THE SANDHOUSE

JOURNAL OF THE C.R.H.A. PACIFIC COAST DIVISION

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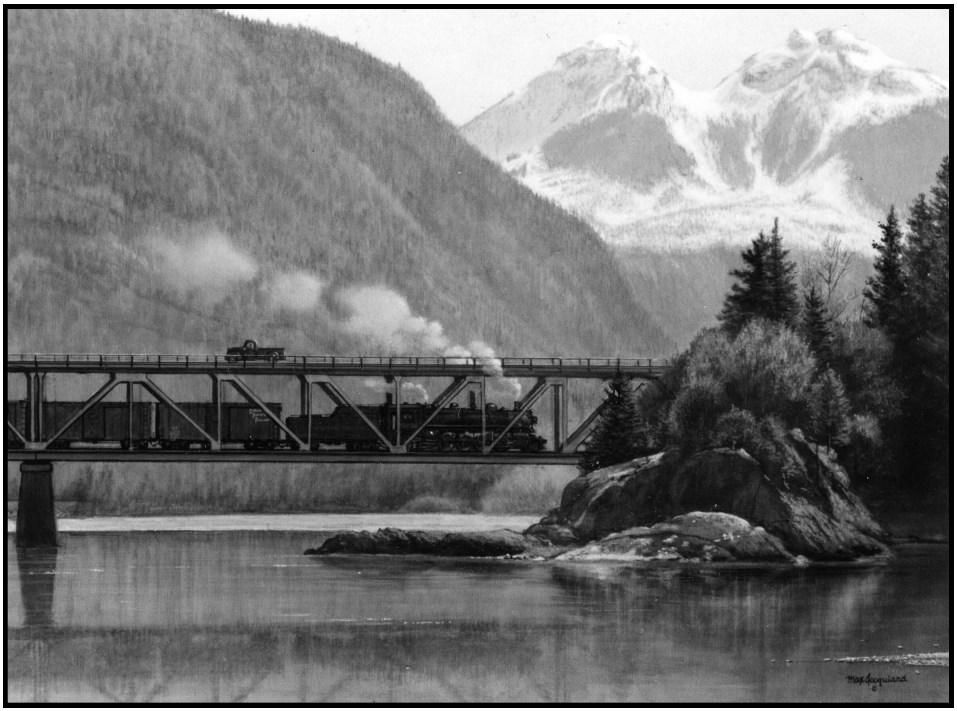

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- **Hope Bridge at 100**
- **Amtrak's Vancouver revival**
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THIS JOURNAL IS THE OFFICIAL PUBLICATION OF THE
CANADIAN RAILROAD
HISTORICAL ASSOCIATION
PACIFIC COAST DIVISION
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Press Date — May 13, 2015

Front cover: *CPR P1n class 2-8-2 locomotive 5256 leads a westbound freight train across Hope Bridge in this painting by well-known railway artist Max Jacquiard. In the background is Isolillock Peak, better known as Mount Holy Cross because late summer snow remains on the face of the mountain in the shape of a cross. In this issue Barrie Sanford writes about Hope Bridge, which is 100 years old this year.*

Back cover: *The first southbound departure of Amtrak's Mount Baker International train to Seattle is seen departing Vancouver on May 26, 1995, restoring passenger rail service between the two cities after a gap of almost 14 years. (Photo by Ian Smith)*

To Our Readers

For The Sandhouse, anniversaries are an opportunity to examine the history of various facets of railways – lines and routes, trains and locomotives, organizations and structures -- that perhaps are otherwise taken for granted.

In this issue, we observe two anniversaries – one a centennial, the other more recent.

The leading article, by historian Barrie Sanford, is the first part of an in-depth look at a structure that has reached its 100th birthday – the Kettle Valley Railway bridge at Hope. Its railway days are long past, but the bridge continues to serve as a vital link for road traffic.

Barrie's story is a fascinating account of the methods, machines and materials used a century ago to build such a key piece of infrastructure in a challenging location.

A more recent event was the re-introduction of passenger rail service between Seattle and Vancouver in May 1995, after an interruption of almost 14 years. The rebirth of passenger service between the two largest cities in the region known as Cascadia has been a success story that is reported in another major article.

We also look at the work to restore CP's contentious Arbutus Line, and present another update on the building of the Evergreen Line, which one day will have anniversaries of its own.

Ian Smith, Editor

Corrections and Clarifications

- Spring 2014 issue, page 7: The paragraph on the restoration of Royal Hudson 2860 failed to note that much of the work was carried out by employees of Robert Swanson's firm Railway Appliance Research Ltd.

