



TOWN OF CONCORD MUNICIPAL UTILITIES

ELECTRIC | WATER | SEWER | TELECOMMUNICATIONS

May 2022 – Broadband Updates

Concord Broadband is pleased to share the following updates and information from the past month. Please do not hesitate to contact us at broadband@concordma.gov should you have any questions, concerns, or feedback.

Operations

We have identified a finalist for the Telecom Director position after reviewing and screening several qualified candidates, and we are undergoing negotiations to bring this person on board. A new Telecom Technician resigned, bringing our total number of Telecom Techs down to three. This resignation was due to a personal matter and not related to the environment in the Town. We hope to have the Director on board to determine if we can maintain three permanent staff and rely more on outside contractors. Due to the relatively slow winters, it may make fiscal sense to do this since we can ramp up quickly in the late spring and incur no salary costs during the winter. We do need to be able to maintain storm and emergency response with the current team without taxing them for after-hours and holiday responses.

Our third-party partner began pulling fiber for Concord Broadband in May, conducting 15 pulls in technically difficult areas that required police details. That fiber has already been spliced by our staff, and those locations are ready to proceed with customer installations. We are preparing another portfolio of customers who require this make-ready work, and we expect them to continue this work for the foreseeable future.

Network Services

Upgrades and Updates

This month we setup and deployed a new server co-located at Substation 223 for the purposes of monitoring and managing the broadband network. This work went well, and now have the unit in service.

We have also begun making modifications to the power supply infrastructure at 223 to accommodate the new equipment coming and ensure we have adequate battery backup supply in the unlikely event we have an outage at the substation. Current equipment has a runtime of over 1 hour, but we are aiming to be able to keep everything powered up for 3 hours to give us time to stage a portable backup generator in the event of an emergency (since one is not installed on-site).

One of Concord Broadband's ISPs has been engaged to double its speed and provide an additional second link for redundancy (at no cost increase over our previous contract), but we are struggling to find adequate fibers due to the number that were destroyed at LCC 20 (Laws Brook Road) in December. See "Special Projects" below for more information on that.

Maintenance

From 1-6am on June 1st, we engaged Calix, the company who makes all customer ONTs* and equipment that distributes internet connectivity, to perform software and firmware updates on all devices (over 1,700). This ensures everything is as stable and secure as possible, and it gives the internal team additional tools maintaining the network. Everything went very smoothly, and we thank the Broadband staff who supervised this work and was on-site in case an unexpected event needed a physical presence.

*ONT: Optical Network Terminal (the device installed in customer homes and businesses)

