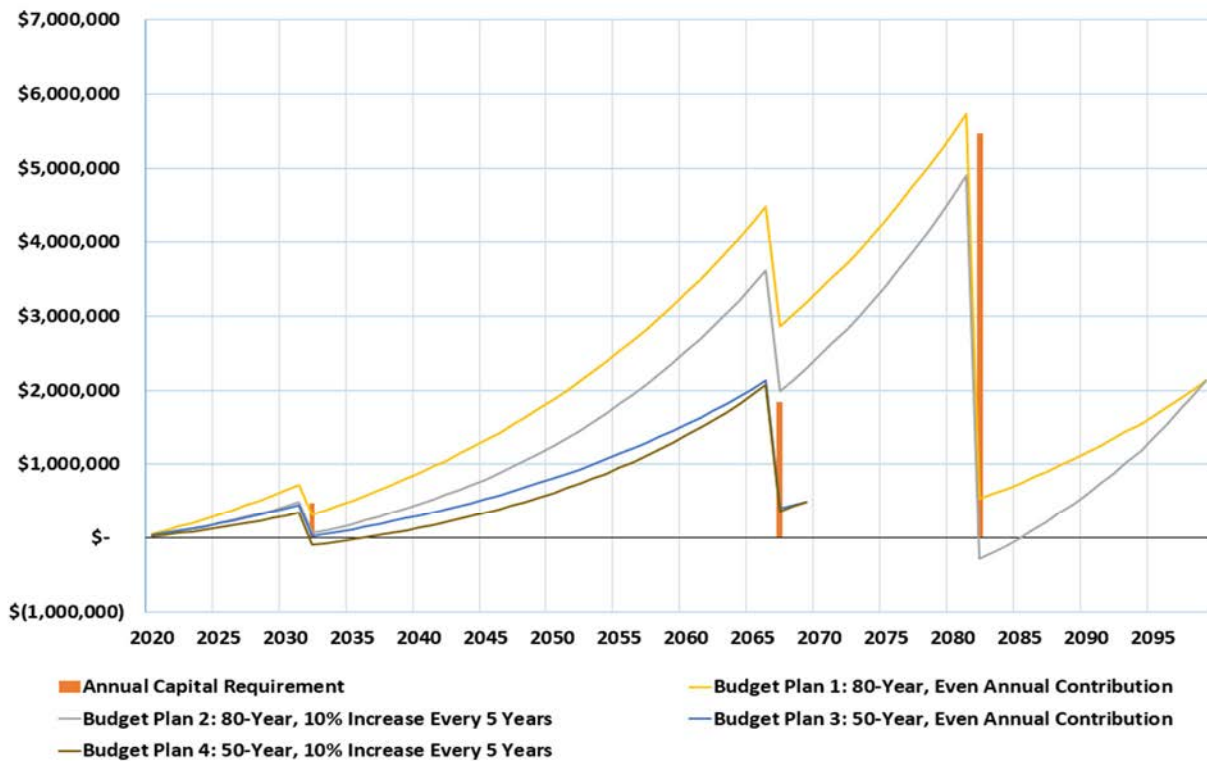


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

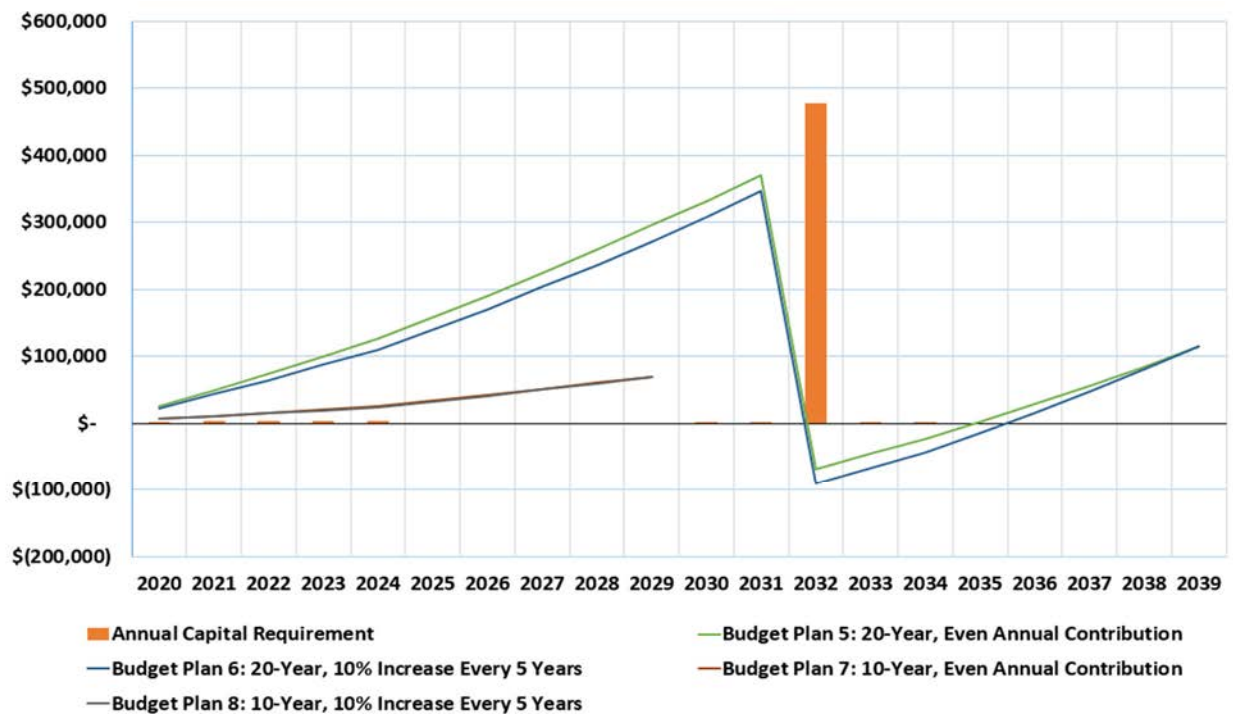


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

Additional operational work is required in the Merrill Crescent wastewater local service area that falls outside of the typical operational and maintenance plan. These items have been listed due to the potential impact that they may have on the users and fronting properties of the local service.

Table 5 – Local Service Improvement Actions

Action Item	Target Year	Cost Estimate	Result
Engage consulting services to complete a feasibility study on potential options for treatment replacement.	2020	\$ 7,500	To be determined.

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November 2019

Painted Boat Resort Wastewater Local Service Asset Management



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Version Log

This document was carefully prepared so that it can be maintained as a living document; a document that is continually edited and updated. Through the various edits and updates, this document may evolve and be expanded as needed. This may be as a result of infrastructure replacement or could be due to changes in regulatory requirements, technology, staffing, or environmental conditions. Regardless of the reason, updates to this asset management plan will be key to the ongoing operation of the Painted Boat Resort wastewater local service.

Version	Revised By	Date	Description
1	D. Joseph	November 28, 2019	Final report for Board of Directors approval

Acknowledgements

Completion of this Asset Management Plan would not have been possible without contributions and support from the following staff:

Darren Joseph	Asset Management Coordinator	Corporate Services
Brad Wing	Financial Analyst	Corporate Services
Tina Perreault	General Manager, Corporate Services	Corporate Services
Cheryl Trent	GIS Administrator	Corporate Services
Emilia Walton	GIS Technician	Corporate Services
Shane Walkey	Manager, Utility Services	Infrastructure Services
Bobby Rebner	Operations Support Technician	Infrastructure Services
Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

PAINTED BOAT RESORT WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1. Local Service Information



Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 12849 Lagoon Road
- Original Construction: 2008
- Taken over by Sunshine Coast Regional District (SCRD): 2008
- Establishment of Local Service: 2011
- Major Upgrades: None to date
- Treatment System Owner: Private (The Owners, Strata Plan BCS2634)
- Number of Fronting Parcels: 32 Residential, 1 Restaurant, 1 Spa
- Number of Users: 34
- Treatment Process: BioMicrobics FAST® 4.5 (3) plants
- Treatment Permit #: RE-100020
- Permitted Discharge Amount: 42 m³/day (residential, spa), 5.4 m³/day (rest.)
- Regulatory Authority: Municipal Wastewater Regulation (MWR)
- Effluent Receiving: Ground
- EOCP Classification: SWWS-M (Small Wastewater Systems – Mechanical)
- Statutory Right of Ways: BB660282 (registered May 5, 2008 for access to the treatment and disposal systems located within strata common property)

PAINTED BOAT RESORT WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1.1. Development Details

The Painted Boat Resort wastewater local service area is located in the Egmont / Pender Harbour Electoral Area (Area A) of the SCRD. The treatment and disposal systems are located within the strata common property, and are located to the east of the residential and commercial users.

The community wastewater systems were constructed in 2008 to assist with the development of new multi-family dwellings in the strata development. The individual strata parcels in the Painted Boat Resort development are too small for an onsite septic system. The systems were managed by the developer until 2011 when the SCRD began overseeing the service.

1.2. Established Bylaws

There have been various bylaws adopted by the SCRD Board of Directors that are relevant to the Painted Boat Resort wastewater local service, as listed in Table 1.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
1080	Painted Boat Community Sewage Treatment System Service (2011)	Established a service area for the Painted Boat Community Sewage Treatment System.
644.3	Painted Boat Sewage Treatment Facilities Fees and Charges (2019)	Provide for the imposition of a charge against the owners for the use and operation of the sewage treatment facility.
668	Painted Boat Waste Water Plant Capital Reserve Fund (2012)	Established a capital reserve fund.
669	Painted Boat Waste Water Plant Operating Reserve Fund (2012)	Established an operating reserve fund.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?

- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

Primary treatment of the influent takes place in individual septic tanks at each facility, owned and operated by the strata. Each tank's grey water is pumped to a common force main and terminates at the community wastewater treatment plant.

Secondary treatment of the wastewater takes place in an underground cast-in-place concrete tank with a series of divider walls forming individual treatment sections within. The top of the tank is a concrete with built-in ground level access lids. The restaurant wastewater is treated separately from the remainder of the facilities.

Wastewater enters the septic tanks where any remaining solids settle. Aeration occurs as aerated water is cascaded over honeycomb media. Effluent from the trickle filter is disinfected by UV prior to entering into the final clarifier and discharging to the drainfield.

The final pumps provide treated effluent to be sent to multiple fields, with restaurant flows directed to an auxiliary area separate from the other facilities. The fields provide effluent disposal through a combined 846 m of perforated drainage pipe.

2.2. Collection System

The SCRD is not responsible for the collection system infrastructure at the Painted Boat Resort wastewater local service area.

2.3. Asset Accessibility

There are no accessibility issues with the infrastructure at Painted Boat Resort.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

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- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

There have been no performance issues noted with the treatment and disposal systems. The treatment and disposal systems are in good condition.

2.5. Asset Replacement Value

It is expected that the treatment process and drainfield configuration that were installed 11 years ago will still be permitted once the systems are due for replacement.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 477,442	2008	50	39
Drainfield (Primary)	\$ 269,201	2008	40	29
Drainfield (Auxiliary)	\$ 57,179	2008	40	29

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide

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sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Painted Boat Resort wastewater local service are charged user fees of \$537.50 per year (including a 25% increase in user fees in 2019). There currently is no separate fee collected as a parcel tax.

3.2. Current O&M Budget

The budgeted and actual expenditures of the Painted Boat Resort wastewater local service from 2015 to 2018 are shown in Table 3.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 14,993.00	\$ 14,524.00	\$ 14,042.00	\$ 14,422.00	\$ 14,495.25
Actual	\$ 10,993.00	\$ 9,003.00	\$ 8,412.00	\$ 7,941.47	\$ 9,087.37
Variance	\$ 4,000.00	\$ 5,521.00	\$ 5,630.00	\$ 6,480.53	\$ 5,407.88

Overall, the operations budget decreased by 4% between 2015 and 2018. The actual expenditure decreased by 28% during the same period of time. The majority of the actual expenditure (56%) was to pay for staffing expenses of operational and administrative staff, with contracted services (29%) being the other significant expenditure.

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Painted Boat Resort local service area. Similar to the current O&M budget, staff wages account for the majority of the potential annual O&M budget for Painted Boat Resort. The required weekly, monthly, quarterly, and annual tasks are primarily completed by a Utility Technician.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;

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- Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Annual UV lamp replacement charges;
- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

With the inclusion of all ancillary charges, the potential operating budget for Painted Boat Resort wastewater local service is \$18,632.00. The potential user fee for the 34 users in this local service area is \$548.00, a 2% increase from 2019 rates. While there is nominal change in user fees, there is an overall increase to the level of service currently provided at this local service area. Without parcel taxes being collected, there is no longer revenue being contributed to reserves.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Painted Boat Resort.

4.1. Reserve Balances

As of the end of 2018, there was \$1,729.92 in capital reserves and \$48,341.86 contributed to operating reserves. Under the existing method of revenue collection and use, these reserves could be combined to invest in capital renewal or replacement projects if required.

There is currently no requirement for Painted Boat Resort to have a set level, by either denomination or percentage, of reserves in place. Based on the current reserve balance and 2019 budget transfers, Painted Boat Resort's reserves are 6% of the estimated replacement value of the infrastructure.

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4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the shortest term in which all infrastructure (i.e. the treatment, disposal, and collection systems) will need to be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (1) Drainfield (2)	Even Annual Contribution	\$ 8,287,200	\$ 3,047
Plan 2	80-Year	Treatment System (1) Drainfield (2)	10% Increase Every Five Years	\$ 11,861,613	\$ 1,941
Plan 3	50-Year	Treatment System (1) Drainfield (1)	Even Annual Contribution	\$ 3,476,500	\$ 2,045
Plan 4	50-Year	Treatment System (1) Drainfield (1)	10% Increase Every Five Years	\$ 4,020,215	\$ 1,484
Plan 5	20-Year	Treatment System (0) Drainfield (0)	Even Annual Contribution	\$ 140,400	\$ 206
Plan 6	20-Year	Treatment System (0) Drainfield (0)	10% Increase Every Five Years	\$ 143,639	\$ 182

PAINTED BOAT RESORT WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 7	10-Year	Treatment System (0) Drainfield (0)	Even Annual Contribution	\$ 71,800	\$ 211
Plan 8	10-Year	Treatment System (0) Drainfield (0)	10% Increase Every Five Years	\$ 72,135	\$ 202

In addition to the replacement of the wastewater systems, other items that appear in the capital budget include:

- Replacement of the UV disinfection equipment; and
- Proportioned short-term debt payments for the purchase and replacement of two service vehicles.

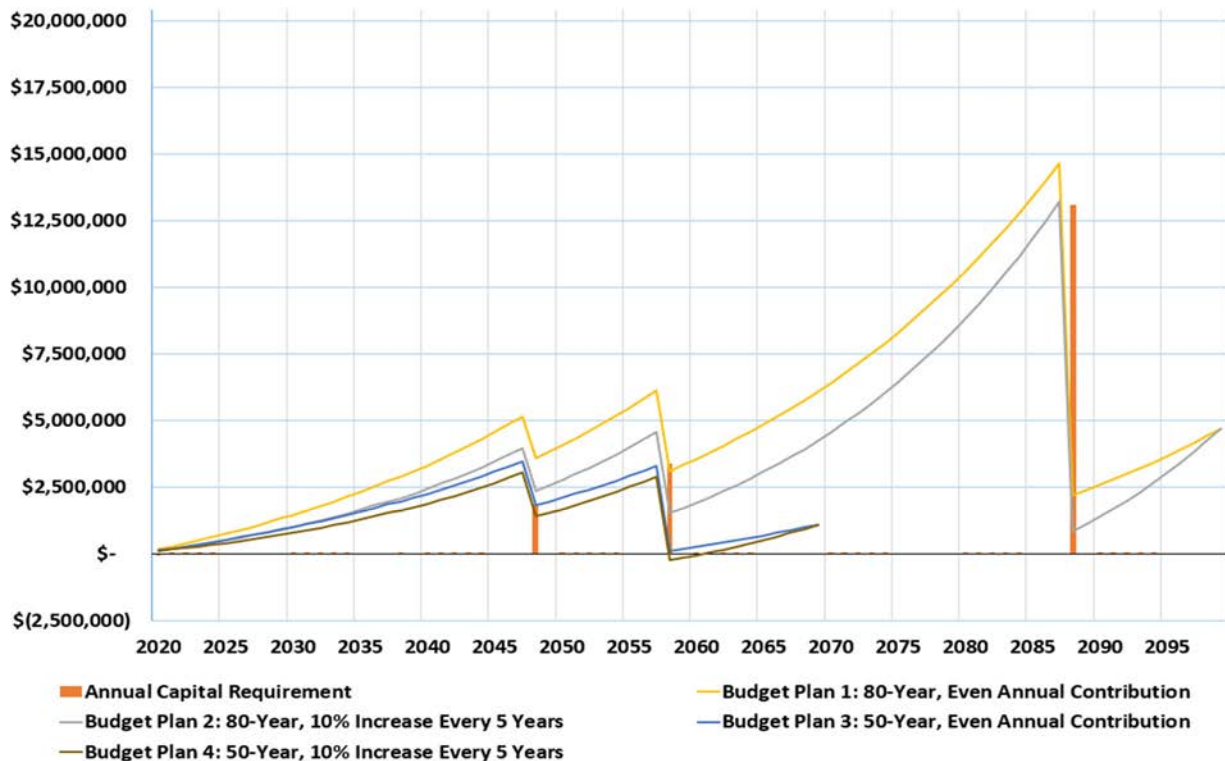


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

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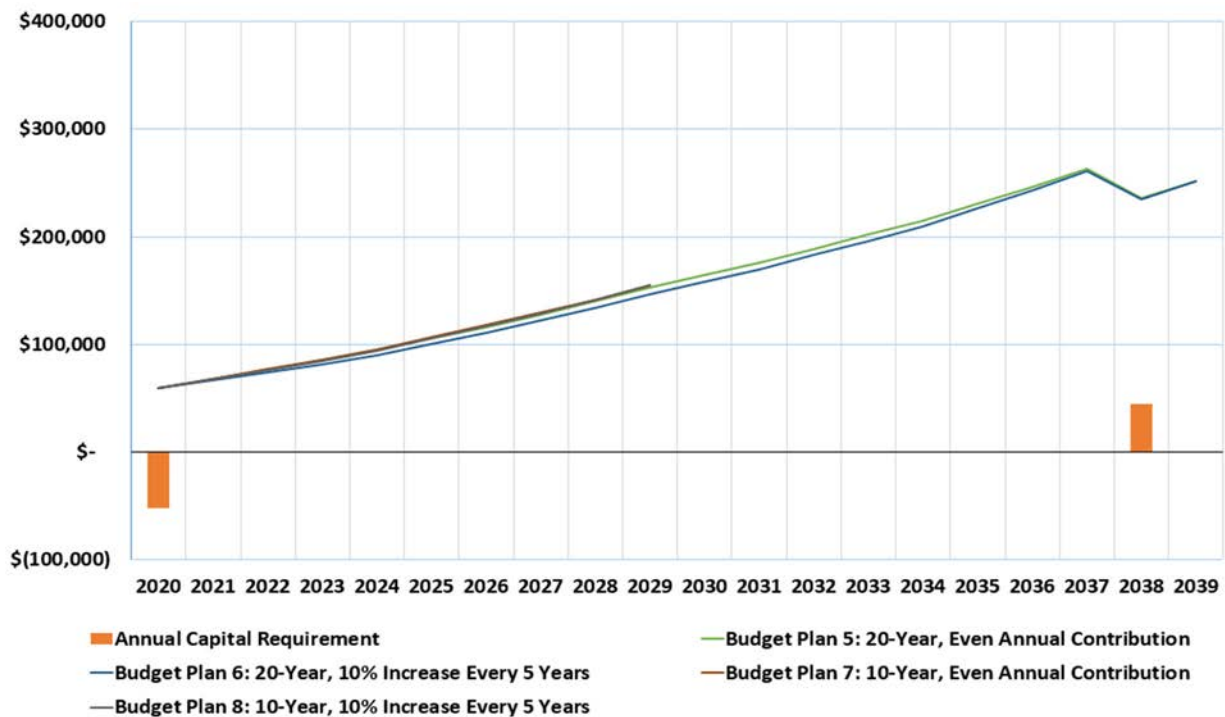


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

There is no additional operational work required in the Painted Boat Resort wastewater local service area at this time.

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November 2019

Pender Landing Wastewater Service Asset Management Plan



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PENDER LANDING WASTEWATER SERVICE ASSET MANAGEMENT PLAN

Version Log

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Version	Revised By	Date	Description
1	D. Joseph		Final report for Board of Directors approval

Acknowledgements

Completion of this Asset Management Plan would not have been possible without contributions and support from the following staff:

Darren Joseph	Asset Management Coordinator	Corporate Services
Brad Wing	Financial Analyst	Corporate Services
Tina Perreault	General Manager, Corporate Services	Corporate Services
Cheryl Trent	GIS Administrator	Corporate Services
Emilia Walton	GIS Technician	Corporate Services
Shane Walkey	Manager, Utility Services	Infrastructure Services
Bobby Rebner	Operations Support Technician	Infrastructure Services
Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

PENDER LANDING WASTEWATER SERVICE ASSET MANAGEMENT PLAN

1. Service Information



Figure 1 – Map of Wastewater Service Area and Infrastructure

- Address: 13321 Pender Landing Road
- Original Construction: 2007
- Major Upgrades: None to date
- Taken over by Sunshine Coast Regional District (SCRD): 2008 (through an agreement to maintain the treatment and disposal systems)
- Establishment of Local Service: Not to date
- Treatment System Owner: Private (Developer)
- Number of Fronting Parcels: 40 Residential
- Number of Users: 8
- Treatment Process: BioMicrobics FAST® 9.0 (2) and 4.5 (1) plants
- Treatment Permit #: RE-100021
- Permitted Discharge Amount: 61 m³/day
- Regulatory Authority: Municipal Wastewater Regulation (MWR)
- Effluent Receiving: Ground
- EOCP Classification: SWWS-M (Small Wastewater Systems – Mechanical)
- Statutory Right of Ways: None required

1.1. Development Details

The Pender Landing wastewater service area is located in the Egmont / Pender Harbour Electoral Area (Area A) of the SCRD. The treatment and disposal systems are located in a vacant parcel of land used for the processing of wastewater, and are located to the north of the houses within the service area.

The community wastewater systems were constructed in 2007 to assist with the development of new single-family dwellings in the neighbourhood. The ground conditions in this area are very rocky and were identified as having insufficient pervious soil material in their yards for constructing an onsite drainfield. The systems are currently being funded by the developer.

1.2. Established Bylaws

A local service has not been created for Pender Landing and therefore there are no relevant bylaws.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

Treatment of the influent takes place in an underground cast-in-place concrete tank with a series of divider walls forming individual treatment sections within. The top of the tank is a concrete with built-in ground level access lids. Adjacent to the tank is a site building that houses the electrical and mechanical equipment.

Wastewater enters the septic tanks where primary solids settle. Aeration occurs as aerated water is cascaded over honeycomb media. Effluent from the trickle filter is pumped through sand filters into the final clarifier before discharge to the drainfield.

The final pumps provide treated effluent to be sent to one of four fields. The fields provide effluent disposal through a combined 1950 m of perforated drainage pipe.

The developer has proposed for the treatment plant to dispose of its effluent through an existing ocean outfall. This proposal is still under review and consideration.

2.2. Collection System

The collection system has approximately 884 m of 75 mm diameter, polyvinyl chloride (PVC), pressure mains, and four manholes. The infrastructure depth varies between 1.09 m and 1.39 m below grade.

2.3. Asset Accessibility

There are no accessibility concerns regarding the assets at Pender Landing.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

There have been no performance issues noted with the treatment and disposal systems. The treatment and disposal systems are in good condition.

The condition of the collection system is unknown.

PENDER LANDING WASTEWATER SERVICE ASSET MANAGEMENT PLAN

2.5. Asset Replacement Value

It is expected that the treatment process and drainfield configuration that were installed 12 years ago will still meet regulatory requirements once the systems are due for replacement.

Replacement value for the collection system was estimated based on individual component replacement values.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 643,484	2007	50	38
Drainfield (Primary)	\$ 325,481	2007	40	28
Drainfield (Auxiliary)	\$ 162,740	TBD ¹	40	TBD
Collection System	\$ 944,451	2007	85	73

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

Pender Landing has not been created as a local service to date, therefore user fees and parcel taxes have not been established. All work completed by the SCRD is billed to the developer as recoverable expenses.

¹ The auxiliary drainfield had not been installed prior to the preparation of this plan.

PENDER LANDING WASTEWATER SERVICE ASSET MANAGEMENT PLAN

3.2. Current O&M Budget

An O&M budget will not be determined for Pender Landing until it has been created as a local service. The actual expenditures billed to the developer from 2015 and 2018 are shown in Table 3.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	N/A	N/A	N/A	N/A	N/A
Actual	\$ 6,397.95	\$ 6,262.67	\$ 5,603.36	\$ 5,715.17	\$ 5,994.79
Variance	N/A	N/A	N/A	N/A	N/A

Overall, the actual expenditure decreased by 12% between 2015 and 2018. The majority of the actual expenditure was to pay for staffing expenses to maintain the treatment and disposal systems.

3.3. Proposed O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Pender Landing local service area. Staff wages account for the majority of the potential annual O&M budget for Pender Landing. The required semi-weekly, weekly, monthly, quarterly, semi-annual, and annual tasks are primarily completed by a Utility Technician.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Annual UV lamp replacement;
- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

With the inclusion of all ancillary charges, the proposed operating budget for Pender Landing wastewater service area is \$36,680.00. The proposed user fee for the eight users in this service area is \$4,585.00.

The particularly high user fees can be attributed to the low number of users in this local service area. Only 20% of the eligible parcels currently have established homes to charge users fees to. The proposed user fees for this service area with fully developed parcels would be \$917.00.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Pender Landing.

4.1. Reserve Balances

Reserve accounts will not be created for Pender Landing until it has been created as a local service.

4.2. Proposed Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the shortest term in which all infrastructure (i.e. the treatment, disposal, and collection systems) will all be replaced.

PENDER LANDING WASTEWATER SERVICE ASSET MANAGEMENT PLAN

Table 4 – Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (1) Drainfield (2) Collection System (1)	Even Annual Contribution	\$ 17,108,800	\$ 5,347
Plan 2	80-Year	Treatment System (1) Drainfield (2) Collection System (1)	10% Increase Every Five Years	\$ 24,488,956	\$ 3,406
Plan 3	50-Year	Treatment System (1) Drainfield (1) Collection System (0)	Even Annual Contribution	\$ 4,901,500	\$ 2,451
Plan 4	50-Year	Treatment System (1) Drainfield (1) Collection System (0)	10% Increase Every Five Years	\$ 5,666,551	\$ 1,778
Plan 5	20-Year	Treatment System (0) Drainfield (0) Collection System (0)	Even Annual Contribution	\$ 426,000	\$ 533
Plan 6	20-Year	Treatment System (0) Drainfield (0) Collection System (0)	10% Increase Every Five Years	\$ 435,558	\$ 469
Plan 7	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	Even Annual Contribution	\$ 297,600	\$ 744
Plan 8	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	10% Increase Every Five Years	\$ 298,935	\$ 712

In addition to the replacement of the wastewater systems, the capital budget also includes replacement of the ultraviolet (UV) disinfection equipment.

PENDER LANDING WASTEWATER SERVICE ASSET MANAGEMENT PLAN



Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

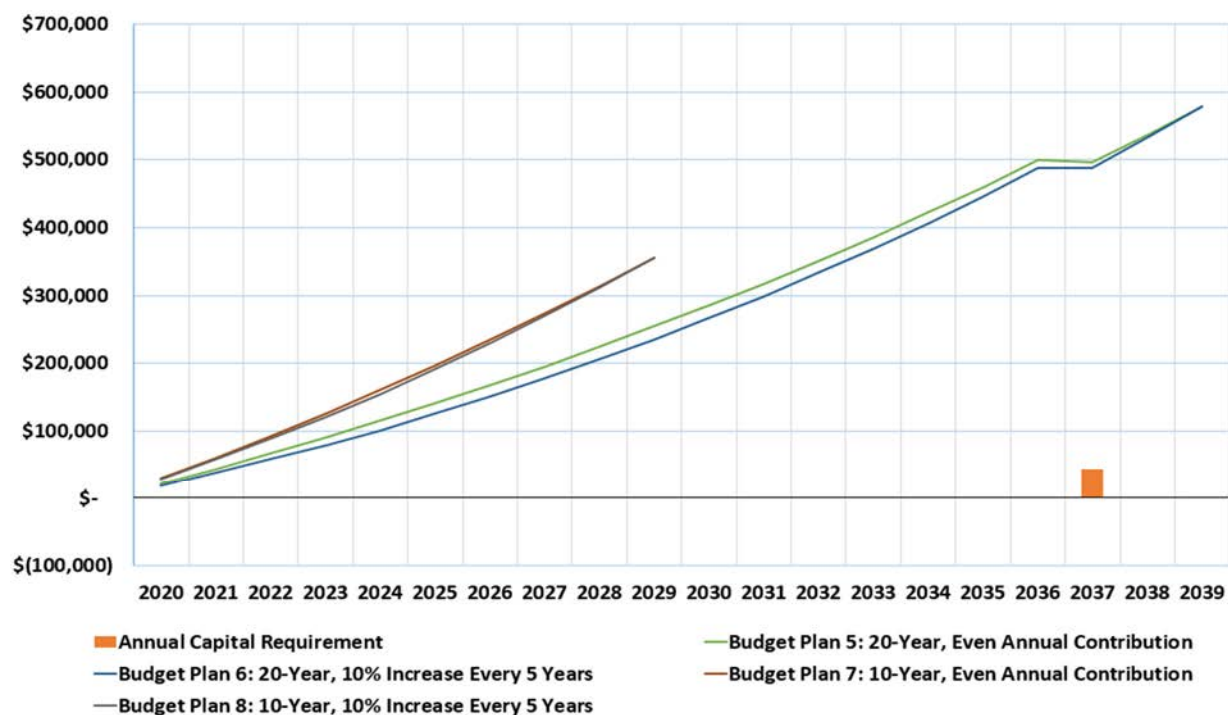


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

Additional operational work will not be considered in the Pender Landing wastewater systems until it meets the requirements for the SCRd to make it a local service.

PENDER LANDING WASTEWATER SERVICE ASSET MANAGEMENT PLAN

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November 2019

Sakinaw Ridge Wastewater Local Service Asset Management Plan



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SAKINAW RIDGE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

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Version	Revised By	Date	Description
1	D. Joseph	November 28, 2019	Final report for Board of Directors approval

Acknowledgements

Completion of this Asset Management Plan would not have been possible without contributions and support from the following staff:

Darren Joseph	Asset Management Coordinator	Corporate Services
Brad Wing	Financial Analyst	Corporate Services
Tina Perreault	General Manager, Corporate Services	Corporate Services
Cheryl Trent	GIS Administrator	Corporate Services
Emilia Walton	GIS Technician	Corporate Services
Shane Walkey	Manager, Utility Services	Infrastructure Services
Bobby Rebner	Operations Support Technician	Infrastructure Services
Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

SAKINAW RIDGE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1. Local Service Information



Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 4300 Milne Road
- Original Construction: 2008
- Taken over by Sunshine Coast Regional District (SCRD): 2014
- Establishment of Local Service: 2017
- Major Upgrades: None to date
- Treatment System Owner: SCRD
- Number of Fronting Parcels: 29 Residential (to a maximum of 40 upon future subdivision)
- Number of Users: 8
- Treatment Process: Whitewater packaged treatment plant
- Treatment Permit #: RE-18368
- Permitted Discharge Amount: 54.5 m³/day
- Regulatory Authority: Municipal Wastewater Regulation (MWR)
- Effluent Receiving: Ground
- EOCP Classification: Unclassified
- Statutory Right of Ways: Not required

SAKINAW RIDGE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1.1. Development Details

The Sakinaw Ridge wastewater local service area is located in the Egmont / Pender Harbour Electoral Area (Area A) of the SCRD. The treatment and disposal systems are located on separate properties.

The community wastewater systems were constructed in 2008 to assist with the development of new single-family dwellings in the neighbourhood. The ground conditions in this area are very rocky and were identified as having insufficient pervious soil material in their yards for constructing an onsite drainfield. The systems were managed by the developer until 2017 when the SCRD began overseeing the service.

1.2. Established Bylaws

There have been various bylaws adopted by the SCRD Board of Directors that are relevant to the Sakinaw Ridge wastewater local service, as listed in Table 1.

Sakinaw Ridge does not currently have bylaws that establish an operating and a capital reserve fund. As discussed in Section 1 of this plan, user fees collected that are not required in the current year will be invested in a reserve fund for future, non-annual maintenance. Meanwhile, parcel taxes will be collected for capital renewal and replacement.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
1087	Sakinaw Ridge Community Sewage Treatment System Service (2017)	Established a service area for the Sakinaw Ridge Community Sewage Treatment System.
714.1	Sakinaw Ridge Sewage Treatment Facilities Fees and Charges (2019)	Provide for the imposition of a charge against the owners for the use and operation of the sewage treatment facility.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?

- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

Primary treatment of the influent takes place in individual household septic tanks located on the residents' properties. Each property's grey water is pumped to a common force main and terminates at the community wastewater treatment plant.

Secondary treatment of the wastewater takes place in an aboveground cast-in-place concrete tank with a series of divider walls forming individual treatment sections within. The top of the tank is a concrete with built-in access lids.

