



## CORPORATE AND ADMINISTRATIVE SERVICES COMMITTEE

Thursday, September 17, 2020  
SCRD Boardroom, 1975 Field Road, Sechelt, B.C.

### AGENDA

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**CALL TO ORDER**      1:30 p.m.

#### **AGENDA**

1. Adoption of Agenda

#### **PRESENTATIONS AND DELEGATIONS**

#### **REPORTS**

1. Budget Project Status Report  
Senior Leadership Team  
**(Voting – All Directors)**  
Annex A  
Pages 1-11
2. Strategic Plan Update  
*Chief Administrative Officer*  
**(Voting – All Directors)**  
Annex B  
pp. 12-22
3. Grants Status Update  
*Manager, Financial Services*  
**(Voting – All Directors)**  
Annex C  
pp. 23-27
4. Financial Sustainability Policy Review  
*General Manager, Corporate Services / Chief Financial Officer*  
**(Voting – All Directors)**  
Annex D  
pp. 28-40
5. Community Recreation Facilities Capital Funding Update and  
Covid-19 Implications  
*Manager, Asset Management and General Manager, Corporate  
Services / Chief Financial Officer*  
**(Voting – B, D, E, F, Sechelt, Gibsons, SIGD)**  
Annex E  
pp. 41-56
6. Process for Amending Established Wastewater Services  
*Corporate Officer*  
**(Voting – All Directors)**  
Annex F  
pp. 57-59

7. Review of Bylaw 320 With Respect To Wastewater Services  
*Manager, Asset Management*  
**(Voting – All Directors)**

Annex G  
pp. 60-171

## **COMMUNICATIONS**

## **NEW BUSINESS**

## **IN CAMERA**

That the public be excluded from attendance at the meeting in accordance with Section 90 (1) (k) of the *Community Charter* – “negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public.”

## **ADJOURNMENT**

## SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

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**TO:** Corporate and Administrative Services Committee – September 17, 2020

**AUTHOR:** SCRD Senior Leadership Team

**RE:** BUDGET PROJECT STATUS REPORT – SEPTEMBER 2020

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### RECOMMENDATION(S)

**THAT the report titled Budget Project Status Report – September 2020 be received.**

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### BACKGROUND

The Budget Project Status Report (BPSR) provides the Sunshine Coast Regional District (SCRD) Board updates on projects as approved through the 2020 Budget process and other major projects added throughout the year. The focus of the BPSR is to report on the status of the various projects and to ensure the projects are on time and on budget.

### DISCUSSION

Staff have updated the report and welcome comments / questions on the progress being made on the listed projects.

The 2020 budget projects are included in this report and most of the projects are showing more comprehensive updates in this report. Also to note is that due to COVID-19 a number of projects were deferred to 2021 or amended in funding source. The deferred projects and completed projects are listed near the bottom of the BPSR. Staff have added some proposed completion dates wherever possible. In terms of a project that was cancelled, the resolution number for this direction is included in the comments.

### STRATEGIC PLAN AND RELATED POLICIES

The BPSR is a metric for reporting on projects that move the Strategic Plan and various other core documents forward.

### CONCLUSION

The goal of the BPSR is to provide project status in a concise manner to the Board. The Administration is working to improve this process as we continue to use this tool.

Reviewed by:			
Manager		Finance	X - T. Perreault
GM	X - I. Hall X - R. Rosenboom	Legislative	X – S. Reid
CAO	X – D. McKinley	Human Resources	

Attachment – Budget Project Status Report – September 2020

Sep-20

2020 BUDGET PROJECT STATUS REPORT

Line No.	Dept.	Function	Mgr.	Budget \$	Budget Expended (to date)	Funding Source	Budget Year	Proposed Completion Date	Actual Completion Date	Function Participants	Work Location	Description	Current Status	% Complete
1	PCD	345	Hall	\$447,666	\$313,516	Taxation	2018	Jun-20		B, D, E, F, and Islands	All	Ports 5 Year Capital Plan Repairs (Halkett Bay approach, West Bay float).	Design work and recruitment of consulting engineer complete. Reviewed condition reports in preparation for design review. Early Q4 outreach to community planned. Construction tendered Q2 2019. Further design work completed and budget report prepared for Board decision. Halkett Bay approach project completed. Staff will proceed with limited work at West Bay later in 2020.	In Progress 75%
2	IS	386	Walkey	\$20,000	\$0	Operating Reserves	2020	Jul-20		A	A	Lee Bay Wastewater Treatment Plant - Collection System Repairs	During CCTV review a pipe segment and manhole have been identified in the collection system needing repairs.	Not Started
3	IS	386	Walkey	\$17,000	\$10,326	Operating Reserves	2020	Jul-20		A	A	Lee Bay Wastewater Treatment Plant - Disposal Primary Drain Field Repairs and Vegetation Management	<b>The Lee Bay Field Vegetation has been removed and pipe testing of the transmission lines has taken place with good results. Faulty control valves have been replaced. Further testing of the field distribution plumbing continues.</b>	In Progress 75%
4	CA	110	Reid	\$10,000	\$0	Operating Reserves	2020	Aug-20		All	Regional	Audio / Visual Improvements in Boardroom	<b>Implementation underway to integrate live stream recording to accommodate both in-person and electronic participation.</b>	In Progress 50%
5	CA	210	Michael	\$74,950	\$63,962	Reserves	2018	Sep-20		E, F, and ToG	Gibsons	Fire Prevention Officer Vehicle	Command vehicle for GDVFD, complete with light and siren package for emergency response. Project is 85+% complete, mobile data terminal remains.	In progress 75%
6	IS	370	Walkey	\$200,000	\$0	Operating Reserves	2020	Sep-20		A, B, D, E, F, F Islands and DoS	D	Chapman Water Treatment Plant Sludge Residuals Disposal and Planning	The Chapman Creek Water Treatment Plant produces residuals that need to be dewatered and disposed of. RFP was issued and all bids were significantly in excess of budget, hence RFP was cancelled. Staff are currently exploring alternative approaches	In Progress 25%
7	IS	370	Walkey	\$46,500	\$0	Short Term Debt	2020	Sep-20		A, B, D, E, F, F Islands and DoS	All	Utility Vehicle Purchase	<b>Tender documents have been generated and will be advertised soon.</b>	In Progress 50%
8	IS	370	Walkey	\$10,000	\$0	Capital Reserves	2020	Sep-20		A, B, D, E, F, F Islands and DoS	Regional	Emergency Water Storage Tanks	Portable water tanks are required to provide emergency water supply to support SCRD services or small communities. <b>Product specifications are completed, procurement to be initiated shortly.</b>	In Progress 25%
9	IS	370	Walkey	\$25,000	\$0	Capital Reserves	2020	Sep-20		A, B, D, E, F, F Islands and DoS	E	Cemetery Reservoir Fencing Access	Planning underway. <b>MOTI has upgraded their part of the road, SCRD will upgrade their part of the road this fall and install the fencing.</b>	In Progress 25%
10	IS	391	Walkey	\$40,000	\$0	Reserves	2019	Sep-20		B	B	Curran Road Waste Water Treatment Plant - Marine Outfall Anchor Weights Replacement	Replace all existing marine outfall anchors. An RFP for design and engineering services has been awarded, the kick off meeting has taken place and anchors are being manufactured. <b>Anchors scheduled to be installed in September 2020</b>	In Progress 50%
11	PCD	625	Donn	\$30,420	<b>\$8,403</b>	Capital Reserves	2020	Sep-20		A	A	Replacement of Main Pool Circulation Pump and Replace Three Filters	Currently preparing RFP's. Engineering completed for replacement of main pool circulation pump, approval from Vancouver Coastal Health pending. Anticipated completion by end of Q3. <b>Replacement filters ordered and installation completed. Vancouver Coastal Health approval for replacement of main pool pump received. Main pool pump replacement completed, sign off by engineer and Vancouver Coastal Health pending. Invoicing for engineering and pump pending.</b>	In Progress 75%
12	PCD	625	Donn	\$17,450	\$3,286	Operating Reserves	2020	Sep-20		A	A	Spare Main Pool Circulation Pump and Spare Hot Tub Jet Circulation Pump	Staff are currently working on requisitions. Spare main pool pump will be ordered upon approval of engineer design specifications by Vancouver Coastal Health. Anticipated completion by end of Q3. Spare hot tub jet circulation pump ordered and onsite. <b>Spare main pool pump ordered, delivery pending.</b>	In Progress 75%
13	IS	365 - 370	Walkey	\$25,000	\$0	Operating Reserves	2020	Sep-20		All	Sechelt	Mason Road Utility Building Space Planning	A building permit has been obtained and staff are receiving quotes from contractors to complete the building modifications. On hold due to COVID-19 pandemic	In Progress 50%
14	PCD	650	Robinson	\$30,000	\$0	Reserves	2018	Sep-20		All EA including Islands	B, D, F	Community Parks - Sports Field Potable Water Use Reduction	Analysis of strategies, including ground water use, to reduce potable water use at fields. Project completed as of July 2020. Sufficient non-potable water was found at a depth of 370ft. In Cliff Gilker Park. Invoicing and final reporting underway.	In Progress 75%
15	CA	110	Reid	\$25,000	\$0	Operating Reserves	2020	Oct-20		All	Regional	Public Engagement Platform	<b>RFP out for tender - closes September 27.</b>	In Progress 25%
16	CA	216	Daley	\$35,000	\$0	Capital Reserves	2020	Oct-20		B	B	Facility Upgrades		Not Started

2020 BUDGET PROJECT STATUS REPORT

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17	CA	216	Daley	\$7,000	\$0	Operating Reserves	2020	Oct-20		B	B	Facility Audit Report		Not Started
18	PCD	615	Robinson	\$25,000	\$4,617	Operating Reserves	2020	Oct-20		B, D, E, F (Except F Islands), ToG, DoS, SIGD	Gibsons	Gibsons and District Aquatic Facility - Critical Capital Components	Pool Heat Exchangers. Quotes being obtained currently. Domestic Hot Water Storage Tank. Not Started. Heat Exchanger Control Valves - Not Started. Heat exchangers ordered delivery pending Q3. Domestic hot water storage tank ordered delivery pending Q3. Heat exchanger control valves ordered and onsite. Invoicing pending for all items ordered. <b>Heat exchanger delivery pending, domestic hot water storage tank delivery complete. Invoicing complete for heat exchanger control valves. Invoicing pending for domestic hot water storage tank.</b>	In Progress 75%
19	IS	381 - 390	Walkey	\$0	\$0	Operating Reserves / Grant	2020	Oct-20		Various	Various	Feasibility Study for Wastewater Treatment Plants	Grants were applied for at Grievies, Sunny side, Jolly Roger, Secret Cove, Langdale and Merrill. Merrill and Grievies were successful.	In Progress 50%
20	IS	355	Cooper	\$15,000	\$0	Operating Reserves	2020	Oct-20		B, D, E, F	B, D, E, F	Education and Outreach Materials	Development of education and outreach materials is underway. Introductory brochure, display panels and curbside collection guide are drafted. Awaiting finalization of curbside food waste collection contract to align timing. Final drafts are underway. Mail-out of Green Bin introductory brochure to <b>residents completed mid-August with multi-family to follow in September.</b>	In Progress 75%
21	IS	355	Cooper	\$8,000	\$0	Operating Reserves	2020	Oct-20		B, D, E, F	B, D, E, F	App for Curbside Collection Services	Procurement to be initiated in June 2020. Awaiting the finalization of the curbside food waste collection contract to align timing. Procurement completed. Next step will be to populate the App and other communications components. App anticipated to be live early to mid-Sep.	In Progress 50%
22	PCD	615	Robinson	\$127,876	\$120,376	Reserves	2018	Oct-20		B, D, E, F, DoS, ToG, SIGD	Gibsons and Sechelt	Community Recreation Facilities - Arena Regulatory Projects	Addressing regulatory orders from WorkSafeBC and Technical Safety BC with the SCRD Arena Facilities. Fan installation substantially completed, invoicing pending. WorkSafeBC notified of project completion. Follow up inspection by WorkSafeBC pending. All WorkSafeBC orders have been addressed with only some minor TSBC orders outstanding. Confirmation of compliance with remaining TSBC orders from TSBC safety officer is pending. Request was sent but no response has been given by TSBC. Sending a second request. Procurement of refrigeration maintenance contract completed pending board approval, this is the last remaining order on the list. Staff will contact TSBC safety officer again for confirmation of compliance with all orders when signed maintenance contract is available. <b>Maintenance contract awarded and signed by contractor, signature by SCRD pending.</b>	In Progress 75%
23	PCD	650	Robinson	\$60,000	\$0	Capital Reserves	2020	Nov-20		A, B, D, E, F	All	Sports Field Equipment - Deep Aerator	Procurement process underway. Requesting costs for purchase and delivery of all required equipment. Anticipate final delivery mid-Q4. Exploring options for equipment sharing with regional sports field partners.	In progress 50%
24	IS	350	Cooper	\$10,000	\$10,000	Taxation	2020	Nov-20		All	Regional	WildSafeBC Program	Staffing position to be confirmed shortly. Staff hired and started WildSafeBC training on May 11, 2020. Program is underway.	In Progress 75%
25	CA	113 (116)	Cropp	\$25,000	\$0	Operating Reserves	2020	Nov-20		All	Regional	Insurance Asset Appraisal (Phase 2)	Contractor has been engaged and work to begin in Aug/Sept 2020	In Progress 25%
26	CA	210	Michael	\$50,000	\$0	Reserves	2019	Dec-20		E, F, and ToG	Gibsons	Replace auto extrication equipment	PO issued. Expected delivery Q3	In Progress 50%
27	CA	210	Michael	\$20,000	\$0	Taxation	2019	Dec-20		E, F, and ToG	Gibsons	Hazardous materials response equipment	Hazardous material response equipment required for ammonia response at the Gibsons and Area Community Centre (GACC). Equipment committee struck, currently evaluating project requirements and scope of work. Equipment is on order. Expected to be fully complete by Q3, 2020	In Progress 75%
28	CA	212	Higgins	\$5,000	\$0	Reserves	2018	Dec-20		D	D	Site Design	In progress. Waiting for Telus tower project.	In Progress 25%
29	IS	312	Walton	\$15,000	\$0	Reserves	2019	Dec-20		All	Sechelt	Maintenance Facility (Fleet) - Exhaust Venting System	Expansion of the current vehicle exhaust system in fleet shop to accommodate larger number of buses and trucks being repaired simultaneously. Parts ordered and construction to be completed in Q3 2020	In Progress 50%
30	IS	312	Walton	\$10,000	\$0	Capital Reserves	2020	Dec-20		All	Regional	Fleet Loaner Vehicle	<b>Awaiting replacement vehicle to become available in Q4 2020 or Q1 2021</b>	In Progress 25%
31	IS	312	Walton	\$10,000	\$0	Operating Reserves	2020	Dec-20		All	All	Electric Vehicle Maintenance	<b>Initiation of this project is depended on pending decision on type of EVs and EV-charging stations to be purchased.</b>	Not Started
32	IS	350	Cooper	\$10,000	\$0	Taxation	2020	Dec-20		All	Sechelt	Leachate Management Update	<b>Field work completed, analyses and report to be completed by end of 2020.</b>	In Progress 50%

2020 BUDGET PROJECT STATUS REPORT

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33	IS	350	Cooper	\$175,000	\$0	Taxation	2020	Dec-20		All	Regional	Future Waste Disposal Options Analysis Study	<b>Closing date of RFP is September 18, 2020. Contract award in October 2020 and first results expected Jan 2021.</b>	<b>Started</b>
34	IS	350	Cooper	\$15,000	\$0	Taxation	2020	Dec-20		All	Sechelt	Sechelt Landfill Biocover Feasibility	Project to be initiated in Q3 2020.	Not Started
35	IS	350	Rosenboom	\$437,605	\$193,000	Taxation	2020	Dec-20		All	Sechelt	Remediation Measures Sechelt Landfill Drop-Off Area	Final engineering assessment report received. Internal review of options completed. Conceptual design completed. <b>September ISC staff report seeking budget approval based on preliminary design for construction to start early 2021 at the latest.</b>	<b>In Progress 50%</b>
36	IS	365	Walkey	\$11,650	\$0	Reserves	2019	Dec-20		A and SIGD	A	Pool Road Waterline Replacement / Right of Way Acquisition	Survey and legal services required as part of the water main installation project completed in 2017. ROW acquisition is pending other work in the immediate area that will impact ROW discussions. Recent discussions with property owners suggests more work required.	In Progress 50%
37	IS	365	Walkey	\$7,000	\$0	User Fees	2019	Dec-20		A and SIGD	A	Katherine Creek Flow Monitoring Summary Report	<b>Data analyses is being completed that will result in report to be submitted to FLNRORD in Q4 2020</b>	<b>In Progress 50%</b>
38	IS	366	Misiurak	\$250,000	\$18,000	Reserves	2019	Dec-20		A	A	Mark Way / Chris Way / Bargain Harbour Road Water Main Replacements	Replacement of 50mm PVC water main in the South Pender Harbour water service area that required a significant amount of emergency repairs. Design is complete and permit applications have been submitted. Construction timeline is dependent on receipt of MOTI construction permit and crew availability. Anticipated construction in Q4.	In Progress 25%
39	IS	366	Misiurak	\$40,000	\$0	Operating Reserves	2020	Dec-20		A	A	McNeil Lake Dam Safety Audit	<b>Consultant dam site inspections completed. Consultant/staff operator interviews are underway along with preparation of draft reports for each of the dams, followed by completion of their work in Q4 2020.</b>	<b>In Progress 50%</b>
40	IS	366	Walkey	\$50,000	\$0	Capital Reserves	2020	Dec-20		A	A	Treatment Plant Upgrades	Replacement of treatment system components will allow for more efficient operation of the SP water treatment plant. <b>Procurement of equipment initiated in Q3 and to be continued in Q4 2020.</b>	<b>In Progress 25%</b>
41	IS	370	Misiurak	\$15,000	\$0	User Fees	2019	Dec-20		A, B, D, E, F and DoS	D	Edwards Lake Dam Safety Audit	<b>Consultant dam site inspections completed. Consultant/staff operator interviews are underway along with preparation of draft reports for each of the dams, followed by completion of their work in Q4 2020.</b>	<b>In Progress 50%</b>
42	IS	370	Misiurak	\$94,229	\$11,363	Reserves	2018	Dec-20		A, B, D, E, F and DoS	F	Langdale Well - Pump Station Upgrade	<b>Tenders received July 31 and Recommendation for Contract award at October Committee and Board meeting</b>	<b>In Progress 50%</b>
43	IS	370	Misiurak	\$50,000	\$5,699	Reserves	2018	Dec-20		A, B, D, E, F and DoS	E	Chaster Well Upgrades (Well Protection Plan - Phase 2)	Preliminary design is complete and drafting of the tender documents is underway. Construction in late 2020.	In Progress 50%
44	IS	370	Misiurak	\$112,500	\$0	Reserves	2018	Dec-20		A, B, D, E, F and DoS	B, D, DOS	Exposed Water Main Rehabilitation	<b>Project will be deferred until spring/summer 2021.</b>	In Progress 75%
45	IS	370	Misiurak	\$25,000	\$0	Operating Reserves	2020	Dec-20		A, B, D, E, F, F Islands and DoS	D	Edwards Lake Dam Safety Audit - Additional Funding	see line 41	<b>In Progress 50%</b>
46	IS	370	Misiurak	\$40,000	\$0	Operating Reserves	2020	Dec-20		A, B, D, E, F, F Islands and DoS	D	Chapman Lake Dam Safety Audit	<b>Consultant dam site inspections completed. Consultant/staff operator interviews are underway along with preparation of draft reports for each of the dams, followed by completion of their work in Q4 2020.</b>	<b>In Progress 50%</b>
47	IS	370	Misiurak	\$87,500	\$0	Capital Reserves	2020	Dec-20		A, B, D, E, F, F Islands and DoS	A, B, D, and Sechelt	Exposed Water Main Rehabilitation (Funding Increase)	see line 39	In Progress 75%
48	IS	370	Misiurak	\$175,000	\$0	Capital Reserves	2020	Dec-20		A, B, D, E, F, F Islands and DoS	F	Langdale Pump Station (Phase 2)	see line 37	In Progress 75%
49	IS	370	Misiurak	\$200,000	\$0	Operating Reserves	2020	Dec-20		A, B, D, E, F, F Islands and DoS	B	Groundwater Investigation - Phase 3 - Grey Creek	<b>Consultant and SCRD staff identified a suitable location, drilling to be initiated in September 2020</b>	<b>In Progress 25%</b>
50	IS	370	Misiurak	\$375,000	\$0	Operating Reserves	2020	Dec-20		A, B, D, E, F, F Islands and DoS	Regional	Groundwater Investigation - Phase 2 (Part 2)	<b>Consultant review and identification of three potential test well site have been completed for Roberts Creek, Chaster Road, and Langdale. Drilling to be initiated in September 2020.</b>	<b>In Progress 25%</b>
51	IS	370	Misiurak	\$40,000	\$0	Operating Reserves	2020	Dec-20		A, B, D, E, F, F Islands and DoS	F Island	Feasibility Study Upgrades Eastbourne Water System	<b>Consultant has completed the field assessment and has prepared a preliminary report on the available and type underground of groundwater aquifers. Staff review of report completed. A project information bulletin will be provided to the Eastbourne residents for their review and comment.</b>	<b>In Progress 75%</b>

2020 BUDGET PROJECT STATUS REPORT

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52	IS	370	Misiurak	\$250,000	\$0	Operating Reserves	2020	Dec-20		A, B, D, E, F, F Islands and DoS	Regional	Regional Water Reservoir Feasibility Study Phase 4	<b>Permit issuance for the Site B field soil drilling and geophysical field work is pending with the Province. Field work is expected to occur in early Q4 followed by a Board report in Q4 with the study results.</b>	<b>In Progress 50%</b>
53	IS	370	Rosenboom	\$50,000	\$0	Operating Reserves	2020	Dec-20		A, B, D, E, F, F Islands and DoS	D	Chapman Creek Environmental Flow Requirements Update	Project awarded in May and project execution started with monitoring plan for summer 2020 <b>being finalized for implementation September 2020.</b>	In Progress 25%
54	IS	370	Walkey	\$22,500	\$0	Operating Reserves	2020	Dec-20		A, B, D, E, F, F Islands and DoS	Regional	Confined Space Document Review- Region Water System	A qualified professional is required to review and update the SCRD Confined Space Documents. Staff need to develop tender documents to begin this process. RFQ to be issued in Q3.	Not Started
55	IS	370	Walkey	\$125,000	\$0	Capital Reserves	2020	Dec-20		A, B, D, E, F, F Islands and DoS	Regional	Regional Pressure Reducing Valve Replacements	Staff are currently reviewing requirements for upgrades and will issue a RFQ for a PRV station in Q3.	Started
56	IS	370	Walkey	\$25,000	\$0	Capital Reserves	2020	Dec-20		A, B, D, E, F, F Islands and DoS	D	Chapman Water Treatment Plant Hot Water Upgrade	Staff are coordinating this project with the on site generation project to find efficiencies and cost savings.	In Progress 25%
57	IS	370	Walkey	\$15,000	\$0	Capital Reserves	2020	Dec-20		A, B, D, E, F, F Islands and DoS	All	Equipment Purchase - Utility Trailer	<b>Product specifications are completed and procurement completed early September.</b>	<b>In Progress 75%</b>
58	IS	370	Walkey	\$200,000	\$0	Short Term Debt	2020	Dec-20		A, B, D, E, F, F Islands and DoS	All	Equipment Purchase - Excavator and Trailer	The Utilities crew excavates for water mains and infrastructure regularly and an excavator will increase job efficiency and mobilization. <b>Product specifications are completed, procurement to be initiated shortly.</b>	<b>In Progress 50%</b>
59	IS	382	Misiurak	\$40,000	\$0	Reserves	2019	Dec-20		E	E	Woodcreek Waste Water Treatment Plant - Sand Filter Remediation	<b>Consultant provided to the SCRD a prelim draft design report in late July and SCRD review comments have been returned to consultant for incorporation into a final report in Q3 2020.</b>	<b>In Progress 75%</b>
60	IS	387	Walkey	\$25,000	\$13,638	Reserves	2019	Dec-20		B	B	Square Bay Waste Water Treatment Plant - Infiltration Reduction	Staff are proceeding with repairs and upgrades to the collection system to reduce infiltration. Further analysis of various sections of collection system is underway.	In Progress 75%
61	IS	387	Walkey	\$25,000	\$5,997	Operating Reserves	2020	Dec-20		B	B	Square Bay Waste Water Treatment Plant - Infiltration Reduction (2020)	Further analysis of various sections of collection system .	Started
62	VARIOUS	310 / 312 / 650/ 370	Walton	\$30,000	\$0	Capital and Operating Reserves	2020	Dec-20		All	Regional	Replacement of Mason Road Gate	Project to be started in Q4 2020. <b>SFRP issued on August 20 with a closing date of September 17.</b>	<b>In Progress 25%</b>
63	CA	115	Parker	\$20,000	\$0	Reserves	2019	Dec-20		All	Regional	Collective Agreement Negotiations Support	The Collective Agreement expires December 31, 2019 and will be renegotiated between September – December, 2019. Additional assistance for consultant and/or legal services is anticipated. First meeting October 11, 2019. Negotiations continued through to March, 2020, currently on hold due to COVID-19.	Started
64	CA	136	Hall	\$60,000	\$10,800	CARIP/SS	2017	Dec-20		All	Regional	Corporate Energy Management Program	Scope of work for energy audits coordinated with Asset Management Plan. Tendering for energy audits planned for Q4 2019. Project underway.	In Progress 50%
65	PCD	504	Pady	\$43,990	\$25,705	Reserves	2017	Dec-20		A, B, D, E, F	B, D, E, F	Rural Planning - Zoning Bylaw 310	Consulting contract and other project costs to assist with review/drafting of new zoning bylaw. Consultant has provided the final draft and completed the work within the scope of their project proposal. Staff are reviewing the draft and preparing for focus group engagement for the Fall 2019. Project paused due to staff vacancies/development application workload. To resume in Q3. Next step is preparing draft bylaw.	In Progress 75%
66	PCD	650	Robinson	\$32,370	\$32,370		2019	Dec-20		All EA including Islands	F	Community Parks - Goodwin House Removal	Removal of surplus building at Shirley Macey Park. Tender was issued but not awarded as none of the quotes come with in budget. <b>Analysis of options for consideration anticipated for Q3 or early Q4.</b>	Started
67	PCD	650	Robinson	\$9,410	\$2,598	Taxation	2015	Dec-20		All EA including Islands	All EA including Islands	Community Parks - Signage Upgrade	Collaboration with First Nations on names/translation. Local woodworker preparing sign post for large signs. Sign mockups being confirmed with shisháhl Nation. First phase completed Q4 of 2019. Anticipate final sign purchase and install late 2020.	In Progress 75%
68	PCD	650	Robinson	\$5,192	\$1,113	Taxation	2017	Dec-20		All EA including Islands	All EA including Islands	Community Parks - Parks Bridge Capital Maintenance	Projects planned for completion by Q4 2020 include Vinebrook Bridge replacement as a priority, dependent on weather and water levels. Community interest from SCTS OHV clubs to contribute to replacement project. Exploring options. Major repairs work completed on the Blue (Cliff Gilker) bridge in May 2020.	In Progress 75%
69	PCD	680	Robinson	\$25,000	\$0	Operating Reserves	2020	Dec-20		A, B, D, E, F	D	Pisten Bully Track Replacement	Currently obtaining pricing options. <b>Purchase, delivery and install late Sept. 2020.</b>	In Progress 25%

