



▲ Car 761 on its first test run in April 2021.—Eric Zabelny photo

## Returning a North Shore Silverliner to Passenger Service

By Steve Thomas

Photos by the Author, Except as Noted

Restored Chicago North Shore and Milwaukee Car 761 was dedicated on June 27, 2021, in front of the Depot in East Troy, Wisconsin—nearly 20 years after it was moved to East Troy. The first revenue run for the car was on July 10, 2021. This story explains why it took almost 20 years to return the car to service and documents many of the major and minor tasks that made the car's return possible, especially the extensive work completed over the last two years.

This major restoration took place in the midst of the worst global pandemic in 100 years and faced many challenges, including a reduction in volunteer hours related to the pandemic. A precipitous decline in visitors to the East Troy Electric Railroad also caused budget concerns. But a small group of knowledgeable and dedicated volunteers kept working through it all. Grants and donations came in at the most opportune times. And now we've got a Silverliner in East Troy—and it's a beauty!

As everyone reading *First & Fastest* knows, the Chicago North Shore and Milwaukee Railroad ran between the Loop in downtown Chicago and 6th Street in downtown Milwaukee from 1916 through January of 1963. Railroad historian and

photographer William Middleton described the North Shore Line as a “super interurban.” Many people still remember the North Shore Line fondly. What you may

not know is that Car 761 was on a three-car train that ran between Chicago and Milwaukee on the final day of North Shore operations: January 20, 1963.



▲ Korey Kumbier (standing on TMER&L locomotive L-8) and Chris Schmidt (standing in the doorway of Car 761) were two of our younger members who first proposed restarting the restoration. The crew here, which had rearranged the car barn and moved Car 761 out for the first time in many years, also includes Ryan Barry (standing in the car's front window), Alex Hummel (with radio headset) and Paul Averdung.—Dustin Robinson photo

► This is how the car looked after we first moved it into the maintenance facility in late 2019. The facility is large enough that we could work on Car 761 and one more piece of rolling stock inside the facility at the same time. Only our extended South Shore cars required us to move Car 761 when they needed maintenance.



▲ Left: The seat bases, heat registers and all interior lighting fixtures have been removed in this photo. Many hours of needle scaling the ceiling would be needed to achieve a bare metal surface. Right: After priming and painting, the ceiling looks brand new!—Eric Zabelny photos

Car 761 was one of 25 new interurban coaches ordered by the North Shore from the Standard Steel Car Company in Butler, PA in 1930. In 1949 the car was modernized with a dropped ceiling, eyeball lights, and plush seating. In 1957 it was one of the last North Shore cars repainted in the “Silverliner” scheme. It is just over 55 feet long, weighs 103,800 pounds, and rides on two Baldwin 84-30AA trucks.

A private owner purchased the car in 1963 from Hyman-Michaels, the company hired to scrap the North Shore Line. The Michigan Transit Museum in Mt. Clemons, MI purchased the car in about 1980; there it was used as a coach behind a diesel engine.

In 2001, Paul Averdung, President of the Wisconsin Trolley Museum, a predecessor organization, worked out a trade with the Michigan museum. He sent South Shore Car 11 to them (a car with more seating and one more compatible with their engines and rolling stock) and Jack Franklin, General Manager of the Friends of the East Troy Railroad, arranged for Car 761 to be delivered to East Troy. On a day that might have been a celebration, Car 761 arrived on September 11, 2001, in profound silence while the tragic events of that day unfolded.

Work to restore the car began soon after the car arrived; it included installing a new roof, having new doors and trim manufactured, repairing many of the auxiliary wiring circuits and testing the traction motors. The compressor was also rebuilt. Work ground to a halt in early 2007, when volunteers discovered significant structural damage to the frame on the east end of the car.

