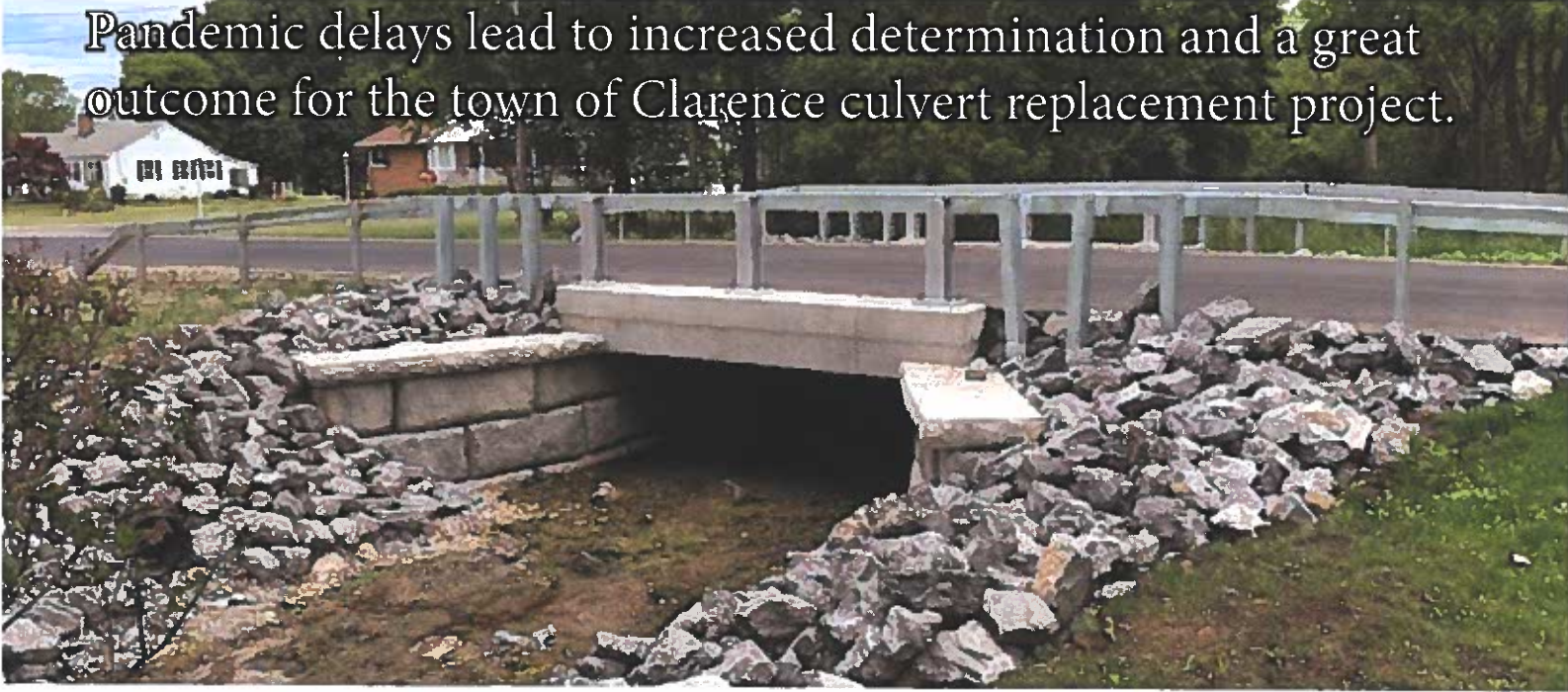


Pandemic delays lead to increased determination and a great outcome for the town of Clarence culvert replacement project.



By **James A. Dussing** – *Superintendent of Highways, Town of Clarence* and **Paul N. Englert** – *Deputy Superintendent of Highways, Town of Clarence*

In spring of 2020 the Clarence Highway Department had planned to replace an old concrete structure on Meadowbrook Road. It became very clear that as the pandemic took hold in our Country and budget uncertainties lingered, that the project may have to be put on hold. In early March 2020, we sent workers home for the better part of a month and the decision was made to delay the project. As the year continued, our department became more determined to make the project happen as soon as we were able to get back to work.