2020 BUDGET PROJECT STATUS REPORT

Line No.	Dept.	Function	Mgr.	Budget \$	Budget Expended (to date)	Funding Source	Budget Year	Proposed Completion Date	Actual Completion Date	Function Participants	Work Location	Description	Current Status	% Complete
70	PCD	680	Robinson	\$33,500	\$0	Operating Reserves	2020	Dec-20		A, B, D, E, F	D	One-Time Minor Capital - Upgrades and Renewal	Work started in Q3. Projects include new visitor entry stairs, renovation of existing Kiosk and signage, new covered entrance to warming hut. New trail grooming drag. Roof replacement on storage container. New pass printer. Parks beginning to source quotes July 2020. <b>Currently undergoing site design and costing.</b>	In Progress 25%
71	IS	365 - 370	Rosenboom	\$19,000	\$0	User Fees	2020	Dec-20		All	All	New or Expansion of Water Conservation Programs	Expended Rainwater Harvesting Program is implemented and contract with BC Hydro for washing machine rebate program signed for implementation this fall.	In Progress 25%
72	PCD	313	Robinson	\$25,000	\$0	Short Term Debt	2020	Dec-20		All	All	Building Maintenance Vehicle	Procurement process planned for end of Q3. <b>Deferred to Q4.</b>	Not Started
73	PCD	615	Robinson	\$13,000	<b>\$1,264</b>	Taxation	2020	<b>Dec-20</b>		B, D, E, F (Except F Islands), ToG, DoS, SIGD	Sechelt	Sunshine Coast Arena Refrigeration Plant Regulatory Items	Second Ammonia Detector - Have requested. Design work for vent stack extension. Not Started. Estimate completion of design work in 3rd QTR of 2020. Second ammonia detector ordered, installed and commissioned. Invoicing for detector pending. <b>Invoicing for detector completed. Design work for vent stack extension deferred to Q4 2020</b>	In Progress 25%
74	PCD	615	Robinson	\$25,000	\$0	Operating Reserves	2020	Dec-20		B, D, E, F (Except F Islands), ToG, DoS, SIGD	Gibsons and Sechelt	Community Recreation Facilities - Future Planning - End of Useful Life Assessment	Asset Management (Kyle) taking the lead on this project for facility services. Not started. Scope developed and procurement starting early Q3. <b>RFP prepared for posting of tender. Anticipated project completion Q4 2020</b>	Started
75	CA	110	Reid	\$125,000	\$0	Operating Reserves	2020	Feb-21		All	Regional	Website Redesign (Phase 2)	Project to be initiated in Q4 2020.	Not Started
76	IS	350	Cooper	\$10,000	\$0	Eco-Fee Reserves	2020	Mar-21		All	Regional	Backyard Composter Rebate	Project to be initiated in Q1 2021.	Not Started
77	PCD	400	Ken	\$25,000	\$0	Reserves	2018	Mar-21		All	D and E with Regional Impact	Cemetery - Business Plan	Planned for initiation of project in Q3 2019. Scope of work complete. Preparing tender documents. Anticipate tendering in Q4 2020.	Started
78	PCD	500	Pady	\$50,000	\$0	Operating Reserves	2020	Mar-21		All	Regional	Regional Growth Framework - Baseline Research	Planned for late 2020 initiation. Coordination with member municipalities will be part of next steps. <b>Project brief developed.</b>	<b>Started</b>
79	IS	370	Rosenboom	\$35,000	\$0	Operating Reserves	2020	Jun-21		A, B, D, E, F, F Islands and DoS	All	Water Supply and Conservation Public Engagement 2020 (including Water Summit)	Outings currently limited to online outings only. Potential for in person events to be determined over time.	<b>In Progress 25%</b>
80	IS	365-370	Rosenboom	\$60,000	\$0	User Fees	2020	Jun-21		All	Regional	Metering Program 2: Water Meter Data Analytics	Project to be started in Q4 2020	Not Started
81	IS	370	Rosenboom	\$25,000	\$2,097	Reserves	2020	Jun-21		A, B, D, E, F and DoS	Regional	Implementation of shísháhlh Nation Foundation Agreement	Resolution 266/19 No. 7 - Foundation Agreement	In Progress 75%
82	IS	370	Rosenboom	\$30,000	\$0	Operating Reserves	2020	Jun-21		A, B, D, E, F, F Islands and DoS	Regional	Bylaw 422 Update	Scope of work is currently being drafted and procurement process to start in Q3 2020	Started
83	IS	365	Walkey	\$2,500	\$0	Operating Reserves	2020	Jun-21		A and SIGD	A	Confined Space Document Review - South Pender Water System	A qualified professional is required to review and update the SCRD Confined Space Documents. Staff need to develop tender documents to begin this process. Work to begin in Q3 2020.	Not Started
84	IS	365	Walkey	\$125,000	\$0	Short Term Debt	2020	Jun-21		A	All	Emergency Generator	The purchase of a generator for the North Pender system that can provide emergency backup energy to operate the Garden Bay Pump Station is required. <b>Product specifications are being completed, procurement to be initiated early Q4 2020.</b>	<b>In Progress 25%</b>
85	IS	366	Walkey	\$5,000	\$0	Operating Reserves	2020	Jun-21		A	A	Confined Space Document Review - North Pender Water System	A qualified professional is required to review and update the SCRD Confined Space Documents. Staff need to develop tender documents to begin this process. RFQ to be issued in Q3.	Not Started
86	IS	370	Walkey	\$250,000	\$0	Capital Reserves	2020	Jun-21		A, B, D, E, F, and DoS	A	Cove Cay Pump Station Rebuild and Access Improvements	Procurement preparations in Q3 2020 with tendering to follow in Q4 2020.	Not Started
87	IS	370	Walkey	\$50,000	\$0	Capital Reserves	2020	Jun-21		A, B, D, E, F, F Islands and DoS	D	Chapman Water Treatment Plant Instrumentation	Replacement of treatment system components at the Chapman Creek Water Treatment Plant. Procurement of equipment some components has taken place.	In Progress 25%



2020 BUDGET PROJECT STATUS REPORT

Line No.	Dept.	Function	Mgr.	Budget \$	Budget Expended (to date)	Funding Source	Budget Year	Proposed Completion Date	Actual Completion Date	Function Participants	Work Location	Description	Current Status	% Complete
88	IS	370	Walkey	\$250,000	\$0	Capital Reserves	2020	Jun-21		A, B, D, E, F, F Islands and DoS	D	Chapman Water Treatment Plant UV Upgrade	The UV treatment process at Chapman Creek Water Treatment plant has reached the end of its operational life and needs to be replaced with a new UV system with redundancy. Preliminary review of design is underway.	Started
89	IS	370	Walkey	\$93,000	\$0	Short Term Debt	2020	Jun-21		A, B, D, E, F, F Islands and DoS	Regional	Vehicle Purchases - Strategic Infrastructure Division	<b>Options and analysis currently being reviewed. This will be advertised for tender soon.</b>	In Progress 25%
90	CA	216	Daley	\$500,000	\$0	Capital Reserves / ST Loan	2020	Jul-21		B	B	Tanker (Tender) Replacement		Not Started
91	CA	210	Michael	\$350,000	\$0	Short Term Debt	2020	Dec-21		E, F, and ToG	Gibsons	Fire Truck Replacement (Engine #1)	Scope developed. Working with other fire departments for joint bid. Delivery not expected until 2021. <b>RFQ issued, closes September 5, 2020</b>	In Progress 25%
92	IS	370	Misiurak	\$692,000	\$176	Reserves	2020	Dec-21		A, B, D, E, F and DoS	B, D, E, F, DOS	Chapman Water Treatment Plant Chlorination System Upgrade	<b>Preliminary layout of the new disinfection equipment had been identified, which required a geotechnical analysis to be completed to determine adequate soil conditions for the foundation of the equipment. Construction tender scheduled for late Q4 2020, followed by construction in 2021.</b>	In Progress 50%
93	IS	370	Misiurak	\$750,000	\$0	Capital Reserves	2020	Dec-21		A, B, D, E, F, F Islands and DoS	E	Reed Road and Elphinstone Road Water Main Replacement	Design of the replacement water lines is underway. Construction permits currently being worked on with MOTI. Construction of the replacement distribution waterlines will be completed in 2021 as part of the Church Road construction project. Improvements will include the installation of new fire hydrants along these sections of waterlines.	In Progress 50%
94	IS	370	Misiurak	\$8,270,000	\$0	Capital Reserves / Long Term Loan	2020	Dec-21		A, B, D, E, F, F Islands and DoS	F	Groundwater Investigation - Phase 4A - Church Road	<b>The second production well was tested in late July. Preliminary results indicated a clear, non turbid and sand free water quality. SCRD and MOTI had an on site meeting to discuss the repaving and drainage issues on Elphinstone , and MOTI committed to correcting the street drainage issues at the time the SCRD repaves Elphinstone during the summer of 2021.</b> Final design and tender issuance is scheduled for Q4 2020. Construction will begin in late 2020 and continue into the summer of 2021 pending the issuance of the necessary MOTI, Provincial Water License, Vancouver Health and BC Hydro permits.	In Progress 75%
95	IS	365	Rosenboom	\$75,000	\$0	Operating Reserves	2020	Dec-21		A and SIGD	A	North Pender Harbour Water Service - Water Supply Plan	Project to start in Q4 2020	Not Started
96	IS	366	Rosenboom	\$75,000	\$0	Operating Reserves	2020	Dec-21		A	A	South Pender Harbour Water Service - Water Supply Plan	Project to start in Q4 2020	Not Started
97	IS	370	Rosenboom	\$25,000	\$0	User Fees	2019	Dec-21		A, B, D, E, F and DoS	Regional	Water Sourcing Policy	Technical engineering support for the development of the Water Sourcing Policy, <b>Project to start in Q1 2021</b> if additional supply sources have been identified	Not Started
98	PCD	615	Robinson	\$410,000	\$25,862		2019	Dec-21		B, D, E, F, DoS, ToG, SIGD	Sechelt	Community Recreation Facilities - Sechelt Aquatic Centre Facility Projects	Various projects identified. Currently working on reassessing wall panel conditions to develop a scope of work for repair based on current conditions. Quotation requested and received for additional testing to determine current status of wall panel condition. Scope of work being finalized. <b>Revised quotation for additional testing to also include development of updated scope of repairs based on testing results requested.</b>	Started
99	PCD	613	Robinson	\$1,272,500	<b>\$441,807</b>		2019	2020 / 2021		B, D, E, F, DoS, ToG, SIGD	Gibsons and Sechelt	Community Recreation - Capital Renewal Plan	Recreation Capital Plan for Rec Facilities - GACC \$12,000; GDAF \$54,000, SAC \$172,000, SCA \$317,399 Started and on going. <b>11 Projects completed to date in 2020. SCA Bitumen roof replacement project design consultant awarded, start of design work pending. Design completion Q4, full project completion anticipated Q2 - Q3 2021. SCA Chiller Upgrade project MCC panel phase tendered, award pending and will require Board approval to proceed.</b>	In Progress 25%
100	PCD	615	Robinson	\$166,500	\$0	Operating Reserves	2020	2020 / 2021		B, D, E, F (Except F Islands), ToG, DoS, SIGD	Sechelt	Capital - Classified as "non-critical" in Asset Management Plan	SCA - Parking Lot Lighting - Not started. SAC Diving Board Replacement - Quotes requested. SAC Sound baffles and Re-Hang Lights - Project Brief Completed. SAC diving board ordered, estimated delivery August 2020. <b>SAC diving board delivered, one part missing from vendor. Following up with vendor regarding missing part. Diving board invoicing pending.</b>	In Progress 25%

2020 BUDGET PROJECT STATUS REPORT

Line No.	Dept.	Function	Mgr.	Budget \$	Budget Expended (to date)	Funding Source	Budget Year	Proposed Completion Date	Actual Completion Date	Function Participants	Work Location	Description	Current Status	% Complete
101	CA	216	Daley	\$20,000	\$0	Capital Reserves	2020	complete		B	B	Gear Washing Machine		Not Started
102	CA	115	Parker	\$10,000	\$0	Support Services	2020	TBD		All	Regional	Public Engagement Training	March 31, 2020 - deferred until 2021.	Not Started
103	CA	115	Parker	\$12,000	\$0	Support Services	2020	TBD		All	Regional	First Nations Cultural Appreciation Initiatives	March 31, 2020 - deferred until 2021.	Not Started
104	CA	115	Parker	\$10,000	\$0	Support Services	2020	TBD		All	Regional	Employee Recognition Program	March 31, 2020 - deferred until 2021.	Not Started
105	CA	115	Parker	\$8,000	\$0	Operating Reserves	2020	TBD		All	Regional	Certificate of Recognition (COR)	TBD	Not Started
106	PCD	540	Hall	\$60,000	\$0	Grant / Operating Reserves	2018	TBD		All	F	Hillside Development Project - Investment Attraction Analysis	Baseline study, market analysis and development recommendations related to Hillside Industrial Park. Scope of work developed. Dialogue with SCREDO.	In Progress 25%
107	PCD	650	Hall	\$62,263	\$4,620	Gas Tax	2016	TBD		All EA including Islands	B	Community Parks - Coopers Green Park - Hall and Parking Design Plans	Approval from MoTI for parking on road right of way received. Application approved by Board of Variance (2016-Sep-30). Consulting with shishálh Nation re archaeological review. Engagement activities completed. RFP released May 19. Archaeology permit application confirmed. Task Force applications being collated for Board appointment. Architect hired; Task Force underway. Report to community on progress and open house March 2018. Design revised following open house. Project update included in Q2 departmental report. Schematic design completed. Design development and project update report to CAS Committee in Q3. Design to be completed Q1 2019. Balance of work will be a carryforward item. Application to Investing in Canada Infrastructure Program completed Q1 2019, aligned with capital funding plan. Grant result announced July 2020. <b>Staff preparing public participation analysis and recommendations for Q3 Committee, following Board direction.</b>	In Progress 50%
108	PCD	650	Robinson	\$300,000	\$0	Capital Reserves	2020	TBD		A, B, D, E, F	Sechelt	Parks Building (Partial Replacement / Upgrade)	Project Brief in development. Options for consideration given pandemic response and guidelines. <b>SLT to review late Q3 2020.</b>	Started
109	PCD	650	Robinson	\$20,000	\$0	Gas Tax	2019	TBD		All EA including Islands	D and E	Community Parks - Lower Road / Ocean Beach Esplanade Connector Planning	Planning for a connector trail, including public participation. Project costing for two options currently under way. Preliminary field layout/design occurred in Q2 with options now being costed. <b>Anticipate options for consideration early Q4.</b>	Started
110	CA	Various	Various	\$33,900	\$0	Taxation / Support Services	2020	TBD		Various	Various	SCRD Corporate Recycling Program	<b>Staff will reassess project and timelines once facilities are re-opened.</b>	Not Started
111	CA	212	Higgins	\$150,000	\$13,829	Reserves	2018			D	D	Roof Replacement	Consultant hired. RFQ online. Site meeting scheduled.	In Progress 25%
112	CA	212	Higgins	\$350,000	\$0	Capital Reserves	2020			D	D	Engine #1 Replacement	In progress. Committee working. Truck spec being designed.	Started
113	CA	220	Treit	\$25,000	\$0	Taxation	2018			All	Regional	911 Tower and Spectrum Upgrading	Applications for new repeater frequencies submitted (to improve communications).	Started
114	CA	220	Treit	\$46,600	\$0	Capital Reserves	2020			All	Gibson	Gibsons Radio Tower		Not Started
115	CA	220	Treit	\$268,900	\$0	Capital Reserves	2020			All	Sechelt	Chapman Creek Radio Tower		Not Started
116	CA	220	Treit	\$128,000	\$0	Capital Reserves	2020			All	Regional	Emergency Telephone 9-1-1 Consulting		Not Started
117	CA	220	Treit	\$141,400	\$0	Capital Reserves	2020			All	Regional	Emergency Equipment Upgrade		Not Started
118	CA	222	Treit	\$20,000	\$0	Reserves	2019			All	Regional	Contracted Services for Statutory, Regulatory and Bylaw Review	Resources are required to implement the recommendations outlined in Section 5 of the Emergency Plan Review which were prioritized for action. The scope of work would include assisting member municipalities in addressing the legislative and bylaw revisions, while ensuring alignment and communication between the parties.	Not Started
119	CA	222	Treit	\$10,000	\$0	Taxation	2020			All	All	Mass Communication System	<b>RFP has closed</b>	Not Started

2020 BUDGET PROJECT STATUS REPORT

Line No.	Dept.	Function	Mgr.	Budget \$	Budget Expended (to date)	Funding Source	Budget Year	Proposed Completion Date	Actual Completion Date	Function Participants	Work Location	Description	Current Status	% Complete
120	IS	370	Walkey	\$50,000	\$17,627	Reserves	2020			A, B, D, E, F and DoS	D	Chapman Lake Siphon System Upgrade	An engineered review was completed in 2019 for system improvements required for the Chapman siphon system for ongoing work in 2020.	In Progress 50%
121	IS	370	Walkey	\$7,000,000	\$0	Long Term Loan	2020			A, B, D, E, F, F Islands and DoS	Sechelt and SIGD	Metering Program 1: Meters Installation Phase 3 District of Sechelt and Sechelt Indian Government District	Timing to be confirmed pending direction from Province regarding public participation in more complex electoral approval processes	Not Started
122	IS	370	Walkey	\$22,000	\$0	User Fees	2020			A, B, D, E, F, F Islands and DoS	Regional	Summer Student (4 months) - Water Asset Inventory Update	<b>Position filled as per September 1, 2020.</b>	<b>In Progress 50%</b>
123	VARIOUS	110 / 115 / 117 / 135 / 136 / 200-290 / 365 / 366 / 370 / 504 / 520 / 650	SLT	\$80,689	\$0	Taxation / Operating Reserves / Support Services	2020			Various	Sechelt	Field Road Space Planning	<b>On hold and pending further review in light of COVID-19, health orders and WorkSafeBC requirements.</b>	Not Started
124	CA	210, 212, 216, 218	Treit	\$10,000	\$0	Reserves	2018			A, B, D, E, F and ToG	Various	Fire Department Records Management Software	VFD Document System - Fire Pro 2 Software Package. Draft project initiation brief developed. Fire Chiefs, IT and RMS team meeting in Q4.	Started
125	IS	381-395	Walkey	\$2,500	\$0	Operating Reserves	2020			Various	Various	Capital Planning Engagement Seminars	Development of alternatives to in-person meetings is underway and scheduling of alternative sessions to occur in July for the <b>period late-August / mid-September</b>	<b>In Progress 50%</b>

DEFERRALS (TO FUTURE YEARS AS NOTED UNDER PROPOSED COMPLETION DATE)

Line No.	Dept.	Function	Mgr.	Budget \$	Budget Expended (to date)	Funding Source	Budget Year	Proposed Completion Date	Actual Completion Date	Function Participants	Work Location	Description	Current Status	% Complete
1	PCD	136	Hall	\$20,000	\$0	Operating Reserves	2020	Dec-21		All	Regional	Building Adaptive and Resilient Communities		Deferred
2	PCD	136	Hall	\$50,000	\$0	Operating Reserves	2020	Dec-21		All	Regional	Community Emissions Analysis		Deferred
3	PCD	500	Pady	\$10,000	\$0	Operating Reserves	2020	Dec-21		All	Regional	Regional Housing Conference Partnership		Deferred
4	PCD	650	Robinson	\$15,000	\$0	Operating Reserves	2020	Dec-21		A, B, D, E, F	All	Suncoaster Trail (Phase 2)		Deferred
5	IS	150	Rosenboom	\$30,000	\$0	Operating Reserves / Surplus	2020	Dec-21		All	Regional	Watershed Governance Feasibility Study		Deferred
6	IS	310	Walton	\$14,271	\$0	Taxation	2020	Dec-21		B, D, E, F, ToG, DoS, SIGD	Regional	Youth Transit Demand Assessment Survey and Pilot Project	Discussion with SD36 and TRAC initiated	Deferred
7	IS	350	Cooper	\$27,000	\$0	User Fees (Tipping)	2020	Mar-21		All	A	Food Waste Drop-offs	Project will be initiated in Q3 2020. <b>As per Board direction July 30, 2020, project deferred to Q1 2021 - THAT the Area A Food Drop-off be delayed to 2021 Resolution 284/20</b>	<b>Deferred</b>

COMPLETED

Line No.	Dept.	Function	Mgr.	Budget \$		Funding Source	Budget Year	Actual Completion Date	Actual Completion Date	Function Participants	Work Location	Description	Current Status	% Complete
1	CA	110	Reid	\$10,000		Reserves	2019	Apr-20	Apr-20	All	Regional	Website Consulting Services (Phase 1)	Consulting services to review and make recommendations on the SCRD website, as well as develop a scope of work for an RFP to re-design the site. RFP closed and evaluation meeting scheduled for November 20, 2019. Kimbo Design was awarded the contract. Work is underway with final report due March 31. Review complete. Final report received April 6, 2020.	Completed
2	PCD	650	Robinson	\$68,000		Reserves	2019	May-20	Jul-20	All EA including Islands	All EA including Islands	Community Parks - Parks Vehicle Replacement	2008 model/150,000 km diesel truck with irreparable emissions problem. Scope of work/specification developed. Project/purchase complete, vehicle delivered and being outfitted with final required accessories. <b>Complete.</b>	<b>Completed</b>

2020 BUDGET PROJECT STATUS REPORT

Line No.	Dept.	Function	Mgr.	Budget \$	Budget Expended (to date)	Funding Source	Budget Year	Proposed Completion Date	Actual Completion Date	Function Participants	Work Location	Description	Current Status	% Complete
3	PCD	345	Hall	\$156,250		FP Change	2019	Jun-20	Jun-20	B, D, E, F, and Islands	F	Ports Services - Keats Landing Emergency Repairs	Repairs at Keats due to boat collision; insurance revenue to be applied (subject to Board approval). <b>Work completed after spring weather delay. Final invoicing and insurance paperwork being completed.</b>	Completed
4	CA	210	Michael	\$30,000		Capital Reserves	2020	Jul-20		E, F, and ToG	Gibsons	Automatic Garage Door Openers	<b>Complete</b>	Completed
5	IS	382	Walkey	\$6,000		Operating Reserves	2020	Jul-20		E	E	Woodcreek Park Wastewater Treatment Plant Inspection Chamber Repairs	<b>Locating and repairing waste water inspection chambers has been completed.</b>	Completed
6	IS	365	Walkey	\$90,000		Short Term Debt	2019	Aug-20		A and SIGD	A	North Pender Harbour Water Service - Vehicle Replacement	<b>new trucks delivered in August 2020</b>	Completed
7	PCD	520	Whittleton	\$50,000		Capital Reserves	2020	Aug-20	Aug-20	A, B, D, E, F, and SIGD	All	Replacement Vehicle	<b>Plug-in hybrid vehicle received and placed in service.</b>	Completed
8	IS	381 - 395	Walkey	\$45,000		Short Term Debt	2019	Aug-20		All Areas	All	Wastewater Service Vehicle Replacement	<b>new trucks delivered in August 2020</b>	Completed
9	IS	350	Cooper	\$20,000		Taxation	2020	Aug-20		All	Sechelt	Hydrogeological Assessment Update	<b>Assessment completed and submitted to MOECC by due date. No noteworthy findings.</b>	Completed
10	PCD	650	Robinson	\$30,000		Reserves	2018	Sep-20		All EA including Islands	B, D, F	Community Parks - Sports Field Potable Water Use Reduction	Analysis of strategies, including ground water use, to reduce potable water use at fields. Project completed as of July 2020. Sufficient non-potable water was found at a depth of 370ft. In Cliff Gilker Park. Invoicing and final reporting underway.	Completed
11	CA	110	Reid	\$25,000		Taxation	2019		Mar-20	All	DoS	Video Streaming Meetings	Consulting services to design, install, commission, and optionally maintain a video and audio live-streaming solution for the SCRD Board Room. Scope of work in negotiation with selected vendor (Soundwerks). System installed and running.	Completed
12	PCD	345	Hall	\$676,830		Short Term Debt	2018		Jul-20	B, D, E, F, and Islands	B	Vaucroft Capital Works	Consulting engineer reviewing condition reports in preparation for design review. Early Q4 outreach to community planned. Construction tendered Q2 2019. Project tendered and awarded, material order and pre-fabrication underway. <b>Project completed spring 2020.</b>	Completed
13	IS	350	Kumar	\$47,680		Taxation	2020		Apr-20	All	Regional	Drywall Screening Process Improvements	<b>Outreach, Education and Training being developed (0.5 FTE is underway)</b>	Completed
14	IS	365	Walkey	\$145,000		Reserves	2019		Mar-20	A and SIGD	A	Garden Bay UV Reactor Purchase	The UV unit has been delivered and being installed.	Completed
15	IS	366	Walkey	\$18,000		Reserves	2019		Apr-20	A	A	Streaming Current Monitor - Water Treatment Plant	The streaming current meter required to ensure compliance with water quality potability at all times is failing frequently and places the SCRD out of compliance during these events. Streaming current instrument has been installed.	Completed
16	IS	370	Walkey	\$120,000		Reserves	2019		Mar-20	A, B, D, E, F and DoS	D	Chapman Water Treatment Plant Water Quality Monitoring Upgrades	The equipment has been received and being installed.	Completed
17	IS	370	Walkey	\$170,000		Short Term Debt	2018		Mar-20	A, B, D, E, F and DoS	All	Regional Water Service - Vehicle Replacements	Tender awarded and awaiting delivery.	Completed
18	CA	506	Nelson	\$5,000		Rate Stabilization	2020		Jul-20	All	Regional	Reduce revenues as a result of change to subscription service with Land Title and Survey Authority of BC	<b>Previously implemented per LTSA directive. Recognition of resulting revenue reduction.</b>	Completed

CANCELLED PROJECT														
Line No.	Dept.	Function	Mgr.	Budget \$	Budget Expended (to date)	Funding Source	Budget Year	Proposed Completion Date	Actual Completion Date	Function Participants	Work Location	Description	Current Status	% Complete
1	IS	350	Cooper	\$10,000	\$0	Taxation	2020	Dec-20	CANCELLED	All	Sechelt	Sechelt Share Shed Sinkhole Repairs	To be considered with Remediation Measures Sechelt Landfill Drop-Off Area. <b>Discontinuation of Share Shed program at Sechelt Landfill as per July 30, 2020 Board direction Resolution 267/20 #3</b>	Cancelled

Open Projects by Year	
2015	1
2016	1
2017	3
2018	13
2019	17
2020	90
2021	0

% Complete Summary	
Not Started	31
Started	16
In Progress 25%	27
In Progress 50%	28
In Progress 75%	23
Completed	18
Deferred	7

DEFINITION	
20.5%	Work has not been started for project.
10.6%	Work is in preliminary stages.
17.9%	Up to 25% progress
18.5%	Up to 50% progress
15.2%	Up to 75% progress
11.9%	100% Finished
4.6%	Project was deferred by motion.

Policy Codes Key	
SP	- Strategic Plan
WE	- We Envision
ITSP	- Integrated Transportation Study Plan
CRWP	- Comprehensive Regional Water Plan
PRM	- Parks and Rec Master Plan
SARP	- Chapman Creek Watershed Source Assessment Response Plan
EVDF, HMBF, RCF, GF	- Fire Departments (strategic plans)

2020 BUDGET PROJECT STATUS REPORT

Line No.	Dept.	Function	Mgr.	Budget \$	Budget Expended (to date)	Funding Source	Budget Year	Proposed Completion Date	Actual Completion Date	Function Participants	Work Location	Description	Current Status	% Complete
	TOTAL				125			Cancelled		1	0.7%	The project listed as cancelled was determined as a) not required by Board or b) the project evolved into a new project and is referred to in status column (line number)	PDTHP - Parks Division Trail Network Plan TFP - Transit Future Plan AAP - Agricultural Area Plan AMP - Asset Management Plan ZW/S - Zero Waste / Sustainability	
	TOTAL									151	100%			

## SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

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**TO:** Corporate and Administrative Services Committee - September 17, 2020

**AUTHOR:** Dean McKinley, Chief Administrative Officer

**SUBJECT:** 2019-2023 STRATEGIC PLAN REVIEW

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### RECOMMENDATION(S)

**THAT** the report titled 2019-2023 Strategic Plan Review be received;

**AND THAT** the 2019-2023 Strategic Plan Review be approved as amended;

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### BACKGROUND

The 2019-2023 Strategic Plan was reviewed September 3 and 4, 2020 at the Gibsons and Area Community Centre in compliance with SCRD Board Policy 'Strategic Planning' - Section 13, Subsection 6430:

*2.1. The SCRD will prepare a strategic plan at the beginning of each Board's term and will update the strategic plan throughout its term. The strategic plan will address the key policy priorities and will be the key focus of the Board's work for our communities.*

*4.1. It is proposed that in the first six months of a new Board's election, the Board will meet to establish goals for the next three years. Furthermore, the Board will meet yearly thereafter to review and where necessary modify and add to the strategic goals identified by the Board. Throughout the year, all proposed amendments will be forwarded to the annual review meeting for consideration with the entire package of goals contained within the Strategic Plan. This process will guide the work of the Board and staff over the three years.*

### DISCUSSION

#### *Analysis*

The strategic plan was originally developed in 2019 with few constraints on budget and human resources. The COVID-19 pandemic has created many financial challenges and disruptions in our regular business processes. This review was intended to recalibrate the current plan's strategic tactics and targets to accomplish the desired outcomes.

The Senior Leadership Team (SLT) gave updates on the current status of the five Strategic Plan Focus Areas.

### Strategic Plan Focus Areas

1. Engagement and Communications
2. Infrastructure Management
3. Regional Collaboration and Partnership
4. Climate Change and Resilience
5. Advocacy

### *Financial Implications*

The financial implications of the Strategic Plan will be dependent on the methods of financing, prioritization and timing of the implementation of the various strategies included in the Plan's 5 Focus Areas. The Strategic Plan will provide significant guidance and input for preparation and finalization of the SCRD's Financial Plan beginning in the 2021 budget year.

It is likely that the SCRD will be heading into the 2021 Budget with a potential significant tax increase. This does not take into consideration any projected large user fee increases in water, wastewater or refuse collections.

Attached are the notes taken from the 2019-2023 Strategic Plan Review session **(ATTACHMENT A)**.

The Board completed a prioritization exercise of the strategic plan tactics and targets. The purpose was to highlight the higher priorities resulting in the following numerical order and ratings.

