

Orcas Highlands Association

Reserve Study



May 2020

Prepared by:

Orcas Highlands Association
Board of Directors

Reserve Study
Executive Summary

Orcas Highlands Association
Orcas Island, Washington
Level of Service: Reserve Study – FULL

120 Lots
July 1, 2020 through June 30, 2021

Starting Road Fund Reserve Balance.....	\$21,600
Starting Reserve Fund.....	\$9977
Fully Funded Reserve Balance.....	\$34,240
Percent Funded.....	92%
Recommended 2020 Quarterly “Fully Funding” Reserve Contribution.....	\$21,600
Recommended 2020 “Special Assessment” for Reserve.....	\$0
Most recent Reserve Contribution Rate per Quarter per Lot.....	\$45

Risk of a Special Assessment.....Low

Economic Assumptions

Annual Inflation Rate including rate of petroleum.....4.00%

Comments:

This reserve study was prepared by the Board of Directors for the Orcas Highlands Association. The unique construction costs and remote location of the Association property limits the number of contractors available to maintain the roadway system and would be difficult for an outside consultant to estimate costs of repair. Additionally, the cost of a credentialed Reserve Specialist to develop a study would be in excess of 5% of the annual budget and create an undue hardship on the Association.

The Road Fund Reserve funds are needed for the paving of the Association’s road system. The roadway paving and subgrade is estimated to have a viable life span of 8 – 10 years. Some lightly used sections historically last much longer, wear and deterioration is not uniform and repaving applications varies by section. We are basing the reserve funding on being able to repave in 7 – 8 years with funds left over for beginning to rebuild for the next 8-year cycle.

The Reserve Fund is to provide moneys for rebuilding the mailbox structure. The structure has an estimated life span of 20 years and will need reroofing at that time. It may be decided to replace the structure with a modular system in the future as the volume of mail is on the decline. The current balance in the reserve account will accommodate future needs and does not require additional funding.

Component List for Orcas Highlands Association

Component	Useful Life	Remaining Useful Life	Current Average Cost (\$)
	UL (years)	RUL (years)	
General Common Areas			
Chip Seal Resurfacing	9	7	\$125,000
Asphalt Resurfacing	20	18	\$17,000
Roadway Subgrade	15	13	\$25,000
Roadway Signs	15	11	\$850
Mailbox Station	20	17	\$8,000
Total Funded Components			\$175,850

Introduction

A Reserve Study anticipates and establishes funding for the Association's major common area repair and replacement expenses. The reserve study is not an exact science because it makes assumptions and projections about future conditions. This study is based primarily on historic data using past actual costs and estimates from the contractors available and qualified to perform the work.

Reserve contributions are established to offset the ongoing, day to day deterioration of our Reserve assets. The Reserve Funding Plan will collect an amount of funds from the owners who benefit from the use and value of those assets, so the Association is financially prepared for the large, irregular expenditure through future years when those assets eventually require replacement.

Methodology

For this Full Reserve Study, we begin with a review of our Governing Documents, review of our historic records, an inventory of our past and current assets, and an evaluation of our funding plan of ongoing maintenance vs. Reserves. We have performed an on-site inspection to quantify and evaluate our common areas.

Which Physical Assets Are Funded by Reserves?

From the National Reserve Study Standards – Reserve Component “Four-Part Test”:

First – It must be a common area maintenance responsibility

Second – The component must have a limited life

Third – The remaining life must be predictable

Fourth – The component must be above a minimum threshold cost (often between .5% and 1%)

This limits Reserve Components to major, predictable expenses.

Within these guidelines it is inappropriate to include lifetime components, unpredictable expenses such as damage due to fire or earthquake, and expenses more appropriately handled from the Operations Budget or as an insured loss.

How were Useful Life and Remaining Useful Life estimates established?

1. Visual Inspection (observed wear and age)
2. Association records of budgeted and expensed repairs
3. History of installation dates and previous life cycle information
4. Paving contractor evaluation and recommendation

How were Current Repair / Replacement Costs Estimated?

1. Actual cost history
2. Contractor and Vendor Recommendations

How much Reserves are enough?

From the National Reserve Study Standards:

Reserve adequacy is found when the amount of current Reserve cash is compared to Reserve component deterioration. Having enough means the Association can execute its projects in a timely manner with existing Reserve funds. Not having enough typically creates deferred maintenance or special assessments.

Each year, the value of deterioration of the component changes. When there is more deterioration (as components approach the time they need to be replaced), there should be more cash to offset that deterioration and prepare for the expenditure. Conversely, the value of the deterioration shrinks after projects are accomplished. The value of deterioration changes each year but is a predictable target.

How much should be contributed?

From the National Reserve Study Standards:

There are four Funding Principles to balance in developing a Reserve Funding Plan.

