CG Budget FY2021

Account	FY '21 Proposed	
Salaries and Wages	$ 2,755,050	
Fringe Benefits	$ 1,855,001	
Equipment	$ 8,668,094	
Supplies	$ 6,555,143	Ex: Veh/Equip Parts, Plow Parts, Tires, Fuel, Shop Tools
Other Line Items	$ 1,806,471	Ex: IT/Telecom, Property and Maintenance, ADS
	$ 21,639,759	

	FY '21
Supplemental Transfer	$ 1,355,358
FY2019 Depreciation	$ 6,410,979
Auction receipts	$ 651,757
Additional DMV Enforcement Units	$ 250,000
Total Equipment Funds Available	**$ 8,668,094**

	DRAFT EQUIPMENT LIST	Units	Estimated Cost / Unit	Total Cost
Plow Trucks				
	Plow Truck Chassis	30	$ 100,000	$ 3,000,000
	Plow and Body (for prior yr chas	30	$ 82,000	$ 2,460,000
Light Uitlity Trucks				
	DMV Enforcement Vehicles	7	$ 50,000	$ 350,000
	Other Light Utility	35	$ 35,000	$ 1,225,000
	1-1/2-ton +	6	$ 84,300	$ 505,800
Heavy Utility Trucks				
	Line Stripe Truck	0		
	Other Heavy Utility	0	$ 100,000	$ -
	Bridge Inspection Truck Overhau	0		
Construction & Miscellaneous Equipment				
	Tractors	2	$ 80,000	$ 160,000
	Graders	0		
	Trailers	0	$ 45,000	$ -
	Backhoes			
	Loaders	3	$ 150,000	$ 450,000
	Water pump			
	Excavators	1	$ 177,000	$ 177,000
	Forklift	0		
	Track Mounted Drill	1	$ 150,000	$ 150,000
	FWD update			
	Water Tanker	2	$ 60,000	$ 120,000
	Batwing mower			
Misc. capitalized expenses				$ 50,000
Radios		40	$ 600	$ 24,000
Sum of Equipment Purchases				$ 8,671,800
Balance				$ (3,706)

Central Garage

The VTrans Central Garage purchases, maintains, and administers the Agency's fleet of vehicles and equipment using an internal service fund. Vehicles and equipment are rented to the maintenance districts, DMV, and other VTrans' divisions. Rental income from those customers covers depreciation, service, and overhead.

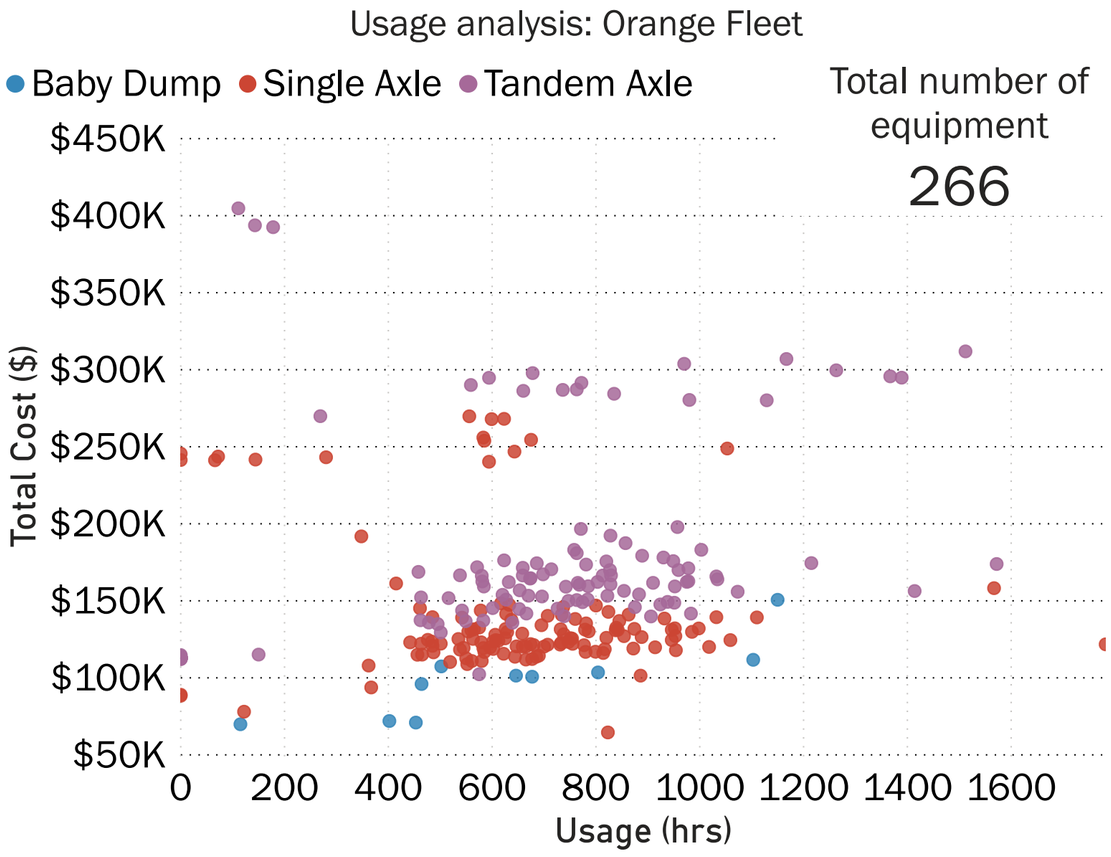
We continue to focus on returning our plow truck fleet to an 8 to 10-year replacement schedule. Timely replacements minimize costly repairs and breakdowns, and provide good service to Vermont's travelers.