The results were as follows (top 4):

- 1) Develop Growth Management Plan;
- 2) Complete development and implementation and plan for community engagement of a water metering program;
- 3) Undertake solid waste management demand analysis and develop options for long-term solid waste management approach for garbage and recycling organics;
- 4) Provide promote and improve online access to services such as building permit applications and inspection scheduling, development applications, bill payment and facility bookings.

### *Next Steps*

Staff will be working to amend the 2019-2023 Strategic Plan document (both document and design updates) once the attached amendments are adopted by the Board. Staff will include the updated 2019-2023 Strategic Plan in the October 8, 2020 Board meeting package for final consideration.

### *Communications Strategy*

A communications strategy is being formulated to inform the public, community partners and stakeholders of the amended focus area goals, strategies, tactics and targets contained within the amended SCRD 2019-2023 Strategic Plan.

## **CONCLUSION**

A review of the 2019-2023 Strategic Plan was conducted on September 3 and 4, 2020 with Board and senior staff. The COVID-19 pandemic has created many financial challenges, disruptions in our regular business processes. The strategic tactics and targets were reviewed and prioritized in the attached notes.

The amended 2019-2023 Strategic Plan will be presented to the October 8, 2020 Board meeting for consideration of adoption. A communications strategy will be formulated to share the amended Strategic Plan with the public, community partners and stakeholders once the plan is adopted.

## **ATTACHMENT:**

Attachment A - SCRD 2020 Strategic Plan Review Notes

Reviewed by:			
Manager		Finance	X – T. Perreault
GM	X – R. Rosenboom X – I. Hall	Legislative	X – S. Reid
CAO	X – D. McKinley	Other	





## SUNSHINE COAST REGIONAL DISTRICT

### 2019-2023 Strategic Plan Review

Gibsons and Area Community Centre

**DAY 1 - Thursday, September 3, 2020 5:00 pm – 8:30 pm**

**DIRECTORS PRESENT:**

Lori Pratt  
Darnelda Siegers  
Leonard Lee  
Andreas Tize  
Donna McMahon  
Mark Hiltz  
Alton Toth  
David Croal

**STAFF/FACILIATOR PRESENT:**

Facilitator	Mark Brown
Chief Administrative Officer	Dean McKinley
GM Corporate Services / CFO	Tina Perreault
GM Planning and Community Development	Ian Hall
GM Infrastructure Services	Remko Rosenboom
Corporate Officer	Sherry Reid
Executive Assistant / Recorder	Tracey Hincks

*Chair Pratt welcomed everyone and gave an introduction to the Board and staff including the groundwork for the spirit of enhancement of constructive dialogue and recognized that the review was taking place on the traditional lands of the shíshálh and Squamish Nations.*

### **Overview of Strategic Plan Process**

*Facilitator Mark Brown gave an overview of the agenda and the expected outcomes of the strategic plan review process were discussed. The strategic plan was originally developed in 2019 with few constraints on budget and human resources and this review is intended to recalibrate the current plan to accomplish the desired outcomes.*

### **Environmental Scan**

Dean McKinley CAO discussed the impact of COVID-19 on the SCRD. The pandemic has created many financial challenges, disruptions in our regular business processes and may have lasting effects on our new normal. Staff have spent hundreds of unexpected hours working on mandatory activities related to the pandemic such as EOC, COVID planning, COVID restart planning and loss of some staff due to family considerations.

The SCRD has been successful with continuing services in areas such as bus services, solid waste services, water delivery, building services, core business services and working remotely

(both staff and Board). Most importantly, there have been no reports of COVID cases in staff or Board members due to prompt safety procedures.

### **Current Status of the five Strategic Plan Focus Areas**

#### **Criteria for Strategic Priorities:**

- Engaged with our communities by actively listening and sharing information
- Respectful of the views and interests of our residents, our peers, our partners and our staff
- Bold and deliberate, acting with courage and purpose

#### **Status of Strategic Plan Focus Areas**

1. Engagement and Communications
2. Infrastructure Management
3. Regional Collaboration and Partnership
4. Climate Change and Resilience
5. Advocacy

The Senior Leadership Team (SLT) gave updates on the status of the Strategic Plan's Strategies and Tactics as well as the establishment of revised Target dates for the completion of the Tactics outlined in the plan. A free-flowing discussion ensued regarding tactics, the proposed amended target dates and the rationale for changes.

#### **Engagement & Communications**

Goal: To proactively engage with our residents, partners and staff in order to share information and obtain their input on issues and decisions that affect them.

#### **Infrastructure Management**

Goal: To ensure that the SCRD's built and natural assets serve our residents now, and in the future.

#### **Regional Collaboration and Partnership**

Goal: To lead, encourage and support our partners and stakeholders in working together to understand and address the opportunities and challenges facing our region.

#### **Climate Change and Resilience**

Goal: In the face of a global climate emergency we must move swiftly to reduce GHG emissions and enhance our region's resiliency to the effects of a changing climate.

#### **Advocacy**

Goal: To advance a collective voice to represent the interests of the region with the Provincial and Federal governments and other agencies responsible for providing governance and services in our region.

The Workplan for Friday was reviewed.

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**DAY 2 - Friday, September 4, 2020 8:30 am – 4:00 pm**

**Board Directive Status Report – Legislative and Financial Considerations**

Tina Perreault GM Corporate Services/CFO and Sherry Reid, Corporate Officer, provided a presentation on the legislative and financial considerations of several key outstanding Board directives.

Considerations to keep in mind as strategic initiatives are prioritized:

- Some decisions around the creation of new services or long-term borrowing have already made and are in motion, and others are upcoming for decision. They may require some form of elector approval to proceed.

As a result of COVID-19, the province has provided advice and recently released a guidance document to assist local governments in moving forward with AAPs and Assent votes. Impact of those changes include:

- Longer timelines to increase opportunities and ways public can respond to AAP and/or vote
- Amending or developing new procedures, amendment to elections Bylaw, and
- Requirement to develop COVID safety plan for voting procedures - and provide training
- Ultimately means additional resourcing required – both in time and financial cost to run process

**In progress per Board directive:**

- Water Meters – Long Term Loan Authorization
- Curbside Recycling – Establish new service

**Upcoming Board Decisions:**

- Wastewater Treatment Plant Services (15) – Amend, dissolve and/or establish new service(s)
- Contribution Service for Social Services – Establish new service
- Watershed Governance – Establish new service (Strategic Plan priority)

**Financial Considerations**

When the 2020-2024 Financial Plan was amended, many projects were deferred into 2021, including several new staffing positions.

The budget was reduced by almost \$400,000 by not contributing reserves on a one time basis and used over \$361,000 of operational reserves to reduce taxation. These contributions are reinstated for 2021 and reserves may not be available for the 2021 Budget.

Staff have been providing several reports on the implications to service delivery as a result of COVID-19, including additional variance analysis and forecasting on projected deficits. The most notable being the projected cost implications to the Recreation facilities re-start. It also continues to evolve on what the implications COVID-19 may have into 2021.

There are several items which the Board has already committed to that will have financial implications starting in 2021 and beyond; such as: the commitment to take on an additional \$16 million dollars' worth of new long-term debt servicing for the Church Rd Well, Water Metering and several other short-term capital equipment financing such as for Fire truck replacements

Ongoing items which will have significant financial implications are; the Sechelt Landfill remediation, wastewater facilities-capital renewal funding, Coopers Green Hall Project. Also unknown is are the impacts of a new collective agreement.

There are several emerging items which will have financial and resourcing implications that need to be acknowledged in the considering the 2021 budget process. These include the regulatory requirement to complete the Sechelt Landfill-Stage H Closure and additional construction of groundwater wells.

It is likely that the SCRD will be heading into the 2021 Budget with a potential for a significant tax increase. This does not take into account any projected large user fee increases in water, wastewater or refuse collections.

## Review/Revise/Confirm 5 Focus Areas

### Prioritize Tactics and Targets - Round 1

1. Engagement and Communications – **keep as is.**
2. Infrastructure Management – **rename:** Asset Stewardship
3. Regional Collaboration and Partnership – **rename:** Working Together
4. Climate Change and Resilience – **rename:** Community Resilience and Climate Change Adaptation
5. Advocacy – **keep as is.**

### Revisions to 2019 – 2023 SCRD Strategic Plan

STRATEGIES	TACTICS	TARGETS
<i>ENGAGEMENT AND COMMUNICATIONS</i>		
<b>AMEND</b> 1.1 – Develop Public Outreach <b>and Engagement</b> Strategy	Tactic 3 - <b>AMEND</b> “Develop displays, materials and other media to increase awareness <b>of the other levels of government</b> and SCRD programs and services”	2021
	<b>ADD</b> Tactic 4 - Review role and mandate of advisory committees and commissions	2021
<b>AMEND</b> 1.2 – Ensure effective internal engagement	Tactic 1 - <b>AMEND</b> by inserting “...and staff <b>including those</b> without emails.”	Ongoing
<b>AMEND</b> 1.3 – Enhance on-line tools to improve functionality and user experience	Tactic 2 – <b>AMEND</b> “Provide <b>promote and improve</b> online access to services such as building permit applications and inspection scheduling, development applications, bill payment and <b>facility bookings.</b> ”	2021

STRATEGIES	TACTICS	TARGETS
<b>ASSET STEWARDSHIP</b>	All 3 Tactics – <b>AMEND</b> “asset management” to “asset stewardship”	
<b>AMEND 2.1</b> – Plan for and ensure year-round water availability now and in the future	Tactic 2 <b>SEPARATE</b> into 2 different tactics “Investigate and/or develop water supply <b>plans....</b> ”	2022
	“Investigate and/or develop water supply <b>sources...</b> ”	2023
	Tactic 3 – <b>AMEND</b> “Review and update Drought <b>Response Plan...</b> ”	Ongoing
	Tactic 6 – <b>AMEND</b> “Complete development and implementation <b>and plan for community engagement</b> of a water metering program.”	2023
<b>AMEND 2.2</b> – Continue to develop and implement comprehensive asset <b>stewardship</b> strategy	Tactic 7 <b>AMEND</b> “Develop strategic action plan for protection of watersheds and <b>aquifers</b> ”	tbd
<b>WORKING TOGETHER</b>		
<b>AMEND 3.3</b> – Increase Intergovernmental Collaboration	<b>DELETE</b> Tactic 1 – “Develop program to increase public awareness of the different levels of government in the region and the services they provide.”	
	<b>ADD</b> Tactic – “Strive to align processes and policies across jurisdictions”	2021
<b>COMMUNITY RESILIENCE &amp; CLIMATE CHANGE ADAPTATION</b>		
<b>AMEND 4.1</b> DEVELOP CLIMATE CHANGE ADAPTATION STRATEGY	<b>AMEND</b> Tactic 3 “Develop and implement adaptation strategies and measures, <b>including emergency plans</b> , for priority risk areas”	2022-23
<b>AMEND 4.3</b> Achieve Carbon Neutrality (Corporate)	<b>AMEND</b> Tactic 1 “Update corporate emissions inventory <b>and set new targets</b> ”	2021

STRATEGIES	TACTICS	TARGETS
<b>ADD</b> 4.4 Enhance COVID Resilience	Review programs/facilities/services and in accordance with public health directives implement methods to deliver programs/services remotely	2021
<b>ADD</b> 4.5 Promote Social Equity		
	Active commitment to fairness, justice and equality in the formulation and implementation of public policy, distribution of public services and management of all institutions serving the public directly or by contract	Ongoing
	Develop a social equity lens	2021
ADVOCACY <i>ADD: Strive to align advocacy efforts with neighbouring local governments and First Nations.</i>	<b>AUDIENCE</b> <b>AMEND</b> all Topics to <b>ADD MLA</b> and <b>MP</b> to AUDIENCE	
5.1 TRANSPORTATION	<b>ADD</b> Transport Canada	
<b>AMEND</b> 5.2 REGIONAL <b>LAND USE AND RESOURCE</b> PLANNING WITH PROVINCE AND FIRST NATIONS	<b>ADD</b> Ministry of Municipal Affairs and Housing Ministry of Transportation and Infrastructure Indigenous and Northern Affairs Canada	
<b>AMEND</b> 5.3 <b>WATERSHED</b> GOVERNANCE opportunities for <b>improved protection of watersheds</b>	<b>ADD</b> Ministry of Transportation and Infrastructure Ministry of Environment and Climate Change Strategy Department of Fisheries and Oceans	
<b>AMEND</b> 5.5 CLIMATE EMERGENCY <b>DELETE</b> “Advocate that the Ministry of Environment”...		
<b>AMEND</b> 5.6 CHILD CARE <b>ADD</b> Increased wages for workers and subsidies for users	<b>AMEND</b> Ministry of Children and Family Development <b>ADD</b> Ministry of Education	
<b>AMEND</b> 5.8 HOUSING	<b>ADD</b> CMHC	
<b>ADD</b> 5.9 ADVANCED EDUCATION	<b>ADD</b> Ministry of Advanced Education Skills and Training Capilano University and VIU	

STRATEGIES	TACTICS	TARGETS
-Funding and partnership opportunities for delivering post-secondary courses	Local School District Ministry of Education	
<b>ADD 5.10 MENTAL HEALTH AND ADDICTION</b> -Cumulative effect of pandemic is drug addiction/homelessness and more intervention/treatment and support need for municipalities affected	<b>ADD</b> Ministry of Health Vancouver Coastal Health Ministry of Mental Health and Addiction	
<b>ADD 5.11 Local Government Structure and Regulation</b> Public process Governance Regulatory framework Intergovernmental relations Cumulative impact on decision making	<b>ADD</b> Municipal Affairs and Housing	

The Board reviewed the 5 strategic focus areas and revised the prioritization of the tactics and targets as outlined in the aforementioned table. As a result, reaffirmed the proposed updated targets presented by staff.

## STRATEGIC FOCUS AREAS DIAGRAM

Revise the layout of the 5 Strategic Focus Areas to relocate “Community Resilience and Climate Change Adaptation” in the center of the circular diagram and retain the 4 other Strategic Focus Areas around the circle.

*The Board and staff were provided a tour of the Gibsons and Area Community Centre.*

## Prioritize Tactics and Targets - Round 2

*The Board completed a prioritization exercise of the strategic plan tactics and targets. The purpose was to highlight the higher priorities resulting in the following numerical order and ratings.*

The results were as follows:

- 1) Develop Growth Management Plan - 8
- 2) Complete development and implementation and plan for community engagement of a water metering program – 7
- 3) Undertake solid waste management demand analysis and develop options for long-term solid waste management approach for garbage and recycling organics – 6
- 4) Provide promote and improve online access to services such as building permit applications and inspection scheduling, development applications, bill payment and facility bookings – 6

- 5) Develop climate change adaptation strategy: undertake risk/vulnerability assessments for communities and infrastructure – 5
- 6) Promote social equity: Develop social equity lens - 4
- 7) Redesign and replace corporate website – 4
- 8) Develop and implement asset stewardship plan components including asset inventory, condition assessments, levels of service, risk assessments, capital and operational maintenance plans and funding strategies – 4
- 9) Undertake effectiveness review of current Solid Waste Management Plan and update plan with future waste disposal strategies – 4
- 10) Provide training and ensure adequate resources for the planning and delivery of public engagement activities – 3
- 11) Investigate and/or develop water supply plans/sources for North and South Pender, Langdale, Soames, Granthams, Eastbourne, Cove Cay, Egmont and Chapman Creek water systems – 3
- 12) Identify and implement opportunities for joint initiatives, collaboration and information sharing between local governments – 3
- 13) Review climate change projections and complete climate change impact mapping - 3

### **Wrap Up and Next Steps**

Dean McKinley, CAO Strategic Plan priorities will be integrated into the decision-making processes at both the governance and administrative levels and will guide the 2021 budget process, as well as the development of corporate work plans.



**SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT**

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**TO:** Corporate and Administrative Services Committee - September 17, 2020

**AUTHOR:** Brad Wing, Manager, Financial Services

**SUBJECT:** GRANTS STATUS UPDATE

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**RECOMMENDATION(S)**

**THAT** the report titled **Grants Status Update** be received for information;

**AND THAT** the SCRD submit an application to the Investing in Canada Infrastructure Program - British Columbia - Community, Culture and Recreation Infrastructure for the Sechelt Aquatic Centre Building Envelope- Review and Energy Efficiency Improvement Project.

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**BACKGROUND**

The Sunshine Coast Regional District (SCRD) applies regularly for grants available to undertake projects in every department each year. Staff diligently search for new grant opportunities and alignment where possible, with the Board's Strategic Plan, Corporate Plans or currently approved projects.

The purpose of this report is to update the Committee on any recent grant application notifications, pending applications, grants in progress and completed grants as well as provide information on potential new opportunities expected to be available in the near future.

The last grants status update was presented at the March 26, 2020 Corporate and Administrative Services Committee meeting.

**DISCUSSION**

Information on recent grant application notifications, pending applications, grants received and in progress and completed grants are detailed in the tables that follow:

*Grant Application Notifications*

The table below summarizes recent grant application notifications:

<b>Program Name</b>	<b>Administered By</b>	<b>Project</b>	<b>Funding Requested / Received</b>	<b>Status</b>	<b>Area(s) Affected</b>
Investing in Canada Infrastructure Program	BC Ministry of Municipal Affairs and Housing	Coopers Green Hall Replacement	\$2,013,641	Approved (funding agreement pending)	Area B

Infrastructure Planning Grant Program	BC Ministry of Municipal Affairs and Housing	Waste Water Feasibility Studies (Greaves, Merrill)	Greaves - \$6,500 Merrill - \$6,500	Approved	Area A
Infrastructure Planning Grant Program	BC Ministry of Municipal Affairs and Housing	Waste Water Feasibility Studies (Sunnyside, Langdale, Secret Cove & Jolly Roger)	\$28,750	Denied	Areas B, E & F
Community Emergency Preparedness Fund	Union of BC Municipalities	Emergency Support Services – ESS 20/20 (Equipment & Training)	\$16,300	Approved	Regional
Community Emergency Preparedness Fund	Union of BC Municipalities	Emergency Operations Centres & Training - SCRD EOC/Mass Communications Project	\$24,635	Approved	Regional
Plan H - Community Connectedness Grants	BC Healthy Communities Society	Resilient Coast - Sunshine Coast Together Project	\$15,000	Denied	Regional

### *Pending Grant Applications*

Below is an updated summary of pending grant applications submitted or in progress for which no notification has been received to date:

<b>Program Name</b>	<b>Administered By</b>	<b>Project</b>	<b>Funding Request</b>	<b>Submission Date</b>	<b>Area(s) Affected</b>
Community Emergency Preparedness Fund	Union of BC Municipalities	Evacuation Route Planning – Water Evacuation Plan	\$25,000	Mar. 13, 2020 (intake deadline extended to Nov. 6 due to COVID)	Regional
Regional Community to Community Forum	Union of BC Municipalities	Shishálh knowledge sharing, listening and learning session	\$2,974	Sep. 4, 2020	Regional
Economic Development Readiness Program	Islands Coastal Economic Trust	Hillside Development Project Investment Attraction Analysis	TBD	Pending (refer to resolution 060/18 No. 24)	Regional

*Grants Received and in Progress*

The table below summarizes approved grant funding for project works and programs which are currently planned or in progress or which are substantially complete pending submission of a final grant claim and report:

<b>Program Name</b>	<b>Administered By</b>	<b>Project</b>	<b>Approved Funding</b>	<b>Project Completion Deadline</b>	<b>Area(s) Affected</b>
Community Emergency Preparedness Fund	Union of British Columbia Municipalities	Volunteer and Composite Fire Department Equipment and Training - SCRD Wildfire Resiliency Project	\$100,000	Feb 12, 2021	Gibsons, Roberts Creek, Halfmoon Bay and Egmont Fire Protection Areas
Community Resiliency Investment Program	Union of British Columbia Municipalities	Community Wildfire Protection Plan – Regional Application	\$114,850	Feb 12, 2021	Regional
Infrastructure Planning Grant Program	BC Ministry of Municipal Affairs and Housing	Sunshine Coast Arena and Sports Fields Water Efficiency Study	\$10,000	Mar. 31, 2021	Regional
Community Emergency Preparedness Fund	Union of BC Municipalities	Emergency Support Services – ESS 20/20 (Equipment & Training)	\$16,300	May 31, 2021	Regional
Community Emergency Preparedness Fund	Union of BC Municipalities	Emergency Operations Centres and Training - SCRD EOC/Mass Communications Project	\$24,635	June 30, 2021	Regional
Infrastructure Planning Grant Program	BC Ministry of Municipal Affairs and Housing	Waste Water Feasibility Studies (Greaves, Merrill)	Greaves - \$6,500 Merrill - \$6,500	Mar. 31, 2022	Area A

*Completed Grants*

The table below is a summary of recently completed grants:

<b>Program Name</b>	<b>Administered By</b>	<b>Project</b>	<b>Funding Received</b>	<b>Completion Date</b>	<b>Area(s) Affected</b>
Housing Needs Report Program	BC Ministry of Municipal Affairs and Housing	Regional Housing Needs Assessment ( <i>TOG is the lead organization responsible for managing the grant, SCRD is a partnering organization</i> )	Approved funding of \$125,000	Results to be presented to the Board on September 18	Regional

### *Upcoming Opportunities*

Staff continuously seek out and monitor grant funding opportunities that align with approved or future planned projects identified in long-term capital plans. Approximately 75 grant programs and funding streams are tracked on an ongoing basis.

At present, there are several open intakes under separate funding streams. Staff are currently reviewing opportunities that align with grant program guidelines, and will bring forward a subsequent report to committee in October with recommended projects to proceed to the application stage.

The Community, Culture, and Recreation Program has a second intake of up to \$100.6 million of funding committed from the Canadian and British Columbian governments to support cost-sharing of infrastructure projects in communities across the province. This intake is designed to target projects starting in 2021 or 2022. Application deadline is October 1, 2020. In reviewing the Community Recreation Capital Plan, staff have identified an opportunity to apply for this intake for the Sechelt Aquatic Centre Building Envelope- Review and Energy Efficiency Improvement Project. A portion of the project is currently in the 2020-2024 Financial Plan in the amount of \$250,000 for the engineering and design, however it is anticipated that the construction portion of the project could be upwards of \$1million. Final cost estimates are still being drafted by the engineering consultant. Staff are recommending an application be submitted for this project based on the alignment with the grant's eligibility requirements.

### *Financial Implications*

Grants received and in progress have been incorporated into the 2020-2024 Financial Plan. Staff will bring a further report detailing any financial implications if the SCRD is successful in receiving funding for any of the pending grant applications.

### *Timeline for next steps or estimated completion date*

Staff are continuously monitoring for grant funding opportunities that align with the Board's Strategic Plan and departmental work plans and will bring forward further reports with details on any new application intakes and opportunities as program details are announced.

## **STRATEGIC PLAN AND RELATED POLICIES**

Reviewing grant opportunities for projects identified in the Strategic Plan or capital plans is consistent with the Financial Sustainability Policy and embodies the spirit of the Mission Statement "To provide leadership and quality services to our community through effective and responsive government."

## **CONCLUSION**

The SCRD applies regularly for grants available to undertake projects in every department each year that align with the Financial Plan and/or the Board's Strategic Plan.

Details on recent application notifications, pending grant applications, grants received and in progress and completed grants are provided for information.

Staff are continuously monitoring for new funding opportunities and will report back on new application intakes and opportunities as program details are announced.

Reviewed by:			
Manager		CFO/Finance	X - T. Perreault
GM	X – I. Hall	Legislative	
CAO	X – D. McKinley	Other	

## SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

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**TO:** Corporate and Administrative Service Committee – September 17, 2020

**AUTHOR:** Tina Perreault, General Manager, Corporate Services / Chief Financial Officer

**SUBJECT:** FINANCIAL SUSTAINABILITY POLICY REVIEW

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### RECOMMENDATION(S)

**THAT the report titled Financial Sustainability Policy Review be received;**

**AND THAT the recommended Policy amendments be approved as presented or amended.**

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### BACKGROUND

The Financial Sustainability Policy was first adopted in January 2011, and was updated in March 2016. The original purpose of the Policy was to address challenges in relation to maintaining stable taxation, however, the goal of the Policy has evolved to ensure the Sunshine Coast Regional District (SCRD) is effectively planning for sustainable service delivery.

In the course of conducting service reviews as part of the corporate asset management planning, staff identified that there lacked a Policy statement related to user fees paying for operations and parcel tax/frontage fees paying for future capital/debt items. As this is a financial 'best practice', it is recommended there is a clear rational, business case and policy presented for the Board's consideration.

As part of the [2020 Budget process debrief](#), the following motion was passed at the July 9, 2020 Regular Board Meeting (255/20), partial excerpt below:

**Recommendation No. 3**      *2020 Budget Debrief and 2021-2025 Financial Planning Process*

...AND THAT the Financial Sustainability Policy be brought forward for review in the fall of 2020;

The purpose of this report is to review the current Policy and make recommendations for amendments to the Board prior to the 2021 Budget process.

## **DISCUSSION**

### *Options and Analysis*

The overall purpose of the Financial Sustainability Policy is to endeavor to continue delivering sustainable service in a stable and affordable manner. There are currently 14 key Policy Statements.

In the course of conducting the various service reviews as part of the SCRD's ongoing asset management planning, most notably the recent wastewater and water utilities rate reviews, it was identified that a considerable portion of those services operational budgets were being funded through parcel tax or frontage fees. Local governments cannot use parcel taxes to recover costs for the general administration of a service. Normally, a parcel tax is levied in conjunction with a user-fee. For example, a local government will often recover the fixed capital costs (for infrastructure) through a parcel tax and the operating costs through a user-fee (e.g. water meter charge)-[source](#).

In 2021, the SCRD will need to be compliant with the new Public Sector Accounting Standard (PSAS)-Section PS 3280 which requires public bodies to account for the future financial commitment associated with its legal obligation for the retirement of a tangible capital asset. Currently, the only area where the SCRD accounts for such a liability is for the closure and post-closure for the landfills. When the new standard is in effect, the landfill liability will roll into the new standard, including the future decommissioning of older assets, such as facilities, wastewater plants, or the public works yard

In order to also align the current Policy with the Boards Strategic focus areas as well as other related policies and corporate plans, several amendments have been provided for consideration. A copy of the draft amended Policy with track-changes is attached (Attachment A) and a summary is as follows:

- **Section 1 - Purpose**

The Purpose has been aligned to match the current Strategic Plan focus areas as well as a change toward long-range financial planning as opposed to short term budgeting.

- **Section 4 - Policy Statements**

- 4.1.1. Growth in Revenues

- Change to be inclusive for all SCRD Departments and align with internal process.

- 4.6.1. Cost of Existing Services

- Clarified examples where inflationary increases typically are derived from local governments.

- 4.10.1. Capital Maintenance, Replacement, and Asset Retirement

- Include more language associated with asset management and service planning.

- **NEW**-4.10.3. - Change title and add section for inclusion of new Public Sector Accounting Standard (PSAS) requirement Section PS 3280 which requires public bodies to account for the future financial commitment associated with its legal obligation for the retirement of a tangible capital asset.
- 4.11.1. Capital Projects
  - Align the Policy to match new statements as part of asset retirement obligations.
- **NEW**-4.12. - Allocation of Funding for Services
  - The purpose of this section is to establish Policy relating to funding transparency and alignment with local government legislation related to service funding. Where possible, it should be clear how operations and capital are funded within a service.
- **NEW**-4.14.2 Debt Management
  - Add a Policy statement whereas the Boards Debt Management Policy aligns with the Financial Sustainability Policy section regarding Debt.
- 4.15. - Reserve Funds and Rate Stabilization
  - Add consistent language related to asset retirement obligations.

*Timeline for next steps or estimated completion date*

Once the Board approves the suggested amendments to the Financial Sustainability Policy, a new version of the Policy will be established.

*Communications Strategy*

As the Financial Sustainability Policy is one of the key guiding documents in preparation of the Financial Planning Process, the revised Policy will be communicated to internally and externally, where appropriate.

**STRATEGIC PLAN AND RELATED POLICIES**

The review of the Financial Sustainability Policy aligns with the Boards Policy mandate. It also aligns with the Boards Strategic Plan focus area of *Asset Stewardship*.

**CONCLUSION**

The Financial Sustainability Policy was first adopted in January 2011, and was updated in March 2016.

Recommended changes to the Policy relate to service reviews as part of the corporate asset management planning; new PSAS-Section PS 3280 - requires public bodies to account for the future financial commitment; align the current Policy with the Boards Strategic focus areas; incorporate other related policies and corporate plans; and a few housekeeping amendments for consideration.



Once the Board approves the suggested amendments to the Financial Sustainability Policy, a new version of the Policy will be established. Changes will be communicated internally and externally where appropriate.

**Attachments:**

- A-Draft amended Financial Sustainability Policy
- B-SCRD Debt Management Policy

Reviewed by:			
Manager		Finance	X – B. Wing
GM		Legislative	
CAO	X D. McKinley	Other	X - K. Doyle

## Sunshine Coast Regional District

## BOARD POLICY MANUAL

Section:	Finance	5
Subsection:		1700
Title:	Financial Sustainability	1

**1. PURPOSE**

This policy was developed to support the move to financial sustainability for the Sunshine Coast Regional District.

