

Town of New Hampton
Proposed 2018 Capital Improvements Plan

The Town Planning board constituted a Capital Improvements Subcommittee at the regular meeting of April 18, 2017. The subcommittee consists of Planning Board members Tania Hiltz, Subcommittee Chair, Robert Broadhurst and David Katz. The subcommittee requested the Town Administrator to solicit capital improvement proposals from the Town Department Heads. The Department proposals were received by the subcommittee and evaluated by interviews with the Department Heads in a series of meetings posted by public notice (Attachment 1) over the period spanning May 16, 2017 to May 31, 2017.

SUMMARY

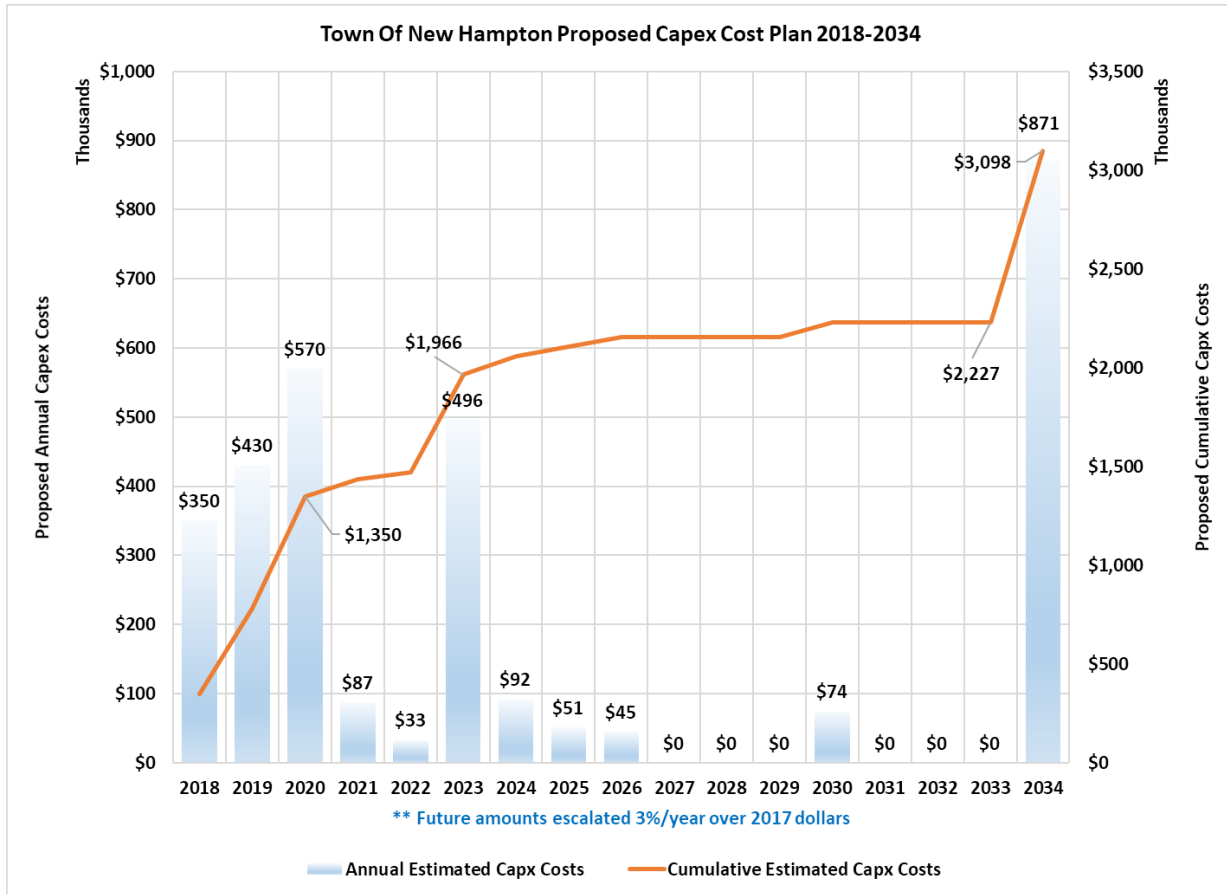
The subcommittee received a total of 28 requests. The original requests are summarized in the following table:

Item Description	Year	Age	Est Repl Cost (2017\$)	Need by Year
Car 1 Chevy Tahoe	2005	12	\$37,000	2021
Engine 1	2003	14	\$350,000	2034
Engine 2	2016	1	---	2035+
Engine 3	1989	28	\$425,000	2024
Forestry 1	2014	3	\$100,000	2034
Boat 1	2014	3	\$75,000	2034
Ambulance 1	1994	23	\$220,000	2018
Ambulance 2	2006	11	\$185,000	2022
New PS Building	2012	5	--	2062+
Building Lot Paving	2018	-1	\$38,000	2018
Finish 2nd Floor	2022		\$591,360	2023
SCUBA	2015	2	\$50,000	2030
Portable Radios	2001	16	---	2021
Defib A1	2015	2	\$34,000	2026
Defib A2	2013	4	\$34,000	2024
Cots 1 & 2	2009	8	\$28,000	2022
Hazard Trailer	2017	0	--	--
Prot. Clothing	2009	8	--	--
6-wheel dump	2003	14	\$180,000	2019
Ford F450 1t dump	2007	10	\$80,000	2018
Baler	x	x	\$15,000	2019
Brook Rd Bridge/Lake Pond	x	x	\$155,000	2018/19
New grader building	x	x	\$70,000	2018
Cruiser 2018	2013	4	\$40,000	2018
Cruiser 2019	2014	3	\$40,000	2019
Cruiser 2020	2015	2	\$40,000	2020
Cruiser 2021	2016	1	\$40,000	2021
Cruiser 2023	x		\$40,000	2023
Cruiser 2024	x		\$40,000	2024
Cruiser 2025	x		\$40,000	2025

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Item Description	Year	Age	Est Repl Cost (2017\$)	Need by Year
Town Clerk Office			\$15,000	2019
Town Office Remodel/Stairs			\$25,000	2019
Phone system			\$16,000	2021

The subcommittee’s recommendations are detailed in Attachment 1 and summarized in the following graph. This graph shows the estimated escalated future item price/cost in the need year and is based on the values in Attachment 2. A proposed payment plan is discussed later in the 10 year capital payment plan.