After many discussions, we mapped out the project goals to determine our needs and a timeline. As a department we have always enjoyed bigger jobs and the challenges of using our own team to accomplish the more complex projects. Our highway department is made up of a talented crew with many different skill sets that were instrumental in completing this job. We utilized encumbered funds from our 2020 resurfacing budget for the new structure and its installation. Another challenge was that this project would have to happen in addition to all of our typical spring work and we did not want to push anything off. Our start date was set for April 19, 2021, which also happened to be the start date for our town-wide brush pickup.

The department enlisted the help of our Town Engineer, Tim Lavocat, as well as outside engineering consultants from Clark, Patterson, Lee (CPL) to assist with design, bidding and permitting. After careful consideration of three design options that were available to us, it was decided to replace the old concrete structure with a pre-engineered

deck slab. All of the work was completed by using a combination of our highway department employees and several local outside contractors for necessary specialty equipment and supplies. We have experience setting pre-cast block walls using them previously in several projects, and felt confident that after the job was completed the new structure would have a service life of at least 50-75 years. The new deck has 26 feet of paved driving surface as well as box beam rail to keep the traffic on the road. The opening is also significantly wider to accommodate additional water during large rain events and seasonal thaws. Our goal was to complete the new deck in two weeks, from demolition to paving. Timelines were tight but we knew we could do it if we stuck to the plan.

The material went out to bid in November 2020 and the bid was awarded the following month to Kistner Concrete products. Almost immediately, discussions started with the engineers, designers and production people. There was careful coordination with Pavilion Drainage Supply, the supplier of the guardrail. It was important to get the necessary components into production and on the ground to meet our deadline. We wanted all of the materials except the deck to be delivered to us prior to the start of the project so we could coordinate delivery to the job. Preliminary work included surveying from Foit-Albert Associates and the installation of culvert pipes in the road ditches to allow for enough room for the various pieces of equipment to operate side by side and safely during construction. Road closure notifications went out to all the residents and various local agencies were notified as to our start date. Detour plans and permits were executed and temporary signage was installed and covered. Equipment was mobilized to the site and ready to go.



We started demolition of the old structure on the morning of April 19, 2021. It took the better part of the day with two excavators and a hammer working to demolish and load out the old structure and material. Heavy weekend rains made it difficult to work once the excavation was complete. A temporary pipe had to be put in place as well as four large pumps to keep the water out of the cut. Crushed stone was hauled in, compacted, the blocks were loaded and brought to the jobsite to start setting on day number two. Two separate crews worked on each side of the cut to set the necessary pre-cast blocks into place. Both of the crews worked extremely hard and endured a ton of water and inclement weather during the project but no one backed down.



Teamwork and careful coordination made it possible to get both walls and headwall set in just a few short days. The following day was spent backfilling, cleaning up, cutting the roadway back and getting ready for the deck to be set. On Thursday of the first week, the four piece deck was hauled to the site and set by a local crane company, Stockwell Construction. Everything went according to plan; the deck was pinned and preparation for paving

began. The rubber membrane was installed with crushed stone to cap it. Base, binder and top went down by our paving crew. The following day the guiderail was installed and the new structure was very close to opening. Topsoil and hydro-seed was put down and the new deck was quietly opened to traffic the afternoon of April 30th just in time for the weekend. The project was completed in just 10 working days.

The Clarence Highway Department is proud of what we were able to accomplish with our team. We are also very grateful for the other half of our crew that continued to do the just as important day-to-day work that needed to be completed during the project. Our brush sweep was finished within the scheduled two weeks and many other important tasks were taken care of. We have never envisioned our department as strictly a street maintenance agency. We see ourselves as a small to medium sized construction company with good equipment and many capable people. We hope that this will be just one of the many great projects we will work on together in our tenure at the Clarence Highway Department. Thank you to all that helped us accomplish this project.

Total Project cost: \$91,000.00

Special Thanks to: CPL Team, Tim Lavocat- PE. , Foit-Albert Associates, Five Star Equipment, Pavilion Drainage Supply, Kistner Concrete Products, Stockwell Construction, KD Equipment and the employees of the Town of Clarence Highway Department.