Financial sustainability, along with ~~asset stewardship and working together collaboratively a sustainability plan and collaborative leadership~~ are integral components of the Strategic Plan. The Board has agreed to use these components as a lens to focus through when making decisions and implementing plans.

- 1.1. A proactive strategy is required that will lay the groundwork for the continuance of high-quality services while providing a legacy for future generations. It will position the Regional District to meet financial obligations and take advantage of opportunities that arise. It will also mean that residents and businesses can look forward to stable, equitable and affordable taxation in relation to the services provided.
- 1.2. The adoption of the Regional District's ~~budget~~ Five-Year Financial Plan is one of the most critical functions undertaken by the Board to achieve its stated goals. Budgets and business-service plans shall be developed in a consistent and planned manner. Budgets shall take into consideration the impacts of initiatives on both the current and future years and the Regional District's ability to fund those initiatives.

**2. SCOPE**

- 2.1. This Policy will apply to the development, management and delivery of all the Regional District's services and programs.

**3. DEFINITIONS****3.1. Sustainability**

Sustainability is a state in which the needs of the present generation are met without compromising the ability of future generations to meet their own needs (Source: Board-adopted definition).

### 3.2. Financial Sustainability

Financial Sustainability is the degree to which a government can maintain its existing financial obligations both with respect to its service commitments to the public and financial commitments to creditors, employees and others without increasing the debt or tax burden relative to the economy in which it operates. (Source: Public Sector Accounting Board Statement of Recommended Practice; Indicators of Financial Condition; SORP 4; May 2009).

## 4. POLICY STATEMENTS

### 4.1. Growth in Revenues

The Sunshine Coast is a growing community and all indications are that this will continue. Growth brings in new revenues (both taxation and fees) which must be estimated using the best available data.

- 4.1.1. Policy: Conservative estimates of revenues related to growth will be included in the budget based on information provided by BC Assessment as well as the respective Departments of the SCRD in collaboration with the and the Planning and Development and Finance Divisions Corporate Services Department.

### 4.2. Fees and Charges

Fees and charges are a significant portion of the Regional District's revenues. They must be reviewed on a regular basis to ensure they are set at the appropriate rate and to provide users with adequate notice of any changes.

- 4.2.1. Policy: The Regional District's self-financed programs are to be fully funded by user fees and/or parcel taxes including corporate overhead, equipment replacement, debt financing, transfers to reserves and capital expenditures.
- 4.2.2. Policy: Fees and charges will be reviewed annually and adjusted where appropriate. Reviews will include an analysis of the Regional District's costs of providing the service, as well as a comparison to other similar local governments.
- 4.2.3. Policy: An increase equal to inflation (Consumer Price Index) shall be applied as appropriate.
- 4.2.4. Policy: The users will be provided with no less than two months' notice of those changes, where possible.

#### 4.3. Alternative Revenues

The Regional District should strive to produce non-traditional revenues and diversify its tax base.

- 4.3.1. Policy: All departments will make every effort to access alternative funding sources. New sustainable funding sources can be used to reduce property tax or fee increases, increase service levels and/or provide new services.
- 4.3.2. Policy: The Regional District will apply for grant funding for projects only after consideration is given to the full lifecycle costs of the project. When considering grant funding, the Regional District will focus on projects that are already included in the Five-Year Financial Plan, the adopted long-term capital plans or the Strategic Plan.

#### 4.4. One-time Revenues

Using one-time revenues to fund ongoing expenditures results in unfunded expenditure obligations in future years.

- 4.4.1. Policy: Operating surpluses and one-time revenues will not be used to fund ongoing expenditures. Major one-time revenues will be applied to:
  - Reserves and/or Rate Stabilization in keeping with levels set by the Board;
  - One-time expenditures; or
  - Repayment of outstanding debt.

#### 4.5. Service Demands Created by a Growing Community

Growth creates demands for service. It is important that the demands created by growth be recognized and efforts be made to maintain or improve existing standards.

- 4.5.1. Policy: Plans should provide details of the demands for service created by growth and should include options as to how the demands can be met and existing standards be maintained or improved.

#### 4.6. Cost of Existing Services

The rising cost of existing services at existing service levels must be recognized.

- 4.6.1. Policy: Each year, an inflation factor will be applied to the operating budget as appropriate (~~Consumer~~-EG.-Municipal or Construction Price Indexes, collective ~~agreements, or agreements,~~ or utility rate increases).
- 4.6.2. Policy: Each budget cycle, the Board will consider the cost of existing services at existing service levels before considering enhancements.

#### **4.7. New Services and Major Enhancements**

The funding established under Policy Statement 4.6 allows the Regional District to provide the same level of service for the existing tax base. It is not designed to provide for new services or major enhancements to existing services.

4.7.1. Policy: New services or enhancements to existing services may be funded by a combination of:

- Reduction in the cost/scope of existing services. This may include a reallocation of resources from one area to another;
- Increase in other revenues;
- An increase in other revenue and/or taxes; and/or
- Ongoing future financial revenues can justify the new service and / or enhancement.

4.7.2. Policy: The process to establish a new service must include thorough and accurate financial planning to support the Board's decision in determining the viability of establishing a new service.

#### **4.8. Demand Management and Efficiencies**

The Regional District does not have the resources to meet all the demands that are made for services. Demand must be managed to make sure that expectations reflect our fiscal reality.

Areas where efficiencies or service level changes may be possible will be identified and brought forward to the Board for consideration.

4.8.1. Policy: Plans will identify demand management strategies and should include options for service level changes and alternative service delivery models.

4.8.2. Policy: As a sound business practice, departments will strive to find and explore efficiencies throughout the Regional District's operations.

4.8.3. Policy: All departments will endeavour to develop partnerships, strategic alliances and shared project funding to assist in the reduction of expenditures to the Regional District.

#### **4.9. Service Reviews (Non-statutory)**

A Service Review is a review of an organisation's services designed to identify potential service delivery improvements. A Service Review can be used to improve the organisation's efficiency and effectiveness and assist in addressing financial sustainability. Systematically reviewing its services allows the Regional District to potentially redesign its mix of services to achieve efficiency gains or generate additional income.

Options that may be explored under a Service Review System include such matters as:

- Changing outputs and levels of service
- Sharing services and resources
- Optimizing the use of existing assets
- Alternate delivery of services or activities
- Internal operational changes (e.g. processes, work practices and technology)
- Adding or modifying user fees or charges
- Consideration of how the service contributes to overall service equity

4.9.1. Policy: The Regional District will undertake regular reviews (internal and/or external) of its services to find ways to improve service delivery and maximize the benefit to the community while minimizing costs.

#### 4.10. Capital Maintenance, ~~and~~ Replacement, and Asset Retirement

The Regional District has substantial value invested in its ~~capital~~ assets. As the community grows, this investment increases. A plan must be implemented to keep the infrastructure in a proper state of repair to avoid costly failures. The SCRD also has a legal obligation to responsibly dispose of its various assets and must account as well as develop financial plans to cover these costs.

4.10.1. Policy: The Regional District will establish and maintain an inventory of its capital assets. A maintenance/replacement plan will be developed utilizing best practices to keep existing assets in optimum condition. This program will be included in the Five-Year Financial Plan and the departmental long-term Capital, ~~-~~ Asset Management and Service Plans.

4.10.2. Policy: The Regional District will depreciate its assets over their useful lives, and a sustainable funding strategy will be developed.

4.10.2-4.10.3. Policy: - The Regional District, in accordance with Public Sector Accounting Standards, will account for and establish a plan for the future financial commitment associated with its legal obligation for the retirement of a tangible capital asset

#### 4.11. Capital Projects

Capital projects and programs are funded from a variety of sources including taxation, grants, debt and reserves. Once the project or program is completed, its full on-going operation and maintenance costs need to be included in the operating budget, and future upgrade and/or replacement costs need to be included in the Capital Plan. These on-going and future costs must be clearly understood before a capital project is approved.

4.11.1. Policy: Each capital project or program submitted for consideration must clearly state its full initial cost, as well as future costs, including operating ~~and~~ upgrade/replacement costs, and decommissioning.- In

addition, the source of sustainable funding for such costs has to be demonstrated.

- 4.11.2. Policy: When proposing capital projects, managers will consider the impact / draw on staff resources to undertake the project. Capital projects may require a change in the operating plan / priorities or additional resources to manage the project. Managers must ensure that staff resources are considered in the budget decisions related to capital projects.

- 4.11.3. Policy: Large-scale capital projects will be budgeted in at least two phases. The first phase is for planning and design, and subsequent phases are for construction and implementation with full life cycle project costs.

#### **4.12. Allocation of Funding for Services**

In order to ensure transparent accounting of the true costs of delivering a regional district service, clarity on the revenue allocation and cost recovery is necessary. The Regional District, where possible, will work towards the following:

- 4.12.1. Policy: The SCRD considers that revenues generated from user fees, property taxation (ad valorem), operational grants, or other revenues will be allocated to fund the operational costs of a service.

- ~~4.11.3.~~4.12.2. Policy: Parcel Taxes, frontage fees, capital grants, or other revenues will be used to fund major capital projects associated with the service. In some cases, capital may be more appropriately funded through property taxation, such as debt servicing costs or minor capital purchases.

#### **4.12.4.13. Carry-forward Projects**

Some projects may not be completed in the year they are budgeted for. In such instances, funding is “carried forward” in recognition of the fact that the project is still required, and the Regional District must be in a position to complete the project. Nonetheless, there is a need to review carry-forward projects in light of other priorities that may have emerged.

- 4.12.1.4.13.1. Policy: Management will complete a detailed review of carry-forward projects in light of other priorities that may have emerged and include a report to the Board, prior to year end, with recommendations for including those projects in the following year’s budget.

#### 4.13.4.14. **Debt Management**

The Regional District recognizes that, properly applied, debt can be an affordable and effective source of funding that complements the sustainability of an organization by matching costs to the appropriate tax payer in the year in which the benefit is received. The Regional District also recognizes that excessive debt reduces an organization's flexibility and its ability to handle unforeseen challenges. Debt decisions shall balance quality of life and financial considerations.

4.14.1. **Policy:** Projects that are to be funded by debt should be submitted to the Board with a "business case", including recommendations on how the debt will be serviced.

4.13.1.4.14.2. **Policy- Any debt funding should align with the Boards 'Debt Management Policy'.**

#### 4.14.4.15. **Reserve Funds and Rate Stabilization**

The Regional District strives to develop appropriate reserves with respect to Regional District capital assets, landfill closure and post closure costs, employee benefit obligations, asset retirement obligations and other significant future financial obligations. Reserves and Rate Stabilization Funds contribute to the financial stability of Regional District services.

4.14.1.4.15.1. **Policy:** The Regional District will review all services to identify the appropriate uses and level of reserves and /or rate stabilization funds recommended for each service. Strategies to build reserves will be developed and presented as part of the annual budget process.

## **5. RESPONSIBILITY**

- 5.1. Directors - To be familiar with this policy and to utilize it as a lens to provide focus when making budget or service decisions.
- 5.2. Staff – To be familiar with this policy and to ensure that it is followed when developing budgets and service options.

## **6. POLICY REVIEW**

- 6.1. The policy shall be reviewed annually by Administration.- Any changes shall be recommended to the Board for approval.

Approval Date	January 13, 2011		015/11
	March 10, 2016		117/16 Rec. 7



## Sunshine Coast Regional District

## BOARD POLICY MANUAL

Section:	Finance	5
Subsection:	Debt	1760
Title:	Debt Management Policy	1

**1. PURPOSE**

- 1.1. Establish financial guidelines and appropriate controls for the issuance and use of new debt and to ensure financial sustainability for the Regional District.

**2. SCOPE**

- 2.1. This Policy applies to issuance and management of all Regional District debt, in accordance with the Local Government Act and Community Charter.

**3. PRINCIPLES**

- 3.1. Principles in this policy provide guidance for policy development and assist with interpretation of the policy applied.
- 3.2. Policy guidelines are developed for the benefit of the Regional District as a whole; for the users of the Regional District's financial statements; the Board; and managers of the Regional District's debt.
- 3.3. Whereas:
- 3.3.1. Debt is an ongoing component of the Regional District's capital financing structure and is integrated into long-term plans and strategies.
- 3.3.2. Notwithstanding that debt is an ongoing component, it must be affordable, kept to a minimum, and in line with the goals of "Financial Sustainability". The Regional District must maintain flexibility to issue debt in response to emerging financial needs.
- 3.3.3. Debt must be structured in a way that is fair and equitable to those who pay and benefit from the underlying asset over time.
- 3.4. Compliance is with all legislation applicable to the Regional Districts including public process, bylaws, and subject to Board approval.
- 3.5. Revenues must be sufficient to accommodate debt servicing.

Approval Date:	December 11, 2014	Resolution No.	579/14 Rec. No. 9
Amendment Date:		Resolution No.	
Amendment Date:		Resolution No.	
Amendment Date:		Resolution No.	

#### 4. POLICY

- 4.1. Projects that are to be funded by debt should be submitted to the Board with a “business case”, including recommendations on how the debt will be serviced.
- 4.2. Expense where debt may be recommended:
  - 4.2.1. One-time capital improvements.
  - 4.2.2. Capital expenditures as a result of service enhancements.
  - 4.2.3. When the useful project life will exceed the term of financing.
  - 4.2.4. Major equipment purchases.
  - 4.2.5. The maximum debt servicing costs be limited to 15% of the Regional District’s revenues (includes taxation, investment income, fees and charges, and unconditional grants).
  - 4.2.6. Purchase of property, if deemed by the Board as essential to the operation of the Regional District.
- 4.3. Reserves are to be considered as a funding source before debt.
- 4.4. Strategies to minimize debt will be considered, such as:
  - 4.4.1. Pay as you go.
  - 4.4.2. Create capital reserves to help future capital replacement needs.
  - 4.4.3. Shorten the number of years to repay the debt when possible.
- 4.5. Current and projected interest rates will be considered when determining the duration of a borrowing term.
- 4.6. In consideration of debt reduction, when MFA Debenture Issues become open for interest rate re-sets (every 10 years on 20 year issues); debt repayment will be considered.
- 4.7. Life cycle costs be matched with debt servicing.

#### 5. POLICY REVIEW

- 5.1. This Policy will be reviewed annually by the Chief Administrative Officer and Treasurer in consideration of meeting the Regional District’s Financial Sustainability goals, market conditions, and industry best practices. Any required changes shall be submitted to Board for consideration and approval. The Policy should be reviewed during each term of the Board to ensure its continued effectiveness.

Approval Date:	December 11, 2014	Resolution No.	579/14 Rec. No. 9
Amendment Date:		Resolution No.	
Amendment Date:		Resolution No.	
Amendment Date:		Resolution No.	

## SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

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**TO:** Corporate and Administrative Services Committee – September 17, 2020

**AUTHOR:** Kyle Doyle, Manager, Asset Management  
Tina Perreault, General Manager Corporate Services / Chief Financial Officer

**SUBJECT:** COMMUNITY RECREATION FACILITIES CAPITAL FUNDING UPDATE AND COVID-19 IMPLICATIONS

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### RECOMMENDATION(S)

**THAT** the report titled Community Recreation Facilities Capital Funding Update and COVID-19 implications be received;

**AND THAT** the Community Recreation Facilities Capital contributions be reduced by \$500,000 for 2021 to offset potential operating deficits as a result of COVID-19 restart implications;

**AND THAT** starting in 2021, the Community Recreation Facilities Capital renewal plan be funded through parcel taxes versus ad valorem taxation;

**AND THAT** starting in 2026, funds from the retirement of the long-term debt (Municipal Finance Authority Loan - Bylaw 550) be reallocated to the Community Recreation Facilities Capital Reserves;

**AND FURTHER THAT** a funding scenario be determined after the Community Recreation Facilities Lifecycle Audit Reports for the Sunshine Coast Arena and Gibsons and District Aquatic Facility have been concluded.

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### BACKGROUND

As part of the Sunshine Coast Regional Districts (SCRD) corporate asset management planning, staff presented a report in 2016 titled '[Recreation Facilities Capital Plan Update 20 Years](#)'. This report established three criteria for capital expenditures anticipated over a 20-year period grouped by criticality ranking of the assets to be funded. The following three asset brackets were identified; Critical, High Priority, and Desirable. Critical assets are 'essential to the primary service of the facility', High Priority assets are 'essential to secondary services of the facility', and Desirable assets affect the quality of the service provided but not the delivery of the service. Following the presentation of the 2016 report, the SCR D resolved to fund Critical assets. Actual funding was resolved to be \$500,000 for 2016, \$548,000 for 2017, and the full targeted \$725,000 in 2018. Beyond 2018 a 2% annual increase was approved.

A staff report titled '2020 Recreation Facilities Capital Funding Review' was received for information at the [Jan 30, 2020 Infrastructure Service Committee](#). This report identified several 'critical' capital expenditures in the 2037-2039 time period that had not been captured by the previous Capital Funding Review's 20-year horizon (2016-2036). These items increased the annual contribution amount required to fund critical Recreation Capital projects by \$129,000. It

was determined that an analysis of the lifecycle of the Sunshine Coast Arena and the Gibsons and District Aquatic Facility should be completed to allow for end of life planning to be incorporated into future iterations of the Community Recreation Facilities Capital Plan. No increase was made to the annual contribution.

A staff report titled 'Community Recreation Facilities [615] COVID-19 Budget Implications' was received at the [July 23, 2020 Corporate and Administrative Services Committee](#). This report outlined operating shortfalls associated with re-opening Recreation Facilities.

The following motion was passed at the July 30, 2020 Regular Board Meeting:

284/20      **Recommendation No. 11**      *Community Recreation Facilities [615] Budget Implications*

THAT staff provide updated Community Recreation Facilities [615] Budget Implications to the July 30, 2020 Special Corporate and Administrative Services Committee, reflecting the restart options recommended at the July 23, 2020 Corporate and Administrative Services Committee meeting;

AND THAT staff provide options for deficit mitigation strategies and report to a future Committee.

Due to the anticipated operational funding deficits, repurposing a portion of the annual funding contribution from the Community Recreation capital fund to operational expenses is being considered.

The purpose of this report is to provide a review of the Community Recreation Facilities Capital Plan for 2021-2040 and to provide insight on the implications of reducing the annual contribution to Recreation Capital for the year 2021.

## **DISCUSSION**

During the 2020 annual review of Community Recreation Facilities Capital funding, a potential temporary reduction of capital funding was introduced for consideration. While the exact magnitude of this reduction is not certain, a figure of \$500,000 has been considered as a reasonable estimate of the amount that could be reduced from the annual contribution to Community Recreation in 2021.

Multiple scenarios that include a one-time reduction of \$500,000 from the 2021 contribution to Community Recreation Capital were entered into the Community Recreation Capital model. Some of the potential scenarios include the retirement of aging facilities. A lifecycle audit is expected to be completed this year for the Gibsons and District Aquatic Facility and the Sunshine Coast Arena which will provide additional information for scenarios that include facility retirement.

### *Analysis*

#### **Existing Funding Schedule**

The existing Community Recreation Facilities Capital funding schedule was modeled with no changes to provide a baseline scenario for comparison (**Appendix A**). It is notable that at the

end of this Capital model, the Capital Reserves are projected to have been reduced to approximately 8% of the current balance. Debt servicing obligations are anticipated to total \$1,169,000 annually, which is \$24,000 greater than the planned annual contribution to Community Recreation Capital for that year.

Outside of the context of the COVID-19 pandemic, the existing funding schedule does not satisfy the anticipated critical capital expenditures over the 20-year horizon of the Community Recreation Facilities Capital Plan. Additionally there are nine years identified within the capital plan where High Priority assets requiring renewal are anticipated to total between \$200,000 and \$750,000. There is currently no funding allocated for High Priority assets, therefore it is likely that further short term debt financing will be required.

The purpose of a Capital Plan is to provide a degree of certainty regarding upcoming capital expenditures. A significant benefit of this certainty is the ability to create consistent revenue structures and therefore consistent taxation rates. Continuing to fund Community Recreation at a 'Critical asset' level of service results in greater variations in the annual funding requisitions from year-to-year.

#### Reduced 2021 Funding Contribution

A one-time reduction in the 2021 contribution to Recreation Capital by \$500,000 is possible in the short-term due to the current Community Recreation Facilities Capital Reserve balance of \$1,433,055. There is also a small uncommitted operational reserve balance of \$93,000 which has been used for operational maintenance items. Consequences begin to compound in the later years of the Community Recreation Capital plan as the need to finance multiple capital projects simultaneously through debt will result in debt payment totaling an amount greater than the currently forecast contribution amount by 2036 (**Appendix B**).

An increase to the existing schedule of contributions will be required to ensure a sustainable Community Recreation Capital Plan. If a reduction in the capital contribution for 2021 is approved, a significantly altered schedule of contributions becomes necessary. Following a \$500,000 reduction in 2021, an annual contribution increase of approximately \$47,000 beginning in 2022 would be required to prevent the capital reserve from being depleted prior to the end of the model (**Appendix C**). The following scenarios explore the implications of additional alternative funding schedules that were considered during this review.

#### Scenario 1: Recapture Reduced Funding via Short-Term Increase in Contribution to Recreation Capital

Consideration was given to recuperating the proposed one-time \$500,000 reduction to annual Community Recreation Capital contributions by introducing a temporary short-term increase in future contributions totaling \$500,000. Five and ten-year periods of increased contributions were modeled to review the implications of this strategy, with consideration given to delaying the start of increased contributions as much as three years. This was found to compound the previously identified funding shortfall associated with the existing contribution schedule. Under these scenarios, in addition to recuperating any reduction in contribution, it would be necessary to increase the annual contribution by approximately \$15,000-40,000 to ensure the Community Recreation Capital model maintains a positive reserve balance through 2040.

This scenario culminates in high levels of debt and minimal reserves at the end of the 20 year plan. There would also be a necessary increase in taxation associated with the increased contribution schedule. For these reasons this scenario is not considered to be financially sustainable. **(Appendix D)**

Scenario 2: Annual Contribution Inflation Increase from 2.0% to 2.5%

This scenario considers increasing the inflationary rate of the annual contribution to Recreation Capital budget from 2.0% to 2.5% for the duration of the 20 years. **(Appendix E)**

At the end of the Community Recreation Capital Plan a reserve balance of \$16,000 is anticipated and annual planned contributions exceed debt payments by \$54,000 (96% ratio of Debt:Contribution). This scenario is not considered financial sustainable due to the high debt ratio at the end of the 20 year plan.

Scenario 3: Single Facility Retirement

This scenario considers the impact of eliminating future capital expenditures associated with the Sunshine Coast Arena beginning in 2027 in preparation for the retirement of this facility in 2035. No additional contributions are considered.

At the end of this scenario a reserve balance of \$920,000 is anticipated and annual debt payments account for 88% of the planned annual contribution. **(Appendix F)** This reserve balance is healthy but due to the considerable debt observed at the end of this scenario it is not sustainable. Additionally this scenario results in a considerable impact on the services provided by Community Recreation.

Scenario 4: Multiple Facility Retirements

This scenario considers the impact of eliminating future capital expenditures associated with the Sunshine Coast Arena **and** the Gibsons and District Aquatic Facility beginning in 2027 in preparation for the retirement of those facilities in 2035. No additional contributions are considered.

At the end of this scenario a reserve balance of \$833,000 is anticipated and annual debt payments account for 70% of the planned annual contribution. **(Appendix G)** This scenario concludes with the most sustainable financial situation; however, it considers the elimination of 50% of the recreation facilities managed by Community Recreation. This option would require an internal service review including the potential planning for new facilities to replace the decommissioned ones as well as a considerable amount of stakeholder and public consultation.

*Expiring Debt*

The long-term debt for the construction of the Sechelt Aquatic Centre and the Gibsons and Area Community Centre are set to expire in 2025 which will result in a reduction of annual debt servicing costs of \$1,629,089. This debt, which is currently recovered through parcel taxes was considered to potentially utilize a portion of the expiring debt to fund the Community Recreation Capital Plan.

For example, by committing to contribute \$1,000,000 for the four years from 2026 to 2029 the Community Recreation Facilities Capital plan can accommodate the reduced contribution for 2021 while projecting the end of 2040 with a reserve balance of \$690,000 and no debt obligations. (**Appendix H**)

Two years of reduced contributions can be accommodated with the same four-year \$1,000,000 contribution commitment resulting in a projected 2040 reserve balance of \$400,000 and an estimated \$75,000 of annual debt obligations. (**Appendix I**)

If, after receiving the upcoming Facility Lifecycle Audit, the decision is made to proceed with facility retirement, the expiring debt could be used to build a considerable reserve to fund new or modified facility construction. Preliminary analysis reviewed models that assumed 10 years of \$1,000,000 additional contribution from 2026-2035. The retirement of one or both of the older facilities were considered. It is projected that over \$10,000,000 in reserves would be accumulated by 2035 while ending the 20 year model with no outstanding debt. By coordinating the timing of contribution increases with the expiring debt, it is possible to mitigate the impact on taxation rates over time.

**It is recommended that the Community Recreation Facilities Capital contributions be reduced by \$500,000 for 2021 to offset potential operating deficits as a result of COVID-19 restart implications.**

**It is also recommended that starting in 2026, funds from the retirement of the long-term debt (Municipal Finance Authority Loan- Bylaw 550) be reallocated to the Community Recreation Facilities Capital Reserves.**

**It is also recommended that a funding scenario be determined after the Community Recreation Facilities Lifecycle Audit Reports for the Sunshine Coast Arena and Gibsons and District Aquatic Facility has been concluded.**

#### *Operational Implications*

Maintaining funding for Community Recreation Facilities Capital at a critical asset class level will continue to result in larger fluctuations in annual requests for funding related to High Priority and Desirable assets such as the \$122,000 Sound Baffles Project at the Sechelt Aquatic Centre in 2020 or the estimated \$310,000 waterslide replacement anticipated for the Sechelt Aquatic Center in 2023.

The uncertainty of the resolution of the global pandemic may result in further requests for operational subsidies for Community Recreation. By committing to use the expiring debt a greater degree of financial flexibility is provided in these uncertain times.

#### *Financial Implications*

Based on the recommended facility re-starts at the July 30, 2020 Board meeting, the projected 2020 deficit was estimated at up to \$835,000. The reduction in the annual capital renewal funding of \$500,000 would help to off-set an anticipated operating shortfall for 2021.

It is also unknown what the financial implications will be to continue operating the facilities into 2021 or even into 2022. It is plausible that user fees will need to be re-assessed and there will be an increase to operating costs to accommodate health and safety measures as a result of COVID-19. For analysis purposes, staff have conservatively estimated a 15% reduction in projected user fees and a 5% increase to operational costs through to 2022. In order to subsidize these impacts, an increase to property taxation is expected. These are estimates at this time and further analysis will be conducted as part of the 2021 budget deliberations.

Also included in the September 17, 2020 Corporate and Administrative Services Committee agenda is a report reviewing the Board's Financial Sustainability Policy. One of the recommendations from the recent utilities user rate reviews and asset management plan service reviews, is to align funding allocations where operating costs are recovered through ad valorem taxation or user fees, and capital renewal or carrying costs for debt financing be recovered through parcel taxes. Ad valorem taxes (or property taxation) is based on the assessed value of a property being taxed.