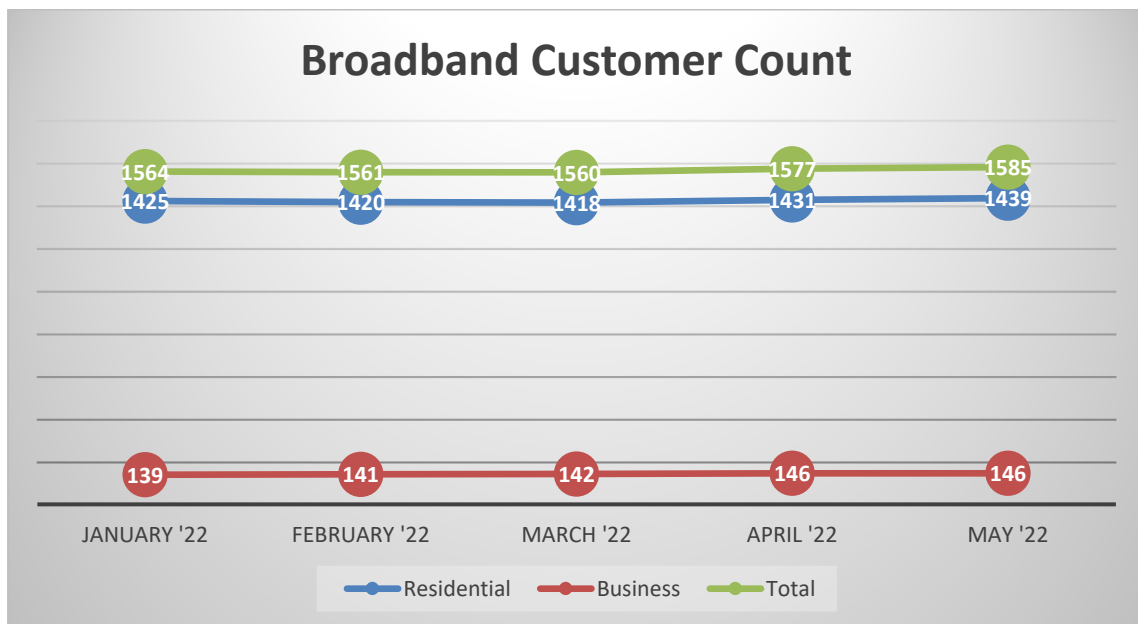
Special Projects

On December 24, 2022, we had a rodent chew through several thick feeder fibers at an LCC on Laws Brook Road. We made emergency splice repairs to the fibers in use, but many dozens of unused fibers were left as is. The plan was always to return in the spring/summer to cut out and repair the damaged section of fibers.

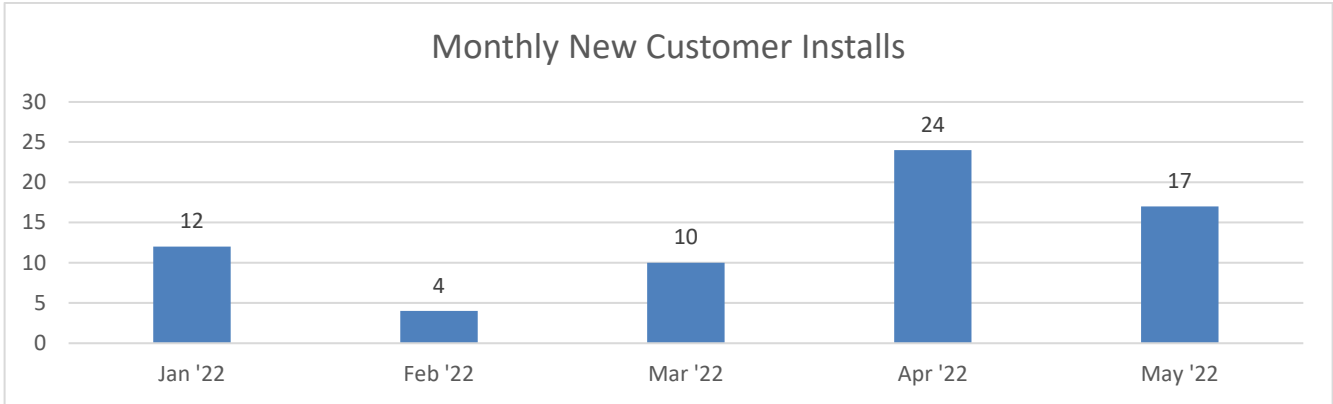
We have engaged a third-party provider to conduct this work so we can have a large team on-site to minimize customer down time. We have received a purchase order and provided it to the vendor, and they are in the process of scheduling the work. The repair will take place overnight to minimize impact to customers.

The team has researched this extensively and identified all downstream customers of this fiber so we can notify them in a highly targeted way. The outage for a given customer will likely vary between a few minutes and a couple hours, but we will know more once the work is scheduled.

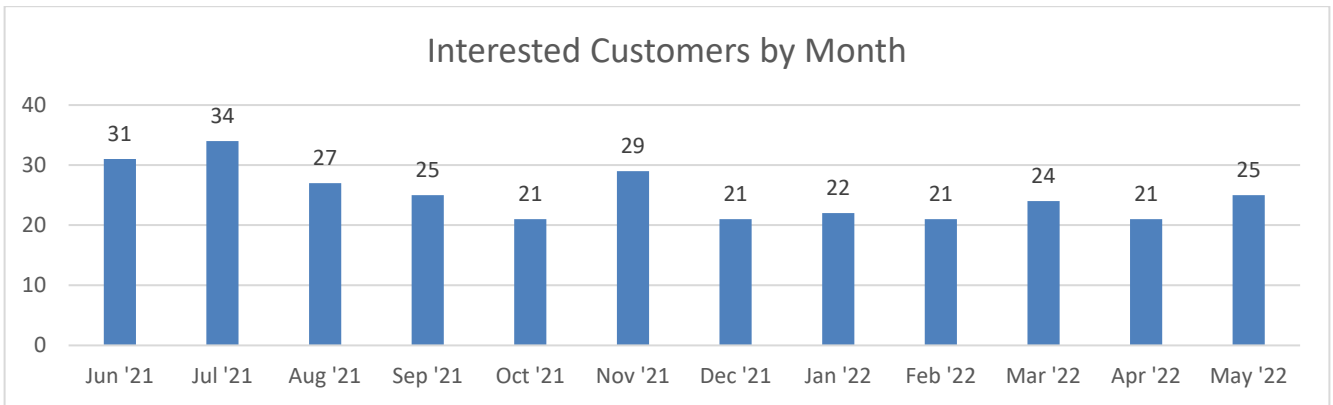
Metrics and Business Data



(A rolling 6-month look at active customers)



