

5116 Heather Drive
Anacortes, WA 98221
360.588.9956

Funding Reserve Analysis
for
Birch Bay Village Community - Roads & Drainage Level 2 Study 2025

August 23, 2024



TABLE OF CONTENTS
Birch Bay Village Community - Roads & Drainage Level 2 Study 2025

Introduction and Executive Summary

Introduction	1-1
Executive Summary	1-2

PART II RESERVE STUDY

Current Assessment Projection Summary	2-1
Current Assessment Projection	2-2
Baseline Funding Model Summary	2-3
Baseline Funding Model Projection	2-4
Fully Funded Model Summary	2-5
Fully Funded Model Projection	2-6
Funding Model Comparison by Percent Funded	2-7
Annual Expenditure Detail	2-8
Asset Current Cost by Category	2-12
Detail Report by Category	2-13
Expenses by Item and by Calender Year	2-18

PART III APPENDIX

Disclosure Form	3-1
Appendix - Disclosure, Definitions & Calculations	3-2



5116 Heather Drive
Anacortes, WA 9822
360.588.9956

August 23, 2024

Mr. Dave Franklin
Birch Bay Village Community
8055 Cowichan Road
Blaine WA 98230

Dear Mr. Dave Franklin,

Introduction

First, we would like to thank you for utilizing our services. Our approach is to provide the members, the board and management with understandable information to make informed decisions needed to best manage your reserve fund and annual contributions. We strive to understand the association's needs and design a funding strategy for meeting those needs based on a realistic approach to finances available and real-world workings of most associations. We live and work in the local area and work hard to keep up to date with costs in your association's neighborhood.

Included within the following pages you will find:

Three funding models which detail how your association finances will look during the 30-year forecast window.

- Current Level of Contributions
- Baseline Funded
- Fully Funded (per the State of Washington RCW 64.34.380)

A list of the community components that the association is responsible for maintaining.

- Estimated current cost of replacement of each component.
- Timeline of estimated remaining life and estimated cost at replacement date per component.

Annual expenditure detail.

Expenses by item and by calendar year.

Average deficit or surplus from a Fully Funded Balance for the association and per member in dollar amount and percentage (based on equal percentage ownership for all units). This amount is calculated by subtracting the association's reserve account balance as of the date of the study (*Budget Year Beginning Date*) from the Fully Funded Balance. Also included is the same calculated amounts as projected at the end of the each study year (*Budget Year Ending Date*).

What is our Recommended Funding Goal? Maintaining the Reserve Fund at a level equal to the value of deterioration is called "Full Funding" (100% Funded). As each asset ages and becomes "used up", the Reserve Fund grows proportionally. This is simple, responsible, and our recommendation.

Evidence shows that associations in the:

- 0-50% range are considered in **Poor** condition and at a high risk of special assessments or deferred maintenance.
- 60-80% range are considered in **Good** condition and should strive to gradually increase reserves.
- 90-130% range are considered in **Excellent** condition and enjoy a low risk of special assessments or deferred maintenance.

The attached funding study is limited in scope to those expense items listed in the attached Expense Detail Report. Expense items which have an expected life of more than 30 Years are not included in this reserve study unless payment for these long-lived items overlaps the 30 Years reserve study envelope.

Birch Bay Village Community - Roads & Drainage Level 2 Study 2025

Executive Summary

Name	Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Location	Blaine, WA
Contributing Members	1128
Year Built	1966
Fiscal Year Ends	2025
Depth of Study	Level 2 Study (<i>With Site Visit</i>)
Date of Study	August 23, 2024
Last On-Site Inspection Date	June 25, 2024
Inflation Rate for Projections	5%

Reserve Account Summary

Reported Current Annual Reserve Contribution	\$295,810 per year
Estimated Fiscal Year Starting Balance	\$1,408,600
Fiscal Year Beginning Balance If Fully Funded	\$2,625,998 (<i>ideal amount in reserves</i>)
Average Deficit/Surplus Per Member (<i>As of Budget Year Beginning Date</i>)	-\$1,079 Percent Funded 54%



5 - Year Summary - Current vs. Baseline vs. Fully Funded (*As of Budget Year Ending Date*)

	Current Funding Model <i>Contribution amount supplied by Client</i>		Baseline Funded Model <i>Reserve account above \$0 within study timeframe</i>		Fully Funded Model Recommended <i>Achieve 100% funded within the 30 year study timeframe</i>	
2025	\$1,391,161	47%	\$1,373,072	46%	\$1,391,161	47%
2026	\$1,013,434	44%	\$975,876	42%	\$1,013,434	44%
2027	\$760,649	35%	\$702,162	32%	\$760,649	35%
2028	\$411,448	32%	\$216,033	17%	\$411,448	32%
2029	\$766,927	52%	\$424,220	29%	\$766,927	52%
	<i>Contribution increases vary</i>		<i>Contribution set for minimum to maintain positive balance</i>		<i>Model goal is to achieve 100% funded by year 30</i>	

The percentage figures above represent the percentage each model is above or below fully funded for the noted time period

Project Description

Birch Bay Village is located along the northern shore of Birch Bay in Washington State. Originally developed in the mid 1960's, the community consists of 1132 lots covering approximately 694 acres. At this point most of the lots have private residences that have been site built, although there are two sections devoted to modular residential structures. The Community assets include a 250 boat marina & administration building, a 9-hole golf course & pro shop, tennis courts, a clubhouse, swimming pool & pool building, an extensive maintenance building & yard, two lakes and approximately 13 miles of asphalt paved streets.

This year's report is a Level 2 Reserve Study which includes a field evaluation of the Association's physical assets, a review of current financial, other information provided by the client and prior reserve reports.

The association reported several projects planned for the coming year. Please refer to the detailed report pages in the following sections of the report.

(Report Note - material and labor costs appear to be continuing to increase in all construction categories. Many associations have reported dramatic cost differences in recent contractor bids on the same projects. We highly recommend associations request contractor bids on upcoming projects early in the process. Until such time as cost increases moderate all models will include an inflation factor of 5%.

Reserve Fund Status and Funding Plan Recommendation - Based on our findings, the current level of funding of the reserve account is not adequate to fund projected expenses for the long term. We recommend the association gradually adopt a reserve funding plan based on the Fully Funding Model in order to ensure that adequate funding is available throughout the 30-year study period.

Current Assessment Projection - The initial reserve assessment is the association's reported current fiscal year funding level and projected out 30 years to illustrate the adequacy of the current funding over time.

Current Total Reported Annual Reserve Contribution - \$295,810

Baseline Funded Model - The goal of this funding method is to keep the reserve cash balance above zero. This means that while each individual component may not be fully funded, the reserve balance overall does not drop below zero during the projected period. A facility using this funding method must understand that even a minor reduction in a component's remaining useful life **or unplanned expenses** can result in a deficit in the reserve cash balance **and may require additional funding**.

Recommended Total Annual Reserve Contribution - \$278,184

Fully Funded Model - This is a straight-line funding model. It distributes the cash reserves to individual reserve components and then calculates what the reserve assessment and interest contribution (minus taxes) should be, again by each reserve component. The current annual assessment is then determined by summing all the individual component assessments. This is the most conservative funding model. It leads to or maintains a fully funded reserve position. (Please note that the Fully Funded Model incorporates funding parameters that seek to reach 100% funded at year 30 reserve study limit. The recommended contribution amount may be unusually high or low for the first few years depending on the current reserve account balance and upcoming expenses).