Wastewater enters the septic tanks where any remaining solids settle. The treated effluent is collected in a large collection tank and is pumped to the recirculating gravel filter. Effluent from the gravel filter flows to a diversion tank prior to discharging to the drainfield.

The final pumps provide treated effluent to be sent to a settling tank on a separate property and can then be diverted to four fields located throughout the parcel. The fields provide effluent disposal through a combined 1,126 m of perforated drainage pipe.

2.2. Collection System

The collection system has approximately 3150 m of 75 mm diameter, polyvinyl chloride (PVC) pressure mains, and twelve manholes. The infrastructure depth has not been recorded at this time.

2.3. Asset Accessibility

There are no accessibility issues with the infrastructure at Sakinaw Ridge.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;

SAKINAW RIDGE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

The treatment system is operating within the design parameters and is still in excellent condition. The disposal and collection systems are in good condition. There have been no performance issues noted for any of these systems.

2.5. Asset Replacement Value

It is expected that the treatment process and drainfield configuration that were installed 11 years ago will still meet regulatory requirements once they are due for replacement.

Replacement value for the collection system was estimated based on individual component replacement values.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 672,791	2008	50	39
Drainfield	\$ 352,722	2008	40	29
Collection System	\$ 2,662,390	2008	85	74

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

SAKINAW RIDGE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Sakinaw Ridge wastewater local service are charged user fees of \$718.75 per year (including a 25% increase in user fees in 2019) and those properties within the service area boundary as outlined in Bylaw No. 1087 are charged \$418.20 in parcel tax per year (including a 2% parcel tax increase in 2019).

3.2. Current O&M Budget

The budgeted and actual expenditures of the Sakinaw Ridge wastewater local service for 2018 are shown in Table 3. The breakdown between expenditure related to the collection system and the treatment and disposal systems has not been recorded. As there have been no recent issues identified with the collection system, all expenditures are assumed to have been allocated to the treatment and disposal systems.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	N/A	N/A	N/A	\$ 16,490.00	N/A
Actual	N/A	N/A	N/A	\$ 15,050.87	N/A
Variance	N/A	N/A	N/A	\$ 1,439.13	N/A

The majority of the actual expenditure (45%) was to pay for staffing expenses of operational and administrative staff, while other significant expenditures include contracted services (38%) and B.C. Hydro utility payment (8%).

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Sakinaw Ridge local service area. Similar to the existing O&M budget, staff wages account for the majority of the potential annual O&M budget for Sakinaw Ridge. The required semi-weekly, weekly, monthly, quarterly, and annual tasks are primarily completed by a Utility Technician.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

With the inclusion of all ancillary charges, the potential operating budget for Sakinaw Ridge wastewater local service is \$30,656.00. The potential user fee for the eight users in this local service area is \$3,832.00, a 433% increase from 2019 rates. This increase is primarily attributed to the separation of property tax revenue from the operating budget and improving the level of service delivered to this local service area.

The particularly high user fees is a result of the low number of users in this local service area. Only 28% of the eligible parcels currently have established homes to charge users fees to. The proposed user fees for this service area with fully developed parcels would be \$1,057.00.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Sakinaw Ridge.

SAKINAW RIDGE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

4.1. Reserve Balances

As of the end of 2018, there were no funds contributed to operating reserves or capital reserves.

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying capital budgets and some with varying levels of infrastructure replacements. For each model, two plans were prepared: even annual contribution and 10% increase every five years.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the shortest term in which all infrastructure (i.e. the treatment, disposal, and collection systems) will need to be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (1) Drainfield (2) Collection System (1)	Even Annual Contribution	\$ 36,346,400	\$ 15,667
Plan 2	80-Year	Treatment System (1) Drainfield (2) Collection System (1)	10% Increase Every Five Years	\$ 52,022,854	\$ 9,980
Plan 3	50-Year	Treatment System (1) Drainfield (1) Collection System (0)	Even Annual Contribution	\$ 5,731,000	\$ 3,952
Plan 4	50-Year	Treatment System (1) Drainfield (1) Collection System (0)	10% Increase Every Five Years	\$ 6,625,984	\$ 2,867

**SAKINAW RIDGE WASTEWATER LOCAL SERVICE
ASSET MANAGEMENT PLAN**

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 5	20-Year	Treatment System (0) Drainfield (0) Collection System (0)	Even Annual Contribution	\$ 954,000	\$ 1,645
Plan 6	20-Year	Treatment System (0) Drainfield (0) Collection System (0)	10% Increase Every Five Years	\$ 975,538	\$ 1,450
Plan 7	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	Even Annual Contribution	\$ 621,200	\$ 2,142
Plan 8	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	10% Increase Every Five Years	\$ 624,015	\$ 2,049

In addition to the replacement of the wastewater systems, other items that appear in the capital budget include:

- Replacement of the drainfield pumps; and
- Proportioned short-term debt payments for the purchase and replacement of two service vehicles.

SAKINAW RIDGE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

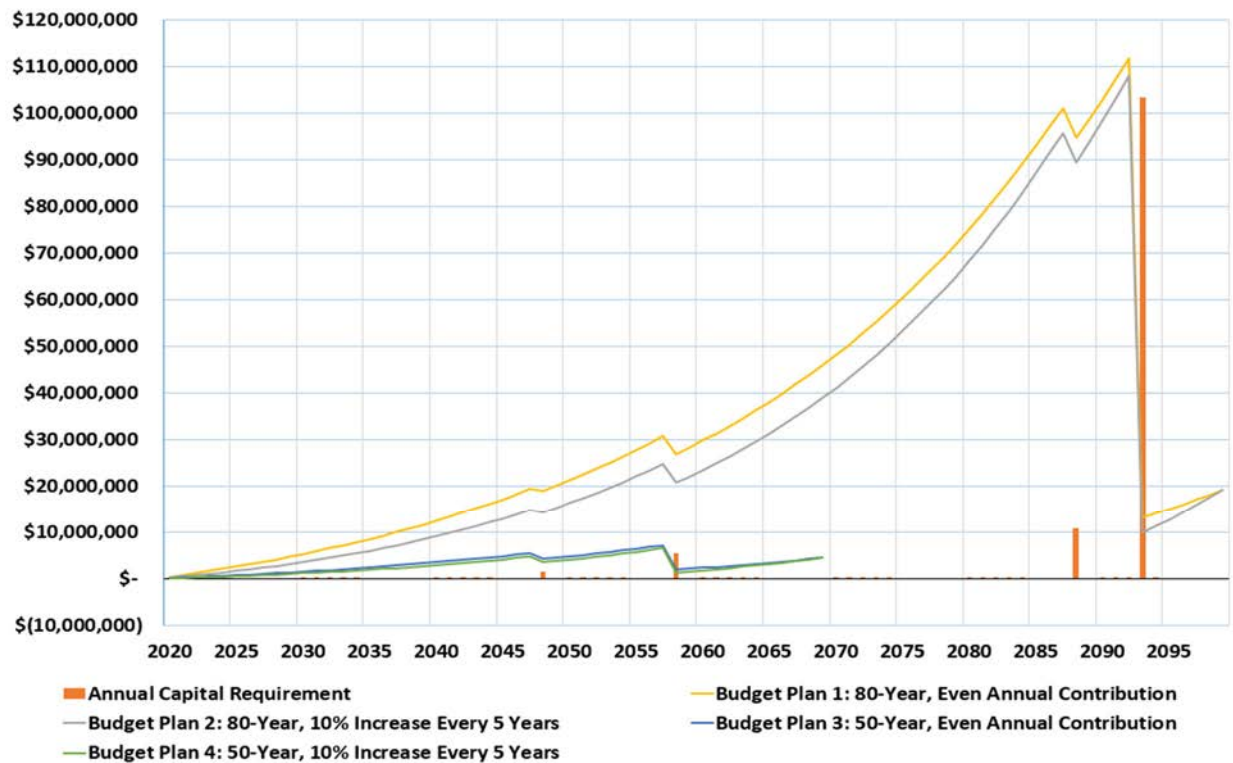


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

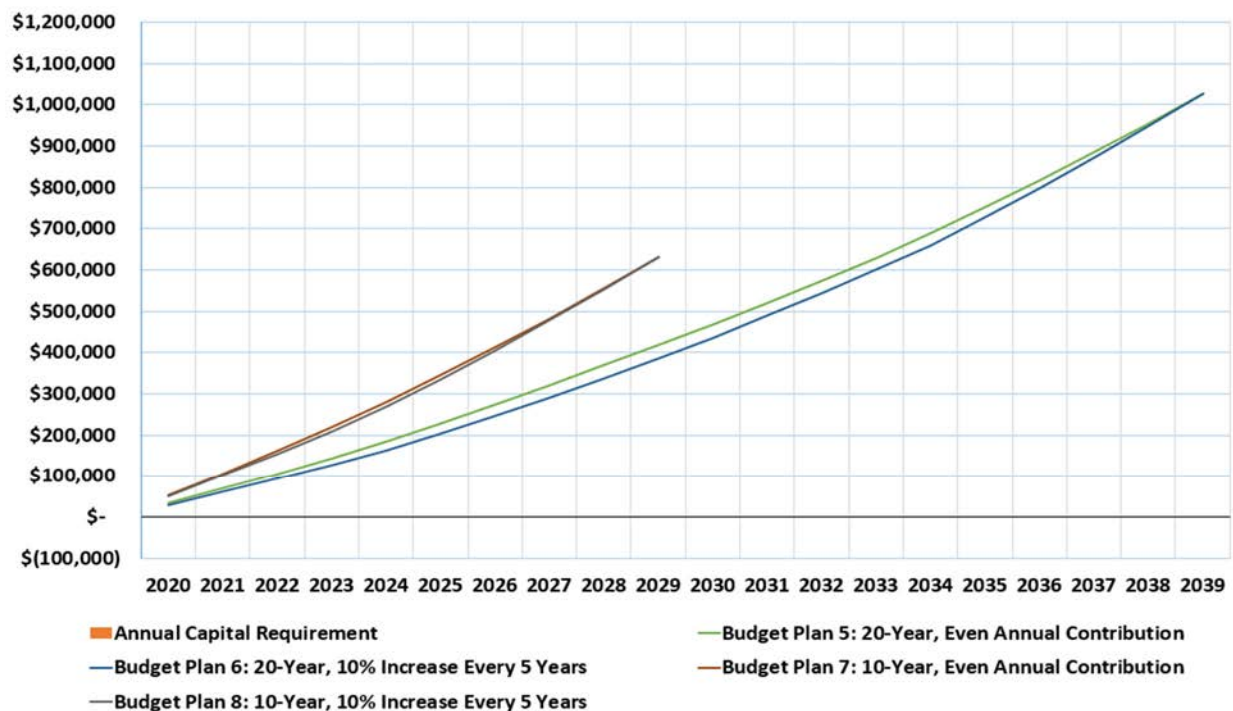


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

Additional operational work is required in the Sakinaw Ridge wastewater local service area that falls outside of the typical operational and maintenance plan. These items have been listed due to the potential impact that they may have on the users and fronting properties of the local service.

Table 5 – Local Service Improvement Actions

Action Item	Target Year	Cost Estimate	Result
Create capital and operating reserves bylaws.	2020	Staff time only.	To be determined.

November 2019

Curran Road Wastewater Local Service Asset Management Plan



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CURRAN ROAD WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

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Acknowledgements

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Darren Joseph	Asset Management Coordinator	Corporate Services
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Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

CURRAN ROAD WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1. Local Service Information



Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 5521 Curran road
- Original Construction: 1982
- Taken over by Sunshine Coast Regional District (SCRD): 1994
- Establishment of Local Service: 1996
- Major Upgrades: 2014 (Replacement of the treatment system)
- Treatment System Owner: SCRD
- Number of Fronting Parcels: 70 Residential
- Number of Users: 50
- Treatment Process: RBC and BioMicrobics FAST® 12.0 plant
- Treatment Permit #: PE-5779
- Permitted Discharge Amount: 200 m³/day
- Regulatory Authority: Ministry of Environment Permit
- Effluent Receiving: Ocean
- EOCP Classification: SWWS-M (Small Wastewater Systems – Mechanical)
- Statutory Right of Ways: GB60112 (registered June 2, 1988, for side yard access to the collection system)

CURRAN ROAD WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1.1. Development Details

The Curran Road wastewater local service area is located in the Halfmoon Bay Electoral Area (Area B) of the SCRD. The treatment systems is located in a vacant parcel of land used exclusively for the processing of wastewater.

The community wastewater systems were constructed in 1982 to assist with the development of new single-family dwellings in the neighbourhood. The ground conditions in this area are very rocky and were identified as having insufficient pervious soil material in their yards for constructing an onsite drainfield. The service area was expanded in 1999. The systems were managed by the developer until 1994 when the SCRD began overseeing the service.

1.2. Established Bylaws

There have been various bylaws adopted by the SCRD Board of Directors that are relevant to the Curran Road wastewater local service, as listed in Table 1.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
232A.4	Package Plants Service Unit (1994)	Established a designated area for the purpose of providing sewage collection, treatment and disposal within Areas A, B and E.
1026	Sewage Treatment Facilities Local Service (1996)	Converted the Package Plants Service Unit to a local service.
428.19	Sewage Treatment Facilities Service Unit (2019)	Establishment of, and subsequent updates thereto, sewage treatment facilities frontage and user charges.
512	Sewage Treatment Facilities Reserve Fund (2001)	Established a capital reserve fund for sewage treatment facilities.
608	Sewage Treatment Facilities Service Operating Reserve Fund (2007)	Established an operating reserve fund for sewage treatment facilities.

2. Description of Assets

2.1. Treatment and Disposal Systems

Treatment of the influent takes place in an underground cast-in-place concrete tank with a series of divider walls forming individual treatment sections within. The top of the tank is a concrete with built-in ground level access lids. Adjacent to the tank is a site building that houses the electrical and mechanical equipment.

Wastewater enters the septic tanks where primary solids settle. The wastewater is then gravity fed into the dose tank and then pumped to the rotating biological contactor (RBC). Effluent from the RBC is then pumped through a filter into the effluent tank, where it is pumped through another filter and disinfected by UV before it discharges to the ocean. The FAST plant was designed to treat higher volumes of flow, however those flows are not anticipated to be reached until development increases the number of the users in the local service area. (The FAST plant has not been accepted by the SCRD as it cannot be properly tested until flow volumes increase.)

The effluent disposes through a 150 mm diameter, high density polyethylene (HDPE) outfall pipe approximately 400 m offshore at a depth of 43 m in the open ocean.

2.2. Collection System

The collection system has approximately 555 m of 150 mm and 200 mm diameter, polyvinyl chloride (PVC) gravity mains, 1140 m of 50 mm pressurized PVC mains, and six manholes. The infrastructure depth varies between 1.50 m and 4.95 m below grade.

Approximately 60 m of the mains is accessed through a Statutory Right of Way that extends through the side yard of a dwelling between Jorgensen Drive and Hydaway Place.

2.3. Asset Accessibility

There are a couple of accessibility concerns regarding infrastructure maintenance and replacement.

- One manhole on Curran Road is approximately 5 m below grade, which poses accessibility concerns due to its depth.

- Access to the wastewater collection system in the Statutory Right of Way will require removal of the existing vegetation, including various bushes and trees.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

The treatment system installed in 2014 has not been able to meet the regulatory requirements due to the low volume of flow from the users. The original treatment system, which was installed in 1982, is still in operation until development allows for the newer system to be utilized. Based on the estimated useful life (EUL), the original treatment tank has approximately 26% of its lifespan remaining. There are concerns regarding a recent failure of the original RBC plant and whether it is feasible for it to be repaired. The treatment system is in poor condition.

The ocean outfall was last inspected in February 2018 and observed to be in good working condition. However the majority of the ballast weights that hold that outfall in place are failing or have already failed. Failure of the ballast will result in the outfall floating to the surface. The disposal system is in poor condition and can be upgraded with the replacement of the anchors.

The condition of the collection system was assessed in 2018 through CCTV inspections. During the inspection all four of the gravity pipe segments were observed to only have minor defects. The collection system is in good condition.

2.5. Asset Replacement Value

It is expected that once the new treatment system has been accepted by the SCRD, that type of treatment process along with the current ocean outfall will meet regulatory requirements when it is due for replacement.

Replacement value for the collection system was estimated based on individual component replacement values. Additional costs for the removal and replacement of bushes and trees located on the north end of the statutory right of way were factored into the replacement cost.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 1,385,097	2014	50	45
Ocean Outfall	\$ 357,035	1982	85	48
Collection System	\$ 713,618	1982	85	48
Collection System	\$ 847,375	1999	85	65

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Curran Road wastewater local service are charged user fees of \$475.00 per year (including a 25% increase in user fees in 2019) and those properties within the service area boundary as outlined in Bylaw No. 1026 are

CURRAN ROAD WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

charged \$153.00 in parcel tax per year (including a 2% parcel tax increase in 2019).

3.2. Current O&M Budget

The budgeted and actual expenditures of the Curran Road wastewater local service from 2015 to 2018 are shown in Table 3.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 19,220.00	\$ 19,029.00	\$ 18,593.00	\$ 19,028.00	\$ 18,967.50
Actual	\$ 31,023.00	\$ 19,447.00	\$ 25,914.00	\$ 21,781.31	\$ 24,541.33
Variance	\$(11,803.00)	\$ (418.00)	\$(7,321.00)	\$(2,753.31)	\$(5,573.83)

Overall, the operations budget decreased by 1% between 2015 and 2018. The actual expenditure decreased by 30% during the same period of time, however each year the actual expenditures exceeded the budgeted amount. The majority of the actual expenditure (44%) was to pay for staffing expenses of operational and administrative staff, while other significant expenditures include B.C. Hydro (28%) and equipment repairs and maintenance (10%).

Actual expenditure overages in the last four years are primarily a result of attempting to implement the FAST plant in the treatment process and repairing deficiencies in the RBC plant.

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Curran Road local service area. Similar to the existing O&M budget, staff wages account for the majority of the potential annual O&M budget for Curran Road. The required weekly, monthly, quarterly, semi-annual, and annual tasks are primarily completed by a Utility Technician.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;

- SCRD Administration Services contribution;
- Annual material and equipment replacement;
- Annual and proportioned non-annual contracted services;
- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

With the inclusion of all ancillary charges, the potential operating budget for Curran Road wastewater local service is \$42,687.00. The potential user fee for this budget is \$837.00, a 76% increase from 2019 rates. This increase is primarily attributed to the separation of property tax revenue from the operating budget and improving the level of service delivered to this local service area.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Curran Road.

4.1. Investment of Reserves

As of the end of 2018, there was \$68,225.68 contributed to operating reserves and \$19,179.07 in capital reserves. Under the existing method of revenue collection and use, these reserves could be combined to invest in capital renewal or replacement projects if required.

There is currently no requirement for Curran Road to have a set level, by either denomination or percentage, of reserves in place. Based on the current reserve balance and 2019 budget transfers, Curran Road's reserves are 2% of the estimated replacement value of the infrastructure.

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame.

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For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the shortest term in which all infrastructure (i.e. the treatment, disposal, and collection systems) will need to be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (1) Ocean Outfall (1) Collection System (1)	Even Annual Contribution	\$ 22,004,800	\$ 3,929
Plan 2	80-Year	Treatment System (1) Ocean Outfall (1) Collection System (1)	10% Increase Every Five Years	\$ 31,495,558	\$ 2,503
Plan 3	50-Year	Treatment System (1) Ocean Outfall (1) Collection System (0)	Even Annual Contribution	\$ 10,750,500	\$ 3,072
Plan 4	50-Year	Treatment System (1) Ocean Outfall (1) Collection System (0)	10% Increase Every Five Years	\$ 12,428,004	\$ 2,228
Plan 5	20-Year	Treatment System (0) Ocean Outfall (0) Collection System (0)	Even Annual Contribution	\$ 620,800	\$ 443
Plan 6	20-Year	Treatment System (0) Ocean Outfall (0) Collection System (0)	10% Increase Every Five Years	\$ 634,889	\$ 391
Plan 7	10-Year	Treatment System (0) Ocean Outfall (0) Collection System (0)	Even Annual Contribution	\$ 465,300	\$ 665
Plan 8	10-Year	Treatment System (0) Ocean Outfall (0) Collection System (0)	10% Increase Every Five Years	\$ 467,355	\$ 636

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In addition to the replacement of the wastewater systems, other items that appear in the capital budget include proportioned short-term debt payments for the purchase and replacement of two service vehicles.

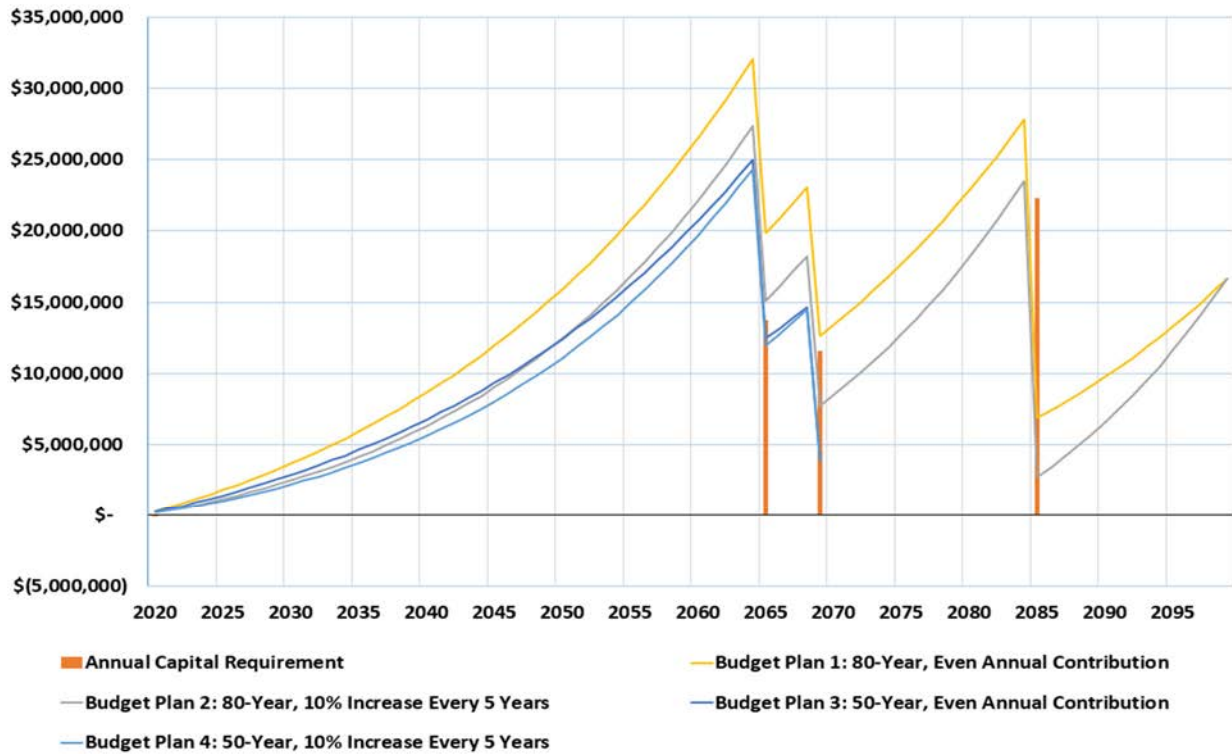


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

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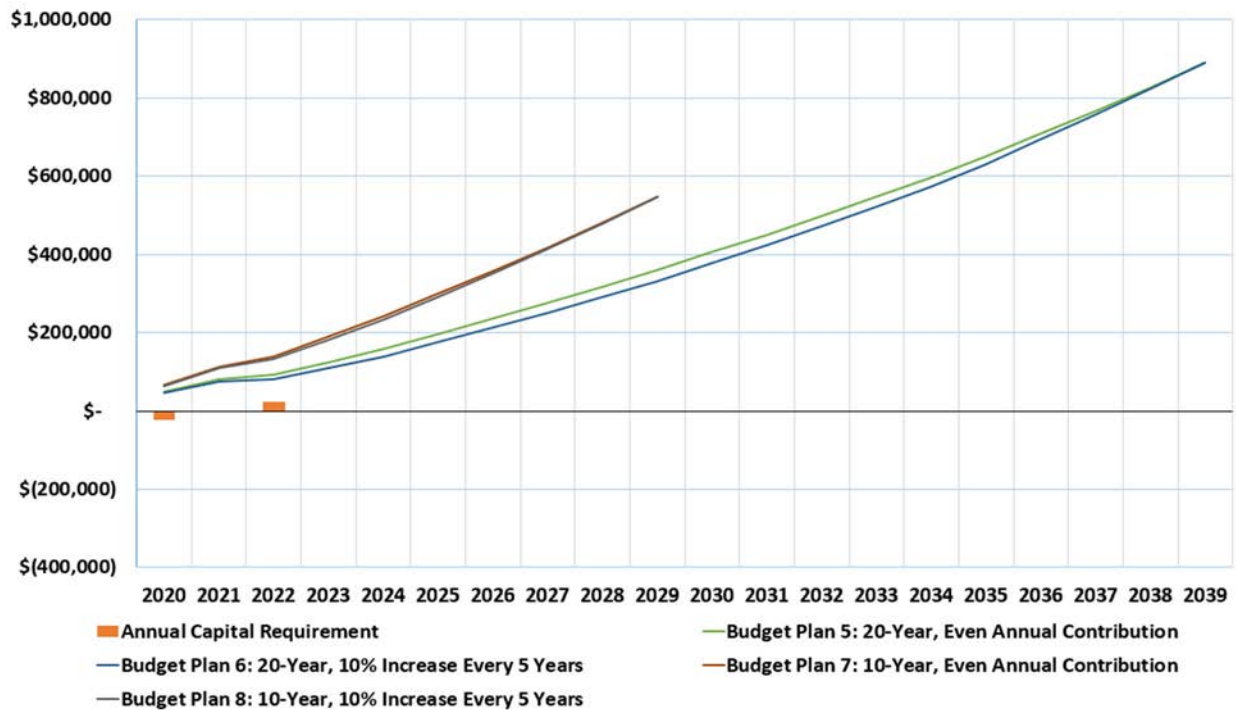


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

There is no additional operational work required in the Curran Road wastewater local service area at this time.

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Version Log

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Version	Revised By	Date	Description
1	D. Joseph	November 28, 2019	Final report for Board of Directors approval

Acknowledgements

Completion of this Asset Management Plan would not have been possible without contributions and support from the following staff:

Darren Joseph	Asset Management Coordinator	Corporate Services
Brad Wing	Financial Analyst	Corporate Services
Tina Perreault	General Manager, Corporate Services	Corporate Services
Cheryl Trent	GIS Administrator	Corporate Services
Emilia Walton	GIS Technician	Corporate Services
Shane Walkey	Manager, Utility Services	Infrastructure Services
Bobby Rebner	Operations Support Technician	Infrastructure Services
Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

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1.1. Development Details

The Jolly Roger wastewater local service area is located in the Halfmoon Bay Electoral Area (Area B) of the SCRD. The treatment system is located to the south of the strata property, near the waterfront, and is accessed from the driveway leading to the marina.

The community wastewater systems were constructed in 1979 to assist with the development of new multi-family dwellings in the strata development. The individual strata parcels in the Jolly Rogers development are too small for an onsite septic system. The systems were managed by the developer until 1985 when the SCRD began overseeing the service.

1.2. Established Bylaws

There have been various bylaws adopted by the SCRD Board of Directors that are relevant to the Jolly Roger wastewater local service, as listed in Table 1.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
232A.1	Package Plants Service Unit (1985)	Established a designated area for the purpose of providing sewage collection, treatment and disposal within Areas A, B and E.
1026	Sewage Treatment Facilities Local Service (1996)	Converted the Package Plants Service Unit to a local service.
428.19	Sewage Treatment Facilities Service Unit (2019)	Establishment of, and subsequent updates thereto, sewage treatment facilities frontage and user charges.
512	Sewage Treatment Facilities Reserve Fund (2001)	Established a capital reserve fund for sewage treatment facilities.
608	Sewage Treatment Facilities Service Operating Reserve Fund (2007)	Established an operating reserve fund for sewage treatment facilities.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

Treatment of the influent takes place in an above ground fiberglass tank with a series of divider walls forming individual treatment sections within. The top of the tank is a fiberglass lid with fiberglass hatches that open into each section.

Wastewater enters into a solids retention tank where fluid has to pass through a screened section into the aeration tank. Treatment is conducted in batches controlled by float switches, timers and levels. After aeration treatment, effluent is transferred into final clarifier for settling and discharge to the ocean. Odors are collected from each treatment tank through a piping manifold and sent through an activated carbon filter via an inline centrifugal fan.

The effluent from the Jolly Roger wastewater treatment local service area is diverted along the shoreline in a 200 mm diameter, high density polyethylene (HDPE) pipe that connects with 200 mm diameter HDPE outfall pipe from the Secret Cover wastewater treatment local service area. The two local service areas discharge their effluent through a shared outfall that is discharged approximately 1070 m offshore at a depth of 26 m in the open ocean.

2.2. Collection System

The SCRD is not responsible for the collection system infrastructure at the Jolly Roger wastewater local service area.

2.3. Asset Accessibility

There are multiple accessibility concerns regarding infrastructure maintenance and replacement at Jolly Roger.

- The land that the treatment system is on is not owned by the SCRD. Additionally, a Statutory Right of Way or memorandum of understanding could not be located that authorizes the SCRD to enter the property to construct, install, maintain, and operate a Regional District wastewater system.

- The treatment plant is in an undesirable location; it is situated adjacent to a cliff and at the edge of a raised platform, which only allows for access to the tanks from one side.
- Access to the current treatment system requires crossing the neighbour's property. The SCRd is not named on the Statutory Right of Way.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

Based on the estimated useful life (EUL), the community septic tank has approximately 20% of its lifespan remaining. There were no reported structural concerns noted when the tank was last pumped out in 2019. The treatment system is in fair condition.

The ocean outfall is in good condition, however the anchors have been replaced at several locations in recent years. This is largely the result of boat anchors getting caught under the outfall and damaging the infrastructure.

2.5. Asset Replacement Value

It is expected that the treatment process that was installed 40 years ago will not be permitted once the treatment plant is due for replacement. A replacement value was estimated based on the treatment system at Roberts Creek Co-Housing wastewater local service area.

At Roberts Creek Co-Housing, wastewater enters the septic tanks where primary solids settle. Aeration occurs as aerated water is cascaded over honeycomb media. Effluent from the trickle filter is pumped through sand filters into the final clarifier before disposal.

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The treatment process from Roberts Creek Co-Housing was chosen for determining a replacement cost for Jolly Roger based on a similar number of users and it is a process that is commonly used in new development. An additional factor was applied to the replacement cost from Roberts Creek Co-Housing due to the difficulty presented by the topography of the land. A feasibility study should be completed by a professional engineer to determine the treatment and disposal process best suited for the conditions at Jolly Roger wastewater local service.

Financial contributions to the ocean outfall is evenly shared between Jolly Roger wastewater local service area and Secret Cove wastewater local service area; only Jolly Rogers' share has been included in Table 2.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 772,619	1979	50	10
Ocean Outfall	\$ 410,364	1979	85	45

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Jolly Roger wastewater local service are charged user fees of \$412.50 per year (including a 25% increase in user fees in 2019) and those properties within the service area boundary as outlined in Bylaw No. 1026 are charged \$20.40 in parcel tax per year (including a 2% parcel tax increase in 2019).

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3.2. Current O&M Budget

The budgeted and actual expenditures of the Jolly Roger wastewater local service from 2015 to 2018 are shown in Table 3.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 11,886.00	\$ 11,609.00	\$ 11,052.00	\$ 11,315.00	\$ 11,465.50
Actual	\$ 5,758.00	\$ 8,174.00	\$ 22,690.00	\$ 6,605.99	\$ 10,807.00
Variance	\$ 6,128.00	\$ 3,435.00	\$(11,638.00)	\$ 4,709.01	\$ 658.50

Overall, the operations budget decreased by 5% between 2015 and 2018. The actual expenditure increased by 15% during the same period of time. The majority of the actual expenditure (44%) was to pay for staffing expenses of operational and administrative staff, while other significant expenditures include equipment repairs and maintenance (15%) and B.C. Hydro utility payment (18%).

The irregularity in this budget review, 2017, incurred costs in excess of the budgeted amount due to the outfall sustaining a catastrophic failure. The damage to the outfall appeared to have been caused by a vessel anchor catching the pipe and dragging it. Approximately half of the 2017 budget (48%) went to paying contracted services to repair the damaged outfall.

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Jolly Roger local service area. Similar to the existing O&M budget, staff wages account for the majority of the potential annual O&M budget for Jolly Roger. The required weekly, monthly, quarterly, semi-annual, and annual tasks are primarily completed by a Utility Technician.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Proportioned charges for non-annual equipment replacement;

- Proportioned charges for non-annual contracted services;
- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

Future replacement of the treatment system may result in an increased O&M budget. The treatment system mentioned in the Section 2.5 would increase the required O&M hours by as much as 30%.

With the inclusion of ancillary charges, the potential operating budget for Jolly Roger wastewater local service is \$21,049.00. The potential user fee for this budget is \$679, a 65% increase from 2019 rates. Improving the level of service delivered to this local service area is the primary contributing factor for the significant increase in user fees.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Jolly Roger.

4.1. Reserve Balances

As of the end of 2018, there was \$35,498.24 in capital reserves and \$17,020.67 contributed to operating reserves. Under the existing method of revenue collection and use, these reserves could be combined to invest in capital renewal or replacement projects if required.