1. *Design a plan that provides sufficient cash to perform our Reserve projects on time.*
2. *Create a stable contribution because it keeps these naturally irregular expenses from unsettling the budget.*
3. *Reserve contributions should be evenly distributed over current and future owners enabling each owner to pay their fair share of the Reserve expenses over the years.*
4. *Develop a plan that is fiscally responsible and safe for Directors to recommend to the Association.*

What is our Recommended Funding Goal?

From the National Reserve Study Standards:

Maintaining the Reserve Fund at a level equal to the value of deterioration is called Full Funding or 100% Funded. As each asset ages and becomes degraded the Reserve Fund grows proportionally. Baseline Funding allows the Reserves to fall close to zero, but not below zero. Baseline Funding still provides for the timely execution of all Reserve Projects, and only the "margin of safety" is different. Baseline Funding contributions average only 10% - 15% less than Full Funding contribution.

Given the nature of our component list, a case can be made for either funding model.

Site Inspection

Orcas Highlands Association

Roadways in the Highlands are surfaced with chip seal. The gravel subbase is rolled and compacted, and any holes patched. The surface is sprayed with a hot liquid asphalt then the chip spreader follows immediately with an application of rock. The asphalt is fluid, so the rock is embedded by the displacement of asphalt. A roller sets the rock into the liquid asphalt. Sweeping is done at the completion of the process. Chip seal is used in low traffic settings and is far less expensive than conventional asphalt. The lifespan of chip seal roadway is 7 to 10 years. With very low traffic volumes and rural conditions in the Highlands we have experienced 9 – 15 years wear life from the surfacing. Some of the less used roads have lasted even longer.

Areas with very small surface areas and where the chip seal is impractical are surfaced with a standard asphalt pavement. Patching and some shoulder work are also done with asphalt repair.

Almost all roadways in the Highlands were repaired and/or resurfaced in 2018. It is most cost effective to resurface all the roads at once with either one or two “shots” of chip seal. A contractor discount for volume of work and only one mobilization resulted in a significant cost savings.

Please refer to the Photographic Inventory for information on each of the Common Area Reserve components and those Common Area properties not included in the Reserve Component list.



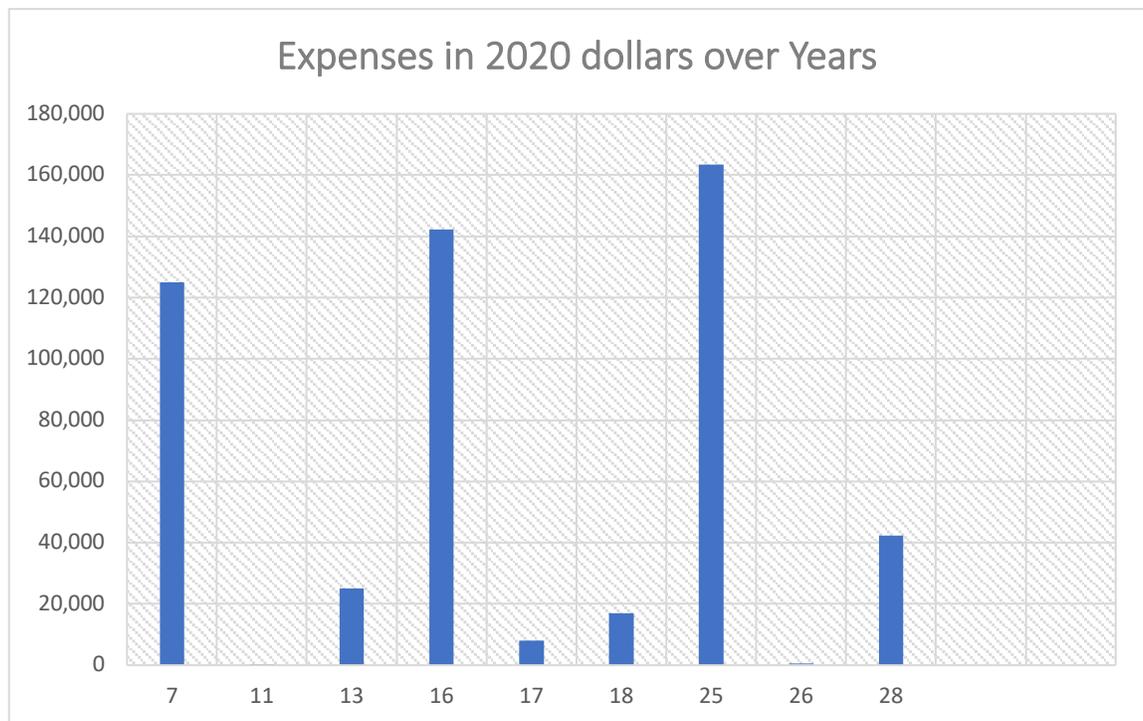
Projected Expenses

This Reserve Study looks forward 30 years; it is quite possible that expenses will be incurred at different time intervals. To maintain the most accurate look forward, the study will need to be updated annually to adjust for shifting conditions and changes in expenses.