The

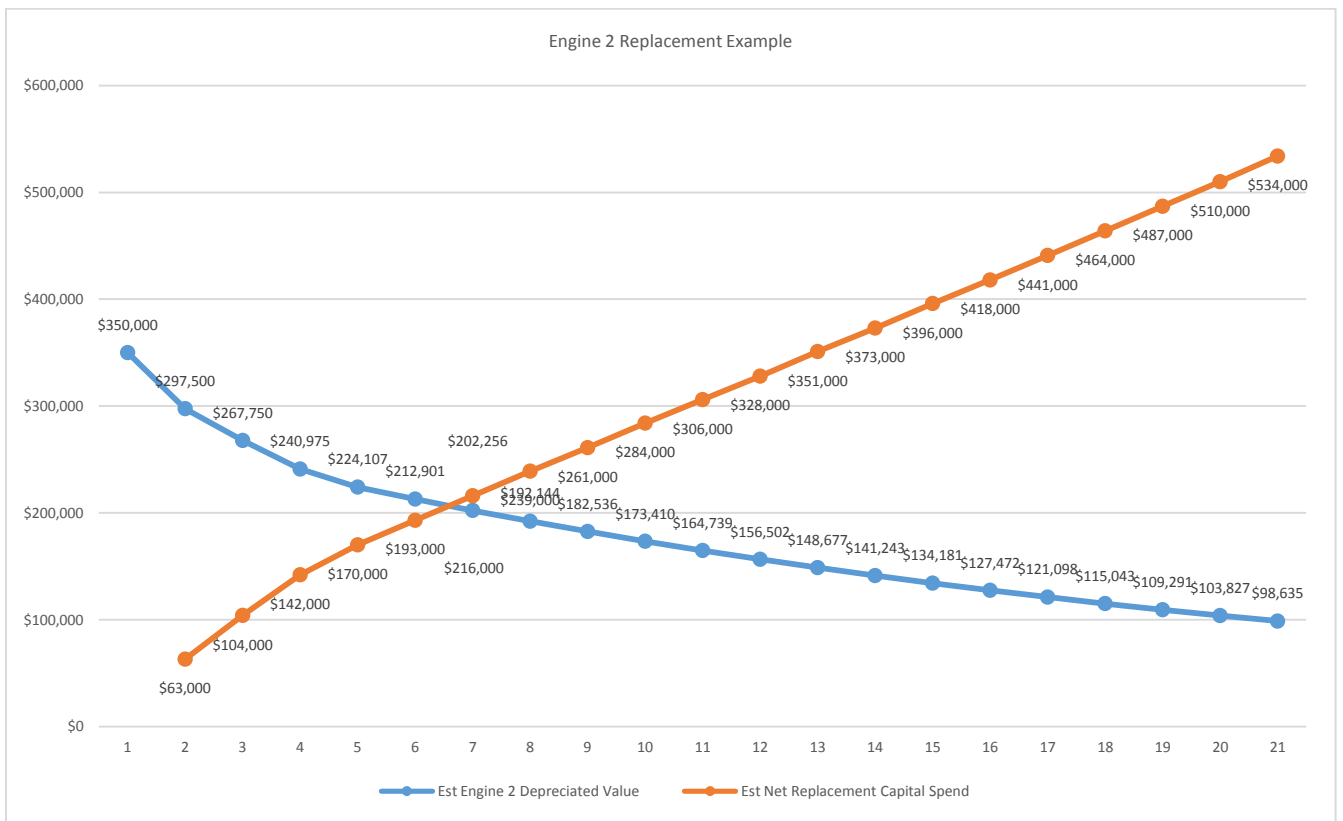
2018 CIP forecast suggests an estimated total capital expenditure (capex) of \$3.10 million through 2034. Sixty three percent (63% or \$1.97M) is forecast to be spent in the next six (6) years (2018-2023).

Within that 6-year timeframe, 30% or \$583,800 is forecast to be spent on tenant improvement/modifications to existing Town buildings with \$448,000 (77% of \$583,800) in improvements requested in 2023 alone for proposed firehouse improvements. Each individual building request has merit; however, the subcommittee recommends that any building additions or improvements be examined by a select committee in their entirety rather than individually considering the time available to meet the projected need. Examining and assessing all Town office, workspace and storage in this manner will meet occupancy or workplace rules/regulations and offer a more efficient use of space for all Town services. An added benefit would be the potential of improved pricing should multiple scopes of work be tendered for bid.