Recommended Total Annual Reserve Contribution - \$295,810

In this Reserve Study the following components are excluded:

Power Lines – Generally utility companies.
Utility Main Lines – Generally utility companies or City.

Depth of Study

We have completed a full-service Level 2 Reserve Study for your association. A field inspection was made to verify the current status of the various reserve study components, their physical condition, and to verify component quantities. In place testing, laboratory testing, and non-destructive testing of the reserve study components were not performed. Field measurements of component quantities were made to either verify improvement plan take offs or determine directly the quantities of various components. Photographs were taken of the site improvements.

Understanding the Budget Year

Your study is based on the standard calendar year January 1 through December 31st. January is the “*budget year beginning*”. This account balance is the starting point for determining the distribution of available funds for the year. Reserve contributions plus any addition income or deposits and interest for the 12-month period are calculated then projected expenses for the year are deducted. The result is the *budget year ending* balance estimated for December 31st.

Initial Reserves

Initial reserves for this reserve study are estimated to be \$1,408,600 as of 12/31/2024. We have relied upon the client to provide the current (or projected) reserve balance, the estimated net-after-tax current rate of interest earnings, and to indicate if those earnings accrue to the reserve fund.

Keeping Your Reserve Study Current

We recommend that your reserve analysis study be updated on an annual basis due to fluctuating interest rates, inflationary changes, and the unpredictable nature of the lives of many of the assets under consideration. All of the information collected during our inspection of the facilities site and computations made subsequently in preparing this reserve analysis study are retained in our computer files.

Conflict of Interest

As the preparer of this reserve study, Pacific Crest Reserves certifies that we do not have any vested interests, financial interests, or other interests that would cause a conflict of interest in the preparation of this reserve study.

Date of Physical Inspection

The property was physically inspected by Pacific Crest Reserves on June 25, 2024.

Pacific Crest Reserves would like to thank the members and management for the opportunity to be of service in the preparation of the attached funding study. Again, please feel free to contact us if you have any questions.

Prepared by:

Charlie Barefield

Charlie Barefield

Reserve Analyst Principal

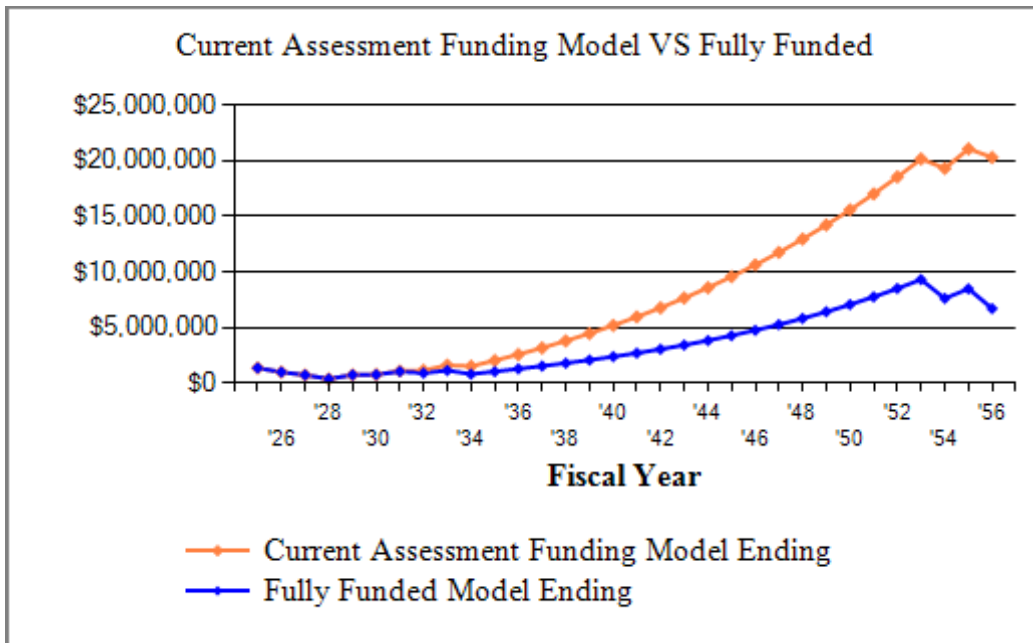
Birch Bay Village Community - Roads & Drainage Level 2 Study 2025

Blaine, WA

Current Assessment Projection Summary

Report Date	August 23, 2024
Budget Year Beginning	January 1, 2025
Budget Year Ending	December 31, 2025
Total Units	1128

Report Parameters	
Inflation	5.00%
Interest Rate on Reserve Deposit	3.75%
Tax Rate on Interest	30.00%
2025 Beginning Balance	\$1,408,600



The Current Assessment Funding Model is based on the current annual assessment, parameters, and reserve fund balance. Because it is calculated using the current annual assessment, it will give the accurate projection of how well the association is funded for the next 30 years of planned reserve expenditures. The monthly contribution noted is the Average Amount per lot.

Current Assessment Funding Model Summary of Calculations

Required Annual Contribution	\$295,810.00
<i>\$262.24 per unit annually</i>	
Average Net Annual Interest Earned	<u>\$35,583.90</u>
Total Annual Allocation to Reserves	\$331,393.90
<i>\$293.79 per unit annually</i>	

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Current Assessment Projection**

Beginning Balance: \$1,408,600

Year	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2025	295,810	35,584	348,833	1,391,161	2,956,068	47%
2026	310,600	25,922	714,250	1,013,434	2,300,671	44%
2027	326,131	19,456	598,372	760,649	2,193,213	35%
2028	342,437	10,524	702,162	411,448	1,283,260	32%
2029	359,559	19,617	23,696	766,927	1,466,306	52%
2030	377,537	20,688	356,357	808,795	1,304,732	62%
2031	396,414	28,739	110,382	1,123,566	1,490,904	75%
2032	416,234	30,107	392,884	1,177,023	1,203,714	98%
2033	437,046	41,788	22,162	1,633,695	1,398,473	117%
2034	458,898	39,562	585,462	1,546,693	1,022,208	151%
2035	481,843	52,608	24,433	2,056,711	1,224,637	168%
2036	505,935	66,596	25,655	2,603,587	1,444,753	180%
2037	531,232	81,582	26,938	3,189,464	1,683,819	189%
2038	557,794	97,623	28,285	3,816,596	1,943,181	196%
2039	585,684	114,780	29,699	4,487,361	2,224,268	202%
2040	614,968	133,118	31,184	5,204,262	2,528,607	206%
2041	645,716	152,702	32,743	5,969,938	2,857,819	209%
2042	678,002	173,606	34,380	6,787,165	3,213,630	211%
2043	711,902	195,903	36,099	7,658,871	3,597,878	213%
2044	747,497	219,672	37,904	8,588,136	4,012,517	214%
2045	784,872	244,997	39,799	9,578,205	4,459,625	215%
2046	824,116	271,964	41,789	10,632,495	4,941,412	215%
2047	865,321	300,666	43,879	11,754,603	5,460,230	215%
2048	908,587	331,199	46,073	12,948,317	6,018,575	215%
2049	954,017	363,666	48,376	14,217,624	6,619,104	215%
2050	1,001,718	398,174	50,795	15,566,721	7,264,640	214%
2051	1,051,804	434,836	53,335	17,000,025	7,958,181	214%
2052	1,104,394	473,771	56,002	18,522,188	8,702,916	213%
2053	1,159,613	515,104	58,802	20,138,103	9,502,228	212%
2054	1,217,594	493,427	2,558,466	19,290,658	7,738,153	249%
2055	1,278,474	538,238	64,829	21,042,541	8,526,554	247%
2056	1,342,397	518,485	2,633,143	20,270,280	6,681,124	303%