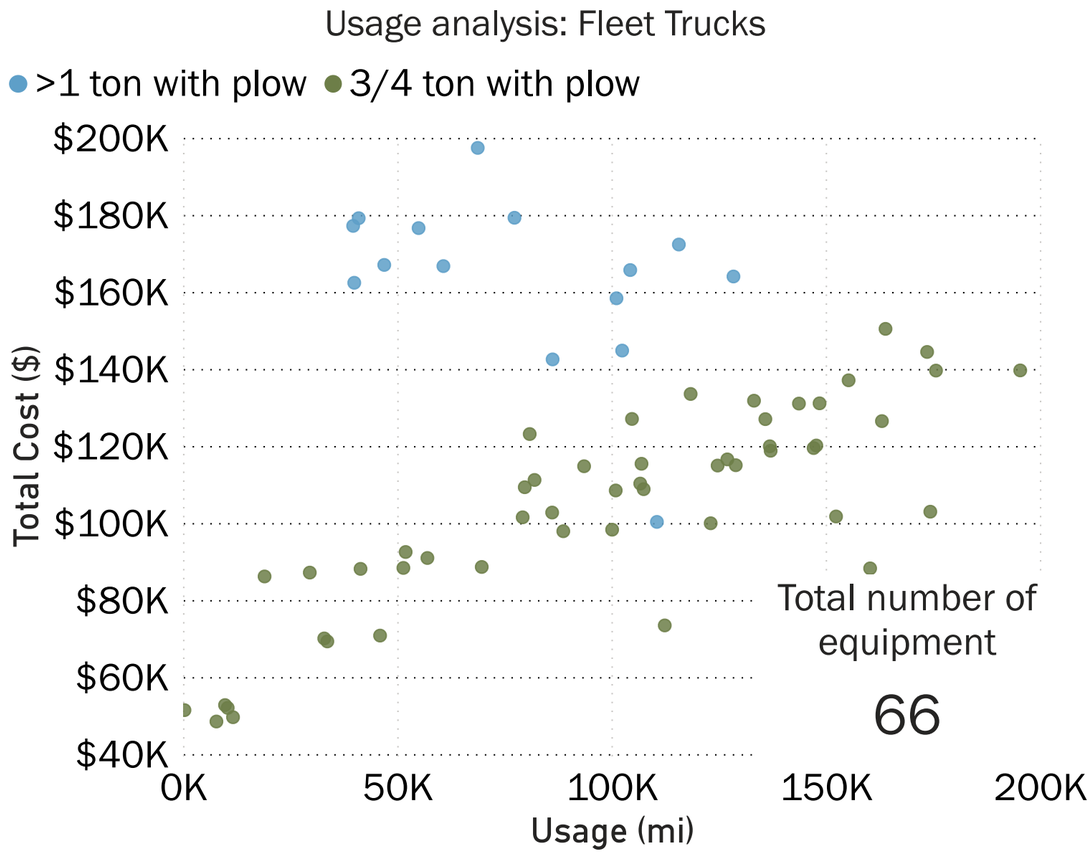
State Fiscal Year 2020 Staff

Total 51

CENTRAL GARAGE PERFOMANCE & ASSETS

Assets	Snowplows (Truck) 264	Orange Plus Trucks 14	Large Equipment 63
Overview of Work	Orange Plus Operating (hrs) 3,360	Warranty Jobs 515	Light, Medium, Heavy Trucks 474
Budget	Work Orders 22,988	Auction 760.4K	Internal Services Fund 20.7M
Internal Performance (Target)	Truck Age (Plow/Dump) 13.2% ≤15% older than 8 yrs	Truck Uptime (Plow/Dump) 74% ≥90% availbility	Utilization Targets (Plow Trucks) 95.5% ≥85% used more than 32 hrs/month





Total Cost by Usage, State Fleet Vehicles. The State of Vermont Central Garage maintains a variety of equipment, plow trucks are a major component: single axle dump trucks, tandem axle dump trucks and baby dump trucks. The total cost of these trucks increase over time due to usage, i.e. hours and miles, respectively. Maintenance costs, fuel costs, initial investment and other misc. costs are used in calculating *Total Cost ($).*

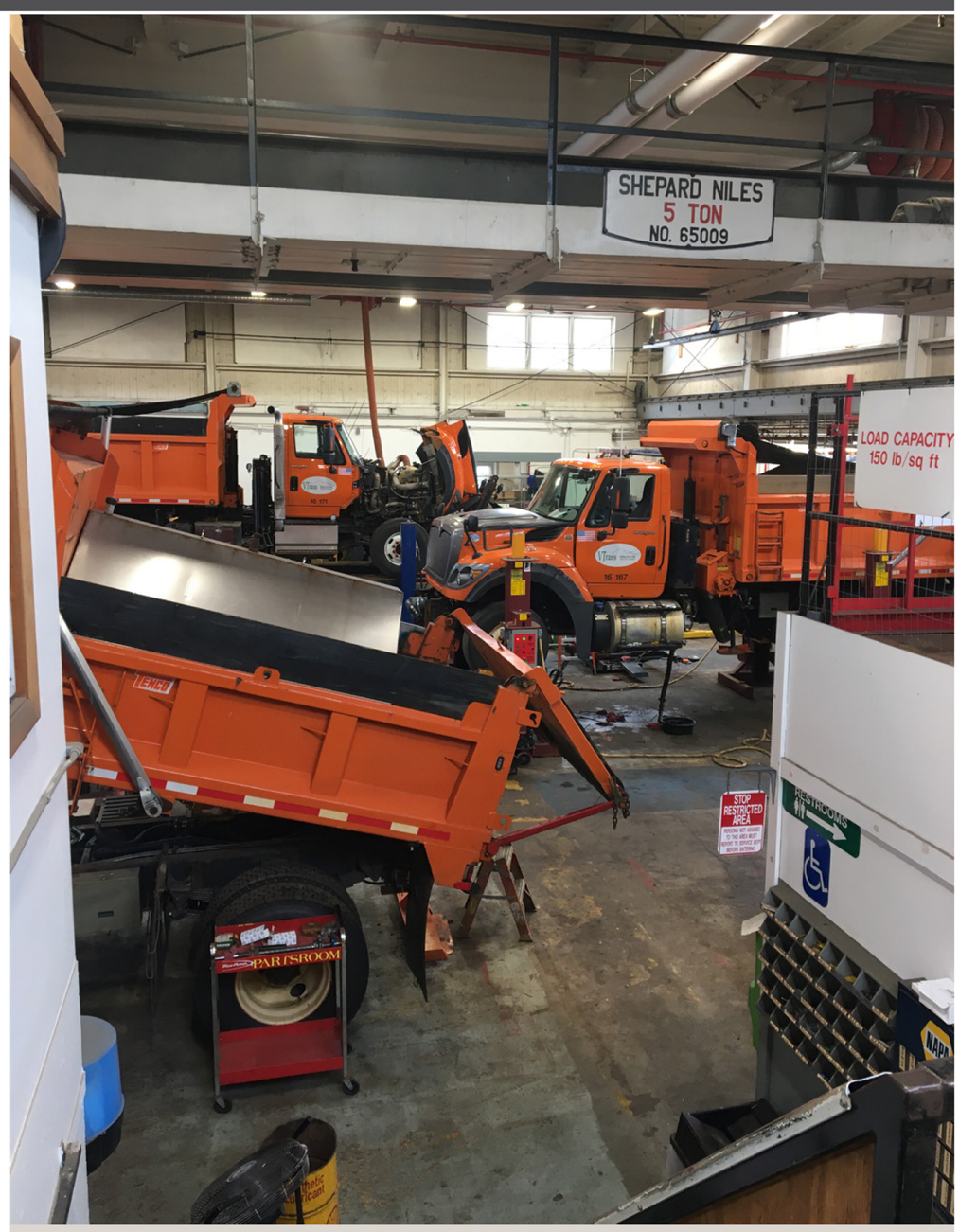
Central Garage Continuous Improvement Efforts & Achievements

