THE WCR PRESS

Issue No. 10 - Thursday, December 31, 2020

TENTH EDITION

As 2020 ends, and this is the Tenth Edition of the WCR Press, we hope this assists our volunteers, neighbours and partners to stay in touch during the temporary COVID-19 Pandemic shut down of our operations. We have been able for the most part to keep the St. Jacobs Restoration and Maintenance Facility open on a limited basis for some restoration projects to continue along with keeping our equipment operational and safe for when we may start operating passenger trains again in 2021.

We have also used this publication to showcase various initiatives planned for the WCR for when we can open again, and the vaccine is in wide distribution.

We have enjoyed providing a history of our operating heritage rail collection as well as reminiscing about other railway operations that have served this area over the years.

Reminiscent of what was a fixture on branch line rail service since Confederation, WCR mixed train combining freight and local passenger service was recreated this past fall led by WCR S-3 locomotive 6593 at Scotchline Road in Woolwich Township.

Mixed Train Madness – The Return of a Rural Stalwart

On rural branch lines across Canada, mixed trains were the backbone of both freight and passenger service to communities not located on rail main lines. A mixed train combined both freight and passenger service in one train and ran on a second-class schedule.

On Wednesday, August 17, 1955, Train M748 has just arrived in Orangeville from Fergus & Elora, with a box car and combine as the consist. Its power is D6b class 526, a rare item on the CPR roster at this late date. It was built by the North British Loco Works in 1903. Presumably this run was the last one for 526 as it left Orangeville for Lambton right after being serviced. Parked beside it is M756 recently arrived from Wingham / Teeswater with a coach and baggage/express consist. On the right is D-4 492 which arrived earlier with the afternoon way freight from Lambton and has distributed its consist onto the 2 storage tracks along the west side of the yard. Photo by Robert J. Sandusky.

Elora Mixed with D-10 953 has just left Cataract enroute to Fergus and Elora. Photo by Lloyd Baxter.

Another view of 953 on the Elora Mixed at CNR diamond in Fergus, July 9, 1955. Photo by J. William Hood.

Mixed trains also provided passenger service to locations on the rail line where no stations existed or were too far for some to get to a station to board. This is where a flag stop came in – the passengers would approach the rail line and use a green and white flag to signal the train they intended to board, and the train would stop and pick them up. Hence the name flag stop. This took place on the old Grand Trunk Railway and later Canadian National Railway's Waterloo Subdivision, the predecessor to the Waterloo Spur.

CNR Mixed train at Paris Ontario lead by RSC13 1700. Photo – Jim Parker Collection

The Uniform Code of Operating Rule (UCOR), the predecessor to the current Canadian Railway Operating Rules (CROR) under Rule 28 stated the following; "*A combined green and white flag or combined or flashing green and white light will be used to stop a train at the flag stations indicated on the schedule or in special instructions*".

A real find for us is thanks to Steve Bradley who is cataloguing the artifacts collected by the late Jim Brown who was, until untimely his passing in September, a good friend to the WCR and especially to both our Asst. General Manager Greg McDonnell and Steve Bradley.

In a call to help research this piece Steve found and forwarded this image of Canadian National Railway's Employee Time Table for Kitchener and dated September 27, 1931. At the time the Guelph Subdivision was called the Brampton Subdivision and the Waterloo Subdivision ran from the Brampton Subdivision in Kitchener connecting to the mainline at Ahrens and Breithaupt Streets. It ran from Galt through Kitchener and north to Waterloo and Elmira.

WATERLOO SUBDIVISION

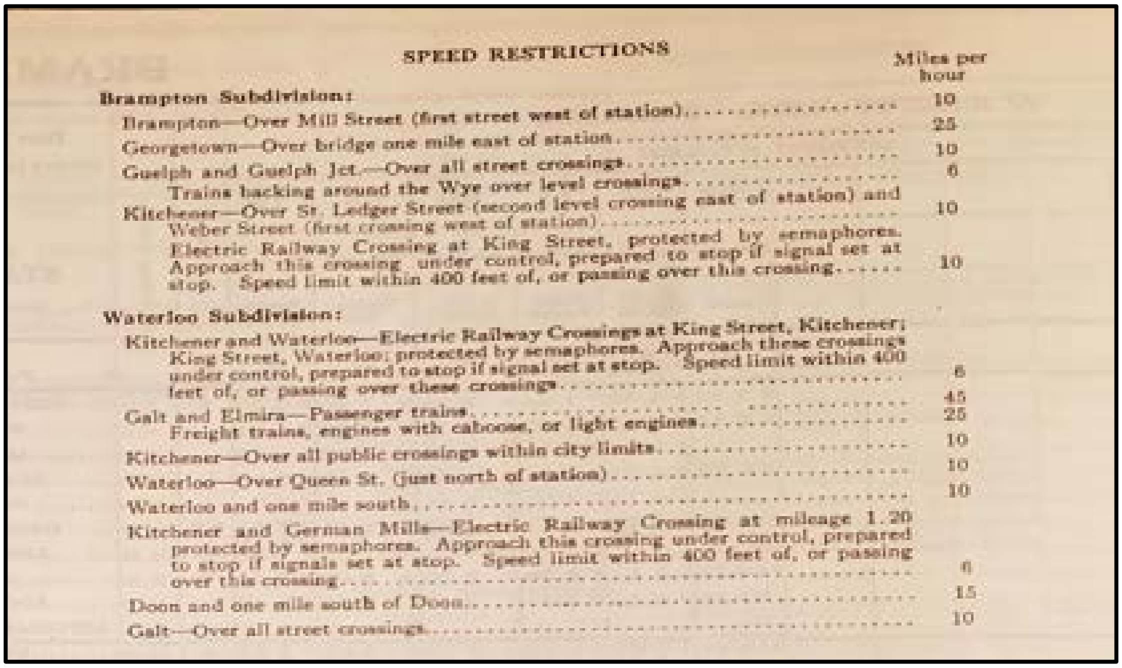
Northward Trains Second Class 325 Mixed	323 Mixed	Symbols	Miles from Kitchener Main Line Switch	Time Table No. 40 Effective September 27th, 1931 STATIONS	Train Order or Telephone	Car Capacity Siding	Other Tracks	Southward Trains Second Class 324 Mixed	326 Mixed
Ex. Sunday	Ex. Sunday							Ex. Sunday	Ex. Sunday
11.00AM		R	12.90	L. GALT A		YARD		10.40AM	
F 11.08			8.87	BLAIR				F 10.30	
F 11.12			6.87	DOON				F 10.24	
F 11.19			4.06	GERMAN MILLS				F 10.18	
S 11.30		W Y		A. KITCHENER L.	T			10.10	
11.55	6.45AM			L. KITCHENER A.		YARD		S 8.30	2.45PM
S 12.05PM	S 6.55		1.69	WATERLOO	T			S 8.20	S 2.30
F 12.13	F 7.03		5.82	HEIDELBERG				F 8.09	F 2.10
S 12.33	S 7.23		7.64	ST. JACOBS	T	18		S 8.05	S 2.05
12.50PM	7.40AM	R	11.73	A. ELMIRA L.	T	YARD		7.55AM	1.40PM
Ex. Sunday	Ex. Sunday							Ex. Sunday	Ex. Sunday
325	323			24.63 miles				324	326

No engine or car, the gross weight of which exceeds 160,000 pounds, must be allowed to pass over bridges between Galt and Elmira.

Rule No. 42 applicable on this Subdivision.

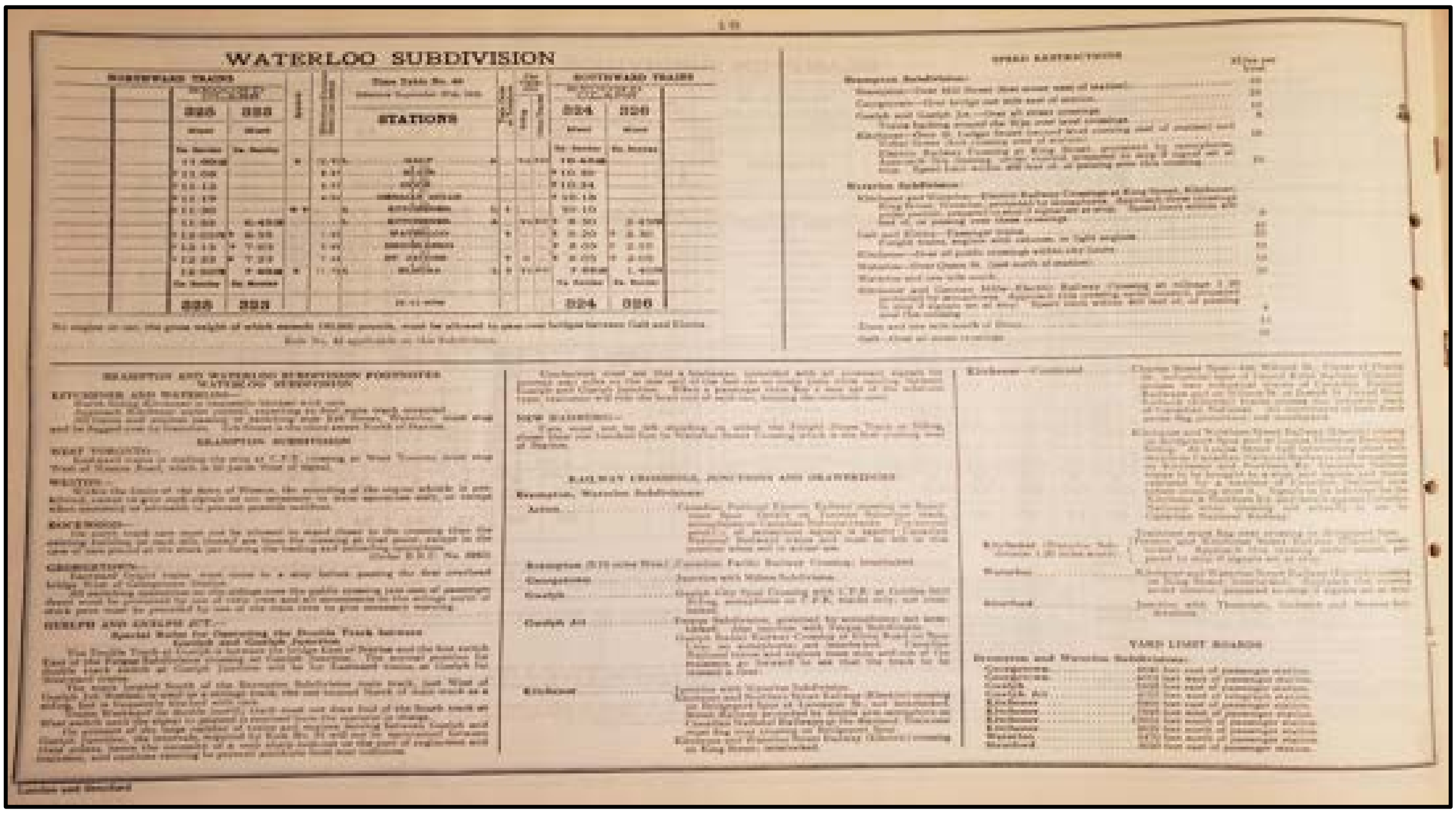
Canadian National Railways Employee Time Table, Waterloo Subdivision, September 27, 1931.
From the collection of James A. Brown