There is currently no requirement for Jolly Roger to have a set level, by either denomination or percentage, of reserves in place. Based on the current reserve balance and 2019 budget transfers, Jolly Roger's reserves are 5% of the estimated replacement value of the infrastructure.

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame.

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For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the value of the infrastructure in the last year of the model.

The highlighted budget plans represent the model in which all infrastructure (i.e. the treatment, disposal, and collection systems) will all be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (2) Ocean Outfall (1)	Even Annual Contribution	\$ 11,251,600	\$ 4,537
Plan 2	80-Year	Treatment System (2) Ocean Outfall (1)	10% Increase Every Five Years	\$ 16,119,859	\$ 2,893
Plan 3	50-Year	Treatment System (1) Ocean Outfall (1)	Even Annual Contribution	\$ 4,157,250	\$ 2,682
Plan 4	50-Year	Treatment System (1) Ocean Outfall (1)	10% Increase Every Five Years	\$ 4,819,876	\$ 1,951
Plan 5	20-Year	Treatment System (1) Ocean Outfall (0)	Even Annual Contribution	\$ 1,544,700	\$ 2,491
Plan 6	20-Year	Treatment System (1) Ocean Outfall (0)	10% Increase Every Five Years	\$ 1,581,421	\$ 2,198
Plan 7	10-Year	Treatment System (1) Ocean Outfall (0)	Even Annual Contribution	\$ 1,272,600	\$ 4,105
Plan 8	10-Year	Treatment System (1) Ocean Outfall (0)	10% Increase Every Five Years	\$ 1,278,375	\$ 3,927

In addition to the replacement of the wastewater systems, other items that appear in the capital budget include:

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- One-time payment for the replacement of the remaining ocean outfall anchors; and
- Proportioned short-term debt payments for the purchase and replacement of two service vehicles.

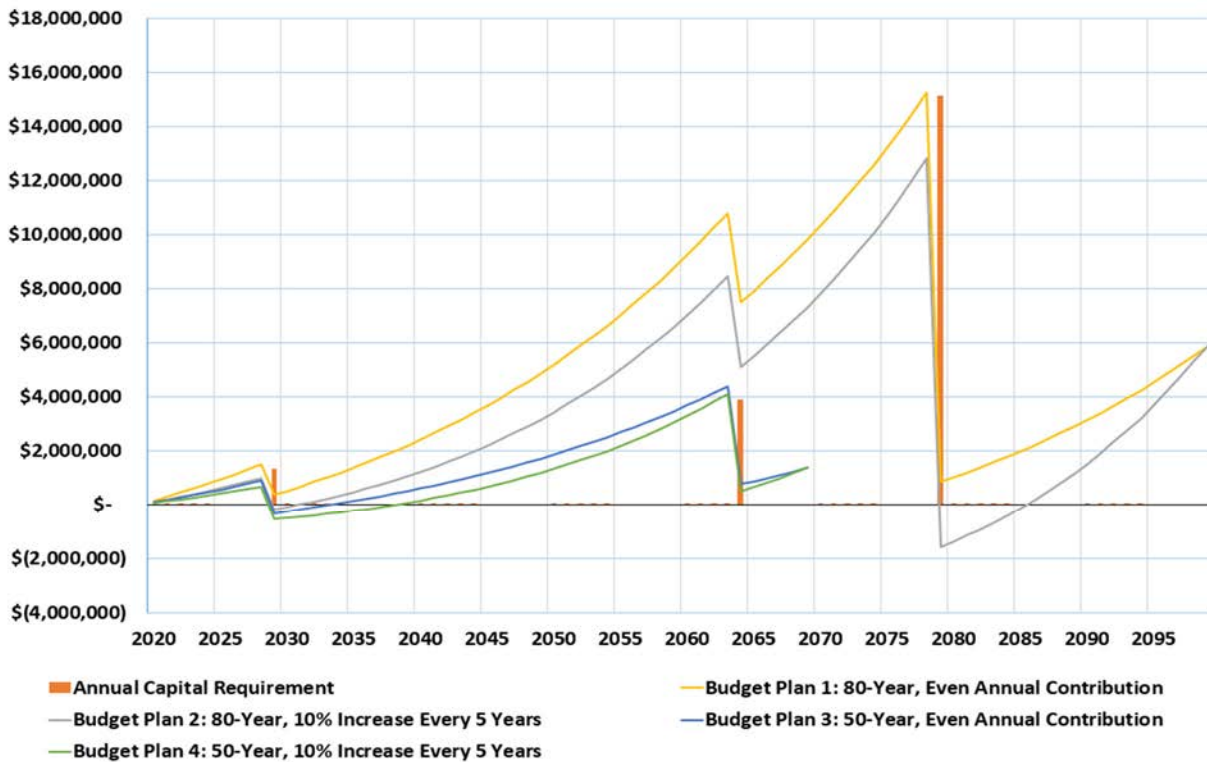
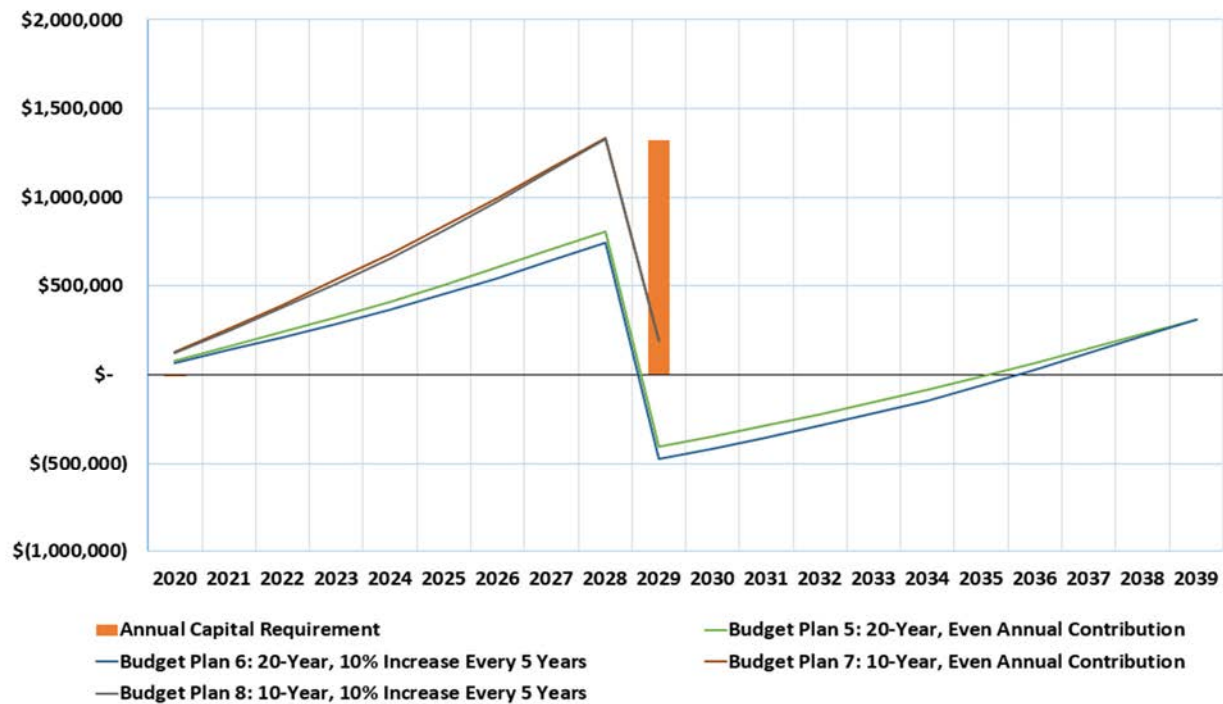


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

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5. Additional Local Service Improvement Actions

Additional operational work is required in the Jolly Roger wastewater local service area that falls outside of the typical operational and maintenance plan. These items have been listed due to the potential impact that they may have on the users and fronting properties of the local service.

Table 5 – Local Service Improvement Actions

Action Item	Target Year	Cost Estimate	Result
Engage consulting services to complete a feasibility study on potential options for treatment replacement.	2020	\$ 10,000	To be determined.
Secure a Statutory Right of Way for legal access onto the property.	2021	\$ 1,300	To be determined.

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Action Item	Target Year	Cost Estimate	Result
Review the Statutory Right of Way over the neighbouring property to determine whether agents of the SCRD are covered by that agreement. If that Statutory Right of way does not cover agents of the SCRD, secure a Statutory right of way with the owner of the neighbouring property to ensure uninterrupted access through their property for the SCRD and agents of the SCRD.	2021	\$ 400 minimum	To be determined.

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Bobby Rebner	Operations Support Technician	Infrastructure Services
Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

1. Local Service Information



Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 5475 Secret Cove Road
- Original Construction: 1979
- Taken over by Sunshine Coast Regional District (SCRD): 1985
- Establishment of Local Service: 1996
- Major Upgrades: None to date
- Treatment System Owner: SCRD (on private land)
- Number of Fronting Parcels: 30 Residential
- Number of Users: 31
- Treatment Process: NPS sequencing batch reactor
- Treatment Permit #: PE-4769
- Permitted Discharge Amount: 57 m³/day
- Regulatory Authority: Ministry of Environment Permit
- Effluent Receiving: Ocean
- EOCP Classification: Small Wastewater System – Mechanical (SWWS-M)
- Statutory Right of Ways: None in place; required for access on to strata common property

SECRET COVE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1.1. Development Details

The Secret Cove wastewater local service area is located in the Halfmoon Bay Electoral Area (Area B) of the SCRD. The treatment system is located to the south of the strata property and is accessed from a walkway situated between dwelling units.

The community wastewater systems were constructed in 1979 to assist with the development of new multi-family dwellings in the strata development. The individual strata parcels in the Secret Cove development are too small for an onsite septic system. The systems were managed by the developer until 1985 when the SCRD began overseeing the service.

1.2. Established Bylaws

There have been various bylaws adopted by the SCRD Board of Directors that are relevant to the Secret Cove wastewater local service, as listed in Table 1.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
232A.1	Package Plants Service Unit (1985)	Established a designated area for the purpose of providing sewage collection, treatment and disposal within Areas A, B and E.
1026	Sewage Treatment Facilities Local Service (1996)	Converted the Package Plants Service Unit to a local service.
428.19	Sewage Treatment Facilities Service Unit (2019)	Establishment of, and subsequent updates thereto, sewage treatment facilities frontage and user charges.
512	Sewage Treatment Facilities Reserve Fund (2001)	Established a capital reserve fund for sewage treatment facilities.
608	Sewage Treatment Facilities Service Operating Reserve Fund (2007)	Established an operating reserve fund for sewage treatment facilities.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

Treatment of the influent takes place in an above ground poured in place concrete tank with a series of divider walls forming individual treatment sections within. The top of the tank is a fiberglass lid with fiberglass hatches that open into each section.

Wastewater enters into a solids retention tank where fluid has to pass through a screened section into the aeration tank. Treatment is conducted in batches controlled by float switches, timers and wall levels. After aeration treatment, effluents are transferred into final clarifier for settling and discharge to the ocean. Odors are collected from each treatment tank through a piping manifold and sent through an activated carbon filter via an inline centrifugal fan.

The effluent from the Secret Cove wastewater treatment local service area connects with effluent piping from the Jolly Roger wastewater treatment local service area through a 200 mm diameter, high density polyethylene (HDPE) pipe. The two local service areas discharge their effluent through a shared outfall that is discharged approximately 1070 m offshore at a depth of 26 m in the open ocean.

2.2. Collection System

The collection system has approximately 335 m in gravity mains and eight manholes. The infrastructure depth varies between 0.90 m and 3.90 m below grade.

2.3. Asset Accessibility

The treatment plant is located on the side of a steep embankment, behind the dwelling units, which could pose a significant challenge for its eventual demolition and replacement.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

Based on the estimated useful life (EUL), the community septic tank has approximately 20% of its lifespan remaining. However when the tank was last pumped out in 2018, there were no reported structural concerns noted. The treatment system is in fair condition.

The ocean outfall is in good condition, however the anchors have needed to be replaced at several locations in recent years. This is largely the result of boat anchors getting caught under the outfall.

2.5. Asset Replacement Value

It is expected that the treatment process that was installed 40 years ago will not meet regulatory requirements once the treatment system is due for replacement. A replacement value was estimated using the replacement value of the treatment system at Roberts Creek Co-Housing wastewater local service area.

At Roberts Creek Co-Housing, wastewater enters the septic tanks where primary solids settle. Aeration occurs as aerated water is cascaded over honeycomb media. Effluent from the trickle filter is pumped through sand filters into the final clarifier before disposal.

The treatment process from Roberts Creek Co-Housing was chosen for determining a replacement cost for Secret Cove based on a similar number of users and it is a process that is commonly used in new development. An additional factor was applied to the replacement cost from Roberts Creek Co-Housing due to the difficulty presented by the topography of the land. A feasibility study should be completed by a professional engineer to determine the treatment

SECRET COVE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

and disposal process best suited for the conditions at Secret Cove wastewater local service.

Financial contributions to the ocean outfall is evenly shared between Secret Cove wastewater local service area and Jolly Roger wastewater local service area; only Secret Coves' share has been included in Table 2.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 772,619	1979	50	10
Ocean Outfall	\$ 410,364	1979	85	45

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Secret Cove wastewater local service are charged user fees of \$412.50 per year (including a 25% increase in user fees in 2019) and those properties within the service area boundary as outlined in Bylaw No. 1026 are charged \$102.00 in parcel tax per year (including a 2% parcel tax increase in 2019).

3.2. Current O&M Budget

The budgeted and actual expenditures of the Secret Cove wastewater local service from 2015 to 2018 are shown in Table 3.

SECRET COVE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 14,039.00	\$ 13,783.00	\$ 13,222.00	\$ 13,602.00	\$ 13,661.50
Actual	\$ 8,739.00	\$ 9,030.00	\$ 23,604.00	\$ 16,778.94	\$ 14,537.99
Variance	\$ 5,300.00	\$ 4,753.00	\$(10,382.00)	\$(3,176.94)	\$ (876.49)

Overall, the operations budget decreased by 3% between 2015 and 2018. The actual expenditure increased by 92% during the same period of time. The majority of the actual expenditure (40%) was to pay for staffing expenses of operational and administrative staff, while other significant expenditures include equipment repairs and maintenance (15%) and B.C. Hydro utility payment (17%).

The irregularity noted in this budget review, 2017, incurred costs in excess of the budgeted amount due to the outfall sustaining a catastrophic failure. The damage to the outfall appeared to have been caused by a vessel anchor catching the pipe and dragging it. Approximately half of the 2017 budget (46%) went to paying contracted services to repair the damaged outfall.

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Secret Cove local service area. Similar to the existing O&M budget, staff wages account for the majority of the potential annual O&M budget for Secret Cove. The required weekly, monthly, quarterly, semi-annual, and annual tasks are primarily completed by a Utility Technician.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Proportioned charges for non-annual equipment replacement;
- Proportioned charges for non-annual contracted services;
- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

Future replacement of the treatment system may result in an increased O&M budget. The treatment system mentioned in Section 2.5 would increase the required O&M hours by as much as 30%.

With the inclusion of ancillary charges, the potential operating budget for Secret Cove wastewater local service is \$22,723. The potential user fee for the 31 users in this local service area is \$733, a 78% increase from 2019 rates. This increase is primarily attributed to the separation of property tax revenue from the operating budget and improving the level of service delivered to this local service area.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRCD does not have a long-term capital funding plan in place for the wastewater infrastructure at Secret Cove.

4.1. Reserve Balances

As of the end of 2018, there was \$9,529.11 in capital reserves and \$18,176.37 contributed to operating reserves. Under the existing method of revenue collection and use, these reserves could be combined to invest in capital renewal or replacement projects if required.

There is currently no requirement for Secret Cove to have a set level, by either denomination or percentage, of reserves in place. Based on the current reserve balance and 2019 budget transfers, Secret Cove's reserves are 3% of the estimated replacement value of the infrastructure.

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe

SECRET COVE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the shortest term in which all infrastructure (i.e. the treatment and disposal systems) will need to be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80 Year	Treatment System (2) Ocean Outfall (1)	Even Annual Contribution	\$ 11,324,000	\$ 4,718
Plan 2	80 Year	Treatment System (2) Ocean Outfall (1)	10% Increase Every Five Years	\$ 16,224,113	\$ 3,009
Plan 3	50 Year	Treatment System (1) Ocean Outfall (1)	Even Annual Contribution	\$ 4,208,500	\$ 2,806
Plan 4	50 Year	Treatment System (1) Ocean Outfall (1)	10% Increase Every Five Years	\$ 4,880,039	\$ 2,041
Plan 5	20 Year	Treatment System (1) Ocean Outfall (0)	Even Annual Contribution	\$ 1,577,200	\$ 2,629
Plan 6	20 Year	Treatment System (1) Ocean Outfall (0)	10% Increase Every Five Years	\$ 1,614,604	\$ 2,319
Plan 7	10 Year	Treatment System (1) Ocean Outfall (0)	Even Annual Contribution	\$ 1,299,800	\$ 4,333
Plan 8	10 Year	Treatment System (1) Ocean Outfall (0)	10% Increase Every Five Years	\$ 1,305,675	\$ 4,145

In addition to the replacement of the wastewater systems, other items that appear in the capital budget include:

- One-time payment for the replacement of the remaining ocean outfall anchors; and
- Proportioned short-term debt payments for the purchase and replacement of two service vehicles.

SECRET COVE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

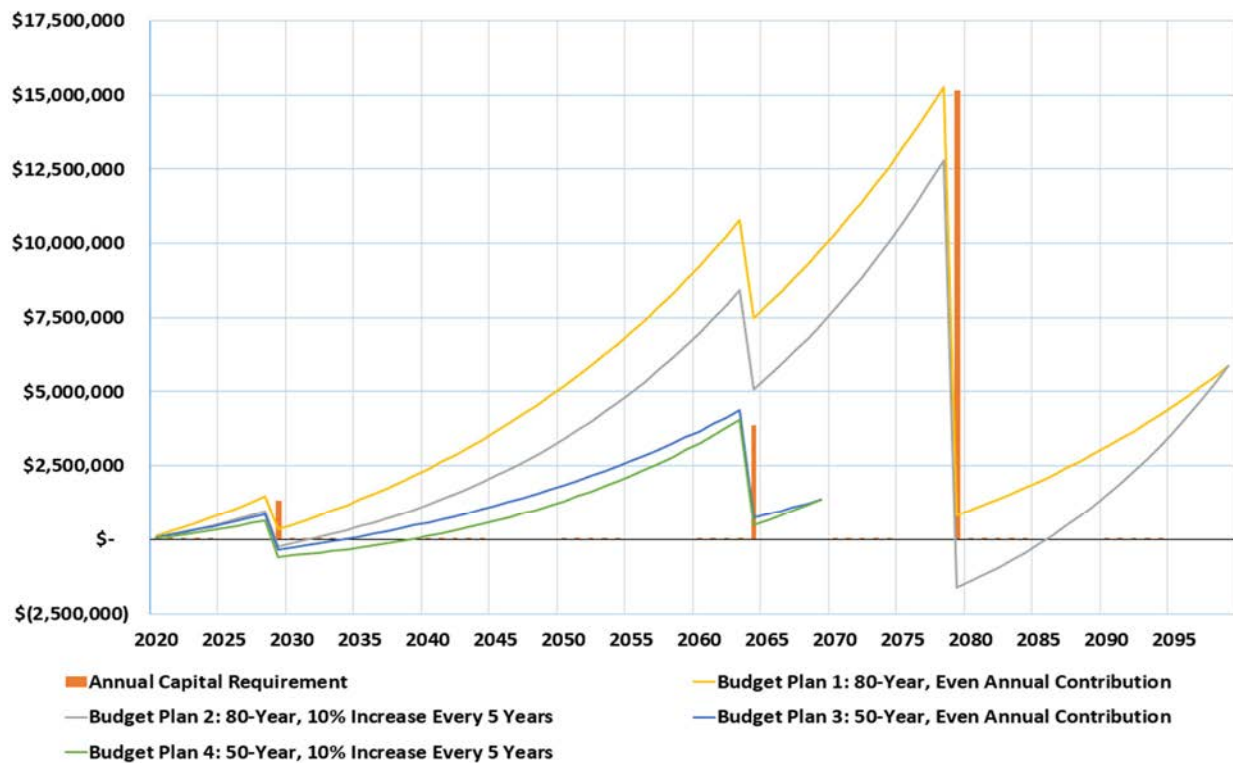


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

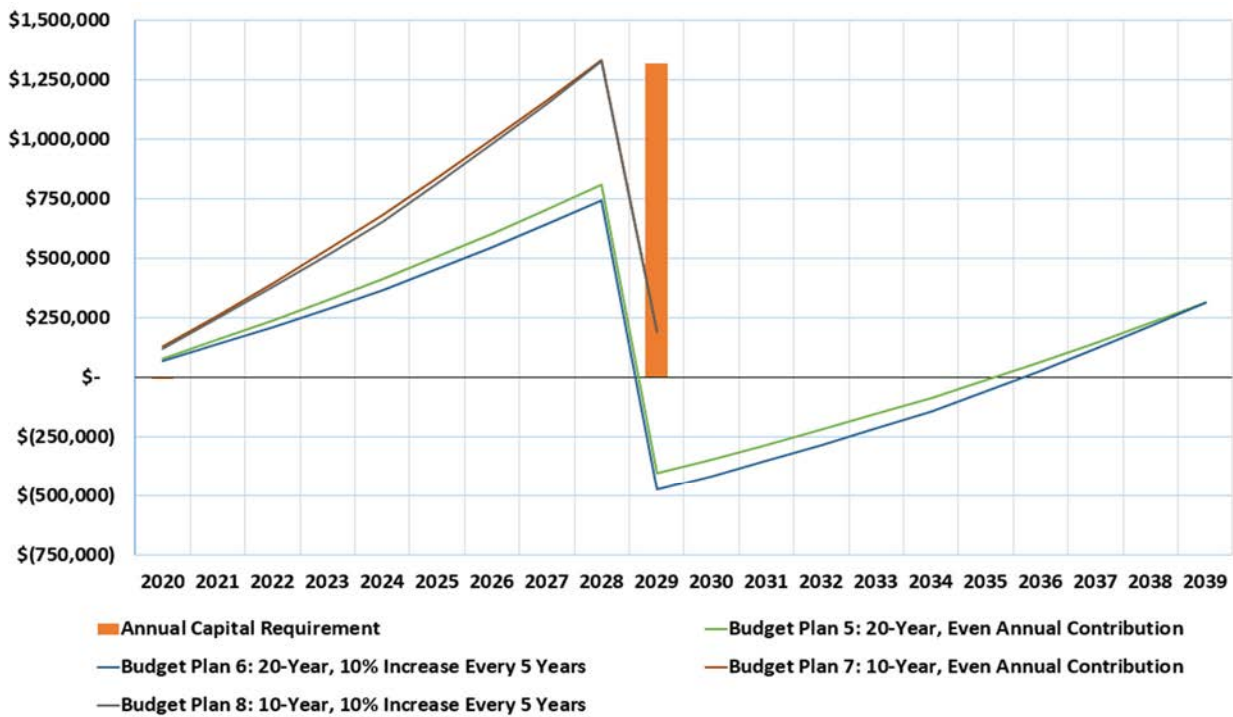


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

Additional operational work is required in the Secret Cove wastewater local service area that falls outside of the typical operational and maintenance plan. These items have been listed due to the potential impact that they may have on the users and fronting properties of the local service.

Table 5 – Local Service Improvement Actions

Action Item	Target Year	Cost Estimate	Result
Engage consulting services to complete a feasibility study on potential options for treatment replacement.	2020	\$ 10,000	To be determined.
Secure a Statutory Right of Way for legal access onto the property.	2021	\$ 1,300	To be determined.

November 2019

Square Bay Wastewater Local Service Asset Management Plan



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Version Log

This document was carefully prepared so that it can be maintained as a living document; a document that is continually edited and updated. Through the various edits and updates, this document may evolve and be expanded as needed. This may be as a result of infrastructure replacement or could be due to changes in regulatory requirements, technology, staffing, or environmental conditions. Regardless of the reason, updates to this asset management plan will be key to the ongoing operation of the Square Bay wastewater local service.

Version	Revised By	Date	Description
1	D. Joseph	November 28, 2019	Final report for Board of Directors approval

Acknowledgements

Completion of this Asset Management Plan would not have been possible without contributions and support from the following staff:

Darren Joseph	Asset Management Coordinator	Corporate Services
Brad Wing	Financial Analyst	Corporate Services
Tina Perreault	General Manager, Corporate Services	Corporate Services
Cheryl Trent	GIS Administrator	Corporate Services
Emilia Walton	GIS Technician	Corporate Services
Shane Walkey	Manager, Utility Services	Infrastructure Services
Bobby Rebner	Operations Support Technician	Infrastructure Services
Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

SQUARE BAY WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1. Local Service Information

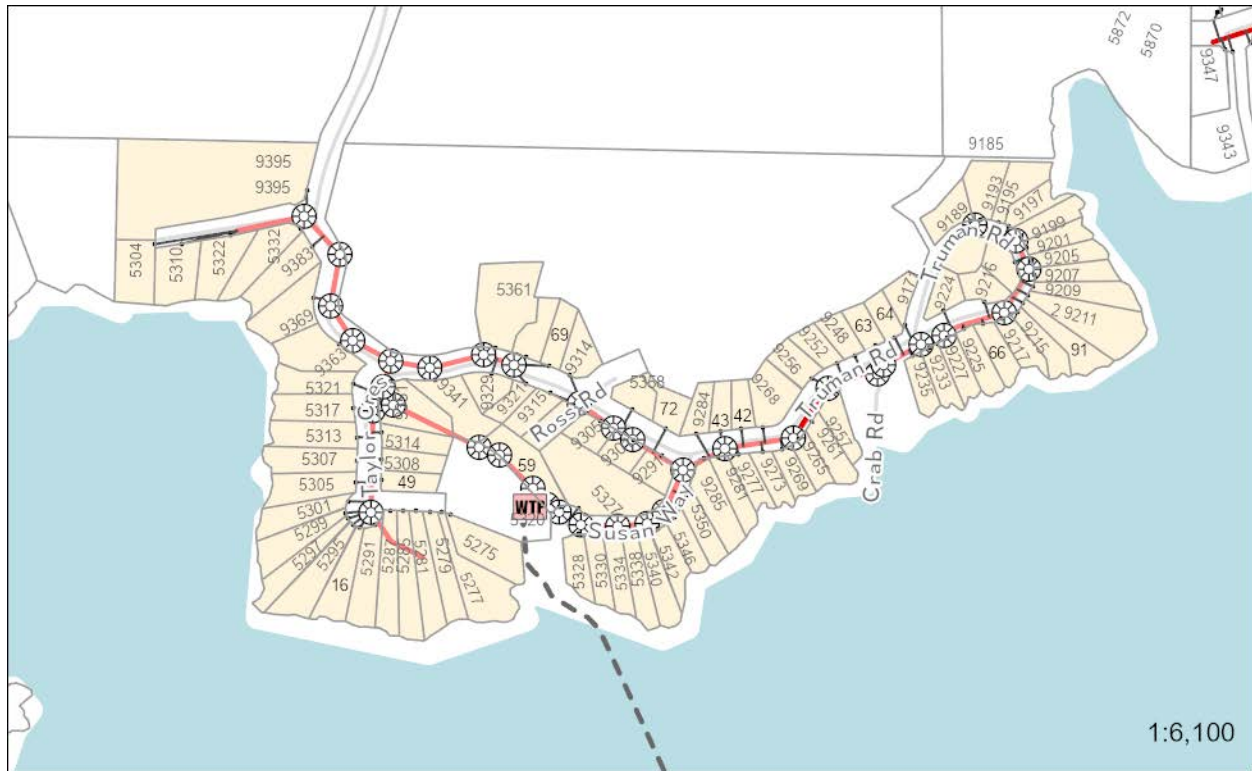


Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 5320 Susan Way
- Original Construction: 1970
- Taken over by Sunshine Coast Regional District (SCRD): 1981
- Establishment of Local Service: 1996
- Major Upgrades: 2019 (Replacement of treatment system)
- Treatment System Owner: SCRD
- Number of Fronting Parcels: 93 Residential
- Number of Users: 79
- Treatment Process: ECOfluid Upflow Sludge Blanket Filtration (USBF®)
- Treatment Permit #: PE-375
- Permitted Discharge Amount: 171 m³/day
- Regulatory Authority: Ministry of Environment Permit
- Effluent Receiving: Ocean
- EOCP Classification: MWWT-III (Municipal Wastewater Treatment – Level 3)
- Statutory Right of Ways: Required for side yard access to the collection system (C76466 registered December 8, 1975, in favour of the developer)

1.1. Development Details

The Square Bay wastewater local service area is located in the Halfmoon Bay Electoral Area (Area B) of the SCRD. The treatment systems is located in a vacant parcel of land used exclusively for the processing of wastewater.

The community wastewater systems were constructed in 1970 to assist with the development of new single-family dwellings in the neighbourhood. The ground conditions in this area are very rocky and have been identified as having insufficient pervious soil material in their yards for constructing an onsite drainfield. The service area was expanded in 1982. The systems were managed by the developer until 1981 when the SCRD began overseeing the service.

1.2. Established Bylaws

There have been various bylaws adopted by the SCRD Board of Directors that are relevant to the Square Bay wastewater local service, as listed in Table 1.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
232A.4	Package Plants Service Unit (1994)	Established a designated area for the purpose of providing sewage collection, treatment and disposal within Areas A, B and E.
1026	Sewage Treatment Facilities Local Service (1996)	Converted the Package Plants Service Unit to a local service.
428.19	Sewage Treatment Facilities Service Unit (2019)	Establishment of, and subsequent updates thereto, sewage treatment facilities frontage and user charges.
512	Sewage Treatment Facilities Reserve Fund (2001)	Established a capital reserve fund for sewage treatment facilities.
608	Sewage Treatment Facilities Service Operating Reserve Fund (2007)	Established an operating reserve fund for sewage treatment facilities.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

The wastewater treatment process initiates with solids being screened at the equalization tank. From the equalization tank the wastewater is pumped to the anoxic zone, followed by the aeration zone where the wastewater flows through the bottom of the Upflow Sludge Blanket Filtration (USBF®). After the USBF the effluent flows into the filter feed tank where it is pumped to the sand filters and ultraviolet (UV) disinfection equipment. Finally, the wastewater flows into the treated effluent tank and gravity feeds through a flow meter before it discharges to the ocean.

The backwash pump in the treated effluent tank uses the treated water to backwash the sand filters. Return activated sludge is drawn from the bottom of the USBF tank and pumped to the head of the anoxic zone. Waste activated sludge is pumped from the aeration zone and stored in the pre-thickener tank where it gets pumped out by a vacuum truck and disposed of.

The effluent disposes through a 300 mm diameter, high density polyethylene (HDPE) outfall pipe approximately 300 m offshore at a depth of 35 m in the open ocean.

2.2. Collection System

The collection system has approximately 635 m of 150 mm diameter, asbestos cement (AC) and 625 m of 150 mm diameter, polyvinyl chloride (PVC) gravity mains, 120 m of 150 mm diameter, PVC force main, and 34 manholes. The infrastructure depth varies between 1.50 m and 4.95 m below grade.

Approximately 75 m of the mains is accessed through the side yard of a dwelling between Taylor Crescent and Susan Way.

2.3. Asset Accessibility

There are a couple of accessibility concerns regarding infrastructure maintenance and replacement.

- The ground conditions are very rocky and therefore the ground will require blasting to replace the main segments.
- Access to the wastewater collection system in the private property will require removal of the existing vegetation, including various bushes and trees.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

The new treatment has been operating in accordance with the design parameters and is in excellent condition.

The ocean outfall was last inspected in December 2017 and observed to be in good condition. It was noted that the concrete anchors, which are securely attached to the pipe and holding the outfall pipe to the ocean bottom, are nearing the end of their service life.

The condition of the collection system was assessed in 2018 through CCTV inspections. During the inspections six of the gravity pipe segments observed to have severe defects, nine have moderate defects, and 18 have minor defects (only three segments were observed to have no defects). The collection system, including the force main, is in poor condition.

2.5. Asset Replacement Value

It is expected that the new treatment process along with the current ocean outfall will still meet regulatory requirements once they are due for replacement.

SQUARE BAY WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Replacement value for the collection system was estimated based on individual component replacement. Additional costs for the removal and replacement of bushes and trees located along the main accessed through private property were factored into the replacement cost.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 959,069	2019	50	50
Ocean Outfall	\$ 176,697	1970	85	36
Collection System	\$ 1,295,270	1970	85	36
Collection System	\$ 2,084,692	1982	85	36
Force Main	\$ 254,709	1982	50	13
Lift Station	\$ 206,449	2014	50	45

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Square Bay wastewater local service are charged user fees of \$412.50 per year (including a 25% increase in user fees in 2019) and those properties within the service area boundary as outlined in Bylaw No. 1026 are charged \$102.00 in parcel tax per year (including a 2% parcel tax increase in 2019).

