

**ADVISORY BUDGET COMMITTEE  
TOWN OF MADISON  
June 18, 2024  
MINUTES**

**Members Present** –Joe Dame; Josh Shackford; Rick Judkins; Joy Gray, Selectman; Sarah DeMartino, School Board

**Members Excused** – Sharon Schilling

**Others Present** – Town Administrator Linda Shackford; Elwin King; MadTV Videographer Kasia Scentsas

**Where and When Posted** – Town Hall upper & lower bulletin boards and Madison & Silver Lake Post Offices on May 28, 2024.

**Meeting Called to Order** – By Dame at 6:00 p.m.

**Welcome and Introductions** were made by Dame.

**Pledge of Allegiance** – Dame led those in attendance in reciting the Pledge.

**Approval of Minutes – Motion** by Judkins, seconded by J. Shackford to approve the minutes of May 21, 2024 as written. The motion passed **5-0**.

**Grader Cost Analysis Review** – Dame prepared a Cost Analysis for the ABC dated June 9, 2024: Proposed Lease to Purchase of a New Caterpillar 140AWD Road Grader

**Executive Summary:**

*The town's existing 120G grader is 37 years old and is at the end of its useful service life. In 2023, the 120G grader required extensive and expensive repairs after it caught on fire. This Spring, the 120G grader broke down again with an engine cooling system problem and is still awaiting repair due to the difficulty in obtaining a new water pump.*

*Since the 120G grader has been out of service, the town recently rented a road grader to maintain the town's gravel roads. The rental cost was approximately \$3,000.00 per week.*

*The annual cost to operate and maintain the 37-year-old 120G grader is only going to increase as the machine ages. The 120G grader has an estimated 10,000-12,000 operating hours on it. Per Caterpillar, a typical road grader has an anticipated B50 component life of 12,000 hours. The B50 component life is the point at which half of components have failed, and equipment manufacturers recommend that this be the outer limit of most users' life expectations. The 120G grader is at the end of its expected service life and should be replaced at this point.*

*The town has 28 miles of gravel roads that require regular maintenance. A reliable road grader is critical for maintaining the roads. In addition, the road grader is needed during the winter snow season for plowing the town's roads.*

*The town recently solicited a bid from Milton Caterpillar in Londonderry, NH for a new road grader. Milton Caterpillar submitted a bid for a 2024 Caterpillar 140 AWDJOY road grader at a net cost of \$377,500.00. This price included the trade-in value for the town's existing Cat 120G grader.*

*The new grader comes with a Caterpillar 7 year/3,500-hour warranty which will significantly reduce the cost of any unexpected repairs during the warranty period.*

**Recommendations:**

*It is recommended that the town proceed with a 7-year or 10-year lease to own purchase of the proposed 2024 Cat 140 AWDJOY road grader.*

*The bid price of \$377,500.00 is an excellent price for this highly capable machine that fully meets the town’s requirements for both gravel road maintenance and snow removal.*

*In addition, Milton Caterpillar is offering a very fair trade-in allowance of \$32,500.00 for the existing 120G grader.*

*The annual cost for a 7-year lease to own purchase is estimated to be \$64,500.00 per year. The annual cost for a 10-year lease to own purchase is estimated to be \$49,500.00 per year.*

*The 2024 Cat 140 grader is a complex piece of machinery that requires regular maintenance. I recommend that the town consider purchasing a Cat Customer Value Plan (CVA) as part of the new grader acquisition.*

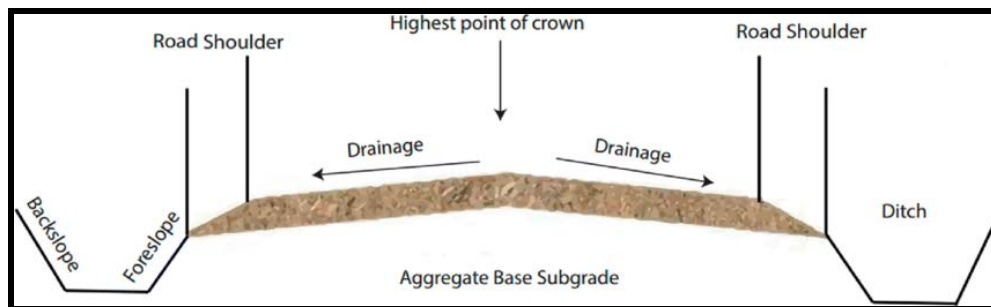
*Per Cat, “a CVA is an ownership plan to help you get the most from your Cat machine. That means genuine Cat parts delivered to you, right on time, for hassle-free maintenance. You get the security of an Equipment Protection Plan (EPP) to avoid unexpected costs for unplanned repairs. Plus, you can monitor the health of your equipment right on your phone. And it’s all rolled into your monthly machine payment for your convenience. Keep the risk low and uptime high — that’s a CVA.”*