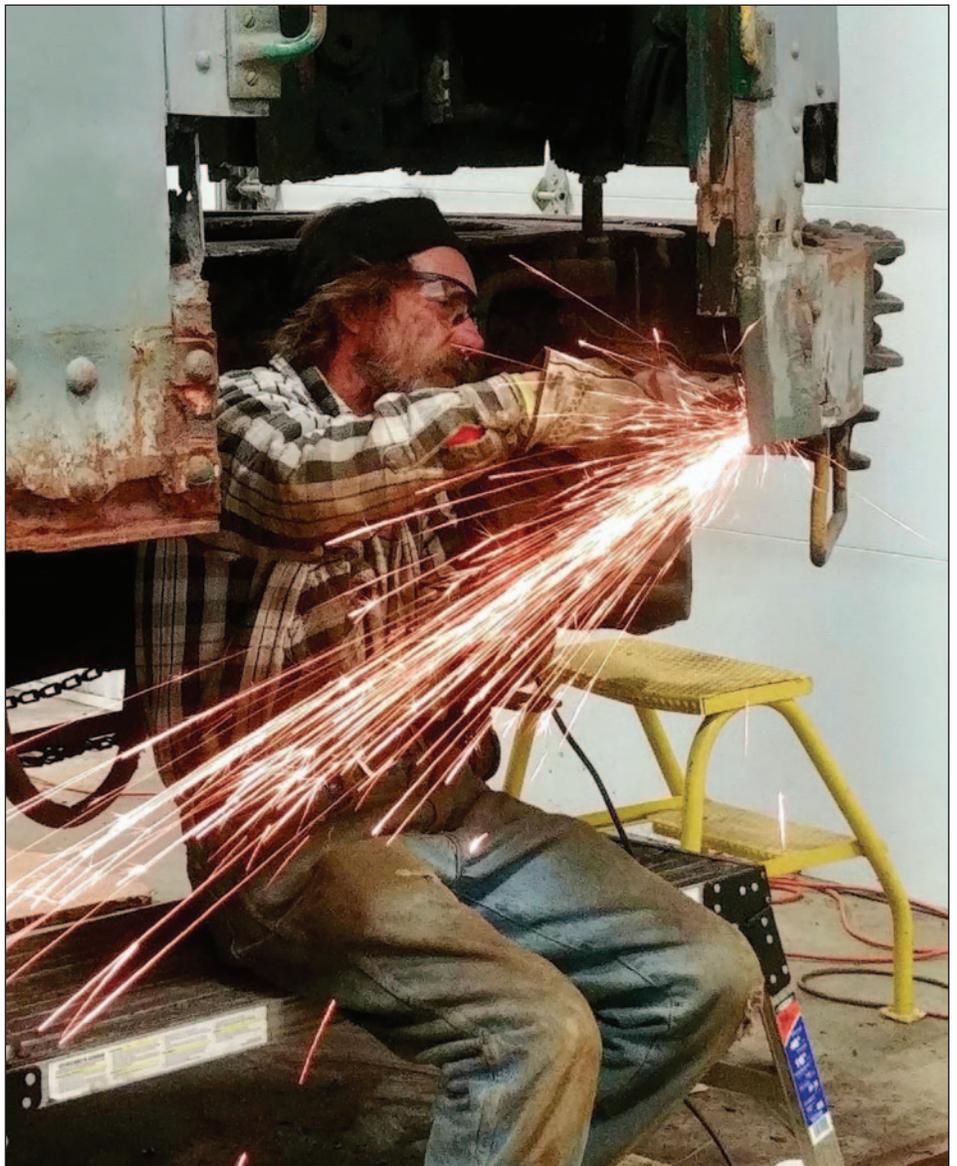
At the time we had neither the staff nor the facilities to do major structural work on a car. Quotes to have the work done professionally were too high for the organization to consider. So, the car was mothballed and stored indoors for over a decade.

In 2018, several volunteers asked about getting the restoration of Car 761 moving again. We now had a new maintenance facility, a healthy operating budget, and we were growing as a volunteer organization. The appeal of an operating North Shore car was still strong, especially among some of our younger volunteers. But after taking a hard look at the structural problems with Car 761, the consensus was that the work was still beyond our capabilities and budget.

