



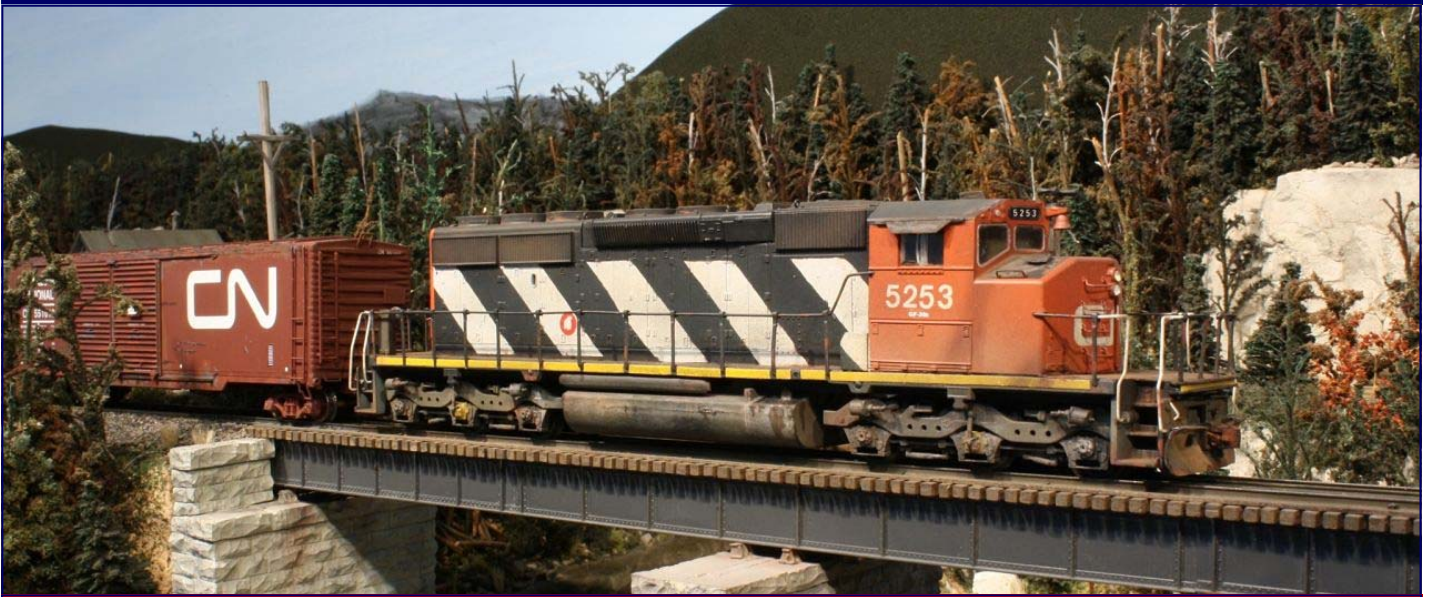
# THE "CANADIAN"

[www.caorm.org](http://www.caorm.org)



WINTER 2019 ISSUE #66

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a quarterly publication of the "Canadian Association of Railway Modellers"



## THE CANADIAN ASSOCIATION OF RAILWAY MODELLERS

Founded October 15, 2003

Founding Members: John Johnston, Peter Moffett, David King, Lex Parker

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**TOP COVER PHOTO BY GEORGE DUTKA:** Weathered CN SD40-2 #5253 is now in use on my White River Division layout handling through freights.

**BOTTOM COVER PHOTO BY RANDY SCHNARR:** Four different levels can be seen in this photograph of the operating layout at the Bruce County Museum.

## MEMBERS AREA PASSWORD

USERNAME: gondola  
PASSWORD: hopper

### PROMOTING THE HOBBY OF RAILWAY MODELLING IN CANADA



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## observation platform john johnston: editor

I am foregoing my usual musing this Issue so that we can share with you a Fundraising Campaign that is being undertaken by the CRHA in conjunction with Rapido Trains to preserve VIA Rail FP9A 6309.



The Canadian Railroad Historical Association (CRHA) has committed to a badly-needed cosmetic restoration of this historic locomotive. Our intention is to put it on display inside our controlled-atmosphere exhibit space at Exporail, the Canadian Railway Museum, in suburban Montreal. There it can be properly conserved and displayed for all to see along with some other pieces of vintage VIA rolling stock, including dome observation car Sibley Park.

The CRHA is a not-for-profit institution with constrained resources, and is seeking your help in the funding of the \$34,000 needed to properly preserve this important piece of Canadian railway heritage. While the restoration work has already begun, the money available to



complete it is not fully subscribed.

Rapido Trains Inc. is generously backing this appeal.

Donors of any amount to this campaign over \$25 will receive a donation receipt from the CRHA, which can be used when filing federal and provincial tax returns to gain income tax credit.



Donations of less than \$500 may be made using your credit card through the [Canada Helps website](http://CanadaHelps.org). You will receive your tax receipt from Canada Helps via email.

Donations of \$500 or more will receive special treatment and should be made directly by mail to the CRHA in order to receive the full benefits of giving.

**Hostler (\$500-999):** A gift at this level will benefit from a one-year membership in the CRHA, including a subscription to Canadian Rail magazine, as well as getting your name on the Hostler-level plaque, which will be displayed with the restored VIA 6309 at Exporail.

**Engineer (\$1000-1499):** A gift at this level will receive the CRHA membership, as well as a \$200 Rapido Trains gift voucher, and your name recognized on the Engineer-level plaque which will be displayed with the restored VIA 6309 at Exporail.

**Superintendent (\$1500 and above):** A gift at this level will receive the CRHA membership, a Rapido Trains HO scale sound equipped FP9A model (a \$360 value) and your name on the Superintendent-level brass plaque permanently affixed to the restored VIA 6309 on display at Exporail.

To make a gift of **\$500 or more** contact Canadian Railroad Historical Association (CRHA) at 110, Saint-Pierre Street Saint-Constant (Quebec) J5A 1G7 or Tel. 450 638-1522 ext.244 / [info@exporail.org](mailto:info@exporail.org) / [exporail.org](http://exporail.org)

### History of Locomotive VIA 6309

VIA 6309 was built in London, Ontario, by GMD in April 1957 as CN 6528 as part of a fleet of 43 similar diesel locomotives. This fleet was initially assigned to long distance passenger trains such as the CN Montreal-Vancouver "Super Continental". They formed the backbone of CN's passenger locomotive fleet and were used

**Continued on Page 10**



## CHAIRMAN'S REPORT

At our Executive Committee meeting held in October 2018 one of the topics we discussed was venues for future conventions or as we tend to call them now "Super Meets". I am pleased to report that not only is the London Ontario meet planning coming along well for April 2019 but two other venues were discussed for the following year. We would like to see CARM holding one event each year which would be of interest to many of our members as well as local or regional events that are organised by the individual chapters. One important aspect of any convention or super meet is that our membership has good advance notice of the dates and times so they can plan their travel and other activities around it. Most such events are held at locations which provide opportunities for informal railfanning around the area before or after the days of organised activities. If you do not know an area well then maybe informal railfanning is best planned to be done after the convention so that one can learn from colleagues at the convention what their experiences have been and where and what is best.