The image of that Time Table shown above indicates two mixed trains operating each day Monday through Saturday from Kitchener (with one of those starting in Galt) to Waterloo, Heidelberg, St. Jacobs and Elmira. Heidelberg was at that time a station stop in the area of what is now the Farmers Market. Both of those trains returned to Kitchener and Galt each operating day. Interesting to note when reviewing the footnotes shown below taken from the 1931 CNR Employee Time Table that passenger train speeds on the Waterloo Subdivision were 45 miles per hour while freight was 25 mph. Somewhat different from the maximum speed today of 10 mph.



SPEED RESTRICTIONS

	Miles per hour
Brampton Subdivision:	
Brampton—Over Mill Street (first street west of station)	10
Georgetown—Over bridge one mile east of station	25
Guelph and Guelph Jct.—Over all street crossings	10
Trains backing around the Wye over level crossings	6
Kitchener—Over St. Ledger Street (second level crossing east of station) and Weber Street (first crossing west of station)	10
Electric Railway Crossing at King Street, protected by semaphores. Approach this crossing under control, prepared to stop if signal set at stop. Speed limit within 400 feet of, or passing over this crossing	10
Waterloo Subdivision:	
Kitchener and Waterloo—Electric Railway Crossings at King Street, Kitchener; King Street, Waterloo; protected by semaphores. Approach these crossings under control, prepared to stop if signal set at stop. Speed limit within 400 feet of, or passing over these crossings	6
Galt and Elmira—Passenger trains	45
Freight trains, engines with caboose, or light engines	25
Kitchener—Over all public crossings within city limits	10
Waterloo—Over Queen St. (just north of station)	10
Waterloo and one mile south	10
Kitchener and German Mills—Electric Railway Crossing at mileage 1.20 protected by semaphores. Approach this crossing under control, prepared to stop if signals set at stop. Speed limit within 400 feet of, or passing over this crossing	6
Doon and one mile south of Doon	15
Galt—Over all street crossings	10



The WCR has used a variation of the flag stop over the years picking up families who live adjacent to our track. We intend to offer this service again to our neighbours living adjacent to the tracks giving them the traditional flag used to signal the train to stop.

With the inception of the ION light rail transit system operated by Grand River Transit (KEOLIS) it is the first time since the middle of the last century that you are able to take a railed vehicle from the area of the now VIA Rail (former CNR station in Kitchener) through to “Heidelberg” (aka: Farmers Market), St. Jacobs and Elmira.

This can be now accomplished again by taking the ION anywhere on their system to the ION Northfield Drive Station in Waterloo and then walking across the street to the Waterloo Central Railway’s Waterloo Station stop and then take the WCR north to the Farmers Market (Heidelberg), Village of St. Jacobs finishing in the Town of Elmira.

Waterloo Subdivision Heidelberg Station originally located at Mile 5.82 in the area of the current Farmers Market near King Street in Woolwich Township. This structure no longer exists. From the collection of Brian Craus

A key component of our 2021 service plan calls for the return of mixed train service to the Waterloo Spur and Woolwich Township. We expect this to be scheduled and while not taking place on every operating day it will be advertised to both rail enthusiasts and those who would like to experience this type of travel from our past.

It is envisioned that the mixed train service will be a premium offering that also includes our restored 100 plus year old TH&B caboose 61 along with our old heavy weight coach 1437, baggage - rural mail-express car, TH&B freight cars along with food and refreshment.

As we reinforce our heritage philosophy, historical operational details are critical to the travel experience. We are going back to offering a detailed experience by mandating that all of our trains now employ the kerosene rear of train marker lamps along with other rail operation details such as traditional railway uniforms-attire for Conductors, Trainman & Engineers.




Volunteer Spotlight – Norm Etheridge – Past President - SOLRS

This past fall after many years as a Director and then President of the Southern Ontario Locomotive Restoration Society, Norm has decided to step down from his active role on the SOLRS Board. Norm has played a key role as a volunteer on the Waterloo Central Railway team working on numerous restoration projects, crewing our trains and shaping this organization since his first day with us.

Norm was first introduced to Waterloo Central Railway ten years ago by the late Don Shiell and remembers volunteering shortly after at the St. Jacobs Restoration and Maintenance Facility (shop) was completed. He was not familiar with trains but had always loved being around large vehicles and equipment and is no stranger to such things.

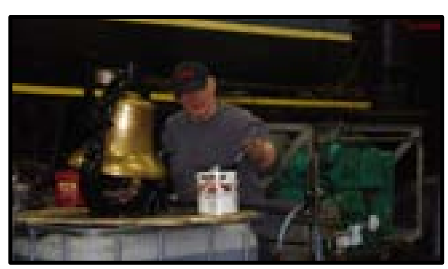
Norm is in the back row, third from the left – at HMCS Venture – approximately 1954-55

Norm joined the Royal Canadian Navy in 1954 in Vancouver, BC as a cadet stationed at HMCS Venture for Officer training. After graduation and he went to Naval Air Station (NAS) Pensacola Florida for flight training with the US Navy. Upon his return to Canada he was stationed at HMCS Shearwater in Halifax, Nova Scotia. From this base of operations, as a RCN pilot he patrolled the eastern seaboard, patrolling for submarines and engaging in rescue missions.

Norm also spent time as a course instructor with the air force in the prairies and served time as part of the 32 Utilities Squadron and the Operational Squadron (VS880). While stationed on the east coast Norm had the distinction of making carrier take-offs and landings on our last surviving aircraft carrier the HMCS Bonaventure. Testimony to Norm's contributions to Canada's defense was that during his time in Halifax not one enemy plane made it past Halifax.

In 1966 Norm joined Trans Canada Airlines (TCA), prior to it becoming Air Canada flying passenger aircraft as well air freight which he particularly enjoyed as they were issued leather flying jackets. During his time flying for Air Canada his favourite plane to fly was the Lockheed L-1011 TriStar. After 30 years flying for Air Canada, Norm retired in 1996 at the age of 60. The WCR was very fortunate that Norm decided to give the WCR a try as a volunteer and has become a happy fixture on the railway.

"The volunteers at Waterloo Central Railway are some of the finest and friendliest people I have ever worked with." Says Norm (then he adds with a chuckle) "and I have worked with A LOT of people". Norm spent many of his earlier years at Waterloo Central Railway doing various jobs around the shop, including painting and work on No. 9. His favourite project he worked on was helping with No. 9's ten-year boiler inspection in 2010. He has also enjoyed painting the interiors and exteriors of various coaches and caboose 482.



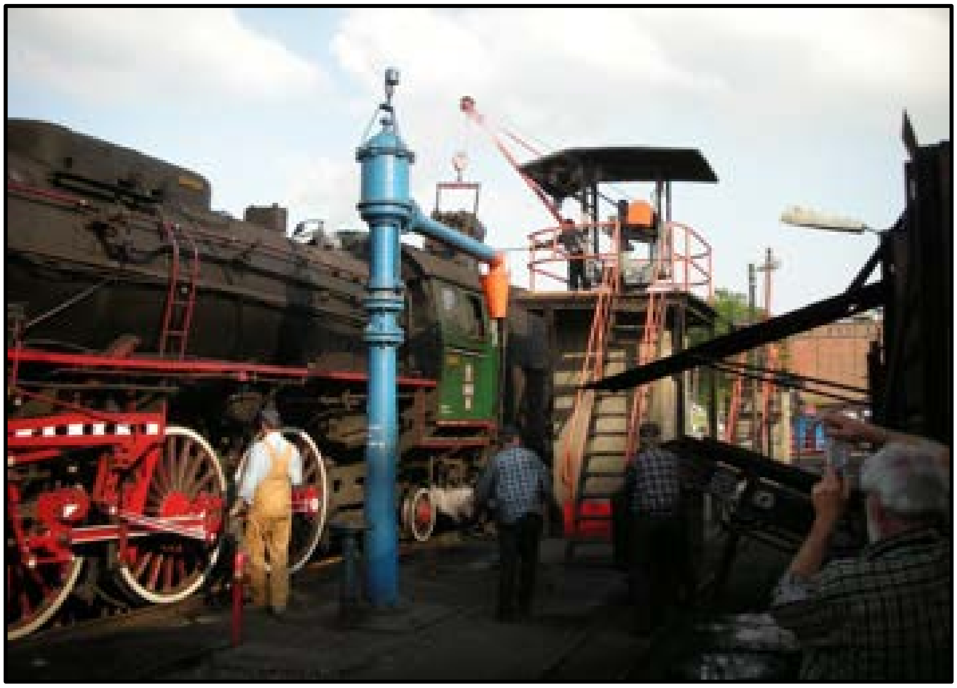
Even during a global pandemic, Norm helped keep our organization true to its mission in continuing to preserve the history of Canadian railways. We would like to sincerely thank Norm for his work on behalf of the WCR and SOLRS. He is still volunteering with us after retiring as President and we are fortunate to have such a wonderful and decent man as a friend.

To sum Norm up, all that needs to be said is that Norm is a true gentleman.