Throughout 2019 multiple continuous improvement efforts occured with collaboration between the Performance and Strategic Initiatives section and Central Garage.

Review of the parts inventory across all Central Garage regions revealed obsolete and slow-moving inventory, as well as space constraints, which limited the ability to allocate inventory of appropriate sale items needed to maintain the Central Garage fleet.

Obsolete inventory is defined as “items that are no longer current or have no turnover within a set period of time”. Through a continuous improvement exercise, review of inventory usage over a three-year period and identification of items either eligible for return to vendors or which could be auctioned, was conducted. Findings yielded $106,000 worth of obsolete inventory. In completing this exercise each region gained in increased square footage of shelf and floor space; and achieved an enhanced vision of the future stocking opportunities within the parts departments.

Central Garage is committed to better utilizing resources within our parts specialist and vendor to better serve our customers. This will be accomplished through establishing standard operating procedures around volume purchasing of common items; creating sales history reports; performing daily inventory counts; and increases communication across all regions. With efforts from the parts specialist team and regional supervisors, CG will have created an increase in equipment up-time by stocking the necessary parts needed to maintain the Central Garage fleet, better enabling the ability to serve the CG mission of keeping the roads safe.



Central Garage's Big Orange fleet vehicles in the garage for scheduled maintenance prior to the 2020 winter season.