With Christmas approaching, as I write this, we are all contemplating what we would like for that ideal present or what to go looking for at the Boxing Day sales. If we are away for the holiday period, we are hoping that our destination happens to have a nearby hobby shop which might have some stock of something we couldn't get locally or has disappeared from the internet list sales. One of the things I always hope for at Christmas is a calendar with twelve different pictures of trains in action. Getting two calendars is even better as it means more pictures. As most of you know CARM prepares a calendar each year and makes it available to our members who request it and pay for it in advance. For 2019 we have a few additional calendars and so

those members who didn't order one with their membership renewal or who would like second one to send to a friend as a present may still order extra ones. Details as to how to do so are given elsewhere in *The Canadian*. But Christmas should be about giving as well as receiving and so I have a suggestion for you below.

Since CARM evolved into an organization with internet memberships we have managed to stabilise our membership numbers which is encouraging and gives us optimism for the future. However even convincing new members to join as free internet members still takes a lot of persuasive talking and model train shows are the best place to do that. If you have anything to do with organising a train show think about offering CARM a table to allow them to promote the association and the hobby. If you are already a member of CARM volunteer to attend a show as a CARM representative to talk up the hobby. Several of the Chapters have built switching layouts which fit on a table top and provide the opportunity for young would be engineers to try their hand at switching freight cars in a tightly spaced yard. To get involved e mail one of the Executive members listed on the cover page of this issue of *The Canadian* and offer to help or ask for some materials to distribute at your show. Not only will this allow you to do a little giving but also to have some fascinating conversations with modellers who just need that little extra shove to convince them to take up the hobby.

Best wishes for Christmas and the New Year from all of us on the Executive.

**GERALD**

### **PUBLICATION SCHEDULE FOR *THE CANADIAN***

*The Canadian* is published four times per year. Submission by authors or Chapters should be submitted by the following dates.

**Spring Issue: February 1**

**Summer Issue: May 1**

**Fall Issue: August 1**

**Winter Issue: November 1**

## ONTARIO MIDWESTERN CHAPTER

The Annual Fall Meeting was held on October 14, 2018 at the Bruce County Museum, home of the Bruce County Model Railroad. In attendance were Graydon Hancock, Steve Hoshel, Judith King, Paul Korhonen, Mike Pickup, Dolf Roelofsen, Randy Schnarr, and guests: Larry Ker, and Craig Dolbeer.

Steve welcomed everyone to the meeting and we dealt with minutes and our financial statement, both of which were approved. Paul Korhonen provided a cheque for \$100 for the Chapter's support at the Grey Central Show.

Discussion on membership arose with a reminder by Randy to pay membership fees before December 31, unless members have paid for multiple years. Application forms were handed out as a reminder to pay attention to this important aspect of our association.

Judith showed her hand built model of the Cartierville station. Dolf showed his RPO car with a Micro Mark video camera installed. Cooling vents were needed to avoid heat buildup. He used Rapido trucks each with 4 wheel pickup for power continuity. The monitor shows the view of a passenger looking out the door of the coach. The system was set up and worked well.

Paul donated model people to populate the BCMR towns, to help bring the dioramas to life. Steve brought his NRE Genset Switcher decked out in black and gold CN switcher colours to run on BCMR. Randy brought a selection of locos to run on the BCMR.

Steve noted the passing of Jim Ellis and our MWO member Lloyd Koch, both dedicated modelers.

Upcoming Events ...promoting the hobby (see Charlie Cooper on line for expanded list)

February 16-17 - Barrie Allandale Model Train Show  
 February 23 - Copetown RPM meet  
 February 24 - Copetown Train Show  
 March 17 - Kitchener Model Train Show

The balance of the meeting was spent operating trains on the BCMR in the gallery, setting up the on-board video, resolving those glitches that turn up just when you don't expect them, and doing a photo on the Paisley bridge. We were scrambling to clear the building by 5:00 PM.

**NEXT MEETING: APRIL 16, 2019 AT A LOCATION TO BE ANNOUNCED.**

## TORONTO CHAPTER

Chapter member Bill O'Shea died on 1 October as a result of an irreversible lung disease (pulmonary fibrosis). He was 16 days short of his 78th year. When I met Bill in 1999, he was not a model railroader but once he saw the budding CN Weston Sub which was in the framework stage, he quickly became an ardent modeller.

Bill worked on both versions of the CN Weston Sub and provided all of the electronic knowledge for the group and a good part of the humor on our weekly Wednesday meetings. He served as Treasurer of the Toronto chapter. We remember especially, his good humour, his wit and his extensive knowledge of electronics which he patiently shared with us.

He will be missed and remembered. Two industries on the layout bear his name.

**Bill O'Shea (far left) at William Waithe's first CN Weston Subdivision layout, January 11, 2014.**





**LONDON  
AND AREA  
CHAPTER**

**FOREST CITY RAILS 2019 SUPER MEET in London/St. Thomas**

Friday, May 17th: Pizza party meet & greet and movie night in the hospitality room of the Stoneridge Inn. Start time – 8:00 p.m. Cost included in the registration fee of \$25.00 per person.

Saturday, May 18th: 10:00 a.m. CARM annual meeting in the hospitality room. Lunch break after at the venue of your choice. Reconvene at 1:30 p.m. at the Elgin County Railway Museum for a tour of the facilities which will include the BX interlocking tower a short distance away. Cost will be \$7.00 + hst per person payable at the museum. Some St. Thomas layouts will be open from 4:00 - 6:00 p.m. Break for supper. The Thames Valley Railway Club, located in Thorndale, will host an operating session from 7:30 - 9:30 p.m.

Sunday, May 19th: 10:00 a.m. A tour of the Canada Southern Railway Station. Some London, Ontario layouts will be available for viewing from 1:00 - 4:00 p.m..

Subject to change without notice.

Hotel Information for those needing to make reservations: Best Western Stoneridge Inn at 6675 Burtwistle Lane, London, Ontario. Tel: 519-652-6022 <http://stoneridgeinn.com>

Rooms are \$134.00 per night and includes a breakfast buffet. Booking URL

[https://bestwestern.com/en\\_US/book/hotel-rooms.66085.html?groupid=B56HN9T2](https://bestwestern.com/en_US/book/hotel-rooms.66085.html?groupid=B56HN9T2)

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**FOREST CITY RAILS 2019 SUPER MEET REGISTRATION FORM**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Prov: \_\_\_\_\_ Postal Code \_\_\_\_\_

Email: \_\_\_\_\_

For confirmation of registration only.

**Please enclose a cheque of \$25.00 per person and mail to:  
Bruce Harmer, 7190 Outer Drive, Port Franks, Ontario N0M 2L0**

Registration desk will be open at the Friday “Meet & Greet” and on Saturday at 9:30 a.m. before the AGM in the hospitality room at the Best Western Stonebridge Inn.