The Wolsztyn Experience – Steam in Poland – Part 2 - *David Banks*

Having completed our day on the narrow gauge it was now time to crew on the main line passenger train from Wolsztyn to Poznan Glowny. We were up early, 0400hrs to work the 0527hrs train arriving 0717 hrs. Loco was OL49-23 a 2-6-2 for the 110 mile 1 ½ hr. run.

I was paired up with Fred Beeton from Ottawa; we each fired one way and drove the other way. The OL49 class was built between 1951 & 1954, 119 were built for PKP.



Wolsztyn coaling and water station

We met our Polish Locomotive Engineers (Maerek and Ryszard) at the station and prepared for the run. They did not speak any English really but we communicated fine by hand gestures. They basically stayed in the background to offer assistance if required.

This is a regular scheduled commuter train, so you had to stay on schedule. Precisely on time the guard blows his whistle and we are off.

There are 19 station stops to Poznan, some spots between stations we could hit 60 mph. The weather was hot so firing was not an easy job, big firebox to keep a good fire in. Some very nice countryside and as we get close to Poznan we pass some old communist style architecture.

The last bit of the run we were put on the main line under the electric wires this had to be bang on time as a very busy line.

We arrived on time probably close to 300 passengers got off.

The Polish engineers were very mischievous at times, and always came to the platform side of cab to check out the ladies.

Poznan Glowny

Driving (Locomotive Engineer) on the way Poznan Glowny

We then uncoupled the locomotive and went to the yard to turn the locomotive on the turntable and took on water then back to the train for the return journey. We left at 1135hrs back to Wolsztyn.

On the return journey a bit of excitement. It was raining slightly approaching a crossing, blowing the whistle, all of a sudden from a line of stopped cars the last one pulls out and was going to try and cross, at the last moment as we are on the crossing he put on the brakes and slid to a stop literally a couple of feet from the side of the engine.

It all happened in a flash as we were doing probably 60 mph, sure got the heart racing. We arrived back at 1320 hrs. passengers unloaded, we uncoupled from the train and ran back to the engine shed where we did some maintenance and cleaning, engine was prepped for the next day run, coaled up and watered. The next day we had off so Fred and myself took the train to a fantastic agricultural museum a large collection of steam engines and equipment. They had a pair of ploughing engines and the plough, copies of Fowler. Was well worth the visit.

Engine Shed at Wolsztyn

Once passengers unloaded, we uncoupled from the train and ran back to the engine shed where we did some maintenance and cleaning, engine was prepped for the next day run, coaled up and watered. The next day we had off so Fred and myself took the train to a fantastic agricultural museum a large collection of steam engines and equipment. They had a pair of ploughing engines and the plough, copies of Fowler. Was well worth the visit.

Interior of Engine Shed at Wolsztyn

WWII bunkers along the main line leading into Poznan Station

The following day we had another early morning turn to Poznan, same loco with Engineers Ireneusz (Irek) and Ryszard (Richard). At one station the Conductor comes up to the engine with some orders, he is walking back to his coach blows the whistle for us to go but his door closes, Irek is laughing and tells me to go and the Conductor is now running to get into his coach, he made it safely.

Next time our last two days a trip in the mountains and then a trip from Wroclaw to Jelez Laskowice on locomotive Tkt-48 2-8-2T.

WCR's "New" RDC Update

Our acquisition and efforts to get former VIA Rail Budd RDC's 6205, 6135, 6148, 6111, 6138 to our shop in St. Jacobs is making progress with the units being readied for movement at the VIA Rail Toronto Maintenance Facility (TMC).

The WCR's "new" RDC's in these 2 photos are framed by the Toronto skyline as we work on them at TMC. A VIA locomotive is at the far end of the photo to provide train air to test the brake equipment as the repairs progress

These units will be lifted by CN and brought to St. Jacobs by freight train but before that can happen, we must ensure they are safe to travel and that the brake systems are in in good working order. Several of these units have not moved in well over 20 years along with several having had some parts removed over that time to keep the VIA RDC fleet running. Those units most affected are the "scrap" cars 6111 and 6138 which we purchased for parts.

Over the last several weeks Matthew Schilling, Greg McDonnell and Norm Gelinas have made over a half dozen trips to TMC to work on these units in the field and outside in winter conditions. We have also been very fortunate to have had the advice and assistance of Brian Craus who was a volunteer with us when he was younger and is now back again. Brian also works for VIA as a Car Inspector. Due to the issues pertaining to COVID-19 each trip required extensive safety forms from VIA to ensure our safety as well as that of VIA staff we would encounter. Our units were moved to an isolated spot away from other equipment to protect everyone.

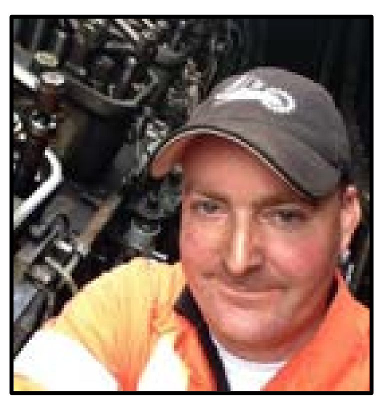
The three stored serviceable units - 6205, 6135, 6148 - we plan on putting back into service first once home are essentially ready to go. However, we are finding 6111 and 6138 the most challenging. In both of these units' substantial brake systems had been removed such as the main air reservoirs and other critical parts that will not allow the units to pass a brake test. The extent of the work required to get these units moved has been a challenge for us. We are very fortunate to have Norm who has experience with CPR Budd cars from earlier in his career working in Sudbury.

We also would not be able to even attempt this work, which was a great deal more than expected, without the cooperation of VIA Rail and the Senior Property Manager, Asset Management at TMC Mr. Andre Fennell. From our first inspection visit some time ago to the numerous recent trips to make the cars mechanically fit, Andre has been very supportive. We could not have attempted this work without his support and cooperation for which we are extremely grateful.

Each RDC unit has a direct drive shaft from the diesel engine slung underneath to one axle per truck assembly.

To move these units CN required that the drive shaft be disconnected from the transmission-torque converter on each axle. Norm, Greg & Matthew are shown here disconnecting the driveshaft on 6111 and slinging it in the bracket designed for this use.

Once we got into this it was apparent additional expertise was required. and in that we have found our Guardian Angels in the form of Chris Fox and Jason Shron of Rapido Trains.



Chris is a Locomotive Engineer with Metrolinx and the Chief Mechanical Officer for Rapido Trains. Rapido purchased RDC 6133 in Moncton saving it from being scrapped and brought it back to Toronto and have since gotten it running again. Along with this and several other RDC's Rapido purchased Jason, Chris and their team are restoring former VIA sleeper Edmundston and other units such as the last surviving LRC locomotive.

During his 5-hour layover each day between trips shepherding GO passengers from Hamilton to Toronto, on an almost daily basis, Chris has been using his off duty time to guide us through and do the lion's share of the work to get our RDC units in service and safe to travel. We cannot adequately express our gratitude to both Chris and Jason.

Jason Shron who is the founder and CEO of Rapido trains along with Chris have loaned us many major pieces of equipment such as the 2 main air brake reservoirs to replace the equipment missing from our cars. As our units are spare cars and we are using them for parts, we just need to get them to St. Jacobs after which we will take the loaned parts off and return them to Rapido. Their generosity and advice has been priceless to us. If it were not for their help and good nature there would be a good chance, we might not have been able to get all the cars back to St. Jacobs.

At the time of this article being written we were getting close and Chris was committing his vacation to help us get these cars out of the TMC. When you have a moment please check out the attached videos from Rapido trains as to the progress being made with their Budd RDC. https://rapidotrains.com/content/saving-rdc-1-6133

With the main air reservoir missing from 6111, Rapido loaned us one from their units.

Norm, Greg and Matthew are shown here hoisting the “new” reservoir in the field into place using a series of straps and come-along.

Norm, Matthew and Greg have hoisted the tank into place and are working on lining it up with the car’s air line on both ends of the tank and secure it to 6111.

This was quite an endeavour given this tank weighed several hundred pounds.

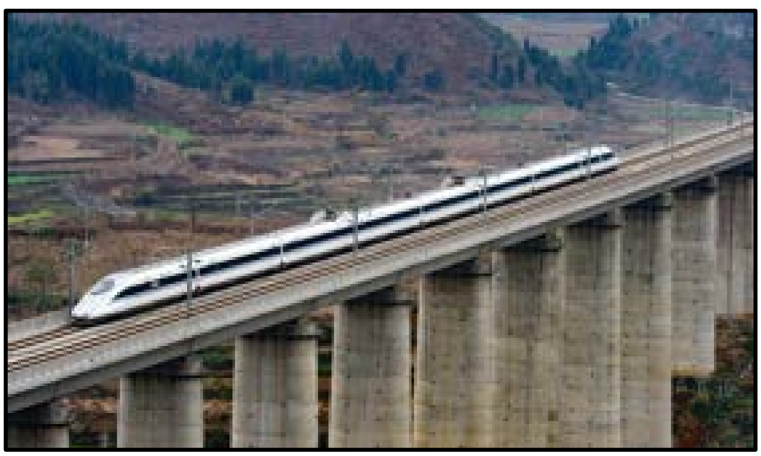
Chris Fox is shown doing the final inspection of the newly secured main reservoir on 6111.

On each visit to the TMC we must request of VIA to place a locomotive at one end of our cars to provide air so we can determine if the repairs are working. Chris & Jason with Andre's cooperation have permitted us to place Rapido's operational RDC-1 6133 to provide an air supply for this work.

Keeping On Track - *Maurice Dusseault, Professor at University of Waterloo and co-founder of InspecTerra Inc.*

Those elegant locomotives and well-appointed heritage passenger wagons that we admire travel on steel rail tracks. Obvious, perhaps, but the tracks must be maintained: on all railways, all the time, for goods and personal safety.

Track ballast and sleepers form the railway base, and steel rail forms the roadway. Steel rail technology has changed over the last 100 years. From individual sections bolted together (the source of the clickety-clack train sound that everyone recognizes), the industry now lays continuous track, with long sections laid and welded together in the field. The storied train sound is different now, and the advent of high-speed trains such as the Shinkansen in Japan and the TGV in France a generation ago means that these tracks must operate at a remarkably high-performance level. A passenger train derailment because of a track flaw at a speed of 325 km is unthinkable. So far, it appears not to have happened; derailments have been largely the result of other factors such as collisions or human errors.