SQUARE BAY WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

3.2. Current O&M Budget

The budgeted and actual expenditures of the Square Bay wastewater local service from 2015 to 2018 are shown in Table 3.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 50,184.00	\$ 35,504.00	\$ 32,121.00	\$ 33,030.00	\$ 37,709.75
Actual	\$ 36,843.00	\$ 33,871.00	\$ 36,915.00	\$ 50,533.11	\$ 39,540.53
Variance	\$ 13,341.00	\$ 1,633.00	\$(4,794.00)	\$(17,503.11)	\$(1,830.78)

Overall, the operations budget decreased by 34% between 2015 and 2018. The actual expenditure increased by 37% during the same period of time. The majority of the actual expenditure (63%) was to pay for staffing expenses of operational and administrative staff, while other significant expenditures include contracted services (14%) equipment repairs and maintenance (13%), and B.C. Hydro utility charges (7%).

The irregularity in this budget review, 2017 and 2018, incurred costs in excess of the budgeted amount due to labour associated to the replacement of the treatment system and emergency repairs to the collection system.

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Square Bay local service area. Similar to the existing O&M budget, staff wages account for the majority of the potential annual O&M budget for Square Bay. The required semi-weekly, monthly, quarterly, semi-annual, and annual tasks are primarily completed by a Utility Technician.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Annual material and equipment replacement;
- Annual and proportioned non-annual contracted services;

- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

With the inclusion of all ancillary charges, the potential operating budget for Square Bay wastewater local service is \$64,780.00. The potential user fee for the 79 users in this local service area is \$820.00, a 99% increase from 2019 rates. This increase is primarily attributed to the separation of property tax revenue from the operating budget and the newly installed treatment system requiring a greater amount of effort to maintain than the system it replaced.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Square Bay.

4.1. Reserve Balances

As of the end of 2018, there was \$31,789.18 in capital reserves and \$79,427.92 contributed to operating reserves. Under the existing method of revenue collection and use, these reserves could be combined to invest in capital renewal or replacement projects if required.

There is currently no requirement for Square Bay to have a set level, by either denomination or percentage, of reserves in place. Based on the current reserve balance and 2019 budget transfers, Square Bay's reserves are 2% of the estimated replacement value of the infrastructure.

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

SQUARE BAY WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the shortest term in which all infrastructure (i.e. the treatment, disposal, and collection systems) will need to be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (1) Ocean Outfall (1) Collection System (1)	Even Annual Contribution	\$ 33,108,800	\$ 4,450
Plan 2	80-Year	Treatment System (1) Ocean Outfall (1) Collection System (1)	10% Increase Every Five Years	\$ 47,473,416	\$ 2,840
Plan 3	50-Year	Treatment System (1) Ocean Outfall (1) Collection System (1)	Even Annual Contribution	\$ 22,209,000	\$ 4,776
Plan 4	50-Year	Treatment System (1) Ocean Outfall (1) Collection System (1)	10% Increase Every Five Years	\$ 25,674,394	\$ 3,464
Plan 5	20-Year	Treatment System (0) Ocean Outfall (0) Collection System (0)	Even Annual Contribution	\$ 1,293,600	\$ 695
Plan 6	20-Year	Treatment System (0) Ocean Outfall (0) Collection System (0)	10% Increase Every Five Years	\$ 1,322,917	\$ 613
Plan 7	10-Year	Treatment System (0) Ocean Outfall (0) Collection System (0)	Even Annual Contribution	\$ 859,300	\$ 924
Plan 8	10-Year	Treatment System (0) Ocean Outfall (0) Collection System (0)	10% Increase Every Five Years	\$ 863,205	\$ 884

In addition to the replacement of the wastewater systems, other items that appear in the capital budget include:

- Replacement of the security fencing around the perimeter of the site;

SQUARE BAY WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

- Replacement of the standby generator;
- Replacement of the air blower units;
- Replacement of the ultraviolet (UV) disinfection equipment;
- One-time replacement of the ocean outfall anchors;
- Payment of the short-term debt for the new treatment system. (The Clean Water and Wastewater Fund grant funded 83% of the project.); and
- Proportioned short-term debt payments for the purchase and replacement of two service vehicles.

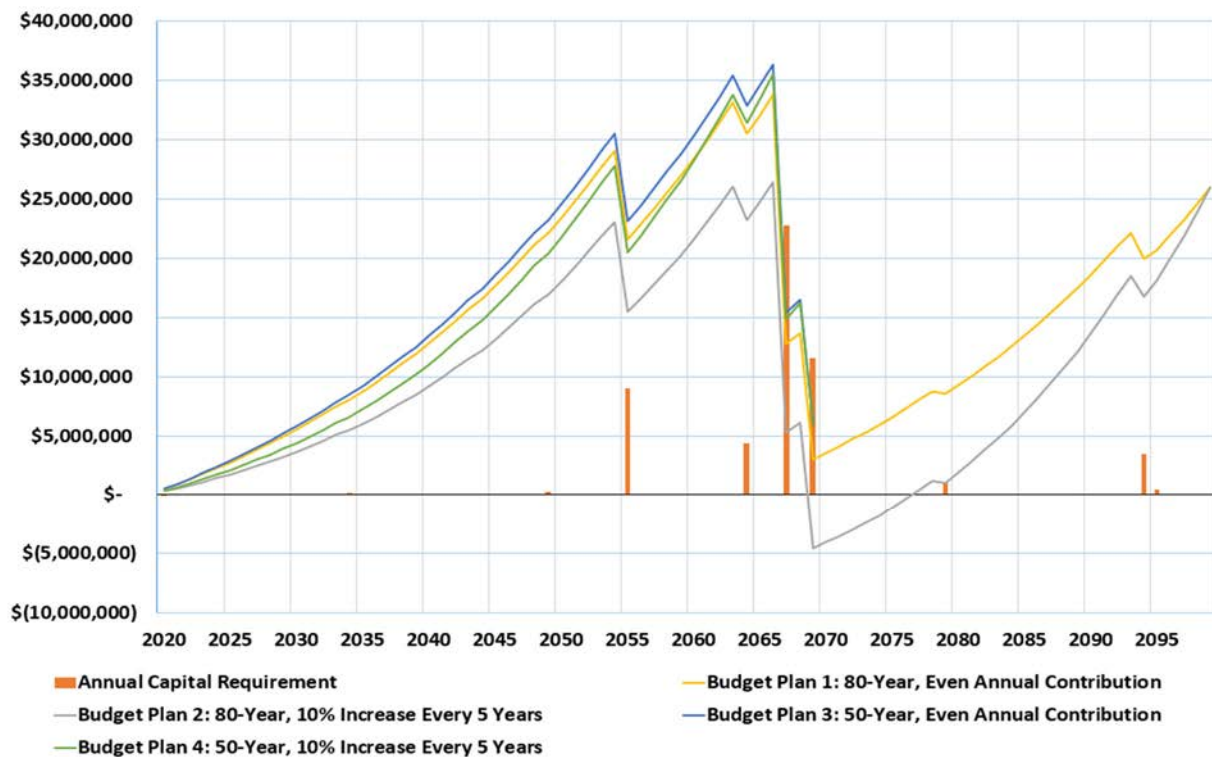


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

SQUARE BAY WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

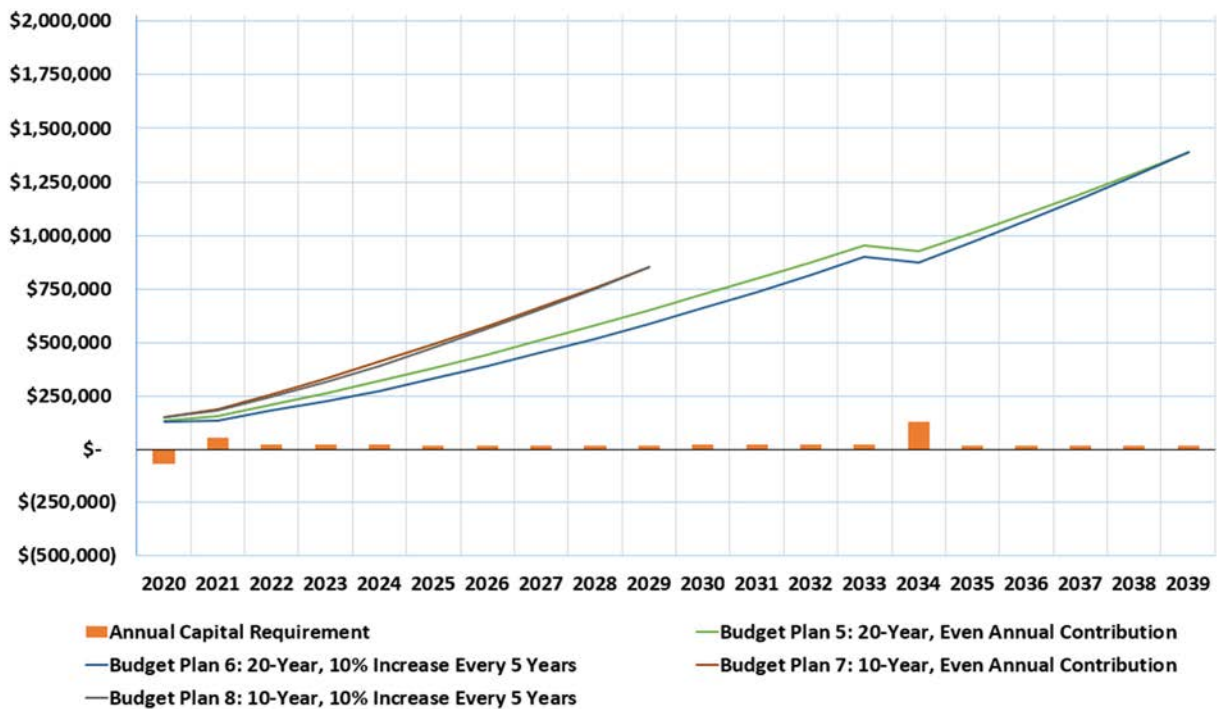


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

Additional operational work is required in the Square Bay wastewater local service area that falls outside of the typical operational and maintenance plan. These items have been listed due to the potential impact that they may have on the users and fronting properties of the local service.

SQUARE BAY WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Table 5 – Local Service Improvement Actions

Action Item	Target Year	Cost Estimate	Result
Repair the severe rated defects in the collection system noted in the CCTV inspection.	2020-2021	\$ 26,600	To be determined.
Transfer Statutory Right of Away from developer to SCRD over portion of private property for the operation, maintenance, and replacement of the wastewater collection system.	2021	\$ 1,300	To be determined.
Repair the moderate rated defects in the collection system noted in the CCTV inspection.	2021-2023	\$ 4,500	To be determined.

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November 2019

Roberts Creek Co-Housing Wastewater Local Service Asset Management Plan



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ROBERTS CREEK CO-HOUSING WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Version Log

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Version	Revised By	Date	Description
1	D. Joseph	November 28, 2019	Final report for Board of Directors approval

Acknowledgements

Completion of this Asset Management Plan would not have been possible without contributions and support from the following staff:

Darren Joseph	Asset Management Coordinator	Corporate Services
Brad Wing	Financial Analyst	Corporate Services
Tina Perreault	General Manager, Corporate Services	Corporate Services
Cheryl Trent	GIS Administrator	Corporate Services
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Shane Walkey	Manager, Utility Services	Infrastructure Services
Bobby Rebner	Operations Support Technician	Infrastructure Services
Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

ROBERTS CREEK CO-HOUSING WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1. Local Service Information

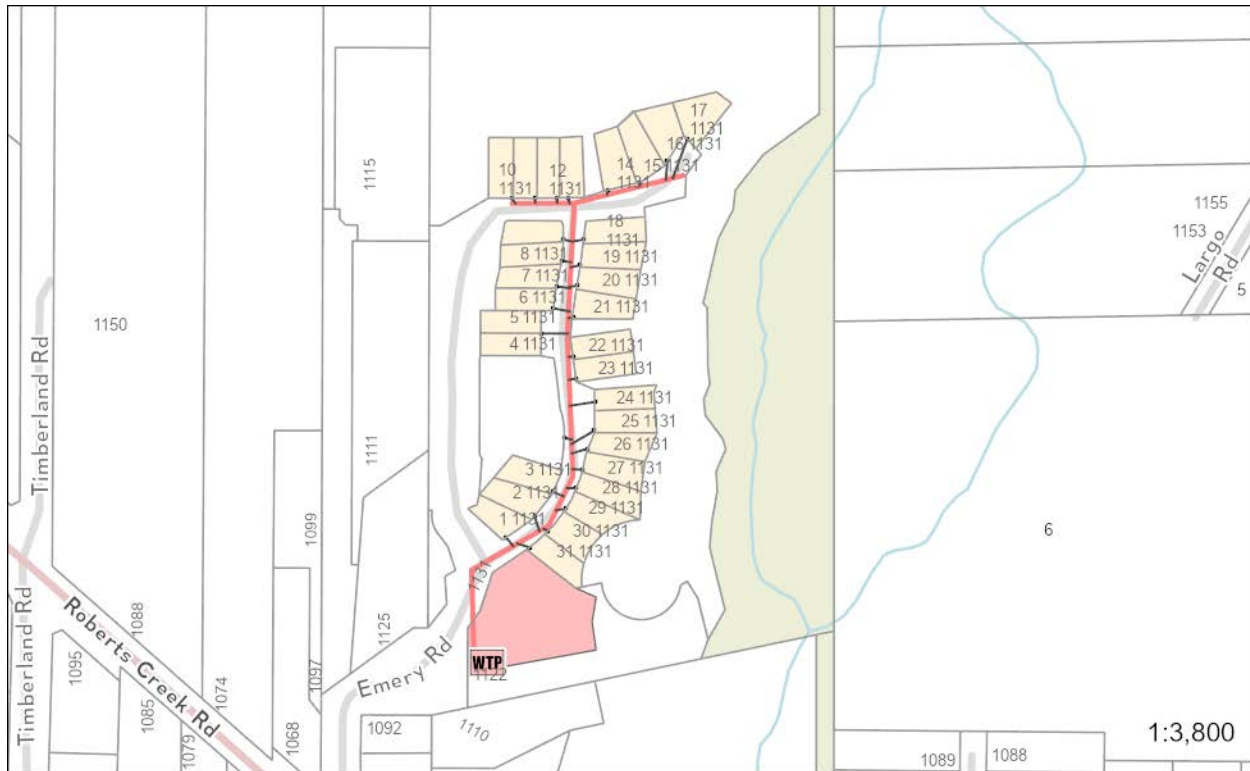


Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 1122 Emery Road
- Original Construction: 2003
- Major Upgrades: None to date
- Taken over by Sunshine Coast Regional District (SCRD): 2004
- Establishment of Local Service: 2004
- Treatment System Owner: SCRD
- Number of Fronting Parcels: 31 Residential
- Number of Users: 31
- Treatment Process: BioMicrobics FAST® 9.0 (1) and 4.5 (1) plants
- Treatment Permit #: RE-17518
- Permitted Discharge Amount: 51 m³/day
- Regulatory Authority: Municipal Wastewater Regulation (MWR)
- Effluent Receiving: Ground
- EOCP Classification: SWWS-M (Small Wastewater Systems – Mechanical)
- Statutory Right of Ways: BW4949 (registered January 7, 2004, for access to the collection system located within strata common property)

ROBERTS CREEK CO-HOUSING WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1.1. Development Details

The Roberts Creek Co-Housing wastewater local service area is located in the Roberts Creek Electoral Area (Area D) of the SCRD. The treatment and disposal systems are located in a parcel of land used for the processing of wastewater, and are located to the south of the houses within the service area. Over time, the residents of the co-housing development have built raised gardens on top of a section of the fields.

The community wastewater systems were constructed in 2003 to assist with the development of new single-family dwellings in the strata development. The individual strata parcels in the Roberts Creek Co-housing development are too small for an onsite septic system. The systems were taken over by the SCRD immediately upon construction completion and occupancy of the houses.

1.2. Established Bylaws

There have been various bylaws adopted by the SCRD Board of Directors that are relevant to the Roberts Creek Co-Housing wastewater local service, as listed in Table 1.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
1026.3	Sewage Treatment Facilities Local Service (2004)	Converted the Package Plants Service Unit to a local service.
428.19	Sewage Treatment Facilities Service Unit (2019)	Establishment of, and subsequent updates thereto, sewage treatment facilities frontage and user charges.
512	Sewage Treatment Facilities Reserve Fund (2001)	Established a capital reserve fund for sewage treatment facilities.
608	Sewage Treatment Facilities Service Operating Reserve Fund (2007)	Established an operating reserve fund for sewage treatment facilities.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

Treatment of the influent takes place in an underground cast-in-place concrete tank with a series of divider walls forming individual treatment sections within. The top of the tank is concrete with built-in ground level access lids. Adjacent to the tank is a site building that houses the electrical and mechanical equipment.

Wastewater enters the septic tanks where primary solids settle. Aeration occurs as aerated water is cascaded over honeycomb media. Effluent from the trickle filter is pumped through sand filters into the final clarifier before discharge to the drainfield.

The final pumps provide treated effluent to be sent to one of four fields. The fields provide effluent disposal through a combined 450 m of perforated drainage pipe.

2.2. Collection System

The collection system has approximately 340 m of 200 mm diameter, polyvinyl chloride (PVC), gravity mains, and eight manholes. The infrastructure depth varies between 0.60 m and 2.95 m below grade.

2.3. Asset Accessibility

There are no accessibility issues with the infrastructure at Roberts Creek Co-Housing.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

ROBERTS CREEK CO-HOUSING WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

Even though there are no issues with the treatment process or equipment, the treatment plant has not been performed to regulatory requirements since its conception. The community is visibly aware of what they dispose of which reduces the household flows below design. Due to an insufficient amount of wastewater to process, the system has never been able to meet the established effluent criteria. The treatment plant is in poor condition until a solution to this problem can be reached.

There have been no performance issues noted with the drainfield. The drainfield is in good condition.

The condition of the collection system was assessed in 2018 through CCTV inspections. During the inspection two pipe segments and one manhole observed to have moderate defects with minor defects in the system noted. The collection system is good condition.

2.5. Asset Replacement Value

It is expected that the treatment process and drainfield configuration that were installed 16 years ago will still meet regulatory regulations once they are due for replacement.

Replacement value for the collection system was estimated based on individual component replacement values.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 613,569	2003	50	34
Drainfield	\$ 163,566	2003	40	24
Collection System	\$ 575,720	2003	85	69

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Roberts Creek Co-Housing wastewater local service are charged user fees of \$562.50 per year (including a 25% increase in user fees in 2019) and are charged \$204.00 in parcel tax per year (including a 2% parcel tax increase in 2019).

3.2. Current O&M Budget

The budgeted and actual expenditures of the Roberts Creek Co-Housing wastewater local service from 2015 to 2018 are shown in Table 3. The breakdown between expenditure related to the collection system and the treatment and disposal systems has not been recorded. As there have been no recent issues identified with the collection system, all expenditures are assumed to have been allocated to the treatment and disposal systems.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 18,956.00	\$ 18,450.00	\$ 17,647.00	\$ 18,274.00	\$ 18,331.75
Actual	\$ 14,781.00	\$ 13,806.00	\$ 11,777.00	\$ 12,791.10	\$ 13,288.78
Variance	\$ 4,175.00	\$ 4,644.00	\$ 5,870.00	\$ 5,482.90	\$ 5,042.97

Overall, the operations budget decreased by 4% between 2015 and 2018, while the actual expenditure decreased by 16% during the same period of time. The majority of the actual expenditure (56%) was to pay for staffing expenses of operational and administrative staff, while other significant expenditures include B.C. Hydro utility charges (20%) and contracted services (10%).

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Roberts Creek Co-Housing local service area. Similar to the existing O&M budget, staff wages account for the majority of the potential annual O&M budget for Roberts Creek Co-Housing. The required semi-weekly, weekly, monthly, quarterly, semi-annual, and annual tasks are primarily completed by a Utility Technician.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Proportioned charges for non-annual contracted services;
- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

With the inclusion of all ancillary charges, the potential operating budget for Roberts Creek Co-Housing wastewater local service is \$41,509.00. The potential user fee for the 31 users in this local service area is \$1,339.00, a 138% increase from 2019 rates. This increase is primarily attributed to the separation of property tax revenue from the operating budget and improving the level of service delivered to this local service area.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Roberts Creek Co-Housing.

ROBERTS CREEK CO-HOUSING WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

4.1. Reserve Balances

As of the end of 2018, there was \$2,461.33 in capital reserves and \$31,945.19 contributed to operating reserves. Under the existing method of revenue collection and use, these reserves could be combined to invest in capital renewal or replacement projects if required.

There is currently no requirement for Roberts Creek Co-Housing to have a set level, by either denomination or percentage, of reserves in place. Based on the current reserve balance and 2019 budget transfers, Roberts Creek Co-Housing's reserves are 2.7% of the estimated replacement value of the infrastructure.

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the model in which all infrastructure (i.e. the treatment, disposal, and collection systems) will all be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (1) Drainfield (2) Collection System (1)	Even Annual Contribution	\$ 10,144,000	\$ 4,090
Plan 2	80-Year	Treatment System (1) Drainfield (2) Collection System (1)	10% Increase Every Five Years	\$ 14,520,096	\$ 2,606

**ROBERTS CREEK CO-HOUSING WASTEWATER LOCAL SERVICE
ASSET MANAGEMENT PLAN**

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 3	50-Year	Treatment System (1) Drainfield (1) Collection System (0)	Even Annual Contribution	\$ 3,180,000	\$ 2,052
Plan 4	50-Year	Treatment System (1) Drainfield (1) Collection System (0)	10% Increase Every Five Years	\$ 3,677,561	\$ 1,489
Plan 5	20-Year	Treatment System (0) Drainfield (0) Collection System (0)	Even Annual Contribution	\$ 231,000	\$ 373
Plan 6	20-Year	Treatment System (0) Drainfield (0) Collection System (0)	10% Increase Every Five Years	\$ 236,459	\$ 329
Plan 7	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	Even Annual Contribution	\$ 162,400	\$ 524
Plan 8	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	10% Increase Every Five Years	\$ 163,065	\$ 501

In addition to the replacement of the wastewater systems, the capital budget also includes proportioned short-term debt payments for the purchase and replacement of two service vehicles.

ROBERTS CREEK CO-HOUSING WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

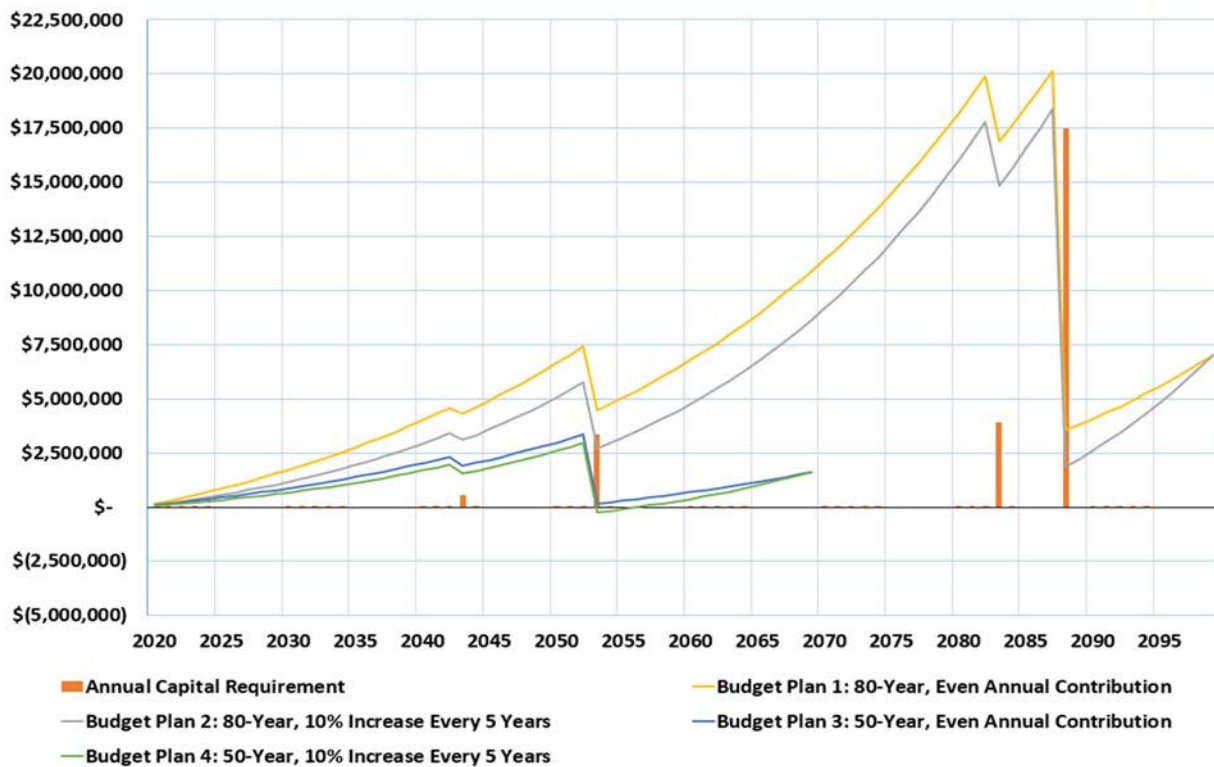


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

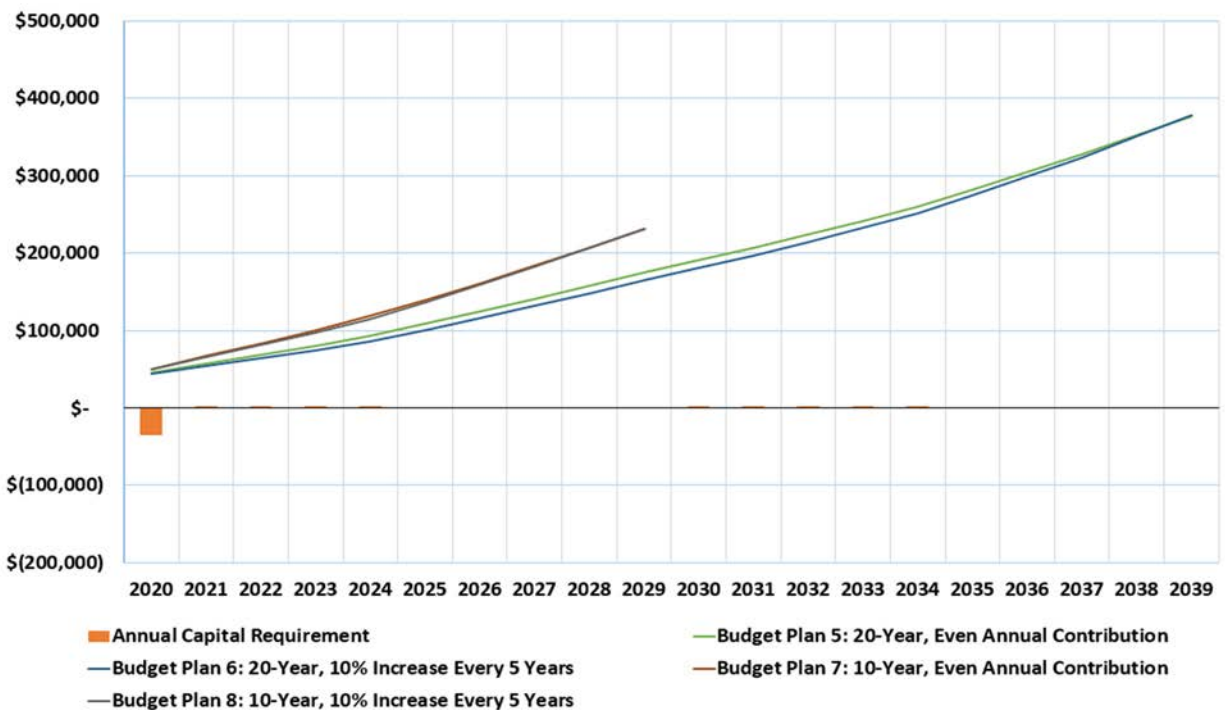


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

Additional operational work is required in the Roberts Creek Co-Housing wastewater local service area that falls outside of the typical operational and maintenance plan. These items have been listed due to the potential impact that they may have on the users and fronting properties of the local service.

Table 5 – Local Service Improvement Actions

Action Item	Target Year	Cost Estimate	Result
Repair the moderate rated defects in the collection system noted in the CCTV inspection.	2021-2023	\$ 1,100	To be determined.

Sunnyside Wastewater Local Service Asset Management Plan



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1. Local Service Information

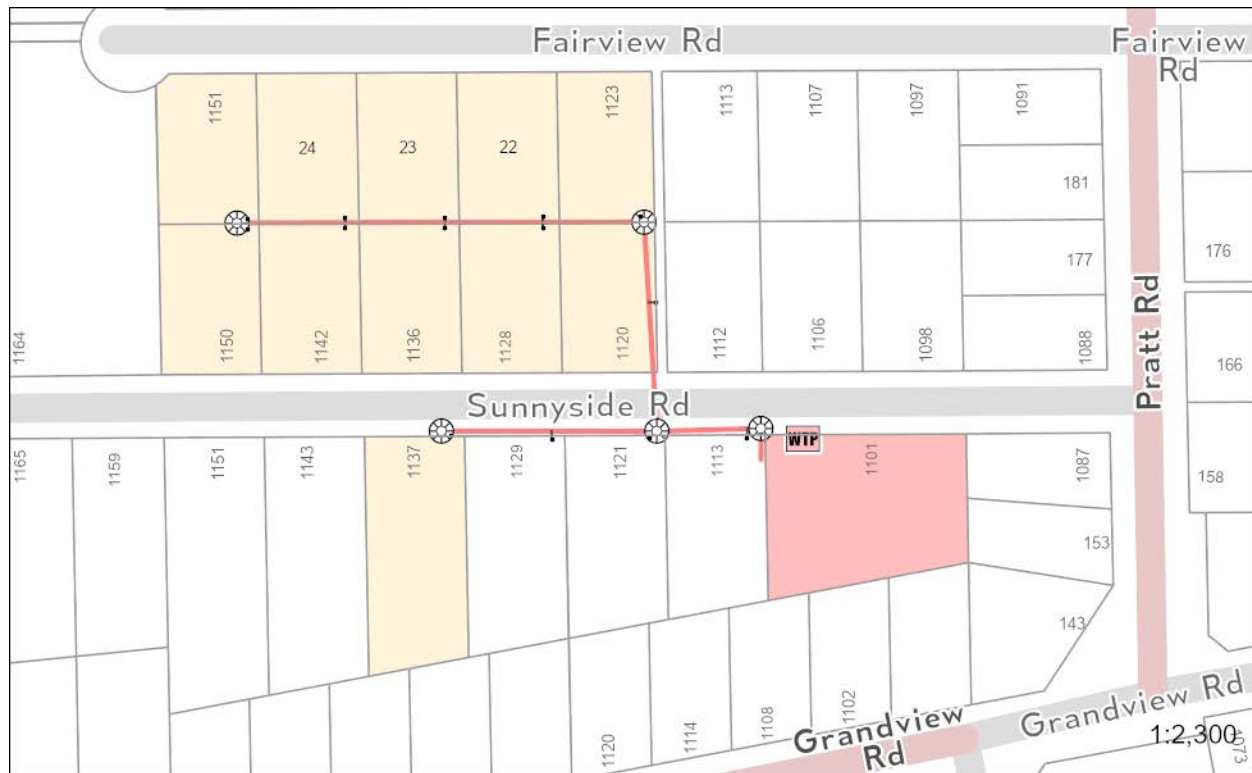


Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 1101 Sunnyside Road
- Original Construction: 1977
- Taken over by Sunshine Coast Regional District (SCRD): 1979
- Establishment of Local Service: 1996
- Major Upgrades: None to date
- Treatment System Owner: SCRD (on private land)
- Number of Fronting Parcels: 11 Residential
- Number of Users: 8
- Treatment Process: Septic tank
- Treatment Permit #: Not required
- Permitted Discharge Amount: < 22.7 m³/day
- Regulatory Authority: Public Health Act
- Effluent Receiving: Ground
- EOCP Classification: Unclassified
- Statutory Right of Ways: G10580 (registered February 16, 1979, for rear yard access to the collection system)

1.1. Development Details

The Sunnyside wastewater local service area is located in the Elphinstone Electoral Area (Area E) of the SCRD. The treatment and disposal systems are located within a parcel of land also used as a regional park (Sunnyside Park) which is maintained by SCRD Facility Services and Parks Division staff.

This community wastewater systems were constructed in 1977 to assist with the development of new single-family dwellings in the neighbourhood. The parcels in this service area were identified as having insufficient pervious soil material in their rear yards for constructing an onsite drainfield. The systems were managed by the developer until 1979 when the SCRD began overseeing the service.

The arrangement of a regional park sharing the same land as a drainfield is unique.

1.2. Established Bylaws

There have been various bylaws adopted by SCRD Board of Directors that are relevant to the Sunnyside wastewater local service, as listed in Table 1.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
232A	Package Plants Service Unit (1983)	Established a designated area for the purpose of providing sewage collection, treatment and disposal within Areas A, B and E.
1026	Sewage Treatment Facilities Local Service (1996)	Converted the Package Plants Service Unit to a local service.
428.19	Sewage Treatment Facilities Service Unit (2019)	Establishment of, and subsequent updates thereto, sewage treatment facilities frontage and user charges.
512	Sewage Treatment Facilities Reserve Fund (2001)	Established a capital reserve fund for sewage treatment facilities.
608	Sewage Treatment Facilities Service Operating Reserve Fund (2007)	Established an operating reserve fund for sewage treatment facilities.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

Primary treatment of the influent takes place in individual household septic tanks located on the residents' properties. Each property's grey water is pumped or gravity fed into the collection system, which terminates at the community treatment tank.