The chart below summarizes future expenses for the Association as defined by our Reserve Component List. With roadway work recently completed the Association is currently (2020) in the rebuilding phase. The Association has policies in place to assess a building fee for new construction or unusual use of the roadway system, such as logging truck traffic from adjoining land holders. This policy establishes fees that are allocated to the road repair fund and are used for maintenance needed due to heavy equipment and contractor traffic on the roadway.

A summary of the Reserve Component List is included in the Component Details table and a summary of the expenses themselves are shown in the 30-yr Expense Summary table.

ANNUAL RESERVE EXPENSES

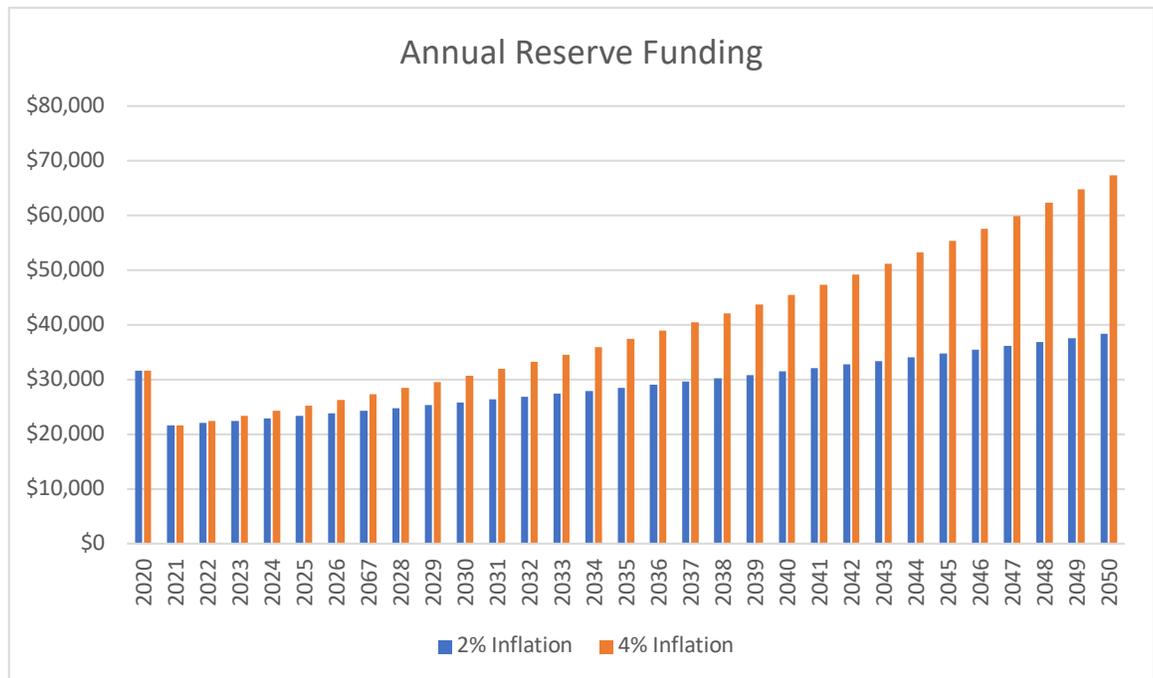


Reserve Fund Status

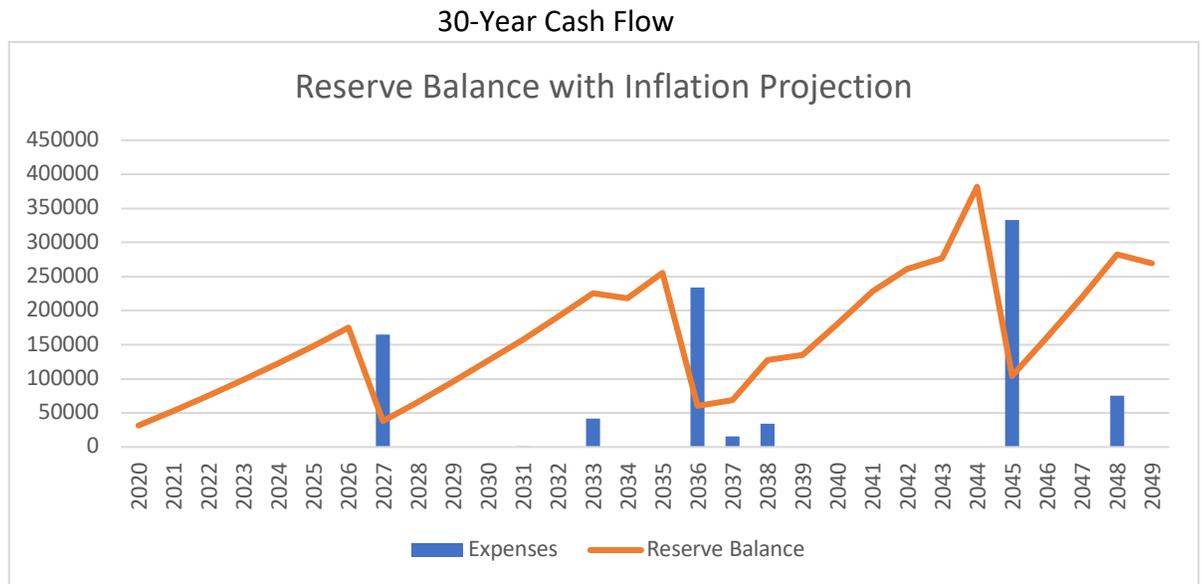
The starting point for this study is the Reserve Fund balance, projected to be \$31,576 as of the start of the Fiscal Year on 7/1/2020. This is based on our current dues payments and deposit of our tax refund from the 2018 sale of the water system. As of the Fiscal Year Start, our Fully Funded Balance is calculated to be \$34,240. This represents the current value of our common area components. Comparing our Reserve Balance to our Fully Funded Balance indicates our Reserves are 92% funded.

Recommended Funding Plan

Based on our current Percent Funded and our Reserve needs, the Directors recommend budgeted contributions of \$21,600 to be broken down as \$45 per lot per quarter for this next Fiscal Year. We recommend a 4% inflation rate to keep pace with inflation.



The following chart shows our Reserve balance with our projected funding needs at the 4% inflation rate.



Component Expenses

Years to Project Execution	Component	2020 Expense	Expenses with Inflation
7	Chip Seal Resurface	125,000	164,491
11	Roadway Signs	400	616
13	Roadway Subsurface	25,000	41,627
16	Chip Seal Resurface	142,329	234,123
17	Mailbox Station	8,000	15,583
18	Asphalt Resurfacing	17,000	34,439
25	Chip Seal Resurface	163,505	333,230
26	Roadway Signs	645	1,109
28	Roadway Subsurface	42,280	74,968