*I also recommend that the town include DPW personnel training as part of the acquisition. The new Cat 140 grader has many advanced features and capabilities compared to the old 120G grader. Cat dealer provided familiarity training covering operation and maintenance of the new machine is highly recommended.*

**Requirement:**

*The town has 28 miles of gravel roads that require regular maintenance. This equates to 56 lane-miles of roads to maintain. The roads are subjected to a heavy volume of vehicle traffic, especially in the summer months.*

*The gravel roads are usually filled and graded twice a year – once in the Spring and again in the late Summer. Ongoing road repairs are also required to fix any areas of the roads that may need grading more often than normal.*



**Cross Section of a Typical Gravel**

*A reliable road grader is critical for maintaining the roads. The machine is specifically designed to grade and crown a road as shown in the above picture.*

*In addition, the road grader is needed during the winter snow season for plowing the town’s roads. The new grader will be equipped with a Craig wing plow mount which is compatible with the town’s existing wing plow.*

**Existing Town Road Grader:**

*The town currently owns a 1987 Caterpillar 120G road grader. The number of operating hours on the machine is estimated to be 10,000-12,000 hours. The hour meter broke sometime in the past, so the exact number of operating hours is unknown.*



*In 2023, the grader caught on fire damaging the machine’s wiring harness. Caterpillar no longer stocked the wiring harness for this machine, so a replacement had to be custom made at a cost of approximately \$50,000.00 of which approximately \$20,000.00 was covered by the town’s insurance policy. This Spring, the machine was leaking engine coolant, and a Caterpillar technician was called in to diagnose the problem. The engine water pump has failed and requires replacement at a cost of approximately \$6,000.00. The Cat dealer charged \$1,500.00 just to diagnose the coolant problem and they are currently awaiting delivery of the parts so the grader can be repaired and put back into service. The annual cost to operate and maintain the 37-year-old 120G grader is only going to increase as the machine ages. The 120G grader has an estimated 10,000-12,000 operating hours. Per Caterpillar, a typical road grader has an anticipated B50 component life of 12,000 hours. B50 component life is the point at which half of components have failed, and equipment manufacturers recommend that this be the outer limit of most users' life expectations.*

**Cost of a New Road Grader:**

*The town has solicited a bid from Milton Caterpillar for a new 2024 Cat 140 AWDJOY Road Grader. The dealer’s selling price for the new grader is \$425,000.00 less the trade-in value for the existing 120G grader. The after-trade-in cost is \$377,500.00.*



**Cat 140 Road**

**Cost Comparisons:**

*A new Cat 140 AWG road grader is typically priced in the \$425,000 to \$475,000 range. Used machines are extremely expensive as well. Cat graders are in high demand and the prices have significantly increased over the past 4-5 years.*

*Used Cat 140 grader prices:*

- *2023 Cat 140 JOY with 158 hours. \$495,000.00*



- *2023 Cat 140-13 with 750 hours. \$418,244.00*



- *2020 Cat 140 with 2,362 hours. \$389,000.00*



- *2023 Cat 140-13 with 285 hours. \$498,106.00*



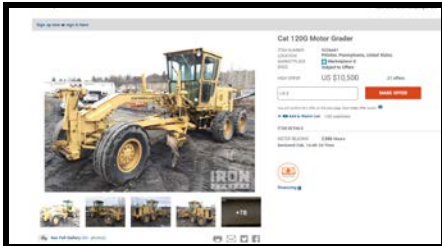
- *2023 Cat 140-13 with 142 hours. \$419,027.00*



*Fair Market Value of the Town's 1987 Cat 120G Grader:*

The price range for used Cat 120G graders in similar condition to the town's grader is \$10,500.00 to \$39,900.00. Based on this market survey, the trade-in value of \$32,500.00 for the town's old grader is very fair.

Current online auction: \$10,500.00



*Other for Sale:*

A screenshot of a listing for a 1977 Caterpillar 120G Motor Grader. The listing features a large image of the grader on the left. To the right of the image is a table with specifications: Condition (Used), Enclosed Cab (Yes), MLS Number (12108303), Last Updated (12/3/2023), Location (Pittston, PA, US, 304 mi. away), and Sold By (Big Iron Equipment LLC). The price is listed as \$29,950 USD. On the far right, there are several buttons: a phone icon with the number (833) 909-..., an 'Email Seller' button, a green button for financing starting at \$608/m, a 'Save' button with a heart icon, and a 'More Info' button with a plus icon.

Two screenshots of listings for Caterpillar 120G graders. The left screenshot shows a listing for a 1981 Caterpillar 120G For Sale in Mobile, AL, with a price of \$19,900.00 USD. It features a large image of the grader and a 'Get Shipping Quotes' button. The right screenshot shows a listing for a Caterpillar 120 with a price of 35,000 \$ ex VAT. It includes a large image of the grader and a 'Request a quote' button.