The community treatment tank, which acts as secondary treatment, is an underground concrete septic tank located in northwest corner of 1101 Sunnyside Road. There are four outlets from the tank which allows the effluent to be diverted to multiple fields located throughout the parcel. The fields provide effluent disposal through a combined 770 m of perforated drainage pipe.

2.2. Collection System

The collection system has approximately 300 m of 200 mm diameter, asbestos cement (AC) gravity mains, and five manholes. The infrastructure depth varies between 1.10 m and 2.65 m below grade.

Approximately 180 m of the mains and two manholes are accessed through a Statutory Right of Way that extends from Sunnyside Road through the east side of 1120 Sunnyside Road and through the rear yards of ten of the homes that front on both Fairview Road and Sunnyside Road. Nine of those properties connect to the system through the rear right of way while 1120 Sunnyside Road connects from the right of way on the east side of its property.

2.3. Asset Accessibility

Although the service area for Sunnyside is fairly small, there are multiple accessibility concerns regarding infrastructure maintenance and replacement.

- Access to the wastewater collection system in the Statutory Right of Way will require removal of the existing vegetation, including various bushes and trees. A cedar fence, and fence posts, will also need to be removed.
- The land that the community treatment tank and drainfield is on is not owned by the SCRD. Additionally, a Statutory Right of Way or memorandum of understanding could not be located that authorizes the SCRD to enter the property to construct, install, maintain, and operate a Regional District wastewater system.
- The playground surround, covering approximately 88 m², is situated directly on top of a portion of the drainfield. As previously mentioned, it is assumed that the existing drainfield may be replaced with a smaller one. If that assumption is true, the perforated pipe under the playground could be abandoned and the playground may be able to remain in place without being dismantled. It is also possible that the playground will no longer be permitted when the treatment and disposal systems require replacement. (A Statutory Right of Way does not exist for the playground equipment.)

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

Based on the estimated useful life (EUL), the community septic tank has approximately 16% of its lifespan remaining. However when the tank was last pumped out in 2015, there were no reported structural concerns noted. A visual inspection of the tank during its next pump out will provide staff with a better understanding of its current condition and whether it may exceed its EUL. The treatment system is in fair condition.

A percolation test on the drainfield was conducted in 2019 to assess the condition of the perforated pipe (the test determines the water absorption rate at

an exposed section of the pipe). While there has been no surface issues noted with the drainfield, it is now beyond its EUL and poses a concern for potential failure in the near future. The results of the percolation test revealed no issues with percolation over three of the runs tested, however it was noted that the lower run was taking excess effluent compared to the others. The disposal system is in fair condition.

The condition of the collection system was assessed in 2018 through CCTV inspections. During the inspection one pipe segment and two manholes were observed to have moderate defects. The collection system is in fair condition and can be upgraded upon completion of the necessary repairs.

2.5. Asset Replacement Value

It is expected that the treatment process that was installed 43 years ago will not meet regulatory requirements when the community treatment tank is due for replacement. Additionally, the existing drainfield exceeds what would typically be required for the number of parcels that are serviced and may be replaced with a smaller field. To account for these factors, a replacement value was estimated based on the treatment and disposal systems at Canoe Road wastewater local service area.

At Canoe Road, influent is pumped to elevated treatment modules where it is processed through filter media and disposed of in a trenchless drainfield. This process was chosen for determining a replacement cost for Sunnyside based on a similar number of users and relatively low construction cost. A feasibility study should be completed by a professional engineer to determine the treatment and disposal process best suited for the conditions at Sunnyside wastewater local service.

Replacement value for the collection system was estimated based on individual component replacement values. Additional costs for the removal and replacement of bushes, trees, and the cedar fence that extends the length of the statutory right of way were factored into the replacement cost.

SUNNYSIDE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 217,840	1977	50	8
Drainfield	N/A ¹	1977	40	-2 ²
Collection System	\$ 204,278	1977	85	43

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Sunnyside wastewater local service are charged user fees of \$125.00 per year (including a 25% increase in user fees in 2019) and those properties within the service area boundary as outlined in Bylaw No. 1026 are charged \$51.00 in parcel tax per year (including a 2% parcel tax increase in 2019).

3.2. Current O&M Budget

The budgeted and actual expenditures of the Sunnyside wastewater local service from 2015 to 2018 are shown in Table 3. The breakdown between expenditure related to the collection system and the treatment and disposal systems has not

¹ The treatment system and drainfield have been assigned a single replacement cost. Both systems are anticipated to be replaced at the same and have the same estimated useful life.

² A negative Remaining Useful Life indicates that the asset has lasted longer than the expected norm. It is not necessarily directly related to asset condition or that the asset has failed.

SUNNYSIDE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

been recorded. As there have been no recent issues identified with the collection system, all expenditures are assumed to have been allocated to the treatment and disposal systems.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 1,375.00	\$ 1,298.00	\$ 1,159.00	\$ 1,206.00	\$ 1,259.50
Actual	\$ 587.00	\$ 239.00	\$ 318.00	\$ 416.82	\$ 390.21
Variance	\$ 788.00	\$ 1,059.00	\$ 841.00	\$ 789.18	\$ 869.30

Overall, the operations budget decreased by 12% between 2015 and 2018, while the actual expenditure decreased by 29% during the same period of time. The majority of the actual expenditure (92%) was to pay for staffing expenses of operational and administrative staff.

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Sunnyside local service area. Similar to the existing O&M budget, staff wages account for the majority of the potential annual O&M budget for Sunnyside. The required monthly and annual tasks are primarily completed by a Utility Technician. Due to the relative simplicity of the infrastructure, the hours required to complete an optimal level of service at Sunnyside are much less than treatment systems with mechanical equipment.

Significant expenses included in the potential operating budget are:

- Staffing expenses, including
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Proportioned charges for non-annual contracted services; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

Future replacement of the treatment system may result in an increased O&M budget. The treatment system mentioned in the Section 2.5 would increase the required O&M hours by as much as 80%. Other expenses relating to that type of

treatment system include B.C. Hydro utility charges and scheduled filter media and equipment replacement.

With the inclusion of all ancillary charges, the potential operating budget for Sunnyside wastewater local service is \$3,416. The potential user fee for the eight users in this service area is \$427, a 242% increase from 2019 rates. This increase is primarily attributed to the separation of property tax revenue from the operating budget and improving the level of service delivered to this local service area.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Sunnyside.

4.1. Reserve Balances

As of the end of 2018, there was \$17,487.53 in capital reserves and \$7,251.62 contributed to operating reserves. Under the existing method of revenue collection and use, these reserves could be combined to invest in capital renewal or replacement projects if required.

There is currently no requirement for Sunnyside to have a reserve balance that is defined by either denomination or percentage. Based on the current reserve balance and 2019 budget transfers, Sunnyside's reserves are 6% of the estimated replacement value of the infrastructure.

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe

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of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the shortest term in which all infrastructure (i.e. the treatment, disposal, and collection systems) will need to be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (2) Drainfield (2) Collection System (1)	Even Annual Contribution	\$ 3,579,200	\$ 4,067
Plan 2	80-Year	Treatment System (2) Drainfield (2) Collection System (1)	10% Increase Every Five Years	\$ 5,128,229	\$ 2,594
Plan 3	50-Year	Treatment System (1) Drainfield (1) Collection System (1)	Even Annual Contribution	\$ 1,464,500	\$ 2,663
Plan 4	50-Year	Treatment System (1) Drainfield (1) Collection System (1)	10% Increase Every Five Years	\$ 1,694,945	\$ 1,934
Plan 5	20-Year	Treatment System (1) Drainfield (1) Collection System (0)	Even Annual Contribution	\$ 408,700	\$ 1,858
Plan 6	20-Year	Treatment System (1) Drainfield (1) Collection System (0)	10% Increase Every Five Years	\$ 418,502	\$ 1,640
Plan 7	10-Year	Treatment System (1) Drainfield (1) Collection System (0)	Even Annual Contribution	\$ 334,750	\$ 3,043
Plan 8	10-Year	Treatment System (1) Drainfield (1) Collection System (0)	10% Increase Every Five Years	\$ 336,263	\$ 2,911

In addition to the replacement of the wastewater systems, the capital budget also includes proportioned short-term debt payments for the purchase and replacement of two service vehicles.

As mentioned in Section 2.3, replacement costs and timing were based on the infrastructure recently constructed at Canoe Road. Different treatment and

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disposal systems may have different replacement times than noted in Table 4. For example, the proposed trenchless drainfield was assigned a longer EUL than a drainfield with perforated pipe. If a piped drainfield were to be installed it is assumed that, based on its EUL, it would need to be replaced in the 50-Year model, prior to the treatment system replacement.

The above models do not factor in costs associated with parcel transfer in order for the SCR D to secure land ownership of the wastewater treatment and disposal property.

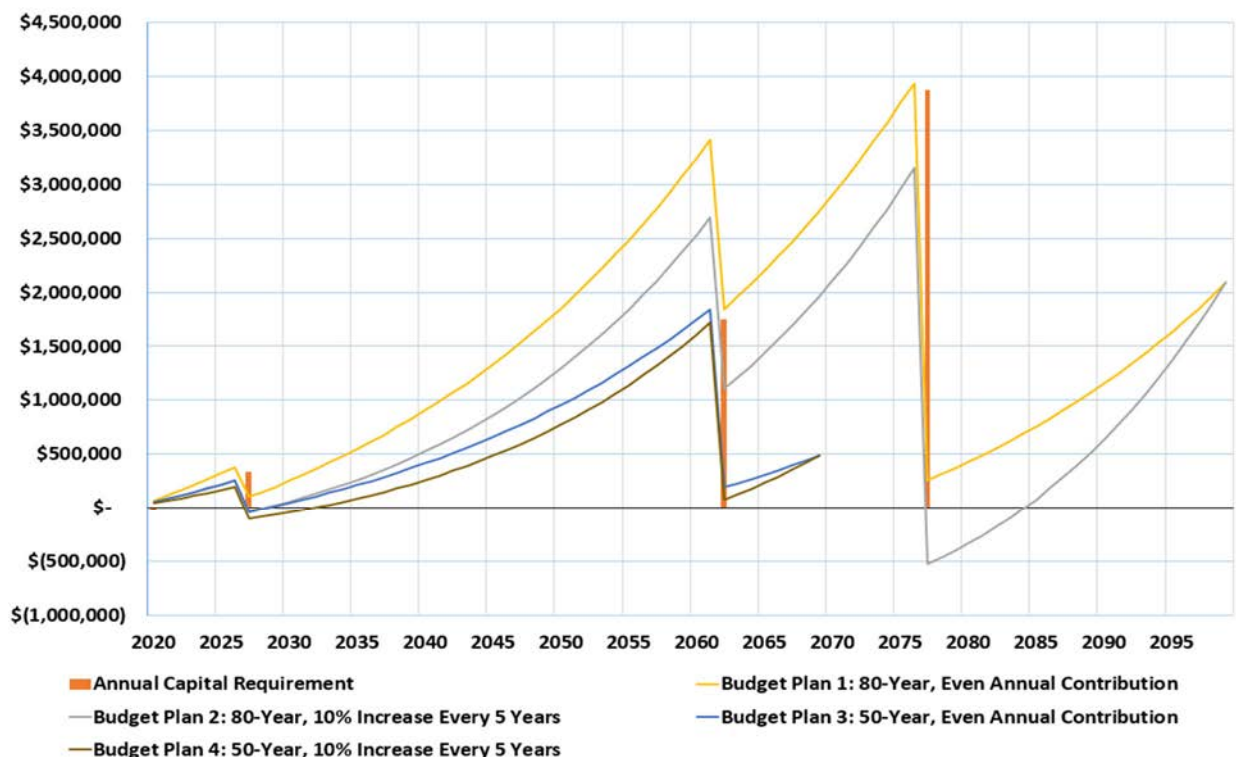
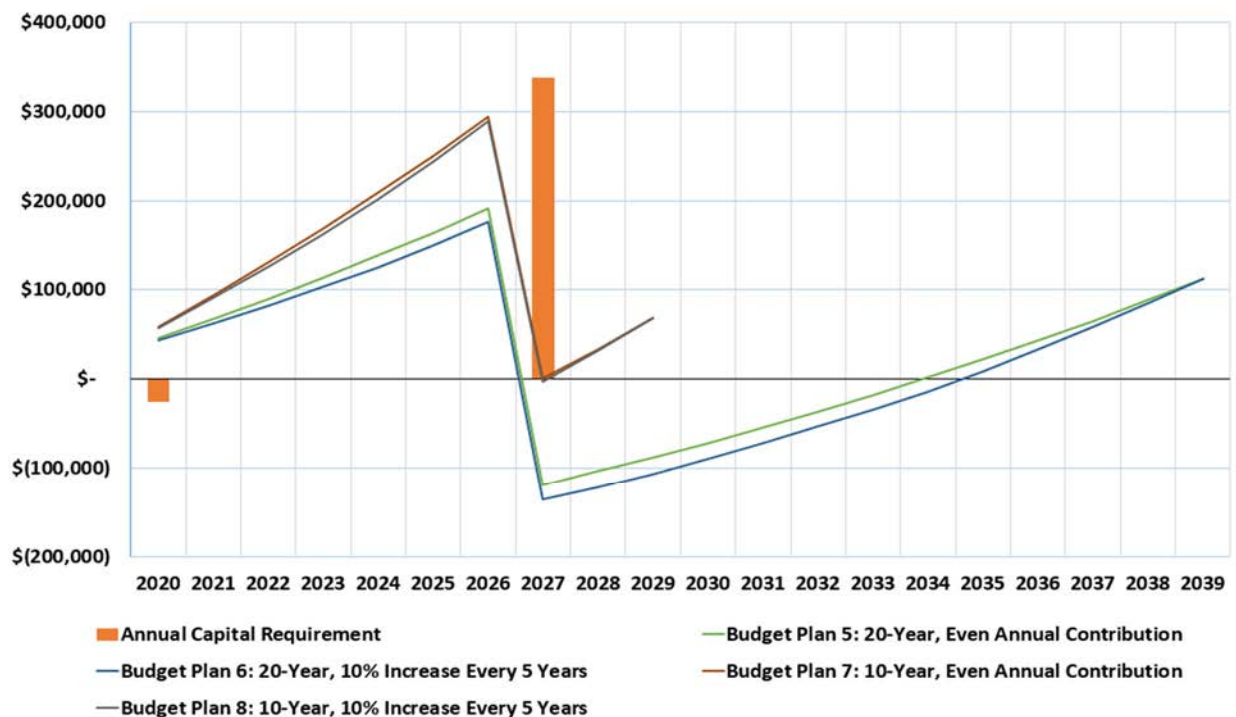


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

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5. Additional Local Service Improvement Actions

Additional operational work is required in the Sunnyside wastewater local service area that falls outside of the typical operational and maintenance plan. These items have been listed due to the potential financial impact that they may have on the users and fronting properties of the local service.

Table 5 – Local Service Improvement Actions

Action Item	Target Year	Cost Estimate	Result
Engage consulting services to complete a feasibility study on potential options for treatment system replacement.	2020	\$ 7,500	To be determined.
Review Bylaw No. 1026 to ensure fronting properties in the local service area have been correctly identified.	2020	Staff time to review.	To be determined.

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Action Item	Target Year	Cost Estimate	Result
Investigate potential for a transfer of title on 1101 Sunnyside Road prior to the treatment and disposal systems requisite replacement. If transfer of title cannot be obtain, secure a Statutory Right of Way for legal access onto the property in conjunction with a restrictive covenant that would limit the use of the property to a community wastewater treatment and disposal site.	2021	Dialogue with property owner required prior to cost estimate.	To be determined.
Repair the moderate rated defects in the collection system noted in the CCTV inspection.	2021-2023	\$ 4,100	To be determined.

November 2019

Woodcreek Park Wastewater Local Service Asset Management Plan



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Version Log

This document was carefully prepared so that it can be maintained as a living document; a document that is continually edited and updated. Through the various edits and updates, this document may evolve and be expanded as needed. This may be as a result of infrastructure replacement or could be due to changes in regulatory requirements, technology, staffing, or environmental conditions. Regardless of the reason, updates to this asset management plan will be key to the ongoing operation of the Woodcreek Park wastewater local service.

Version	Revised By	Date	Description
1	D. Joseph	November 28, 2019	Final report for Board of Directors approval

Acknowledgements

Completion of this Asset Management Plan would not have been possible without contributions and support from the following staff:

Darren Joseph	Asset Management Coordinator	Corporate Services
Brad Wing	Financial Analyst	Corporate Services
Tina Perreault	General Manager, Corporate Services	Corporate Services
Cheryl Trent	GIS Administrator	Corporate Services
Emilia Walton	GIS Technician	Corporate Services
Shane Walkey	Manager, Utility Services	Infrastructure Services
Bobby Rebner	Operations Support Technician	Infrastructure Services
Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

WOODCREEK PARK WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1. Local Service Information

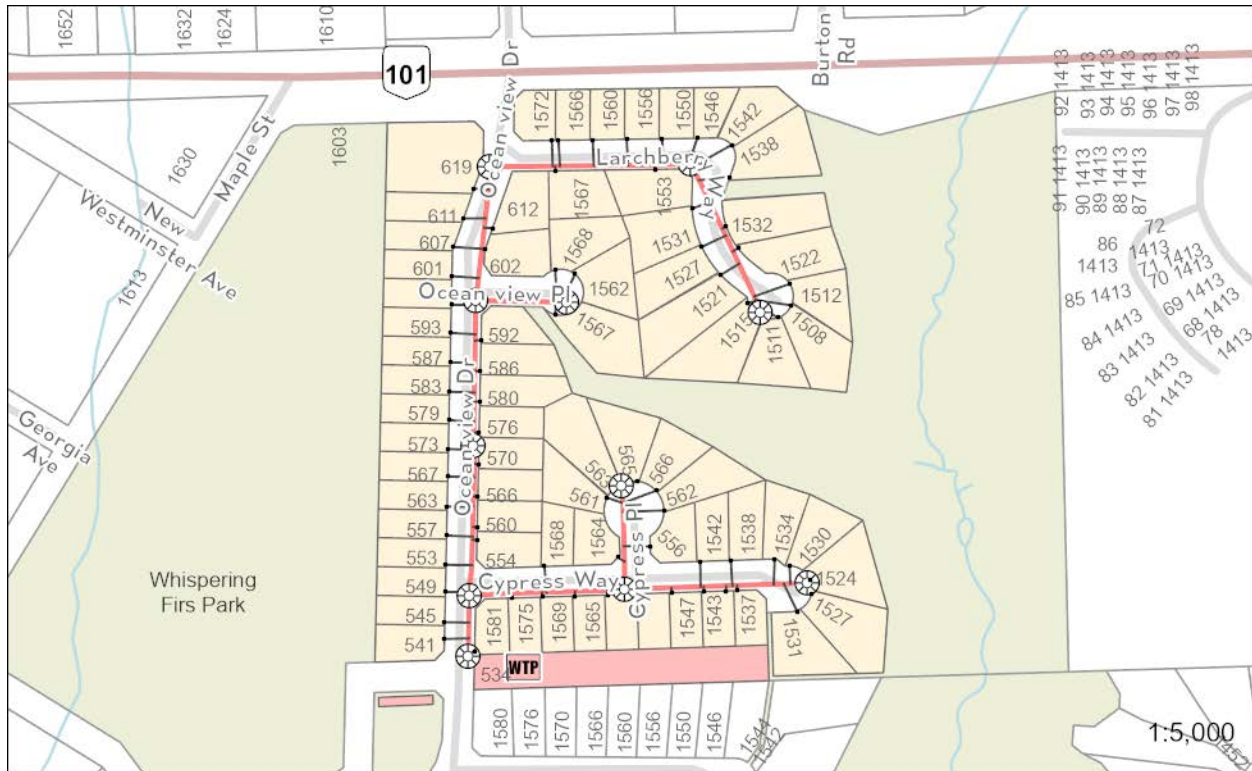


Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 534 Oceanview Drive
- Original Construction: 1980
- Major Upgrades: 1999 (Replacement of treatment and disposal systems)
- Taken over by Sunshine Coast Regional District (SCRD): 1992
- Establishment of Local Service: 1996
- Treatment System Owner: SCRD
- Number of Fronting Parcels: 73 Residential
- Number of Users: 73
- Treatment Process: Recirculating gravel filter
- Treatment Permit #: PE-4183
- Permitted Discharge Amount: 75 m³/day
- Regulatory Authority: Ministry of Environment Permit
- Effluent Receiving: Ground
- EOCP Classification: SWWS-M (Small Wastewater Systems – Mechanical)
- Statutory Right of Ways: None required

WOODCREEK PARK WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

1.1. Development Details

The Woodcreek Park wastewater local service area is located in the Elphinstone Electoral Area (Area E) of the SCRD. The treatment and disposal systems are located in a vacant parcel of land used exclusively for the processing of wastewater, and is located to the south of the houses within the service area.

The community wastewater systems were constructed in 1980 to assist with the development of new single-family dwellings in the neighbourhood. Many of the parcels in this service area were identified as being not large enough for constructing an onsite drainfield. The systems were managed by the developer until 1992 when the SCRD began overseeing the service. The original treatment plant failed in 1991 and a pollution abatement order was issued in October 1992.

1.2. Established Bylaws

There have been various bylaws adopted by the SCRD Board of Directors that are relevant to the Woodcreek Park wastewater local service, as listed in Table 1.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
416	Woodcreek Park Sewer Loan Authorization (1995)	Authorizes the borrowing of funds for the construction of the replacement sewage treatment plant and drainfield.
1022	Woodcreek Park Sewer Local Service (1995)	Established a local service for the purpose of providing sewer service.
430.10	Woodcreek Park Sewer User Rates (2019)	Establishment of, and subsequent updates thereto, sewage treatment frontage and user charges.
665	Woodcreek Park Waste Water Plant Capital Reserve Fund (2012)	Established a capital reserve fund.
666	Woodcreek Park Waste Water Plant Operating Reserve Fund (2012)	Established an operating reserve fund.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

Treatment of the influent takes place in an underground cast-in-place concrete tank with a series of divider walls forming individual treatment sections within. The top of the tank is concrete with built-in ground level access lids. Adjacent to the tank is a site building that houses the electrical and mechanical equipment.

Wastewater enters the septic tanks, flows through inline filters to a recirculation tank which doses the sand filter. From the sand filter the effluent enters the discharge chamber and is pumped to the drainfield. Currently the sand filter has not been functioning and is bypassed in the treatment process.

Once the effluent has been pumped from the discharge chamber, it passes through the flow meter and sampling manhole where it can be diverted to three separate drainfields. Two of the drainfields are located in the same parcel as the treatment plant and the other is located on the west side of Oceanview Drive, south of McIntyre Road. The fields provide effluent disposal through a combined 850 m of perforated drainage pipe.

2.2. Collection System

The collection system has approximately 940 m of 150 mm diameter, asbestos cement (AC) gravity mains, and eleven manholes. The infrastructure depth varies between 1.72 m and 4.70 m below grade.

2.3. Asset Accessibility

While there are no surface related accessibility issues with the infrastructure at Woodcreek Park, the infrastructure will be challenging to access in certain locations due to its depth below grade.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

Treatment of the wastewater has been significantly affected by infiltration in the collection system and the nonfunctioning sand filter. In 2018, the treatment plant had numerous instances of being in non-compliance with the water quality requirements for effluent water. The treatment system is in poor condition.

A percolation test on the drainfield was conducted in 2019 to assess the condition of the perforated pipe (the test determines the water absorption rate at an exposed section of the pipe). While there has been no surface issues noted with the drainfield, and the drainfield is well within its Estimated Useful Life (EUL), years of effluent distribution after bypassing the nonfunctioning sand filter raised concern for potential failure in the near future. The results of the percolation test revealed no issues with percolation on all four of the runs tested. The disposal system is in good condition.

The condition of the collection system was assessed in 2018 through CCTV inspections. During the inspection one pipe segment and one manhole were observed to have moderate defects and seven segments having minor defects (only two segments were observed to have no defects). In addition, there is an infiltration problem with the service connection inspection chambers along Cypress Way as a result of being damaged by a third-party. The overall condition of the collection system is fair and can be upgraded upon completion of the necessary repairs.

2.5. Asset Replacement Value

It is expected that the treatment process and drainfield configuration that were installed 20 years ago would still meet regulatory requirements once they are due

WOODCREEK PARK WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

for replacement. The imminent replacement of the inoperable sand filter is necessary to bring the treatment plant back in to regulatory compliance and has been valued separately from the rest of the treatment system.

Replacement value for the collection system was estimated based on individual component replacement values. The depth of some of the infrastructure contributed to higher than average replacement costs.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 1,236,338	1999	50	30
Sand Filter	\$ 254,258 ¹	1999	40	Nonfunctioning ²
Drainfield (Primary)	\$ 424,987	1999	40	20
Drainfield (Auxiliary)	\$ 35,022	1999	40	20
Collection System	\$ 1,254,165	1980	85	46

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

¹ A 2019 budget proposal was approved for an engineering review and detailed design for a remediation solution for the sand filter. This project will provide the SCRD with a better understanding of the cost to replace the sand filter, however the work had not been completed prior to the preparation of this plan. The 2018 Replacement Cost was determined by using an estimate from 2014.

² This asset was installed at the same time as the treatment plant but has failed and is currently out of commission.

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3.1. Current O&M Fees

The users of the Woodcreek Park wastewater local service are charged user fees of \$500.00 per year (including a 25% increase in user fees in 2019) and those properties within the service area boundary as outlined in Bylaw No. 1022 are charged \$102.00 in parcel tax per year (including a 2% parcel tax increase in 2019).

3.2. Current O&M Budget

The budgeted and actual expenditures of the Woodcreek Park wastewater local service from 2015 to 2018 are shown in Table 3. The breakdown between expenditure related to the collection system and the treatment and disposal systems has not been recorded. As there have been no recent issues identified with the collection system, all expenditure is assumed to be for the treatment and disposal systems.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 32,252.00	\$ 31,066.00	\$ 29,791.00	\$ 30,411.00	\$ 30,880.00
Actual	\$ 19,667.00	\$ 14,672.00	\$ 25,577.52	\$ 32,679.04	\$ 23,148.89
Variance	\$ 12,585.00	\$ 16,394.00	\$ 4,213.48	\$ (2,268.04)	\$ 7,731.11

Overall, the operations budget decreased by 6% between 2015 and 2018, while the actual expenditure increased by 66% during the same period of time. The majority of the actual expenditure (53%) was to pay for staffing expenses of operational and administrative staff, while other significant expenditures include contracted services (24%) and equipment repairs and maintenance (14%).

The irregularity noted in this budget review, 2018, incurred costs in excess of the budgeted amount due to regular work on the recirculating sand filter, attempting to make it function once again.

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Woodcreek Park local service area. Similar to the existing O&M budget, staff wages account for the majority of the potential annual O&M budget for Woodcreek Park. The required semi-weekly, monthly, quarterly, semi-annual, and annual tasks are primarily completed by a Utility Technician.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Proportioned charges for non-annual materials replacement;
- Proportioned charges for non-annual contracted services;
- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

With the inclusion of all ancillary charges, the potential operating budget for Woodcreek Park wastewater local service is \$48,983.00. The potential user fee for the 73 users in this local service area is \$671, a 34% increase from 2019 rates. This increase is primarily attributed to the separation of property tax revenue from the operating budget and improving the level of service delivered to this local service area.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Woodcreek Park.

4.1. Reserve Balances

As of the end of 2018, there was \$24,947.10 in capital reserves and \$158,382.20 contributed to operating reserves. Under the existing method of revenue collection and use, these reserves could be combined to invest in capital renewal or replacement projects if required.

WOODCREEK PARK WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

There is currently no requirement for Woodcreek Park to have a set level, by either denomination or percentage, of reserves in place. Based on the current reserve balance and 2019 budget transfers, Woodcreek Park's reserves are 5% of the estimated replacement value of the infrastructure.

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the shortest term in which all infrastructure (i.e. the treatment, disposal, and collection systems) will need to be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (2) Drainfield (2) Collection System (1)	Even Annual Contribution	\$ 33,382,400	\$ 5,716
Plan 2	80-Year	Treatment System (2) Drainfield (2) Collection System (1)	10% Increase Every Five Years	\$ 47,780,786	\$ 3,641
Plan 3	50-Year	Treatment System (1) Drainfield (1) Collection System (1)	Even Annual Contribution	\$ 12,154,000	\$ 3,330
Plan 4	50-Year	Treatment System (1) Drainfield (1) Collection System (1)	10% Increase Every Five Years	\$ 14,050,434	\$ 2,415

**WOODCREEK PARK WASTEWATER LOCAL SERVICE
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Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 5	20-Year	Treatment System (0) Drainfield (1) Collection System (0)	Even Annual Contribution	\$ 1,757,800	\$ 1,204
Plan 6	20-Year	Treatment System (0) Drainfield (1) Collection System (0)	10% Increase Every Five Years	\$ 1,797,923	\$ 1,061
Plan 7	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	Even Annual Contribution	\$ 598,900	\$ 820
Plan 8	10-Year	Treatment System (0) Drainfield (0) Collection System (0)	10% Increase Every Five Years	\$ 601,650	\$ 785

In addition to the replacement of the wastewater systems, other items that appear in the capital budget include:

- Replacement of the recirculating sand filter;
- Replacement of the privacy fence between the residential properties and the drainfield; and
- Proportioned short-term debt payments for the purchase and replacement of two service vehicles.

WOODCREEK PARK WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

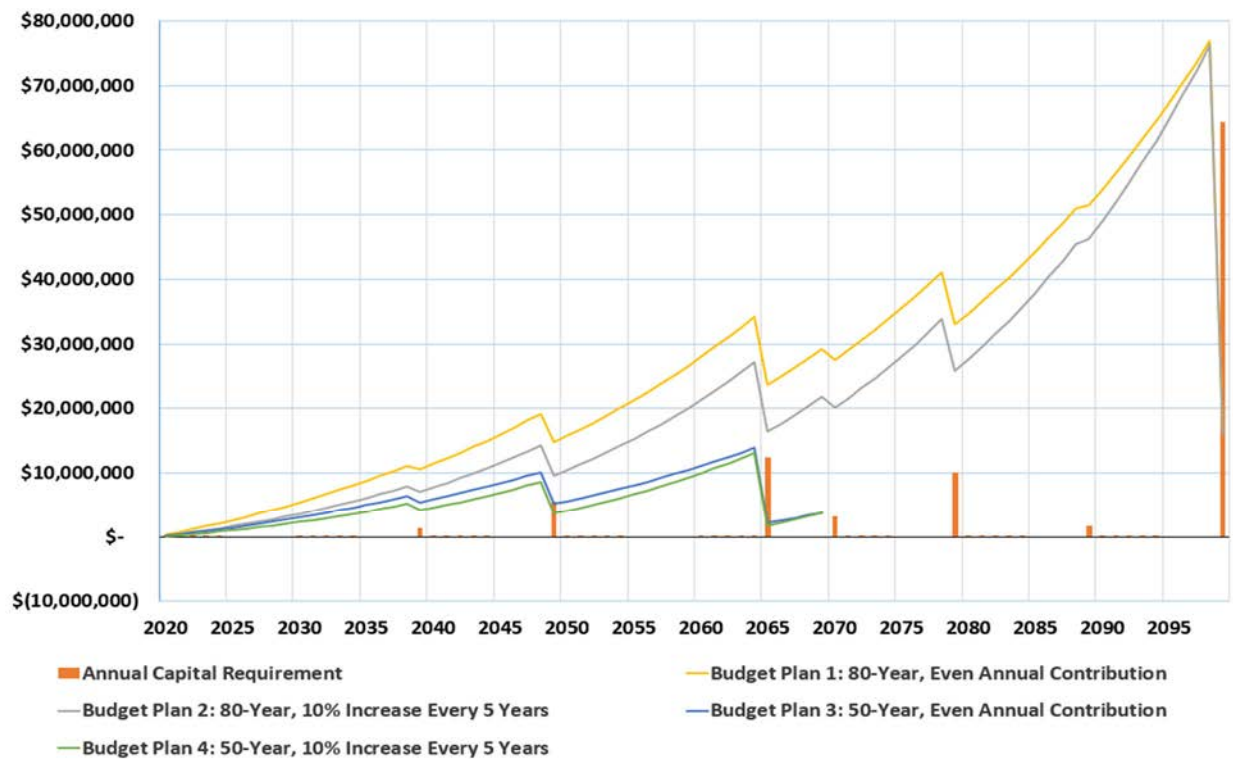


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

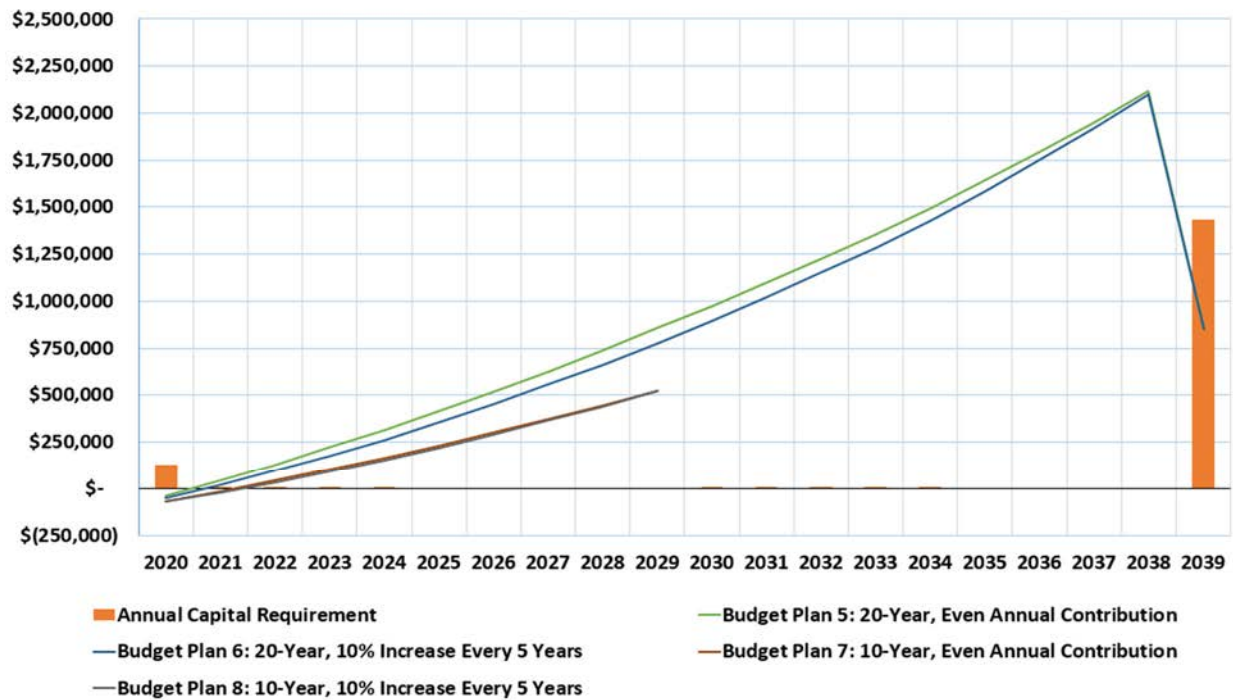


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

Additional operational work is required in the Woodcreek Park wastewater local service area that falls outside of the typical operational and maintenance plan. These items have been listed due to the potential financial impact that they may have on the users and fronting properties of the local service.