Reserve Component List Detail

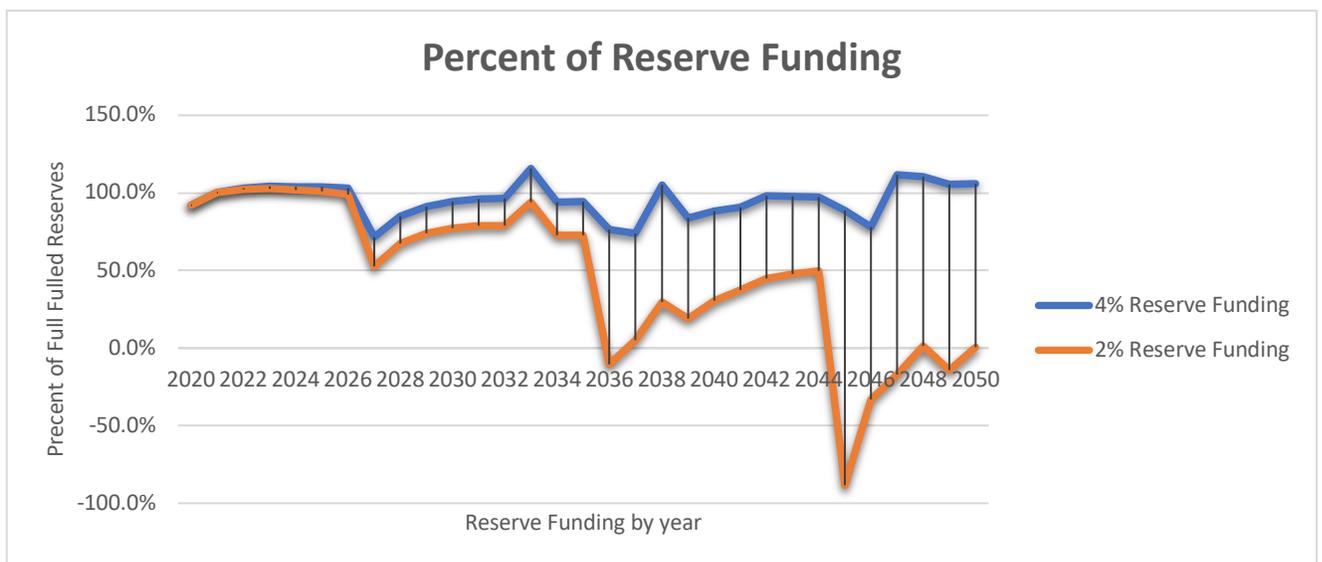
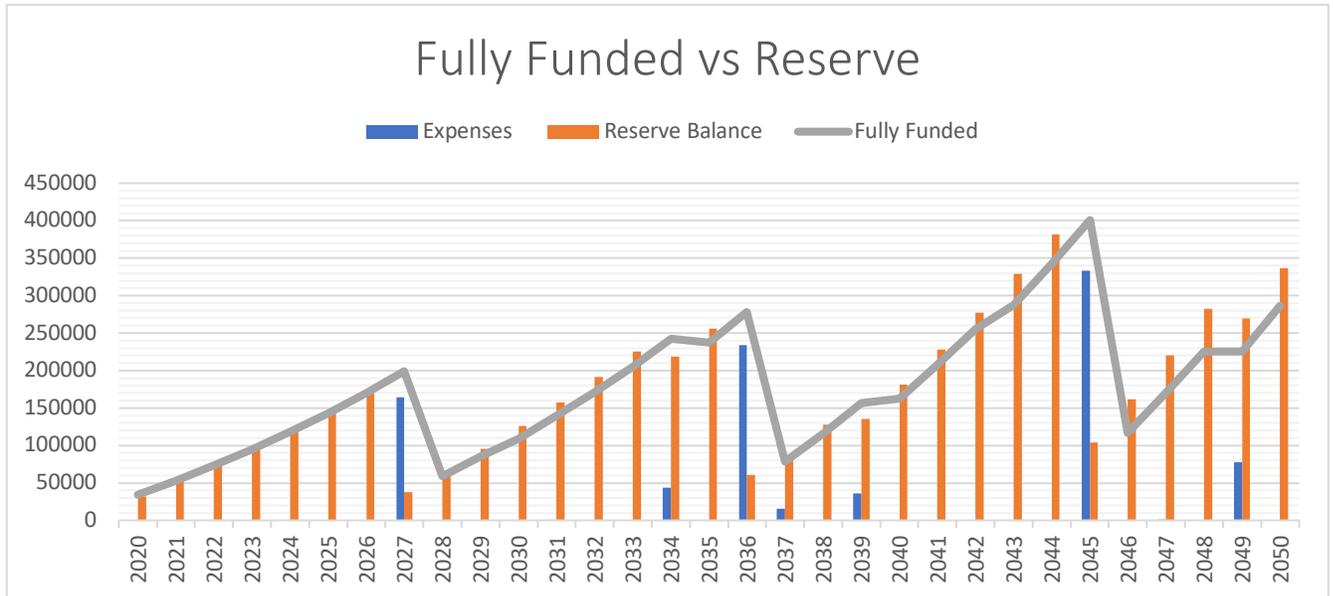
Component	Quantity	Useful Life	Remaining Useful Life	Current Cost Estimate
Chip Seal Resurfacing	Apx. 18,570 GSY	9	7	\$125,000
Asphalt Resurfacing	Apx. 750 GSY	20	18	\$17,000
Roadway Subgrade	Apx. 600 GSY	15	13	\$25,000
Roadway Signs	16 ea	15	11	\$850
Mailbox Station	1	20	17	\$8,000

2020 Fully Funded Balance

Component	Current Cost Estimate		Effective Age		Useful Life	Fully Funded Balance
Chip Seal Resurfacing	\$125,000	X	2	/	9	\$27,780
Asphalt Resurfacing	\$17,000	X	2	/	20	\$1,700
Roadway Subgrade	\$25,000	X	2	/	15	\$3,330
Roadway Signs	\$850	X	4	/	15	\$230
Mailbox Station	\$8,000	X	3	/	20	\$1,200
					TOTAL	\$34,240

Component Significance

Component	Useful Life	Current Cost Estimate	Deterioration Cost / Year	Deterioration Significance
Chip Seal Resurfacing	9	\$125,000	\$13,900	82.4%
Asphalt Resurfacing	20	\$17,000	\$850	5.0%
Roadway Subgrade	15	\$25,000	\$1,670	9.9%
Roadway Signs	15	\$850	\$57	0.3%
Mailbox Station	20	\$8,000	\$400	2.4%
TOTAL Funded Components			\$16,877	100%