# BRUCE COUNTY MUSEUM RAILWAY

## PART 1

### FROM CONCEPT TO REALITY

ARTICLE AND PHOTOS BY RANDY SCHNARR



#### FROM THE EDITOR

Randy approached me and offered to do a series of articles on how the Display Layout at the Bruce County Museum was built by a group of volunteers. The photographs he forwarded showed a very professional display layout in a wonderful setting. I jumped at the chance to share this with you and over the next number of Issues of The Canadian Randy will cover a number of topics including:

- 1: From Concept to Reality: ...explaining how it came together.
- 2: Research & Planning: The efforts of the research team to find the data to give the project substance.
- 3: Major Structure: how the structure was built from initial sketches.
- 4: Diorama Construction: with photos of some of the completed dioramas.
- 5: Control Systems: We will be operating in three modes. Computer controlled, DCC, and DC.
- 6: Future development ; we will be adding sound systems and video cameras to the system so disabled visitors and vertically challenged can enjoy all three levels of the exhibit with sound to match the images.

The order of the articles may change as Randy finds the time to write them, but as you can tell from the photos in this months issue, there is much that all of us can learn from this accomplishment.

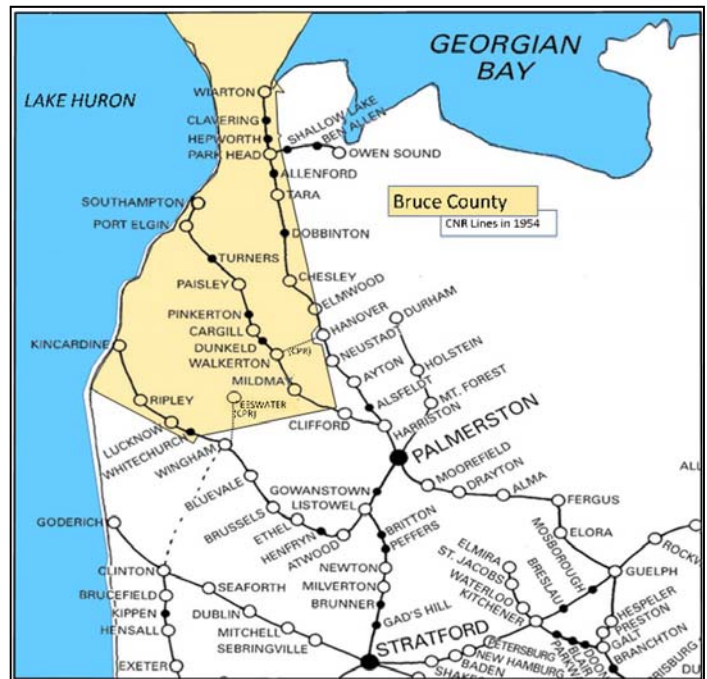
My wife and I retired to Southampton, a small town on the shore of Lake Huron, a place where both of us vacationed since the late 50's. There are many tourist attractions, like a great beach, tours to the lighthouse on Chantry island, a ship wreck , and an amazing museum which houses a full scale model of the wrecked General Hunter. Most of our historical attention was focused on our marine history.

We also have a rich history of the railway. In 1856, charters were granted to the Wellington, Grey & Bruce Railway to build a series of rail lines throughout Southwestern Ontario, Canada. For about 100 years, the railway was instrumental in the development of our region, specifically Bruce County. Before the trains arrived, travel was by foot, horseback, horse drawn wagon or by ship in season. By today's standards, travel was very slow and uncomfortable. A return trip to Toronto, (140 miles) could take almost a week. When the trains arrived, a return trip to Toronto would take one day. Factories prospered with ready access to raw materials and reliable transport for their products. Railways brought prosperity to our region.

In the 1980's when the train tracks were lifted, the roadbeds were saved by Rail Trail groups. We now have inter-community trails with some kiosks to remind us of the missing trains. A good base, but the trains were still "missing".

#### Planning

As a model railroader, a dream was to model the town of Southampton in my home, however, space was too limited to do it well. When a friend, Craig Dolbeer, told me



#### MAP ABOVE:

The Grand Trunk Railway and its successor the Canadian National Railways had 3 subdivisions to Bruce County. They emanated from Palmerston, a major railway hub in Southwestern Ontario and they terminated at Kincardine, Southampton, and Warton/Owen Sound.

The CPR had two lines in Bruce County which reached Walkerton and Teeswater.

of his electronics projects for the Bruce County Museum in Southampton, it occurred to me that they may be interested in a model train layout that reflected more of the history of the railways in Bruce County. They were interested and asked to have a presentation for an exhibit that would interest adults and children alike. A year of planning and negotiation led to funding being obtained in October of 2016 to start building what I refer to as the Bruce County Museum Railway.

As a fan of shelf style modular layouts I had been experimenting with a 6 foot window box diorama where trains are operated behind glass. With the availability of the key information provided in Ian Wilson's book, "Steam Over Palmerston", the concept quickly developed to run trains through each town.. Diorama length was determined by the need to provide by-pass tracks in HO scale. Since museum space was restricted, a stacked structure seemed appropriate. The diagram at the bottom of this page shows the design.