Then a retired ironworker and certified welder named Mike Heck was asked to



▲ The rusty luggage racks were stored awaiting the budget to have them stripped and recoated with nickel. Paul Averdung later said the process of reinstalling the racks was like assembling a 1,000-piece jigsaw puzzle, since the racks had to be completely disassembled into individual rods and brackets for stripping and recoating.—Eric Zabelny photos



▲ Mike Heck cuts away rotted steel sections in this photo by Eric Zabelny.

▼ Here's what one of the vestibules looked like after we removed the layers of flooring above the frame.—Eric Zabelny photo



▲ Stephanie Zabelny sands one of the header panels to help prepare the interior for new paint.—Tom Fleming photo



▲ Eric Zabelny points to an open window after it had been cleaned and repaired so that it would open properly. Rotten wood and window frames were repaired or replaced, ensuring that this restoration was more than cosmetic. Eric is another former volunteer who rejoined the railroad to help with Car 761, a restoration project he worked on the first time it started.—Tom Fleming photo

think about volunteering at the railroad. Mike showed up and made an impact right away. He especially liked a clean and safe workplace and he set about cleaning up and organizing things in our carbarns, storage spaces and maintenance facility. It wasn't immediately known that Mike had

been an ironworker and welder, but as soon as that information surfaced, several of us asked him take a look at Car 761.

#### “I Can Fix That”

What looked impossible to the rest of us looked like just another project to an

experienced ironworker like Mike. He was confident he could fix the structural issues, including repairing the east end coupler mounting. In mid-2019, the Museum Board gave permission to move the car to the maintenance facility for a full assessment. News of our project got the attention of Paul Averdung. Paul was interested in coming back to volunteer if he could work on restoring Car 761.

The museum board did not feel it could fund a full restoration effort, but agreed to let the project move forward if funding could be found. Two volunteers immediately made contributions toward the project, allowing work to begin.

A detailed task list and budget were developed with help from Paul. In late 2019 we started a Charity GoFundMe page for Car 761, and in January 2020, we applied for a grant from the John H. Emery Rail Heritage Trust. In March we learned that the Emery Trust had awarded a \$20,500 grant toward restoration of Car 761. We raised \$4,000 through the GoFundMe campaign, and other volunteers and museum members came through with nearly \$20,000 more, allowing us to complete the project.

Before Car 761 had even been moved to the maintenance facility, volunteers began working to clean the interior of the car and to find parts and materials that had been removed or relocated during the years the car was in storage. Schematics and blueprints were located and hung on the walls



▲ In early March 2020—shortly before the pandemic shut everything down—volunteers helping with the restoration posed with Car 761 in the maintenance facility. You can see new mounting bases for the trolley poles in place atop the car. Standing in the photo from left are Dale Hansen, Paul Averdung, Tom Fleming, Alex Hummel, Steve McCarthy, Sue Budzien, Jerry Borzych, Mike Heck, Patrick Shepherd, Bruce Wilcox, Russell Griswold, Rich Burger and Steve Hitt. Standing or sitting on the car are, from left: Pete Frorath, Chris Schmidt, Evan Richards, Haylee Robinson and Alex Wilcox.—*Dustin Robinson photo*

of the maintenance facility in preparation for the renovation effort.

Once the car was in the maintenance facility, work began to replace and reconnect the brake lines. The compressor, which had been refurbished during the initial restoration, was energized and found to be in working order.

Crews began to strip the ceiling and remove the luggage racks. Ceiling paint and interior paint colors were confirmed with friends from the Illinois Railway Museum (IRM) before application. Paul and Eric Zabelny, another returning volunteer, repainted the ceiling. Paul applied

the primer coat and Eric followed with the finish coat. They worked with others to sand and patch the interior walls to be ready for repainting.

Mike Heck began to uncover and remove flooring, rusted steel plate and frame members from the east end of the car. He also cut away rusted steel from the front of the car and slowly began to replace frame members with new steel framing and cut, bent and welded new pieces of steel plate into place on the front of the car.