Future Fleet Analysis Potential

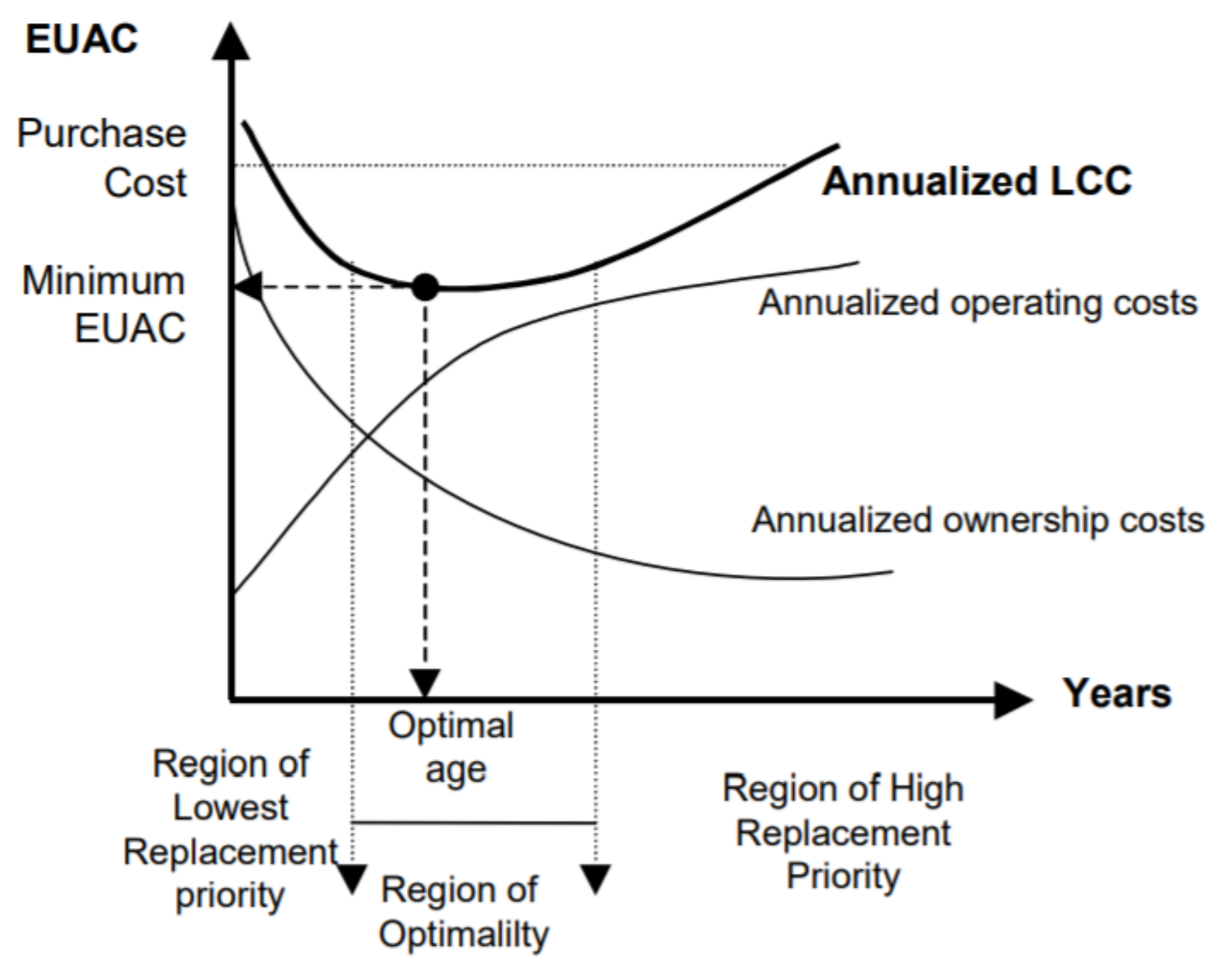


Figure 2-2 Equivalent Uniform Annual Cost Model. Source: Weissman (2003)

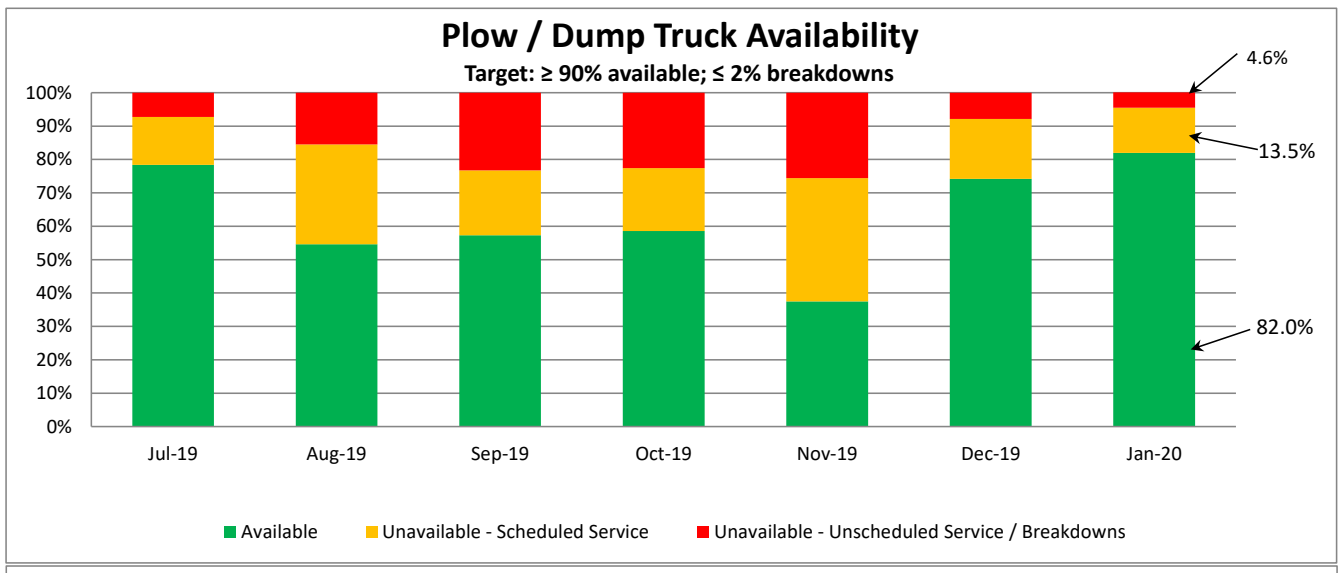
Based on efforts by the University of Minnesota, in coordination with the Minnesota State DOT, a fleet vehicle life-cycle analysis was conducted. The Figure at left which is directly from the *Fleet Asset Life Cycle Costing with Intelligent Vehicles* study. It shows a general shape of an annual cost model. The Equivalent uniform annual cost (EUAC) shows the cost on the Y-axis and Time on the X-axis. The Life Cycle Cost (LCC) is shown by the curve in bold. Based on the research the optimal life cycle for single axle snowplows was found to be 9-11 years.

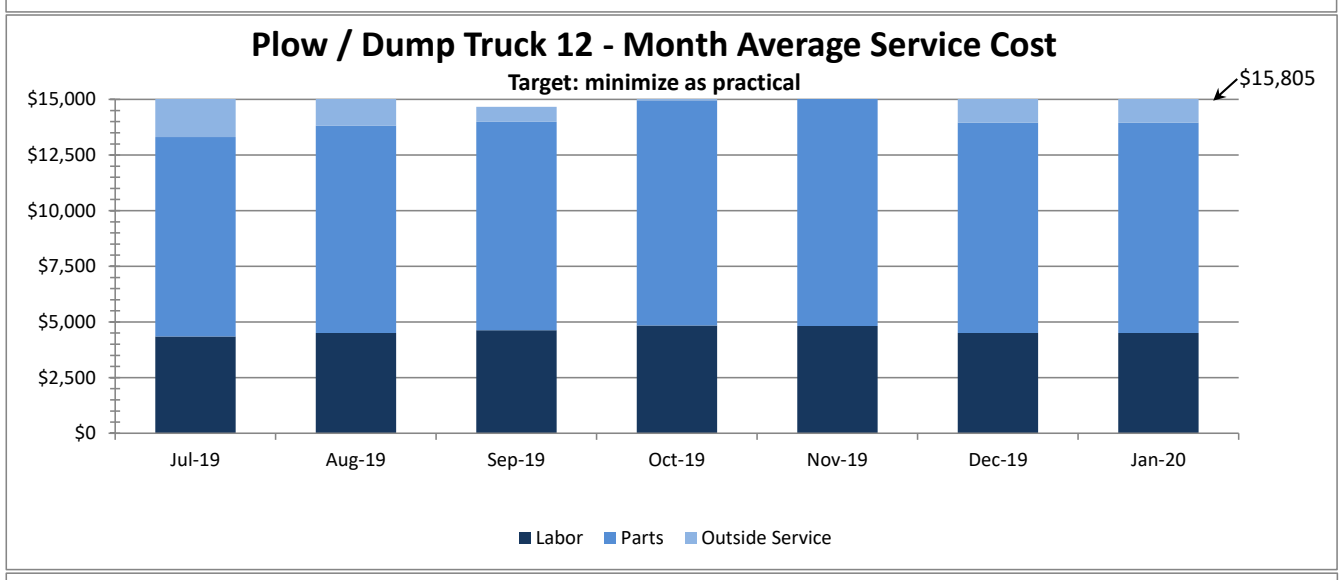
In order to better understand the State of Vermont's fleet vehicle life-cycle cost a more thorough analysis is suggested. Currently, the State of Vermont operates on an 8 year life cycle cost for their fleet trucks.This was determined to be an age that allowed for an optimal resale at auction while optimizing operational value. Irrespective of vehicle age periodic assesments are completed to determine the future of each asset and whether they have reached their optimal age.