Nevertheless, in Canada, even though we have yet to commit to high-speed trains, steel rail flaws are responsible for many derailments each year. Our climate is challenging with exceptionally high temperature differences over a year, distances are large, unit trains are long, and mainline traffic is heavy. But we want to maintain and even increase rail transportation because it consumes one-quarter the fossil fuels per kg-mile as truck transport. We may even think of electrifying some routes between major cities in the future, and if we build a high-speed train between Québec City and Toronto, or even to Windsor (through Kitchener-Waterloo and London), it will be electric, and passengers will be able to go from city to city, downtown to downtown. I have travelled extensively in China and Europe and can attest to the comfort of high-speed train travel.

Keeping a track in great shape involves not only maintaining the track alignment and vertical smoothness; it involves an on-going process of flaw identification, tracking, and rail section replacement when needed. So, what kinds of flaws exist and how are they detected?

I will talk about this, using a few images purloined from the web (and referenced), and then talk about a new technology that some of my younger colleagues have developed that may greatly improve flaw detection reliability while reducing costs.

Derailments

Via Rail derailment near Winnipeg on Dec. 31, 2019 caused by track defects (image courtesy of CBC.ca).

To emphasize the costs, rail track breaks caused by flaws and defects represent a leading cause of train derailments in North America, with over 10,000 derailments in Canada alone since 2004 (from all causes).

These events have resulted not only in loss of life and extensive damage to property and the environment (e.g., chemical spills), but also in major financial losses and disruption to rail transportation services.

CN tanker train derailment in Gainford, AB, on Oct. 19, 2013 caused by rail defects (image courtesy of the Edmonton Journal).

A large derailment is a tens of millions of dollars loss to the operator, and even a moderate derailment can easily reach ten million dollars with all the losses taken together.

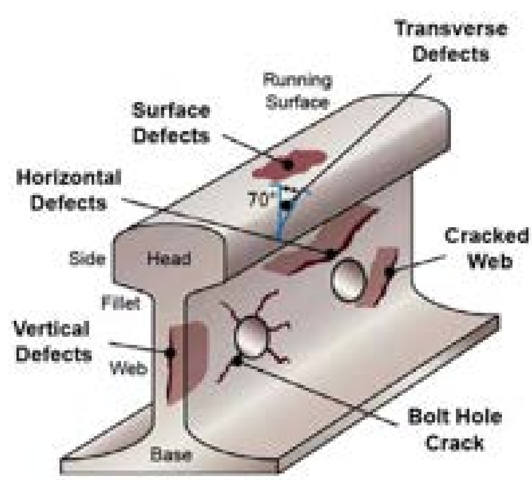
With the continued increase in train traffic, train speeds and freight loads along Canada's main lines, maintaining the condition of the track is thus even more critical.

Rail breaks can initiate from defects in the rail or excessive stresses from passing trains and temperature variations (e.g., extremely cold temperatures leading to embrittlement fractures). While the majority of rail defects (both internal and surface flaws) occur in the rail head, critical flaws can also occur in the rail web and foot (i.e., base).

Types of Rail Defects

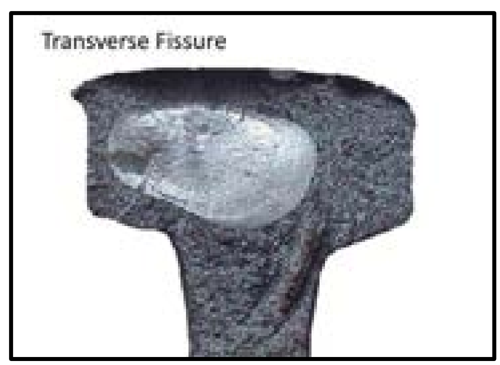
Some of the more common defects to watch for are labeled in this image.

Rail defects include many types of surface flaws, such as worn rails, corrugations, and rolling contact fatigue (RCF) initiated problems, such as surface cracks, head checks, squats, spalling and shelling, as well as various internal defects. Also, internal weld defects can lead to stress concentrations and eventual cracking.



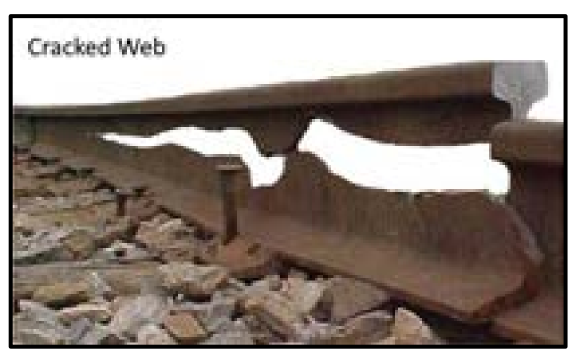
Although many surface flaws are not a huge concern of themselves, they affect loading stresses at the wheel/rail interface, which can lead to more serious defects. The repeated loading leads to alteration of the rail head geometry and the initiation of other more serious defects such as axial cracks.

Transverse defects can be initiated internally below the rail surface with no visual evidence until the rail cracks, so it appears as if these types of fractures develop suddenly. They are particularly dangerous in curved track sections. In the image below, you can see how the crack grew internally until the rail could not take the loads, and suddenly split transversely.



Longitudinal defects also occur below the surface of the rail and can reach lengths of several feet. These defects can split the rail head into two parts, resulting in a large section of broken rail.

These two photos below show extreme cases, but even a much smaller case carries high risk levels because the consequences can be so large.



Rail Flaw Detection

Sperry Rail Inspection Car. Photo by Andreas Keller, Bayview, ON, Apr. 5, 1986, courtesy of http://www.northeast.railfan.net

To minimize the probability of derailment caused by flaws and steel rail failure, the rail industry proactively searches for critical track defects to avoid the serious consequences of large-scale cracks or broken rail. Inspection is governed by regulations, such as Transport Canada's Track Safety Rules (TSR), and the 49 CFR Part 213 - Track Safety Standards in the US.

These standards list the critical rail defect types and sizes that will halt traffic until the rail is repaired or replaced, or that will lead to partial loss-of service, such as speed or wagon load restrictions. The regulations also set out minimum requirements for flaw inspections in terms of frequency and performance requirements.

While significant surface flaws can be identified visually, smaller surface breaking cracks and critically important internal defects are more challenging. One of the first methods to locate internal defects was developed by Dr. Elmer Sperry in the 1920's, who built a rail inspection car that used large magnets to induce a strong magnetic field through the rail and coils for detecting the flux leakage for potential defects. Since then, Sperry Rail Service has grown into a leading company in rail flaw detection, with their familiar yellow flaw detection vehicles or "Sperry cars".

Today, the most common flaw detection technique is ultrasonic testing (UT). Ultrasonic sound waves (vibrations) are generated along the rail by transducers, with the sound waves reflected back to the transducer to be recorded. The data are then analyzed digitally and screened by experienced operators to identify defects of different magnitude.

For surface flaws, such as RCF related defects, both the magnetic flux leakage (MFL) method and eddy current testing are used for detection.

New Flaw Detection Technology

The biggest challenge for railway operators is to monitor thousands of kilometers of rail track on a regular basis with flaw detection technologies that can be operated reliably at high speeds, ideally, the same speeds as the revenue trains. As mainline traffic pushes capacity limits, to avoid delays and run both passenger and freight trains on time, there is reduced opportunity to inspect and maintain the tracks. Current inspection technologies, such as ultrasonic test cars and trains, cannot inspect the rails at the speeds needed to blend in with normal train operations.

Our group at the University of Waterloo has been developing a new inspection technology based on the passive magnetic inspection (PMI) technique. Rather than imposing a strong artificial magnetic field on the rail using large (and expensive) electromagnets, we use highly sensitive sensors to passively measure the existing magnetic field around the rail.

Because steel is a ferromagnetic material, the rail distorts the earth's magnetic field, and if the steel rail has no flaws, this distortion should be the same along the track. But, internal and external defects alter the consistent ferromagnetic properties of the rail steel, leading to detectable anomalies (flaws) in the magnetic field along the track.

Field testing our prototype flaw detection device in St. Jacobs

Because the method does not require any contact with the rail, it can be operated at high speeds.

Our development work, with our small start-up company InspecTerra Inc., has been supported financially by Transport Canada's Rail Safety Improvement Program (RSIP), and by the enthusiastic volunteers and staff at the Waterloo Central Railway (WCR).

We have been conducting field testing of our prototype device at the St. Jacobs train yard, with encouraging results. In addition to the hardware development, a key part of the work is the advanced signal analysis software that is required to analyze the complex magnetic field data from the sensors at speed. The next generation version of the field testing platform is ready, and will be undergoing testing on the WCR tracks in early 2021.

In addition to rail flaw detection, the same technology can be used to detect corrosion and defects in other ferromagnetic (i.e., steel) objects, such as the steam boiler on old Engine No. 9.

Using our small hand-held device, we scanned the wall thickness of a small section of the boiler shell as a demonstration, with very good results.

You can imagine other applications yourself: if it is made of steel and might corrode or crack, InspecTerra should be able to help you monitor its condition and reduce your risk.

Measuring the No. 9 boiler wall thickness using our hand-held scanner.

The Future

So, where will this lead? If all goes well, and our early tests are promising, we will first test at low speeds, then higher speeds all along the Waterloo Spur. Ultimately, the goal is to develop a PMI inspection platform (e.g., a separate inspection carriage, or bogie), that can be mounted at the end of any train for collecting data at speed along branch and mainlines.

The magnetic data will be collected and analyzed in "real-time" by a powerful local microprocessor with special "event detection" software and encoded to a specific location on the track using an internal GPS system. Once the technology is proven in practice, artificial intelligence software will be developed and "educated" with the large data base to improve detection and interpretation, guiding track condition assessment in real time to assure a high level of safety.

