

Reserve Study

Hickory Woods HOA

Londonderry, NH



September 20, 2018
Version 3

<i>Prepared By</i>
<i>Quality Check By</i>

Fiscal Date: January, 1 2019 to December, 31 2019

**Hickory Woods Condominiums
Londonderry, NH
Executive Summary**

- **Site and Grounds:** The property consists of 60 acres of land situated between West Road and Nashua Road in Londonderry, NH. There are privately owned septic tanks and commonly owned leachfields (total of 80). There are several rain gardens and retention ponds. The complex is serviced by Pennichuck Water Works, Inc. There are also several retaining walls, rock-lined slopes, metal chain link fencing, vinyl fencing, signage, and other miscellaneous grounds features.
- **Private Streets, Sidewalks and Curbs:** The Condominium Association maintains private roads named Quarry Road, Pepper Hill Road, Black Forest Circle, Tavern Hill Road and Church Lane with an approximate total lineal footage of 6150. The curbing consists of Cape Cod berm. There are sidewalks with granite curbing at the front of the Clubhouse. There is a large and lit parking lot (41 spaces) also in front of the Clubhouse. The driveways are privately owned and maintained.
- **Building Common Elements:** There are 98 detached single-family buildings and a Clubhouse. The Association is not responsible for the single-family buildings. The Clubhouse has a main level and finished lower level with an above average kitchen on the main level and Tavern on the lower level. There is also an exercise room with rubber flooring on the lower level, and a pool room on the main level.
- **Amenities:** There are exterior amenities associated with the Clubhouse, including tennis courts, basket ball court, driving cages, golfing green, and horse shoe and bocce courts.

The following people were interviewed during our study:

Tim Wege, New Star Property Management
Richard
Brian Wells

The following documents were made available to us and reviewed:

- Proposed site construction and clubhouse documents were provided and reviewed.
- Common Area Infrastructure Assessment by CLD Consulting Engineers
- Letter Rev. 5/23/17 prepared by Association regarding Transition Issues - Engineering/Compliance Concerns
- ByLaws of the Hickory Woods Unit Owners Association

OBSERVATIONS AND COMMENTS:

- **Leachfields:** There are reportedly 70 private leachfields, 9 shared leachfields, and the clubhouse leachfield. These are reported to be Presby Fields. There were no reported concerns. It is recommended that there be an inspection of leachfields in 5 to 10 years to anticipate repairs, if needed to extend their useful life, and to more accurately plan for replacements than can be anticipated in this study.
- **Paving and Flatwork:** Roadways, Clubhouse sidewalk and parking area are serviceable. The CLD Assessment report highlighted cracking of the pavement. Continued movement and cracking may occur. If it does, this should be addressed in a Reserve Study update. While marred, asphalt "Cape Cod" berms appeared to be performing their intended function for surface water control. These are anticipated to be replaced when a pavement overlay is installed. Settled catchbasins would also be raised at that time.
- **Landscaping and Drainage:** Landscaping is generally new. The area within 15 ft. of each single-family house is not Common land and thus, landscaping in this area is not included herein. As such, front yard plantings are the responsibility of the unit owners. Replacement of a limited number of aged trees (e.g., entry, vicinity of clubhouse, Church Lane) and new plantings are included herein. Retaining walls are currently serviceable. Erosion is likely to continue to be a problem at rock-lined slopes given

their design and site grades. Slopes, retaining walls, and drainage features should be inspected and maintained as indicated on your Construction Plans and/or in the CLD Assessment report.

- **Clubhouse:** The clubhouse is above average for this size community. It has architectural shingles, vinyl siding with vinyl accents, large kitchen with upscale cabinetry and granite countertops, lower level Tavern (a.k.a., bar), exercise room, and other function rooms. The finishes and plumbing in the Tavern are generally of lower quality than the bathrooms and kitchen. It is anticipated that the clubhouse is lightly used, particularly the Tavern.

Drywall in mechanical room is needed to cover Kraft facing; this is a fire safety concern that is not included in the Reserve fund budget.

- **Recreational Exterior Amenities:** The grounds to the rear and right side of the Clubhouse have tennis and basket ballcourts with a surface of a specialty synthetic/plastic mesh on concrete mat. The driving cages, golfing green, and bocce courts have synthetic turf. These are high end facilities that are in excellent condition. Manufacturer's information on the plastic mesh and turf should include maintenance guidelines. Replacements will be pricey. Note that there is cracking of the concrete mat under poles for the tennis court nets. These cracks should be repaired soon.

FUNDING STRATEGIES:

Cost figures for specific components are estimated values based upon our experience gathered from past work projects, as well as estimates from cost databases prepared by others, unless actual expenditure pricing has been provided to us. Based on the findings of this study, we find that under current allocations the Reserve Fund will be depleted in 2037 for the current expenditures.