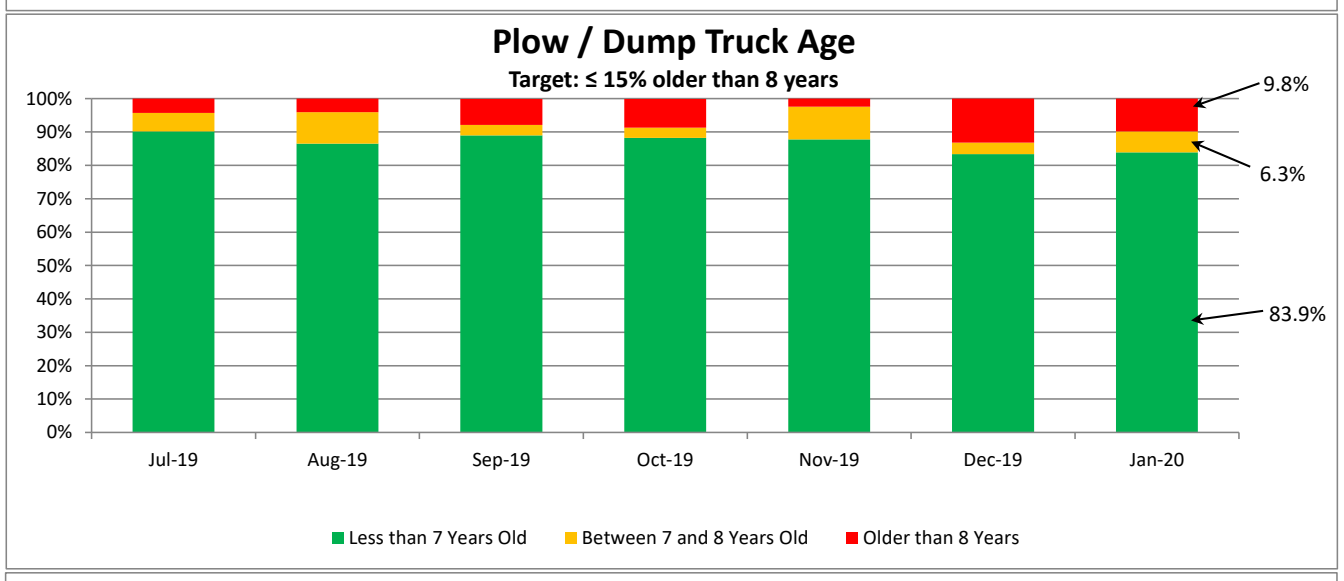
References:

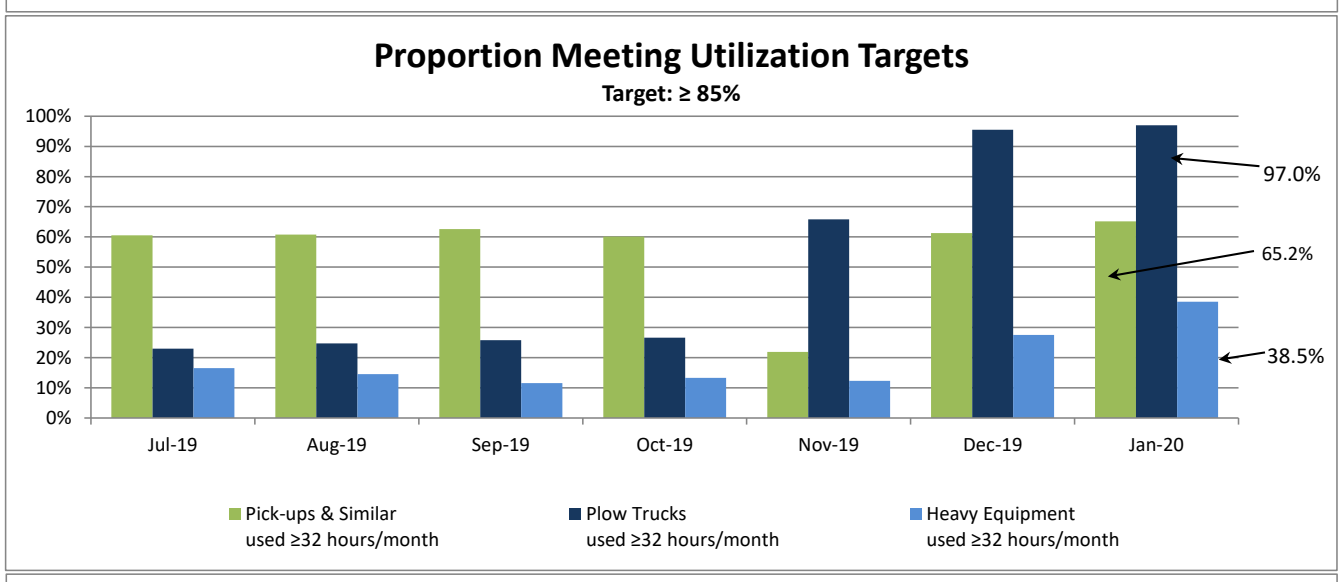
Fleet Asset Life Cycle Cost
http://www.cts.umn.edu/Publications/ResearchReports/pdfdownload.pl?id=970