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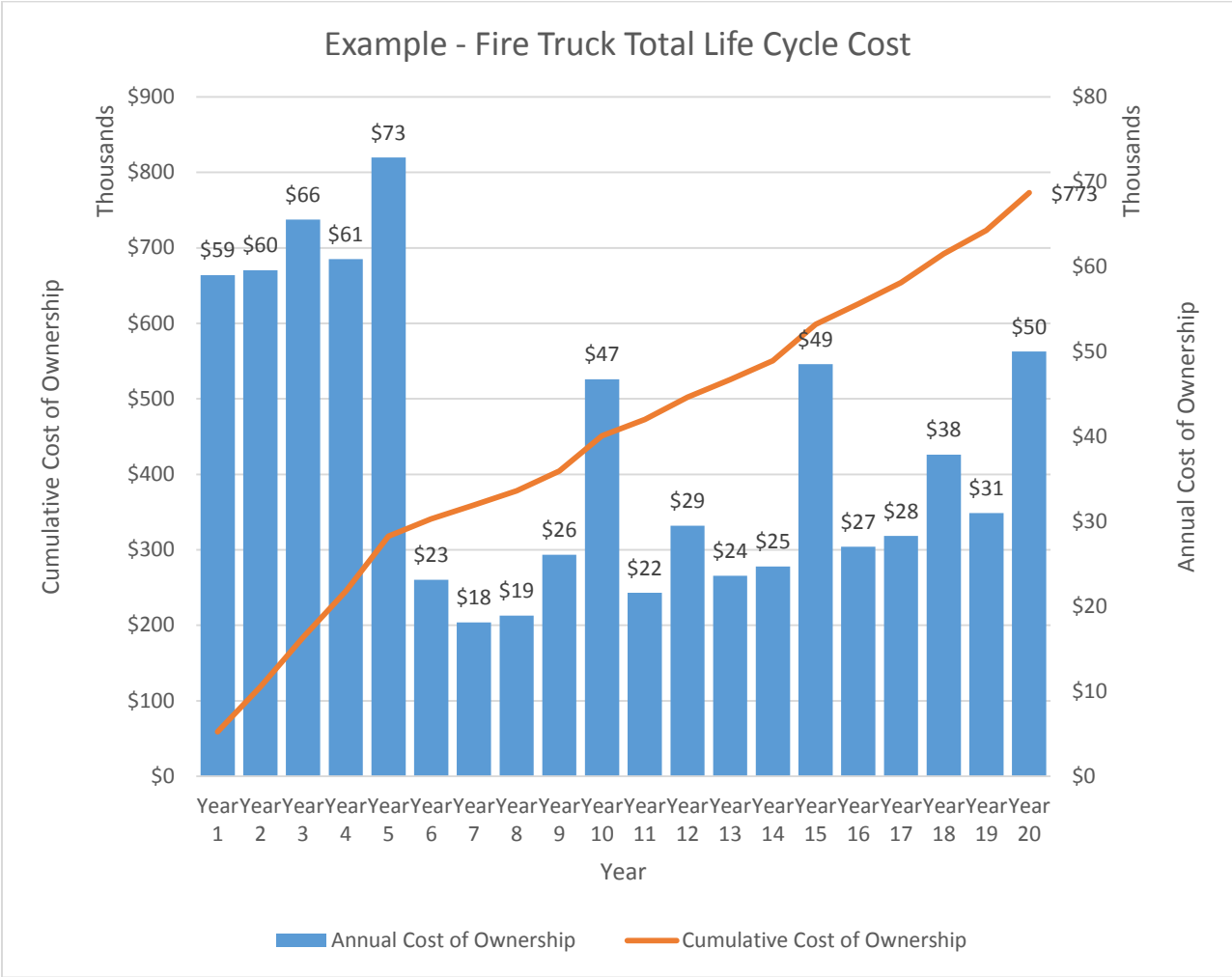
The subcommittee recommends the installation of engine hour meters on Town emergency equipment if not already in use, as a minimum. The Fire Department indicated that much of their equipment spends time idling rather than traveling. This situation drives increased depreciation and maintenance costs compared to just miles driven. It would not be unreasonable to assume, for example, that the idle time of an ambulance that must maintain ambient temperatures whether stopped at a call then stopped at the hospital, would add the equivalent of 2x-3x the mechanical wear and tear of the mileage shown. This effectively shortens the usable life of an emergency vehicle.

The subcommittee recommends that the Town adopt a Total Life Cycle (TLC) asset management approach to all capital equipment. The following graph is an example of where the depreciable value of a current asset, in this case the new Engine 2, would approximately equal the money needed to be appropriated to purchase a replacement asset. The graph shows replacing the equivalent of one-half of a fire truck in 6-7 years. The customary method of replacement at 20 years leaves only 28% of the original asset value while the cost of the replacement asset has increased 181% over the 20-year useful life of the old asset. The overall result of accelerated replacement is that in-service availability is improved, major repairs or replacements and expensive wear-and-tear repairs such as pumps, tires and brakes are dramatically reduced. Refer to Attachment 3 for details.



An example of TLC for Engine 2 including a 5-year payoff of a replacement engine and estimated maintenance is shown in the following graph:

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This projection shows that potentially avoided maintenance costs from year 7-20, assuming the asset is kept, is worth approximately \$432,000 compared to the total 6-year cost of \$341,000 with a TLC approach. Potential long term savings may be on the order \$90,000. Detail worksheets showing maintenance assumptions and estimates are included as Attachment 4. These figures are only estimates and must be trued-up with actual historical cost data.

CURRENT ACCOUNT STATUS

Current status of Town Trust and Capital Reserve accounts are shown in the following table:

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EXPENDABLE TRUST FUNDS & CAPITAL RESERVES FOR THE TOWN OF NEW HAMPTON											
ACCOUNT	ACCOUNT PURPOSE	TYPE	BEGINNING BALANCE	2016 ADDED	2016 PAID	GAIN/LOSS	INCOME	FEES	2016 ENDING BALANCE	2017 ACTIVITY	BALANCE a/o 5/15/17
513	TOWN BRIDGE MAINTENANCE	TRUST	\$71,005.83	\$50,000.00	-\$121,005.83		\$282.49	-\$10.00	\$272.49	\$20,000.00	\$20,272.49
673	TOWN VEHICLE MAINTENANCE	TRUST	\$30,000.04		-\$2,131.33		\$84.37	\$0.00	\$27,953.08	-\$878.12	\$27,074.96
680	GRAVE STONE MAINTENANCE	TRUST	\$6,287.29				\$18.94	\$0.00	\$6,306.23		\$6,306.23
681	BUILDING PLANNING	TRUST	\$472.08		-\$473.46		\$1.38	\$0.00	\$0.00		\$0.00
682	TOWN BUILDING MAINTENANCE	TRUST	\$3,063.66	\$20,000.00	-\$3,019.10		\$32.15	\$0.00	\$20,076.71		\$20,076.71
684	FED & STATE SURPLUS	TRUST	\$5,049.08	\$15,000.00			\$38.77	\$0.00	\$20,087.85	-\$9,824.00	\$10,263.85
930	FIRE DEPT TRAINING	TRUST	\$9,111.35				\$27.45	\$0.00	\$9,138.80		\$9,138.80
846	FIRE DEPT REPAIR	TRUST	\$20,033.33		-\$9,476.08		\$40.73	\$0.00	\$10,597.98		\$10,597.98
081	NATURE & FITNESS TRAIL	TRUST	\$3,091.95	\$365.00	-\$692.85		\$10.02	\$0.00	\$2,774.12		\$2,774.12
676	HIGHWAY DEPARTMENT EQUIP	CAPRES	\$31,322.60	\$20,000.00			\$125.77	\$0.00	\$51,448.37	-\$51,400.00	\$48.37
NEW	VETERANS MEMORIAL TRUST	TRUST	\$0.00						\$0.00	\$613.00	\$613.00
NEW	DRY HYDRANTS REPAIR, REPL	TRUST	\$0.00						\$0.00	\$5,000.00	\$5,000.00
TOTAL ALL ACCOUNTS			\$179,437.21	\$105,365.00	-\$136,798.65	\$0.00	\$662.07	-\$10.00	\$148,655.63	-\$36,489.12	\$112,166.51
TOTAL TRUST ACCOUNTS			\$148,114.61	\$85,365.00	-\$136,798.65	\$0.00	\$536.30	-\$10.00	\$148,655.63	-\$36,489.12	\$112,166.51
TOTAL CAPITAL RESERVE ACCOUNTS			\$31,322.60	\$20,000.00	\$0.00	\$0.00	\$125.77	\$0.00	\$0.00	\$0.00	\$0.00

ACCOUNT DISCUSSION

The account discussion is based on the Town’s current capital expense model of first year OPEX and years 2-5 CAPEX. The account discussion and the 10-year payment forecast will change should the TLC approach to major equipment purchases be determined advantageous to the Town.