- Winter 2014/15 issue, page 8: The map gives an incorrect distance by highway between Dawson Creek and Fairbanks. The correct mileage is 1,520, as stated in the text on page 6.

Dates to Remember

May 21 — PCD Meeting, Place des Arts, Coquitlam, 19:30. (Entertainment: Chris Wasney, Rocky Mountain Circular Tour)

June 18 — PCD Meeting, Place des Arts, Coquitlam, 19:30. (Entertainment: Ian Smith, Evergreen Line Progress, 2014-2015)

September 17 — PCD Meeting, Place des Arts, Coquitlam, 19:30. (Entertainment TBA)

Division News

Our winter meetings continued with a gathering on February 19, with Ron Keillor presenting two videos on Indian railway subjects – the "Monsoon" Railway and the Darjeeling Railway.

March 15 saw the Division once again participating in the annual Western Rails hobby show at the Cameron Recreation Centre in Burnaby, with board members Ian Smith, Chris Wasney and Ron Keillor manning the sales table.

At the March 19 membership meeting, Ian Smith presented the first part of a slide show based on his travels to Germany last autumn. The first part focused on the busy railway scene in Frankfurt and Berlin.

The second part of Ian's show was the entertainment following the business of the Annual General Meeting on April 16. This time the scene shifted to Hamburg and Lübeck. Ian rounded out the evening with a look at the rebuilding and renovation of several major British railway stations.

At the AGM, the incumbent Board of Directors was re-elected by acclamation for the 2015/16 term, as follows: President, Chris Wasney; Vice-President, Ron Keillor; Secretary-Treasurer, Ian Smith; and Director-at-large, Doug Battrum. Two positions of Director-at-large remain vacant.

During the meeting, Douglas N.W. Smith of Brockville, Ont., was announced as the winner of the 2015 Norris Adams Memorial Award, as selected by a panel of judges consisting of Dave Davies, Henry Ewert and Eric Johnson, all past recipients of the award. Doug Smith has been co-editor of the national CRHA publication *Canadian Rail* for 25 years and also has his own publishing venture, Trackside Canada. In these capacities, he has written numerous in-depth articles on B.C. railway subjects, with an emphasis on passenger rail, and has commissioned similar contributions by other railway historians. As Doug was unable to attend the meeting, arrangements have been made to have the award presented to him by CRHA leaders in Montreal.

Two more membership meetings will take place before the summer break – please see Dates to Remember on page 3.

YEARS AGO IN THE SANDHOUSE

35 Years Ago (April 1980 issue)

— A derailment along Seton Lake claims the life of a BCR engineer.

30 Years Ago (April 1985 issue)

— The red, white and blue livery begins to appear on BC Rail.

25 Years Ago (March 1990 issue)

— VIA operates the last runs of the Canadian on the transcontinental CPR route, departing eastbound from Vancouver on January 14 and arriving there westbound on January 17.

20 Years Ago (March 1995 issue)

— BC Rail cuts summer passenger service to Prince George to three times per week.

15 Years Ago (March 2000 issue)

— VIA's Canadian makes its last stop at Port Coquitlam on January 17.

10 Years Ago (Spring 2005 issue)

— VIA celebrates the Canadian's 50th anniversary on April 24.

— Ex-CPR 2-8-0 No. 3716 makes its first run on the Kettle Valley Steam Railway on May 22.

5 Years Ago (Spring 2010 issue)

— Vancouver's Olympic Line streetcar demonstration draws 500,000+ free riders in 60 days.

— West Coast Express daily ridership averages 17,415 during Olympic Games, up 58%.

— Olympic crowds drive SkyTrain to a single-day record of 567,000 riders on February 20.

— The new Canada Line carries a single-day record of 287,400 riders on February 19.

— British Columbia Railway personnel are transferred to the B.C. Ministry of Transportation.

Hope Bridge: 100th anniversary of a vital road and rail link

by Barrie Sanford

This is a year of many railway centenaries in British Columbia, owing to the fact that 1915 was the high point of the railway construction mania in the province.

Already the date of January 23 has passed, marking the 100th anniversary of the driving of the last spike on the Canadian Northern Railway at Basque, just south of Ashcroft.

Two other major railway events of 1915 were the driving of the last spike on the Kettle Valley Railway at Princeton on April 23, and the official commencement of regular service on the railway on May 31. Although both events were given media attention at the time, the KVR was not really complete.