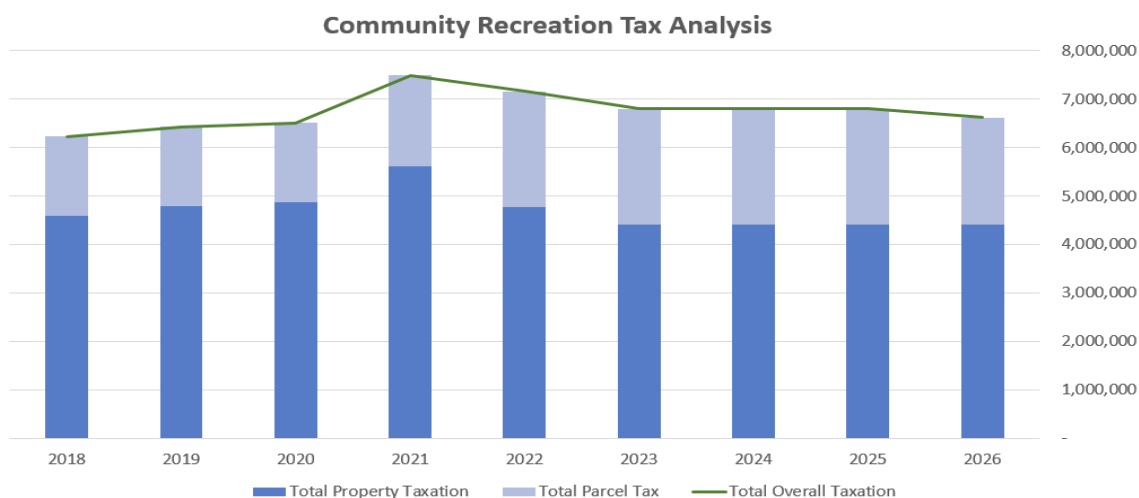
Currently, the Community Recreation's capital renewal plan is being funded through ad valorem taxation and only the long-term debt for the construction of the Sechelt Aquatic and Gibsons and Area Community Centre are being recovered through parcel taxes. As stated above, the debt is ongoing to the end of 2025. **For 2021, it is recommended that the Community Recreation Facilities Capital Plan be transitioned to parcel taxes.** This would increase parcel taxes by \$250,000 for 2021 and by an additional \$500,000 for 2022. The parcel tax for 2020 was \$112.64 and the estimated change per parcel would be an increase of \$17.15 for 2021 (\$129.80) with an additional increase of \$34.47 for 2022 (\$169.25). Due to the increases in costs and lost revenue, property taxation will still see an increase in 2021 even with the one-time deferral of \$500,000 and will hopefully stabilize into 2022 onward. A high-level representation of the taxation is as follows:

	Actual	Actual	Actual	Projected	Projected	Projected	Projected	Projected	Projected
Year	2018	2019	2020	2021	2022	2023	2024	2025	2026
Property Taxation (Ad Valorem)	\$ 4,598,664	\$ 4,799,019	\$ 4,874,173	\$ 5,172,819	\$ 5,172,819	\$ 5,172,819	\$ 5,172,819	\$ 5,172,819	\$ 5,172,819
Add:									
Projected Deficit*				835,000					
For analysis purposes:									
15% loss in user fees				263,611	263,611				
Increase in operational costs due to COVID				92,575	94,427				
Less:									
One time capital deferral				(500,000)					
Move capital renewal funding to parcel tax				(253,000)	(753,000)	(753,000)	(753,000)	(753,000)	(753,000)
<b>Total Property Taxation</b>	<b>4,598,664</b>	<b>4,799,019</b>	<b>4,874,173</b>	<b>5,611,005</b>	<b>4,777,856</b>	<b>4,419,819</b>	<b>4,419,819</b>	<b>4,419,819</b>	<b>4,419,819</b>
Parcel Tax	1,629,204	1,627,511	1,629,089	1,629,089	1,629,089	1,629,089	1,629,089	1,629,089	-
Move capital renewal funding to parcel tax				253,000	753,000	753,000	753,000	753,000	
<b>Total Parcel Tax</b>	<b>1,629,204</b>	<b>1,627,511</b>	<b>1,629,089</b>	<b>1,882,089</b>	<b>2,382,089</b>	<b>2,382,089</b>	<b>2,382,089</b>	<b>2,382,089</b>	<b>-</b>
<b>Total Overall Taxation</b>	<b>\$6,227,868</b>	<b>\$6,426,530</b>	<b>\$6,503,262</b>	<b>\$7,493,094</b>	<b>\$7,159,945</b>	<b>\$6,801,908</b>	<b>\$6,801,908</b>	<b>\$6,801,908</b>	<b>\$4,419,819</b>

\*Per the July 30, 2020 Corporate & Administrative Services Committee report related to recommended facility re-start service levels.



The resulting impact to property taxation, parcel tax and the overall taxation for the Community Recreation Service would be a small spike in 2021 with the goal of creating more stability in both property and parcel tax in the subsequent years, as well as ensuring more sustainable funding for capital renewal.



## STRATEGIC PLAN AND RELATED POLICIES

The information provided in this report is consistent with the Board's Strategic Focus Area of Infrastructure Management as well as the Financial Sustainability Policy and Debt Management Policy.

## CONCLUSION

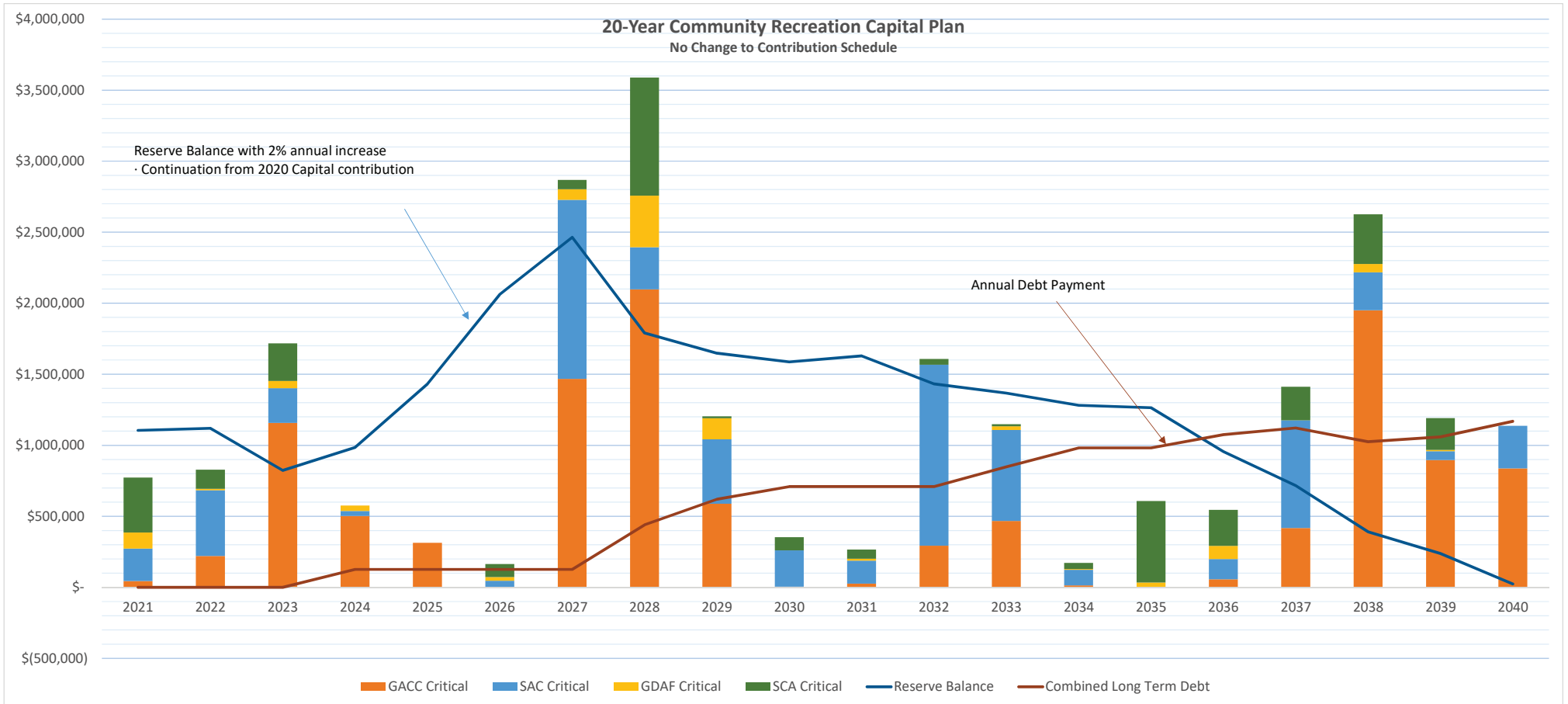
The existing reserve balance enables a one-time reduction in contributions to the Recreation Capital plan of \$500,000. An increased contribution will be required to avoid underfunding the critical assets associated with SCRD Recreation facilities. The upcoming retirement of long-term debt in 2026 presents an opportunity to accommodate reductions in contribution to Recreation Capital during the recovery from the global pandemic. Should the decision to retire aging facilities be made, it would be possible to build a sizeable reserve in preparation to construct new facilities in the near future while reducing existing taxation and improving the service level delivered through SCRD Recreation Facilities.

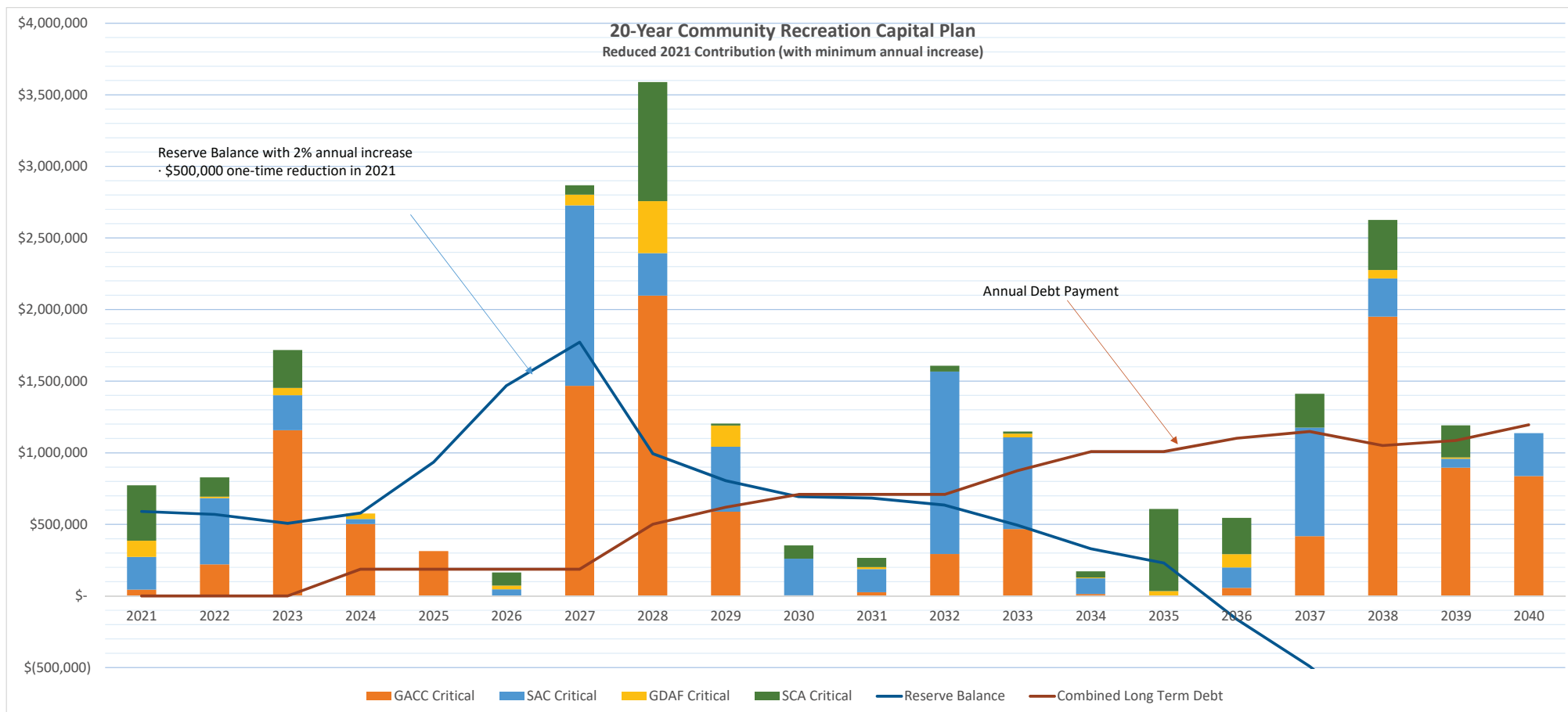
It is also recommended that starting in 2021 the Community Recreation Facilities Capital Plan be transitioned to parcel taxes.

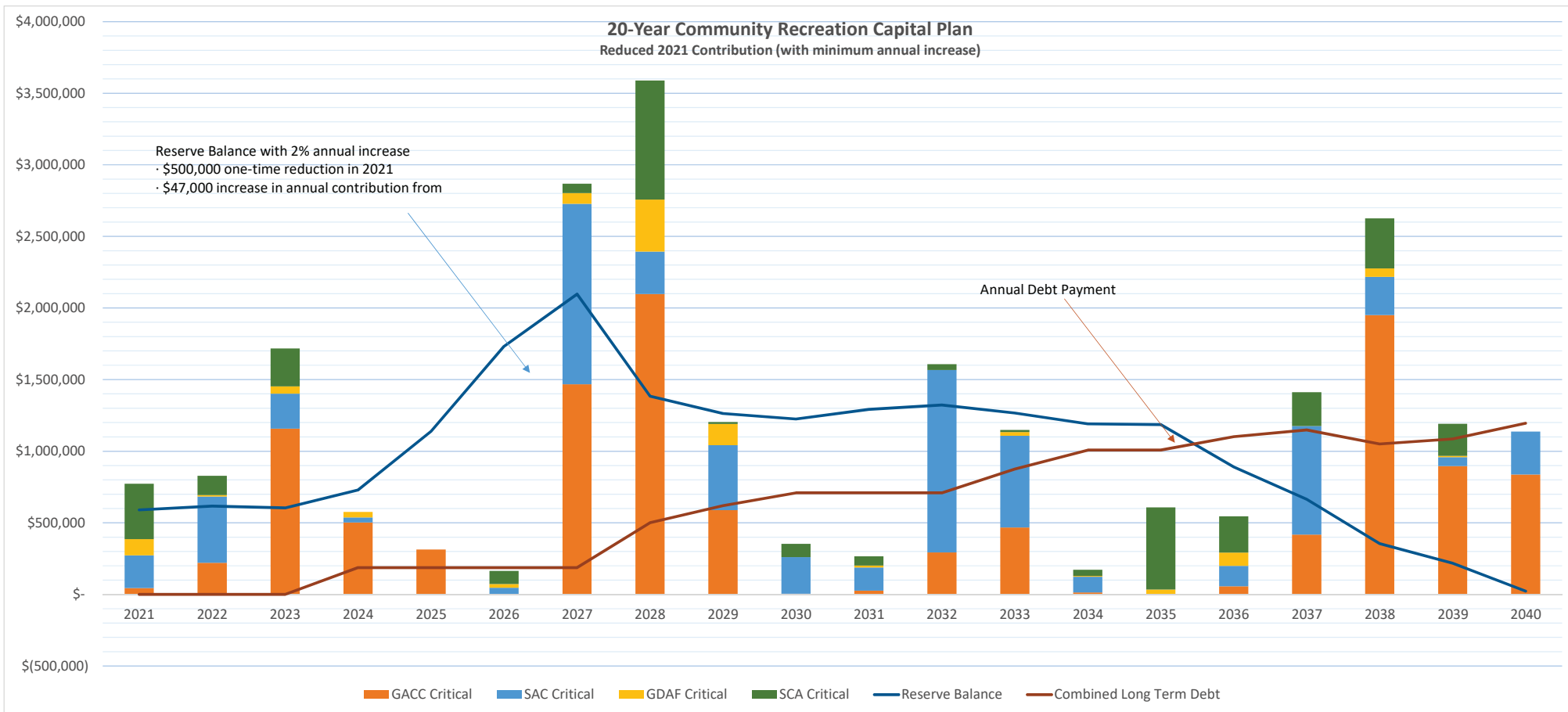
### Attachments:

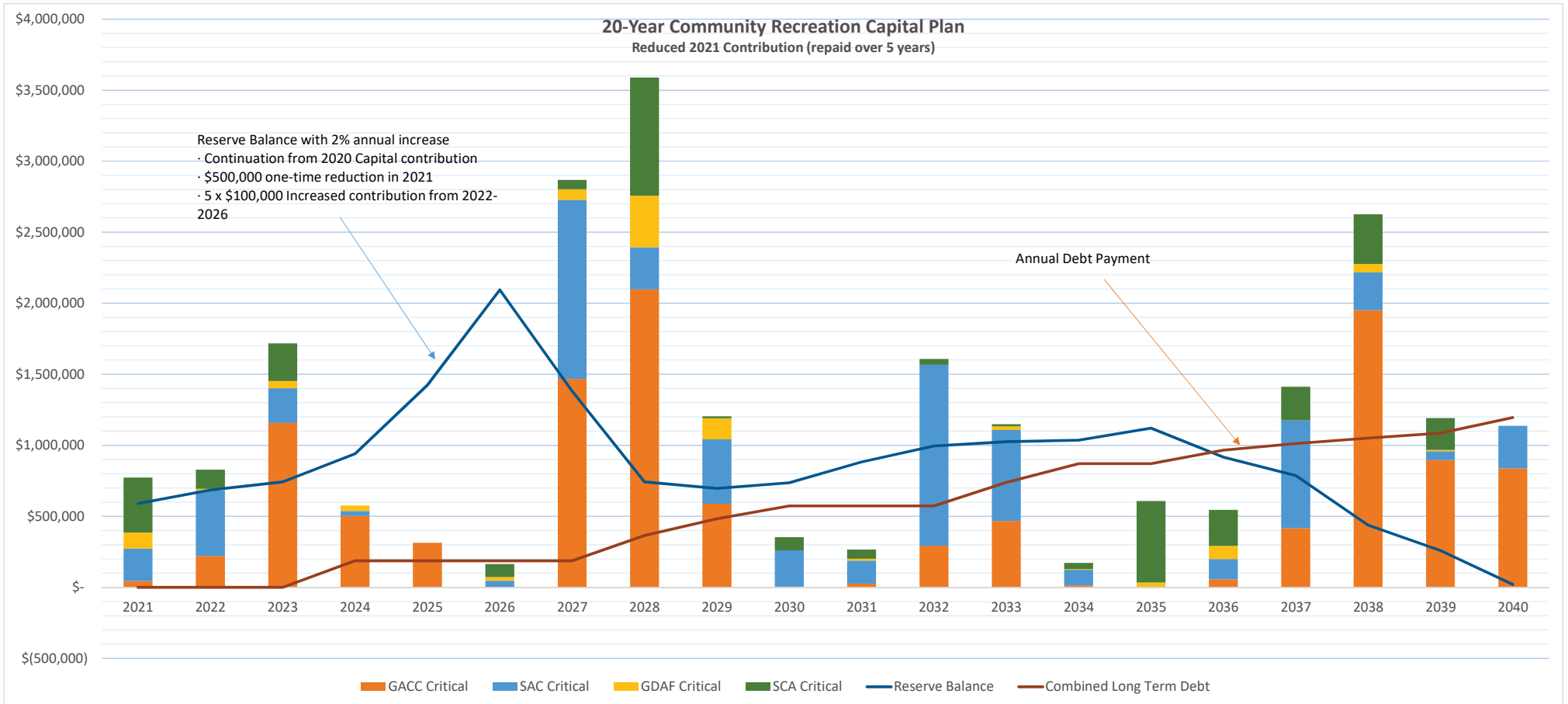
Appendices A-I.

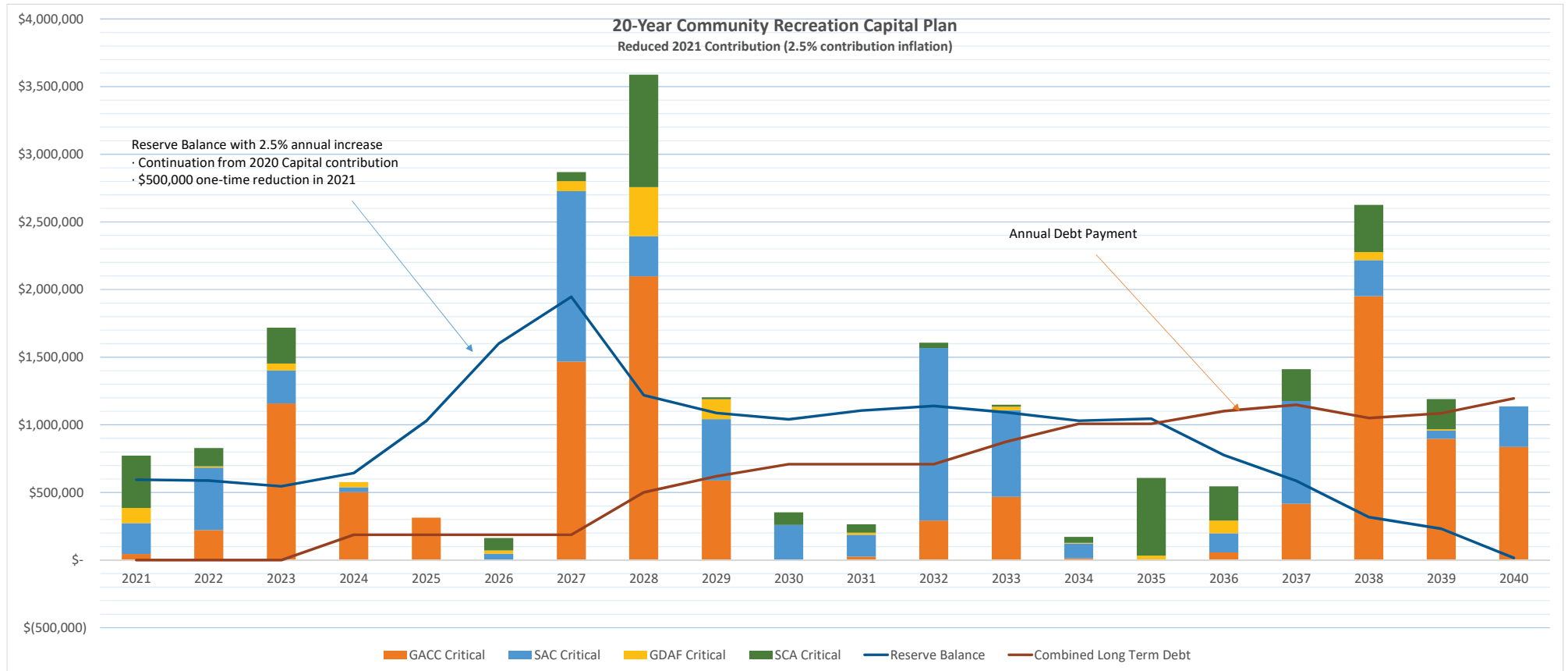
Reviewed by:			
Manager		Finance/CFO	
GM	X – I. Hall	Legislative	
CAO	X – D. McKinley	Other	