513- Town Bridge Maintenance – The Brook Road bridge may partially draw on this account for maintenance until the sunset provision associated with the State Red List is triggered. The CIP recommends this bridge not be upgraded and closed when no longer usable by regulation. There may be associated costs to permanently close the bridge. These costs may be allocated to operating expense.

673 – Town Vehicle Maintenance – Money for the maintenance and repair of all Town vehicles, with the exception of emergency vehicles is included in this account. Disapproval of the police vehicle and the Highway department vehicles may influence the drawdown of this account over time. These costs are operating expense and have not been reviewed by the Subcommittee.

681 – Building Planning – This account is closed and was established and restricted to planning and building the PSB. The subcommittee would recommend a nominal budget allocation to a new account to implement its recommendation to assess all buildings and space allocations. This money would be a contingency should any recommendations of the initial assessment require outside services such as an engineering assessment or material testing. This would be considered an operating expense for 2017 or 2018 and a function of the results of the space assessment. The assessment deliverable would be a space/building management plan with a scope, schedule and order-of-magnitude estimates.

682 - Town Building Maintenance – This account is an expendable trust and is restricted to the maintenance and repairs of only the Town Offices and Town House. Current value is \$20,100. No other buildings are currently included in this fund.

The Town Administrator had requested a telephone system upgrade that was subsequently determined to be outside the scope of a capital improvement and should be considered as an operating expense in the normal budgeting process as initial estimates are less than \$10,000.

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The Subcommittee’s review recommended that the firehouse paving be repaired rather than replace. This repair would be best included in the Public Works Department operating budget.

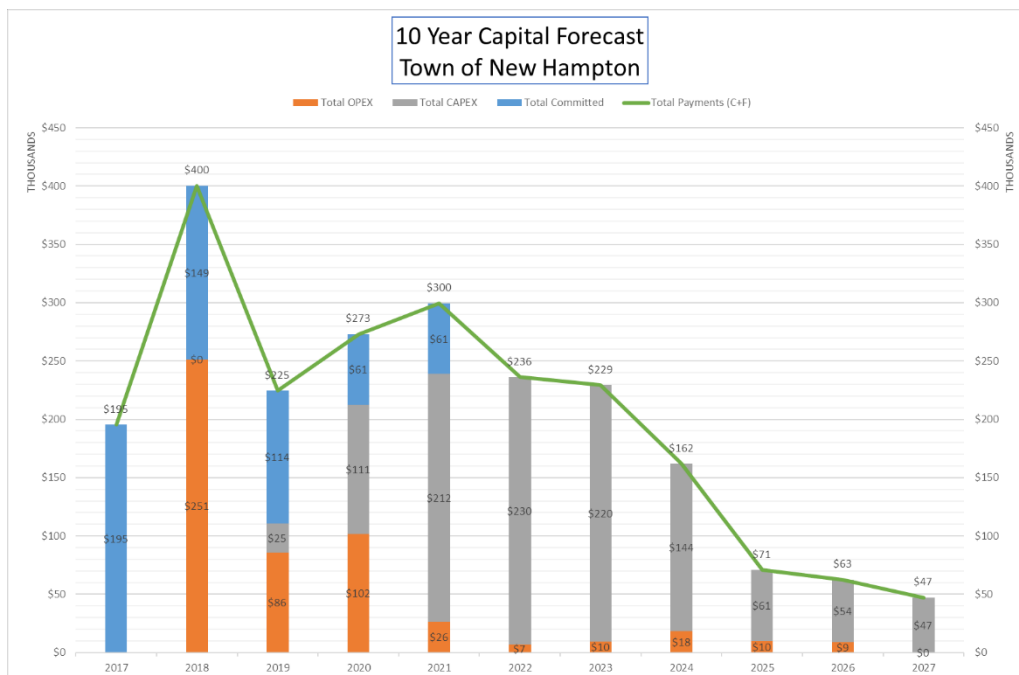
684 – Federal & State Surplus – an account for used vehicles. Should the opportunity prevail that a suitable used vehicle for police or highway appear on the market, this account will require funding to an appropriate level as it does not appear likely that the current balance will support any reasonable purchase. The purchase of used equipment often requires payment in full and, if so, would be an operating expense in that given year.

846 – Fire Department Repair – intended for the maintenance and repair of fire department emergency equipment. The management of this account would be a function of decisions to approve the Fire Department’s capital equipment requests. The Subcommittee concurs with the procurement of the emergency equipment requested by the Fire Department within the context of the mission requirements stated by the Department. Potential alternatives would be subject to future collaboration with the Select Board. There remains approximately \$317.8 thousand in payments for both the 2016 Fire Truck and the 2016 Defibrillators through to 2019. Refer to the 10-year Capital Payment Forecast.

676 – Highway Department Equipment – The capital costs of the Highway Department requests for the dump trucks would be recorded in this account. The 2013 dump truck was paid in full in 2016; however, approximate \$70.1 thousand in payments for the Cat 924 Loader remain until that equipment is paid in full in 2018.

10 YEAR CAPITAL PAYMENT FORECAST

The 10-year payment forecast is based on the current remaining payments for committed capital equipment and the Town payment model of a five (5) year payoff schedule with the first year payment within the operating expense account(s) and subsequent year’s payments in the capital equipment accounts.