A major component of the ultimate railway – the section through Coquihalla Pass from Brodie, southwest of Merritt, to Hope – was still under construction in 1915 and wouldn't be open to regular train service until July of the following year. The Coquihalla Line not only shortened the KVR's route by approximately 100 miles, it was largely responsible for defining the railway's identity in the years that followed.

The Kettle Valley Railway had begun life as a private shortline near Grand Forks. By 1910, the Canadian Pacific Railway had acquired the KVR and commenced using the charter rights of its new acquisition to complete a rail link between Midway, then the end-of-track on the CPR west from the Kootenays, and Hope. CPR civil engineer Andrew McCulloch was assigned the position of Chief Engineer in charge of construction, and his legendary skill in building the railway resulted in the KVR being dubbed "McCulloch's Wonder." The adopted nickname became the title of a book about the railway by the author of this article.

One major challenge confronting McCulloch was the fact that the KVR's route down the Coquihalla Valley brought the railway to Hope, on the south side of the Fraser River, whereas the CPR mainline was on the north side of the river.

The KVR would either have to continue down the south bank of the Fraser River to the CPR's Mission Bridge, 50 miles to the west, or build a new bridge somewhere between Hope and Mission. The Canadian Northern Railway was already building along the south bank of the river, so it soon became obvious that a second bridge at or near Hope would be needed.

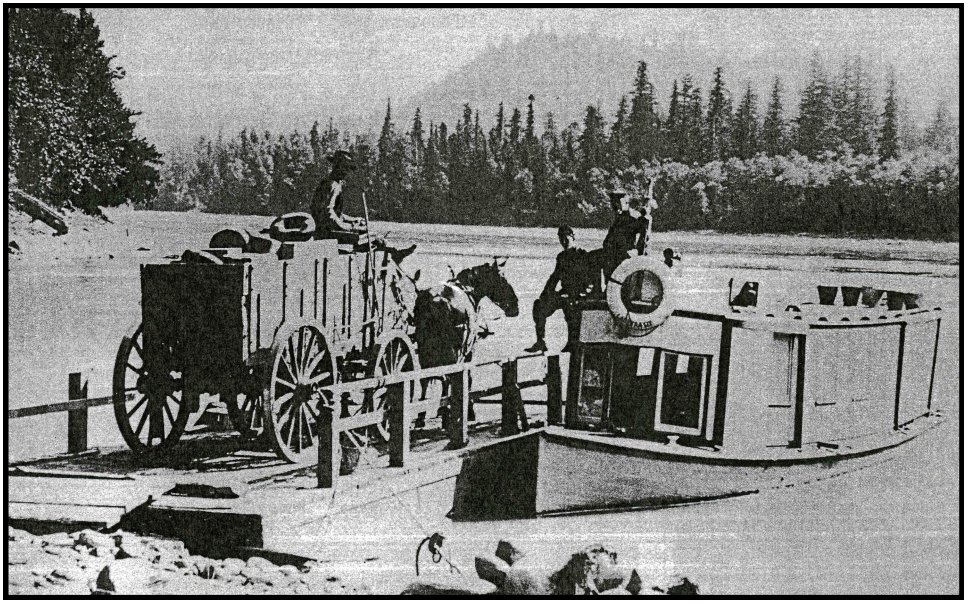
Hope and Yale, upstream, had been established as minor Hudson's Bay Company fur-trading posts in the mid-1800s. The fur trade evaporated with the discovery of gold in the Fraser River near Yale late in 1857, which brought thousands of gold-seekers into the region. The Fraser was navigable as far upstream as Yale, and access to the region from the coast was relatively easy on board the numerous steam-powered stern-wheeler riverboats operating on the Lower Fraser.

The collapse of the gold rush in the early 1860s reduced the number of riverboats operating on the Lower Fraser, but almost all riverboat service above Chilliwack ended with the completion of the CPR through the Fraser Valley in the early 1880s. This left the village of Hope isolated because it was on the opposite side of the Fraser from the CPR.

Ferry service across the Fraser at Hope began in the 1880s but suffered a tumultuous history. Ferry tolls were never enough to cover the cost of operation, so private operators were reluctant to provide the service. Offers of subsidies for the service came and went with the vagaries of the political winds. Drifting ice in winter and swift-flowing water during freshets made conditions dangerous for rowboats and even small steam vessels.