We have used a threshold funding model with a minimum level of funding at 10%. This model predicts that monthly contributions must be increased to about \$6,700, which is about \$68/month/unit. This value is likely to increase with a Reserve Study update including projected expenditures for the components listed above.

The intent of the Reserve Study, as stated in the "Important Information" at the beginning of this report, is to aid your association with the planning purposes. The recommended funding levels are influenced by numerous factors, such as interest rates, inflationary changes, etc. Since the funding levels are not static, our recommendations do not specify a fixed number or goal.

It is important to note that funds identified as "Reserve" funds are intended for non-annual repairs and replacements. Please refer to page 1-3 and 1-4 in this report for a listing of typical expenses, such as exterior painting, which should be considered in the Association's annual operating budget.

Respectfully Submitted,

Nancy Nichols, PE, HI, LEED
Senior Engineer and Vice President

Eric Battey
Reviewer

Hickory Woods HOA

Team Engineering Current Assessment Funding Model | 30 Year Projection | Owners' Summary

Beginning Balance: \$170,000

Year	Current Cost	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2019	2,090,125	22,344	3,548	6,275	189,617	414,044	46%
2020	2,152,829	23,014	4,078		216,710	520,041	42%
2021	2,217,414	23,705	4,633		245,047	632,024	39%
2022	2,283,936	24,416	5,212		274,675	750,259	37%
2023	2,352,454	25,148	5,727	4,502	301,049	870,382	35%
2024	2,423,028	25,903	5,852	25,098	307,706	975,962	32%
2025	2,495,719	26,680	6,244	12,776	327,853	1,100,561	30%
2026	2,570,590	27,480	6,917		362,250	1,245,311	29%
2027	2,647,708	28,305	7,620		398,175	1,397,756	28%
2028	2,727,139	29,154	7,870	24,008	411,191	1,532,075	27%
2029	2,792,826	30,028	5,928	133,720	313,428	1,560,934	20%
2030	2,876,611	30,929	6,446	10,797	340,006	1,720,887	20%
2031	2,962,909	31,857	7,210		379,073	1,900,488	20%
2032	3,051,797	32,813	8,009		419,895	2,089,316	20%
2033	3,143,350	33,797	7,713	56,041	405,363	2,230,040	18%
2034	3,237,651	34,811	8,404	7,790	440,789	2,428,758	18%
2035	3,334,781	35,856	8,157	56,004	428,798	2,587,972	17%
2036	3,434,824	36,931	8,557	24,793	449,493	2,788,432	16%
2037	3,537,869	38,039		591,595	-104,063	2,415,549	
2038	3,644,005	39,180		153,169	-218,051	2,488,625	
2039	3,753,325	40,356		262,067	-439,762	2,456,410	
2040	3,865,925	41,566		314,483	-712,679	2,374,507	
2041	3,981,902	42,813		225,334	-895,199	2,387,764	
2042	4,101,359	44,098		438,926	-1,290,027	2,188,997	
2043	4,224,400	45,421		325,450	-1,570,056	2,107,872	
2044	4,351,132	46,783		454,559	-1,977,832	1,896,982	
2045	4,481,666	48,187		325,861	-2,255,506	1,818,448	
2046	4,616,116	49,632		261,224	-2,467,097	1,810,739	
2047	4,754,600	51,121		269,060	-2,685,036	1,801,826	
2048	4,897,238	52,655		286,558	-2,918,940	1,782,233	

Hickory Woods HOA
Londonderry, NH
Team Engineering Threshold Funding Model • Owners' Summary

Report Date	September 20, 2018
Version	3
Budget Year Beginning	January 1, 2019
Budget Year Ending	December 31, 2019
Total Units	98

<i>Report Parameters</i>	
Inflation	3.00%
Annual Assessment Increase	3.00%
Interest Rate on Reserve Deposit	2.00%
Contingency	10.00%
2019 Beginning Balance	\$170,000

<i>Threshold Funding Model Summary of Calculations</i>	
Required Month Contribution <i>\$68.32 per unit monthly</i>	\$6,695.57
Average Net Month Interest Earned	<u>\$348.37</u>
Total Month Allocation to Reserves <i>\$71.88 per unit monthly</i>	\$7,043.94

Hickory Woods HOA
Team Engineering Threshold Funding Model | 30 Year Projection | Owners' Summary