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10 Year Payment Detail

Item	Original Cost	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2013 HWY Dump Truck	\$144,000	\$30,500											
2014 HWY Cat 962 Loader	\$204,100	\$35,000	\$35,000										
2016 FD Fire Tanker Truck	\$350,000	\$53,200	\$53,200	\$53,200									
2016 FD Defibrillator	\$32,000	\$16,000											
2017 Grader	\$292,200	\$60,777	\$60,777	\$60,777	\$60,777	\$60,777							
Total Committed		\$195,477	\$148,977	\$113,977	\$60,777	\$60,777							
Item	Forecast Cost	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
FD Command Vehicle (Chevy Tahoe)	\$41,900					\$17,420	\$8,380	\$8,380	\$8,380	\$8,380			
FD Engine 3	\$464,600				\$92,920	\$92,920	\$92,920	\$92,920	\$92,920				
FD Ambulance 1	\$226,600		\$226,600										
FD Ambulance 2	\$196,400			\$39,280	\$39,280	\$39,280	\$39,280	\$39,280					
FD Cots 1 & 2	\$32,700						\$6,540	\$6,540	\$6,540	\$6,540	\$6,540		
Defibrillator 2	\$42,200								\$8,440	\$8,440	\$8,440	\$8,440	\$8,440
Defibrillator 1	\$44,900										\$8,980	\$8,980	\$8,980
Cruiser 2018	\$41,200		\$8,240	\$8,240	\$8,240	\$8,240	\$8,240	\$8,240					
Cruiser 2019	\$42,500			\$8,500	\$8,500	\$8,500	\$8,500	\$8,500	\$8,500				
Cruiser 2020	\$43,800				\$8,760	\$8,760	\$8,760	\$8,760	\$8,760	\$8,760			
Cruiser 2021	\$45,200					\$9,040	\$9,040	\$9,040	\$9,040	\$9,040	\$9,040		
Cruiser 2023	\$48,000							\$9,600	\$9,600	\$9,600	\$9,600	\$9,600	\$9,600
Cruiser 2024	\$49,500								\$9,900	\$9,900	\$9,900	\$9,900	\$9,900
Cruiser 2025	\$51,000									\$10,200	\$10,200	\$10,200	\$10,200
HWY 6 wheel Dump	\$191,000			\$38,200	\$38,200	\$38,200	\$38,200	\$38,200					
HWY F450 1 ton Dump	\$82,400		\$16,480	\$16,480	\$16,480	\$16,480	\$16,480						
Total OPEX (First Year Payment)			\$251,320	\$85,980	\$101,680	\$26,460	\$6,540	\$9,600	\$18,340	\$10,200	\$8,980	\$0	\$0
Total CAPEX (Payments years 2-5)			\$0	\$24,720	\$110,700	\$212,380	\$229,800	\$219,860	\$143,740	\$60,660	\$53,720	\$47,120	\$37,520
Total Forecast Payments (OPEX + CAPEX)			\$251,320	\$110,700	\$212,380	\$238,840	\$236,340	\$229,460	\$162,080	\$70,860	\$62,700	\$47,120	\$37,520
Total Payments (Committed + Forecast)		\$195,477	\$400,297	\$224,677	\$273,157	\$299,617	\$236,340	\$229,460	\$162,080	\$70,860	\$62,700	\$47,120	\$37,520

FIVE (5) YEAR CAPITAL FUNDING SOURCE ESTIMATE

Funding for capital requests may originate from five principal sources summarized in the following table. The funding source values were estimated to match the proposed annual spend.

FUNDING SOURCE	2017	2018	2019	2020	2021	2022
Taxes	\$179,477	\$173,697	\$185,397	\$180,237	\$189,277	\$180,820
Fees	\$0	\$0	\$0	\$0	\$0	\$0
FD Special Revenue Fund (SRF)	\$16,000	\$126,600	\$39,280	\$92,920	\$110,340	\$53,720
Capital Reserves/Expendable Trusts						\$1,800
Grants, etc.		\$100,000				
TOTAL REVENUE TO OFFSET APPROP.	\$195,477	\$400,297	\$224,677	\$273,157	\$299,617	\$236,340

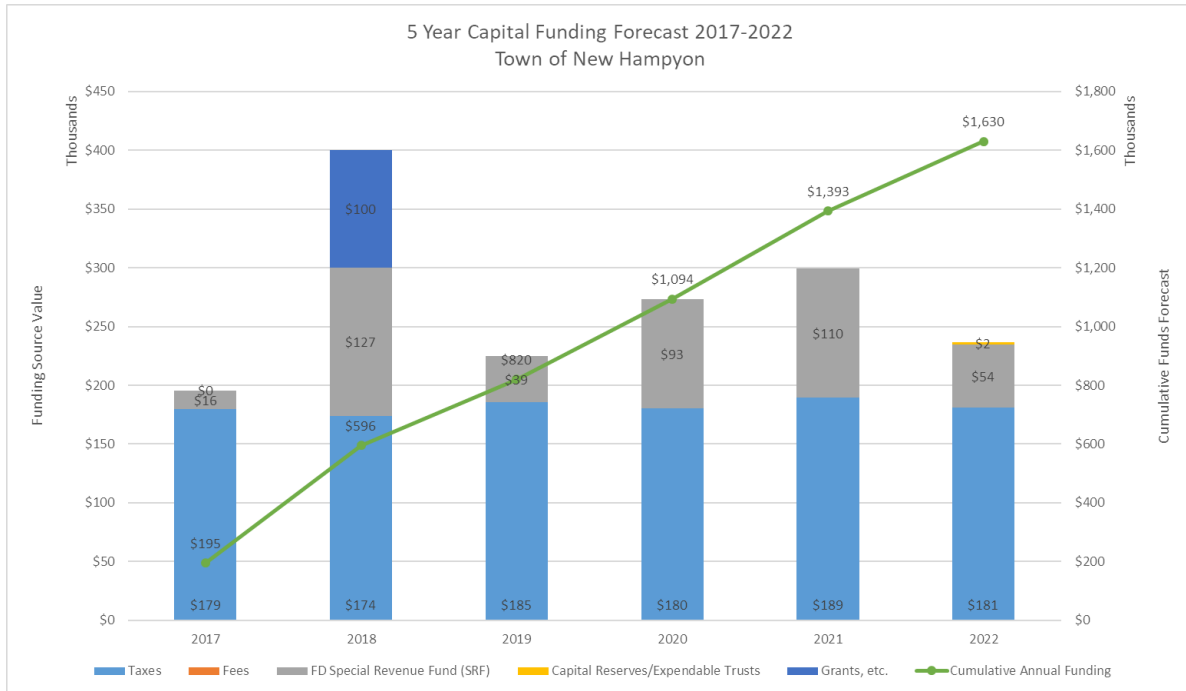
A Special Revenue Fund (SRF) was established specifically for the annual payment of \$25,000 for the Public Service Building (PSB) payment through May, 2027 and Fire Department equipment. A 4-year average annual income was estimated at \$75,000 per year, less the \$25,000 PSB payment, or net \$50,000 income. Use of these SRF funds require voter approval.

The SRF also receives revenue for Medicaid reimbursable expenses associated with emergency medical services (EMS) furnished by the Fire Department. Potential future changes in Medicaid will affect this estimate.