**PHOTO ABOVE: The diorama showing Paisley and the bridge over the Teeswater River.**

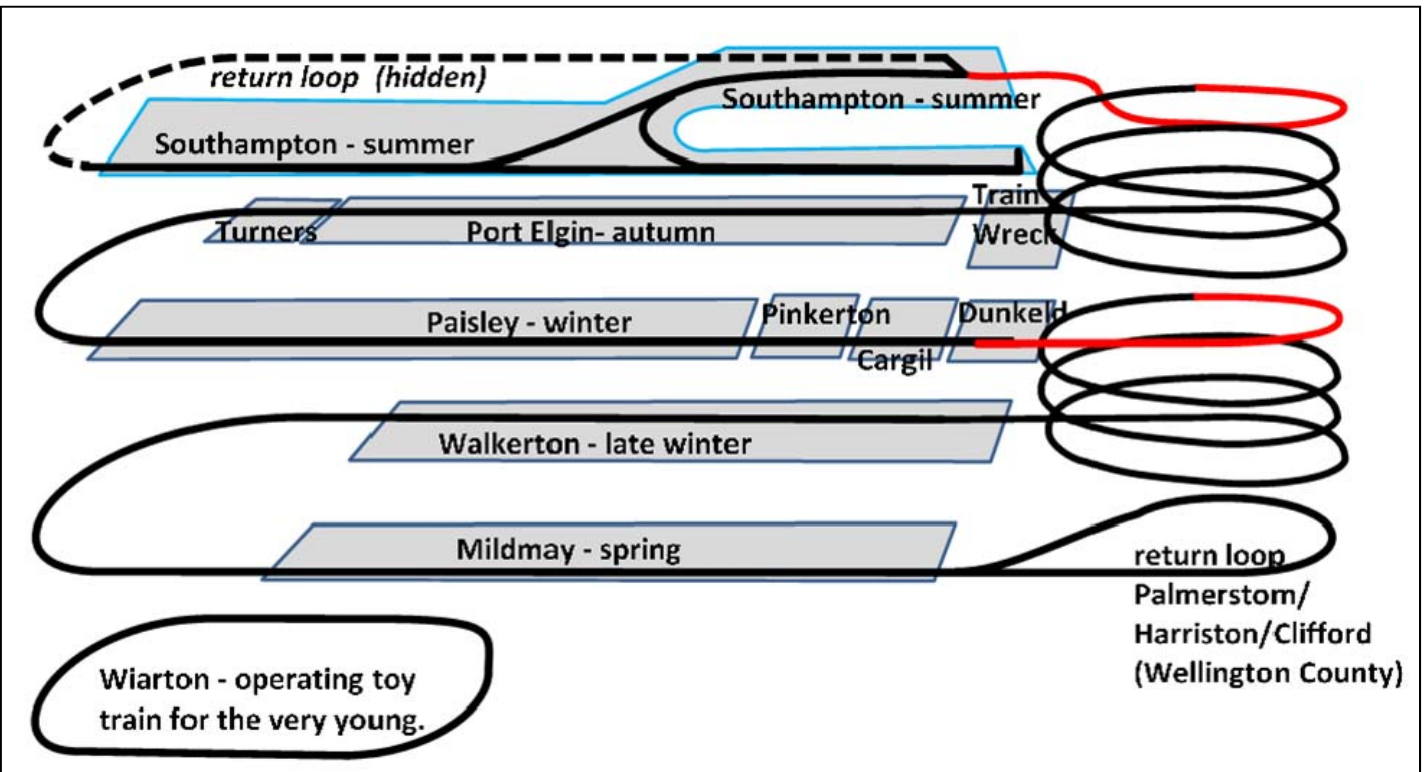
**The Exhibit**

The exhibit is designed so the younger generations get a feel for what the railways were like from the 1920s to the late 1950s ...and for the older generation, an opportunity to re-live the experience. Crouch down to view each diorama about 3/4" up from the bottom of the window to get a

representative perspective of each scene. Find a spot and wait for the train to come, just as we did when the trains ran here.

Don't miss the window box representing the Hurricane Hazel train wreck in Southampton. On the bottom level, children can operate the O Gauge toy train, set in Wiar-ton Ontario.

**DIAGRAM BELOW: The Bruce County Museum Railway exhibit models the towns in Bruce County along the Southampton sub-division, in a loop to loop layout with each town set in a different season. Trains run from Palmerston/Harriston/Clifford (Wellington County- not modelled) into Bruce County at Mildmay (spring), and on through Walkerton (late winter), Paisley (winter), and Port Elgin (autumn), terminating in Southampton (summer). Each town is represented in a 12' long window box diorama. Whistle stop villages are represented in small window boxes.**





## Realization of the Exhibit:

The exhibit was a dream that has been realised with the passionate contributions of the time and talents over 30 volunteers and donors with a variety of interest and skills. Among those who volunteered we had people in each of the following areas.

**Research:** to find photos of railway structures, related businesses and the stories of the people that kept the trains running. Mike Pickup, Jimmy Jo Vogel, Jeff Hemmings, Peter Bowers, Ian Wilson's book "Steam over Palmerston" and the Bruce County Museum Staff.

**Photography:** to capture scenes in season for the backdrops of each town. Jim Gowan, Derek Wills & Randy Schnarr.

**Photo Reworking:** to take the images back in time. Some images had to be created from black and white archive photos. BCM's graphic designer, Chris Irvine.

**Structural Team:** to convert the original concept drawings into the closed-in structure that shows the exhibit effectively yet resists the intrusion of inquisitive fingers.



**PHOTO ABOVE:** Six of the many volunteers who contributed their time and skills to the building of the exhibit.

**PHOTO BELOW:** An overview photograph of the finished exhibit as you can see it today at the Bruce County Museum which is located at 33 Victoria St. N. in Southampton, Ontario.



Paul Maurer, Randy Schnarr with backup support from Tom Thede.

**Model Building:** to create architectural drawings from photographs and to build the railway structures such as stations, industry and bridges. Mike McCullough, Denny Snider, Derek Wills, Judith King, Tim Schmidt, Tom Marcotte, Graydon Hancock, and Randy Schnarr.

**Control Systems:** to have the trains run with DC, DCC or computer controlled power. The work of Craig Dolbeer with the incredible assistance of Paul Carnahan.

**Assembly, Wiring and, well, just putting it all together** ...laying track, ballasting, wiring, wiring, and more wiring, scenery, making trees, moving into the museum and finesse work. Gord Eagles, Larry Ker, Don Nicholson, Carl Blahut, Richard Collis and Bob Funston.

**Donors of Rolling Stock and Artifacts:** Bob Styles, Jim Coles, Peter Clark, Paul Kornahan, Peter Stamford, Art Eby, Denny Snider, and Vicky Hendry, Southampton Rotary and 98 the Beach radio station.

Thanks to the many dedicated volunteers who brought this dream to life.

Total time to produce the exhibit as presented at the opening celebration exceeded 8,000 hours. The project will continue to be developed by volunteers who meet weekly to add details to make the images even more realistic and to operate the trains as they were operated by the railway. We may even run trains on the Southampton "sub" that would have been only a crazy dream during the railway years. Anything can happen here, like visits by Thomas, the Turbo Train, or even "the Canadian".

Come and join us as we re-live a bit of the history of the rails in Bruce County.

Be sure to watch the Bruce County Museum for special events on the BCMR Southampton Subdivision. The museum refers to this project as "Riding the Rails".

You may also enjoy the many other interactive exhibits at the museum, bring the family.

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### CRHA Fundraising Campaign continued from Page 3:

extensively west of Montreal on any type of passenger assignment. Transferred to VIA Rail in 1978 and numbered VIA 6528 it continued to be used across the VIA system. At 25 years of age it was completely rebuilt at CN's Pointe St Charles shop and returned to service in 1984 renumbered as VIA 6309. It was retired in April 1996. It was on the last steam-heating-equipped consist to leave Halifax, as part of the Atlantic Limited, on January 23, 1993 and on the last steam-heating consist be-

tween Montreal and Jonquiere on April 1996. It went on display at Exporail in 2004 as part of the VIA Rail Historic Rolling Stock collection.

Rapido Models VIA FP9A locomotives will be delivered to donors at the Superintendent level via Canada Post when the models arrive in 2019. (Model may not be exactly as shown).



# CONSTRUCTING A BROAD GAUGE 1867 CROSSEN ORE CAR

WITH GEORGE PARKER  
TEXT AND IMAGES BY TED RAFUSE

George Parker's fascination with the mid 19<sup>th</sup> century Cobourg & Peterborough Railway involved many avenues of research gleaned information resulting in his diverse sharing of that knowledge with the public. His article in the July-August, 2013, issue of *Canadian Rail*, "Construction of the Rice Lake Bridge - Revisited," attests to his detailed knowledge of that railway's enterprise in constructing Rice Lake Bridge. At the time of its construction in the early 1850s this project was the second largest engineering project of its day in North America. George's civil engineering background prepared him well for the diligent, imaginative and detailed research on that construction topic. His perceptive conclusions presented innovative knowledge providing novel insight into the construction of Rice Lake Bridge.

To capture the imagination of the general public, George determined to construct models of the ore cars that travelled on that link across Rice Lake. As part of Cobourg's celebration of Canada 150 at the harbour, George organized a booth where 150 members of the general public could build 150 of the cars that will be described below. On that July day the number of cars constructed was less than had been hoped for, but those that participated were delighted in their constructed model and George's tutorial skills. The number 150 was significant in Canada's heritage but it also noted the 150<sup>th</sup> anniversary of the construction by Crossen of the original ore cars. A very complimentary dovetail to the celebrations.