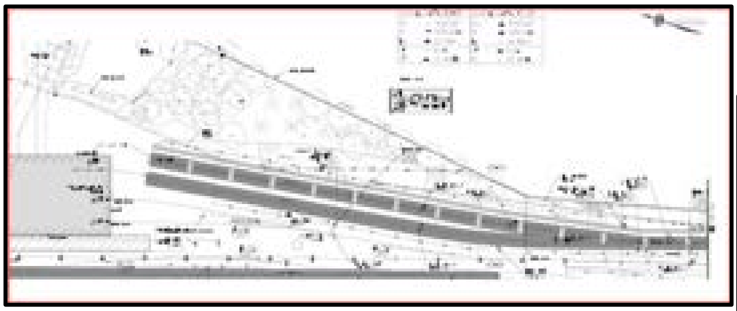
How much will it take to develop this technology to a useful state for Canadian track owners? Far less than the cost of a typical derailment.

And, if we can get the method working well at high speeds, we can even integrate it into the high-speed rail system to help maintain the highest standards of operational safety. Then, we'll say – "It started with the WCR, InspecTerra Inc. and the UoW."

New Track Construction Project - St. Jacobs Restoration & Maintenance Facility

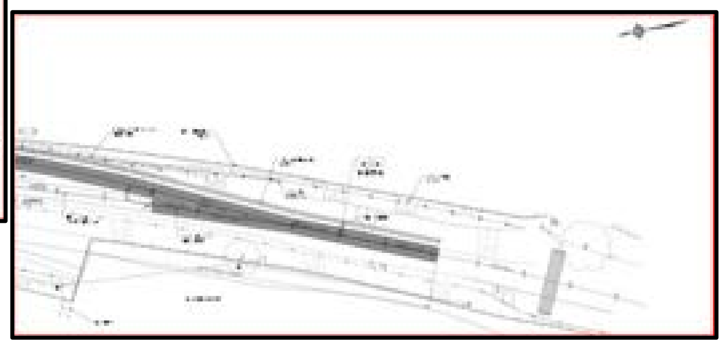
In November we moved ahead with a long-standing project calling for the installation of additional turnouts and tracks at the St. Jacobs Restoration and Maintenance Facility (shop). This project is the largest undertaking by our organization since the construction of the shop several years ago. This will provide the required space to store an entire train in one piece without breaking it up after each use as well as freeing up space on the St. Jacobs run around track allowing us to progress with several aspects of our 5 and 10 year plan for the future of the WCR. It will permit numerous operational variations that we can not do presently.

It was designed and shepherded over several years by John Vieth and Dave Banks through several different phases from GM Blueplan who did the drawings and the Region of Waterloo to obtain the required approvals. It entails the installation of new turnout (switch) on the Waterloo Spur "main" track south of the shop leading to new shop tracks. Extensive grading and site preparation for the new tracks and additional turnout required to split those 2 tracks is also needed.



Track plans showing two new shop tracks and new turnout from shop tracks.

Track plans showing new turnout leading from "main" track to new shop tracks.



PNR Railworks arrived in mid-November to start construction of the first phase which was the new No. 10 right hand turnout (switch). They constructed the turnout using a relay switch we had in stock, on the platform away from the area where it was to be inserted into the main track. When the turnout was completed, they cut out a piece of the "main" track where it was to go, dragging the newly completed turnout to the desired location and inserting it. This method does not compromise the main track and allows it to remain open except for one day instead of 3 or more days if built in place.

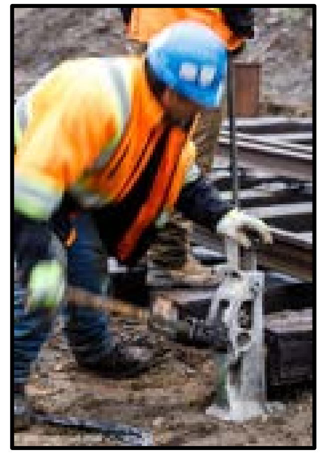
These photos show that process of the turnout construction from beginning to end. This switch lived to serve us another day and was originally from our Uptown Waterloo Station run around track and donated to us by the Region of Waterloo when that track was removed for the ION system.

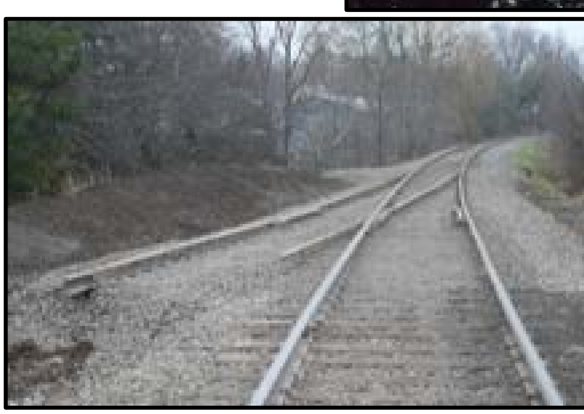
PNR crews lay out and construct the switch while the excavations take place to insert it into the "main" track.

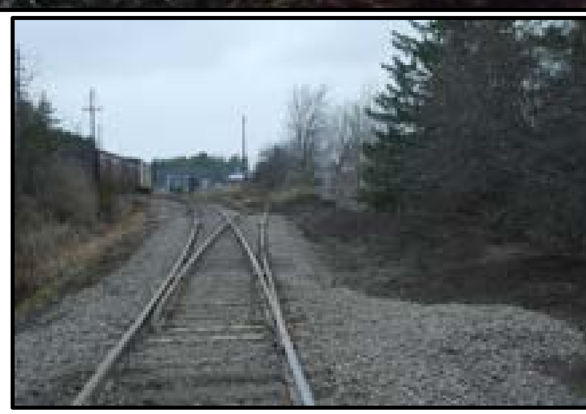

CAT


CAT


© greg mcdonnell 2020







PNR crews move the completed turnout to the Waterloo Spur dragging it down the track to its new location, inserting it into the Waterloo Spur "main" track. The two photos immediately above show the new turnout in place facing south towards Waterloo and north to the shop.

With the new turnout in place, inspected and the Waterloo Spur "main" track in service, the next step was the removal of a tremendous amount of earth to the south of the shop where the two new shop-storage tracks and additional turnout are to go. Along with that part of the excavation, readying the roadbed, new required drainage, remedial work on existing drainage, ensuring a compacted roadbed, laying of a protective cloth to keep the clay from weeping up through the ties and the laying of the first level of ballast to permit the laying the ties was required.

The excavator for this critical assignment was Claude LaRue of TDC Excavating. It was readily apparent after the first day of excavation that when the shop was first constructed the excavated material was not removed from the site but spread out in this area adding additional material to be removed now.

This along with substantial pieces of old concrete and ties found buried were also disposed of. What is interesting is that when Claude got down to the level of the new roadbed it was already substantially ready to go.

In researching old photos and diagrams from the mid-1930's there were a number of rail tracks in that area prior which had been removed. We were able to take advantage of that primary roadbed for our use.

The plans required a series of Hickenbottom drains (above) that run several hundred feet south from the shop parallel to the 2 new tracks. They were installed along with the required gravel, backfilled and the site was ready to proceed with the ballast.

What also contributed to the great amount of fill to be removed was that we had to go down almost 2 feet below the existing rail head over the entire area being excavated. We originally planned to excavate just one track this year but when considering the scope of the work and costs now against doing it in the future we decided to do it all now.

One thing we were able accomplish with this undertaking was to clean up trackside at the south end of the shop on both sides and going up the old Home Hardware siding.

Claude was able to smooth and level out rough walking areas thereby providing a higher degree of safety for our crews switching in the area as well as contributing to a generally higher esthetic quality for the area. We plan on seeding these areas with wild flowers in the spring.

The orange stakes show the centre track line for the 2 new tracks.

With the ballast spread out in a depth of 4 to 6 inches, the area is now ready for our volunteers to commence laying the ties we have on site. We also received a donation of 60 concrete ties that will be used in this area. Concrete ties come with the tie plates installed and we plan on using these at a predetermined space with the wood ties to assist with providing the correct gauge as we move along.

While we were fortunate to find a good clay base for the roadbed it also required spreading the cloth over the entire area to prevent water from seeping up. In high clay areas, where rail is present, after several years the clay will work its way up through the ballast eventually covering the ballast with clay. The black covering in these photos is that material.

It is expected we will have enough ties for the one long track that runs along the property line and very close to having enough for the second track that runs off the long track. We also have in inventory one additional switch and are determining if it is the correct one for our application. If not, we are investigating trading all or parts of it for what we require to complete the work. We will also have to acquire a few more relay switch ties for where the additional turnout will go. Even if we do not install this switch right away (and the second track) we should lay the proper ties to alleviate more work n the future. Switch ties are much longer than regular track ties.

It is our intention to commence laying the ties and rail immediately in January, weather dependant. If we can, the preferred route would be to install the second switch ourselves to complete the entire project as soon as possible. This scenario is still under discussion.

We are very appreciative of the professional work performed by PNR Railworks and would like to especially thank Phil Kelly, Ahmad Shaghasi and Joe Vaz along with their colleagues who did the ground work constructing and installing the turnout for us. We are also very appreciative of Claude Larue owner of TDC Excavating of Maryhill who specializes in railway infrastructure with specialized hi-rail equipment and expertise that made this project go very quickly, efficiently and with the highest degree of quality control. We sincerely appreciate both of their contributions to the successful completion of this project.

The Platforum

The Platforum is a video podcast for the railfan and model railroader alike and the brainchild of Bob Fallowfield who is one of our active volunteers.

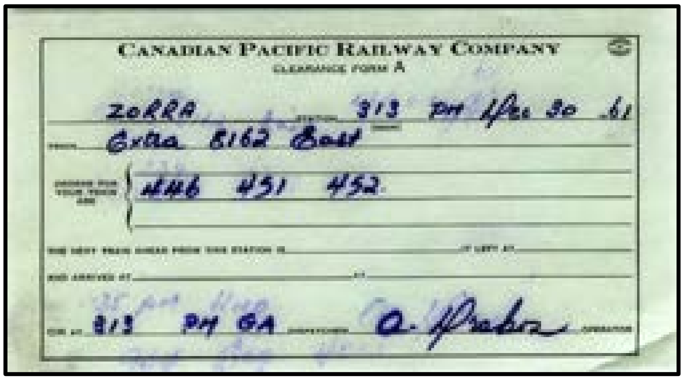
Bob's year end production this year features the Waterloo Central Railway interviewing several WCR volunteers discussing various projects and undertakings of the WCR.