Beginning Balance: \$170,000

Year	Current Cost	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2019	2,090,125	80,347	4,180	6,275	248,252	414,044	60%
2020	2,152,829	82,757	5,913		336,922	520,041	65%
2021	2,217,414	85,240	7,730		429,892	632,024	68%
2022	2,283,936	87,797	9,634		527,323	750,259	70%
2023	2,352,454	90,431	11,538	4,502	624,791	870,382	72%
2024	2,423,028	93,144	13,120	25,098	705,956	975,962	72%
2025	2,495,719	95,938	15,037	12,776	804,155	1,100,561	73%
2026	2,570,590	98,816	17,308		920,280	1,245,311	74%
2027	2,647,708	101,781	19,685		1,041,746	1,397,756	75%
2028	2,727,139	104,834	21,685	24,008	1,144,257	1,532,075	75%
2029	2,792,826	107,979	21,574	133,720	1,140,091	1,560,934	73%
2030	2,876,611	111,219	24,006	10,797	1,264,519	1,720,887	73%
2031	2,962,909	114,555	26,772		1,405,847	1,900,488	74%
2032	3,051,797	117,992	29,662		1,553,501	2,089,316	74%
2033	3,143,350	121,532	31,550	56,041	1,650,541	2,230,040	74%
2034	3,237,651	125,178	34,522	7,790	1,802,451	2,428,758	74%
2035	3,334,781	128,933	36,656	56,004	1,912,036	2,587,972	74%
2036	3,434,824	132,801	39,540	24,793	2,059,585	2,788,432	74%
2037	3,537,869	136,785	31,121	591,595	1,635,896	2,415,549	68%
2038	3,644,005	140,889	31,464	153,169	1,655,079	2,488,625	67%
2039	3,753,325	145,115	29,699	262,067	1,567,827	2,456,410	64%
2040	3,865,925	149,469	26,927	314,483	1,429,740	2,374,507	60%
2041	3,981,902	153,953	25,988	225,334	1,384,347	2,387,764	58%
2042	4,101,359	158,571	20,811	438,926	1,124,804	2,188,997	51%
2043	4,224,400	163,329	17,915	325,450	980,597	2,107,872	47%
2044	4,351,132	168,228	12,451	454,559	706,717	1,896,982	37%
2045	4,481,666	173,275	9,576	325,861	563,708	1,818,448	31%
2046	4,616,116	178,474	8,051	261,224	489,008	1,810,739	27%
2047	4,754,600	183,828	6,443	269,060	410,219	1,801,826	23%
2048	4,897,238	189,343	4,560	286,558	317,563	1,782,233	18%

Hickory Woods HOA

Team Engineering Annual Expenditure Spread Sheet

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Site/Grounds/Campus										
Asphalt Overlay- Tavern Hill and Church										
Asphalt, Overlay - Black Forest, Pepper Hill and..										
Asphalt, Replacement - Parking and Sidewalk										
Asphalt, Sealcoat & striping - Parking and Side..	5,000					5,796				
Courts, Miscellaneous Phase 1										
Courts, Miscellaneous Phase 2										
Fence, Chain-Link										
Fence- Tennis, BasketBall & Driving Range										
Fence- White Vinyl										
Flag Pole										
Leachfield Inspections										15,657
Leachfield Replacements first 5 - Phase 1										
Leachfield Replacements first 5 - Phase 2										
Leachfield Replacements first 5 - Phase 3										
Leachfield Replacements first 5 - Phase 4										
Leachfield Replacements first 5 - Phase 5										
Leachfield Replacements second 5 - Phase 1										
Leachfield Replacements second 5 - Phase 2										
Leachfield Replacements second 5 - Phase 3										
Leachfield Replacements second 5 - Phase 4										
Leachfield Replacements second 5 - Phase 5										
Ornamental Trees										
Pavement Survey							4,179			
Pole Lights										
Reserve Study Update					4,502					5,219
Retaining Walls										
Rock-lined Swale, 29 Black Forest	1,275									
Shrubs							2,388			
Signs										
Walkways, Flagstone & Patio										
Site/Grounds/Campus Total:	6,275				4,502	5,796	6,567			20,876

Hickory Woods HOA Team Engineering Annual Expenditure Spread Sheet

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Clubhouse										
Appliances										
Carpet						19,302				
Ceramic Tile										
Composite Tile										
Elevator Machinery and Cab										
Fire Alarm System										
Gas Log Unit and Chimney										
HVAC										
Interior Wood Door Replacement										3,131
Kitchen and Baths Refurbishing										
Lighting										
Mechanical Room Drywall		Unfunded								
Roof, Resurfacing										
Rubberized Flooring										
Tavern Refurbishing										
Wastewater, Sewage Pump							1,791			
Water Heater							4,418			
Clubhouse Total:						19,302	6,209			3,131
Year Total:	6,275				4,502	25,098	12,776			24,008