To further his community information sharing George constructed a garden scale version of the successor Cobourg, Peterborough & Marmora Railway & Mining Company which is currently on display during the summer months at the Sifton-Cook Heritage Centre in Cobourg. It was the CP&MR&MCo that ordered the 100 ore cars to be manufactured in order to haul iron ore. This was an arduous undertaking involving the company's Crowe Lake open pit mining operation, near Marmora, from whence the ore was moved by rail to Trent Narrows on the Trent River, dumped onto barges which were moved to Harwood on Rice Lake, there transloaded into railway ore cars to be transferred by rail to Cobourg's harbour for transloading onto lake vessel for delivery in Rochester and other U.S. ports.

George has also shared his knowledge with lively presentations on both the C&P and the CP&MR&MCo topics with seven local historical societies as well as with the Peterborough Chapter of the Professional Engineers On-



**PHOTO ABOVE:** These are some of the 'parts' George presented to each modeller. Notice that some pieces have been predrilled, some have been painted, a few have been assembled. And from this 'clutter' would appear an ore car.

**PHOTO BELOW:** This image better displays most of the parts required for assembly. The bottom frame pieces have blackened 'journal' boxes through which axles will be placed. The holes in the frame are for stiffening rods, the long thin black pieces seen, and these connect the two frame pieces together with a tiny screw to secure these sides together. The bottom of the dump box frame has 3 longitudinal supports, the centre one rounded towards each end to provide the 'axle' which allows the ore body to dump. The two long strips on the left-hand side are the Masonite rails that the car will eventually rest on.

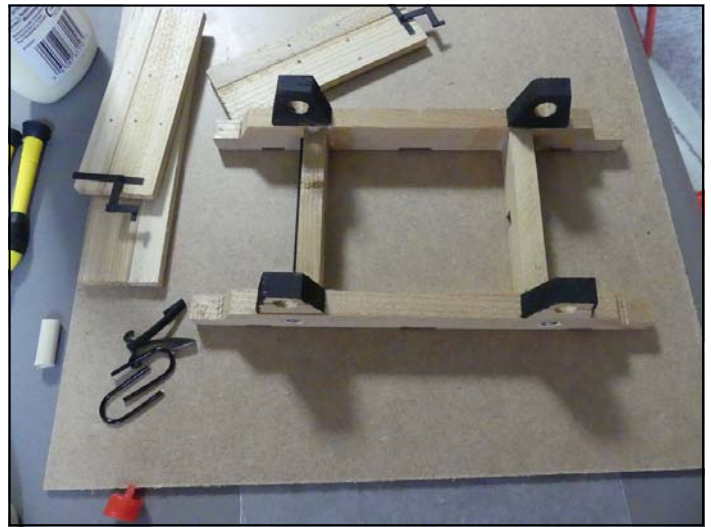


tario. Four ore car construction sessions have also been held at both the Sifton-Cook Heritage Centre in Cobourg and the Harwood Memorial Hall. In total George has overseen the construction of 65 of 'his' cars.

James Crossen at the time owned and operated a successful foundry in Cobourg primarily manufacturing agricultural implements. Although the CP&MR&MCo was an American invested enterprise, local individuals were involved in its conception and operation. The award for the construction of the ore cars was perhaps predicated on Crossen's reputation for manufacturing skill and innovation and in part on the fact there was no rail car manufacturer near by so an on-site fabrication of the rail cars was a favourable consideration. The ore cars were not replicated at any future date and their design may have been influenced by those of a similar design in England. The Cobourg & Peterborough railway was constructed to Provincial or Broad gauge, 5 feet 6 inches between the railheads. The model constructed was built to this standard, 1:14.

One November 2016 afternoon George met with a half dozen avid modellers in the basement of Terry Achcroft's house. Other Cobourg Modellers that were part of the assembling team included, Bob Duncan, Neil Hunter, John Johnston, Ted Rafuse and Mike Sonosky. Each member would construct a car for themselves.

To diminish the time involved, George pre-cut all the dimensional wood requirements from cedar fence boards and bits of pine scraps. Other sources for incidental parts included Home Hardware for paint can lid wheels and various sizes of eyes, hooks and coupling chain, Lee Valley for the mini-miniature screws, Michaels for the small chain and Mt. Albert Lumber for scale lumber. The actual construction is best described in pictures. George believes that a total investment of ten dollars would build this car. All of the participants received more value than that in camaraderie and accomplishment.



**PHOTO ABOVE:** Here the basic underframe is viewed with the bottom turned upwards. Some of the sides of the ore box are also visible. The U 'bolts' will be used to maintain the pivoting member in place during the movement of the ore box.



**PHOTO ABOVE:** Here one of the assemblers is affixing a small, very small, fastener to the wood box frame. The projection from this member will allow the box to be locked in an upright position. This securing device is 'riveted' to allow it to move. The black pieces, which appear to be metal, are in fact coloured plastic.

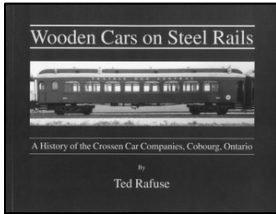


**PHOTO LEFT:** George recommends a quick drying yellow carpenter's glue to speed up the assembly of wooden parts. In this illustration hands and fingers are fitting the dump box sides to the bottom of the dump box. The 'U' shaped part with the bevelled ends is the part of the box frame that allows it to be tipped.

At the end of the session George announced that he had another project for us, and others. He wants to duplicate the ore car experience by using participant models to tell the Rice Lake Bridge story. Each participant would build a section of Rice Lake Bridge using coffee stir sticks as the primary construction component. When all the finished sections of the Burr truss bridge are completed the plan is then to string them together in Harwood. This model would be at 1:48 O scale and a train would be run across the bridge sections carrying lumber. Perhaps in the future there will be another construction related article similar to this one.



**PHOTO ABOVE:** George, standing, is supervising Bob, centre, and Neil, back to the camera as they position various parts to their individual cars. Neil appears to have surpassed Bob in the pace of construction of his car. Note in the bottom left of the image Terry's car approaching the finish.



For those seeking additional information on the Crossen Car Company a book outlining the history of the company is available from [www.steampowerpublishing.org](http://www.steampowerpublishing.org).



**PHOTO LEFT:** The box completed. Observe the rod that acts as the shank of a hinge to allow the car to side dump its contents. Note the ten miniscule black screws that represent iron bolts. Note also on the two interior box sides the moving clasp that secures the door in an upright position. The other black objects are mounted beneath the box frame and act as a leverage spring to assist in the manual dumping process.

**PHOTO BELOW:** A portrait of all six construction participants. Noted the black painted, paint can top, wheels assembled on the two cars nearest the camera. Note the black metal (plastic) strapping on the dumping box that acts as reinforcement. These braces were glued to the wooden framework.



**PHOTO ABOVE LEFT:** The assembly team, save for the photographer, intent with the construction, all under the watchful scrutiny of supervisor George.



**PHOTO ABOVE:** Small links of chain on the car side stabilized the ore box from moving when in transit. A link was located on a horizontal J bar and the J bar twisted such that the link was unable to free itself. The green painter's tape is holding two pieces of wood together while the glue dries.