The only permanent solution was a bridge.
In the heady days of 1910, the CPR had embarked on an ambitious plan to double-track its entire mainline through British Columbia. Construction of double track from Vancouver to Ruby Creek was soon underway and completed in 1912. CPR's plan at that time was to leave Ruby Creek as the end of the double track until the KVR's Coquihalla Line was completed. That way, trains could be diverted via Hope-Brodie-Merritt-Spences Bridge while the difficult task of double-tracking through the rugged Fraser Canyon was undertaken.

In fact, further double-tracking east of Ruby Creek was never carried out because of the radically changed conditions brought about by World War I and the rapid rise of automobiles and trucks as substitutes for trains. Ruby Creek remains the end of double track to this day.
Andrew McCulloch and his counterparts in the CPR conducted extensive drilling tests in the Fraser River between Ruby Creek and Hope with the objective of finding the best location for a bridge. Ultimately, a decision was made to construct the bridge immediately adjacent to the village of Hope. The fact that this location required the least construction of new trackage to



This poor quality reproduction from a magazine is one of the few known photos of the Lady Fraser*, one of several small vessels used with a barge to provide service across the Fraser River at Hope prior to completion of Hope Bridge in 1915.*

(All illustrations from the collection of Barrie Sanford)

connect the CPR and KVR was undoubtedly a critical factor in the decision. But the provincial government was also interested in having a bridge constructed at Hope, so a combined road-rail bridge was proposed.

The parties agreed that the KVR would build and own the bridge and the provincial government would pay the KVR $200,000 to have the bridge incorporate an upper deck to carry pedestrians, horse-drawn wagons and driven cattle. Automobiles were then still scarce.

It was estimated that the bridge would cost $750,000 to build, and considering the rapid inflation of that period it is unlikely the bridge cost less than that. However, official records of the CPR report the cost as being $564,751. Perhaps that was merely the cost to the KVR after deducting the provincial government subsidy. In any case, the public share was about one-quarter to one-third of the total cost.

The agreement between the provincial government and the KVR was signed on January 12, 1912, and ratified by the lieutenant-governor on February 27 (a copy can be found in British Columbia Statutes 1912, Chapter 35). A clause in the agreement stated: "Railway will not alienate, sell or dispose of the aided line or said bridge unless the Railway shall first obtain the consent thereto of the Lieutenant-Governor in Council."

The proposed bridge was soon referred to as Hope Bridge. More recently, following a major rehabilitation between 1993 and 1995, it has been called the Fraser-Hope Bridge. It became the second of only two double-deck road-rail bridges ever constructed in B.C., the other one being New Westminster Bridge.

Several side-by-side road-rail bridges were built in B.C., and planking of the track deck of railway bridges for road traffic was implemented in numerous instances. However, no other double-deck bridges were ever constructed. Both noted bridges survive, but not as dual-function bridges. Hope Bridge now carries only road traffic. New Westminster Bridge carries only rail traffic, unless one considers the thousands of imported automobiles that cross it every year aboard triple-deck railway cars.

There was a long delay between the ratification of the provincial subsidy agreement and the actual start of construction. The major cause was the uncertainty as to the bridge's exact location. As of early 1912, the CPR had not decided on details of its mainline double-tracking and line improvements opposite Hope, so the location of the planned junction between the KVR and CPR could not be set.

On the south side of the river the KVR and Canadian Northern were squabbling over a crossing of their mutual tracks within the Village of Hope. The CNoR also wanted building of the bridge delayed so as not to impede riverboats delivering construction supplies between Hope and Yale.

It was clear the CNoR was going to be first in getting its tracks into Hope. The CPR line between the Coquihalla Valley and the planned bridge would have to cross the CNoR, so the bridge would have to wait until the crossing layout was decided. The CNoR wanted the CPR to build an overhead crossing; the CPR wanted a less expensive level crossing. Eventually, the railways agreed to a diamond crossing. The CPR, being the loser in the race to get tracks into Hope, was obliged to build and staff an interlocking tower to prevent trains from colliding.

Hope Bridge was designed to have four identical steel through trusses, each 238 ft. long, set on three concrete river piers and two concrete end abutments. A foot-long expansion gap between each truss resulted in the bridge's official length being 955 ft., three feet longer than the sum of the lengths of the four spans. It was actually somewhat longer than 955 ft., if the flanking spans on the roadway deck are included.

Many of the bridge members were made of laced steel channels. This was a common design for steel bridges in those days because steel channels linked by lacing bars required the least amount of steel needed to produce a given strength. However, laced channels involved an enormous amount of labour to fabricate and assemble, and were a nightmare to paint. Only the low cost of labour compared with the cost of steel in those days gave the design any virtue. New bridges today never use this technique.