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The estimate assumes the Fire Department will succeed in obtaining a \$100,000 grant to support the purchase of Ambulance 1 in 2018. Loss of the grant may require offsets from the other funding sources or delay/deferral of the ambulance replacement.

A five-year forecast of funding sources is shown in the following graph and detailed in the table below:



QUALIFICATIONS AND ASSUMPTIONS

1. All estimates and assumptions made by the CIP subcommittee in this report require validation of past data. A review of equipment maintenance records over the last 3-5 years is suggested.
2. 2017 estimated Capex values provided by respective Department Heads and were considered values expressed in 2017 dollars. Proposed budget values escalated to the proposed need date at 3% per year.
3. Need dates were provided by Department Heads unless modified by the subcommittee and noted in the remarks.

SUBMITTED BY:

Tania Hiltz, Chair

Robert Broadhurst

David Katz

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Attachment 1 – Public Notice of CIP Meetings

PUBLIC NOTICE
Capital Equipment Sub-Committee

Town Office Upstairs Meeting Room
6 Pinnacle Hill Road

The Capital Improvements Sub-Committee of the Planning Board will hold work sessions on the dates listed below. The purpose will be to discuss the update of the Capital Improvements Program (CIP).

Tuesday, May 16th at 6:00 PM – AND

Tuesday, May 23rd at 6:00 PM

Town Clerk/Tax Collector, Conservation Commission,
Selectmen & Town Administrator

Wednesday, May 24th at 6:00 PM

Police Chief & Public Works Director

Wednesday, May 31st at 5:00 PM

Fire Chief – Fire Dept., EMS & Emergency Management

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Attachment 1 – CIP Subcommittee Recommendations Detail

Item Description	Year	Age	Useful Life	To-go Life	Est Repl Cost (2017\$)	Need by Year	Priority (Dept Hd)	Priority (CIP S/C)	Remarks
Car 1 Chevy Tahoe	2005	12	15	3	\$37,000	2021	Necessary	Necessary	CIP S/C concurs. Need based on future body/mechanical maintenance.
Engine 1	2003	14	30	16	\$350,000	2034			No action required.
Engine 2	2016	1	30	29		2035+			No action required.
Engine 3	1989	28	34	6	\$425,000	2024	Desirable	Necessary	CIP concurs with need but recommends accelerated replacement not later than 2020. Unit no longer complies with applicable codes and standards.
Forestry 1	2014	3	20	17	\$100,000	2034			No action required.
Boat 1	2014	3	20	17	\$75,000	2034			No action required.
Ambulance 1	1994	23	22	-1	\$220,000	2018	Urgent	Urgent	Current backup unit that does not have 4WD. Industry standard useful life is 15 years. 68% of calls are for EMS.
Ambulance 2	2006	11	15	4	\$185,000	2022	Desirable	Desirable	CIP S/C concurs. Current primary ambulance. Industry standard useful life is 15 years
New PS Building	2012	5	50	45					No action required.
Building Lot Paving	2018	-1	15	16	\$38,000	2018	Urgent	Necessary	CIP S/C recommends at this time crack filling and sealing to extend original asphalt life
Finish 2nd Floor (5000sqft@\$75/sqft)	2022	-5	15	20	\$375,000	2023	Desirable	Desirable	CIP S/C concurs with need conditioned on a Town-wide space utilization assessment. Unit rate reduced to \$75/sqft to better reflect interior rate rather than new building construction.
SCUBA	2015	2	14	12	\$50,000	2030	Deferrable	Deferrable	CIP concurs with need. Replace at end of useful life
Portable Radios	2001	16	20	4		2021			No action required.
Defib A1	2015	2	10	8	\$34,000	2026	Deferrable	Deferrable	CIP S/C concurs. Replace at end of useful life.
Defib A2	2013	4	10	6	\$34,000	2024	Desirable	Desirable	CIP S/C concurs. Replace at end of useful life.
Cots 1 & 2	2009	8	12	4	\$28,000	2022	Desirable	Desirable	CIP S/C concurs. Replace at end of useful life.
Hazard Trailer	2017	0	20	20	\$18,150				No action required.
Prot. Clothing	2009	8	10	2					No action required.
6 wheel dump	2003	14	15	1	\$180,000	2019	Necessary	Necessary	CIP S/C concurs. Replacement should be 2019 or earlier as repairs are costly.
Ford F450 1t dump	2007	10	10	0	\$80,000	2018	Urgent	Urgent	CIP S/C concurs. Replace at end of useful life. Vehicle has 165,000 miles. Estimate includes plow and sander

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Item Description	Year	Age	Useful Life	To-go Life	Est Repl Cost (2017\$)	Need by Year	Priority (Dept Hd)	Priority (CIP S/C)	Remarks
Baler	x	x	30	30	\$15,000	2019	Desirable		The CIP S/C recommends this request be re-submitted in 2018 and the need then evaluated based on actual material volumes of the previous 3-5 years.
Brook Rd Bridge/Lake Pond	x	x	50	x	\$155,000	2018/19	Urgent		The CIP S/C visited the subject bridge and recommends the bridge remain open until the expiration of the mandated repair window then permanently closed.
New grader building	x	x	50	50	\$70,000	2018	Urgent		The CIP S/C does not concur with the request as submitted. The CIP S/C recommends the department re-visit the request and consider other temporary measures for storage/ protection.
Cruiser 2018	2013	4	4	0	\$40,000	2018	Urgent	Urgent	CIP S/C concurs with need. The Police Dept has consistently maintained a 4 year replacement plan. This replacement is consistent with that plan considering the original replacement date of 2017 for this cruiser was skipped.
Cruiser 2019	2014	3			\$40,000	2019	Necessary	Necessary	CIP S/C concurs with need. The Police Dept has consistently maintained a 4 year replacement plan. This replacement is consistent with that plan considering the original replacement date of 2017 for this cruiser was skipped.
Cruiser 2020	2015	2			\$40,000	2020	Necessary	Necessary	CIP S/C concurs with need. The Police Dept has consistently maintained a 4 year replacement plan. This replacement is consistent with that plan considering the original replacement date of 2017 for this cruiser was skipped.
Cruiser 2021	2016	1			\$40,000	2021	Necessary	Necessary	CIP S/C concurs with need. The Police Dept has consistently maintained a 4 year replacement plan. This replacement is consistent with that plan considering the original replacement date of 2017 for this cruiser was skipped.
Cruiser 2023	x	x			\$40,000	2023	Desirable	Desirable	CIP S/C concurs with need. The Police Dept has consistently maintained a 4 year replacement plan. This replacement is consistent with that plan considering the original replacement date of 2017 for this cruiser was skipped.
Cruiser 2024	x	x			\$40,000	2024	Desirable	Desirable	CIP S/C concurs with need. The Police Dept has consistently maintained a 4 year replacement plan. This replacement is consistent with that plan considering the original replacement date of 2017 for this cruiser was skipped.