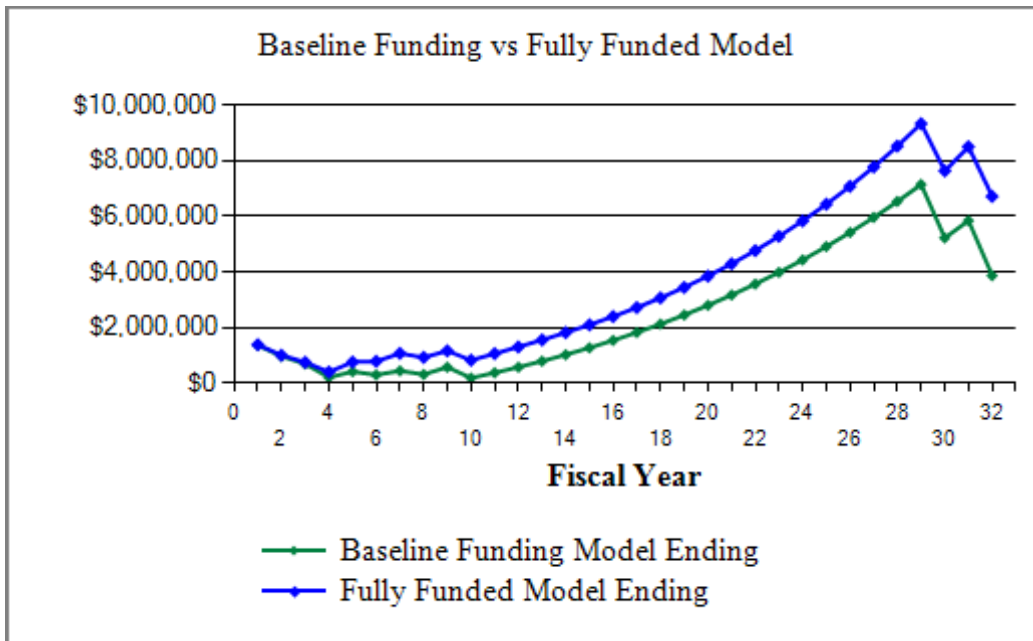
Birch Bay Village Community - Roads & Drainage Level 2 Study 2025

Blaine, WA

Baseline Funding Model Summary

Report Date	August 23, 2024
Budget Year Beginning	January 1, 2025
Budget Year Ending	December 31, 2025
Total Units	1128

Report Parameters	
Inflation	5.00%
Annual Assessment Increase	5.00%
Interest Rate on Reserve Deposit	3.75%
Tax Rate on Interest	30.00%
2025 Beginning Balance	\$1,408,600



The **Threshold Funding Model** calculates the minimum reserve assessments, with the restriction that the reserve balance is not allowed to go below \$0 or other predetermined threshold, during the period of time examined. All funds for planned reserve expenditures will be available on the first day of each fiscal year. The **Threshold Funding Model** allows the client to choose the level of conservative funding they desire by choosing the threshold dollar amount. The monthly contribution noted is the Average Amount per lot.

Baseline Funding Model Summary of Calculations	
Required Annual Contribution	\$278,183.64
<i>\$246.62 per unit annually</i>	
Average Net Annual Interest Earned	\$35,121.20
Total Annual Allocation to Reserves	\$313,304.84
<i>\$277.75 per unit annually</i>	

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Baseline Funding Model Projection**

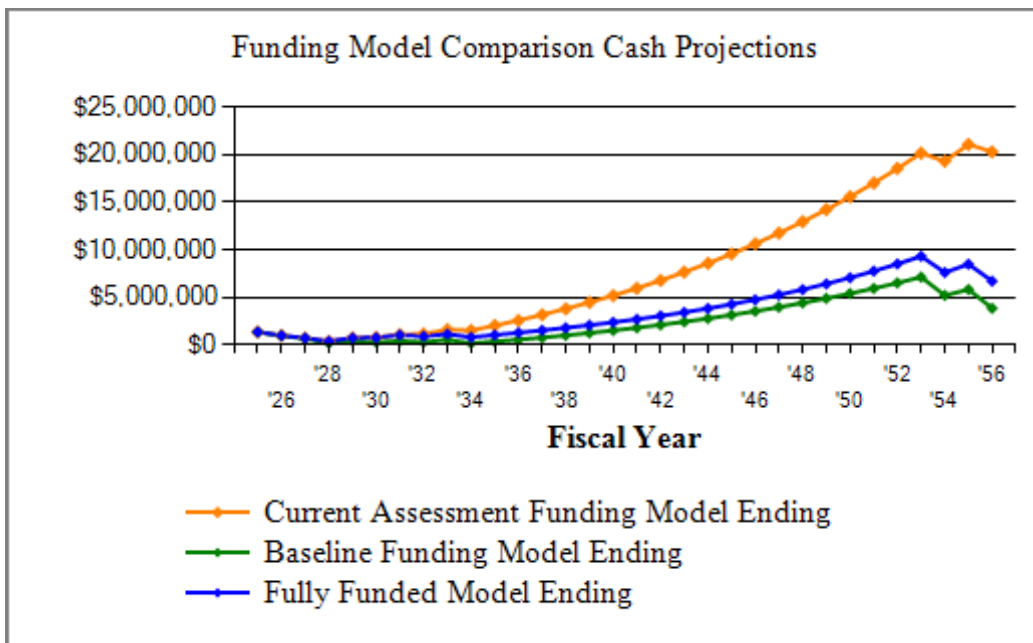
Beginning Balance: \$1,408,600

Year	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2025	278,184	35,121	348,833	1,373,072	2,956,068	46%
2026	292,093	24,962	714,250	975,876	2,300,671	42%
2027	306,697	17,960	598,372	702,162	2,193,213	32%
2028	210,507	5,526	702,162	216,033	1,283,260	17%
2029	221,032	10,851	23,696	424,220	1,466,306	29%
2030	232,084	7,874	356,357	307,821	1,304,732	24%
2031	243,688	11,580	110,382	452,706	1,490,904	30%
2032	255,873	8,287	392,884	323,982	1,203,714	27%
2033	268,666	14,975	22,162	585,462	1,398,473	42%
2034	191,881	5,037	585,462	196,918	1,022,208	19%
2035	201,475	9,816	24,433	383,775	1,224,637	31%
2036	211,548	14,954	25,655	584,623	1,444,753	40%
2037	222,126	20,470	26,938	800,281	1,683,819	48%
2038	233,232	26,387	28,285	1,031,615	1,943,181	53%
2039	244,894	32,729	29,699	1,279,539	2,224,268	58%
2040	257,138	39,519	31,184	1,545,013	2,528,607	61%
2041	269,995	46,784	32,743	1,829,049	2,857,819	64%
2042	283,495	54,552	34,380	2,132,716	3,213,630	66%
2043	297,670	62,850	36,099	2,457,137	3,597,878	68%
2044	312,553	71,709	37,904	2,803,495	4,012,517	70%
2045	328,181	81,162	39,799	3,173,039	4,459,625	71%
2046	344,590	91,241	41,789	3,567,080	4,941,412	72%
2047	361,820	101,982	43,879	3,987,003	5,460,230	73%
2048	379,911	113,422	46,073	4,434,262	6,018,575	74%
2049	398,906	125,601	48,376	4,910,393	6,619,104	74%
2050	418,851	138,559	50,795	5,417,008	7,264,640	75%
2051	439,794	152,341	53,335	5,955,808	7,958,181	75%
2052	461,784	166,992	56,002	6,528,582	8,702,916	75%
2053	484,873	182,560	58,802	7,137,212	9,502,228	75%
2054	509,117	133,556	2,558,466	5,221,419	7,738,153	67%
2055	534,572	149,393	64,829	5,840,555	8,526,554	68%
2056	561,301	98,929	2,633,143	3,867,642	6,681,124	58%

Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
 Blaine, WA
Fully Funded Model Summary

Report Date	August 23, 2024
Budget Year Beginning	January 1, 2025
Budget Year Ending	December 31, 2025
Total Units	1128

Report Parameters	
Inflation	5.00%
Interest Rate on Reserve Deposit	3.75%
Tax Rate on Interest	30.00%
2025 Beginning Balance	\$1,408,600



The **Component Funding Model's** long-term objective is to provide a plan to a fully funded reserve position over the longest period of time practical. This is the most conservative funding model. The monthly contribution noted is the Average Amount per lot.

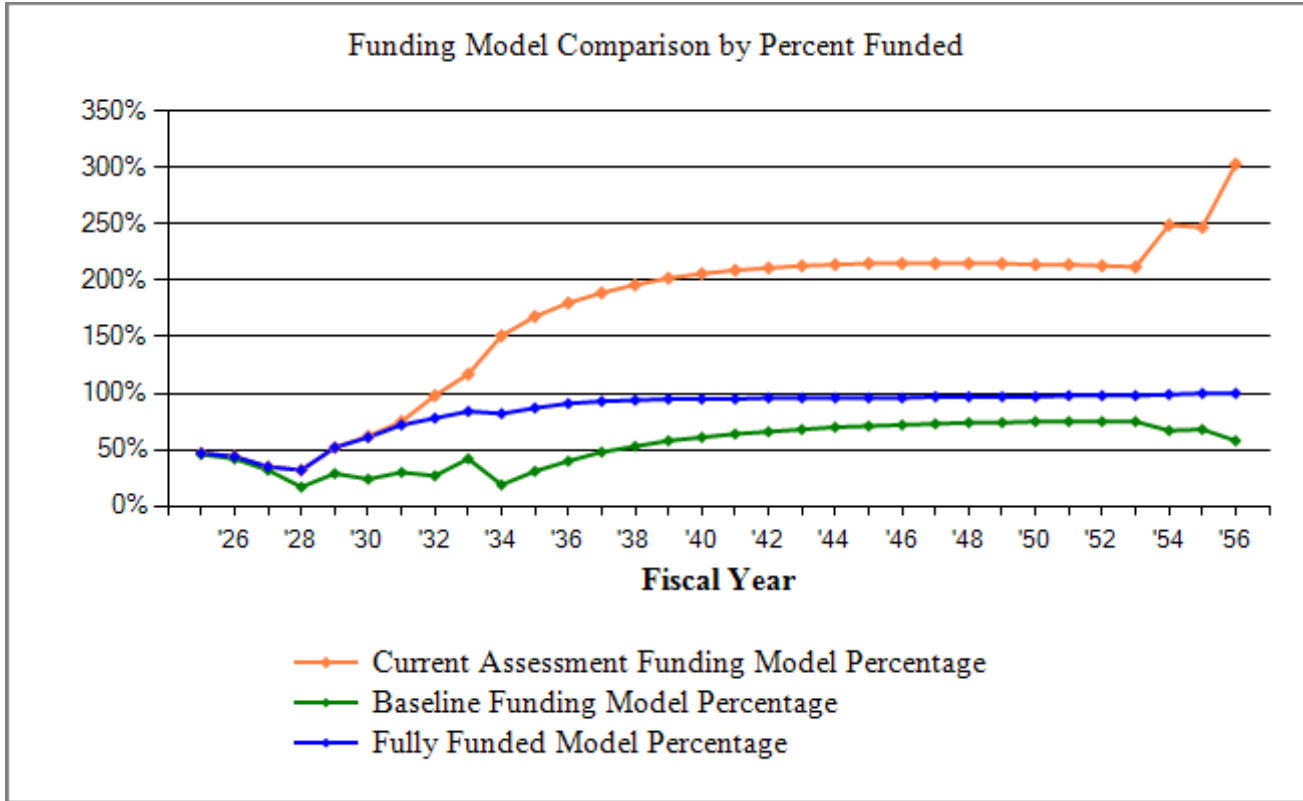
Fully Funded Model Summary of Calculations	
Required Annual Contribution	\$295,810.00
<i>\$262.24 per unit annually</i>	
Average Net Annual Interest Earned	\$35,583.90
Total Annual Allocation to Reserves	\$331,393.90
<i>\$293.79 per unit annually</i>	

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Fully Funded Model Projection**

Beginning Balance: \$1,408,600

Year	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2025	295,810	35,584	348,833	1,391,161	2,956,068	47%
2026	310,600	25,922	714,250	1,013,434	2,300,671	44%
2027	326,131	19,456	598,372	760,649	2,193,213	35%
2028	342,437	10,524	702,162	411,448	1,283,260	32%
2029	359,559	19,617	23,696	766,927	1,466,306	52%
2030	363,154	20,310	356,357	794,035	1,304,732	61%
2031	366,786	27,574	110,382	1,078,013	1,490,904	72%
2032	225,000	23,891	392,884	934,020	1,203,714	78%
2033	227,250	29,902	22,162	1,169,010	1,398,473	84%
2034	229,522	21,343	585,462	834,414	1,022,208	82%
2035	231,818	27,347	24,433	1,069,145	1,224,637	87%
2036	234,136	33,538	25,655	1,311,164	1,444,753	91%
2037	236,477	39,918	26,938	1,560,621	1,683,819	93%
2038	245,936	46,680	28,285	1,824,953	1,943,181	94%
2039	255,774	53,839	29,699	2,104,867	2,224,268	95%
2040	266,005	61,417	31,184	2,401,105	2,528,607	95%
2041	284,093	69,627	32,743	2,722,082	2,857,819	95%
2042	303,411	78,517	34,380	3,069,629	3,213,630	96%
2043	324,043	88,136	36,099	3,445,710	3,597,878	96%
2044	346,078	98,539	37,904	3,852,423	4,012,517	96%
2045	369,612	109,784	39,799	4,292,019	4,459,625	96%
2046	394,745	121,931	41,789	4,766,906	4,941,412	96%
2047	421,588	135,046	43,879	5,279,661	5,460,230	97%
2048	450,256	149,201	46,073	5,833,045	6,018,575	97%
2049	480,873	164,470	48,376	6,430,012	6,619,104	97%
2050	513,573	180,936	50,795	7,073,725	7,264,640	97%
2051	548,496	198,683	53,335	7,767,569	7,958,181	98%
2052	585,793	217,806	56,002	8,515,166	8,702,916	98%
2053	625,627	238,402	58,802	9,320,394	9,502,228	98%
2054	668,170	195,040	2,558,466	7,625,137	7,738,153	99%
2055	713,606	217,190	64,829	8,491,104	8,526,554	100%
2056	680,900	171,645	2,633,143	6,710,506	6,681,124	100%

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Funding Model Comparison by Percent Funded**



The chart above compares the projected Reserve Percentage Funded of the three funding models (Current Assessment Funding Model, Baseline Funding Model and Fully Funded Model) over 30 years.