**PHOTO BELOW:** An end view of the completed 1867 Crossen ore car. The bar extending beyond the car on the right is the dump lever. On the opposite end of this bar is the spring. The two are mated by a hook and eye arrangement. To move the dump box into a dump position, two men, one either end, would push up on this bar and the box would tilt, allowing the ore to fall by gravity. George estimates that the two men, by exerting 115 pounds of upward thrust each, could tilt the approximate 5,000 pound load of material.

**PHOTO ABOVE:** This view of the end of the ore car reveals additional details. There were no brakes on these cars, save for the last one in the string of twenty-five that made up a train. The cars were coupled by three links of chain hooked onto a partially opened eye bolt, shaped like a horizontal letter J. This allowed a very tight coupling of adjacent cars but did not prevent them from buffering each other when in transit. Note the black 'iron' strapping around the end frame members. That strapping prevented the wood from splintering as the cars bumped into each other. Also visible is the spring at the end of the lifting bar. And the half circle of 'metal' that appears behind the spring allows the bottom of the box to revolve on its wooden 'axle.'





**PHOTO BELOW:** George with his engineering background and his interest in having an action aspect to the model, created this invention to illustrate the operating function. To test this feature, black beans act as ore. The far bin is the 'ore' as it comes from the mine. The modellers had to fill the far scoop with ore, and then deposit the ore in the car as seen here.

**PHOTO ABOVE:** In this photo modeller's fingers on the lever bars replace the arms of the men who would tip the box allowing the ore to fall out to a ship's hold or simply onto the ground, perhaps from a raised trestle to create a mound beneath. Some 'ore' has already fallen from the dump box. Voila, the proof that the two and one-half hour session of building an 1867 Crossen ore car ended successfully with an operating model. Kudos to George for his design ingenuity and his inspiring patience.



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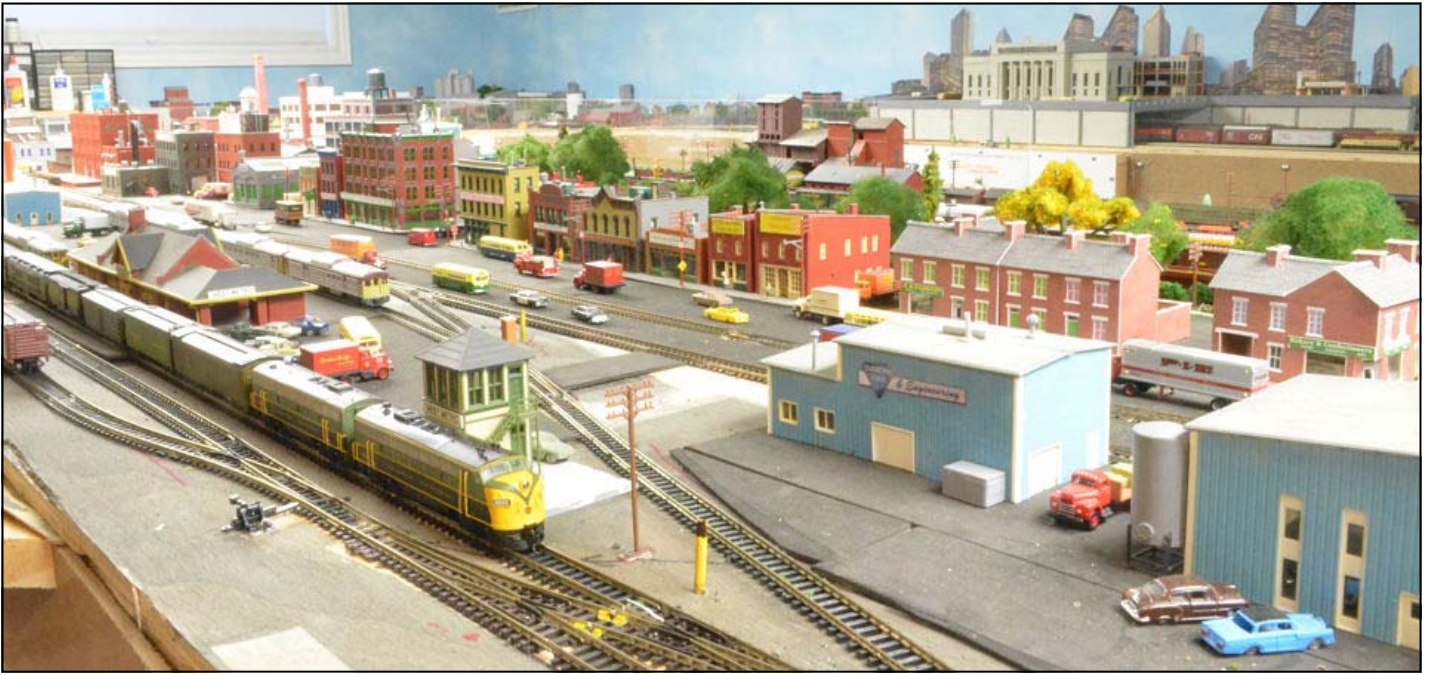


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**PHOTO ABOVE:** CN locomotive 6520, an Intermountain F9A, waits patiently at West Tower for a green aspect. Trailing is a long consist of head end express and reefer cars, an RPO car, baggage and coaches and dining car. This is CN's premiere train on the MUB&TRy. The entire layout occupies about 60% of the room. It is built in the shape of a rectangle but there is no need for a duck-under as there are loops at either end of the track design. Access is by an open walkway at the end of the section nearest the camera. Note the length of the CN passenger train. This area awaits track ballasting and scenery details. The roads are 1/16 inch foam that Clayton purchases from a variety store and cuts to size for his streets and highways.

## Clayton Morgan's Metropolitan Union Belt & Terminal Railway Co. Ltd. Text & Images by Ted Rafuse

With a railway name this long one knew that the modelling had to be in N-scale! Clayton sought to represent a belt and terminal railway located in a major metropolitan area, hence the name. The layout time era is the 1960s specifically 1967. The municipal rail model theme was adopted as he enjoys operating long trains without having the engine in one town and the caboose in another town. In this large metropolitan rail landscape, long trains operate through the central and suburban areas of such a community.

Long an enthusiast of Canadian railways, several Canadian rail companies are represented on the layout: Canadian National, Canadian Pacific and Toronto, Hamilton & Buffalo.

Following several recent life changes, Clayton commenced construction of the MUB&TRy in January, 2016. On the initial work agenda was the room preparation as this layout is in part of the basement area of his house. A primary feature was a door to prevent the house cats from entering and rearranging the subsequent layout. The benchwork is 17 x 8 feet, is level at a height of 54½ inches above the floor, and thereby allows book and storage shelves beneath the layout. That layout height was

selected as Clayton, who has built several lower height layouts, believes that N scale rolling stock appears more realistic to the eye at that level.

With no grades on the layout N-scale motive power has more reliable traction on the rails to allow for lengthy trains to be hauled. Both passenger and freight trains trundle the layout. The track plan is essentially that of a folded dog-bone. The large central Union Station serves a dual function as both a station and a staging area. That staging area is open and greatly enhances the ability to resolve any uncoupling or derauling incidents. In previous layouts a hidden yard proved to be problematic for Clayton and the present version has resolved those problems. There are many yards and industries on the layout as Clayton very much enjoys switching. The reason for the continuous loop is that he also enjoys sometimes just watching the trains go round and round.