30-Year Income/Expense Detail

Fiscal Year	2020	2021	2022	2023	2024
Starting Reserve Balance	\$9,976	\$31,576	\$53,176	\$75,640	\$99,003
Annual Reserve Contribution	\$21,600	\$21,600	\$22,464	\$23,363	\$24,297
Recommended Special Assessment	0	\$0	\$0	\$0	\$0
Total Income	\$31,576	\$53,176	\$75,640	\$99,003	\$123,300
Component					
Chip Seal Resurfacing	\$0	\$0	\$0	\$0	\$0
Asphalt Resurfacing	\$0	\$0	\$0	\$0	\$0
Roadway Subgrade	\$0	\$0	\$0	\$0	\$0
Roadway Signs	\$0	\$0	\$0	\$0	\$0
Mailbox Station	\$0	\$0	\$0	\$0	\$0
Total Expenses	\$0	\$0	\$0	\$0	\$0
Ending Reserve Balance	\$31,576	\$53,176	\$75,640	\$99,003	\$123,300

Fiscal Year	2025	2026	2027	2028	2029
Starting Reserve Balance	\$123,300	\$148,569	\$174,848	\$37,688	\$66,112
Annual Reserve Contribution	\$25,269	\$26,280	\$27,331	\$28,424	\$29,561
Recommended Special Assessment	0	\$0	\$0	\$0	\$0
Total Income	\$148,569	\$174,848	\$202,179	\$66,112	\$95,673
Component					
Chip Seal Resurfacing	\$0	\$0	\$164,491	\$0	\$0
Asphalt Resurfacing	\$0	\$0	\$0	\$0	\$0
Roadway Subgrade	\$0	\$0	\$0	\$0	\$0
Roadway Signs	\$0	\$0	\$0	\$0	\$0
Mailbox Station	\$0	\$0	\$0	\$0	\$0
Total Expenses	\$0	\$0	\$164,491	\$0	\$0
Ending Reserve Balance	\$148,569	\$174,848	\$37,688	\$66,112	\$95,673

Fiscal Year	2030	2031	2032	2033	2034
Starting Reserve Balance	\$95,673	\$126,417	\$157,774	\$191,026	\$225,608
Annual Reserve Contribution	\$30,744	\$31,973	\$33,252	\$34,582	\$35,966
Recommended Special Assessment	0	\$0	\$0	\$0	\$0
Total Income	\$126,417	\$158,390	\$191,026	\$225,608	\$261,574
Component					
Chip Seal Resurfacing	\$0	\$0	\$0	\$0	\$0
Asphalt Resurfacing	\$0	\$0	\$0	\$0	\$0
Roadway Subgrade	\$0	\$0	\$0	\$0	\$43,292
Roadway Signs	\$0	\$616	\$0	\$0	\$0
Mailbox Station	\$0	\$0	\$0	\$0	\$0
Total Expenses	\$0	\$616	\$0	\$0	\$43,292
Ending Reserve Balance	\$126,417	\$157,774	\$191,026	\$225,608	\$218,282

Fiscal Year	2035	2036	2037	2038	2039
Starting Reserve Balance	\$218,282	\$255,686	\$60,464	\$85,337	\$127,412
Annual Reserve Contribution	\$37,404	\$38,900	\$40,456	\$42,075	\$43,758
Recommended Special Assessment	0	\$0	\$0	\$0	\$0
Total Income	\$255,686	\$294,587	\$100,920	\$127,412	\$171,169
Component					
Chip Seal Resurfacing	\$0	\$234,123	\$0	\$0	\$0
Asphalt Resurfacing	\$0	\$0	\$0	\$0	\$35,816
Roadway Subgrade	\$0	\$0	\$0	\$0	\$0
Roadway Signs	\$0	\$0	\$0	\$0	\$0
Mailbox Station	\$0	\$0	\$15,583	\$0	\$0
Total Expenses	\$0	\$234,123	\$15,583	\$0	\$35,816
Ending Reserve Balance	\$255,686	\$60,464	\$85,337	\$127,412	\$135,353

Fiscal Year	2040	2041	2042	2043	2044
Starting Reserve Balance	\$135,353	\$180,861	\$228,190	\$277,411	\$328,601
Annual Reserve Contribution	\$45,508	\$47,328	\$49,221	\$51,190	\$53,238
Recommended Special Assessment	0	\$0	\$0	\$0	\$0
Total Income	\$180,861	\$228,190	\$277,411	\$328,601	\$381,839
Component					
Chip Seal Resurfacing	\$0	\$0	\$0	\$0	\$0
Asphalt Resurfacing	\$0	\$0	\$0	\$0	\$0
Roadway Subgrade	\$0	\$0	\$0	\$0	\$0
Roadway Signs	\$0	\$0	\$0	\$0	\$0
Mailbox Station	\$0	\$0	\$0	\$0	\$0
Total Expenses	\$0	\$0	\$0	\$0	\$0
Ending Reserve Balance	\$180,861	\$228,190	\$277,411	\$328,601	\$381,839