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Annual Expenditure Detail**

Description	Expenditures
Replacement Year 2025	
Asphalt Paving - Crack Repair/Seal	15,000
Culvert Replacement/Modifications - Phase 1	183,833
Kwann Lake Emergency In/Out	150,000
Total for 2025	\$348,833
Replacement Year 2026	
Asphalt Paving - Crack Repair/Seal	15,750
Asphalt Paving - Phase 2	593,500
Beaver Pond Splash Pad	105,000
Total for 2026	\$714,250
Replacement Year 2027	
Asphalt Paving - Crack Repair/Seal	16,537
Culvert Replacement/Modifications - Phase 2	361,334
Thunderbird Overflow & Kwann Modification Project	220,500
Total for 2027	\$598,372
Replacement Year 2028	
Asphalt Paving - Crack Repair/Seal	17,364
Asphalt Paving - Phase 3	684,798
Total for 2028	\$702,162
Replacement Year 2029	
Asphalt Paving - Crack Repair/Seal	18,233
Culvert Replacement/Modifications - Phase 3	5,464
Total for 2029	\$23,696
Replacement Year 2030	
Asphalt Paving - Crack Repair/Seal	19,144
Asphalt Paving - Phase 4	337,213
Total for 2030	\$356,357
Replacement Year 2031	
Asphalt Paving - Crack Repair/Seal	20,101
Culvert Replacement/Modifications - Phase 4	90,281
Total for 2031	\$110,382

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Annual Expenditure Detail**

Description	Expenditures
Replacement Year 2032	
Asphalt Paving - Crack Repair/Seal	21,107
Asphalt Paving - Phase 5	371,777
Total for 2032	\$392,884
Replacement Year 2033	
Asphalt Paving - Crack Repair/Seal	22,162
Total for 2033	\$22,162
Replacement Year 2034	
Asphalt Paving - Crack Repair/Seal	23,270
Asphalt Paving - Phase 6	562,192
Total for 2034	\$585,462
Replacement Year 2035	
Asphalt Paving - Crack Repair/Seal	24,433
Total for 2035	\$24,433
Replacement Year 2036	
Asphalt Paving - Crack Repair/Seal	25,655
Total for 2036	\$25,655
Replacement Year 2037	
Asphalt Paving - Crack Repair/Seal	26,938
Total for 2037	\$26,938
Replacement Year 2038	
Asphalt Paving - Crack Repair/Seal	28,285
Total for 2038	\$28,285
Replacement Year 2039	
Asphalt Paving - Crack Repair/Seal	29,699
Total for 2039	\$29,699
Replacement Year 2040	
Asphalt Paving - Crack Repair/Seal	31,184
Total for 2040	\$31,184

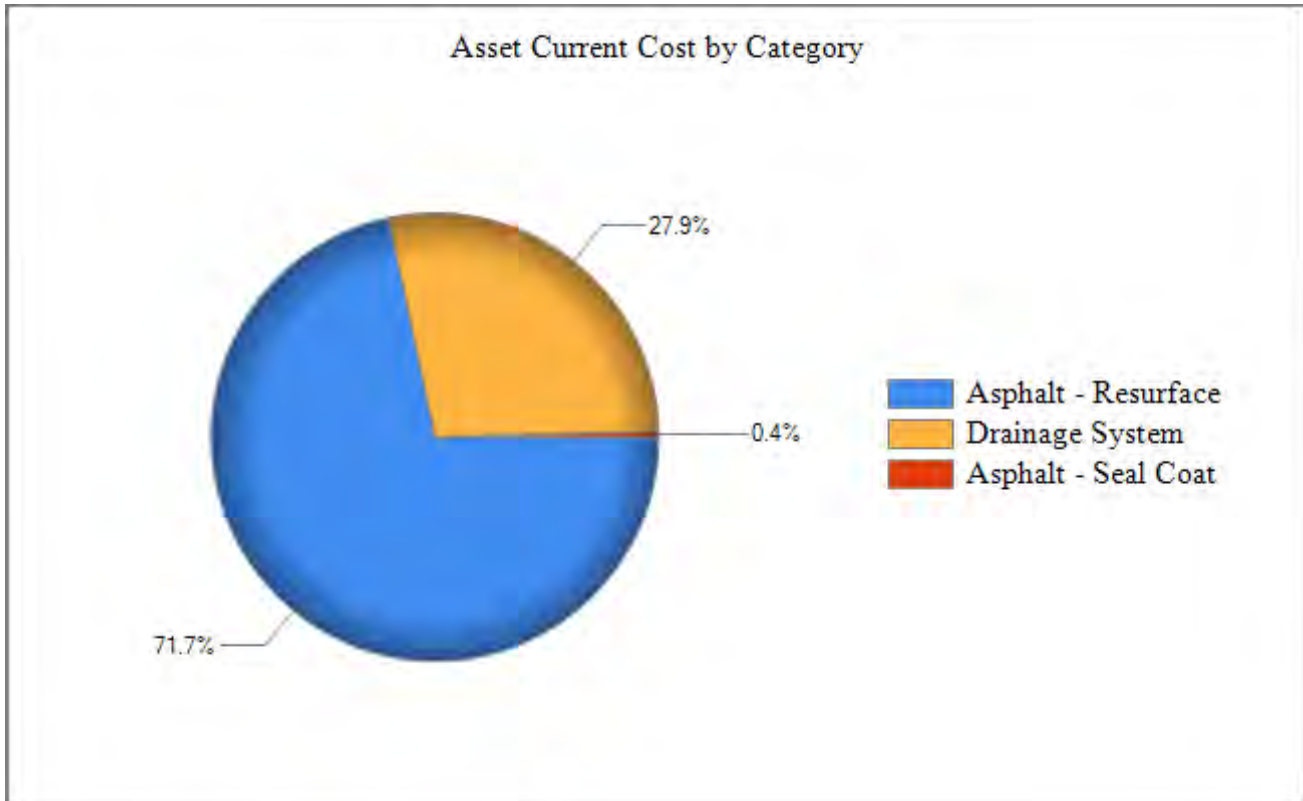
**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Annual Expenditure Detail**