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Item Description	Year	Age	Useful Life	To-go Life	Est Repl Cost (2017\$)	Need by Year	Priority (Dept Hd)	Priority (CIP S/C)	Remarks
Cruiser 2025	x	x			\$40,000	2025	Deferrable	Deferrable	CIP S/C concurs with need. The Police Dept has consistently maintained a 4 year replacement plan. This replacement is consistent with that plan considering the original replacement date of 2017 for this cruiser was skipped.
Town Clerk Office			0	20	\$15,000	2019	Necessary	Necessary	CIP S/C concurs with need conditioned on a Town-wide space utilization assessment
Town Office Remodel/Stairs			0	30	\$25,000	2019	Necessary	Necessary	CIP S/C concurs with need conditioned on a Town-wide space utilization assessment
Phone system			0	10	\$16,000	2021	Necessary	Necessary	CIP S/C concurs with need conditioned on a Town-wide space utilization assessment

Key

Urgent - 2018

Necessary - 2019-2021

Desirable - 2022-2024

Deferrable - 2025-2026

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Attachment 2 – CIP Cost Detail
Note: Future costs escalated at 3% per year

Legend:
 Proposed Spend year

Item Description	Year	Age	Useful Life	To-go Life	Est Repl Cost (2017\$)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
						Future costs escalated @ 3%/year																
Car 1 Chevy Tahoe	2005	12	15	3	\$37,000	\$38,200	\$39,400	\$40,600	\$41,900													
Engine 1	2003	14	30	16	\$350,000	\$360,500	\$371,400	\$382,600	\$394,100	\$406,000	\$418,200	\$430,800	\$443,800	\$457,200	\$471,000	\$485,200	\$499,800	\$514,800	\$530,300	\$546,300	\$562,700	\$579,600
Engine 2	2016	1	30	29																		
Engine 3	1989	28	34	6	\$425,000	\$437,800	\$451,000	\$464,600														
Forestry 1	2014	3	20	17	\$100,000	\$103,000	\$106,100	\$109,300	\$112,600	\$116,000	\$119,500	\$123,100	\$126,800	\$130,700	\$134,700	\$138,800	\$143,000	\$147,300	\$151,800	\$156,400	\$161,100	\$166,000
Boat 1	2014	3	20	17	\$75,000	\$77,300	\$79,700	\$82,100	\$84,600	\$87,200	\$89,900	\$92,600	\$95,400	\$98,300	\$101,300	\$104,400	\$107,600	\$110,900	\$114,300	\$117,800	\$121,400	\$125,100
Ambulance 1	1994	23	22	-1	\$220,000	\$226,600																
Ambulance 2	2006	11	15	4	\$185,000	\$190,600	\$196,400															
New PS Building	2012	5	50	45																		
Building-Lot-Paving	2018	-1	15	16	\$38,000	\$0																
Finish 2nd Floor (5000sqft@75/sqft)	2022	-5	15	20	\$375,000	\$386,300	\$397,900	\$409,900	\$422,200	\$434,900	\$448,000											
SCUBA	2015	2	14	12	\$50,000	\$51,500	\$53,100	\$54,700	\$56,400	\$58,100	\$59,900	\$61,700	\$63,600	\$65,600	\$67,600	\$69,700	\$71,800	\$74,000				
Portable Radios	2001	16	20	4																		
Defib A1	2015	2	10	8	\$34,000	\$35,100	\$36,200	\$37,300	\$38,500	\$39,700	\$40,900	\$42,200	\$43,500	\$44,900								
Defib A2	2013	4	10	6	\$34,000	\$35,100	\$36,200	\$37,300	\$38,500	\$39,700	\$40,900	\$42,200										
Cots 1 & 2	2009	8	12	4	\$28,000	\$28,900	\$29,800	\$30,700	\$31,700	\$32,700												
Hazard Trailer	2017	0	20	20	\$18,150																	
Prot. Clothing	2009	8	10	2																		
6 wheel dump	2003	14	15	1	\$180,000	\$185,400	\$191,000															
Ford F450 1t dump	2007	10	10	0	\$80,000	\$82,400																
Baler	x	x	30	30	\$15,000	\$0	\$0	\$0														
Brook Rd Bridge/Lake Pond	x	x	50	x	\$155,000	\$0	\$0															
New grader-building	x	x	50	50	\$70,000	\$0	\$0															
Cruiser 2018	2013	4	4	0	\$40,000	\$41,200																
Cruiser 2019	2014				\$40,000	\$41,200	\$42,500															
Cruiser 2020	2015				\$40,000	\$41,200	\$42,500	\$43,800														
Cruiser 2021	2016				\$40,000	\$41,200	\$42,500	\$43,800	\$45,200													
Cruiser 2023	x				\$40,000	\$41,200	\$42,500	\$43,800	\$45,200	\$46,600	\$48,000											
Cruiser 2024	x				\$40,000	\$41,200	\$42,500	\$43,800	\$45,200	\$46,600	\$48,000	\$49,500										
Cruiser 2025	x				\$40,000	\$41,200	\$42,500	\$43,800	\$45,200	\$46,600	\$48,000	\$49,500	\$51,000									
Town Clerk Office			0	20	\$15,000	\$15,500	\$16,000	\$16,500														
Town Office Remodel/Stairs			0	30	\$25,000	\$25,800	\$26,600	\$27,400														
Phone system			0	10	\$16,000	\$16,500	\$17,000															
Totals						\$350,200	\$429,900	\$569,900	\$87,100	\$32,700	\$496,000	\$91,700	\$51,000	\$44,900	\$0	\$0	\$0	\$74,000	\$0	\$0	\$0	\$870,700
Cumulative Capx Spend						\$350,200	\$780,100	\$1,350,000	\$1,437,100	\$1,469,800	\$1,965,800	\$2,057,500	\$2,108,500	\$2,153,400	\$2,153,400	\$2,153,400	\$2,153,400	\$2,227,400	\$2,227,400	\$2,227,400	\$2,227,400	\$3,098,100