Fiscal Year	2045	2046	2047	2048	2049
Starting Reserve Balance	\$381,839	\$103,977	\$161,559	\$220,335	\$282,616
Annual Reserve Contribution	\$55,367	\$57,582	\$59,885	\$62,281	\$64,772
Recommended Special Assessment	0	\$0	\$0	\$0	\$0
Total Income	\$437,207	\$161,559	\$221,444	\$282,616	\$347,388
Component					
Chip Seal Resurfacing	\$333,230	\$0	\$0	\$0	\$0
Asphalt Resurfacing	\$0	\$0	\$0	\$0	\$0
Roadway Subgrade	\$0	\$0	\$0	\$0	\$77,966
Roadway Signs	\$0	\$0	\$1,109	\$0	\$0
Mailbox Station	\$0	\$0	\$0	\$0	\$0
Total Expenses	\$333,230	\$0	\$1,109	\$0	\$77,966
Ending Reserve Balance	\$103,977	\$161,559	\$220,335	\$282,616	\$269,421

Component Details

The Component Details section provides background on the Association and the basis of our funding assumptions. The section represents the full range of components and measures them against the National Reserve Study Standards to determine if they meet the criteria for reserve funding.

1. Common area repair & replacement responsibility
2. Component must have a limited useful life
3. Life limit must be predictable
4. Above a minimum threshold cost – 1% of the Annual operating expenses.

Not all components belonging to the Association are appropriate for reserve funding. The common area property that has been retained for green area, water shed and community recreation area (Tracts A & B of the Rosario Highlands plats) are undeveloped forest land and have a predictable life limit and no limited useful life. These components are deemed inappropriate for Reserve Funding.

Orcas Highlands Association Background

Orcas Highlands Association is a development on Orcas Island in Washington's San Juan Islands. Access to the island is by ferry, small plane or private boat. This remote location has an impact on the materials pricing and availability of contractors especially for road construction work. The Association, as it currently functions, was formed as a non-profit corporation in Washington State in April 1982.

Up until 2018 the Association owned and operated its own water supply system including tanks, pumps, transport lines, meters, and valves. In 2018 the system was sold to Washington Water Service along with all the equipment and piping. Washington Water along with Orcas Power and Light, CenturyLink, and RockIsland Communications all have utility easements within the development. Each of those utilities own their lines and equipment up to each individual property lot line.

Access to the development is from a county road, Lindsay Way, which branches off the main roadway on the island. Lindsay Way is owned and maintained by San Juan County until it forks with Discovery Way. The county roadway and easements are not included in this study.

The Association includes 120 lots, all individually owned. Currently there are three homes under construction and 20 lots that are undeveloped.

General Common Areas

Component 1: Roadways

Sub Element 1a: Chip Seal Resurfacing

Quantity: Approximately 18,570 gross square yards

Location: Throughout the Association

Funded: Yes, Meets National Reserve Study Standards four-part test

History: Last redone in 2018, engineering walk-through post construction confirmed all roadway surfaces were in good condition and all repairs were made.

Comments: See historic documentation of costs for past work. Only one contractor services the island so bidding is non-competitive. Only cost options are to join with other Associations to increase volume of work for a discount or change type of surfacing. Last study of surfacing options found Chip Seal to be the least expenses by a significant margin.

Useful Life: 8 – 10 years, more on less traveled roads. Severity of winters can influence the life span of the surfacing.

Remaining Life: Estimating at least 7 years.

Cost Estimate: See Historic Expenses



Roadway prior to resurfacing – this section is at the end of its life span.



Post construction roadway – similar throughout the Highlands. No striping, speed limit 15mph

Component 1: Roadways

Sub Element 1b: Asphalt Resurfacing

Quantity: Approximately 750 gross square yards

Location: Throughout the Association

Funded: Yes, Meets National Reserve Study Standards four-part test

History: Last redone in 2018, engineering walk-through post construction confirmed all roadway surfaces were in good condition and all repairs were made.

Comments: See historic documentation of costs for past work. Used on areas too small for chip seal, patching, or shoulder work

Useful Life: 20 years Severity of winters can influence the life span of the surfacing.

Remaining Life: Estimating at least 18 years.

Cost Estimate: See Historic Expenses

Component 1: Roadways

Sub Element 1c: Roadway Subgrade

Quantity: Approximately 600 gross square yards

Location: Throughout the Association

Funded: Yes, Meets National Reserve Study Standards four-part test

History: Last redone in 2018, engineering walk-through post construction confirmed all roadway surfaces were in good condition and all repairs were made.

Comments: See historic documentation of costs for past work. Random repairs needed as sections age. Important to maintain drainage and culverts to prevent premature erosion of subbase.

Useful Life: 15 years

Remaining Life: Estimating at least 13 years.