The structures on the layout include Walthers Cornerstone, Design Preservation Models (DPM), Model Power and Metcalfe. Many of these structures have been modified and Clayton has scratch built many others.





**PHOTO ABOVE:** Which train gets the green aspect first? The CPR quartet of Budd Cars, Dayliners on CP, have already left West Metro station so they will access the main line first. The lead Dayliner is a rare RDC-4, a combination RPO and baggage/express unit. The CN engineer is not upset by the CP gaining the main line first as his train is still loading passengers, baggage and express at the West Metro station.

Locomotive control is by walkaround DC control. With more than three dozen power units Clayton has had negative experience with DCC so he has remained faithful to the DC system which he knows well. At the time the images for the article were taken in November 2017 the layout was between 75 and 85 percent complete his estimation. Most of the work to yet be completed involves ballasting and scenery enhancements.

Track is flex track and includes approximately 75 Atlas and Peco turnouts some radiating from the mainline and some serving industrial spurs. Most turnouts are within arm's length and operate manually by Caboose Hobbies' throws. Some 250 pieces of rolling stock ride the rails pulled by some forty or so locomotives including various first and second-generation diesels and multiple pieces of self-propelled cars. On the layout are GM F-units, EMD E8's, GMD Geeps, MLW FA-units & RS-3, RS-10 & RS-18, CLC C-Liners, by several manufacturers: Kato, Atlas, Life-like, Rapido, Con-Cor, and others. The RDC's are Kato models.

As a memory of a by-gone era there are also two steam locomotives retained for fan trips. While the rolling stock is impressive Clayton's forte is in scratch-building structures and modifying the occasional kit. He does not construct rolling stock.

Clayton has long held an interest in trains. He grew up in the Jane Bloor area of Toronto many decades ago. From that residence he often visited the Sunnyside rail corridor where he could witness many trains pulled by CN, CP or TH&B locomotives. As an adult Clayton has lived east of Toronto and has researched and authored three books



**PHOTO ABOVE:** Adjacent to chemical alley at one end of the layout is the distillery area. Here one can surmise the liquid product that is manufactured within the buildings here. Reflecting an imported style of architecture these buildings are Metcalfe cardboard kits from England. They provide a realistic aura for century plus brick and stone structures.

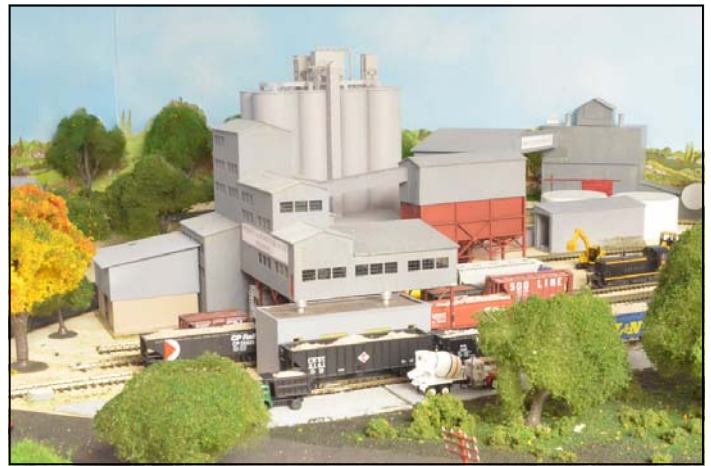
**PHOTO BELOW:** From the central aisle this view shows the Metro West layout area. The centre tracks serve the chemical and distillery districts. Visible to the left is the CPR engine house. Beyond the layout is a bookshelf laden with books and articles used as references and on the far wall is a display case with additional N-scale rolling stock in exhibition.



on the topic of local rail history. The titles are: *Railways of Clarington, volumes 1 & 2*, and *Remembering the Os-hawa Railway*. All were published by the Bowmanville Museum.

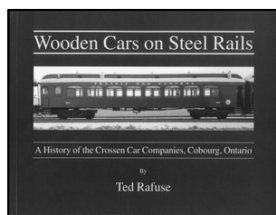
The MUB&TRy is not Clayton's first foray into building a model layout. At age fifteen or so, he acquired a second hand Lionel set. Later he modelled with a Hornby Dublo 00 set. Following the Hornby set he concentrated in HO scale and developed several layouts in that scale but retained the rolling stock and locomotives for successive layout designs. About the year 2000 he changed his modelling focus to N scale and in the nearly two decades since has constructed 3 layouts in that scale. Overall he believes he has constructed some ten different layouts.

In his late seventies, Clayton maintains his decades long interest in railways and in modelling railways. Over decades, Clayton maintains, and continues to retain, his passion for railways, real and model.

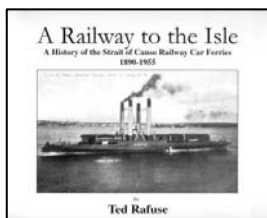


**PHOTO ABOVE:** Clayton has constructed an interpretation of a crushed stone and cut gravel pit. CN dedicates a switcher to this active industry. Many of the structures are kitbashed to create the atmosphere of the plant complex.

**PHOTO BELOW:** Xavier Junction is a suburban location. Note the covered highway bridge in the background.



**Wooden Cars on Steel Rails** chronicles the Crossen Car Manufacturing Co, Canada's largest independent builder of wooden rail cars 1866-2016.

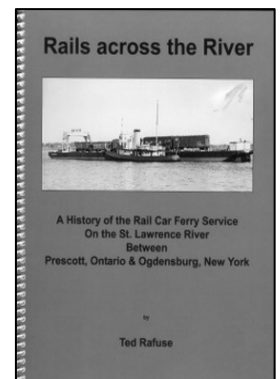


**A Railway to the Isle** outlines the rail car ferry service between Cape Breton Island and Nova Scotia 1890-1955.

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# WEATHERING A CN SD40-2 No. 5253

BY GEORGE DUTKA

Back at the Spring Woodstock train show I picked up this custom built SD40-2 that had been nicely detailed, decaled and with some sprayed-on weathering. It clearly was an engine constructed in the 1980's with the original cab cut off and a comfort cab kit applied. The model is a dummy which I thought would work well with any of my DCC sound engines. I also thought this might be a good engine to experiment with, trying some of my new-found weathering techniques. So, lets look at its history and how I weathered it.

## The Prototype

CN 5253 is one of 21 engines built in May and June 1975 numbered 5241-5261. They are 3,000hp which has a top speed of 65mph. Seven in this series still remain at work today. CN 5253 was wrecked at Ashcroft, BC on Aug 22, 1978 and removed from the roster. A really short lifespan of three years for a CN locomotive.

## Weathering the Model

The engine needed a few details re-applied such as the awnings. A few paint chips are also found on the model which were touched up with Floquil grimy black. I had purchased a set of Reeves acrylic gouache tubes which is regularly discounted through the year at Michael's. I added some rust spots beginning with the Reeves burnt umber followed by a smaller spot of burnt sienna over top the same area using a fine brush. Once dry I touch the rust spots with Bragdon light rust using a micro brush dragging it down were I could. The areas I chose to rust up first are areas on the handrails, plow, fuel tank and around the roof fans.