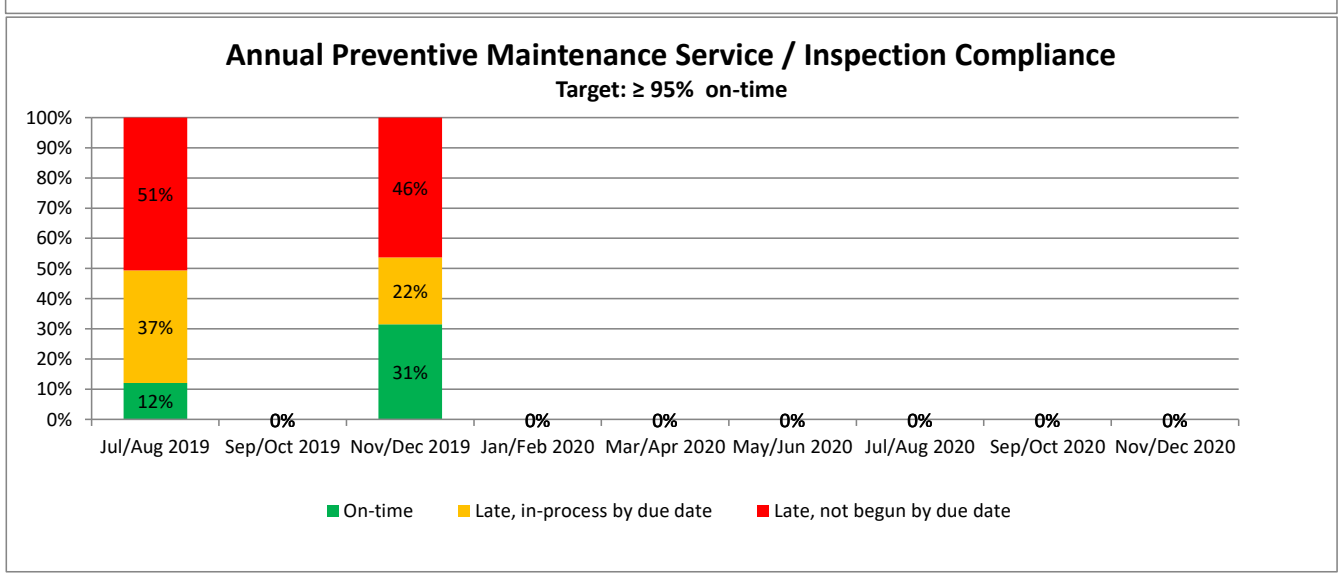
VTrans Central Garage Performance Measures