Table 5 – Local Service Improvement Actions

Action Item	Target Year	Cost Estimate	Result
Repair the service connection inspection chambers that were damaged by a third-party to rectify the infiltration issues affecting the plant performance.	2020	\$ 6,000	To be determined.
Repair the moderate rated defects in the collection system noted in the CCTV inspection.	2021-2023	\$ 4,000	To be determined.

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Langdale Wastewater Local Service Asset Management Plan



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1. Local Service Information

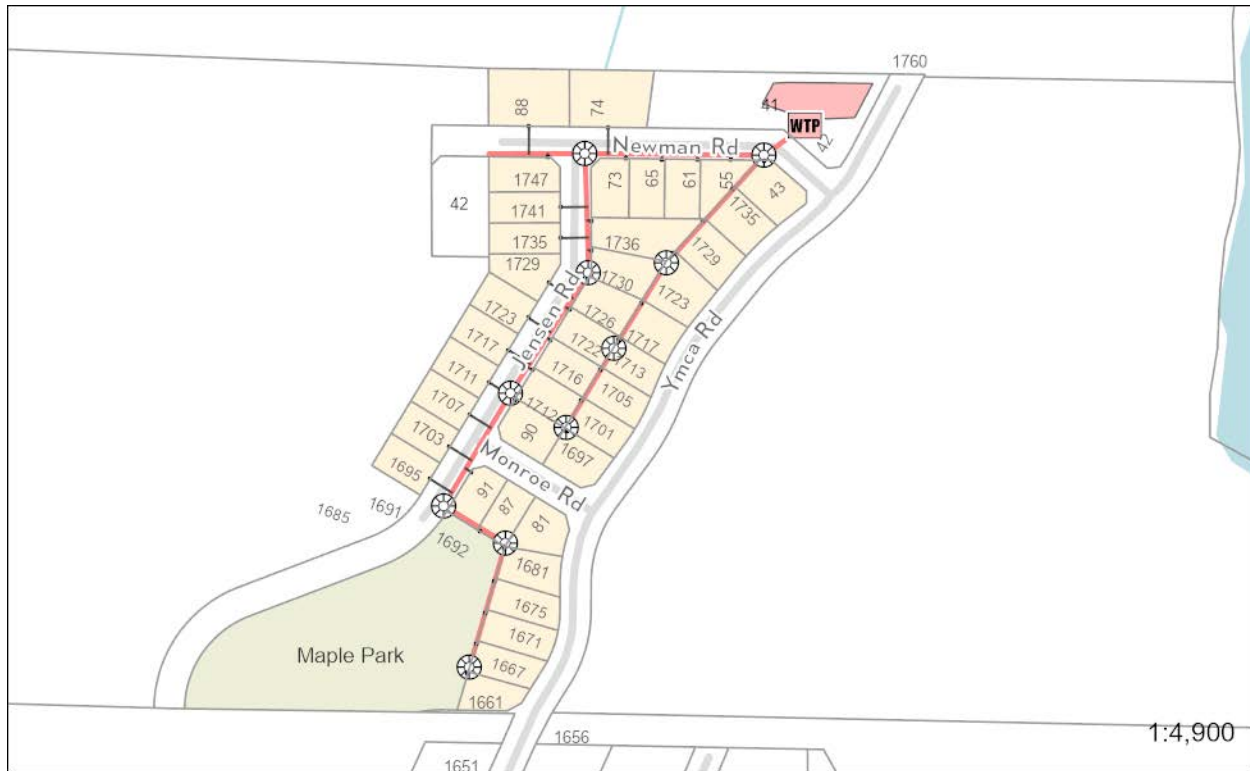


Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 42 Newman Road
- Original Construction: 1981
- Taken over by Sunshine Coast Regional District (SCRD): 1989
- Establishment of Local Service: 1996
- Major Upgrades: None to date
- Treatment System Owner: SCRD
- Number of Fronting Parcels: 40 Residential
- Number of Users: 40
- Treatment Process: Rotating biological contactor (RBC) (nonfunctioning)
- Treatment Permit #: PE-6209
- Permitted Discharge Amount: 54.6 m³/day
- Regulatory Authority: Ministry of Environment Permit
- Effluent Receiving: Ground
- EOCP Classification: SWWS-M (Small Wastewater Systems – Mechanical)
- Statutory Right of Ways: BL269689 (registered August 1, 1997, for rear yard access to the collection system)

1.1. Development Details

The Langdale wastewater local service area is located in the West Howe Sound Electoral Area (Area F) of the SCRD. The treatment and disposal systems are located in a vacant parcel of land used exclusively for the processing of wastewater.

The community wastewater systems were constructed in 1981 to assist with the development of new single-family dwellings in the strata development. The parcels in this service area were identified as having insufficient land for constructing an onsite drainfield. The system was managed by the developer until 1989 when the SCRD began overseeing the service.

1.2. Established Bylaws

There have been various bylaws adopted by the SCRD Board of Directors that are relevant to the Langdale wastewater local service, as listed in Table 1.

Table 1 – Established Bylaws Pertaining to the Wastewater Local Service

Bylaw No.	Bylaw Name	Purpose
232A.4	Package Plants Service Unit (1994)	Established a designated area for the purpose of providing sewage collection, treatment and disposal within Areas A, B and E.
1026	Sewage Treatment Facilities Local Service (1996)	Converted the Package Plants Service Unit to a local service.
428.19	Sewage Treatment Facilities Service Unit (2019)	Establishment of, and subsequent updates thereto, sewage treatment facilities frontage and user charges.
512	Sewage Treatment Facilities Reserve Fund (2001)	Established a capital reserve fund for sewage treatment facilities.
608	Sewage Treatment Facilities Service Operating Reserve Fund (2007)	Established an operating reserve fund for sewage treatment facilities.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

The existing treatment and disposal systems have been decommissioned at the Langdale wastewater local service area. Currently the wastewater is being diverted to the treatment and disposal systems on the YMCA Camp Elphinstone property.

To date, there is no agreement in place between the SCRD and the YMCA for long-term shared use of the YMCA treatment plant. If an agreement cannot be reached between the two parties, a decision will need to be made whether the old treatment and disposal systems can be recommissioned or will need to be replaced.

2.2. Collection System

The collection system has approximately 815 m of 150 mm diameter, polyvinyl chloride (PVC) gravity mains, and ten manholes. The infrastructure depth varies between 0.60 m and 1.95 m below grade.

Approximately 350 m of the mains and five manholes are accessed through two Statutory Right of Ways. The first section extends from Newman Road through the rear yards of eight of the homes that front on YMCA Road (between Newman Road and Monroe Road). The second section extends from the south end of Jensen Road through the rear yards of seven homes that front Monroe Road and Jensen Road. All of those properties, and one additional neighbouring property, connect to the system through the rear right of ways.

2.3. Asset Accessibility

There are a couple of accessibility concerns regarding infrastructure maintenance and replacement.

- Entries to repair or service equipment in the old treatment plant are difficult due to buildup of gases. The structure should be demolished and hatches installed to improve pump accessibility.

- Access to the wastewater collection system in the Statutory Right of Way will require removal of the existing vegetation, including various bushes and trees. Cedar fences, and fence posts, will also need to be removed. From the 2018 aerial photograph, there may also be a conflict with the placement of sheds near the right of way.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

The treatment plant is has failed and staff are exploring options for long-term wastewater treatment for the Langdale local service area. The treatment system is in poor condition.

Initially the wastewater from Langdale was diverted to YMCA Camp Elphinstone due to a failure of the drainfield. There was an effluent breakout (effluent rising to the surface due to an inability to drain through the perforated pipe) in the northwestern corner of the drainfield. A percolation test on other locations of the drainfield was conducted in 2019 to assess the condition of the rest of the perforated pipe (the test determines the water absorption rate at an exposed section of the pipe). While the drainfield it is now nearing its EUL and poses a concern for additional failure in the near future, the results of the percolation test revealed no issues with percolation on all four of the runs tested. The disposal system is in fair condition.

The condition of the collection system was assessed in 2018 through CCTV inspections. During the inspection two pipe segments were observed to have minor defects and three manholes observed to have moderate defects. The collection system is in good condition.

2.5. Asset Replacement Value

It is expected that, barring an agreement to have the wastewater permanently diverted to YMCA, the treatment system at Langdale will need to be replaced with a new process while the drainfield could be replaced with a field similar to the existing one. A replacement value was estimated based on the treatment and disposal systems at Roberts Creek Co-Housing wastewater local service area.

At Roberts Creek Co-Housing, wastewater enters the septic tanks where primary solids settle. Aeration occurs as aerated water is cascaded over honeycomb media. Effluent from the trickle filter is pumped through sand filters into the final clarifier before discharge to the drainfield.

The treatment process from Roberts Creek Co-Housing was chosen for determining a replacement cost for Langdale based on a similar number of users and it is a process that is commonly used in new development. A feasibility study should be completed by a professional engineer to determine the treatment and disposal process best suited for the conditions at Langdale wastewater local service.

Replacement value for the collection system was estimated based on individual component replacement values. Additional costs for the removal and replacement of bushes, trees, and the cedar fence that extends the length of the statutory right of way were factored into the replacement cost.

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 715,830	1981	50	12
Drainfield	\$ 267,353	1981	40	2
Collection System	\$ 493,460	1981	85	48

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL.

These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments. User fees and parcel taxes are collected annually to fund these activities.

LANGDALE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

As discussed in the Wastewater Service Review, the current fees and taxes are combined and can be used to fund the operational expenditures for the year. The recommendation in the Wastewater Service Review is for user fees to provide sufficient revenue for operational expenditures and for parcel taxes to be invested in capital renewal and replacement.

3.1. Current O&M Fees

The users of the Langdale wastewater local service are charged user fees of \$562.50 per year (including a 25% increase in user fees in 2019) and those properties within the service area boundary as outlined in Bylaw No. 1026 are charged \$102.00 in parcel tax per year (including a 2% parcel tax increase in 2019).

3.2. Current O&M Budget

The budgeted and actual expenditures of the Langdale wastewater local service from 2015 to 2018 are shown in Table 3. The breakdown between expenditure related to the collection system and the treatment and disposal systems has not been recorded. As there have been no recent issues identified with the collection system, all expenditures are assumed to have been allocated to the treatment and disposal systems.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	\$ 23,814.00	\$ 22,973.00	\$ 21,561.00	\$ 22,172.00	\$ 22,630.00
Actual	\$ 14,587.00	\$ 13,921.00	\$ 40,025.00	\$ 21,159.98	\$ 22,423.25
Variance	\$ 9,227.00	\$ 9,052.00	\$(18,464.00)	\$ 1,012.02	\$ 206.75

Overall, the operations budget decreased by 7% between 2015 and 2018. The actual expenditure increased by 45% during the same period of time. The majority of the actual expenditure (57%) was to pay for staffing expenses of operational and administrative staff, while other significant expenditures include contracted services (30%) and equipment repairs and maintenance (10%).

The irregularity noted in this budget review, 2017, incurred costs in excess of the budgeted amount due to the cost of establishing an infrastructure connection between Langdale and YMCA Camp Elphinstone.

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at Langdale local service area. Similar to the existing O&M budget, staff wages account for the majority of the potential annual O&M budget for Langdale. The required weekly, monthly, and annual tasks are primarily completed by a Utility Technician.

Significant expenses in the budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Annual and proportioned non-annual contracted services; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

With the inclusion of all ancillary charges, the potential operating budget for Langdale wastewater local service is \$40,080.00. The potential user fee for the 40 users in this local service area is \$1,002.00, a 78% increase from 2019 rates. This increase is primarily attributed to the separation of property tax revenue from the operating budget and improving the level of service delivered to this local service area.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

The SCRD does not have a long-term capital funding plan in place for the wastewater infrastructure at Langdale.

4.1. Reserve Balances

As of the end of 2018, there was no investments in capital reserves and \$33,786.27 contributed to operating reserves. Under the existing method of revenue collection and use, these reserves could be combined to invest in capital renewal or replacement projects if required.

There is currently no requirement for Langdale to have a set level, by either denomination or percentage, of reserves in place. Based on the current reserve balance and 2019 budget transfers, Langdale's reserves are 2% of the estimated replacement value of the infrastructure.

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the value of the infrastructure in the last year of the model.

The highlighted budget plans represent the model in which all infrastructure (i.e. the treatment, disposal, and collection systems) will all be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (2) Drainfield (2) Collection System (1)	Even Annual Contribution	\$ 13,458,800	\$ 4,206
Plan 2	80-Year	Treatment System (2) Drainfield (2) Collection System (1)	10% Increase Every Five Years	\$ 19,347,246	\$ 2,691

**LANGDALE WASTEWATER LOCAL SERVICE
ASSET MANAGEMENT PLAN**

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 3	50-Year	Treatment System (1) Drainfield (2) Collection System (1)	Even Annual Contribution	\$ 6,002,000	\$ 3,001
Plan 4	50-Year	Treatment System (1) Drainfield (2) Collection System (1)	10% Increase Every Five Years	\$ 6,958,280	\$ 2,183
Plan 5	20-Year	Treatment System (1) Drainfield (1) Collection System (0)	Even Annual Contribution	\$ 1,823,900	\$ 2,280
Plan 6	20-Year	Treatment System (1) Drainfield (1) Collection System (0)	10% Increase Every Five Years	\$ 1,869,163	\$ 2,014
Plan 7	10-Year	Treatment System (1) Drainfield (1) Collection System (0)	Even Annual Contribution	\$ 1,492,050	\$ 3,730
Plan 8	10-Year	Treatment System (1) Drainfield (1) Collection System (0)	10% Increase Every Five Years	\$ 1,499,348	\$ 3,570

In addition to the replacement of the wastewater systems, other items that appear in the capital budget include proportioned short-term debt payments for the replacement of two service vehicles.

LANGDALE WASTEWATER LOCAL SERVICE ASSET MANAGEMENT PLAN

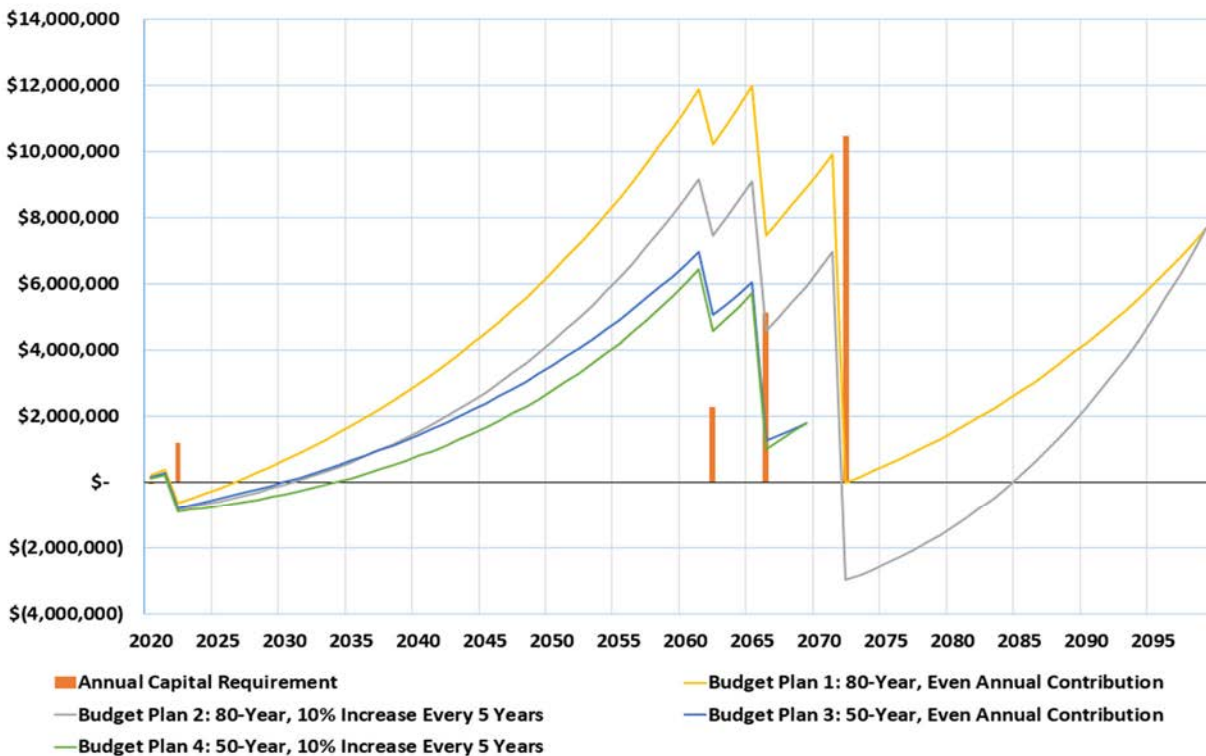


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

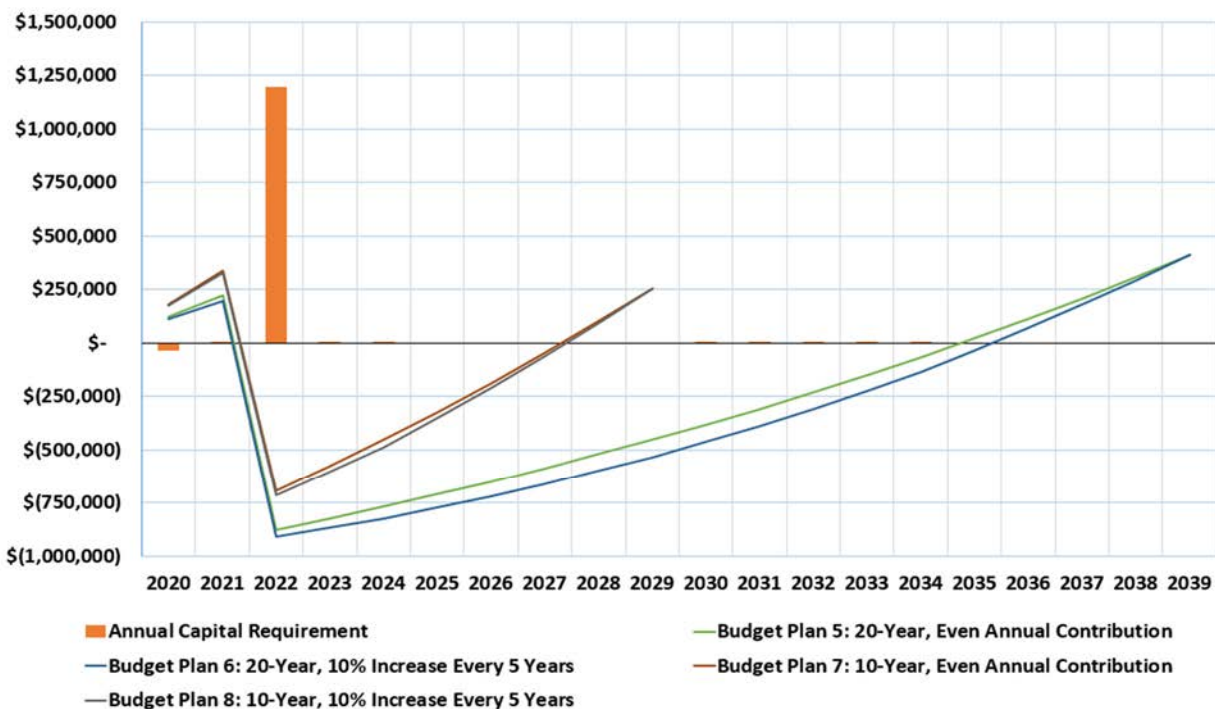


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

Additional operational work is required in the Langdale wastewater local service area that falls outside of the typical operational and maintenance plan. These items have been listed due to the potential impact that they may have on the users and fronting properties of the local service.

Table 5 – Local Service Improvement Actions

Action Item	Target Year	Cost Estimate	Result
Investigate potential for an agreement with YMCA Camp Elphinstone regarding shared use of the treatment system and ocean outfall.	2019-2020	Dialogue with property owner required prior to cost estimate.	To be determined.
Secure a Statutory Right of Way for legal access onto YMCA Camp Elphinstone property.	2020	\$ 1,300	To be determined.
Pending the outcome from dialogue with YMCA Camp Elphinstone, engage consulting services to complete a feasibility study on potential options for treatment system replacement.	2020	\$ 10,000	To be determined.
Repair the moderate rated defects in the collection system noted in the CCTV inspection.	2021-2023	\$ 6,000	To be determined.

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November 2019

YMCA Camp Elphinstone Wastewater Service Asset Management Plan

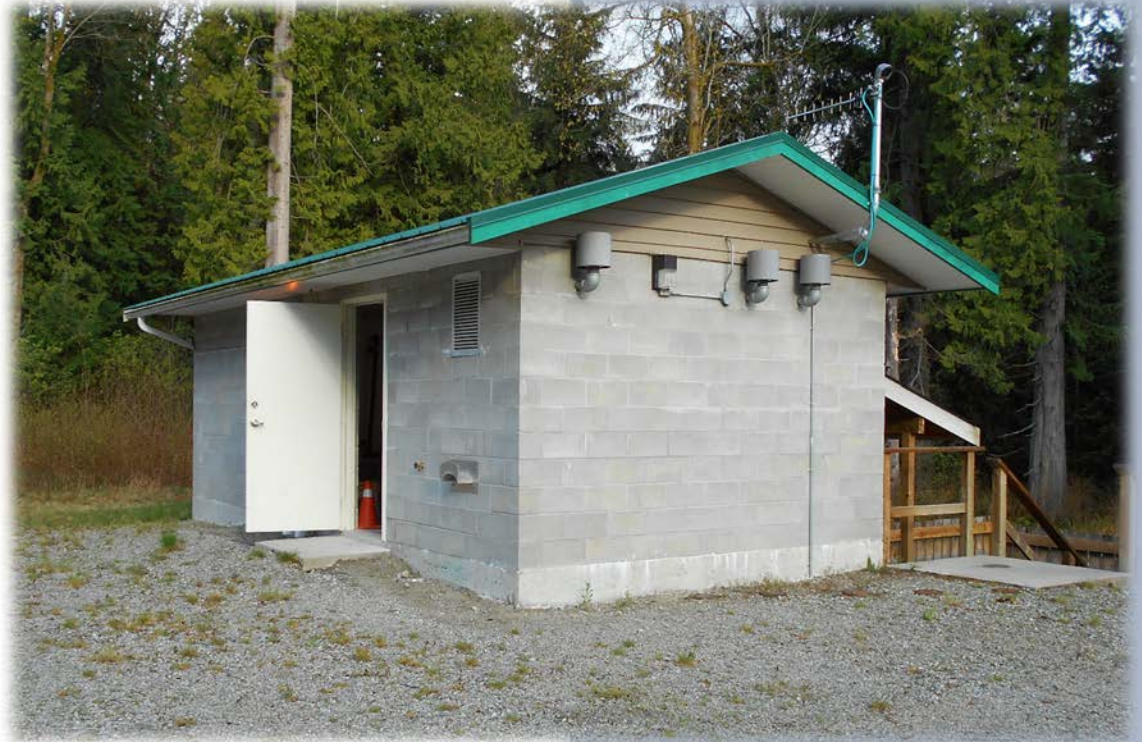


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YMCA CAMP ELPHINSTONE WASTEWATER SERVICE ASSET MANAGEMENT PLAN

Version Log

This document was carefully prepared so that it can be maintained as a living document; a document that is continually edited and updated. Through the various edits and updates, this document may evolve and be expanded as needed. This may be as a result of infrastructure replacement or could be due to changes in regulatory requirements, technology, staffing, or environmental conditions. Regardless of the reason, updates to this asset management plan will be key to the ongoing operation of the YMCA Camp Elphinstone wastewater local service.

Version	Revised By	Date	Description
1	D. Joseph	November 28, 2019	Final report for Board of Directors approval

Acknowledgements

Completion of this Asset Management Plan would not have been possible without contributions and support from the following staff:

Darren Joseph	Asset Management Coordinator	Corporate Services
Brad Wing	Financial Analyst	Corporate Services
Tina Perreault	General Manager, Corporate Services	Corporate Services
Cheryl Trent	GIS Administrator	Corporate Services
Emilia Walton	GIS Technician	Corporate Services
Shane Walkey	Manager, Utility Services	Infrastructure Services
Bobby Rebner	Operations Support Technician	Infrastructure Services
Codi Abbott	Utility Operations Superintendent	Infrastructure Services
Ashley Gray	Utility Technician	Infrastructure Services

1. Service Information

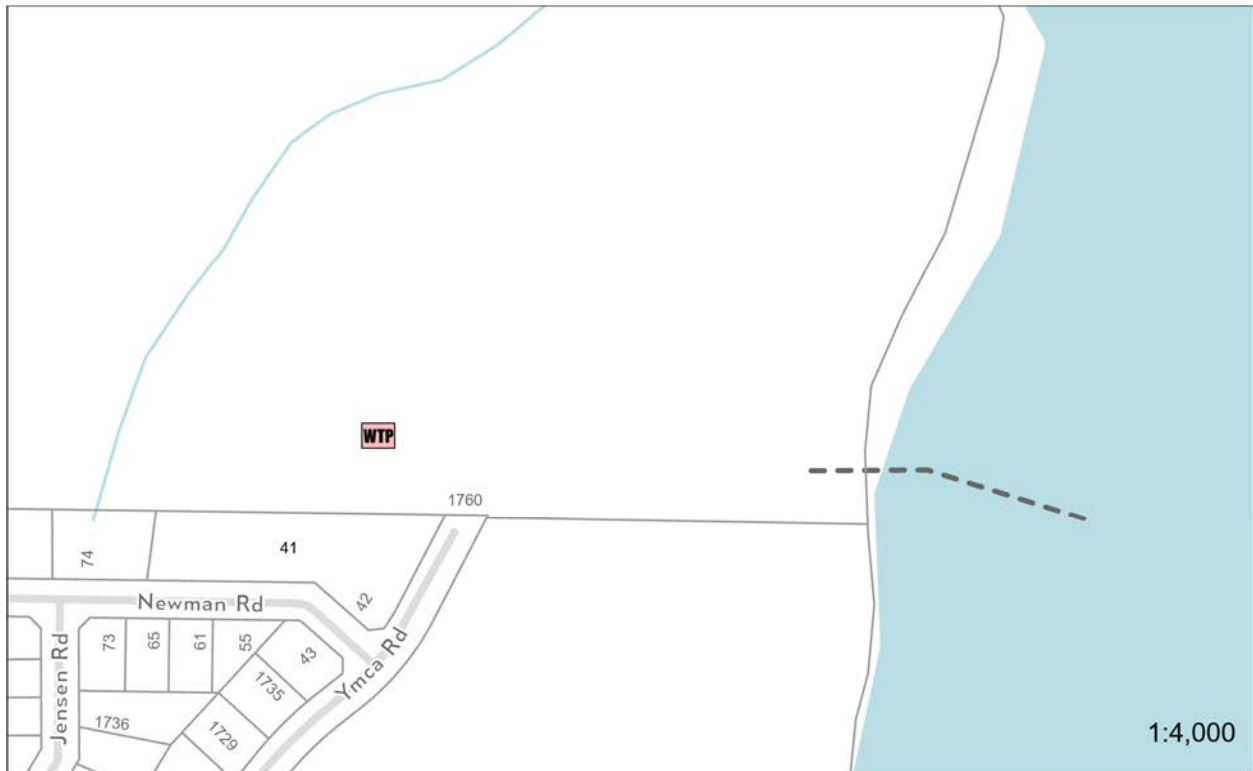


Figure 1 – Map of Wastewater Local Service Area and Infrastructure

- Address: 1760 YMCA Road
- Original Construction: Unknown
- Major Upgrades: 2010 (Drainfield to ocean outfall) and 2014 (treatment plant)
- Taken over by Sunshine Coast Regional District (SCRD): 2014 (through an agreement to maintain the treatment and disposal systems)
- Establishment of Local Service: Not to date
- Treatment System Owner: Private
- Number of Fronting Parcels: 1 Private Camp
- Number of Users: 1 Private Camp
- Treatment Process: BioMicrobics FAST® 9.0 (3) plants
- Treatment Permit #: RE-100023
- Permitted Discharge Amount: 300 m³/day
- Regulatory Authority: Municipal Wastewater Regulation (MWR)
- Effluent Receiving: Ocean
- EOCP Classification: SWWS-M (Small Wastewater Systems – Mechanical)
- Statutory Right of Ways: Required (Once local service is established)

1.1. Development Details

The YMCA Camp Elphinstone wastewater service area is located in the West Howe Sound Electoral Area (Area F) of the SCRD. The treatment system is located on the camp property, near the entrance to the property.

The community wastewater systems were constructed in approximately 1987 to support camp operations. The SCRD currently maintains the treatment system and ocean outfall for the camp.

1.2. Established Bylaws

A local service has not been created for YMCA Camp Elphinstone and therefore there are no relevant bylaws.

2. Description of Assets

The following sections outline the current state of the wastewater systems by providing answers to the following questions:

- What do we own?
- Where is it?
- What is its condition?
- What is its useful life?
- What is its value?

2.1. Treatment and Disposal Systems

Treatment of the influent takes place in an underground cast-in-place concrete tank with a series of divider walls forming individual treatment sections within. The top of the tank is a concrete with built-in ground level access lids. Adjacent to the tank is a site building that houses the electrical and mechanical equipment.

Wastewater enters the septic tanks where primary solids settle. Aeration occurs as aerated water is cascaded over honeycomb media. Effluent from the trickle filter is pumped through sand filters into the final clarifier before discharge to the drainfield before it discharges to the ocean.

The effluent disposes through a 150 mm diameter, high density polyethylene (HDPE) outfall pipe approximately 155 m offshore at a depth of 30 m in the open ocean.

2.2. Collection System

The SCRD is not responsible for the collection system infrastructure at the YMCA Camp Elphinstone wastewater service area.

2.3. Asset Accessibility

There are no accessibility concerns regarding the assets at YMCA Camp Elphinstone.

2.4. Asset Condition

Wastewater treatment system condition was determined by staff based on several factors.

- Previous or immanent failure of the system;
- Frequency of system repairs;
- Age of system; and
- Ability to regularly meet effluent quality regulations.

Based on these factors each system in the local service area was assigned a condition rating from excellent to poor. An excellent condition is assigned to systems in near new condition, good to systems with few minor defects, fair to systems with moderate defects or signs of aging, and poor to systems that cannot currently function as designed, or will soon cease functioning without repair, due to flow volumes, defects, or aging.

There have been no performance issues noted with the treatment system at this location. The treatment system is in good condition.

The ocean outfall was last inspected in February 2018 and observed to be in excellent working condition.

2.5. Asset Replacement Value

It is expected that the treatment process and outfall that were installed in 2014 and 2010 respectively would still meet regulatory requirements once the infrastructure is due for replacement.

YMCA CAMP ELPHINSTONE WASTEWATER SERVICE ASSET MANAGEMENT PLAN

Table 2 – Asset Replacement Value Summary

Asset Type	Replacement Cost (2018 \$)	Year Installed	Estimated Useful Life	Remaining Useful Life
Treatment System	\$ 1,627,159	2014	50	45
Ocean Outfall	\$ 86,895	2010	85	76

3. Operations and Maintenance (O&M) Plan

Operations and maintenance (O&M) are the activities that ensure the wastewater systems are able to continue to function as designed throughout their EUL. These activities include routine inspections and readings, unforeseen repairs, effluent sampling, and ongoing condition assessments.

3.1. Current O&M Fees

YMCA Camp Elphinstone has not been created as a local service to date, therefore user fees and parcel taxes have not been established. All work completed by the SCRD is billed to the developer as recoverable expenses.