Dame summarized the above cost analysis which lead to discussion.

Gray asked if there is a ballpark cost on the repair for the current coolant leak issue? No definitive number has been obtained. With a plan to use it sparingly, it is doubtful that the issue would impact the trade value.

Judkins noted the reduced labor cost as the CAT 140 machine can do the work twice as fast. J. Shackford explained that the 140 machine has a more powerful engine, is 20,000 pounds heavier allowing for one pass on roads versus having to make two. This machine also has a 14' board versus 12', all wheel drive which lessens the need to install chains for plowing and grading.

Concern that the technology of the machine will prohibit repairs to be made in house, just like a personal automobile was stated by Gray. The machine would be covered by a 7-year, 3,500-hour warranty.

Dame's research found used machines selling for \$498,000. This machine available to the Town, with a municipal discount is available for \$410,000. The CAT 140 meets the Town's needs and is set up with a wing plow hook up what is compatible with the plow we have.

Gray asked if there would be any training for the new machine. J. Shackford stated that there are two DPW employees that know how to run it with one being Foreman Chick who is a talented operator that has been with the Town for several years. King noted that this machine is controlled by joystick which is the same as the grader rented from Burke Quarry. Gray would like to be assured that training would be available.

L. Shackford offered a quote for financing from Tax Exempt Leasing:

\$410,000 minus the \$32,500 trade would necessitate financing of \$377,500.

Rate:	5.99%	5.99%
Term:	7-year	10-year
Payment:	\$67,599.44	\$51,265.86
Total Cost:	\$473,196	\$512,568

Dame calculated a worst-case scenario to finance all of the \$410,000 which would be an annual payment of \$73,418 with a total cost of \$513,931. Dame also had calculated an annual cost that included lease payment, maintenance and operating expenses at \$84,000.

Questions that came up were:

- Would any repairs needed come off the trade allowance?
- How much would the coolant leak cost to fix?
- Will CAT take it as a trade as-is with the issue?
- How does the escape clause work?

L. Shackford explained the municipal escape clause to the Committee.

This purchase would be presented at the 2025 Town Meeting in a warrant article that would "ratify" the purchase, should it all move forward.

J. Shackford stated that an instructor from UNH T2 told him that a 10-year-old grader still holds 60-65% of its value when time to trade. Gray could see in old meeting minutes that they "kicked the can" over the years in regards to the idea to purchase a grader. J. Shackford offered history of the last 18 years from when they first decided to keep the 1987 grader going.

The Committee discussed the option of renting a grader. Gray wanted to quantify the expense. The grader the Town owns is typically used to grade the roads in the spring, repair spring and summer washouts, annual ditching on dirt and paved roads, fall grading with building of the road crowns, winter plowing and pushing back of snow banks. The last time a grader was rented it cost \$3,600 which included transportation; the rented grader is not equipped to plow. DeMartino could see it being used more often if it was owned versus being rented and that this is not a frivolous purchase. Gray's math equated to an annual rental cost for 52 weeks at \$187,000 and \$93,600 for 26 weeks.

The Selectmen have scheduled a public hearing for June 23<sup>rd</sup> at 4:30pm to inform residents of the grader issues and solutions. The Committee members intend to attend with L. Shackford making proper notice.

**Motion** by Dame, seconded by Judkins to make a recommendation to support the purchase of a new grader and entering into a 7-year lease for its purchase. The motion passed **5-0**.

L. Shackford will obtain answers to questions discussed during the meeting; and Dame's offer to put together a data sheet for the public hearing was accepted by the Committee.

**2024 Drawdown Review** – The Committee reviewed the current drawdown which is in line with the percentage of the year at 46%. Clarification was asked for on some lines that included election supplies and the town project lines. L. Shackford will look into why those lines are significantly overspent or close to, and return with her findings.

**Income/Revenue Review** – A draft revenue report produced out of QuickBooks was reviewed by the Board.

**Other Business** – Elwin King of High Street has submitted a request for appointment to the Committee. Dame has spoken with Schilling about this and was instructed to have the appointment placed on the next agenda. J. Shackford suggested a change to the Budgeting Ordinance that would allow the Committee to make appointments to vacant seats versus it being the Chairman's decision; it would be more in line with how other committees in Town operate. King will be added to the Committee email chain.

**Public Comment** – There was none.

**7:41 PM** – **Motion** by Dame, seconded by Judkins to adjourn. The motion passed unanimously. The next meeting is scheduled for July 16, 2024 at 6:00pm.

Respectfully Submitted,

Linda Shackford,  
Town Administrator/Recording Secretary