(The number of completely new installations completed; customers whose homes or businesses never had Concord Broadband service before)



(This is the number of individuals who complete the Concord Broadband interest form on the Concord Website, whether they are in the current service area or not)

Marketing

With the help of our Customer Service division at the Light Plant, Concord Broadband has revived our newsletter sign-up form on the Town's website, and we will hopefully get some content out to these interested parties soon. We also plan to post updates like this one on the website so more people can learn about what we're doing.

We are beginning to collect data on distinct areas of Town where there may be clusters of interested parties that would allow Concord Broadband to fund additional expansion. This concept is popular in among other fiber broadband entities and can justify capital expenses with extremely likely revenue.

Fiber Broadband Completion Task Force Report

We have assembled a chart in the appendix to provide a summary of these recommendations and will highlight them at monthly Light Board meetings when relevant.

This month, our staff have been working on the metrics and have the following proposed intervals:

| Metric | Interval |
|---|-----------|
| Class of service: which type/tier/speed people have | Monthly |
| Completely new installs (never had service before) | Monthly |
| Installations | Monthly |
| Net change in customers | Monthly |
| Subscribers | Monthly |
| Take Rate | Monthly |
| Total active customers | Monthly |
| Interest form submissions | Monthly |
| Churn | Quarterly |
| Parcels served | Quarterly |
| Premises served | Quarterly |
| Profit/Loss | Quarterly |
| Progress against completion | Quarterly |
| Road miles served | Quarterly |

Those in **bold** are contained in this month's update. More coming soon! We will provide some monthly data in charts, but quarterly data will also include all metrics in a table format.

Future Projects and Things to Note

- We are preparing to reissue the RPF for Helpdesk services for Concord Broadband. We will keep the public and Light Board informed about the progress of that.
- During the software/firmware maintenance in early June, we were able to make use of the NISC Messenger product to send several hundred notifications directly to customers about the maintenance so that we weren't relying solely on the Town's website and social media to get the word out. It seemed to have the intended impact because we received no calls during the work! Thank you to the CMLP Customer Service team for their help on this.

Appendix

Fiber Broadband Completion Task Force’s Draft Report Goals

| Goal | Type | Next Steps | Additional Info. |
|---|------------|------------|------------------|
| Policies (p.36) | | | |
| • Universal Access | Policy | | |
| • Expansion outside current territory | Policy | | |
| • Support Economic Vitality, Sustainability, Equity & Inclusion | Policy | | |
| • Affordable Housing | Policy | | |
| • Sustainability | Policy | | |
| • Public Safety | Policy | | |
| • Education | Policy | | |
| • Economic Support | Policy | | |
| • Government Access (PEG) | Policy | | |
| Recommended metrics for tracking (p.37) | | | |
| • Parcels served | Metric | | |
| • Premises served | Metric | | |
| • Road miles served | Metric | | |
| • Subscribers | Metric | | |
| • Take rate | Metric | | |
| • Churn | Metric | | |
| • Installations | Metric | | |
| Governance (p.39) | | | |
| • Track progress against completion | Metric | | |
| • Rate of return policy | Policy | | |
| • Financial goals | Policy | | |
| • Retained earnings and reserve policy | Policy | | |
| Strategic Planning Goals (p.40) | | | |
| • Marketing and growth | Metric | | |
| • Business return | Policy | | |
| Budgeting Process for Fiber Expansion (p.41) | | | |
| • Expand to fill existing opportunities | Planning | | |
| • External funding sources | Research | | |
| Capital Planning Process (p.42) | | | |
| • Quantifying cost of expansion | Research | | |
| • How to fund expansion | Research | | |
| • Revise/refine methods for computing ROI | Research | | |
| Construction and Logistics (p.42) | | | |
| • Vibratory plow – direct buried fiber cables | Operations | | |