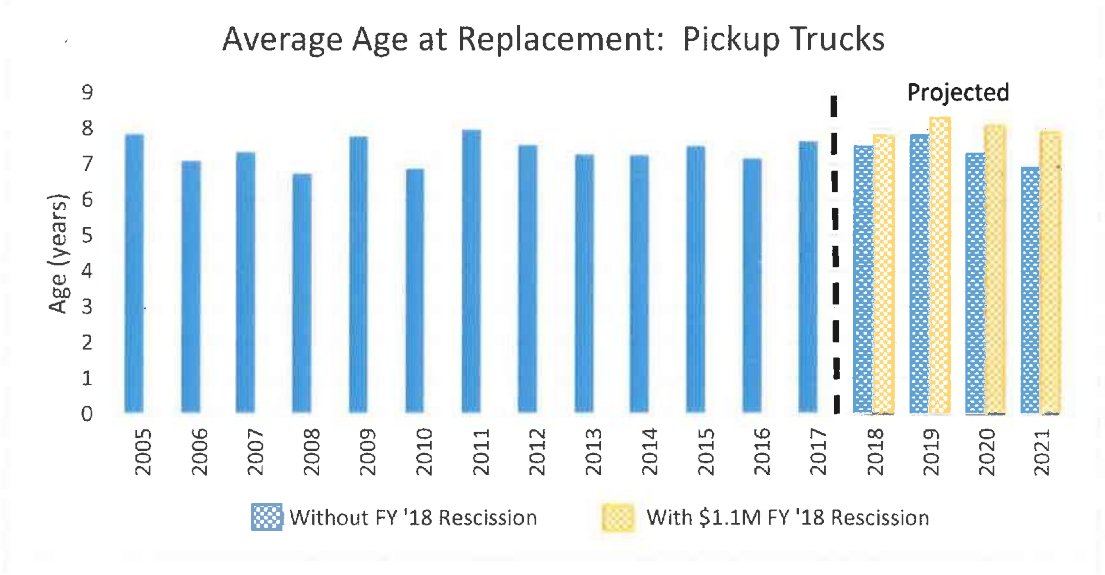








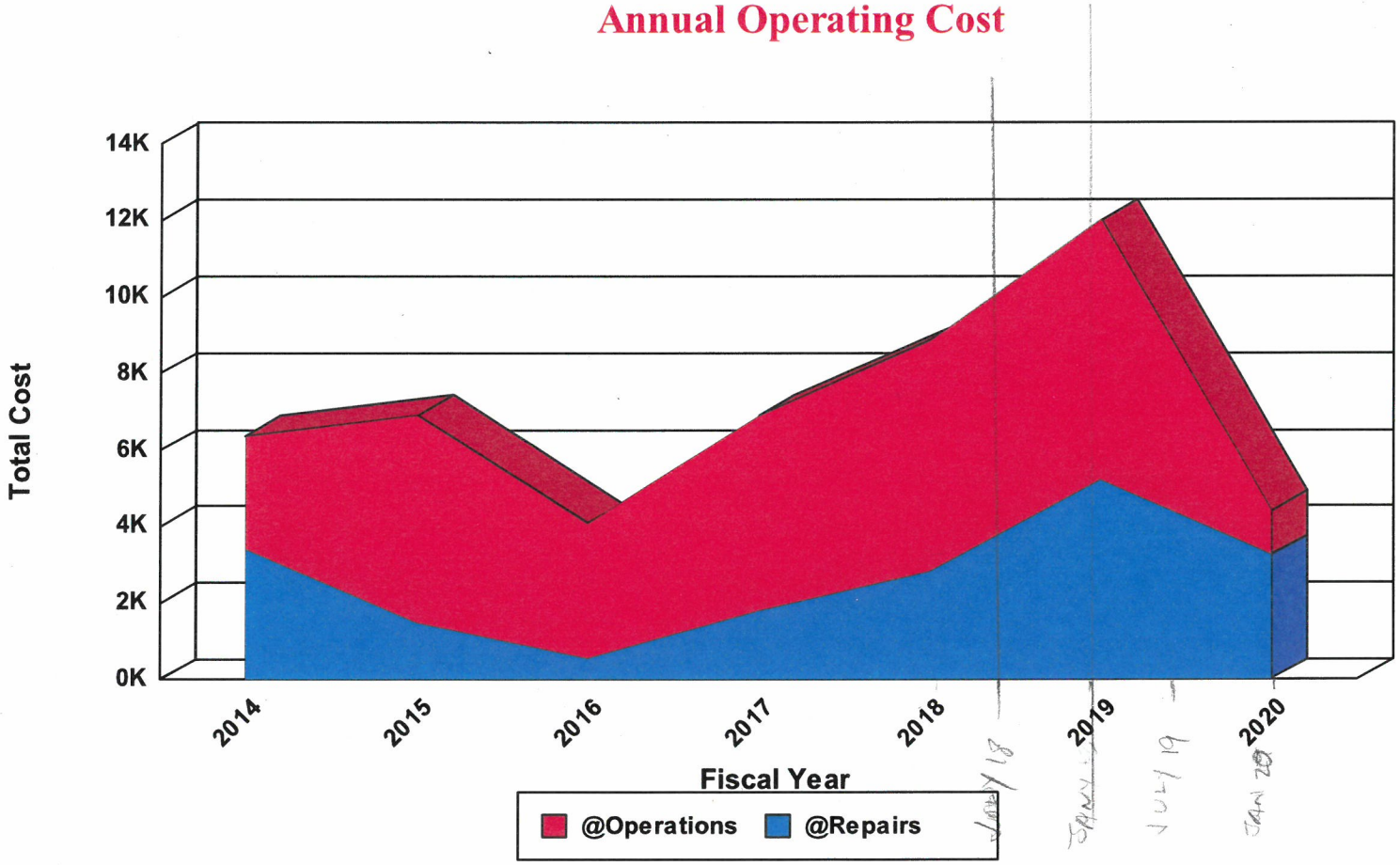
VTrans Central Garage
Historic and Projected Vehicle and Equipment Replacement Age



Unit Operating Cost History

Fiscal Period	Usage	Total Operating Costs: Labor	Parts	Comm	Total Repair	Fuel	Oil	Misc.	Total Costs	Quantity: Fuel	Oil
Unit No: 24089 - 2014 CHEVROLET 2500											
Selection-To-Date:	156,082	5,594.40	12,777.96	134.82	18,507.18	30,969.32	0.00	0.00	49,476.50	11,640.97	0.00