3.2. Current O&M Budget

An O&M budget will not be determined for YMCA Camp Elphinstone until it has been created as a local service. The actual expenditures billed to the developer from 2015 to 2018 are shown in Table 3.

Table 3 – Budgeted and Actual Operations and Maintenance Expenditures

Expenditures	2015	2016	2017	2018	Average
Budget	N/A	N/A	N/A	N/A	N/A
Actual	\$ 6,185.29	\$ 6,858.92	\$ 6,771.30	\$ 9,464.17	\$ 7,319.92
Variance	N/A	N/A	N/A	N/A	N/A

Overall, the actual expenditure increased by 65% between 2015 and 2018. The majority of the actual expenditure was to pay for staffing expenses to maintain

the treatment and disposal systems. In 2018, expenses were incurred to fund ultraviolet (UV) bulb replacements and ocean outfall inspection.

3.3. Potential O&M Budget

The potential O&M budget was created based on an optimal level of service for the systems at YMCA Camp Elphinstone. Staff wages account for the majority of the potential annual O&M budget for YMCA Camp Elphinstone. The required weekly, monthly, quarterly, semi-annual, and annual tasks are primarily completed by a Utility Technician.

Significant expenses in the potential operating budget include:

- Staffing expenses, consisting of:
 - O&M staffing requirement;
 - Administration of the wastewater system by Utilities Services staff;
 - SCRD Administration Services contribution;
- Annual and proportioned non-annual material and equipment replacement;
- B.C. Hydro utility charges; and
- Proportioned share of service vehicles, tools, and miscellaneous expenses.

With the inclusion of all ancillary charges, the potential operating budget for YMCA Camp Elphinstone wastewater local service is \$26,731.00.

4. Capital Plan

Capital expenditure is required for the periodic renewal or replacement of wastewater systems or system components. A capital plan considers many of the topics already covered in this plan including asset replacement values and EULs, asset condition, and following a well-developed O&M plan.

4.1. Reserve Balances

Reserve accounts will not be created for YMCA Camp Elphinstone until it has been created as a local service.

YMCA CAMP ELPHINSTONE WASTEWATER SERVICE ASSET MANAGEMENT PLAN

4.2. Potential Capital Budget

Budget models considering four different time frames (10, 20, 50, and 80 year periods) were prepared for consideration, each with varying impact on parcel tax and with different systems requiring replacement over the selected time frame. For each model two plans were prepared: a 10% parcel tax increase every five years, or a fixed parcel tax throughout the model time frame.

Each model factors in funding the full cost of the infrastructure requiring replacement within the life of the model. Any debt incurred during the timeframe of the model is paid off in full with interest and the model terminates with a reserve balance equal to 10% of the projected value of the infrastructure in the last year of the model.

The highlighted budget plans represent the shortest term in which all infrastructure (i.e. the treatment and disposal systems) will need to be replaced.

Table 4 – Potential Capital Budget Options Based on Model and Payment Method

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 1	80-Year	Treatment System (1) Ocean Outfall (1)	Even Annual Contribution	\$ 8,445,600	\$105,570
Plan 2	80-Year	Treatment System (1) Ocean Outfall (1)	10% Increase Every Five Years	\$ 12,097,084	\$ 67,300
Plan 3	50-Year	Treatment System (1) Ocean Outfall (0)	Even Annual Contribution	\$ 5,194,000	\$103,880
Plan 4	50-Year	Treatment System (1) Ocean Outfall (0)	10% Increase Every Five Years	\$ 6,004,425	\$ 75,350
Plan 5	20-Year	Treatment System (0) Ocean Outfall (0)	Even Annual Contribution	\$ 238,800	\$ 11,940
Plan 6	20-Year	Treatment System (0) Ocean Outfall (0)	10% Increase Every Five Years	\$ 244,349	\$ 10,530

YMCA CAMP ELPHINSTONE WASTEWATER SERVICE ASSET MANAGEMENT PLAN

Capital Budget	Model	Infrastructure Replaced	Payment Method	Total Revenue	Parcel Tax (Year 1)
Plan 7	10-Year	Treatment System (0) Ocean Outfall (0)	Even Annual Contribution	\$ 180,500	\$ 18,050
Plan 8	10-Year	Treatment System (0) Ocean Outfall (0)	10% Increase Every Five Years	\$ 181,335	\$ 17,270

In addition to the replacement of the wastewater systems, the capital budget also includes replacement of the ultraviolet (UV) disinfection equipment.

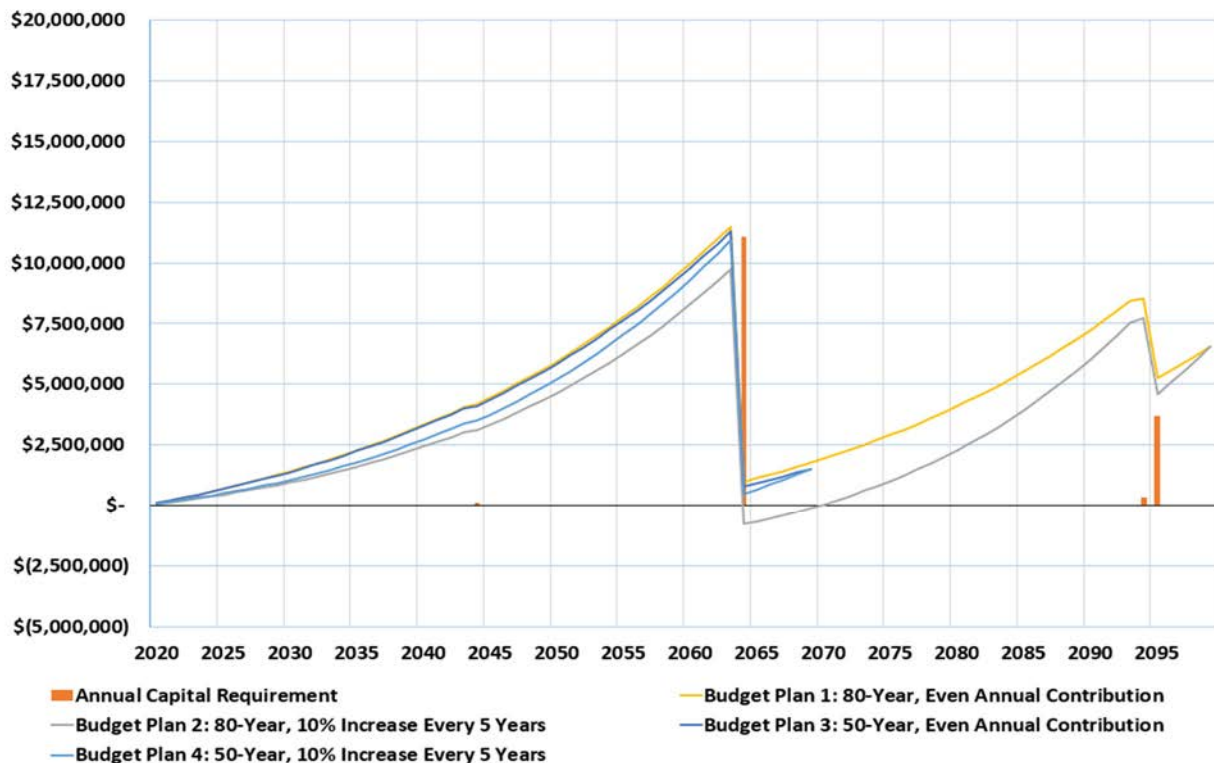


Figure 2 – Wastewater Local Service 50-Year and 80-Year Capital Plans

YMCA CAMP ELPHINSTONE WASTEWATER SERVICE ASSET MANAGEMENT PLAN

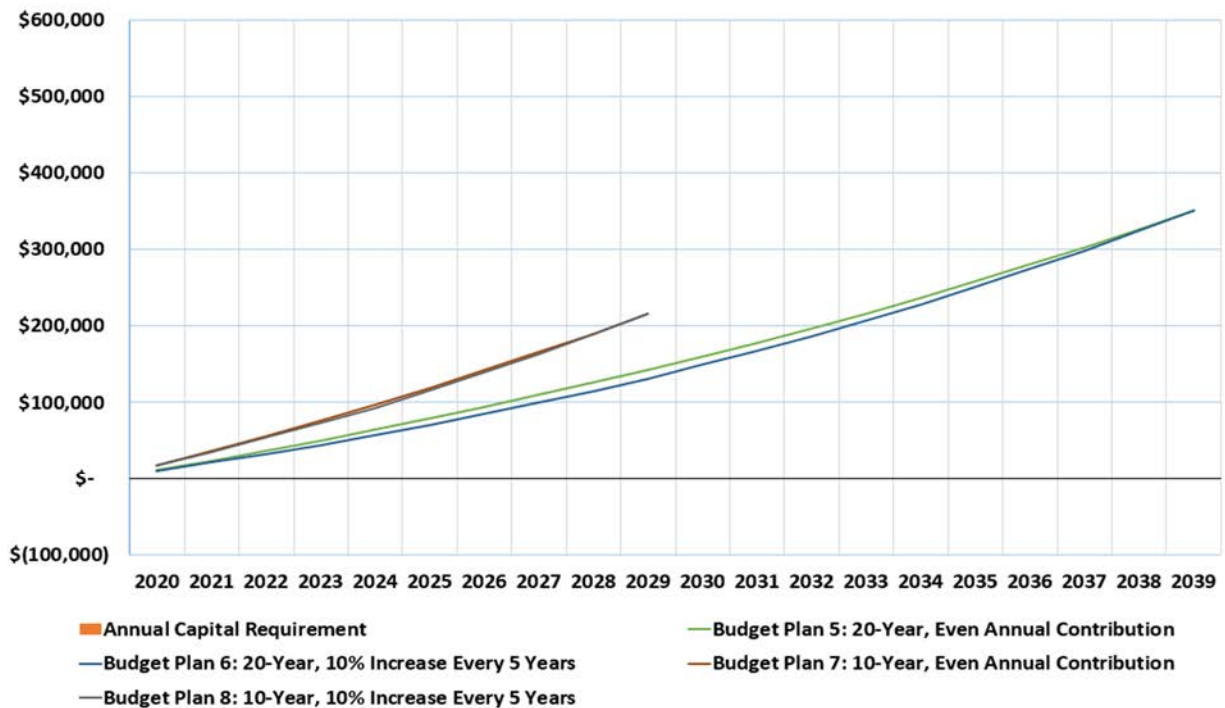


Figure 3 – Wastewater Local Service 10-Year and 20-Year Capital Plans

5. Additional Local Service Improvement Actions

Additional operational work will not be considered in the YMCA Camp Elphinstone wastewater systems until it meets the requirements for the SCRD to make it a local service.

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Electoral Area Services Committee – July 21, 2022

AUTHOR: Ian Hall, General Manager, Planning and Development

SUBJECT: **PLANNING AND DEVELOPMENT DEPARTMENT 2022 Q2 REPORT**

RECOMMENDATION

THAT the report titled Planning and Development Department 2022 Q2 Report be received.

BACKGROUND

The purpose of this report is to provide an update on activity in the Planning and Development Department for the Second Quarter (Q2 – April 1 to June 30, 2022).

The report provides information from the following Planning and Development Department divisions:

- Planning & Development Services
- Building Inspection Services
- Sustainable Development
- Protective Services

PLANNING AND DEVELOPMENT SERVICES DIVISION

Regional Planning [500]

Key projects in Q2 included:

- Regional Growth Baseline Research: At the direction of the Board's Strategic Plan, staff undertook the process of investigating and evaluating the potential of proceeding with a RGS baseline research project.
- Recap: the general goals of the RGS process are as follows:
 - Develop a shared understanding between Coast local governments of historical growth patterns and anticipated future growth needs;
 - Understand adequacy and sustainability thresholds for servicing capacity;
 - Foster dialogue about opportunities (building blocks, roadmap) to ensure future growth aligns with/contributes to community goals as described in Official Community Plans and other high-level plans and strategies. Potentially, a collective vision can be defined for how best to sustainably manage anticipated growth in a way that advances livability and reflects shared goals, objectives and values.
- The contract was awarded to MODUS consultants in Q2, 2021. Staff have engaged with the contract provider and commenced the process of connecting regional partners and data sources towards framing out the project.
- A current and future data report has been completed by MODUS. Staff interviews with project partners and policy review were completed. A draft report for Phase 2 Policy Review was made available for staff review in April and was circulated to all project partners for review. MODUS notes this draft report was missing some engineering information due staff illnesses with key information providers. This has resulted in the overall project timing being further adjusted. Now the missing information has been provided in a complete report and it is currently under review by project partners.
- MODUS has started work on the final Phase 3 Report, including mapping of potential growth areas. Next steps will include presenting the final Phase 3 Report to SCRD Board and preparing strategic recommendations for consideration. Staff are targeting to report back to EAS on outcomes in Q4.

Rural Planning [504]

Key projects in Q2 included:

- The Zoning Bylaw No. 310 Update project (also known as Bylaw 722) – Staff have continued to work towards completion of the Draft Bylaw. Most recent milestones have included Public Information Meetings (PIMs) as well as agency and APC feedback from referrals. This collective feedback has been evaluated and informed tweaks to the Draft Bylaw, which are summarized in a report included for consideration in the July 21 EAS Agenda. If 2nd Reading is granted for the proposed bylaw in July, next steps are proposed to include an orientation/engagement meeting for APCs and referral for a Public Hearing which is targeted for early September 2022.



Pictured above: Senior Planner, Yuli Siao presenting at Bylaw 722 PIM in Roberts Creek.

- **Development Approvals Grant:** The Province has developed a Local Government Development Approvals program. A total grant allocation of \$15-million (Province-wide) is part of the Province's ongoing work to give local governments the tools necessary to meet housing needs in their communities. SCRD was awarded requested grant funding and is preparing for next steps of call for proposals and project initiation, with a view to creating regional value. The project is titled Planning Enhancement Project Phase 1 (PEP 1) and project commencement is anticipated in Q3.
- The volume of property inquiries in Q2 2022 remains high, though slightly less than the same quarter in 2021. At halfway through the year Planning and Development is tracking at 47% of the total inquiries received for 2021, which saw a 60% increase over 2020. From an inquiry perspective, this evidence highlights the last 1.5 years as the busiest ever recorded. The Request Tracker (RT) system has aided staff in tracking these numbers accurately. It is important to note there is a range of response-needs for each property inquiry. Some inquiries require one short answer; however, a large volume of property inquiries received require substantial back and forth between staff and the customer to answer complex property inquiries and pre-application questions.
- Planning and Bylaw staff continue to work together closely to respond to a sustained uptick in the rise in complaints/investigations/infractions related to land alteration works done without permits in development permit areas (riparian areas), tree cutting permit areas and Agricultural Land Reserve (removal and placement of fill). As a pattern, these files take significant amounts of staff time to bring to completion, often involve other agencies compliance /enforcement staff and may involve damage to sensitive ecosystems or agricultural areas that is irreparable, despite remediation effort. It is estimated that over Q1 and Q2 that these files have consumed a minimum 1 to 1.5 FTE planning staff time and 2 FTE Bylaw Staff time; and yet the influx of this work continues to grow, with staff struggling to resource sufficient time to manage these complex files. Staff feel it is critical to note this shift in time allocation, which is taking away from other Planning and Bylaw Enforcement work when planning services are already in record demand. With a lens of seeking compliance and messaging proactive measures when possible, staff are continuing to review inter-divisional process improvements to manage the workflow and additionally contemplate resource needs.

- Staff recruitment has been challenging throughout Q2. Currently Planning and Development is undergoing two recruitments, which include a new position for Senior Planner associated with the PEP1 (two rounds of recruitment) and a Planning Technician 1, which is a key role for handling public inquiries and processing minor planning applications that was recently vacated. With an already small team and record demands on planning services, recruitment challenges have been impacting the abilities to keep up with application and inquiry volumes, as well as make meaningful progress on the development process review project.

OPERATIONS

Development Applications Statistics

Applications Received	Area A	Area B	Area D	Area E	Area F	Q2 2022	YTD 2022
Development Permit	8	5	2		2	17	27
Development Variance Permit	1	1				2	2
Subdivision	4	1	4	2		11	16
Rezoning/OCP						0	2
Board of Variance						0	0
Agricultural Land Reserve					2	2	3
Frontage Waiver	2	1				3	4
Strata Conversion						0	2
Total	15	8	6	2	4	35	56

There were 35 Development Applications received in Q2 2022 compared to 36 in Q2 2021.

- The 2021 total for Development Applications was 122.
- The 2020 total for Development Applications was 77.
- The 2019 total for Development Applications was 96.
- The 2018 total for Development Applications was 88.

Development Applications Revenue

Revenue Stats	Area A	Area B	Area D	Area E	Area F	Q2 2022	YTD 2022
Development Permit	\$5,000	\$2,150	\$1,000		\$1,000	\$9,150	\$13,550
Development Variance Permit	\$500	\$500				\$1,000	\$1,000
Subdivision	\$6,265	\$865	\$3,975	\$1,730		\$12,835	\$17,490
Rezoning/OCP						\$0	\$2,900
Board of Variance						\$0	\$0
Agricultural Land Reserve					\$1,500	\$1,500	\$2,250
Frontage Waiver	\$450	\$600				\$1,050	\$1,200
Strata Conversion						\$0	\$1,300
Total	\$12,215	\$4,115	\$4,975	\$1,730	\$2,500	\$25,535	\$39,690

Development Applications revenue was \$25,535 in Q2 2022 compared to \$22,263 in Q2 2021.

- The 2021 total for Development Applications revenue was \$89,642.
- The 2020 total for Development Applications revenue was \$58,270.
- The 2019 total for Development Applications revenue was \$60,625.
- The 2018 total for Development Applications revenue was \$69,402.

Provincial and Local Government Referrals

Referrals	District of Sechelt	Town of Gibsons	Shíshálh Nation	Islands Trust	Skwxwú7mesh Nation	Province	Other*	Q2 2022	YTD 2022
Referrals						4	2	6	12

*LCRB referrals

There was 6 Referrals received in Q2 2022 compared to 4 in Q2 2021.

- The 2021 total for Referrals was 10.
- The 2020 total for Referrals was 25.
- The 2019 total for Referrals was 26.
- The 2018 total for Referrals was 24.

Planning Division Public Inquiries

The statistics provided in the table below provide an overview of the quantity of planning / property related inquiries that the public submit to planning staff via email, front counter and phone.

2022 Public Inquiries	#	2021 Public Inquiries	#
January	278	January	151
February	238	February	372
March	257	March	263
April	235	April	353
May	272	May	289
June	244	June	285
July		July	280
August		August	269
September		September	331
October		October	249
November		November	227
December		December	177
2022 Year to Date Total	1524	2021 Year to Date Total	3246

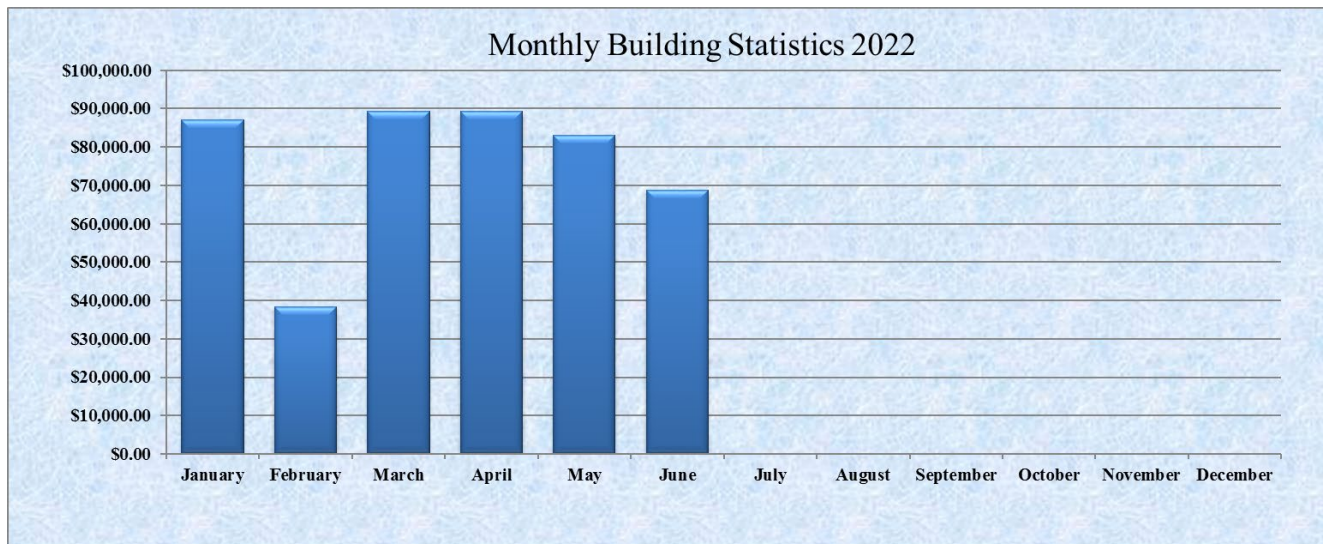
There were 751 public inquiries in Q2 2022 compared to 927 in Q2 2021.

- The 2021 total for Public Inquiries was 3246.
- The 2020 total for Public Inquiries was 2029.

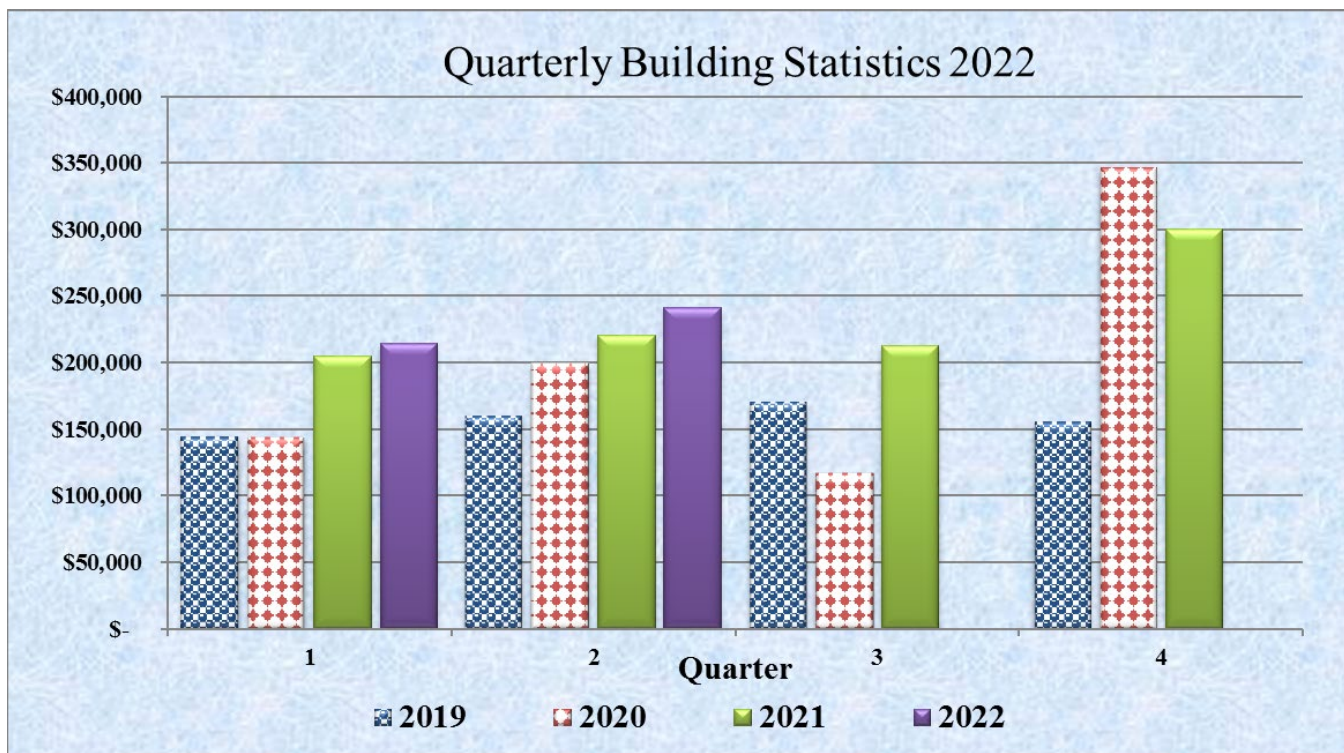
BUILDING INSPECTION SERVICES DIVISION

Construction activity remained strong in Q2 with indications that this trend will continue into Q3.

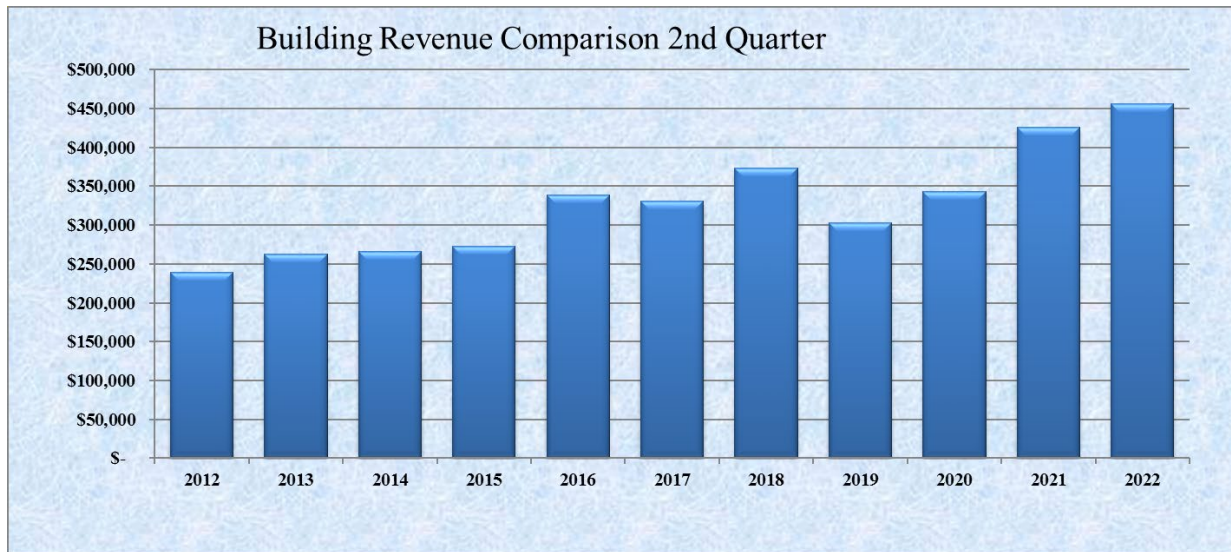
2022 Q2 Monthly Building Statistics



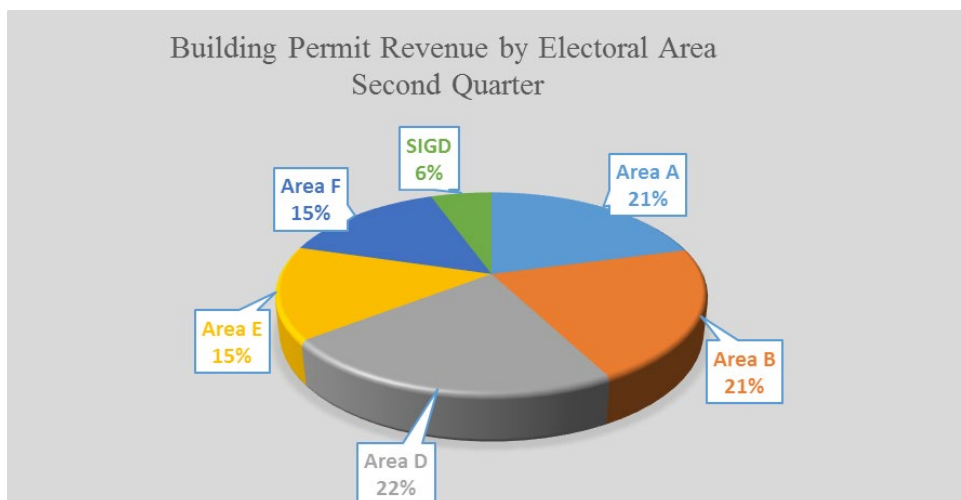
Quarterly Building Statistics Comparison 2019 – 2022



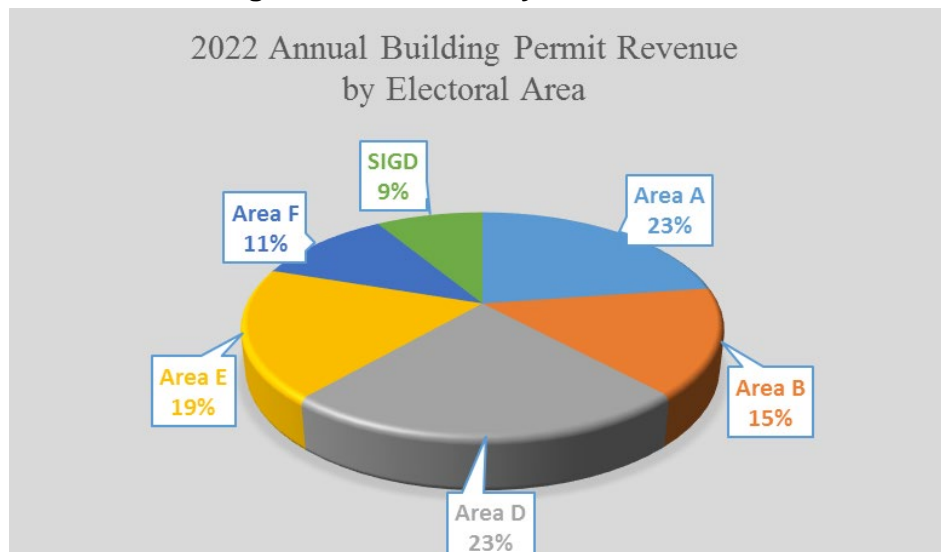
Q2 Building Revenue Comparison (2012 – 2022)



Q2 2022 Building Permit Revenue by Electoral Area



YTD 2022 Building Permit Revenue by Electoral Area



SUSTAINABLE DEVELOPMENT DIVISION

- Milestone 2 of the Building Adaptive and Resilient Communities (BARC) Framework with ICLEI Canada is complete and involves a Climate Science Report as well as a Climate Risk Assessment. Both reports are available on letstalk.scrd.ca/climate.
- Work began on Milestone 3 of BARC with a Community Project Team workshop identifying an initial long list of actions.
- The greenhouse gas emissions inventory and forecasting report was completed and presented to the Board. The report is available on letstalk.scrd.ca/climate.
- The Electric Vehicle Charging Stations Program Phase 1 infrastructure is completed with 5 charging stations serving the SCRD fleet. Preparatory work for Phase 2 is underway.
- A summer student was hired and they are working on the Community Climate Action Plan development.
- Contracts have been awarded for energy studies on decarbonizing Sechelt Aquatic Centre, Gibsons and Area Community Centre, and Sunshine Coast Arena.
- The Sunshine Coast Community Solar Association is working on its reports on the solar and efficiency potential of several SCRD sites.
- DL1313 conservation efforts progressed with receipt of support from Sk̓wx̓wú7mesh Nation for application to the Province of BC for a Nominal Rent Tenure.

PROTECTIVE SERVICES DIVISION

Fire Protection Service

The extended benefit plan for the volunteer firefighters has commenced with approximately 84% of the eligible members currently enrolled in the program. There are a few firefighters who are currently away from their respective departments who are expected to enroll upon their return.

The Manager of Protective Services attended the FireSmart Conference in Kamloops in May. There was some excellent information provided which will be used help to grow the FireSmart Program here on the Sunshine Coast.

The Manager of Protective Services, along with four chief officers from the SCRD and CAO McKinley attended the *Working Together: Effective Fire Service Administration for Fire Chiefs and Local Government* CAOs conference as well. The conference provided the attendees with a clearer understanding of their respective roles and responsibilities in the provision and administration of a local fire service.

Four chief officers from the SCRD along with the Manager of Protective Services attended the Fire Chiefs Association of BC conference in Victoria in June. It was the first in-person conference held since 2019 and provided some valuable information and great networking opportunities.

A meeting was held with Dave Mitchell and Associates at the request of the SCRD Building Department to examine the response times of the SCRD fire departments and how those response times impact the building requirements for structures within the SCRD.