I applied masking tape to the windows and headlight. I airbrushed the engine with two coats of Proto Paints, flat haze made by Rapido. Rapido's Proto Paints are an acrylic product which dry's very fast. The colour used gives the paint job a bit of a faded look. Once this had dried I added some Bragdon dark rust to the walkway followed by some gloss medium along the lower area of some engine compartment doors to emulate oil seeping through to the walkways. I did add some spillage to the front and rear platform. I also added some gloss as oil spills around the fuel tank filler areas. The steps got a light coat of Bragdon dark rust.

On the couplers I dabbed acrylic burnt sienna and a dusting of Bragdon bright rust. PanPastel raw umber shade, a good dirty weathering colour was lightly applied to the truck side frame and fuel tank. I usually dip my brush into the PanPastel weathering pod then wipe off a good amount be-

fore applying the weathering mix to the engine. I used some PanPastel Titanium white for highlights to the lower areas. "Less is More" when applying powders and pastels.

I decided to try a new technique on the roof of my engine. This was my first attempt and I think it turned out really well. I suggest you give it a try on one of your models. It is called a paint chipping technique which I found on the internet that only requires three steps. I use Anita's acrylic brand of paint which I found in the US which is recommended for this weathering technique. One can find similar colours and products at Michael's. The colour used in charcoal a medium gray.

I began by applying the paint with a fine brush in a line which curves around near the edge of the seams on the cab roof, nose and around the roof filters. Once dry using a medium size micro brush I applied the same colour but with a bit of water applied to the micro brush first. I dab it on the inside portion of the gray line. I did not worry if it touched the line as it will kind of blend the two together. The third step is the addition of a fine line using burnt sierra acrylic as rust on the outside edge of the gray line. I only added the rust randomly not along the whole line. My overhead photos view's the technique better than I can explain. A coat of Bragdon powders soot (black) is applied to the whole roof of the engine to blend the weathering together.

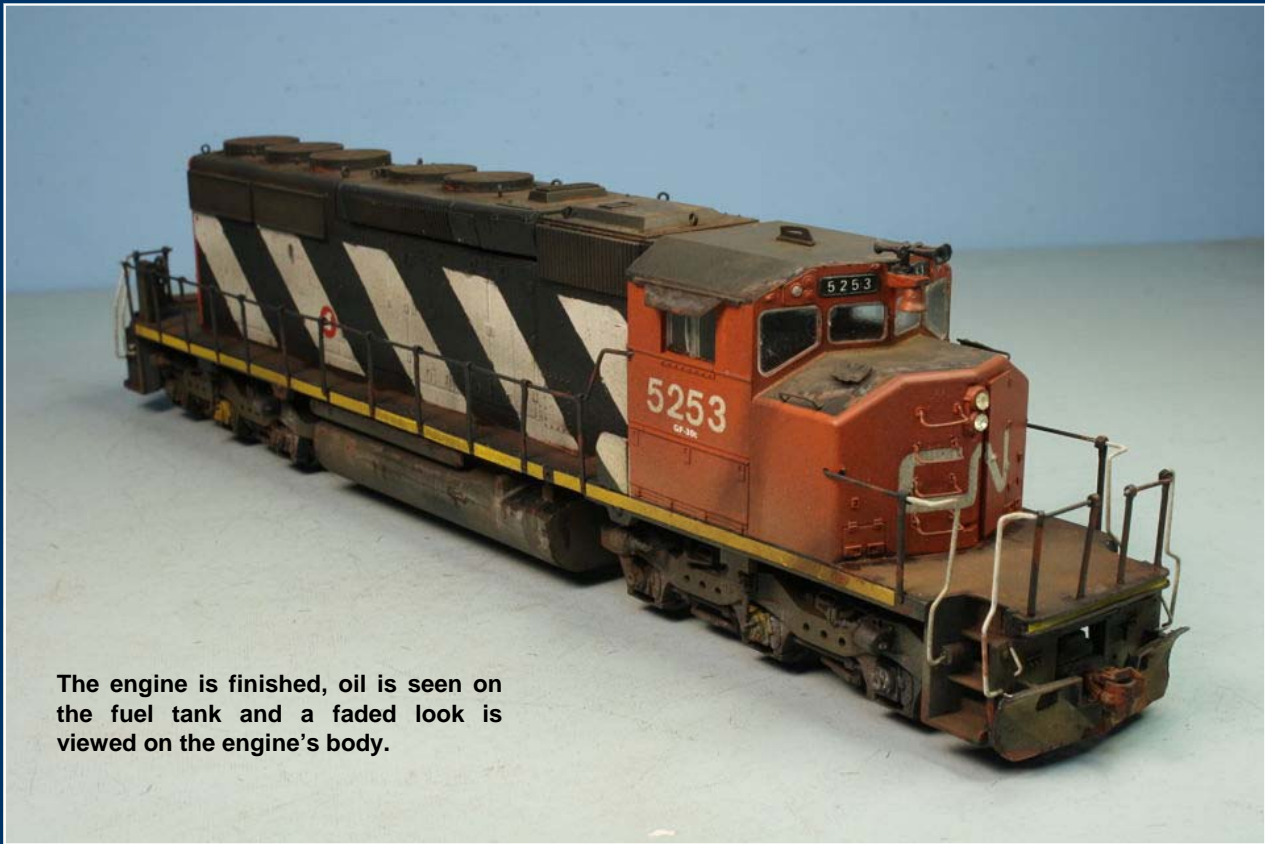
## Final Notes

The roof and hood chipping along with the wet oil areas are what really makes this engine stand out. Although my engine looks really worn as much of the fleet really appears, this particular unit never made it to this point, being used only three years on the CN. The chipping effect I think is really neat and I plan on trying it on other units in my White River Division fleet. I am confident this effect is something a modeller that is not that experienced in weathering can try with positive results.



# WEATHERING A CN SD40-2 No. 5253

## BY GEORGE DUTKA



The engine is finished, oil is seen on the fuel tank and a faded look is viewed on the engine's body.



PHOTO RIGHT: A look down at the cab roof and nose viewing my first attempt at chipping paint. I think it worked out well.

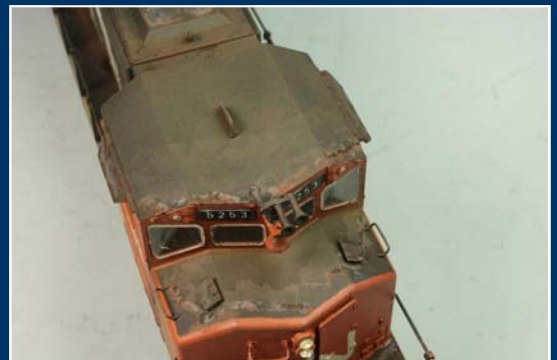


PHOTO LEFT ABOVE: Once I was happy with how the cab roof looked I moved to paint chipping on the engine's roof. The roof near the fans was my second attempt which I feel was better than the first. If one feels intimidated, try this technique on a small area as a test first. I am sure you will be happy with the effect once completed.



PHOTO LEFT: I added gloss to the fuel tank as spillage and a few spots on the running boards

PHOTO RIGHT: Paint chips and rust seen on the plow, handrails and coupler.