Please check out the Home for the Holidays episode at: https://youtu.be/sGml7qhzDAs

Train Order Operations - *Russ Deacon*

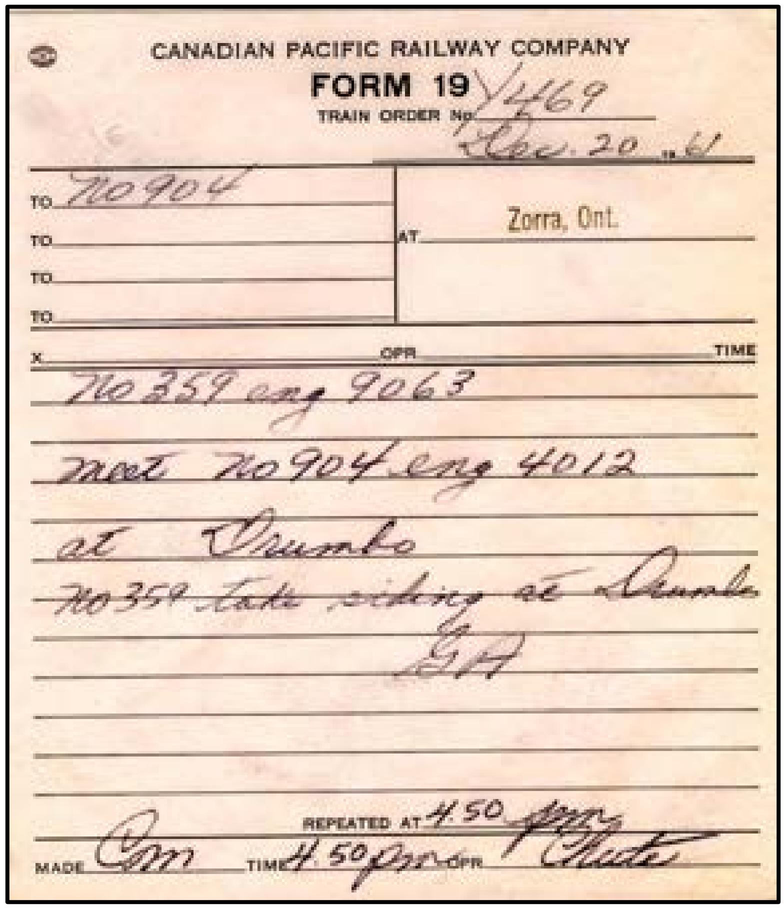
Before the advance of technology, train operations were controlled by written train orders issued by a train dispatcher by telegraph and delivered to train crews by a telegrapher or train order operator. Use of the telegraph was phased out during the mid-twentieth century and replaced by a dedicated dispatcher's telephone line that was open at all times and audible at all stations on the line.

The use, wording, and delivery of train orders was strictly defined in the rulebook in no less than 45 separate rules that took up some 40 pages in the Uniform Code of Operating Rules governing Canadian railways. The dispatcher was required to issue orders simultaneously to all receiving stations and each station was required to repeat the order for confirmation by the dispatcher and other receiving stations. As prescribed by the rulebook, train orders "must be brief and clear; in the prescribed forms when applicable; and without erasure, alteration or interlineation."



CANADIAN PACIFIC RAILWAY COMPANY
CLEARANCE FORM A

ZORRA 313 PM Dec 30 61
Extra 8162 East
446 451 452
813 PM GA



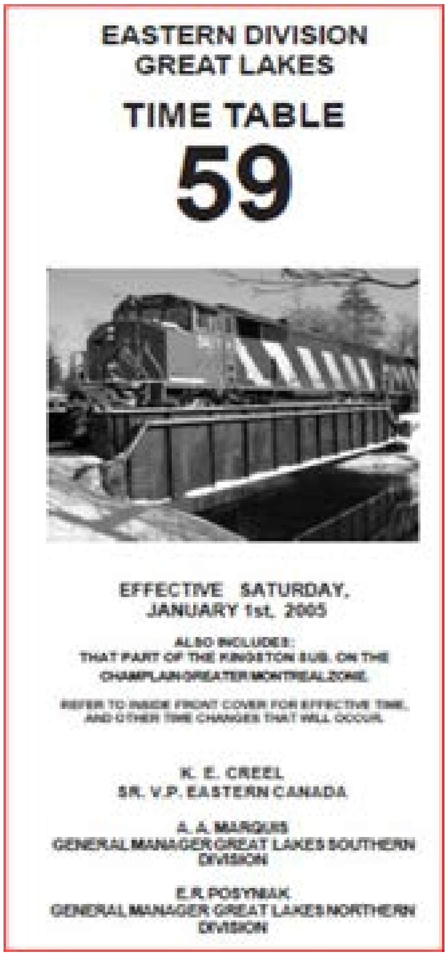
CANADIAN PACIFIC RAILWAY COMPANY
FORM 19 Y
TRAIN ORDER No 469
Dec. 20 61
TO No 904
AT Zorra, Ont.
TO
TO
TO
X OPR TIME
No 359 eng 9063
meet No 904 eng 4012
at Drumbo
No 359 take siding at Drumbo
GA
REPEATED AT 4.50 pm
MADE Cm TIME 4.50 pm OPR

Prior to the implementation of train orders, train movements were governed by a timetable, which contained a schedule for most regular freight and passenger train movements.

Meets between trains in opposing directions were prescribed in the schedule, and one train simply waited on the other. As traffic increased so did the level of sophistication, culminating in a timetable containing schedules of various classes and establishing priority. Still, there was no way to supersede it, and single-track operation was slow, haphazard at best, downright dangerous at worst. The term "cornfield meet" (for a head-on collision) had real meaning in those days.

By the late nineteenth century, the train-order system had become well established. Train movements and schedules were defined by timetable and governed by train orders. Specific trains were accorded a number, numerical class (or superiority) and timetabled schedule. Scheduled, or "regular" trains, were authorized by the timetable. First-class trains were superior to or had precedence over second-class trains, which were superior to third-class trains, etc. Between trains of the same class, those in the direction specified in the timetable were superior to those in the opposite direction. Inferior trains were required to clear the track for the superior train to pass.

These timetables, distributed to all employees with duties involving train operation, conveyed the authority for a train to move over a given section of track at a given time; they were the official operating schedules of the railroad. Simpler versions of the timetables, showing times and other information regarding passenger trains, were made available to the public so riders could know when the trains ran.

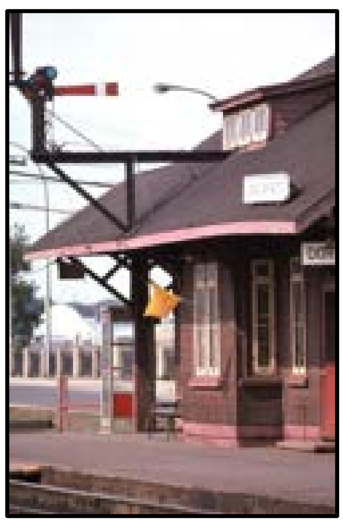


Meeting points between scheduled trains were indicated in the timetable, usually in boldface type together with the number of the train or trains to be met. However, such meets were not mandatory and could be superseded by train order. The timetable established where trains should meet if they were both on time. The superior train did not have to wait on an inferior train at a timetable meet. The onus was on the inferior train to clear the track. Since all of the instructions were not positive, if an inferior train broke down and was unable to clear the track, how would a superior train be informed as they were normally not required to slow down! The answer: train orders.

Train orders were issued by the dispatcher and superseded the timetable. They were used in advance of an inferior train meeting a superior one and to establish a positive meeting point. Train orders could also be used to add extra trains that were not in the schedule, modify the schedules, authorize work trains, and warn of speed restrictions, dangerous track conditions or other operational concerns.

Stations were outfitted with train order signals, often semaphore-style signals, that informed approaching trains of orders to be delivered at that station. In later years train orders were of two types: "19R" and “19Y” Upon receiving 19R train orders, the station operator was required to place the train order signal in the red, or “stop” position. Trains were required to stop to receive 19R orders, some of which needed to be signed for by a member of the train crew, particularly if the restriction in a specific order took effect at the issuing station. A yellow indication on the train order signal informed crews of "19Y" orders that could be delivered to a passing train at speed. A green indication on the train order signal meant that no orders were on hand for delivery to the train.


Three indication train order signal.


Two indication train order signal with yellow flag to indicate 19Y order to be delivered


At the end of the train order era the semaphore signal is replace with a modern signal showing all 3 colours

Train-order forms themselves came in pads printed on a thin onionskin paper, or "flimsy," which enabled crews to read them over the light of a firebox or against a kerosene lantern. Most orders required three copies, one for the locomotive crew, one for the caboose (or conductor on a passenger train), and the other as the station record. The number of copies also varied as to number of pertinent trains covered by the order. In the era before typewriters and ballpoint pens, operators copied orders using a stylus against double-sided carbons backed by a steel plate. Telegraphers' script, a beautiful, flowing, but legible handwriting, was the trademark of an operator who had learned his trade in the days of the Morse telegraph schools.

Handing up orders was part and parcel of the operator's job. For many years, a bamboo hoop with a metal clip holding the orders was used. Its big drawback was that it had to be returned by the crew, who simply threw it along the right of way. Pity the hapless operator who had to trudge down the track to retrieve the hoop in winter or during an electrical storm. In later years, operators used a fork holding a string in which a slip knot was tied to hold the orders. The crew member simply slipped his arm through the fork, the string slipped out of the spring-loaded latch that retained it, and the orders were in hand. On many roads, permanent order-hoop stands, or racks allowed the operator to "load them" and then stand back and inspect the passing train. Regardless of the improvements, delivering orders was not pleasant under any circumstances. Operators had to watch for shifted loads and flying brake shoes.

Today with technology the timetable system has been replaced by newer methods of operating authority involving radio communications. On higher traffic areas a centralized traffic control (CTC) system is used to control the train movements using colored signal lights. There are many different combinations of light patterns that can be used today to control the movement of the train. The explanation of these various patterns is complex enough it deserves its own article which will be covered in another newsletter.