Town of New Hampton
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Attachment 3 – Capital Equipment Replacement Example

Engine 2 Capital Replacement Example																						
Escalation/ Depreciation Assumptions	Original Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	% Original Cost
Link to Fire Truck Depreciation		15%	10%	10%	7%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	
Est Engine 2 Depreciated Value	\$350,000	\$297,500	\$267,750	\$240,975	\$224,107	\$212,901	\$202,256	\$192,144	\$182,536	\$173,410	\$164,739	\$156,502	\$148,677	\$141,243	\$134,181	\$127,472	\$121,098	\$115,043	\$109,291	\$103,827	\$98,635	28%
Engine 2 Escalated Repl Capital Cost @ 3%/yr	\$350,000	\$360,500	\$371,315	\$382,454	\$393,928	\$405,746	\$417,918	\$430,456	\$443,370	\$456,671	\$470,371	\$484,482	\$499,016	\$513,987	\$529,406	\$545,289	\$561,647	\$578,497	\$595,852	\$613,727	\$632,139	181%
Est Net Replacement Capital Spend		\$63,000	\$104,000	\$142,000	\$170,000	\$193,000	\$216,000	\$239,000	\$261,000	\$284,000	\$306,000	\$328,000	\$351,000	\$373,000	\$396,000	\$418,000	\$441,000	\$464,000	\$487,000	\$510,000	\$534,000	

Depreciation estimate based on information obtained at <https://www.firerescue1.com/fire-products/fire-apparatus/articles/293260-How-to-determine-the-value-of-used-fire-apparatus/>

Town of New Hampton
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Attachment 4 – TLC Example Detail – Engine 2

*All values are estimates made by CIP subcommittee. Actual historical cost data needed to validate this example.

		EXAMPLE															
		LIFE CYCLE COST ANALYSIS TOOL															
		Current Maintenance Practices															
Asset Type	Fire Truck	ASSET LIFE	Cap X	PM & Inspection		Engine RR		Trans. RR		Brake program		Tire program		Road Calls		Projected Annual Cost of Ownership	Cumulative Total Cost of Ownership
Useful Life	20			# per year	Cost	Year (x)	Cost	Year (x)	Cost	Year (x)	Cost	Year (x)	Cost	# per year	Cost		
First Cost (Price – Salvage)	\$ 225,000	Year 1	\$45,000	6	\$6,000		\$0		\$0	1	\$2,000		\$0	60	\$6,000	\$59,000	\$59,000
Inflate Rate *1	3%	Year 2	\$45,000	6	\$6,180		\$0		\$0	1	\$2,060		\$0	62	\$6,365	\$59,605	\$118,605
PM & Insp.	\$ 1,000.00	Year 3	\$45,000	6	\$6,365		\$0		\$0	1	\$2,122	1	\$5,305	64	\$6,753	\$65,545	\$184,150
Engine R/R	\$ 10,000	Year 4	\$45,000	6	\$6,556		\$0		\$0	1	\$2,185		\$0	66	\$7,164	\$60,906	\$245,056
Trans R/R	\$ 10,000	Year 5	\$45,000	6	\$6,753		\$0	1	\$11,255	1	\$2,251		\$0	68	\$7,601	\$72,860	\$317,916
Brake program	\$ 2,000	Year 6		6	\$6,956		\$0		\$0	1	\$2,319	1	\$5,796	70	\$8,063	\$23,134	\$341,050
Tire program	\$ 5,000	Year 7		6	\$7,164		\$0		\$0	1	\$2,388		\$0	72	\$8,555	\$18,107	\$359,157
Miles/Year	20,000	Year 8		6	\$7,379		\$0		\$0	1	\$2,460		\$0	74	\$9,076	\$18,915	\$378,072
Miles/PM	3,500	Year 9		6	\$7,601		\$0		\$0	1	\$2,534	1	\$6,334	76	\$9,628	\$26,096	\$404,168
Engine Miles	100,000	Year 10		6	\$7,829	1	\$13,048	1	\$13,048	1	\$2,610		\$0	78	\$10,215	\$46,748	\$450,916
Trans Miles	100,000	Year 11		6	\$8,063		\$0		\$0	1	\$2,688		\$0	81	\$10,837	\$21,588	\$472,504
Brake Miles	20,000	Year 12		6	\$8,305		\$0		\$0	1	\$2,768	1	\$6,921	83	\$11,497	\$29,492	\$501,996
Tire Miles	20,000	Year 13		6	\$8,555		\$0		\$0	1	\$2,852		\$0	86	\$12,197	\$23,603	\$525,599
Road Calls/per call	\$ 100	Year 14		6	\$8,811		\$0		\$0	1	\$2,937		\$0	88	\$12,940	\$24,688	\$550,286
Multipliers based on inflation		Year 15		6	\$9,076		\$0	1	\$15,126	1	\$3,025	1	\$7,563	91	\$13,728	\$48,517	\$598,804
Year 1	1.00	Year 16		6	\$9,348		\$0		\$0	1	\$3,116		\$0	93	\$14,564	\$27,027	\$625,831
Year 2	1.03	Year 17		6	\$9,628		\$0		\$0	1	\$3,209		\$0	96	\$15,450	\$28,288	\$654,119
Year 3	1.06	Year 18		6	\$9,917		\$0		\$0	1	\$3,306	1	\$8,264	99	\$16,391	\$37,878	\$691,998
Year 4	1.09	Year 19		6	\$10,215		\$0		\$0	1	\$3,405		\$0	102	\$17,390	\$31,009	\$723,007
Year 5	1.13	Year 20		6	\$10,521		\$0	1	\$17,535	1	\$3,507		\$0	105	\$18,449	\$50,012	\$773,018
Year 6	1.16	Year 21															
Year 7	1.19	Year 22															
Year 8	1.23	Year 23															
Year 9	1.27	Year 24															
Year 10	1.30	Year 25															
Year 11	1.34	Year 26															
Year 12	1.38	Year 27															
Year 13	1.43	Year 28															
Year 14	1.47	Year 29															
Year 15	1.51	Year 30															
Year 16	1.56																
Year 17	1.60																
Year 18	1.65																
Year 19	1.70																
Year 20	1.75																
		TOTALS	\$225,000		\$161,222		\$13,048		\$56,964		\$53,741		\$40,183		\$222,861	\$773,018	\$773,018
																TLC (Capex+Opex)	\$773,018