Description	Expenditures
Replacement Year 2041	
Asphalt Paving - Crack Repair/Seal	32,743
Total for 2041	<u>\$32,743</u>
Replacement Year 2042	
Asphalt Paving - Crack Repair/Seal	34,380
Total for 2042	<u>\$34,380</u>
Replacement Year 2043	
Asphalt Paving - Crack Repair/Seal	36,099
Total for 2043	<u>\$36,099</u>
Replacement Year 2044	
Asphalt Paving - Crack Repair/Seal	37,904
Total for 2044	<u>\$37,904</u>
Replacement Year 2045	
Asphalt Paving - Crack Repair/Seal	39,799
Total for 2045	<u>\$39,799</u>
Replacement Year 2046	
Asphalt Paving - Crack Repair/Seal	41,789
Total for 2046	<u>\$41,789</u>
Replacement Year 2047	
Asphalt Paving - Crack Repair/Seal	43,879
Total for 2047	<u>\$43,879</u>
Replacement Year 2048	
Asphalt Paving - Crack Repair/Seal	46,073
Total for 2048	<u>\$46,073</u>
Replacement Year 2049	
Asphalt Paving - Crack Repair/Seal	48,376
Total for 2049	<u>\$48,376</u>
Replacement Year 2050	
Asphalt Paving - Crack Repair/Seal	50,795
Total for 2050	<u>\$50,795</u>

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Annual Expenditure Detail**

Description	Expenditures
Replacement Year 2051	
Asphalt Paving - Crack Repair/Seal	53,335
Total for 2051	<u>\$53,335</u>
Replacement Year 2052	
Asphalt Paving - Crack Repair/Seal	56,002
Total for 2052	<u>\$56,002</u>
Replacement Year 2053	
Asphalt Paving - Crack Repair/Seal	58,802
Total for 2053	<u>\$58,802</u>
Replacement Year 2054	
Asphalt Paving - Crack Repair/Seal	61,742
Asphalt Paving - Phase 1	2,496,724
Total for 2054	<u>\$2,558,466</u>
Replacement Year 2055	
Asphalt Paving - Crack Repair/Seal	64,829
Total for 2055	<u>\$64,829</u>
Replacement Year 2056	
Asphalt Paving - Crack Repair/Seal	68,071
Asphalt Paving - Phase 2	2,565,072
Total for 2056	<u>\$2,633,143</u>

Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Asset Current Cost by Category



The above chart illustrates the current cost breakdown percentage of the Component Categories in this reserve study (highest percentage components listed at top, items less than 2% are listed as "Other"). Special attention should be given to those component categories which take up a bulk of the % of the current cost as these may require significant planning to adequately budget for their replacement. Refer to the Cash Flow Projections and the Annual Expenditure Report for the projected timeline of expected expenditures.

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Detail Report by Category**

Asphalt Paving - Phase 1 - 2054

Asset ID	1001	1 Allowance @ \$606,570.00
Category	Asphalt - Resurface	Asset Actual Cost \$606,570.00
Placed in Service	January 2024	Percent Replacement 100%
Useful Life	30	Future Cost \$2,496,724.37
Replacement Year	2054	
Remaining Life	29	

The Community includes approximately 13 miles of asphalt paved roads. The association has resurfacing planned in three phases beginning in 2024. Regular cycles of repair is the most cost-effective program for the long-term care of asphalt. Water penetration is the largest contributor to deterioration. Our understanding is patching of the damaged areas will continue until resurfacing is scheduled.

Asphalt Paving - Phase 2 - 2026

Asset ID	1002	1 Allowance @ \$565,238.00
Category	Asphalt - Resurface	Asset Actual Cost \$565,238.00
Placed in Service	January 1999	Percent Replacement 100%
Useful Life	30	Future Cost \$593,499.90
Adjustment	-3	
Replacement Year	2026	
Remaining Life	1	

Asphalt Paving - Phase 3 - 2028

Asset ID	1003	1 Allowance @ \$591,554.00
Category	Asphalt - Resurface	Asset Actual Cost \$591,554.00
Placed in Service	January 1999	Percent Replacement 100%
Useful Life	30	Future Cost \$684,797.70
Adjustment	-1	
Replacement Year	2028	
Remaining Life	3	

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Detail Report by Category**

Asphalt Paving - Phase 4 - 2030

Asset ID	1004	1 Allowance @	\$264,215.00
Category	Asphalt - Resurface	Asset Actual Cost	\$264,215.00
Placed in Service	January 1999	Percent Replacement	100%
Useful Life	30	Future Cost	\$337,212.73
Adjustment	1		
Replacement Year	2030		
Remaining Life	5		

Asphalt Paving - Phase 5 - 2032

Asset ID	1005	1 Allowance @	\$264,215.00
Category	Asphalt - Resurface	Asset Actual Cost	\$264,215.00
Placed in Service	January 1999	Percent Replacement	100%
Useful Life	30	Future Cost	\$371,777.04
Adjustment	3		
Replacement Year	2032		
Remaining Life	7		

Asphalt Paving - Phase 6 - 2034

Asset ID	1006	1 Allowance @	\$362,394.00
Category	Asphalt - Resurface	Asset Actual Cost	\$362,394.00
Placed in Service	January 1999	Percent Replacement	100%
Useful Life	30	Future Cost	\$562,192.04
Adjustment	5		
Replacement Year	2034		
Remaining Life	9		

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Detail Report by Category**

Asphalt Paving - Crack Repair/Seal - 2025

Asset ID	1007	1 Allowance @ \$15,000.00
Category	Asphalt - Seal Coat	Asset Actual Cost \$15,000.00
Placed in Service	January 2024	Percent Replacement 100%
Useful Life	1	Future Cost \$15,000.00
Replacement Year	2025	
Remaining Life	0	

It was reported the budget includes an annual crack repair/seal allowance.

Culvert Replacement/Modifications - Phase 1 - 2025

Asset ID	1008	1 Allowance @ \$183,833.00
Category	Drainage System	Asset Actual Cost \$183,833.00
Placed in Service	January 2022	Percent Replacement 100%
Useful Life	1	Future Cost \$183,833.00
Adjustment	2	
Replacement Year	2025	
Remaining Life	0	

The community includes some 20 plus miles of drainage ditches and associated culverts. Cleaning and maintaining the the drainage system requires annual expense and major replacement of these essential elements over time.

Culvert Replacement/Modifications - Phase 2 - 2027

Asset ID	1009	1 Allowance @ \$327,741.00
Category	Drainage System	Asset Actual Cost \$327,741.00
Placed in Service	January 2022	Percent Replacement 100%
Useful Life	1	Future Cost \$361,334.45
Adjustment	4	
Replacement Year	2027	
Remaining Life	2	

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Detail Report by Category**

Culvert Replacement/Modifications - Phase 3 - 2029

Asset ID	1010	1 Allowance	@ \$4,495.00
		Asset Actual Cost	\$4,495.00
		Percent Replacement	100%
Category	Drainage System	Future Cost	\$5,463.70
Placed in Service	January 2022		
Useful Life	1		
Adjustment	6		
Replacement Year	2029		
Remaining Life	4		

Culvert Replacement/Modifications - Phase 4 - 2031

Asset ID	1011	1 Allowance	@ \$67,369.00
		Asset Actual Cost	\$67,369.00
		Percent Replacement	100%
Category	Drainage System	Future Cost	\$90,280.90
Placed in Service	January 2022		
Useful Life	1		
Adjustment	8		
Replacement Year	2031		
Remaining Life	6		

Thunderbird Overflow & Kwann Modification Project - 2027

Asset ID	1012	1 Allowance	@ \$200,000.00
		Asset Actual Cost	\$200,000.00
		Percent Replacement	100%
Category	Drainage System	Future Cost	\$220,500.00
Placed in Service	January 2008		
Useful Life	15		
Adjustment	4		
Replacement Year	2027		
Remaining Life	2		

Our understanding is management is exploring options for maintaining water level management and drainage from the community pond via a weir system as an alternative to the current overflow pump system. The cost included is a place holder only until such time as the feasibility of a weir system can be determined.