Annual Operating Cost

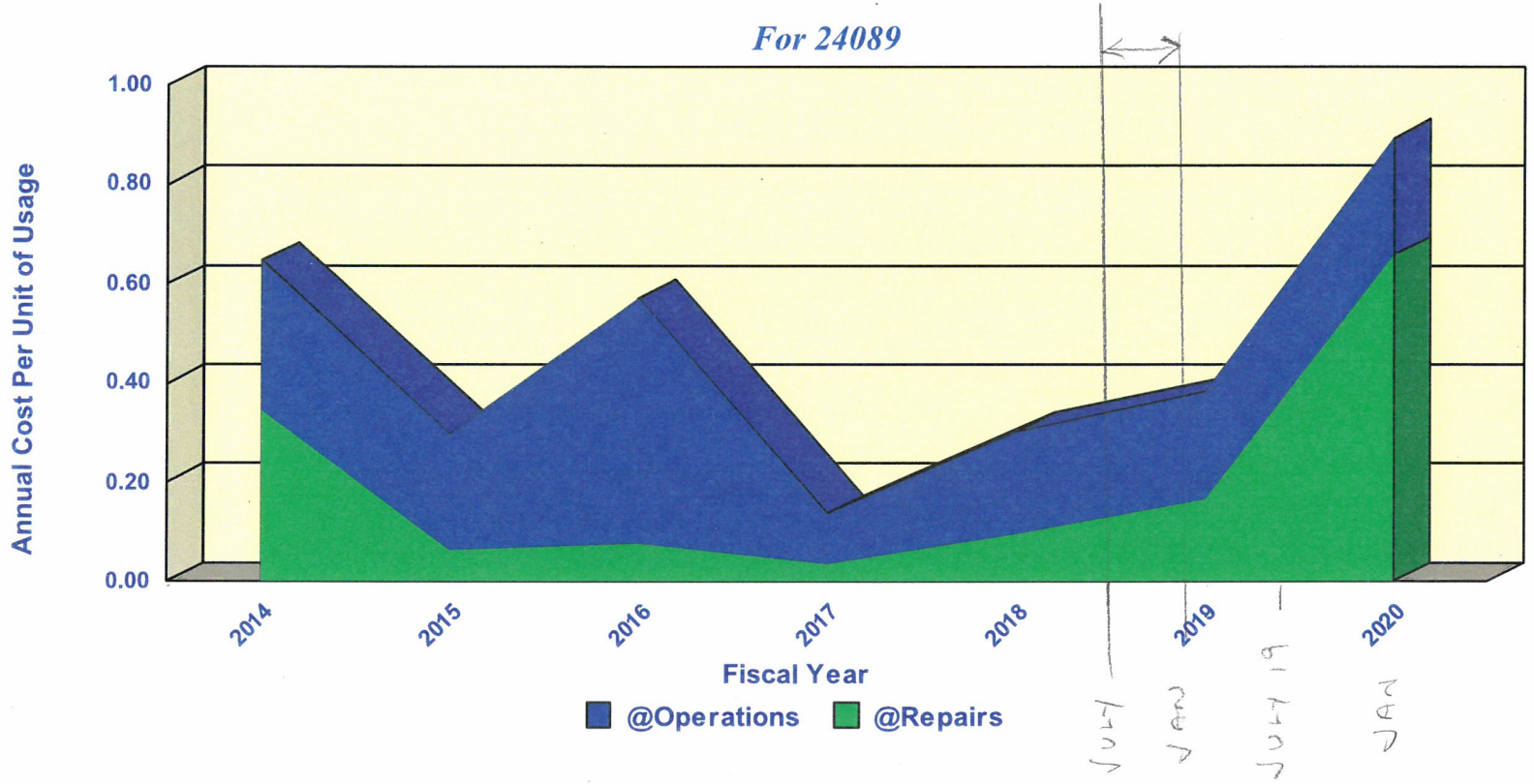


Unit Cost/Use History

		Total Cost Per Mile								Qty/MI	
Fiscal Period	Usage-M	Labor	Parts	Comm.	Total Repair	Fuel	Oil	Misc.	Total Cost	Fuel	Oil
Unit No: 24089 - 2014 CHEVROLET 2500											
Life-To-Date:	156,082	0.036	0.082	0.001	0.119	0.198	0.000	0.000	0.317	0.075	0.000

Annual Operating Cost Per Use

For 24089



Unit Cost/Use History

Transp - Central Garag

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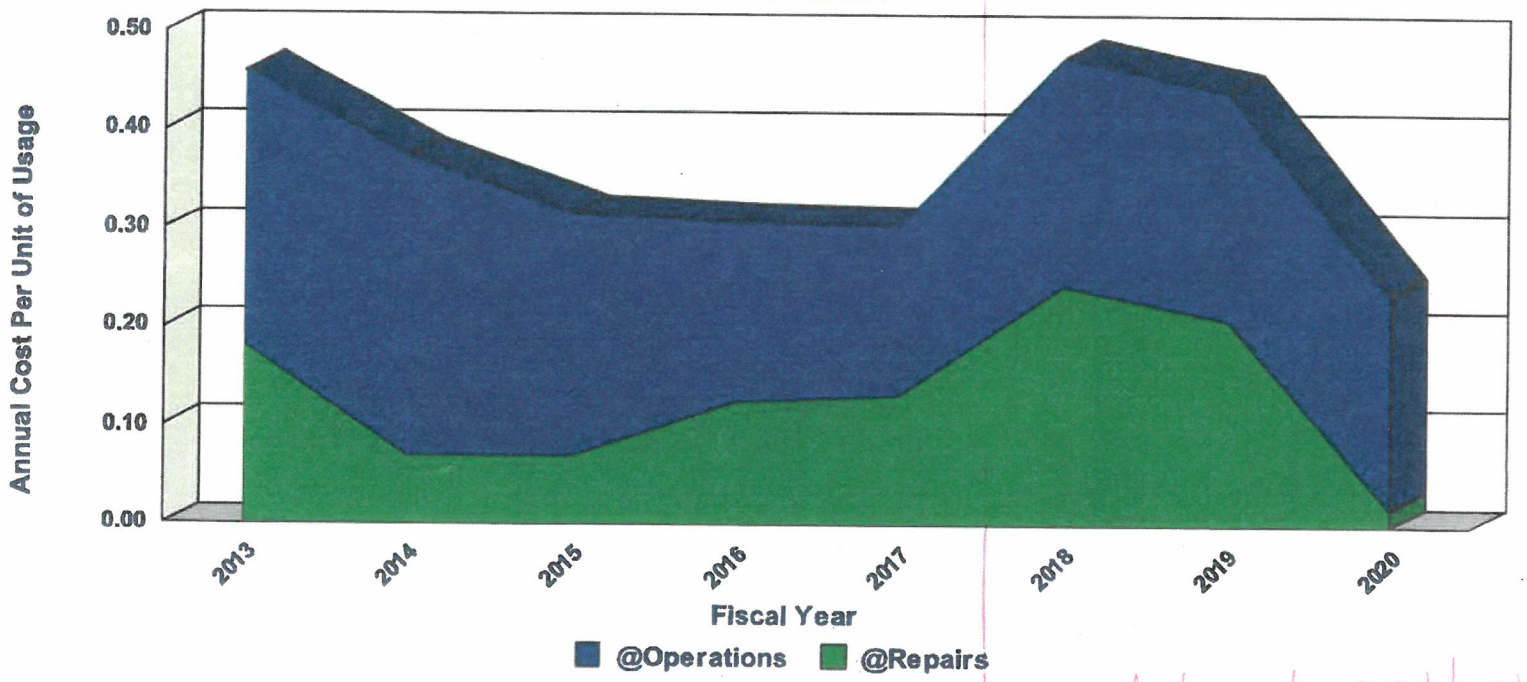
Fiscal Period	Usage-M	Total Cost Per Mile								Qty/MI	
		Labor	Parts	Comm.	Total Repair	Fuel	Oil	Misc.	Total Cost	Fuel	Oil
Unit No: 29124 - 2013 CHEVROLET 2500											
Life-To-Date:	175,299	0.042	0.096	0.005	0.143	0.236	0.000	0.000	0.379	0.082	0.000

Annual Operating Cost Per Use

For 29124



← would have been sold in Spring (April) 2018 Auction w/o Recession.

Unit Operating Cost History

Transp - Central Garage

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Fiscal Period	Usage	Total Operating Costs								Quantity	
		Labor	Parts	Comm	Total Repair	Fuel	Oil	Misc.	Total Costs	Fuel	Oil
Unit No: 29124 - 2013 CHEVROLET 2500											
Selection-To-Date:	175,299	7,342.32	16,741.22	924.56	25,008.10	41,448.25	0.00	0.00	66,456.35	14,370.22	0.00