Change of Command

With Norm Ethridge's retirement as President of SOLRS, Director and former Treasurer of SOLRS Chris Corrigan has stepped up to assume the role of President and Treasurer of the Southern Ontario Locomotive Restoration Society (SOLRS).

As well as being a long serving volunteer Locomotive Engineer and Conductor with the WCR, Chris has a long and successful business career behind him and is well suited to guide the organization through the challenges we face during the pandemic and the long range plans for the Waterloo Central Railway.

Chris and his wife Cathy are renowned locally as the creators of Hog Tails BBQ in Waterloo. After selling that business the lure of smoked food was too great and they started what has become another local culinary landmark with their purchase of the Lancaster Hotel (the Lanc & Ocean Queen) in the Bridgeport section of Kitchener, starting the Lancaster Smokehouse.

WCR Today

We close the year with a photo array of one of our greatest achievements this year – our new colour scheme to set the tone for the new WCR coming in 2021.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1002
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The pandemic shut down has dramatically curtailed operations at the shop with strict attendance and safety controls in place. Along with the work required to get No. 9 ready to return to service in 2021 after its TSSA inspection, Grant and Brian have been working tirelessly on the restoration of Toronto Hamilton & Buffalo Railway (TH&B) caboose No. 61 which is now over 100 years old. Its retrofitted aluminum windows are being replaced with reproductions of the originals being recreated from scratch by Brian. Grant has restored the rusted rivets fastening the steel sheathing to the frame, patched the roof among with other things and is repainting it back into its "Ti-Cats" yellow paint scheme.

Waterloo Spur History

GRAND TRUNK RAILWAY SYSTEM

MIDDLE DIVISION

EMPLOYES' TIME TABLE No. 43

To take effect at 12.01 o'clock a.m. Sunday, June 4th, 1911

STANDARD TIME

43

DESTROY FORMER TIME TABLES

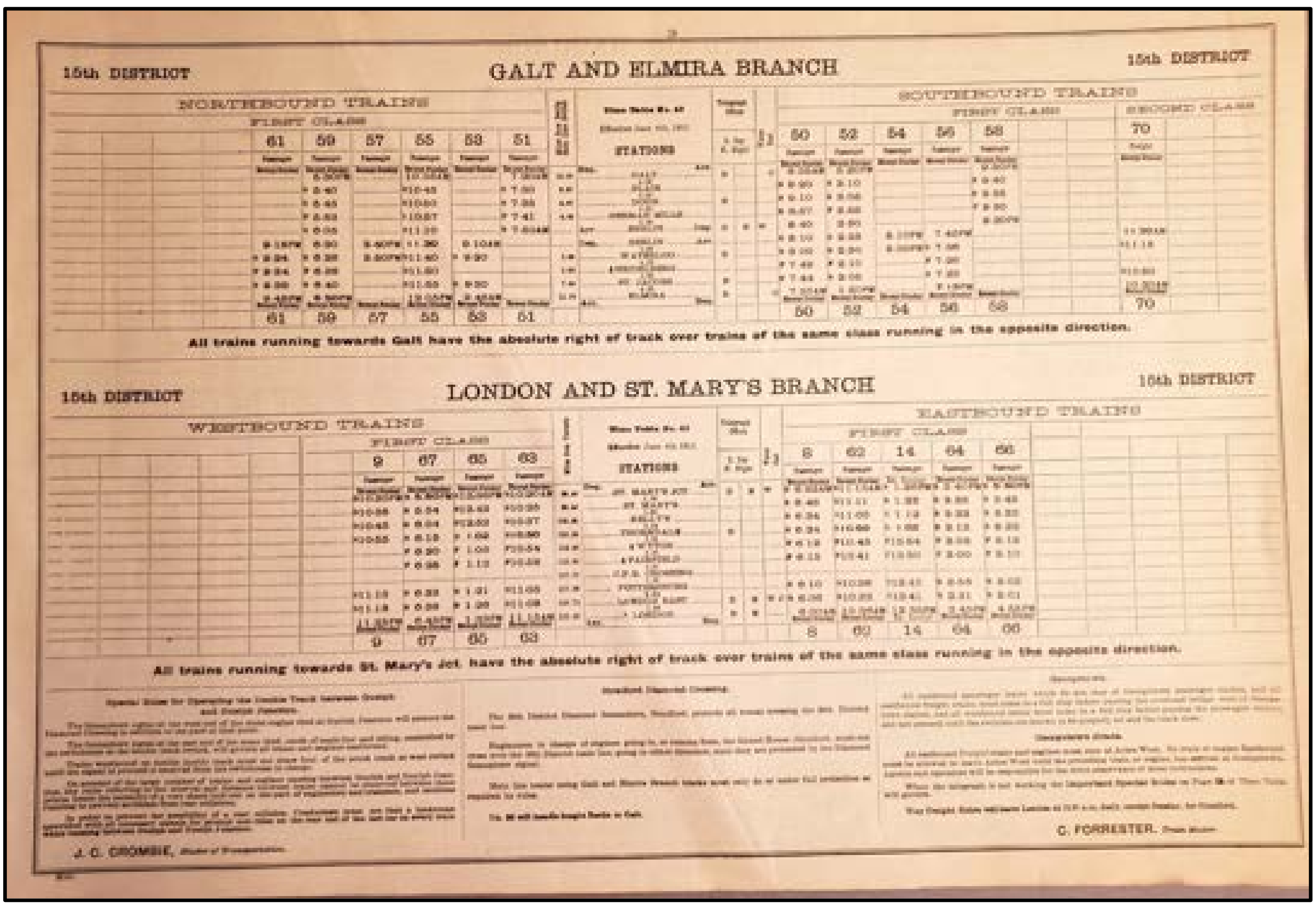
We have been aware for many years that the Waterloo Subdivision in its day was a very busy line with numerous passenger and freight trains running to and from Kitchener (Berlin) to Waterloo, St. Jacobs and Elmira.

Much of the information related to its history has been anecdotal as local research facilities and libraries do not possess a wealth of information when it came to this rail line.

This changed this past week with the receipt of this copy of an old GTR Employees Time Table for the early part of the 19th century.

We were very fortunate to have received from Steve Bradley who is curating aspects of the collection of the late James (Jim) A. Brown, images of Grand Trunk Railway System Employee Time Table No.43 from Jim's collection.

This Time Table is for the Middle Division which took in our area including the Waterloo Subdivision and is dated Sunday, June 11, 1911. It is also interesting to note that in 1911 it was called the Elmira Branch.



15th DISTRICT GALT AND ELMIRA BRANCH 15th DISTRICT

NORTHBOUND TRAINS — FIRST CLASS: 61, 59, 57, 55, 53, 51

SOUTHBOUND TRAINS — FIRST CLASS: 50, 52, 54, 56, 58 — SECOND CLASS: 70

All trains running towards Galt have the absolute right of track over trains of the same class running in the opposite direction.

15th DISTRICT LONDON AND ST. MARY'S BRANCH 15th DISTRICT

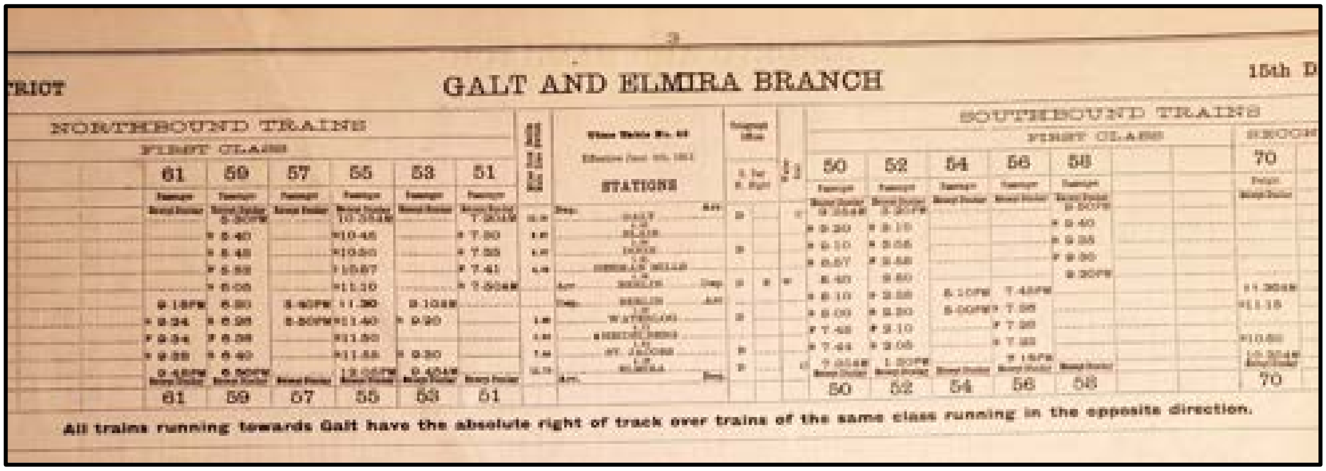
WESTBOUND TRAINS — FIRST CLASS: 9, 67, 65, 63

EASTBOUND TRAINS — FIRST CLASS: 8, 62, 14, 64, 66

All trains running towards St. Mary's Jct. have the absolute right of track over trains of the same class running in the opposite direction.