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Detail Report by Category**

Beaver Pond Splash Pad - 2026

Asset ID	1013	1 Allowance @	\$100,000.00
Category	Drainage System	Asset Actual Cost	\$100,000.00
Placed in Service	June 2020	Percent Replacement	100%
Useful Life	1	Future Cost	\$105,000.00
Adjustment	5		
Replacement Year	2026		
Remaining Life	1		

Kwann Lake Emergency In/Out - 2025

Asset ID	1014	1 Allowance @	\$150,000.00
Category	Drainage System	Asset Actual Cost	\$150,000.00
Placed in Service	June 2020	Percent Replacement	100%
Useful Life	1	Future Cost	\$150,000.00
Replacement Year	2025		
Remaining Life	0		

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Expenses by Item and by Calender Year**

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Asphalt Paving - Crack Repair/Seal	15,000	15,750	16,537	17,364	18,233	19,144	20,101	21,107	22,162	23,270
Asphalt Paving - Phase 1		593,500								
Asphalt Paving - Phase 2				684,798						
Asphalt Paving - Phase 3						337,213				
Asphalt Paving - Phase 4								371,777		
Asphalt Paving - Phase 5										562,192
Asphalt Paving - Phase 6										
Beaver Pond Splash Pad		105,000								
Culvert Replacement/Modifications - Phase 1	183,833									
Culvert Replacement/Modifications - Phase 2			361,334							
Culvert Replacement/Modifications - Phase 3					5,464					
Culvert Replacement/Modifications - Phase 4							90,281			
Kwann Lake Emergency In/Out	150,000									
Thunderbird Overflow & Kwann Modification Pr..			220,500							
Year Total:	348,833	714,250	598,372	702,162	23,696	356,357	110,382	392,884	22,162	585,462

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Expenses by Item and by Calender Year**

Description	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Asphalt Paving - Crack Repair/Seal	24,433	25,655	26,938	28,285	29,699	31,184	32,743	34,380	36,099	37,904
Asphalt Paving - Phase 1										
Asphalt Paving - Phase 2										
Asphalt Paving - Phase 3										
Asphalt Paving - Phase 4										
Asphalt Paving - Phase 5										
Asphalt Paving - Phase 6										
Beaver Pond Splash Pad										
Culvert Replacement/Modifications - Phase 1										
Culvert Replacement/Modifications - Phase 2										
Culvert Replacement/Modifications - Phase 3										
Culvert Replacement/Modifications - Phase 4										
Kwann Lake Emergency In/Out										
Thunderbird Overflow & Kwann Modification Pr..										
Year Total:	24,433	25,655	26,938	28,285	29,699	31,184	32,743	34,380	36,099	37,904

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Expenses by Item and by Calender Year**

Description	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
Asphalt Paving - Crack Repair/Seal	39,799	41,789	43,879	46,073	48,376	50,795	53,335	56,002	58,802	61,742
Asphalt Paving - Phase 1										2,496,724
Asphalt Paving - Phase 2										
Asphalt Paving - Phase 3										
Asphalt Paving - Phase 4										
Asphalt Paving - Phase 5										
Asphalt Paving - Phase 6										
Beaver Pond Splash Pad										
Culvert Replacement/Modifications - Phase 1										
Culvert Replacement/Modifications - Phase 2										
Culvert Replacement/Modifications - Phase 3										
Culvert Replacement/Modifications - Phase 4										
Kwann Lake Emergency In/Out										
Thunderbird Overflow & Kwann Modification Pr..										
Year Total:	39,799	41,789	43,879	46,073	48,376	50,795	53,335	56,002	58,802	2,558,466

**Birch Bay Village Community - Roads & Drainage Level 2 Study 2025
Expenses by Item and by Calender Year**

Description	2055	2056
Asphalt Paving - Crack Repair/Seal	64,829	68,071
Asphalt Paving - Phase 1		
Asphalt Paving - Phase 2		2,565,072
Asphalt Paving - Phase 3		
Asphalt Paving - Phase 4		
Asphalt Paving - Phase 5		
Asphalt Paving - Phase 6		
Beaver Pond Splash Pad		
Culvert Replacement/Modifications - Phase 1		
Culvert Replacement/Modifications - Phase 2		
Culvert Replacement/Modifications - Phase 3		
Culvert Replacement/Modifications - Phase 4		
Kwann Lake Emergency In/Out		
Thunderbird Overflow & Kwann Modification Pr..		
Year Total:	64,829	2,633,143



Reserve Study Disclosure Form

In Compliance with RCW 64.34.308 and RCW 64.38.025 (2019)

Name of Association: Birch Bay Village Community - Roads & Drainage

Current Year Reported Budget Contribution to Reserves: \$295,810

Recommended 2025 Contribution to Reserves, per study: \$295,810

Funding Plan Used for Recommendations: Full Funding

Projected Year End Reserve Balance at Current Funding Level: \$1,391,161
(Percentages below indicate the projected year end percentage level of the Reserve Fund vs Fully Funded at the Current Contribution Amount)

Projected Year End Balance If the account was Fully Funded: \$2,956,068

5 Year Balances

Estimates Per Study:	2025	2026	2027	2028	2029
Projected Year End Reserve Balances at Current Contribution Level	\$1,391,161	\$1,013,434	\$760,649	\$411,448	\$766,927
<u>Average Deficit/Surplus Per Member: \$-\$1,079 Percent Funded 54%</u>					
Projected Year End Reserve Balances at Recommended Funding Contribution Level:	\$1,391,161	\$1,013,434	\$760,649	\$411,448	\$766,927
Projected Year End Fully Funded Reserves If Fully Funded:	\$2,956,068	\$2,300,671	\$2,193,213	\$1,283,260	\$1,466,306
Percent Reserve is Fully Funded at Current Funding Level:	47%	44%	35%	32%	52%

Based upon the most recent reserve study, will the association have funds to meet obligations for the next 30 years at the current contribution rate? Yes

To be Completed by Management

Proposed 2025 Budget's Contribution to Reserves: _____

Is Additional Funding (Regular or Special Assessment) Planned? Yes/No

When is it due? (Month/Year) _____

What is the Purpose? Description of Project(s):

Duration of Assessment: Start Date _____ End Date _____

Assessment Amount per Unit on Average: Per Month _____ Per Year _____

Author Name _____

Birch Bay Village Community - Roads & Drainage Level 2 Study 2025

Appendix - Disclosure, Definitions & Calculations

Percent Funded

Many reserve studies use the concept of "Percent Funded" to measure the reserve account balance against a theoretically perfect value. Percent Funded is often used as a measure of the "Financial Health" of an association. The assumption is, the higher the percentage, the greater the "Financial Health". The question of substance is simply: How much is enough? To answer the question, some understanding of Percent Funded is required. Percent Funded is the ratio of current cash reserves divided by the Fully Funded value at any instant in time. Fully Funded is defined as the present value of the sum of all Reserve Items divided by the expected life of each item. In essence, Fully Funded is simply the total of the average net present value of the association improvements. Reserve Items with a remaining life greater than the study life are not included in the calculation. For example; building framing, foundations, water lines, and other long-lived items that fall outside the envelope of the reserve study are excluded from the calculation. Percent Funded is then, the current reserve balance divided by the Fully Funded value multiplied by 100 (to give a percentage). The concept of percent funded is useful when the reserve study is comprehensive, but misleading when the reserve study is superficial or constrained. As a result, we recommend that the statement "Percent Funded" be used with caution.