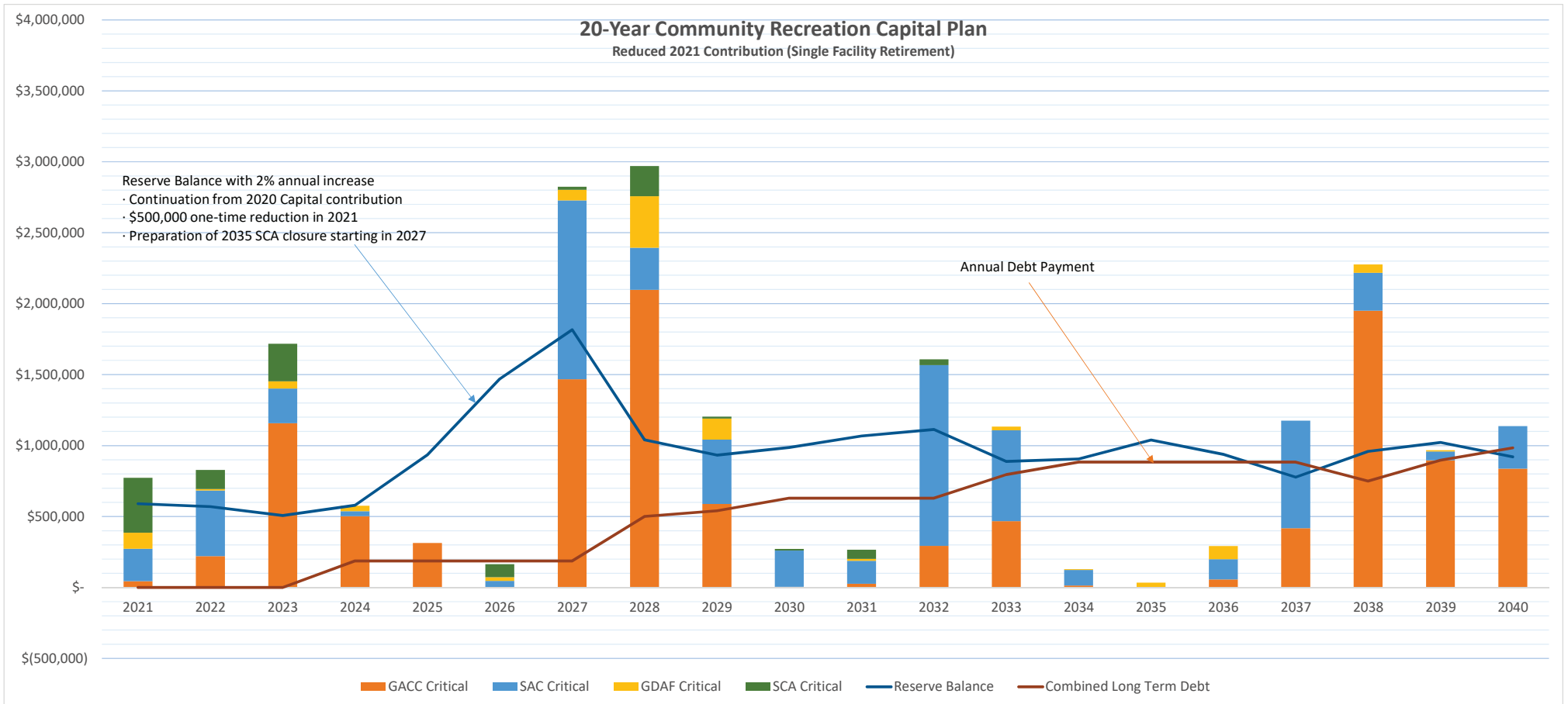


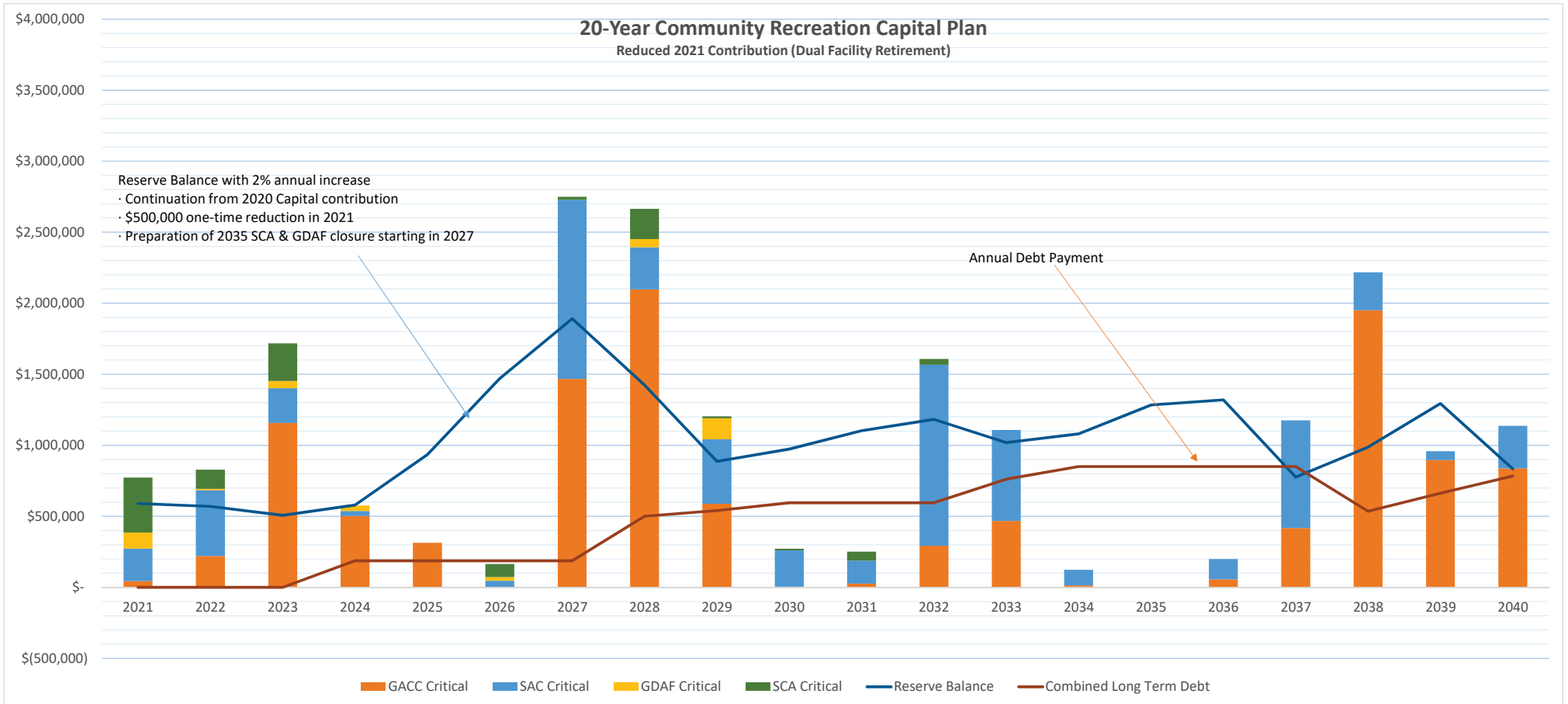




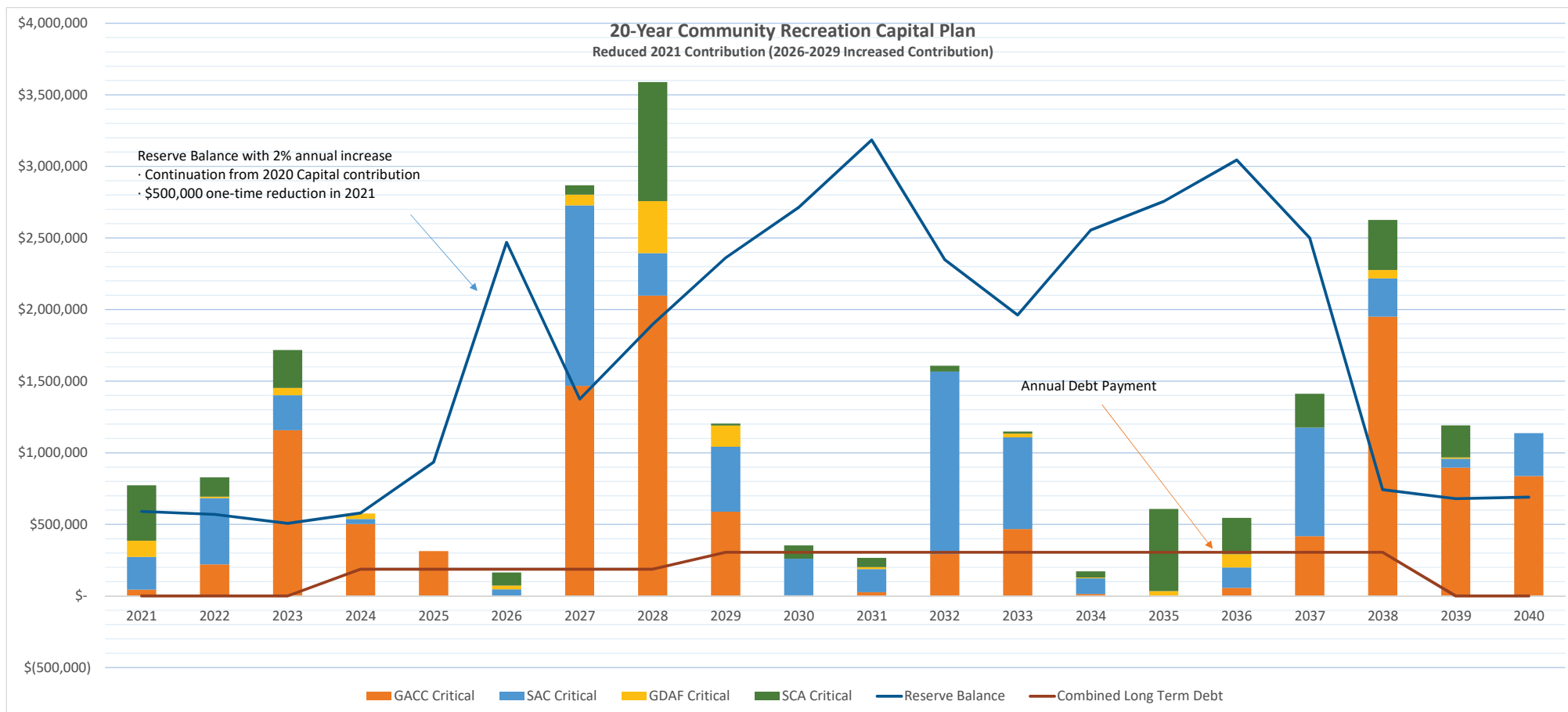


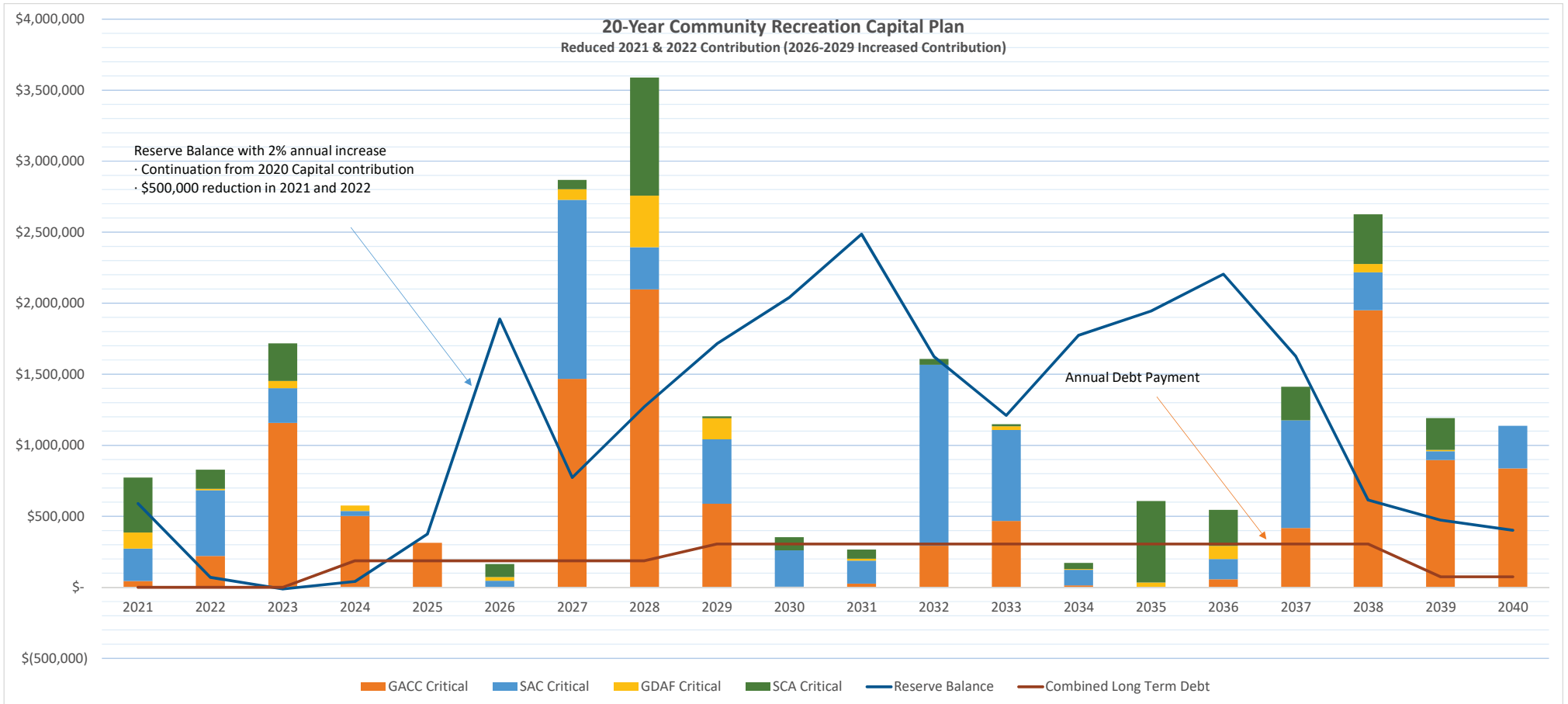












## SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

**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

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**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

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### RECOMMENDATIONS

**THAT the report titled Review of Bylaw 320 With Respect To Wastewater Systems be received for information.**

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### 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*

<b>Wastewater Treatment Facility</b>	<b>Electoral Area</b>	<b>Constructed Date</b>	<b>SCRD assumed responsibility in</b>	<b>Number of parcels serviced</b>
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 <sup>2</sup> )	YES
B (1500 m <sup>2</sup> )	YES
C (2000 m <sup>2</sup> )	YES
D (3500 m <sup>2</sup> average and 2800 m <sup>2</sup> minimum)	YES
E (5000 m <sup>2</sup> average and 4000 m <sup>2</sup> minimum)	YES
CD1 (Comprehensive Development One) (360 m <sup>2</sup> )	YES
F (10,000m <sup>2</sup> and) (8000 m <sup>2</sup> 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 <sup>2</sup> )	YES
B (1000 m <sup>2</sup> )	YES
C (2000 m <sup>2</sup> )	YES
D (4000 m <sup>2</sup> )	YES
CD1 (Comprehensive Development One) (2,000 m <sup>2</sup> )	YES
CD2 (Comprehensive Development Two) (24,000 m <sup>2</sup> )	YES
G (10,000m <sup>2</sup> and) (8000 m <sup>2</sup> 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)

CONTENTS

I	TITLE
II	PROCEDURES TO EXTEND WATER AND/OR SEWER SYSTEMS
III	WATER AND/OR SEWER SERVICING AGREEMENT
IV	GENERAL CONDITIONS OF CONTRACT
V	STANDARDS FOR DESIGN OF WATER AND/OR SEWER
VI	STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF WATERWORKS FACILITIES
VII	STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF SANITARY SEWER FACILITIES

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 or 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.

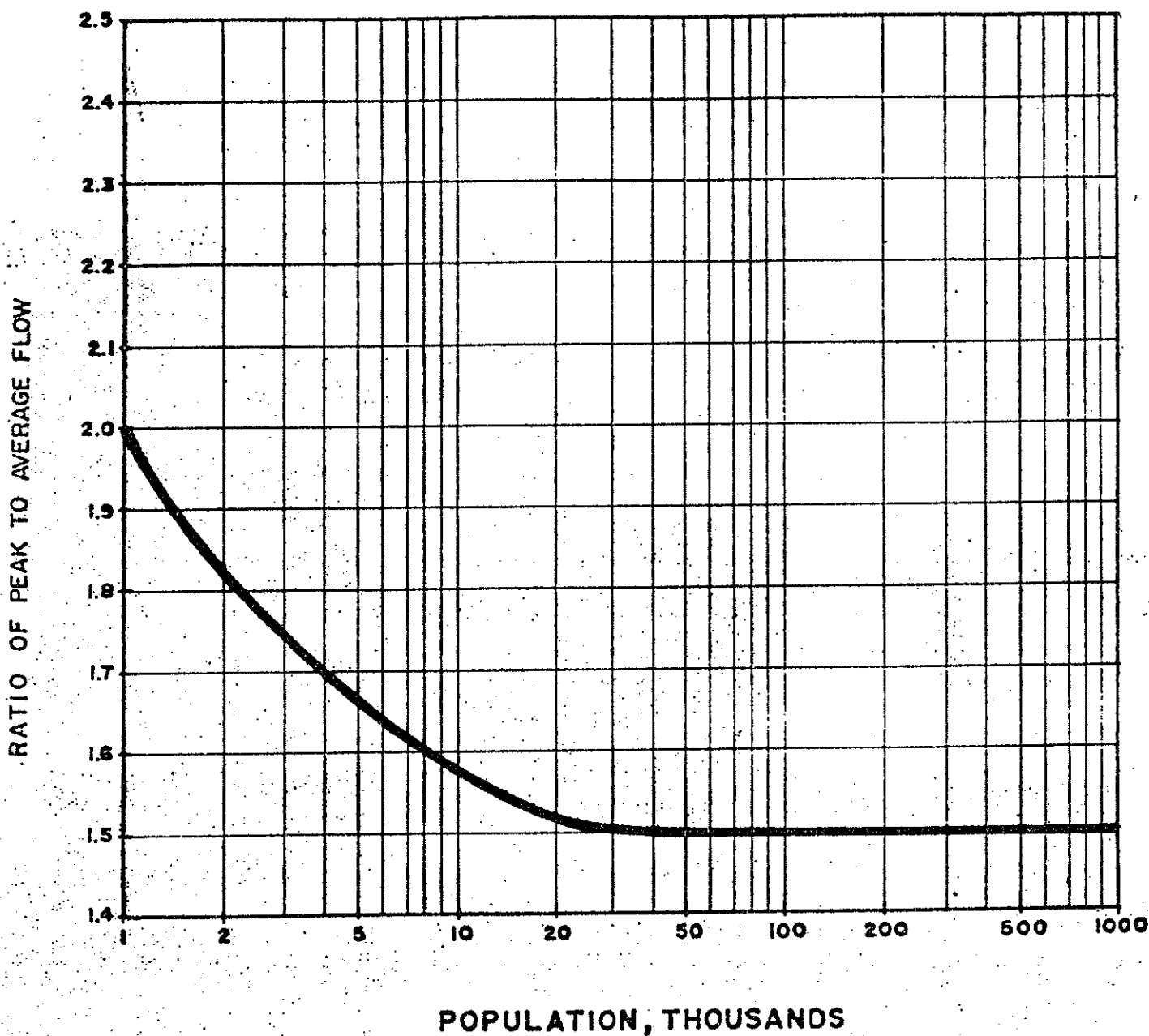
(j) Service Connections

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

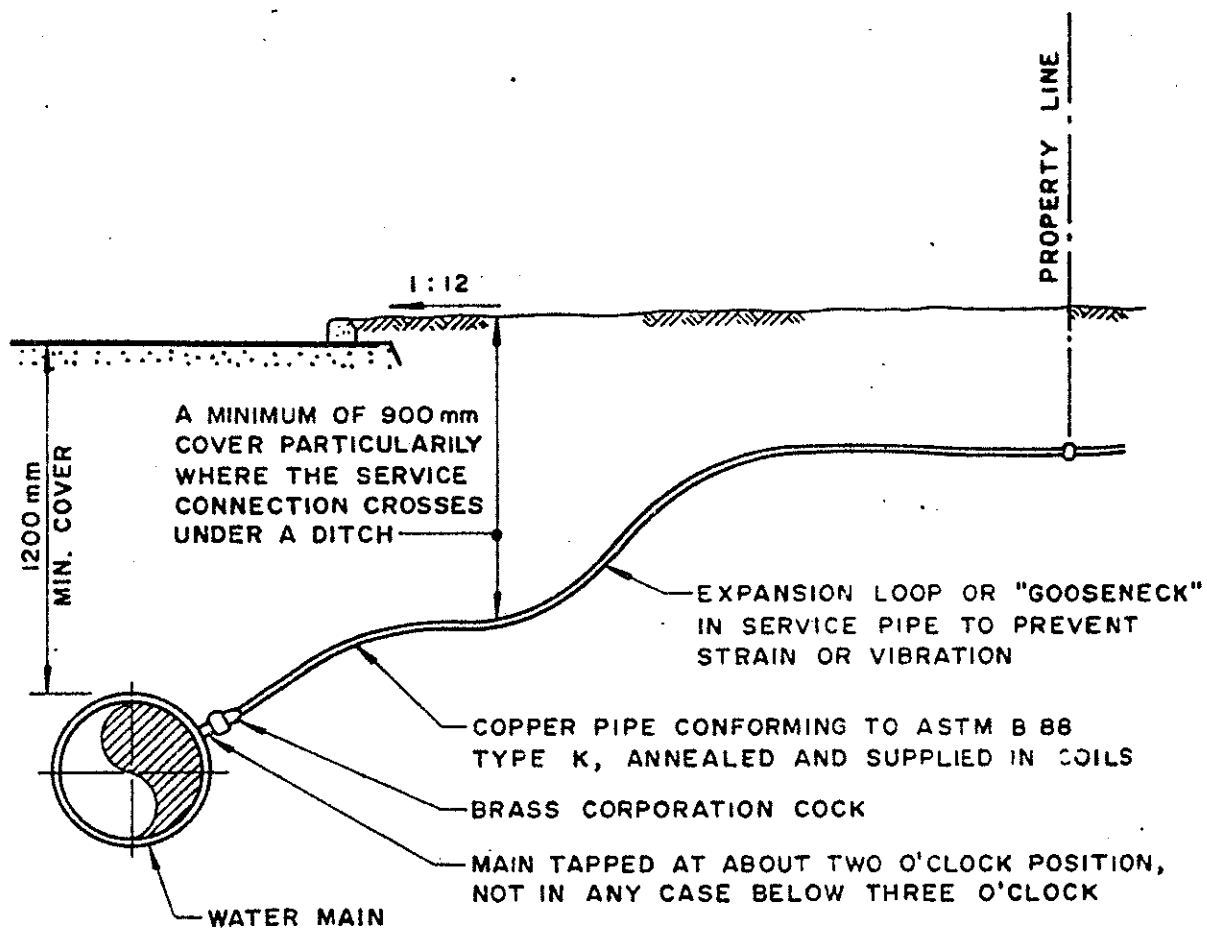
Clean-up shall be completed promptly to the satisfaction of the Engineer.

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**

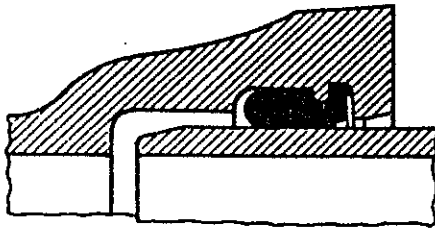
<u>Description</u>	<u>Drawing No.</u>
Typical Water Connection between Main and Property Line	W-1
Types of Hub Connections in Fittings	W-2
Temporary End of Watermain	W-3
Typical Hydrant Assembly	W-4
Typical Gate Valve Cover Installation	W-5
Typical Air Valve Installation	W-6
Typical Blow Off at Watermain 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  $\phi$  OR 25 mm  $\phi$  CONNECTION

No.	DATE	REVISIONS	DWG. W-1
TYPICAL WATER SERVICE CONNECTION BETWEEN MAIN & PROPERTY LINE 114			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEER DATE . . . . .

## FOR USE WITH CAST IRON PIPE



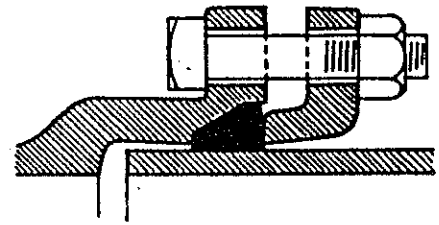
**TYTON (TYP)**

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.

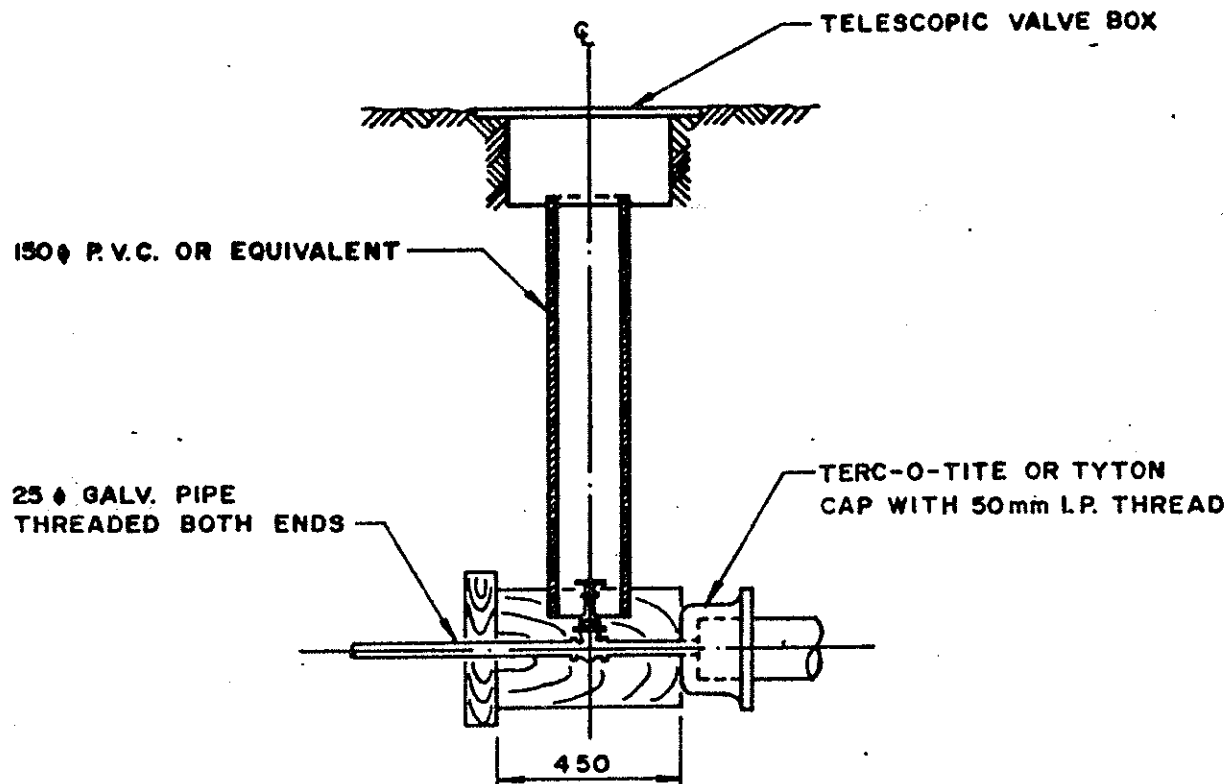
FOR CAST IRON FLANGED FITTINGS CLASS 125 (B16.1-1975) METAL THICKNESS TO ASTM SPECIFICATIONS (B16.1-1975) METAL SPECIFICATIONS TO ASTM SPECIFICATION A126



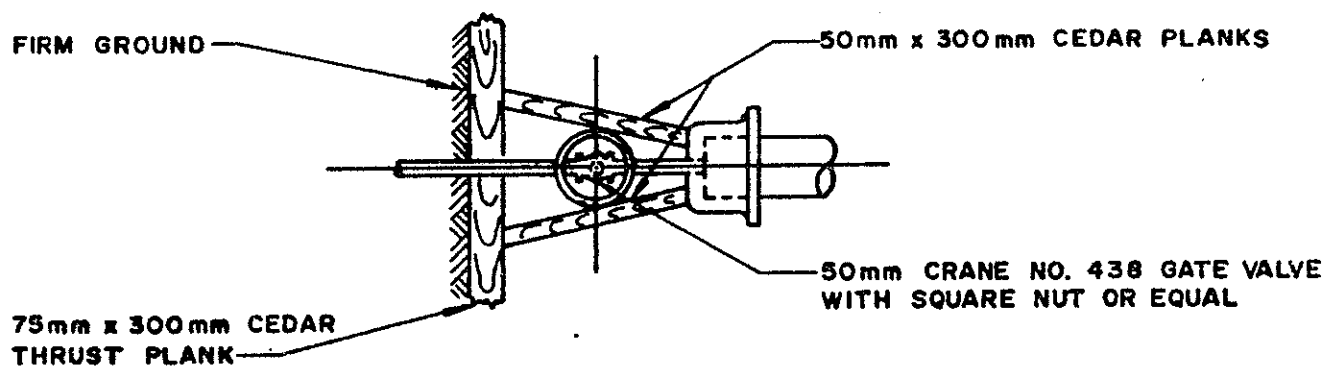
**TER-MECH (MJ)**

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
<b>TYPES OF HUB CONNECTIONS IN FITTINGS</b>			<b>SUNSHINE COAST REGIONAL DISTRICT</b> PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE . . . . .
115			



**ELEVATION**

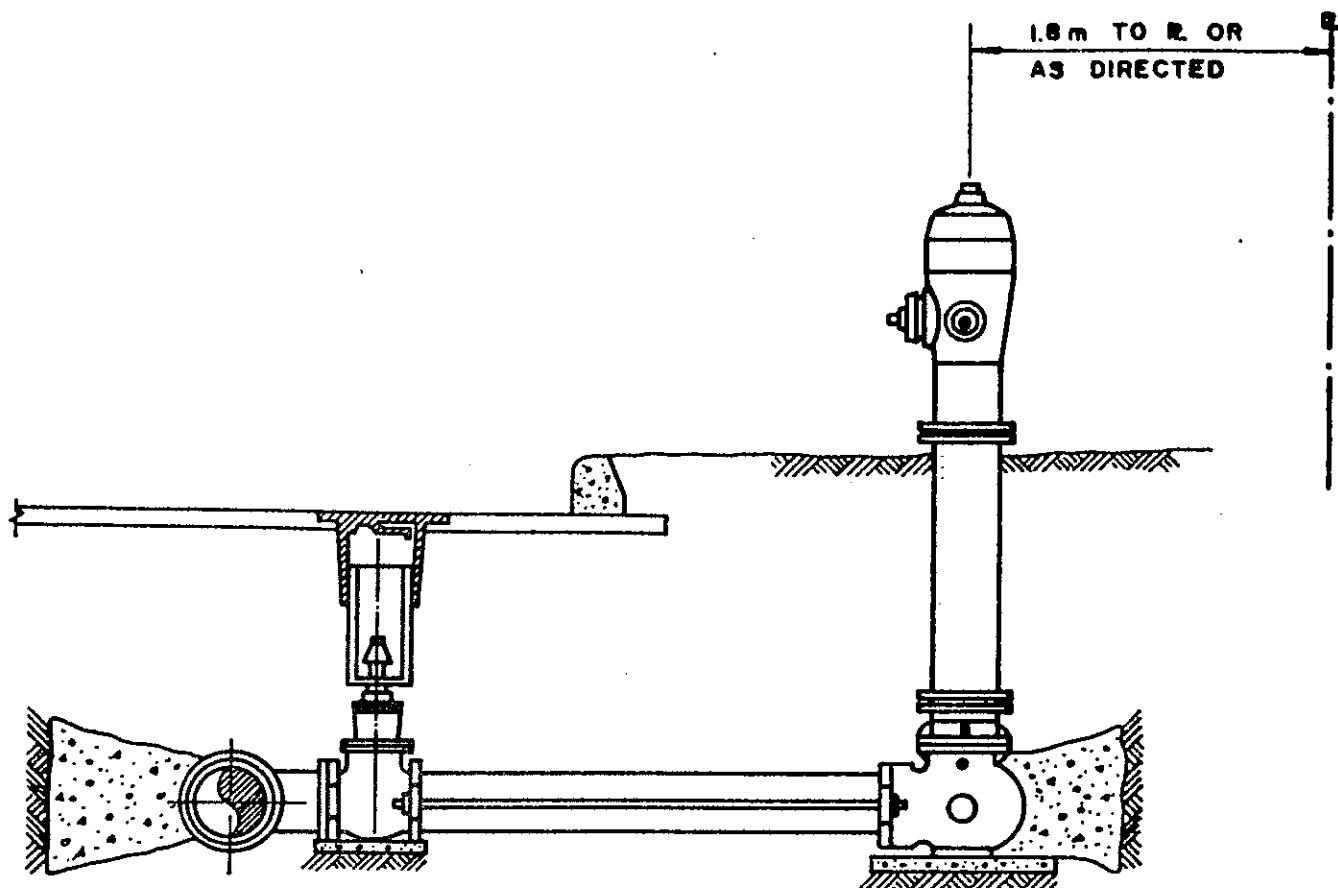


**PLAN**

**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 . . . . .

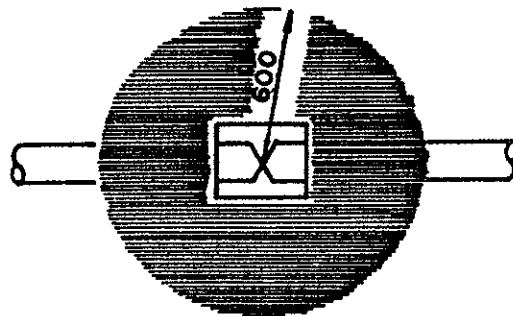
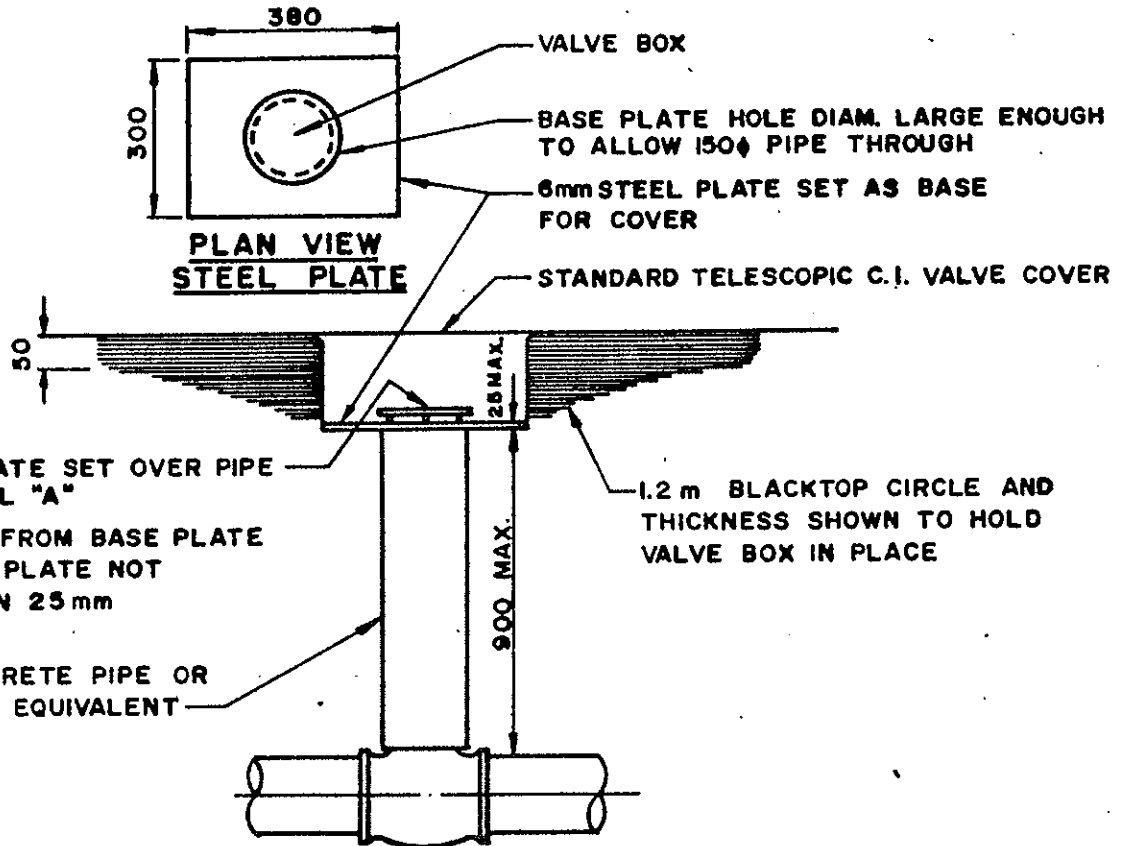
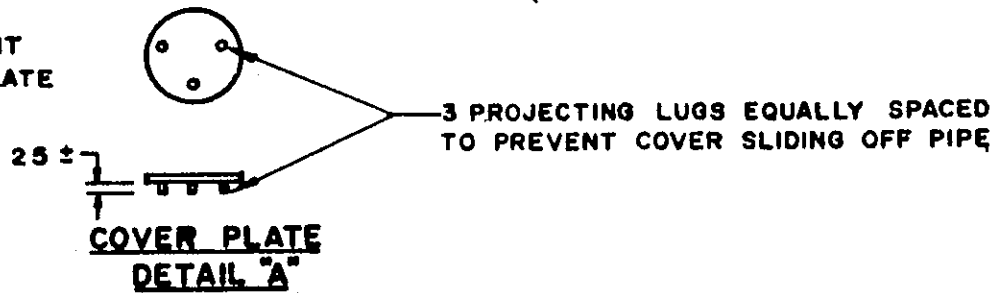