Where necessary, the crew removed and repaired or rebuilt window frames, window guides, window trim and wall panel seg-

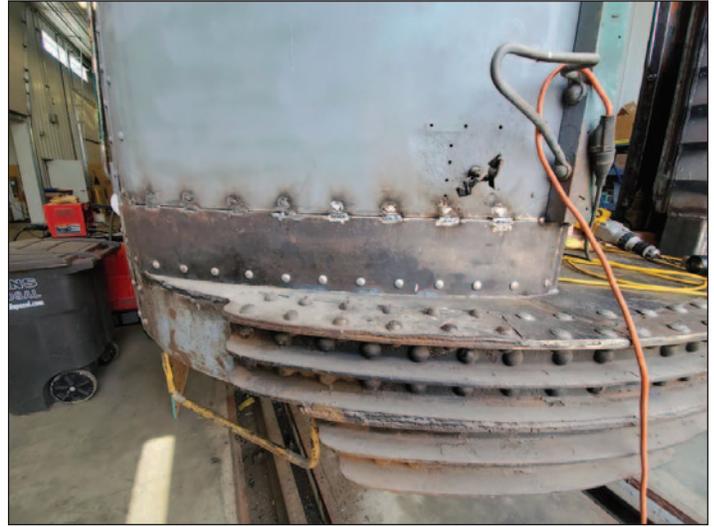
ments to make sure the final product would look good and work properly. New window frames were built for both ends of the car, since the originals had been lost or were too deteriorated to reuse.

Rich Burger began to identify, assess and size the new doors that had been built for the car more than 15 years earlier. He also began work to install the hinges, handles and other fittings that had been removed from the existing doors, then cleaned and polished by Steve Hitt and Patrick Shepherd.

When the flooring and sub-flooring were removed from the west end of the car,



▲ A view of the east end, with the corroded steel cut away in preparation for new replacement steel.



▲ By early May of 2020 the frame had been repaired and new steel was in place on the east end of the car. New steel plate was also installed and welded into place in the vestibule.—Eric Zabelny photo



▲ These photos both show one of the west end center posts of the car, with extensive corrosion and rot (left), and with new steel welded in place (right).—Eric Zabelny photos



▲ Wood sub-flooring and trim were installed in the east end vestibule by late May of 2020.



▲ Body filler had been applied over the repaired steel and sanded to prepare the east end for painting.

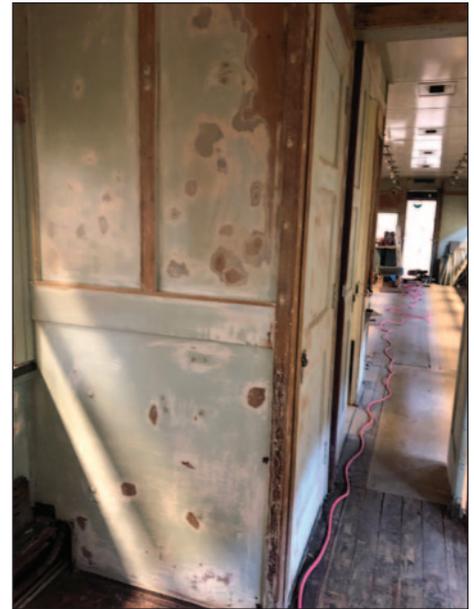
we found the frame and the plate steel nearly as corroded as the east end. So, after Mike finished the work on the east end,

Jamie Kolanowski joined the team and began the same process of rebuilding on the west end.

Meanwhile, other volunteers began to procure, cut and install sub-flooring and wood trim pieces to bring the east end



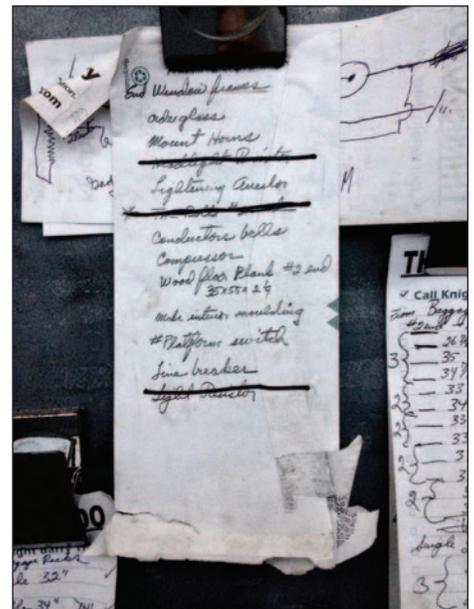
▲ Eric is hard at work grinding rust off of every nook and cranny of the body of the car. This was the most tedious part of the project for him and took three times as long as he estimated it would take.