Washington State Homeowners and Condominium Act Compliance with RCW 64.38 and RCW 64.34 (2019)

This reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair, or replacement in future years, and may not include regular contributions to a reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require you to pay on demand as a special assessment your share of common expenses for the cost of major maintenance, repair, or replacement of a reserve component. A reserve component list (as applicable), including roofing, painting, paving, decks, siding, plumbing, windows, and any other reserve component that would cost more than one percent of the annual budget for major maintenance, repair, or replacement. If one of these reserve components is not included in the reserve study, the study should provide commentary explaining the basis for its exclusion. The study must also include quantities and estimates for the useful life of each reserve component, remaining useful life of each reserve component, and current repair and replacement cost for each component.

Disclosures Required by RCW 64.90.550.

This Reserve Study meets all requirements of the Washington Uniform Common Interest Ownership Act.

- a) This Reserve Study was prepared with the assistance of a reserve study professional and that professional was independent;
- b) This Reserve Study includes all information required by RCW 64.90.550 Reserve Study – Contents; and
- c) This reserve study should be reviewed carefully. It may not include all common and limited common element components that will require major maintenance, repair, or replacement in future years, and may not include regular contributions to reserve account for the cost of such maintenance, repair, or replacement. The failure to include a component in a reserve study, or to provide contributions to a reserve account for a component, may, under some circumstances, require the association to (1) defer major maintenance, repair, or replacement, (2) increase future reserve contributions, (3) borrow funds to pay for major maintenance, repair, or replacement, or (4) impose special assessments for the cost of major maintenance, repair, or replacement.

Reserve Study Assumptions

The below listed assumptions are implicit in this reserve study:

- Cost estimates and financial information are accurate and current.
- No unforeseen circumstances will cause a significant reduction of reserves.
- Sufficient comprehensive property insurance exists to protect from insurable risks.
- The association plans to continue to maintain the existing common areas and amenities.
- Reserve payments occur at the end of every calendar month.
- Expenses occur at the end of the expense year.

Inflation Estimate

Inflation for the last year has been reviewed and a best fit regression analysis of the last 12 months has been used to determine future expense estimates. Based on the current economic conditions, the inflation rate will need to be closely monitored as this is a critical factor in reserve planning for future fund needs.

Impact of Component Life

The projected life expectancy of the major components and the reserve funding needs of the association are closely tied. Performing the appropriate routine maintenance for each major component generally increases the components' useful life,

Birch Bay Village Community - Roads & Drainage Level 2 Study 2025

Appendix - Disclosure, Definitions & Calculations

effectively moving the component expense into the future which reduces the reserve funding payments of the association. Failure to perform such maintenance can shorten the remaining useful lives of the major components, bringing the replacement expense closer to the present which increases the reserve funding payments of the association.

Study Method

This reserve analysis study and the parameters under which it has been completed are based upon information provided to us in part by representatives of the association, its contractors, assorted vendors, specialist and independent contractors, the Community Association Institute, and various construction pricing and scheduling manuals including, but not limited to: Marshall & Swift Valuation Service, RS Means Facilities Maintenance & Repair Cost Data, RS Means Repair & Remodeling Cost Data, National Construction Estimator, National Repair & Remodel Estimator, Dodge Cost Manual and McGraw-Hill Professional. Additionally, costs are obtained from numerous vendor catalogues, actual quotations or historical costs, and our own experience in the field of property management and reserve study preparation.

It has been assumed, unless otherwise noted in this report, that all assets have been designed and constructed properly and that each estimated useful life will approximate that of the norm per industry standards and/or manufacturer's specifications. In some cases, estimates may have been used on assets, which have an indeterminable but potential liability to the association. The decision for the inclusion of these as well as all assets considered is left to the client.

We recommend that your reserve analysis study be updated on an annual basis due to fluctuating interest rates, inflationary changes, and the unpredictable nature of the lives of many of the assets under consideration. All of the information collected during our inspection of the association and computations made subsequently in preparing this reserve analysis study are retained in our computer files. Therefore, annual updates may be completed quickly and inexpensively each year.

Items Beyond the Scope of this Report

Building or land appraisals for any purpose.

State or local zoning ordinance violations.

Building code violations.

Soils conditions, soils contamination or geological stability of site.

Engineering analysis or structural stability of site.

Air quality, asbestos, electromagnetic radiation, formaldehyde, lead, mercury, radon, water quality or other environmental hazards.

Invasions by pests, termites and any or all other destroying organisms, insects, birds, bats or animals to buildings or site. This study is not a pest inspection.

Adequacy or efficiency of any system or component on site.

Specifically excluded reserve items:

Septic systems and septic tanks.

Buried or concealed portions of swimming pools, pool liners, Jacuzzis and spas or similar items.

Items concealed by signs.

Missing or omitted information supplied by the Client for the purposes of reserve study preparation.

Hidden improvements such as sewer lines, water lines, irrigation lines or other buried or concealed items.

Definitions:

Purpose of Distribution

Distribution will have no real meaning for a cash flow model. But the nature of the Fully Funded Model requires it. Annuity payments are based on an accumulation of reserves for each component in the study. Because a study will rarely start with 'perfect' funding for each component, a starting point for each year must be established.

At the start of the study (The beginning fiscal date)

The beginning balance is used for distribution

Going through the components ordered by remaining life and starting with the least remaining life, the balance is assigned to the components by the value of fully funded for each component. Fully funded for components with no life left is the replacement value of the component.

Birch Bay Village Community - Roads & Drainage Level 2 Study 2025 Appendix - Disclosure, Definitions & Calculations

If after the last component there is still a balance remaining, the list of components is iterated again and the moneys are assigned at the replacement cost of each component.

If after the second pass on there are remaining funds then just the components being replaced are iterated and distribution is set to twice the replacement value.

If there are still funds after the above, they are considered excess funds.

In each following year of the projection

Money is accumulated from contributions and interest on deposit. Expenditures for replacement/repair of components is subtracted. This becomes the ending balance of the year. This money is distributed in the same manner as described above.

Calculations:

Fully Funded Methods

Basic Fully Funded

There are two published methods of calculating Fully Funded. The first only considers the present value of a component. Present value in each period will change according to the inflation applied.

$$FullyFunded = (Age / Useful Life) * Present Value$$

Community Association Press Fully Funded

To account for inflation and interest earned on deposit the writers of '**RESERVE FUNDS: How & Why community Associations Invest Assets**' came up with:

$$Basic_FF = (Age / Useful Life) * Present Value$$

$$CAI_FF = Basic_FF \\ + Basic_FF / (1 + interest)^{Remaining Life} \\ - Basic_FF / (1 + inflation)^{Remaining Life}$$