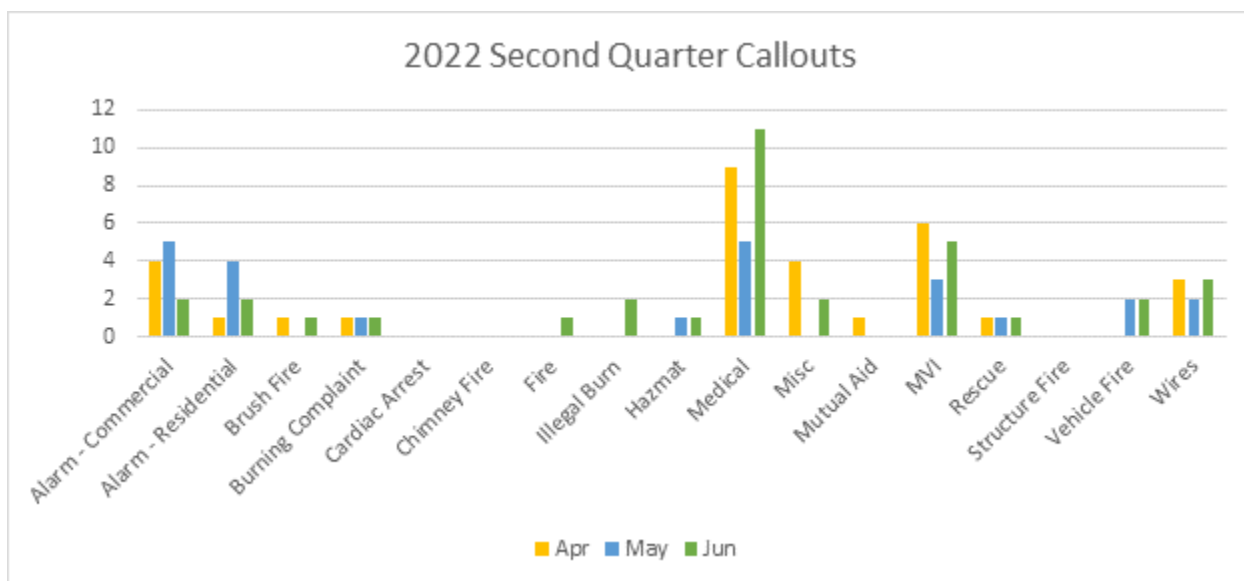
Gibsons and District Volunteer Fire Department (GDVFD)



Pictured above: Regional cooperation and emergency preparedness training example - firefighters from Gibsons, Roberts Creek, Sechelt, Halfmoon Bay and the District of North Vancouver participate in a wildfire preparedness scenario in Gibsons on April 10, 2022.

- Gibsons membership currently sits at 38 firefighters.

- Currently 36 members of the department have obtained exterior certification, 34 have obtained interior and 31 have obtained full service (NFPA 1001).
- The GDVFD responded to 89 calls for service in the second quarter of 2022. This consisted of 80 paged and 9 duty calls totaling over 725 person-hours for the quarter.
- Notable incidents this quarter included several vehicle fires, two motor vehicle incidents with vehicles over embankments, a child in distress in a locked vehicle and a mutual aid call for the Quint (ladder truck) to assist Sechelt Fire with a structure fire.



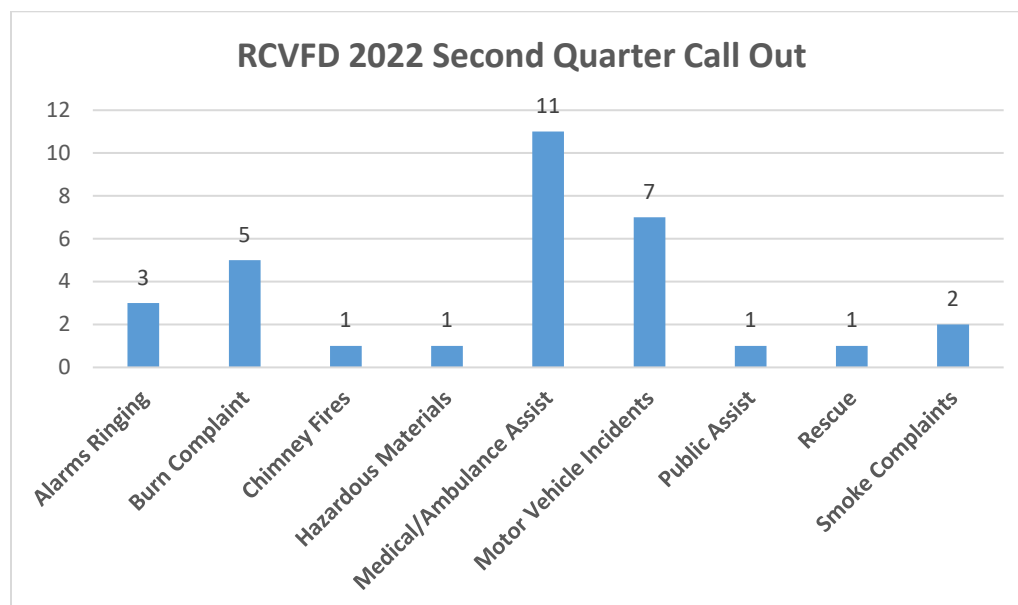
- Travis Young has accepted the full-time position of fire inspector, effective May 29, 2022 after filling in due to a vacancy for the past two years. Travis started as a volunteer with the GDVFD in 2014 and was hired as a casual fire inspector in 2020.



Pictured above: Firefighters extinguish a vehicle fire on Industrial Way in Gibsons on May 23, 2022.

Roberts Creek Volunteer Fire Department (RCVFD)

The Roberts Creek Fire Department responded to 32 calls in the second quarter of 2022.



Some of the more noteworthy calls included:

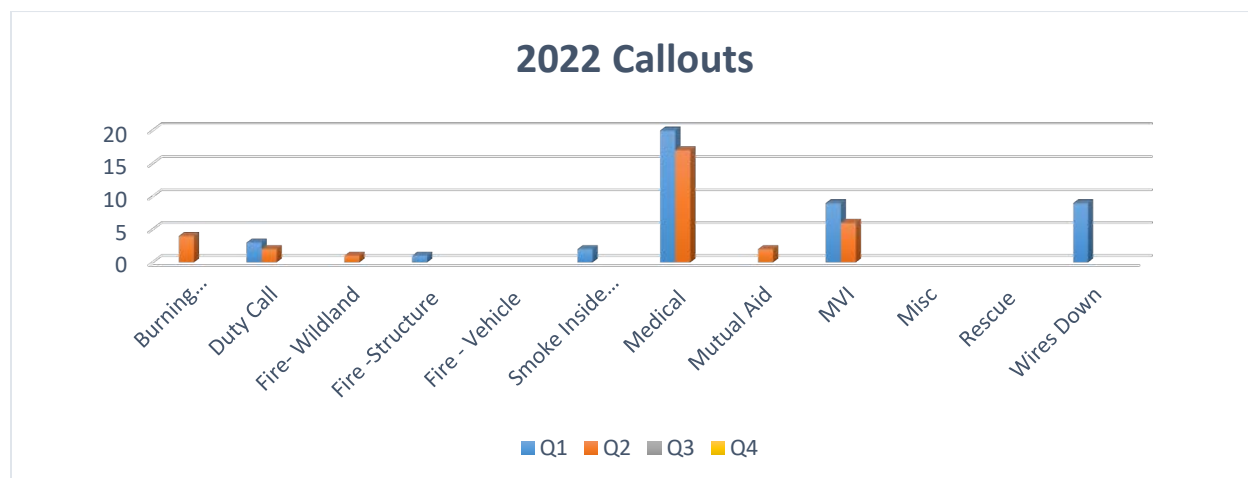
- Vehicle fuel spill after individual(s) drilled a hole in a tank to steal fuel,
- Search for a missing ATV rider,
- Patient who had been thrown and stepped on by a horse,
- Two medical calls to deal with an infant and a toddler,
- Assisting with the rescue of an injured mountain biker.

Training in Q2 included:

- Two new recruits began training in April in the Exterior Operations course.
- A Cultural Presentation to the FD members by shishálh Nation.
- Ongoing Rope Rescue
- Vehicle rescue training
- Two officers of the RCVFD attending an Emergency Scene Traffic Control 'Train the Trainer' course
- Deputy Chief Hatanaka completing a child car seat installation course

Halfmoon Bay Volunteer Fire Department (HMBVFD)

The Halfmoon Bay Volunteer Fire Department responded to 35 calls in the second quarter of 2022.



Training in Q2:

- Members of the HMBVFD combined for a total of 1,446 hours of training during the second quarter.



In addition to the regular weekly training, members of the HMBVFD participated in a variety of other courses such as:

- Wildland Interagency Training
- Fire Investigation Levels I and II
- Resilient Minds Train the Trainer (tool to improve the mental health of our members)
- EMA-FR (medical) HMBVFD was able to certify six of its newest members and re-certify four others, with 95% of the membership now certified as First Responders

Membership

- The HMBVFD lost two long time members to retirements this quarter: Pat Hobbs with 30 years of service, and Wayne McMahon with 31 years of service. They also temporarily lost one member, Noah Sullivan, who was hired onto the BC Wildfire Service, but who is expected to return in the fall.
- New Recruit class started with three new recruits, Michelle Rose, Gloria Collins Allcock and Danielle Smith and there are three additional vacant spots that need to be filled in order to reach a full complement of members.

Equipment

- Halfmoon Bay's new Tender was put into service in April. The new tender carries 200 more gallons of water than the old tender and has a larger pumping capacity. It also carries three more personnel and has integrated 911 seat to hold SCBA to allow for quicker action on fires. This unit can be used to fight wildland interface fires, provide structural protection, as well as fight structure fires in residential areas. Overall, it allows the HMBVFD to provide improved service to the residents of Halfmoon Bay.



Pictured above: New HBVFD tender and volunteers

Fire Halls

- LED lighting upgrade was completed in Hall #1.

Egmont and District Volunteer Fire Department (EDVFD)



Pictured above: EDVFD Volunteers at Fire Hall

The EDVFD responded to five calls in the second quarter of 2022, breakdown as follows:

- Medical calls 1
- Motor Vehicle Incidents 3
- Report of Smoke 1

The firefighters from the Egmont and District Volunteer Fire Department combined for over 200 hours of training in the second quarter of 2022. Notwithstanding the damp spring, much of the training focused on training to respond to wildfires.

In addition to the regular, weekly training, one member completed a “Train the Trainer” course for traffic control, another member completed the course “Frontline Leadership” through the Justice Institute of BC, while two other members completed a Rapid Intervention Team course at the fire training facility in Sechelt.

The fire department also set up a new water holding tank near Ruby Lake to provide a water source in the event of a fire in that area.

Sunshine Coast Emergency Program (SCEP)

The FireSmart Home Assessment program, funded through the FireSmart Economic Recovery Fund, is continuing as the two FireSmart coordinators completed 65 home assessments in the second quarter of 2022. In addition to the home assessments, there have been opportunities for public outreach to provide additional education about the value of FireSmart.



Pictured above: FireSmart Coordinator Bill Higgs providing FireSmart information to a group of residents on Gambier Island during one of their Emergency Preparedness events.

SCRD is receiving positive feedback on FireSmart work. Excerpt from a letter, shared with permission:

"In his role with the SCRD, and now as a Local FireSmart Representative, Bill has been supporting us over the past two years as we work to define our areas of highest risk and our priorities around fire preparedness as a community. We know we have a long road ahead of us and still much to do but having easy access to FireSmart resources makes our committee's work a little easier."

*Kind regards,
Jennifer Henderson
Fircom Sunset Society Fire Committee
Gambier Island, BC*

A contractor has been selected, and a contract signed, to complete the prescription phase of the FireSmart Demonstration Forest project in Connor Park in Halfmoon Bay. We are currently working the shishálh Nation to complete an archeological survey prior to the commencement of the prescription development to ensure compliance with the *Heritage Conservation Act* and aligned with the Heritage Protocol.

The Sunshine Coast Regional District, in conjunction with the Town of Gibsons and District of Sechelt, was successful in its grant application to develop three evacuation plans. A joint RFP is currently being developed to secure a vendor to complete the three projects.

A coordinated regional application (SCRD, SIGD, ToG, and DoS) was submitted for a CEPF grant for Extreme Heat Risk Mapping, Assessment, and Planning in a short (6-week) application window. Follow-on direction from the Board will be sought, as is sometimes the case with short-window programs.

A meeting was held with the three RCMSAR groups and the Chief Financial Officer to discuss formalizing the funding process for those groups. Service agreements are currently being developed which will clarify that funding process.

After a significant delay due to capacity challenges at the provincial level, we are now moving forward with the recovery projects which are necessary as a result of the November, 2021 flooding event. An engineer from SNT Geotechnical has been assigned to review the eleven projects. The engineer had escorted tours of the sites with the support of SCRD staff and is currently completing reports for Disaster Financial Assistance on each of the projects. The next meeting with the engineer and a representative from the Disaster Recovery Division of Emergency Management BC is scheduled for July 7.

The SCRD was successful in a grant application for the amount of \$24,967.00 for its Emergency Support Service (ESS) Reception Centre Modernization project. The funds will be used to further enhance the Sunshine Coast ESS program.

Nancy Hughes has been hired as the new full time Emergency Management Coordinator. Nancy joins the SCRD with extensive experience in emergency management with the RCMP. She is scheduled to assume her duties in her new role in July.

911 Service - Upgrades

An ongoing project has been the antenna replacement project for the 911 radio system. During the third week in June we saw the 911 paging and radio equipment successfully transitioned from the Gibsons Fire Hall site on North Road to the TELUS tower nearby. The ability to share a tower with Telus rather than having to construct a new one for this purpose has avoided over \$250,000 in future costs for SCRD. This work not only improves our emergency communications but has secured this critical public safety infrastructure onto antenna towers that are engineered for this type of use.



Pictured above: New 911 communication equipment installed at the Telus site on North Road which supports the replacement of the antenna which was on the tower at the Gibsons Fire Hall. That antenna can now be removed, and the tower partially dismantled, to reduce the stress on that structure and thus maintain its structural integrity.

All necessary assessments have been completed and permits acquired for the construction of the new E911 communication tower at Chapman Water Treatment plant. An RFP for the project is expected to be issued in July. Negotiations have started with the RCMP in order to establish/renew agreements with them for shared space/equipment on three towers.

Emergency Communications Team

SCEP volunteers from the Emergency Communications Team (ECT) participated in the Radio Amateurs of Canada (RAC) Canada Day Event. It is a 24-hour event which provided an opportunity for the members to practice quickly setting up outdoor stations while making contacts with other radio operators.



Pictured above: Some of the members of our Emergency Communication Team at the RAC Canada Day event

Bylaw Enforcement Division

Senior Bylaw Officer Krissy Kirkpatrick and Bylaw Officer Stephen Lanegraff attended the 2022 License Inspectors Bylaw Officers Association (LIBOA) Conference. There was great content delivered in a lecture setting, and attendees were also able to ask questions as it pertained to their specific communities / files.

Courses attended by our bylaw officers included:

- Minimum Fines in Bylaws and Debt Collection
- Animal Behaviour & Welfare Consulting
- Options and Processes for Management Plans for Aggressive Dogs, since the Santics Decision
- Panel Discussion on Danger Dogs
- How to learn to Stop Worrying
- Information Prosecutions and Low Information Litigants
- Procedural Fairness & Bylaw Enforcement Best Practices (Office of the Ombudsperson)

During the second quarter of 2022, the bylaw department received a total of 85 Bylaw/Dog control Complaints broken down by Electoral Area as follows:

Bylaw		Dog Control	
Electoral Area A	19	Electoral Area A	N/A
Electoral Area B	16	Electoral Area B	7
Electoral Area D	10	Electoral Area D	3
Electoral Area E	11	Electoral Area E	1
Electoral Area F	13	Electoral Area F	3
SIGD	0	SIGD	1

At this time, the Bylaw Department is currently dealing with 47 active land alterations and riparian files.

Reviewed by:			
Manager	X – B. Kennett (A) X – J. Jackson X – R. Shay X – M. Treit	Finance	
GM	X – I. Hall	Legislative	
CAO	X – D. McKinley	Other	

SUNSHINE COAST REGIONAL DISTRICT

HALFMOON BAY (AREA B) ADVISORY PLANNING COMMISSION

June 28, 2022

 RECOMMENDATIONS FROM THE HALFMOON BAY (AREA B) ADVISORY PLANNING COMMISSION MEETING HELD ELECTRONICALLY.

PRESENT:	Vice Chair	Barbara Bolding (Acting Chair)
	Members	Nicole Huska Alda Grames Catherine Ondzik
ALSO PRESENT:	Electoral Area D Director	Lori Pratt (Non-Voting Board Liaison)
	Recording Secretary	Sandy Goldsmith
	SCRD	Yuli Siao (Senior Planner)
	Guests	Meaghan Hennessy Christopher Richmond
REGRETS:	Members	Kelsey Oxley Eleanor Lenz

CALL TO ORDER 7:00 p.m.

AGENDA The agenda was adopted as presented.

MINUTESArea B Minutes

The Area B APC minutes of March 22, 2022 were adopted as presented.

REPORTS

Proposed new Zoning Bylaw No. 722

SCRD Senior Planner was present to address any questions/concerns regarding the 1st reading draft of Bylaw No 722.

The APC presented questions/concerns regarding the new bylaw, and these were addressed and discussed:

- the possibility of reducing parcel size of land for growing cannabis to allow for micro cultivators
- closer monitoring and enforcement of bylaws regarding B&Bs.
- more affordable housing available to address employment issues on the Coast

The Senior Planner confirmed that the APC's feedback will be presented to the Electoral Area Services Committee.

UNFINISHED BUSINESS

The APC requests that the SCRD provide a copy of the RAR report and the Development Permit records for the Wood Bay Ridge Rd. subdivision and well as for other subdivision applications in the future.

DIRECTOR'S REPORT

The Director's report was received.

NEXT MEETING July 26, 2022

ADJOURNMENT 8:40 p.m.

SUNSHINE COAST REGIONAL DISTRICT

ROBERTS CREEK (AREA D)
ADVISORY PLANNING COMMISSION

June 20, 2022

RECOMMENDATIONS FROM THE ROBERTS CREEK (AREA D) ADVISORY PLANNING
COMMISSION MEETING HELD ELECTRONICALLY

PRESENT:	Chair	Mike Allegretti
	Members	Gerald Rainville Eric Ansley
ALSO PRESENT:	Electoral Area D Director	Andreas Tize (Non-Voting Board Liaison)
	Recording Secretary	Diedra Goodwin
REGRETS/ABSENT:		Meghan Hennessy Nicola Kozakiewicz Chris Richmond Alan Comfort

CALL TO ORDER 7:03 p.m.**AGENDA** The agenda was adopted as presented.**MINUTES**

The Roberts Creek (Area D) APC Minutes of February 23, 2022 were approved as circulated.

The following minutes were received for information:

- Halfmoon Bay (Area B) APC Minutes of February 22 & March 22, 2022

REPORTSProposed new Zoning Bylaw No. 722

Key Points of Discussion:

- It is quite difficult to analyze changes in proposed Bylaw 772 without a side by side comparison with Bylaw 310 on a computer screen.
- It was not obvious which changes were organizational in the new Bylaw and which were substantive.

- Regarding setbacks from roads: Greenhouses are difficult to site for sun exposure and requiring more distance from property lines may make them impossible to have.
- Why not a sliding scale instead of discrete rules? An example found in Section 4.3, Subdivision Requirements, one measure for parcels between 2000 and 3500 square metres, and a different requirement for parcels over 3500 square metre.
- Intentions to increase density in the new Bylaw requires more predictive analysis. By how much would density increase? Will the changes accommodate more housing?
- There is no reference to vacation homes. They create dark neighborhood's prone to increased crime, don't provide the same support to the local economy, and put more pressure on transportation to and from the Sunshine Coast. Can that issue be addressed in the new Bylaw? Or would it not be possible because jurisdiction and of property tax benefit to the Province.
- Replace method of limiting the footprint of a home-based business from "20% of the size of the house". A thousand square foot studio or workshop would require a 5000 square foot house. Many home occupations require a large space. A home office has vastly different requirements from a cabinet shop or a pottery. Parcel coverage is a better metric to use. A Grandfathered-in industrial shop would not be protected if destroyed by natural disaster. It could not be rebuilt to the required size.
- The maximum number of permanently parked vehicles on the property should be considered.
- With bigger setbacks, the tendency will be to put the parking and vehicle noise on the property line. Rules that put parking at lot lines will create more noise and fumes for neighbours.
- What is a care centre? You are allowed a 'second dwelling', or care centre. Page 123 defines care facility but not care centre.
- A glossary is required to define terms.
- How will a provincially granted 'agriculture status' on the land title relate to the new Bylaw?

The Director pointed out that any suggestions received before 3rd reading is part of the adoption process, so having a better way to compare documents or getting more clarity on some issues should not be a problem in order to make subsequent recommendations.

The Area D APC will respond after we have a detailed comparative analysis of the material differences between Bylaw 310 and Bylaw 722.

DIRECTORS REPORT

The Director's Report was received.

NEXT MEETING July 18, 2022

ADJOURNMENT 7:50 p.m.

SUNSHINE COAST REGIONAL DISTRICT

AREA E – ELPHINSTONE
ADVISORY PLANNING COMMISSION

June 22, 2022

RECOMMENDATIONS FROM THE AREA E ADVISORY PLANNING COMMISSION MEETING
HELD ELECTRONICALLY

PRESENT:	Chair	Mary Degan
	Members	Rod Moorcroft Nara Brenchley Rick Horsley Karen Mahoney
ALSO PRESENT:	Electoral Area E Director	Donna McMahon (Non-Voting Board Liaison)
	Alternate Area E Director	Lucie McKiernan
	Senior Planner	Yuli Siao
	Recording Secretary	Diedra Goodwin
REGRETS:	Members	Kasha Janota-Bzowska
ABSENT:	Members	Urszula Dragowska Bob Morris Anne Cochran

CALL TO ORDER 7:02 p.m.

AGENDA The agenda was adopted as presented.

MINUTES

Area E Minutes

The Area E APC minutes of January 26, 2022 were approved as circulated.

Minutes

The following minutes were received for information:

- Halfmoon Bay (Area B) APC Minutes of January 25, February 22 & March 22, 2022
- West Howe Sound (Area F) APC Minutes of January 25, 2022

REPORTSProposed new Zoning Bylaw No. 722.

Yuli Siao, Senior Planner presented to the committee.

Comments on the new Bylaw should be received by the end of June, 2022.

Comments from APC Members:

- What are the intentions regarding cannabis growing under the new Bylaw on ALR land? Food production will become more critical in our area. It will be good to save ALR land for food production in preference to cannabis.
- What resources does the RD have to enforce the Bylaw? What will happen with properties that become non-conforming once the new Bylaw takes effect?
- Will there be setbacks applied to growing cannabis near property lines in residential neighborhoods? Setbacks should be large enough to protect neighbours from the odor of cannabis cultivation.
- Definitions of poultry, fowl, roosters, etc. could be clearer.
- Would my birds, including ducks, chickens, one rooster, possibly turkey, on my R2 1/2 acre lot property be grandfathered in under the new Bylaw? A rooster is essential to keep my birds reproducing on site. If roosters are prohibited bringing chickens from off coast will introduce diseases like avian flu. Muscovy ducks are quieter than chickens.
- If noise is an issue regarding roosters, what about vehicle noise at 4 AM?
- Rooster noise really bothers some people.
- We must have roosters or we will not sustain egg production. We don't produce enough of our food, so we must have measures that protect food production.
- Electric fences have not been mentioned and these can be helpful for bee keeping and raising livestock.
- Parking regulations should not lead to having everything paved. Could there be a provision to require a percentage of permeable surfaces, especially on smaller properties?
- Can stormwater issues be addressed in the new Bylaw?
- Can changes to secondary dwelling size allowances be considered in relation to maximum lot coverage. Could there be increased flexibility, e.g. two small houses, instead of a large main dwelling and smaller secondary?

Recommendation No. 1 *Proposed new Zoning Bylaw No. 722*

The Area E APC recommended that the comments provided with respect to Bylaw 722 be considered.

DIRECTOR'S REPORT

The Director's report was received.

NEXT MEETING July 27, 2022

ADJOURNMENT 8:40 p.m.

SUNSHINE COAST REGIONAL DISTRICT**AREA F – WEST HOWE SOUND
ADVISORY PLANNING COMMISSION****June 28, 2022**

RECOMMENDATIONS FROM THE WEST HOWE SOUND (AREA F) ADVISORY PLANNING COMMISSION MEETING HELD ELECTRONICALLY VIA ZOOM

PRESENT:	Chair	Susan Fitchell
	Members	Kate-Louise Stamford Sarah Macdonald Alicia Lavalley (part) Fred Gazeley(part)
ALSO PRESENT:	Director, Electoral Area F	Mark Hiltz (Non-Voting Board Liaison)
	Jonathan Jackson Recording Secretary	Manager, Planning & Development Diane Corbett
REGRETS:	Member	Doug MacLennan

CALL TO ORDER 7:03 p.m.

AGENDA The agenda was adopted as presented.

MINUTESWest Howe Sound (Area F) Minutes

The West Howe Sound (Area F) APC minutes of January 25, 2022 were approved as circulated.

Minutes

The following minutes were received for information:

- Halfmoon Bay (Area B) APC Minutes of January 25, February 22 & March 22, 2022
- Roberts Creek (Area D) APC Minutes of February 28, 2022
- Elphinstone (Area E) APC Minutes of January 26, 2022

There was discussion about the new committee format at the SCRD and inquiry about each committee's terms of reference. Members noted their appreciation in previously receiving the Planning and Development Committee minutes within the APC agendas, with the opportunity to learn about what is happening in other electoral areas and about the follow-up by the Board on APC recommendations. It was noted that, unless regional in nature, many planning and development items would be assigned to the new Electoral Area Services Committee.

REPORTS

Proposed New Zoning Bylaw No. 722

Manager of Planning and Development presented an overview of proposed Zoning Bylaw No. 722.

- Proposed Bylaw 722 seeks to implement interim changes that serve as a stepping stone to future comprehensive policy work and that bring the zoning bylaw to a more modern standard. The proposed bylaw is at first reading; there have been two public information meetings. The proposed bylaw has now been referred for comment.
- Proposed Bylaw No. 722 seeks to achieve the following:
 - Incremental increases to housing options, under existing OCPs
 - Begin to address building climate resilience
 - Provide clarifications and user-friendly changes (including format of bylaw)
 - Respond to changing needs of residential agriculture and home-based businesses.
- What is not changing in the proposed zoning bylaw:
 - land use designations
 - zone boundaries
 - subdivision districts and boundaries
 - general land use density framework
 - site specific zoning.
- The proposed bylaw includes more housing options, less design barriers, work from home, support for energy efficiency, adaptation to climate change, clarity on cannabis production retail. There has been an effort to align policies with provincial and federal legislation.
- Proposed housing options and design: allow for a secondary suite (up to 55 sq m/592 sq ft) auxiliary to a single dwelling unit; increased maximum floor area for auxiliary dwelling from 55 sq m to 90 sq m (969 sq ft), carriage house allowed; and remove the 6-metre (19.7 ft) minimum building width requirement for dwellings.
- Housing Options: The intent of increasing the size of the auxiliary dwelling is to create housing/rental options that could house families. Secondary suites would be allowed in any single unit dwelling. The bylaw would allow a secondary suite and a short-term rental in your home.
- Home Based Business: reflect current home working trend; support economic vitality and diversity; is permitted in most zones subject to conditions to prevent nuisance and neighbourhood conflicts.
- Residential agriculture: growing trend on the coast; support agriculture and supplement local food production; agricultural product sale permitted as auxiliary use; backyard bees and chickens permitted subject to conditions.
- Energy Efficiency and climate change adaptability: floor area limit excludes exterior walls, to support energy efficient buildings; height exceptions applied to green roofs,

solar collectors and wind turbines; waterfront setbacks of 15 m consistently applied throughout the zoning bylaw area, to enhance flood protection.

- Cannabis production and retail: land use distinction between medical and non-medical cannabis production removed; permit cannabis retail in commercial zones only
- Next steps: second reading (the target for second reading is Electoral Area Services Committee on July 21); public hearing; third reading; adoption; continue work towards future zoning bylaw and planning policies.

Comments from APC discussion included:

- All three of those (measures regarding housing options) will be helpful; people can buy property together (parents and kids) with the increased size of an auxiliary dwelling.
- How will future OCP policy updates utilize/apply Bylaw No. 722?
- Heartened to see move to 15 metre setback. It is important to have that standard.
- Is there anyone who is contemplating that there be a consistent strategy for the various OCPs to address those issues like housing options in a more fundamental way? How do we as the coast as a whole get to the point of addressing those issues that are more broad and at a deeper level?

Director Hiltz offered comment on the current planning process.

Upon discussion, it became apparent that a number of APC members needed more time to become more familiar with proposed Bylaw No. 722 in order to provide comment that was robust or substantive.

It was determined that the Area F APC would meet again via Zoom to discuss the bylaw in one week.

It was noted people could comment as individuals on the “Let’s Talk” website (<https://letstalk.scrd.ca/bylaw-722>).

Recommendation No. 1 *Proposed Zoning Bylaw No. 722*

The Area F APC recommended support of the intention of Proposed Bylaw No. 722 as stated in the overview, and that we need further time to really study the details of the proposed bylaw to make any specific recommendations.

DIRECTOR’S REPORT

The Director’s report was received.

The meeting was recessed at 9:23 pm and reconvened on July 5, 2022 at 7:00 pm.

The APC continued discussion on the proposed new Zoning Bylaw No. 722

Upon further review of Proposed Zoning Bylaw No. 722, West Howe Sound APC members shared perspectives on the document.

Points from discussion included:

- Am comfortable with our general statement that we support the intention of Proposed Zoning Bylaw No. 722.
- In the “Let’s Talk” website, there are a lot of issues around chickens. There needs to be further clarification around poultry raising, such as the difference between hens and broilers, and information around slaughtering if you have chickens on your property.
- Suggest that issues around chickens and poultry may get sorted through second reading.
- At the very outset of the bylaw, in the Interpretation section, there is reference to the defined terms being in italics, but then no reference to where the definitions are located. There should be directions on where you can find the definitions.
- Some definitions of dwelling units are problematic in some respects; e.g., “auxiliary dwellings” indicates size restrictions in the definition and in the bylaw. There is room to improve the language so it is clearer for the use and the definitions. Definitions, particularly as they relate to things such as dwelling units, etc., should be revisited in relation to the specific provisions in the bylaw that are referenced, so that there is not a duplication of prohibitions and language.
- Definition of “seasonal use” refers to it being six months. Is that consecutive or is it total months?
- The defined terms are italicized. When I read through the definitions, the defined terms are sometimes in italic and sometimes not; needs consistency.
- Climate resiliency – Did not see a lot that really expanded the opportunities. On page 23 of the bylaw regarding construction levels, the wording was around .6m above the provincial standard; a measurement may not be appropriate five years from now. Would like to see it more tightly tied to provincial best practices, flood standards, flood construction levels. Needs to be more “tight”.
- Climate resiliency – There was not a lot of detail regarding using gray water and storm water supply. Maybe have ability to have tanks within setbacks to have fire protection, or, especially in more rural zones, opportunities to bolster our ability to respond to fire using gray water or storm water. Look at more detail around supporting that kind of climate resiliency.
- Housing: restrictions on shipping containers, page 23. Shipping containers would be another opportunity for housing types, with the right regulations. Same with tiny homes. How do tiny homes fit into the definition of mobile homes?
- What is the build-out of the proposed bylaw for Area F in the different zones? It is stated the bylaw would not change density. Getting a sense of potential density with the proposed bylaw may be useful to determine if this is a good direction. Not sure how 722 fits into OCPs. Would the zoning bylaw be impacted by a Regional Growth Strategy? Look at this in more of a big picture way.
- Would question the total prohibition of the shipping container model for auxiliary building. Fire resistance is an excellent characteristic of shipping containers. This structure is used as a fence, for storage at some properties on the highway, and would be extremely efficient as a deterrent to highway noise.
- In correlating Bylaw Nos. 310 and 722, it appears the number of zones and subdivision districts has changed. In 310, it appears there are 15 rural zones and 11 subdivision districts; in 722, there are 11 rural zones and 16 subdivision districts.
- If Bylaw No. 722 is adopted, concern about the development of updated OCPs, and coordinating with regional development plans. Those Big Pictures will have significant impact on this zoning bylaw. Concern: if we proceed with the bylaw, those bigger

pictures get pushed further into the future. If 310 were to stay as is, and the OCP coordination of development plans were pushed to the forefront, it would be a more efficient use of everyone's time. Would be forced to look at the region as a whole. There has to be a vision of the coast as a whole. It is the sort of thing that is easy to allow to percolate as an idea in the background through successive elected officials.

- Important that this goes through. Even to get the base similarity implemented. There are some good ideas here. It gets the regions in a similar space, a baseline for OCP development.
- Concern about the impacts of bees on the neighbourhood if allowed on a fourth of an acre. Retain current lot size restrictions for beekeeping allowed in Bylaw 310. There is a definite impact on neighbouring parcels; the proposed size restrictions seem to be not adequate.
- Imported honeybees have impact on native bees. Would support not allowing them on smaller lots for reasons you've described.
- "Single-unit dwelling" – Members perceived that "single-detached dwelling" would be more understandable or less confusing;
- "Two-unit dwelling" – Members found this term was confusing.
- What would build-out look like if every single detached dwelling had a secondary suite?
- What would be the impact of individual dwellings? What about parking, roads, schools, etc.? What would our communities look like with this flexibility?

Recommendation No. 2 *Area F APC Feedback on Proposed Zoning Bylaw No. 722*

That the Area F APC continues to support the intention of the Proposed Zoning Bylaw No. 722 as stated in the Overview and, upon further review, recommend:

- That the location of the Definitions be included in the Interpretation section at the outset of the bylaw;
- To review the substantive provisions of the bylaw and referenced definitions for clarity;
- To clarify regarding the keeping of chickens, and to clarify "hens" and "broilers" and if there are different impacts between the two, and to clarify regulations around slaughtering poultry;
- To reconsider the keeping of bees lot size restriction, as there is a significant impact by bees to neighbouring parcels and to native flora and fauna, including native bees;
- To scrap the current word "single-unit dwelling" and replace it with "single-detached dwelling".

Recommendation No. 3 *Electoral Area Services Committee Minutes*

The Area F APC recommended that a link be provided in regular APC packages to the latest Electoral Area Services Committee minutes.

NEXT MEETING Tuesday, July 26, 2022

ADJOURNMENT 8:10 p.m.