▲ The interior of the car had been prepared for painting in this photo, taken in mid-July of 2020.



▲ Bruce Wilcox retrieves Car 761's seats from our Milwaukee Road refrigerator car, where they had been stored for almost 20 years.



▲ Paul kept lists of tasks attached to the car. These were a reminder to himself, but also a good way to acquaint new volunteers with the tasks remaining.

floor to its proper level. They found and rehabilitated three of the four stairwells with steel that had been fabricated for them in 2003. Work also picked up on the exterior car body, which included needle scaling, wire wheeling and sanding to prepare the car for exterior paint.

Once the seats were removed from storage, the reupholstering process began. The seat backs were removed from the seat frames, the upholstered side panels and arm rests were removed, and the cushion "blanks" were assessed as to whether they could be reused or needed to be replaced. The seat frames also needed to be stripped

and replated, since many of them were quite rusty.

While not the most physical or glamorous work, the seats were quite a project. Many of the fasteners used on the seats were nearly impossible to remove. Disassembling each seat took several hours.

Finding a source to strip and replate the seat frames proved difficult. Paul Averdung called every facility he could find in the Midwest and nobody could strip and recoat the seat frames with chrome. The frames are rather large pieces (roughly 3 feet by 4 feet), so smaller shops could not handle them. None of the larger shops did

chrome anymore, for environmental and regulatory reasons.

One company was willing to do the work: Gatto Industrial Plating in Chicago, Illinois. The finish would not be chrome, but the zinc coating they used was a close substitute. We took two seat frames down to Gatto as a test to see how they would look. The Gatto plant is large and their plating lines are huge (one line is called "Godzilla"). They completed the work

▼ Paul works to secure new steel sections just before the first external painting work. Note that the windows are all taped and ready.—Eric Zabelny photo



▲ After priming, the coat of red paint had been applied to the top of the car on September 9th.—Eric Zabelny photo



▲ The top of the car was wrapped in plastic and the bottom of the car had been painted with the grey base coat in this September 26th photo.

quickly and we brought the frames back for the team to inspect. Paul and Eric compared notes and agreed that the finish was acceptable and a big improvement over the rusty alternative. The cost was also much less than we had budgeted for chrome.

We rented a U-Haul truck and delivered the rest of the seat frames to Gatto. A couple of weeks later we made a return trip to retrieve them. We used plenty of pipe insulation on the frames where they would rest on the floor or might jostle each other and we secured the load with plenty of rope and bungee cords. We didn't want

the new finish to be ruined on the way back to East Troy!

Once the seat frames were back, they were identified for proper placement in the car. There are several sizes of seats and frames, so the arrangement had to be confirmed. The arm rests and upholstered side inserts were reattached to the frames, and then the frames were mounted to the seat bases. The back rests were reattached and the reupholstered cushions returned to each seat once the frames were in place.

The reupholstery work itself was done by a company our volunteer Bruce Wilcox works for: Homestyle Custom Upholstery in Bayview, WI. His company did a wonderful job on both the seats and on the remanufac-

tured window shades. The upholstery fabric itself had been purchased in 2002 from a British manufacturer that made fabric nearly identical to the original 1950s-era fabric used by the North Shore Line.

The original plan was to restore Car 761 to the green and light grey with red trim paint scheme that was on the car when it was delivered to East Troy. That paint scheme would have matched the look of the car starting in the late 1930s or early 1940s. We thought we would need a professional painting company to recreate the fluted stainless-steel look of the Silverliner era and we thought it would be too expensive.