**Hickory Woods HOA
Team Engineering Annual Expenditure Spread Sheet**

Description	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Site/Grounds/Campus										
Asphalt Overlay- Tavern Hill and Church	127,000									
Asphalt, Overlay - Black Forest, Pepper Hill and..								572,018		
Asphalt, Replacement - Parking and Sidewalk										
Asphalt, Sealcoat & striping - Parking and Side..	6,720					7,790				
Courts, Miscellaneous Phase 1										83,029
Courts, Miscellaneous Phase 2										
Fence, Chain-Link									19,578	
Fence- Tennis, BasketBall & Driving Range							25,515			
Fence- White Vinyl							7,703			
Flag Pole										
Leachfield Inspections										
Leachfield Replacements first 5 - Phase 1										
Leachfield Replacements first 5 - Phase 2										
Leachfield Replacements first 5 - Phase 3										
Leachfield Replacements first 5 - Phase 4										
Leachfield Replacements first 5 - Phase 5										
Leachfield Replacements second 5 - Phase 1										
Leachfield Replacements second 5 - Phase 2										
Leachfield Replacements second 5 - Phase 3										
Leachfield Replacements second 5 - Phase 4										
Leachfield Replacements second 5 - Phase 5										
Ornamental Trees								24,793		
Pavement Survey							5,616			
Pole Lights										
Reserve Study Update					6,050					7,014
Retaining Walls										
Rock-lined Swale, 29 Black Forest										
Shrubs							3,209			
Signs							5,616			
Walkways, Flagstone & Patio					3,025					
Site/Grounds/Campus Total:	133,720				9,076	7,790	47,660	24,793	591,595	90,043

**Hickory Woods HOA
Team Engineering Annual Expenditure Spread Sheet**

Description	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Clubhouse										
Appliances		10,797								
Carpet					25,185					
Ceramic Tile										
Composite Tile										
Elevator Machinery and Cab										
Fire Alarm System										
Gas Log Unit and Chimney										
HVAC					21,781					
Interior Wood Door Replacement										
Kitchen and Baths Refurbishing										
Lighting										
Mechanical Room Drywall		<i>Unfunded</i>								
Roof, Resurfacing										
Rubberized Flooring										63,126
Tavern Refurbishing										
Wastewater, Sewage Pump							2,407			
Water Heater							5,937			
Clubhouse Total:		10,797			46,966		8,344			63,126
Year Total:	133,720	10,797			56,041	7,790	56,004	24,793	591,595	153,169

Hickory Woods HOA

Team Engineering Annual Expenditure Spread Sheet

Description	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Site/Grounds/Campus										
Asphalt Overlay- Tavern Hill and Church						197,862				
Asphalt, Overlay - Black Forest, Pepper Hill and..										
Asphalt, Replacement - Parking and Sidewalk				80,522						
Asphalt, Sealcoat & striping - Parking and Side..	9,031					10,469				
Courts, Miscellaneous Phase 1										
Courts, Miscellaneous Phase 2				93,449						
Fence, Chain-Link										
Fence- Tennis, BasketBall & Driving Range										
Fence- White Vinyl										
Flag Pole										
Leachfield Inspections										
Leachfield Replacements first 5 - Phase 1	212,399									
Leachfield Replacements first 5 - Phase 2		218,771								
Leachfield Replacements first 5 - Phase 3			225,334							
Leachfield Replacements first 5 - Phase 4				232,094						
Leachfield Replacements first 5 - Phase 5					239,057					
Leachfield Replacements second 5 - Phase 1						246,228				
Leachfield Replacements second 5 - Phase 2							253,615			
Leachfield Replacements second 5 - Phase 3								261,224		
Leachfield Replacements second 5 - Phase 4									269,060	
Leachfield Replacements second 5 - Phase 5										277,132
Ornamental Trees										
Pavement Survey							7,548			
Pole Lights		18,975								
Reserve Study Update					8,131					9,426
Retaining Walls		37,206								
Rock-lined Swale, 29 Black Forest										
Shrubs							4,313			
Signs										
Walkways, Flagstone & Patio										
Site/Grounds/Campus Total:	221,429	274,952	225,334	406,065	247,188	454,559	265,476	261,224	269,060	286,558

**Hickory Woods HOA
Team Engineering Annual Expenditure Spread Sheet**

Description	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Clubhouse										
Appliances							16,821			
Carpet				32,860						
Ceramic Tile		3,721								
Composite Tile		2,325								
Elevator Machinery and Cab							32,349			
Fire Alarm System		13,952								
Gas Log Unit and Chimney		6,511								
HVAC										
Interior Wood Door Replacement										
Kitchen and Baths Refurbishing										
Lighting		13,022								
Mechanical Room Drywall	<i>Unfunded</i>									
Roof, Resurfacing					78,263					
Rubberized Flooring										
Tavern Refurbishing	40,638									
Wastewater, Sewage Pump							3,235			
Water Heater							7,979			
Clubhouse Total:	40,638	39,531		32,860	78,263		60,385			
Year Total:	262,067	314,483	225,334	438,926	325,450	454,559	325,861	261,224	269,060	286,558