Cost Estimate: See Historic Expenses

Historic Expenses for Roadway Component Cost Estimate

Road Maintenance	TOTAL COST 2007	TOTAL COST 2012	TOTAL COST 2018	Total	AVG OVER 20 YR
Doolittle Construction	0.00	80,695.76	103,921.94	184,617.70	9,230.89
Richard Lawson Construction	0.00	0.00	16,853.59	16,853.59	842.68
Paving	0.00	80,695.76	120,775.53	201,471.29	10,073.56
Earthworks Company	0.00	21,520.91	0.00	21,520.91	1,076.05
Griffin Yardworks	0.00	0.00	4,997.20	4,997.20	249.86
Island Excavating, Inc.	111,824.94	75,139.78	18,470.83	205,435.55	10,271.78
Kimple Excavating	0.00	899.83	308.36	1,208.19	60.41
Norlan Construction	0.00	0.00	667.84	667.84	33.39
Orcas Construction	0.00	1,864.73	443.21	2,307.94	115.40
Orcas Excavators, Inc.	22,940.13	925.07	0.00	24,759.81	1,237.99
Orcas Septic & Dozer Service	1,044.69	0.00	0.00	1,044.69	52.23
Earthwork	135,809.76	100,350.32	24,887.44	261,942.13	13,097.11
TOTAL	135,809.76	181,046.08	145,662.97	\$ 463,413.42	\$ 23,170.67

	FEE	LOTS	QTR	YEARS	TOTAL
Road Paving	45	120	4	1	21600
Road maintenance incl snow	15	120	4	1	7200

	FEE	LOTS	QTR	YEARS	TOTAL
Road Paving	45	120	4	8	172800
Road maintenance incl snow	15	120	4	8	57600

Component 2: Roadway Signs

Quantity: 16 each

Location: Throughout the Association

Funded: Yes, Meets National Reserve Study Standards four-part test

History: Roadway signage installed 2016.

Comments: Roadway signage is a mix of volunteer made wooden signs and metal reflective roadway signs. This cost addresses the metal signs throughout the Highlands. Signs also included warning posts at steep road edge on Switchback Road.

Useful Life: 15 years

Remaining Life: 11 years.

Cost Estimate: Signs purchased for \$700 in 2016 & 2017. Installed for \$150.



Component 3: Mailbox Station

Quantity: 1

Location: Entry on Lindsay Way

Funded: Yes, Meets National Reserve Study Standards four-part test

History: Complete reconstruction in 2018

Comments: Structure built to commercial standards with treated timbers. Only contracted maintenance projected in next 30 years is reroofing. Volunteers paint and maintain the structure annually.

Useful Life: 20 years

Remaining Life: 17 years.

Cost Estimate: Reroofing and minor repair estimated at \$8,000



Component 4: Common Area Green Space / Water Shed / Community Park

Quantity: 38 Acres

Location: South side of Association plats and inside Discovery Circle.

Funded: No, no predictable life limit and no limited useful life

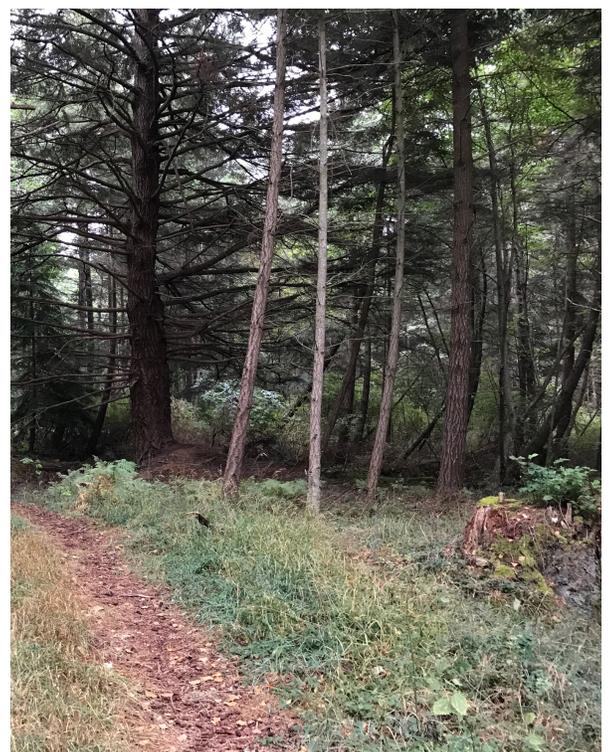
History: Established as green space in original plat and set aside for water shed and informal / undeveloped recreation area

Comments: Annual funds are collected for fire management and fuel reduction in the forest areas.

Useful Life: NA

Remaining Life: NA

Cost Estimate: NA



Resource Cited and Used:

National Reserve Study Standards of the Community Associations Institute, Revised August, 2000.

www.reservestudy.com – Association Reserves