But we didn't know two important facts. First, one of our museum volunteers, Steve



▲ Stephanie Zabelny applies the masking tape necessary to deliver the striping that will give the car a fluted stainless-steel appearance.

Rudolph, had contacted Dennis Storzek, who painted North Shore Silverliner Car 251 at IRM 40 years ago. From memory, Dennis provided pages of detailed instructions on creating the “shadow striping” technique used on the Silverliners. Second, Eric had used the instructions, plus a lot of his own “trial and error” work, to learn the technique.

First, he measured out and started masking the lines. It required a lot of tape and paper to overlap things so the overspray didn’t spoil the areas that weren’t painted yet.

The trickiest part was the shadowing technique itself, which required fine tuning the spray gun, making sure it had the right amount of paint and was set at the right air pressure. After many hours of fine tuning, he felt like he had the technique down pretty well. After painting the first shadow line, Eric’s nerves settled and the



▲ The tape had just been removed, revealing the terrific job done by Eric and Paul to recreate the stainless-steel appearance used by the North Shore line in the 1950s to modernize the look of their cars. You had to touch the car to make yourself believe that it wasn’t fluted stainless-steel.—  
*Eric Zabelny photo*



▲ Eric applies the shadow painting to the west end of the car in this photo by Tony Pignaloni.

process began to move along smoothly.

With the major painting finished, volunteers worked to finish installing the seats, painted and fit the doors for proper operation, and built the distinctive North Shore roof mats on both ends of the car. All the door handles, locks, vents, lighting fixtures and fans were reinstalled to return the car to its North Shore glory days.

Paul was also working to refurbish the group switch used in the propulsion and control circuits of the car. Then he completed installing the control stands at both ends of the car and ran the brake piping and control wiring through the newly

installed cab floors. Adjustments were made to the stairs, which were repainted and reattached, while the door traps were repaired and reinstalled.

In all, volunteers spent an estimated 6,000 hours restoring Car 761. Documented expenditures on the car were less than \$50,000, though there were many undocumented contributions that “just happened” along the way.

Since the dedication ceremony, Car 761 took its first revenue run on July 10th and has been a favorite for charter groups, including the local chapter of the National Railway Historical Society (NRHS), the



▲ In this photo, taken in late December 2020, Scott Patrick (another returning volunteer) had bent and placed the wood supports for the mats on each end of the car.



▲ In early January 2021, the interior of the car had been painted, the lighting fixtures and vent hardware had been reinstalled, the luggage racks were in place, and some of the seat mounting bases had been installed. One seat frame and several reupholstered cushions are visible in this photo. We purchased the flooring from the same company that made the flooring for the North Shore Line in the 1950s.



▲ An original North Shore Line herald plate is on the car in this March 2021 photo. We had one of the originals in our museum and another was donated by another returning volunteer, Tony Pignaloni. With help from Zach Ehlers and George Morissette, Eric ordered and installed authentic decals and lettering for the car, both inside and out.

◀ By late February, most of the seats had been reinstalled and the interior is close to being finished.—Eric Zabelny photo



◀ Ryan Jonas, President of the East Troy Railroad Museum, Tom Sharratt from the Emery Rail Heritage Trust, and Eric Zabelny spoke during the dedication of Car 761 on June 27, 2021.

▼ East Troy Railroad Museum Board members assist in the ribbon-cutting ceremony during the dedication. From left: Pat Doran, Ed Stayonovich, Steve Rudolph, Alice Rudolph (cutting the ribbon), Tom Sharratt, Ryan Jonas, John Giove, Bill Finke, Steve Southworth and Steve Thomas.—Scott Patrick photo



National Conference of the NRHS, two weddings, a Night Photo Shoot, a donor appreciation train, a classic car group visit and several other special events.

If you haven't seen this car yet, the operating season in East Troy began again in late April 2022. Why not plan a visit?

*Endnote: I would like to acknowledge assistance in the preparation of this article from Eric Zabelny and Steve Rudolph, fellow volunteers at the East Troy Railroad Museum.*