**NOTES:**

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 m<sup>2</sup>) 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**

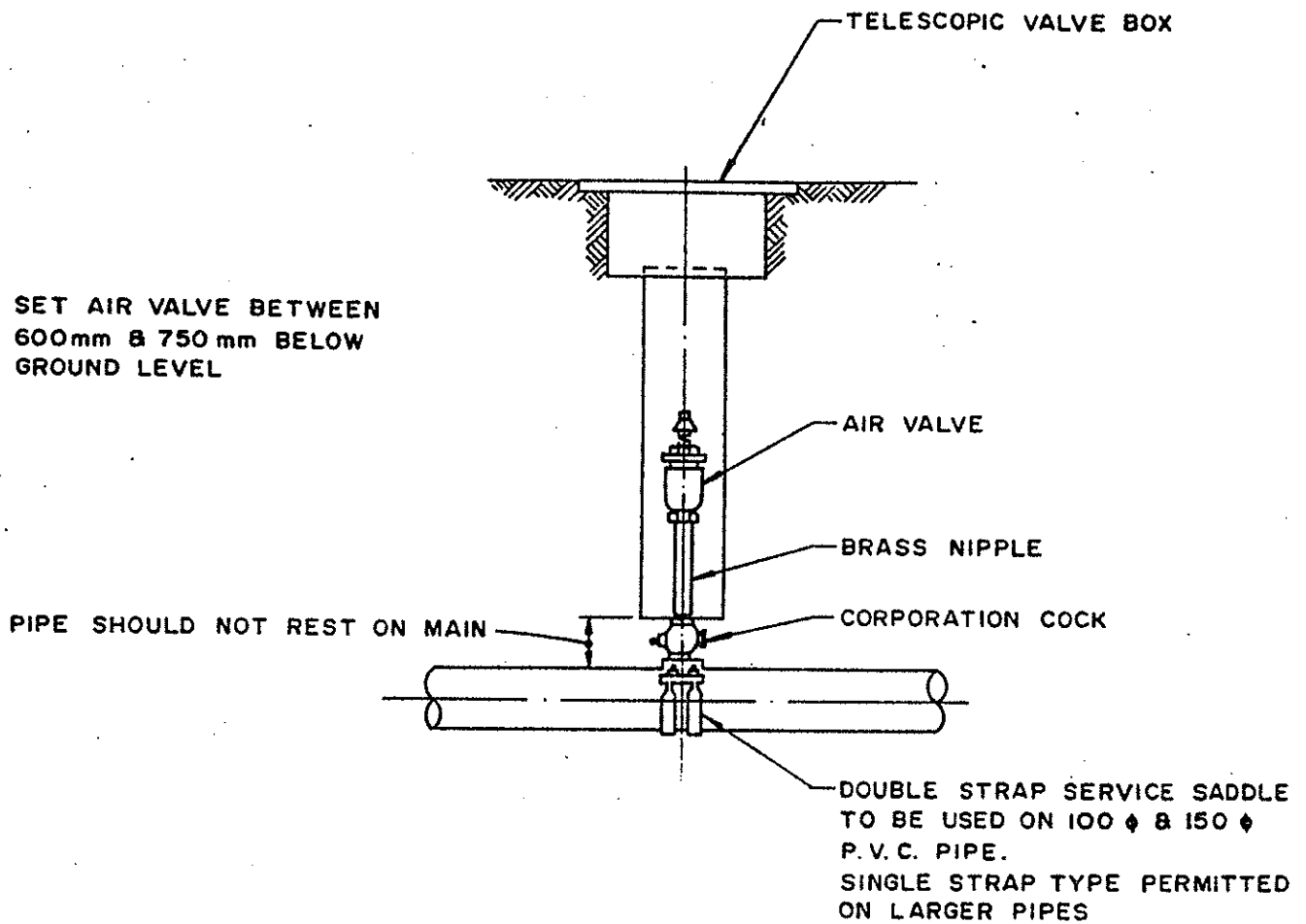
**NOTE:**

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

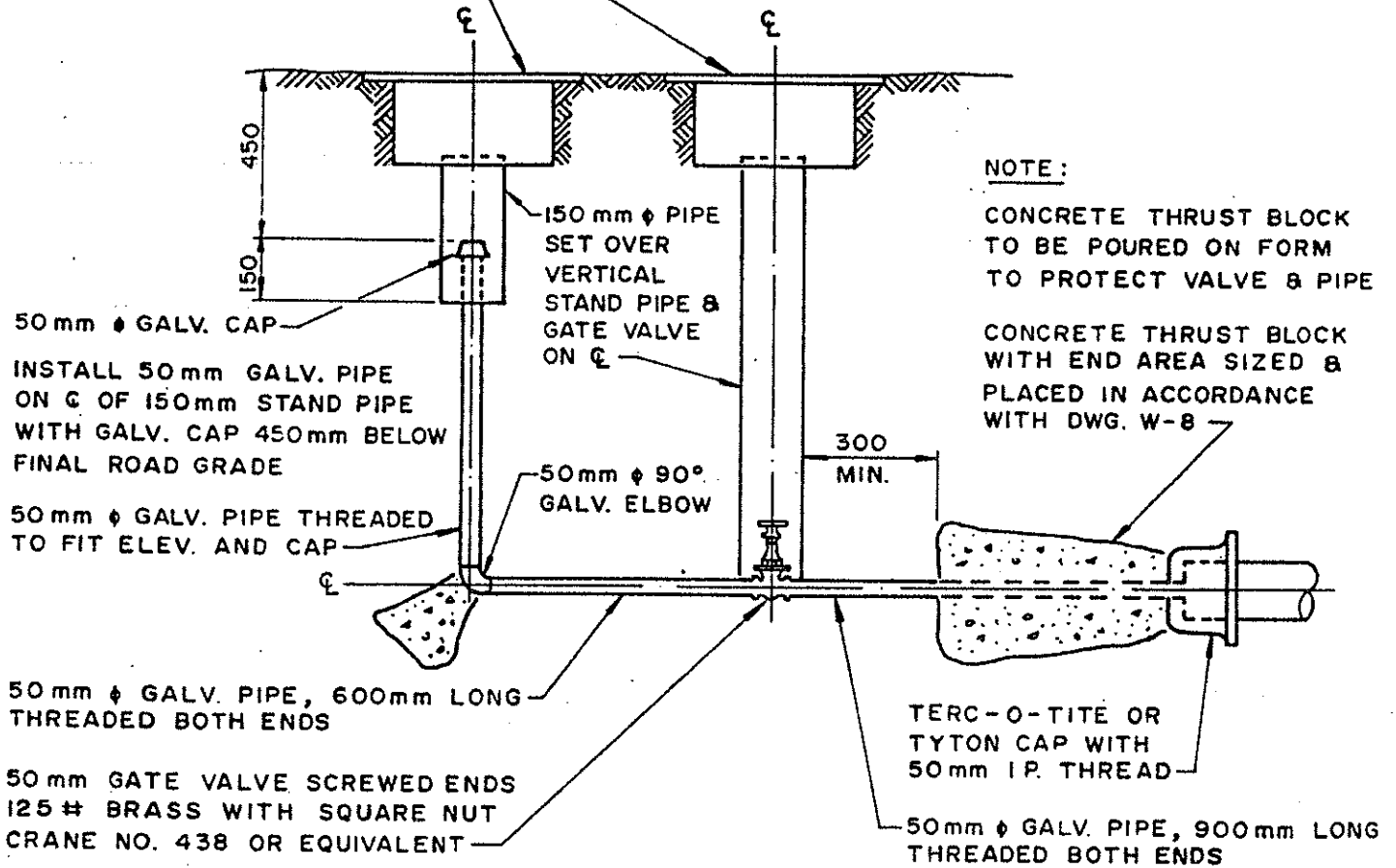


**NOTE :**

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 . . . . .
119			

TELESCOPIC VALVE BOX



No. DATE

REVISIONS

DWG. W - 7

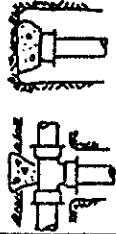

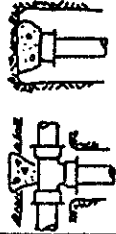

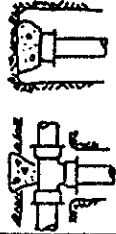

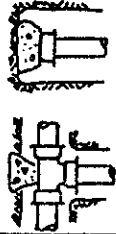

TYPICAL BLOW OFF AT  
WATERMAIN END POINT

SUNSHINE COAST REGIONAL DISTRICT

PREPARED BY

DAYTON & KNIGHT LTD. CONSULTING ENGINEERS

DATE . . . . .

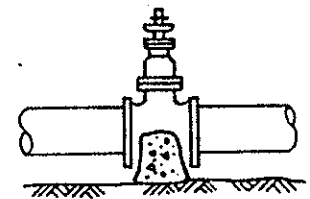
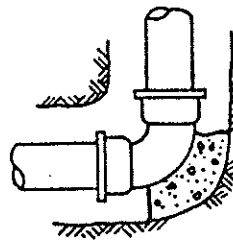
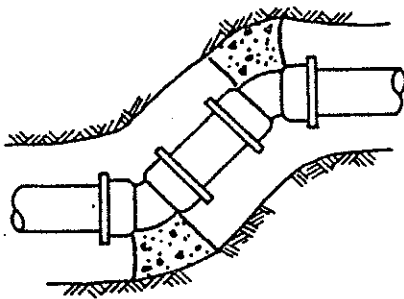
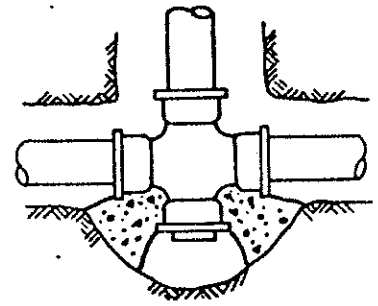
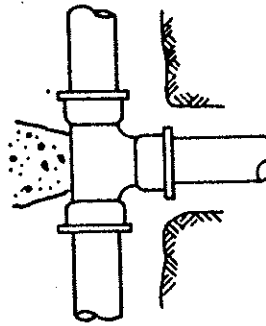
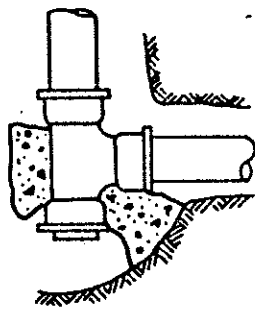
	CAPS, PLUGS & TEES	90° ELBOWS		45° ELBOWS		22 1/2° ELBOWS		11 1/4° ELBOWS		VERTICAL BENDS
		THRUST KN	MINIMUM BLOCK BASE AREA m <sup>2</sup>	THRUST KN	MINIMUM BLOCK BASE AREA m <sup>2</sup>	THRUST KN	MINIMUM BLOCK BASE AREA m <sup>2</sup>	THRUST KN	MINIMUM BLOCK BASE AREA m <sup>2</sup>	
1915.2 - HARD 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	
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	
574.6 - SAND - COURSE, LOOSE OR FINE COMPACT		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	
191.5 - SOFT CLAY-		16	0.167	23	0.242	12	0.130	6	0.065	SEE 22 1/2° ELBOW 
		33	0.344	47	0.492	25	0.269	13	0.139	
		57	0.595	81	0.845	44	0.455	22	0.232	

SEE NOTE 5

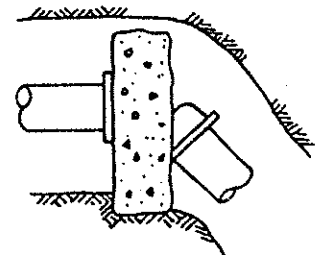
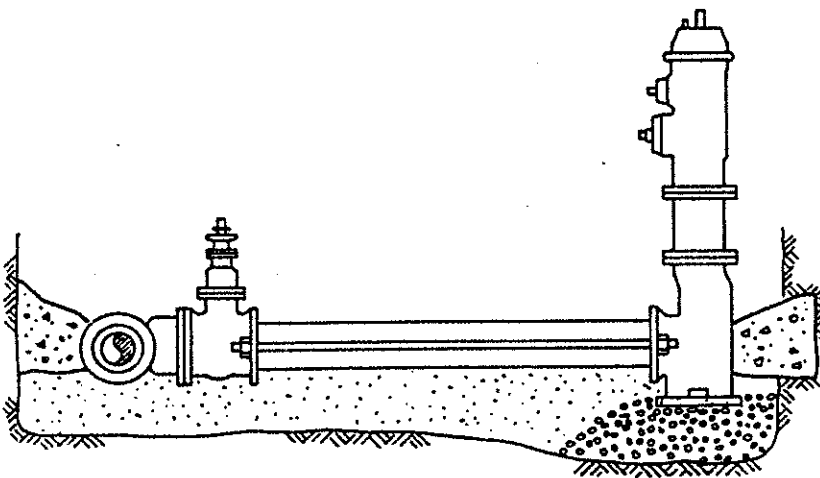
1. CONCRETE THRUST BLOCKS SHALL EXTEND INTO UNDISTURBED SOIL. THRUST IN SOFT UNSTABLE SOILS WILL REQUIRE REMOVAL OF SOIL AND REPLACEMENT WITH COMPACTABLE FILL OR SUFFICIENT STABILITY TO RESIST THRUST OR SPECIAL ANCHOR BLOCK AS DIRECTED BY THE CITY ENGINEER.
2. BLOCKING WILL BE REQUIRED FOR ALL ELBOWS, 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.

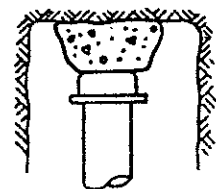
No.	DATE	REVISIONS	DWG. W-8
<p align="center"><b>CONCRETE BLOCKING</b></p>			<p align="center"><b>SUNSHINE COAST REGIONAL DISTRICT</b></p> <p align="center">PREPARED BY DAYTON &amp; KNIGHT LTD. CONSULTING ENGINEERS DATE . . . . .</p>



ALL BLOCKING TO EXTEND  
INTO UNDISTURBED SOIL















ELEVATION



No.	DATE	REVISIONS	DWG. W - 9
SUGGESTED THRUST BLOCK LOCATIONS			SUNSHINE COAST REGIONAL DISTRICT
122			PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE . . . . .

# STANDARD SYMBOLS

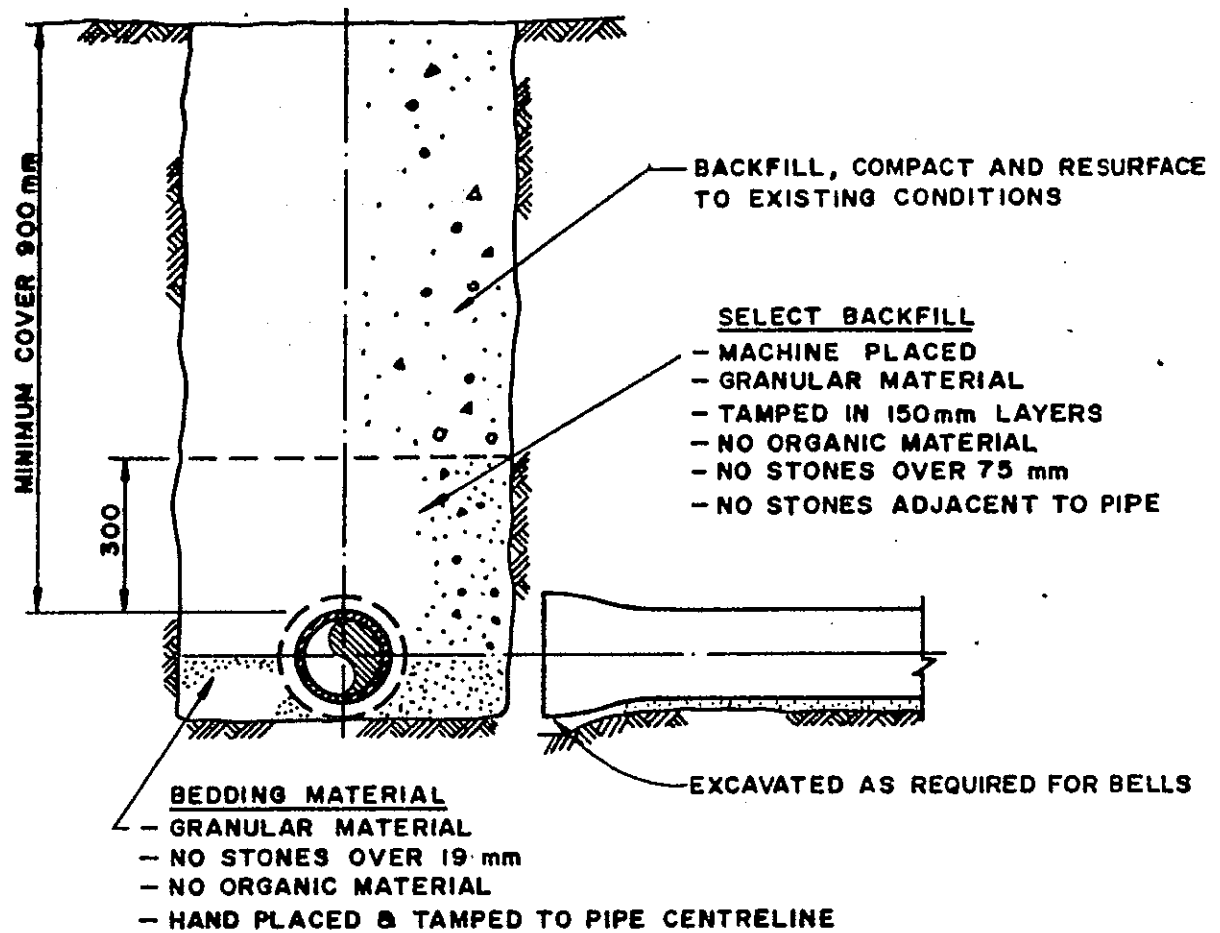
(FOR USE ON CONTRACT DRAWINGS)

_____ 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
_____  P.R.V. _____	PRESSURE REDUCING VALVE
_____  M _____	METER
_____  _____	FIRE HYDRANT
_____  M.O. _____	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
123			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) 124			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

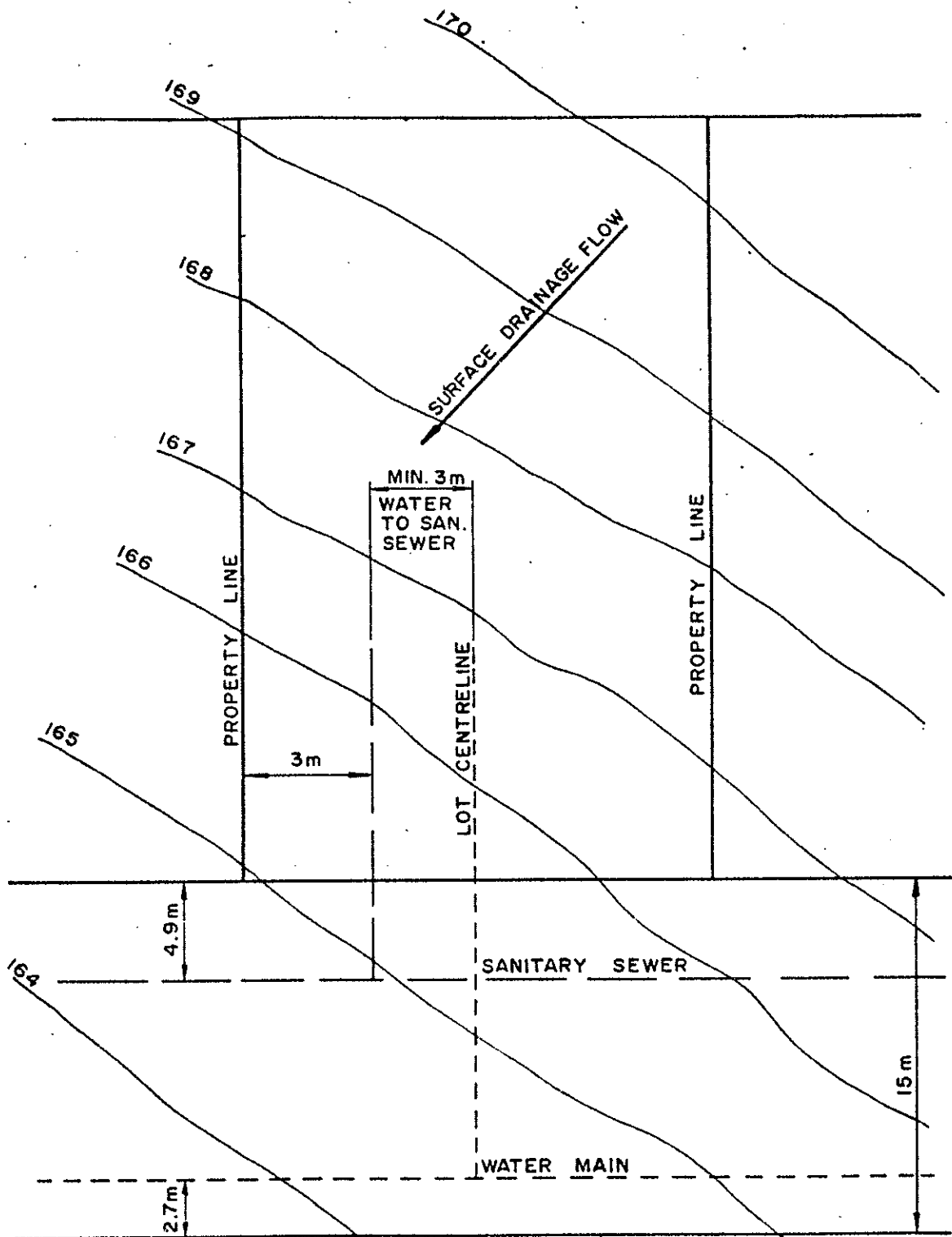
Prior to final inspection of sewers, the Contractor shall flush each run between manholes, by use of a high pressure water jet cleaner. The Contractor shall remove all foreign material found in the sewers.

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**

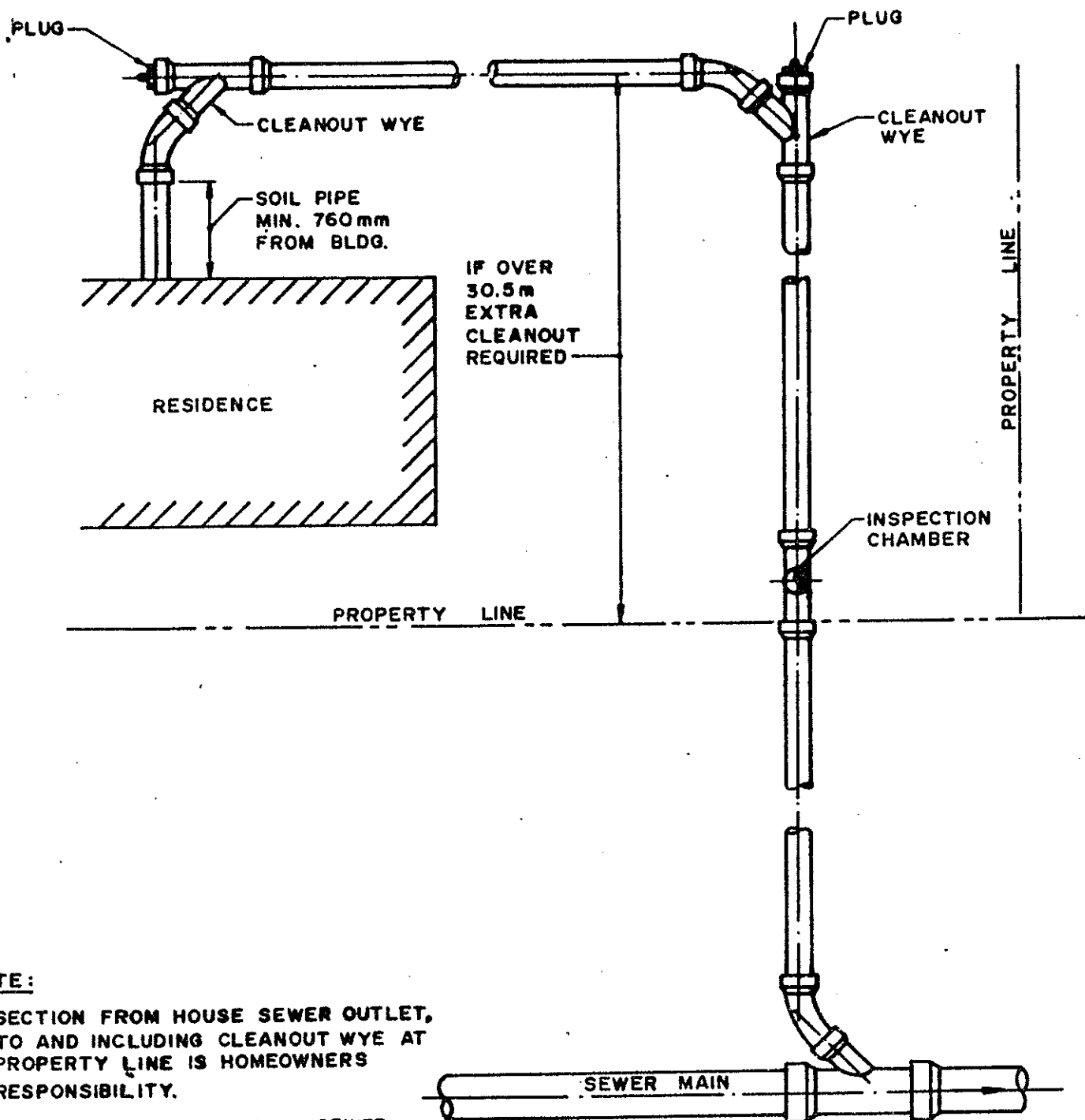
<u>Description</u>	<u>Drawing No.</u>
Typical Location of Service Connections to Residential Vacant Lots	S-1
Typical Residential Sewer Connection	S-2
Service Connection - Riser Type	S-3
Service Connection - Non-Riser Type	S-4
Trench Details - Section in Greavelled Surface	S-5
Trench Details - Section 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

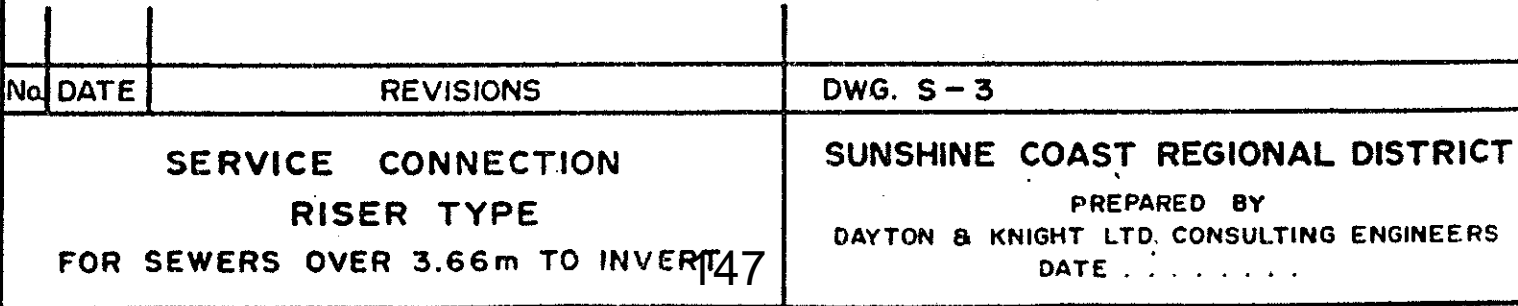
No.	DATE	REVISIONS	DWG. S - I
TYP. LOCATION OF SERVICE CONNECTIONS TO RESIDENTIAL VACANT LOTS			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE . . . . .



**NOTE:**

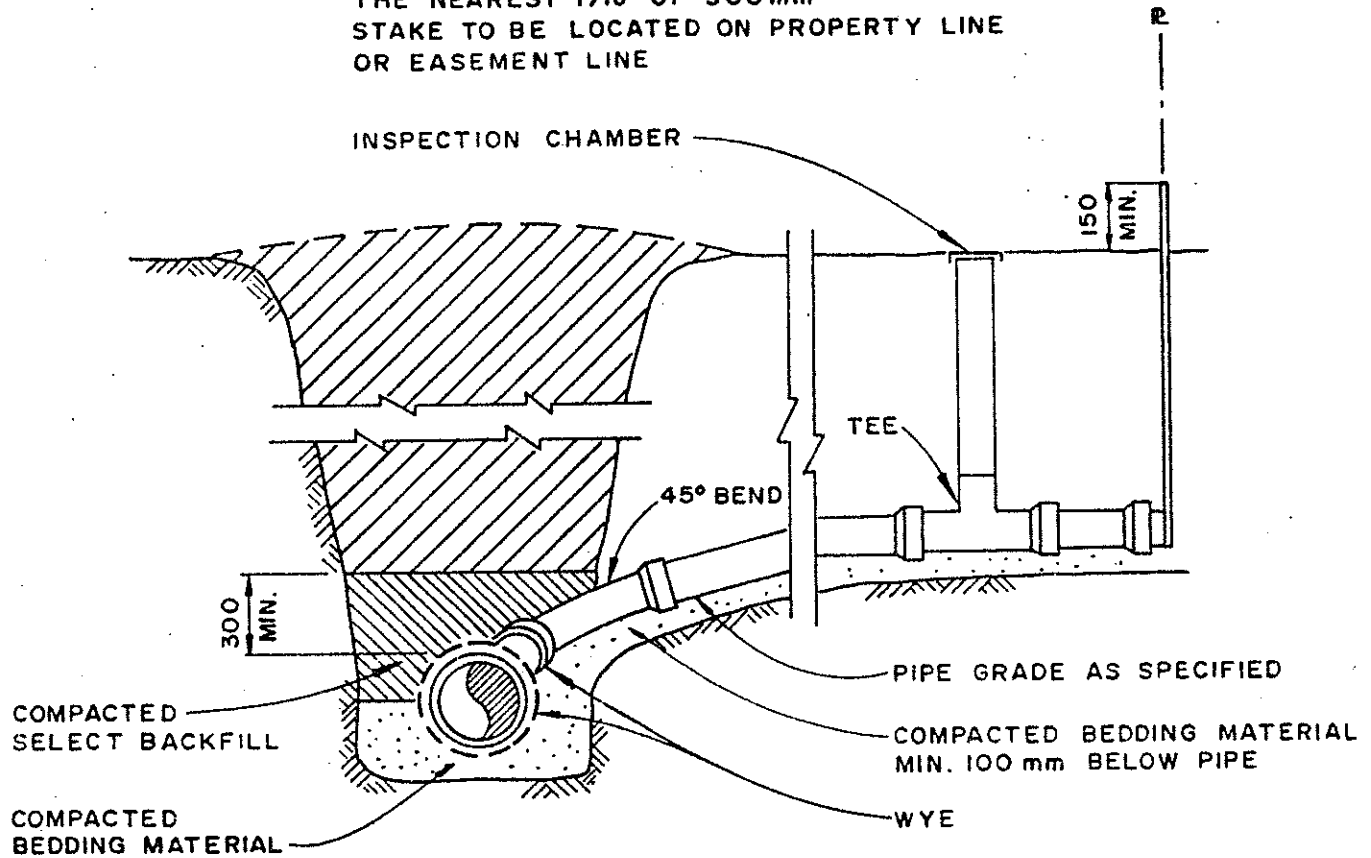
1. SECTION FROM HOUSE SEWER OUTLET, TO AND INCLUDING CLEANOUT WYE AT PROPERTY LINE IS HOMEOWNERS RESPONSIBILITY.
2. MINIMUM GRADE FOR 100mm SEWER LINE IS 1mm PER 50mm.  
IN EXCEPTIONAL CASES A GRADE OF 1mm PER 100mm MAY BE USED, PROVIDING THIS IS AUTHORIZED AND APPROVED BY THE MUNICIPAL ENGINEER.
3. 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 . . . . .



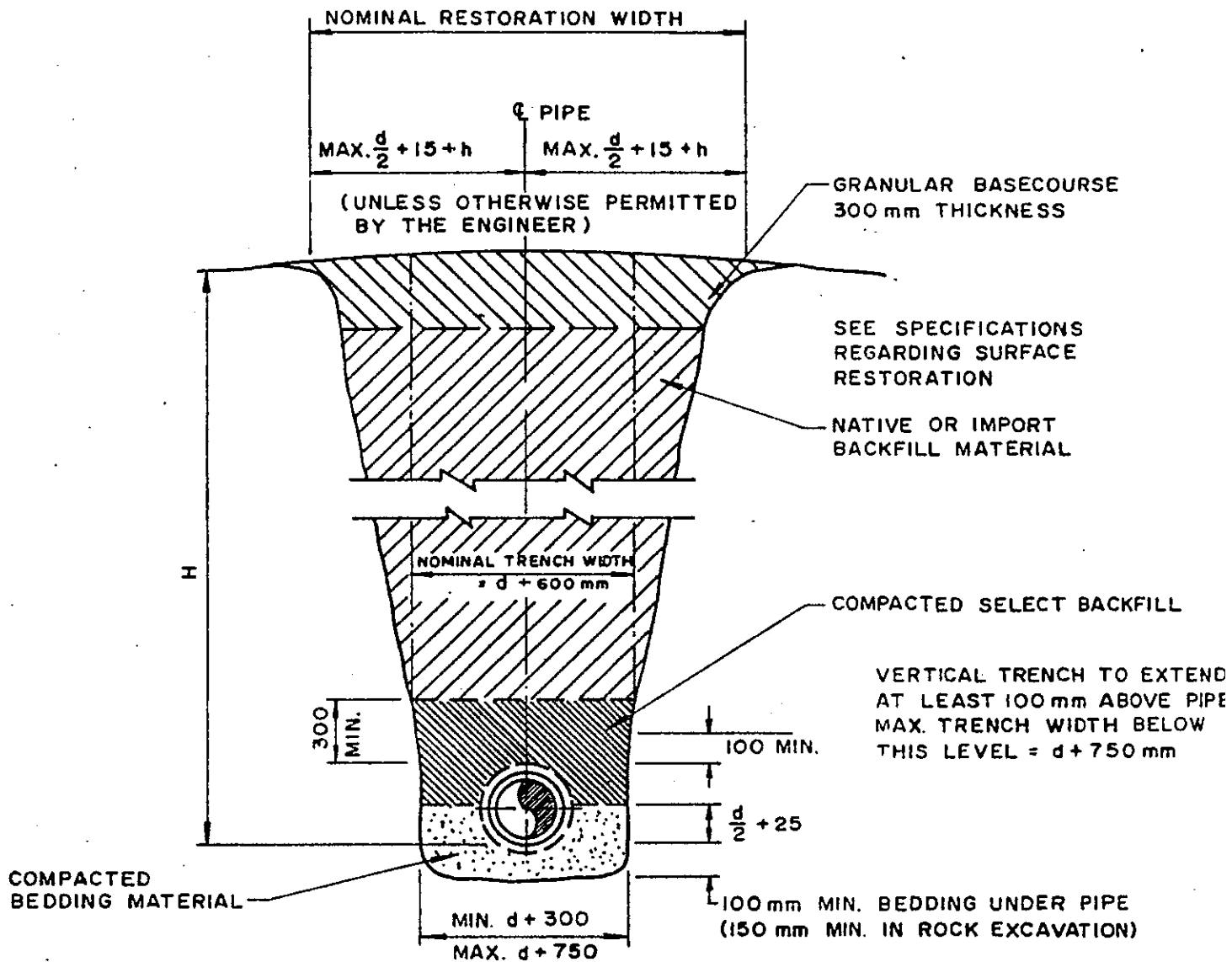
IF THE SERVICE IS IN A LOCATION WHERE THE STAKE  
MAY BE A HAZARD TO PEDESTRAIN OR VEHICULAR TRAFFIC,  
IT SHALL ONLY BE BROUGHT TO GROUND SURFACE

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

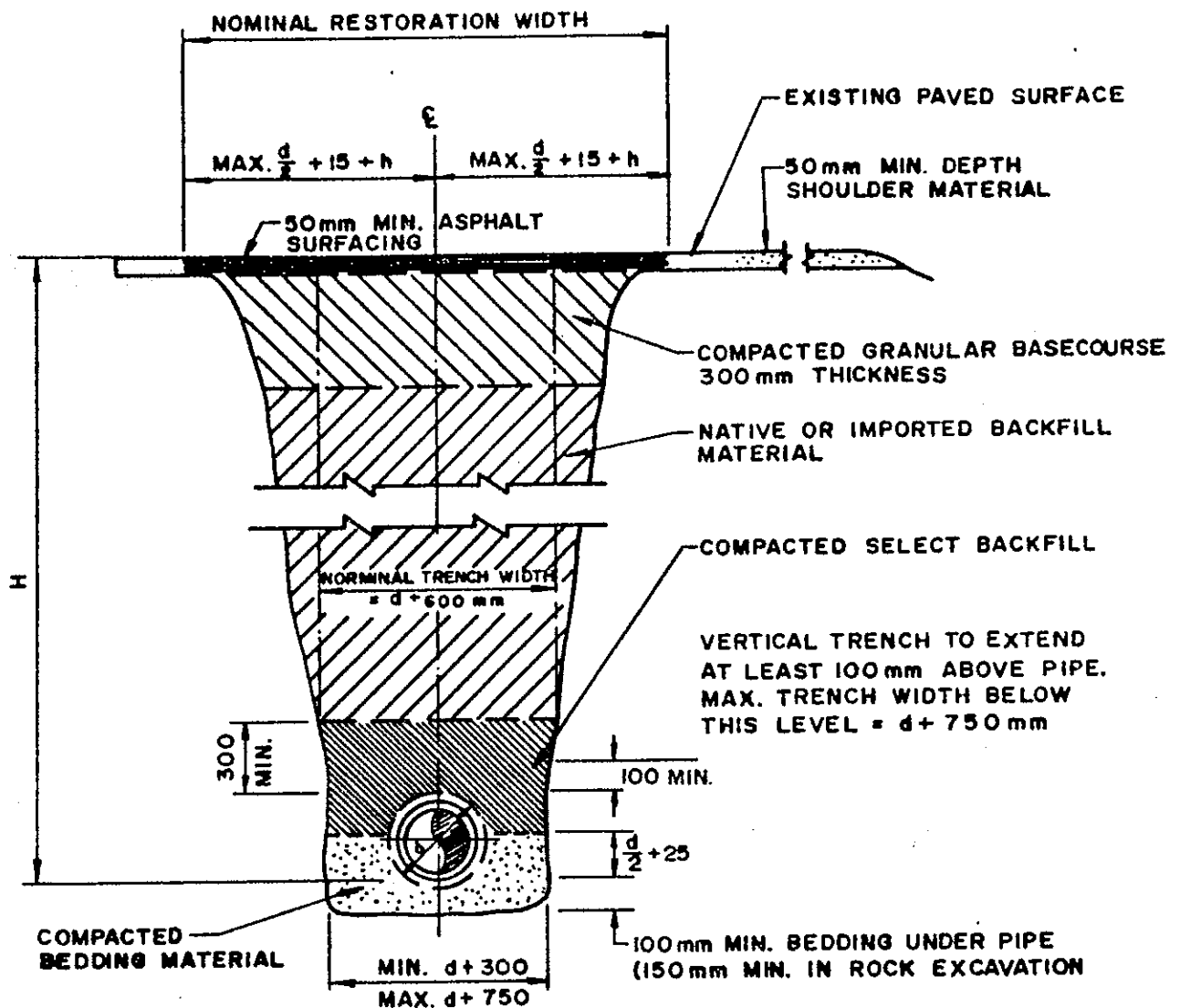


No.	DATE	REVISIONS	DWG. S - 4
SERVICE CONNECTION NON-RISER TYPE FOR SEWERS LESS THAN 3.66m TO INVERT			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE . . . . .

**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 . . . . .

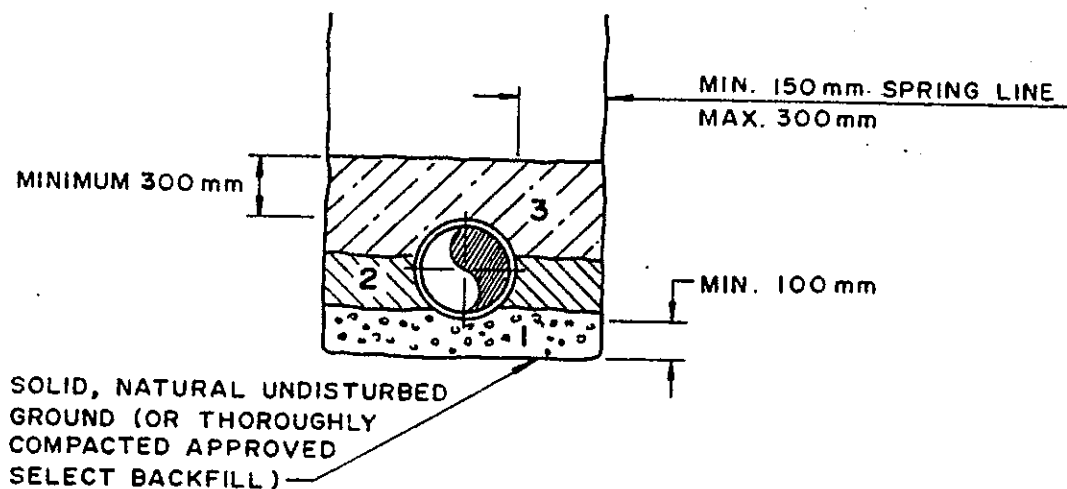


**NOTE:** "h" IS NUMERICALLY EQUAL TO "H" & THE ANSWER IS IN MILLIMETRES  
 d = THE OUTSIDE DIAMETER OF THE PIPE  
 AT ITS LARGEST SECTION.

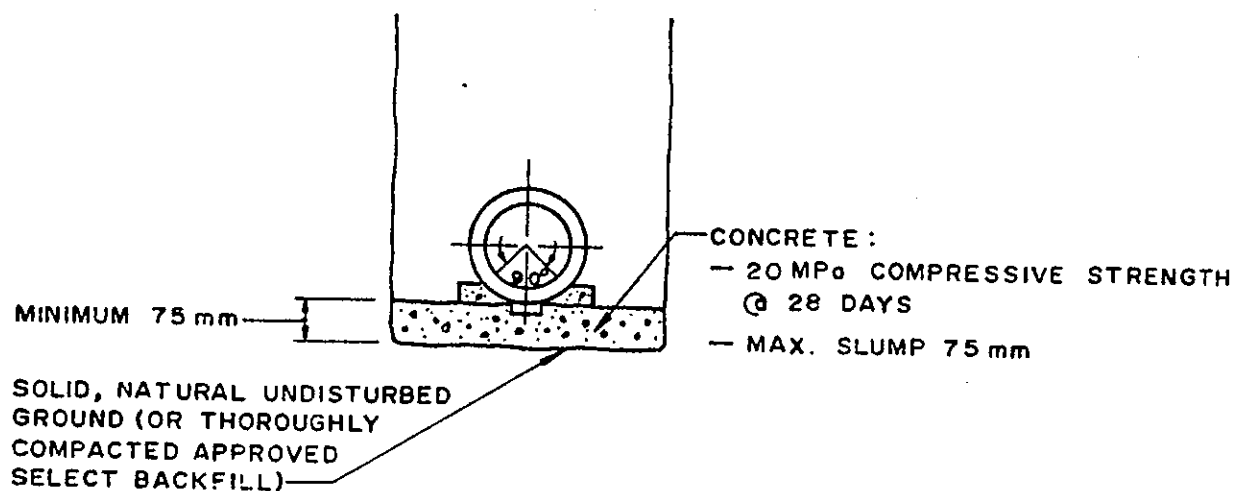
No.	DATE	REVISIONS	DWG. S - 6
TRENCH DETAILS SECTION IN PAVED SURFACE			SUNSHINE COAST REGIONAL DISTRICT PREPARED BY DAYTON & KNIGHT LTD. CONSULTING ENGINEERS DATE . . . . .



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

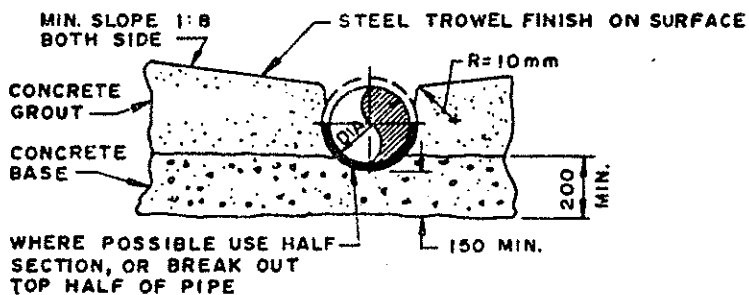
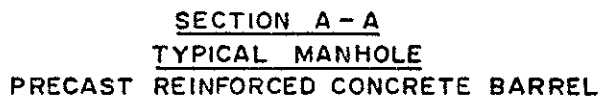
REVISIONS

DWG. S - 7

BEDDING BACKFILL AND  
CRADLING IN PIPE ZONE

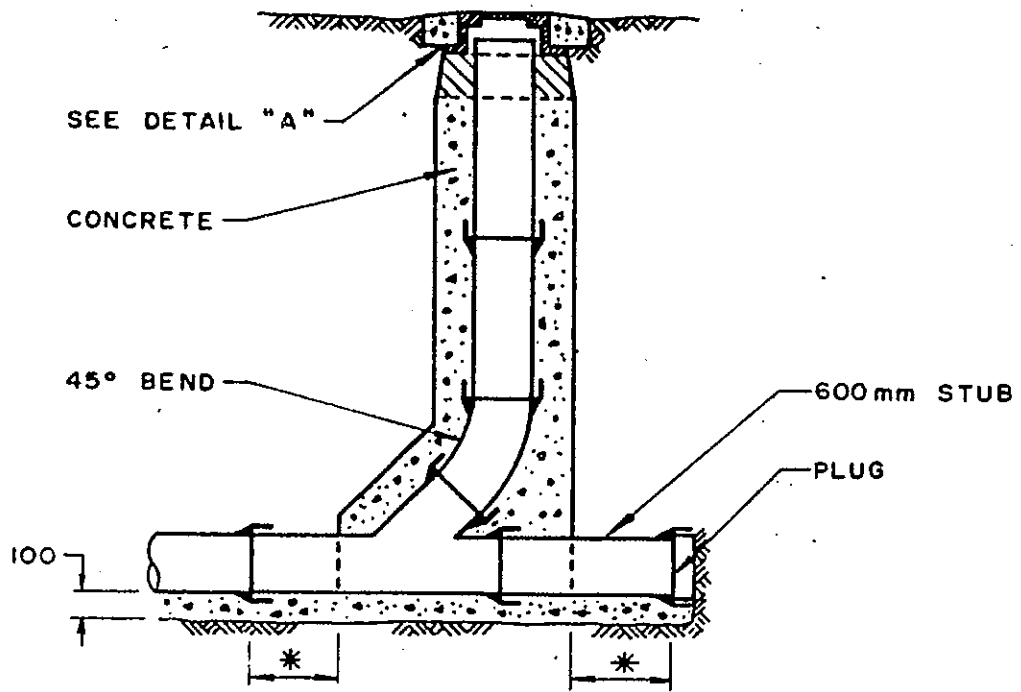
SUNSHINE COAST REGIONAL DISTRICT

PREPARED BY  
DAYTON & KNIGHT LTD. CONSULTING ENGINEERS  
DATE . . . . .

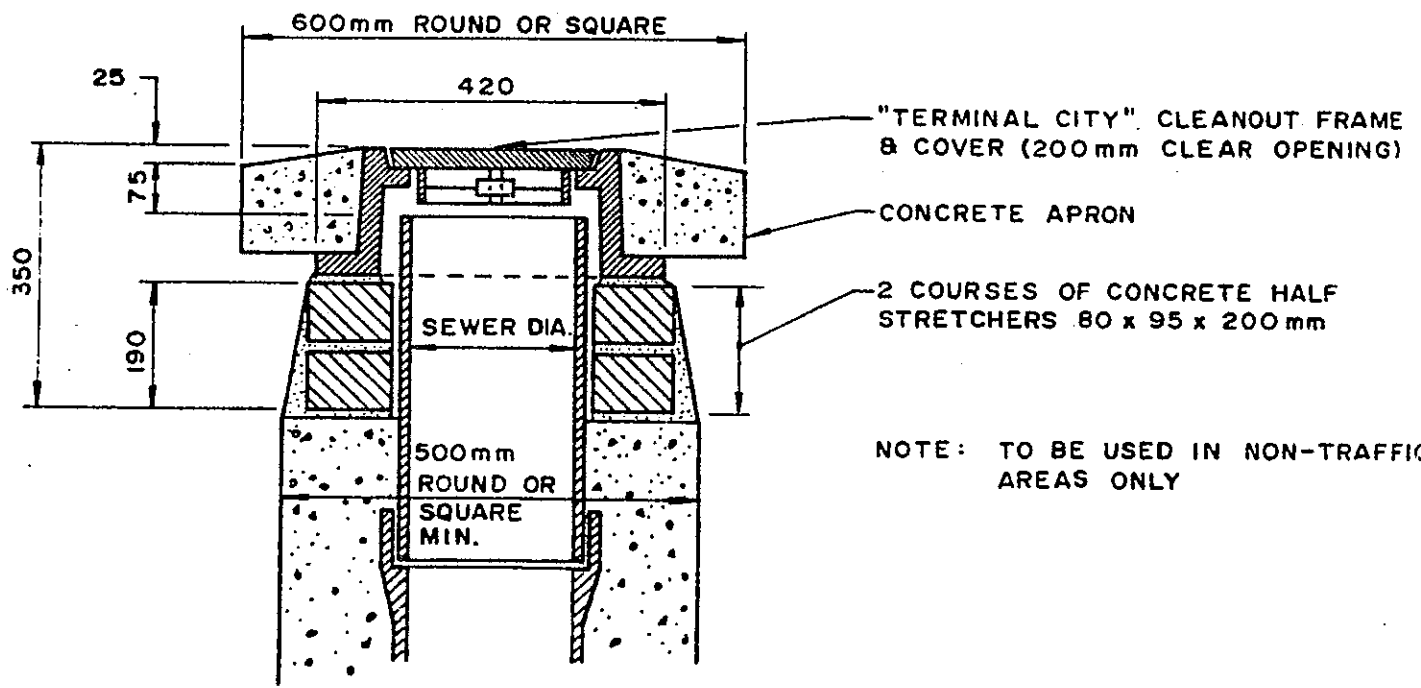


# INVERT CHANNELLING IN MANHOLE

No.	DATE	REVISIONS	DWG. S-8
<p align="center"><b>MANHOLE DETAILS</b>  <b>STANDARD PRECAST TYPE</b>  <b>FOR SEWERS 380mm DIA. OR LESS &amp;</b>  <b>OVER 1.37m IN DEPTH</b></p>			<p align="center"><b>SUNSHINE COAST REGIONAL DISTRICT</b></p> <p align="center">PREPARED BY  <b>DAYTON &amp; KNIGHT LTD. CONSULTING ENGINEERS</b>          DATE . . . . .</p>



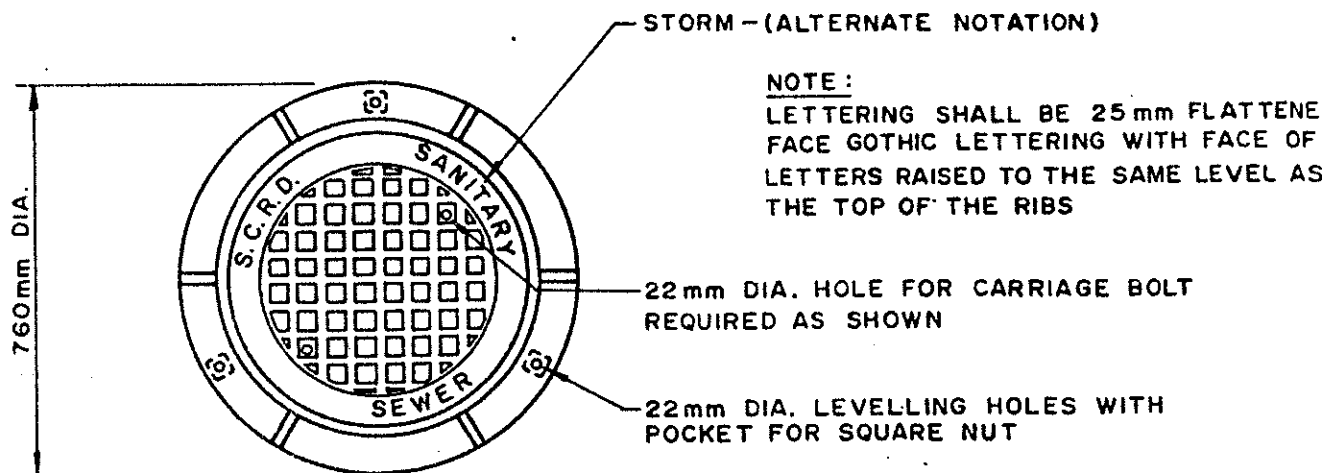
NOTE : \* MAXIMUM PROJECTION NO MORE THAN ONE PIPE DIAMETER



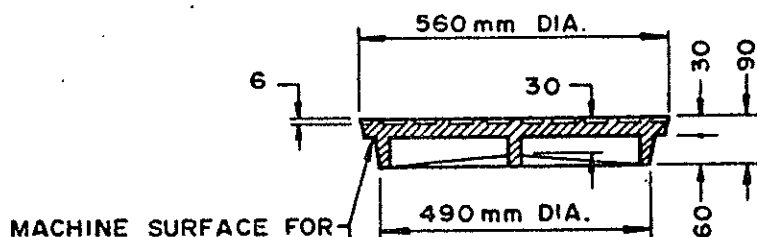
NOTE: TO BE USED IN NON-TRAFFIC AREAS ONLY

COVER DETAIL "A"

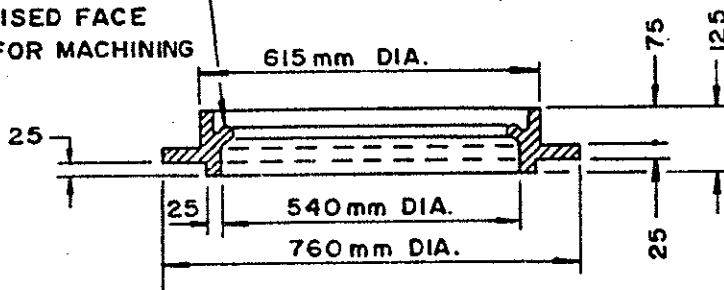
No.	DATE	REVISIONS	DWG. S - 9
SANITARY SEWER CLEANOUT STRUCTURE			SUNSHINE COAST REGIONAL DISTRICT
			PREPARED BY
			DAYTON & KNIGHT LTD., CONSULTING ENGINEERS
			DATE . . . . .



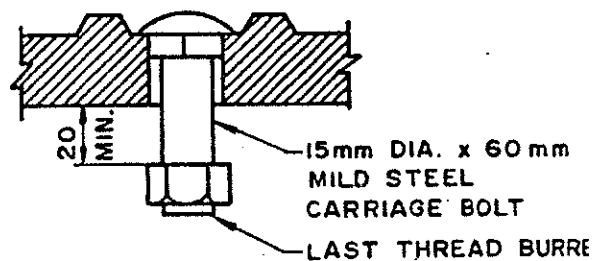
PLAN



COVER



FRAME



CARRIAGE BOLT DETAIL

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
			PREPARED BY
			DAYTON & KNIGHT LTD. CONSULTING ENGINEERS
			DATE . . . . .

**SUNSHINE COAST REGIONAL DISTRICT**  
**SUBDIVISION SERVICING STANDARDS**  
**(WATER AND SEWER)**

**METRIC CONVERSION TABLE**

**(APPROXIMATIONS)**

<b>WHEN YOU KNOW</b>	<b>MULTIPLY BY</b>	<b>TO FIND</b>
	<b>LENGTH</b>	
millimetres	.04	inches
metres	3.30	feet
kilometres	0.60	miles
inches	2.54	centimetres
feet	0.305	metres
miles	1.60	kilometres
<b>AREA</b>		
square metres	10.80	square feet
hectares	2.50	cubic feet
square feet	0.09	square metres
acres	0.4	hectares
<b>VOLUME</b>		
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 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:

\_\_\_\_\_

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**End of Agreement**

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## 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