J. C. CROMBIE

C. FORRESTER



TRICT GALT AND ELMIRA BRANCH 15th D

NORTHBOUND TRAINS — FIRST CLASS: 61, 59, 57, 55, 53, 51

STATIONS

SOUTHBOUND TRAINS — FIRST CLASS: 50, 52, 54, 56, 58 — SECOND: 70

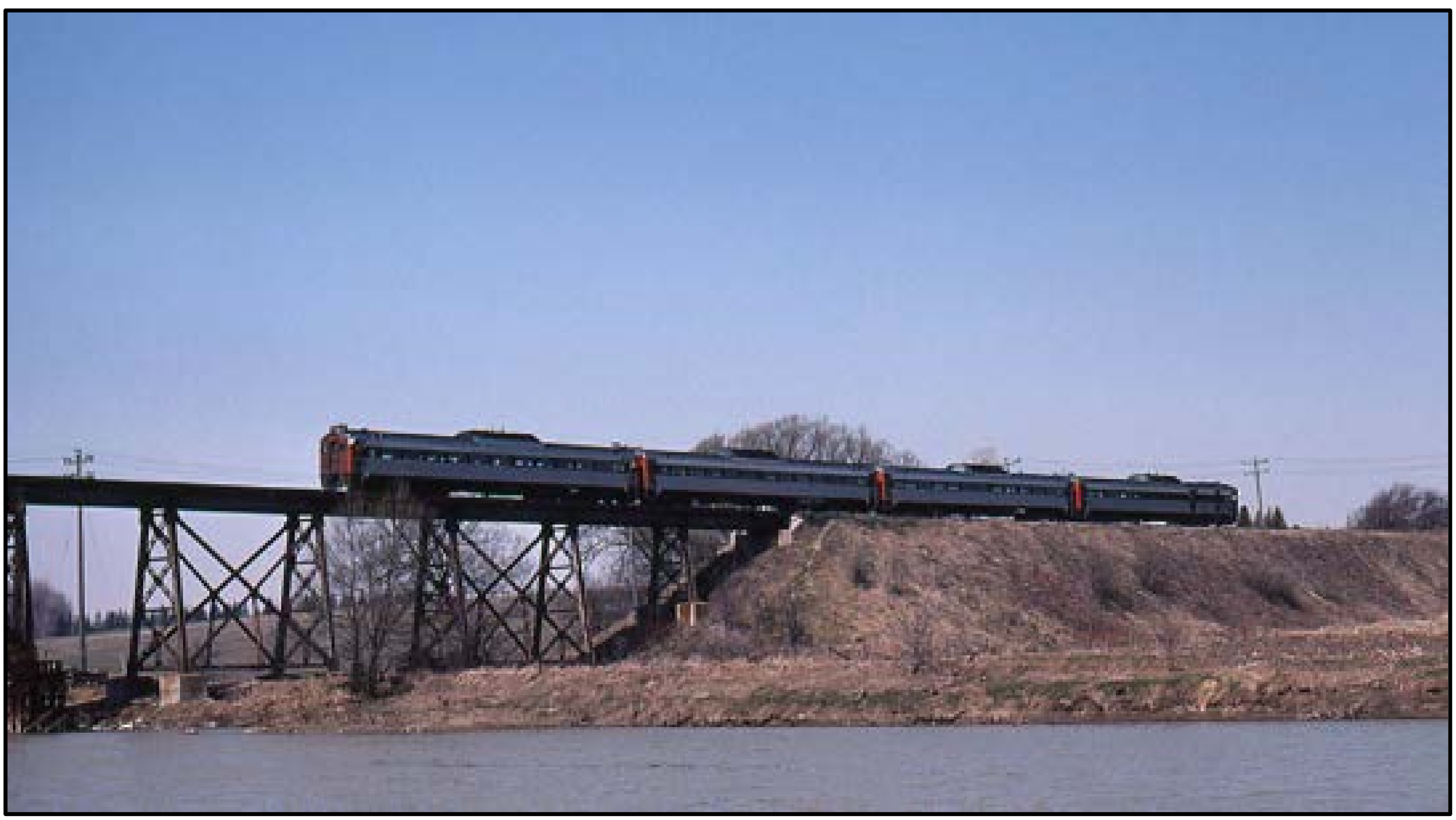
All trains running towards Galt have the absolute right of track over trains of the same class running in the opposite direction.

In 1911 there were numerous return passenger train trips from Berlin to Elmira along with a scheduled freight train. There were also passenger trains that ran only between Berlin and Waterloo and return. The speeds were much greater then shown by the times between station stops.

On The Spur

For many years the Kitchener Kiwanis Club ran a major fundraiser known as the Sugar Bush Express which was a chartered passenger train from the CN Station (now VIA Rail) in Kitchener to Elmira on the Waterloo Spur for the Elmira Maple Syrup Festival. The Elmira Maple Syrup Festival is the largest single day festival in North America having had in attendance up to 80,000 visitors.

The Sugar Bush Express ran with many incarnations and in April 10, 1976 John Sutherland captured it on the St. Jacobs Trestle over the Conestogo River with four Budd RDC's. The consist that day consisted of 6113, 6006, 6005, 6351. As time would go on RDC-9 6006 would become part of the WCR fleet and currently in use as a dining – parlour lounge car. Thankyou very much to John for the use of this rare photo of this service on the Waterloo Spur as well as showing the potential for our future service.



An earlier version of the Sugar Bush Express from the locomotive cab window of a CN FP9 as the two locomotives from the first trip north are broken apart in Elmira beside what is now the Lanxess Plant to provide a locomotive to lead one of the southbound trips to Kitchener as opposed to shoving the train south to the Guelph Sub. They would shuttle for the day and on the final trip when in Kitchener the 2 locomotives would couple for the return trip to Toronto.

Local Railway Perspectives

CNR passenger train No. 154 from Sarnia to Toronto, lead by FPA-4 6760 is taking on passengers and baggage on a winter week-end afternoon many years ago.

In January of 1976 a CNR plow extra just outside of Stratford

In November of 1972 CN S-3's 8496 & 8497 assigned to Kitchener yard service.

CN Tempo service RS-18 3153 equipped with HEP power leads conventional equipment passenger train No. 154 at Kitchener with a steam generator unit departs for Toronto. Note the Waterloo Spur connection in the background.

CN GP9 Extra 4517 West passes the switch to the Waterloo Spur in Kitchener heading back to its home terminal of Stratford.

In June of 1971 Lake Erie & Northern (CPR) SW1200RS Extra 8162 South in the classic Tuscan & grey colours switches out the gravel pit in Paris Ontario on a clear Sunday morning.

In July of 1971 Grand River Railway (CPR) Locomotive Engineer Joe Hauser switches out the GRR-CPR yards in Kitchener in what is now the Iron Horse Trail behind Victoria Park on a Saturday morning.

CPR S-11 6617 awaiting the next day's work at the old CPR engine house in Guelph.

In February of 1974 Grand River Railway (CPR) SW1200RS 8161 in the new at the time action red paint scheme switch the Carling-O'Keefe Brewery at King and William Streets in Waterloo.

In the summer of 1971 Grand River Railway (CPR) SW1200RS 8161 with a classic wood van switch the interchange in Galt with the CPR Galt Sub mainline.

CPR S-2 7033 on the turntable at the CPR John Street Roadhouse in Toronto – also now home to the Steam Whistle Brewery.

In June 1970 CPR FPA-2 4094 and FA-1 4015 at the CPR John Street Roundhouse in Toronto awaiting assignment.

Orangeville yard was always an interesting place in its heyday. This image was taken from the top of the coal tower, showing the entire yard (on a quiet day). Photo by Robert J. Sandusky.

COVID-19 Operational Update

We continue to face the ravaging impacts of COVID-19. We cannot let our guard down. Recent infection numbers in Ontario have been rising at an unacceptable rate. The health and safety of you and your family, our crews, volunteers and staff are our number one priority. While we closely monitor all information regarding COVID-19 the recent province wide shut down has caused us to implement even stricter protocols for the shop. Essential activities only are permitted.

We will continue to closely monitor the local and national situation revolving around COVID-19 to ensure we reopen when it is safe to do so and when that happens our protocols will provide our guests and passengers a safe journey with us. This year has allowed us to review our operation in detail and when we reopen next year please join us for the new Waterloo Central Railway.

On behalf of the Board of Directors of SOLRS and the WCR Management Team we hope you and your families are safe and healthy during this time of uncertainty and thank you for your continuing interest. We look forward to the time when this is a memory and we are all doing again what we love and enjoy.

This is our Tenth Edition of the WCR Press. We started this publication in the spring of 2020 as a way to stay in touch with our volunteers, neighbours and partners during the temporary COVID-19 Pandemic shut down of our operations. We have enjoyed providing a history of our operating heritage rail collection as well as reminiscing about other railway operations that have served this area over the years. The response to our publication has been heart warming and as a result we have decided to continue this as a regular publication of the Waterloo Central Railway and Southern Ontario Locomotive Restoration Society.

Editorial Contributions & Acknowledgements

A special thanks to Chris Fox, Brian Craus, Jason Shron & Rapido Trains along with Andre Funnell for their on-going support and assistance for our RDC acquisition. This along with many thanks to Norm Gelinas, Greg McDonnell and Matthew Schilling. We also would not be in the position of having these Budd RDC's without Joe Cianci, Director of Asset Management at VIA Rail in Montreal who just retired after a long career with VIA.

We are also very appreciative of Raymond Kennedy, the creator and editor of Old Time Trains for his knowledge and advice.

Photos and articles by Greg McDonnell, Peter McGough, Matthew Schilling, Dave Banks, Russ Deacon, Maurice Dusseault, Bob Fallowfield, Robert J. Sandusky, Steve Bradley, Lloyd Baxter, J. William Hood, Collection of Jim Parker, Collection of James A. Brown, & Brian Craus.

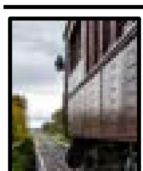
WATERLOO CENTRAL RAILWAY

Southern Ontario Locomotive Restoration Society

- President – Chris Corrigan
- Vice-President – Dave Banks
- Secretary – John Vieth
- Director – Aaron Schnarr
- Director – Irvon Weber
- Director – Minto Schneider
- Director – Russ Deacon

Waterloo Central Railway

- General Manager – Peter McGough
- Assistant General Manager – Greg McDonnell
- Shop Coordinator & Volunteer Coordinator – Matthew Schilling
- Steam Team Manager – Irvon Weber
- Assistant Steam Team Manager – Dave Banks
- Manager of Safety Systems – Kim Martin
- Manager of Training – Dave Banks
- Assistant Manager of Training – Russ Deacon
- Archivist & Collections Manager – Stephen Eadie
- Office Manager, Ticketing & Customer Service – Anna Schnarr
- Accounts Payable & Bookkeeping – Claudia Dauria
- Chief Mechanical Officer – Norm Gelinas
- Master Painter – Grant Scheifele



OUR ORGANIZATION

The Waterloo Central Railway is owned and operated by the Southern Ontario Locomotive Restoration Society; a non-profit charitable organization made up of largely volunteers dedicated to the preservation, restoration, and operation of vintage & historic railway equipment. The Waterloo Central Railway is a licensed shortline railway under Shortline Railway Act of Ontario.