Total weight of steel in the bridge was 5,661,000 lb. As was mandated by engineering codes in that age before the improvement of welding techniques, all steel components of the structure had to be fastened with rivets. About 75,000 rivets were placed, each one by a riveting crew of four men. Each rivet had to be heated to red hot, pushed into place using tongs, and hammered smooth before it cooled. If the cooled rivet was not tight, it had to be drilled out and replaced.

On November 7, 1913, James J. Warren, KVR president, announced that a contract had been awarded that day to the Vancouver heavy contracting firm of Armstrong, Morrison & Co. Ltd. for construction of the bridge substructure. This same contractor had built the substructure for New Westminster Bridge a decade earlier. The company had built, or went on to build, the foundations for most of the Canadian Northern bridges in the Fraser and Thompson canyons.

At the same time Warren instructed McArthur Brothers Construction, which held the contract for construction of the KVR's Coquihalla Line between Hope and Coquihalla, to clear and grade the two miles of route between the north end of the bridge and the planned junction with the CPR downstream of the bridge. McArthur Brothers subcontracted the clearing to the Werdenhoff-Cass Co.

A pile driver can be seen at work building the pile trestle across the Fraser River in the early stages of construction of Hope Bridge. The view is from the Hope side of the river, with the river flowing from right to left. The photo was taken December 21, 1913, by a staff member of Armstrong, Morrison & Co., the bridge substructure contractor.

There does not appear any public announcement about the award of the contract for fabrication and assembly of the steel superstructure. However, the contract was awarded to the Canadian Bridge Co. in early 1914. It called for bridge "erection", whereas modern contracts use the term "assembly" instead of "erection." Readers may form their own conclusion as to the reasons for the change in terminology.

One of A&M's principals, Alexander Morrison (1852-1928), was put in charge of the substructure work. The local *West Yale Review* newspaper records that the other company principal, William Henry Armstrong (1857-1922), was frequently on site.

Assembly of the support infrastructure began immediately on the Hope side of the river close to the bridge site. The period of low water in the Fraser has historically been from December to March, so it was essential for the concrete piers to be above the river level by the end of March, when the river began to rise from local run-off, and be completely done by the end of May, when the river started rising again from run-off in the Rockies.

The machinery infrastructure requirements included a large steam-powered compressor plant, electrical generating plant, numerous concrete mixers, water supply system for the mixing the concrete, and a narrow-gauge tramway for delivering gravel to the mixers and the mixed concrete to the bridge site.

The personnel infrastructure requirements for the 125 men engaged in the work included bunkhouses, dining room and recreation hall. A large warehouse was needed to protect the cement from the weather. All supplies were delivered via the CNoR, which by then was providing limited local service.

Construction of the two concrete end abutments was relatively straight-forward, especially on the north shore where the abutment was on rock, completely out of the water. The south shore abutment was built with a simple cofferdam. The real challenge was construction of the three river piers. The Fraser is about 50 ft. deep at this point, and below the riverbed is a layer of gravel approximately 100 ft. in thickness before bedrock is encountered. Such depths could only be overcome using caissons.

Readers may remember elementary school science lessons in which the teacher placed an inverted glass into a tray or bucket of water to demonstrate that the air pressure in the glass kept any water from coming into the open end of the glass. That is the basic principle of a caisson. As long as the air pressure in the caisson is at least equal to the water pressure outside, no water will enter the open bottom of the caisson.

Of course, at water depths much greater than the classroom water tray, compressed air must be used to match the pressure of the outside water. Men and machinery enter the caisson through airlocks and excavate the loose gravel of the riverbed. As the excavation advances, the concrete pier is started above the caisson, the weight of the concrete driving the caisson downward into the riverbed. The centre of the pier remains hollow for access to and from the caisson. Upon reaching bedrock or satisfactory depth, the hollow is filled with concrete as the workers retreat.

The job of the "sandhogs" – as caisson workers are called – carries with it several dangers. The caisson could be knocked over if struck by a major object floating down the river or it might topple if the cutting edge around the base of the caisson encountered a large rock on one side. In either case, the sandhogs would be drowned instantly. The concrete above the caisson work area could break through, instantly crushing the workers. These are all possible dangers faced by sandhogs. But one certain danger is nitrogen narcosis, more commonly called "the bends."

Sandhogs and deepsea divers undergoing outside pressure from air or water can descend

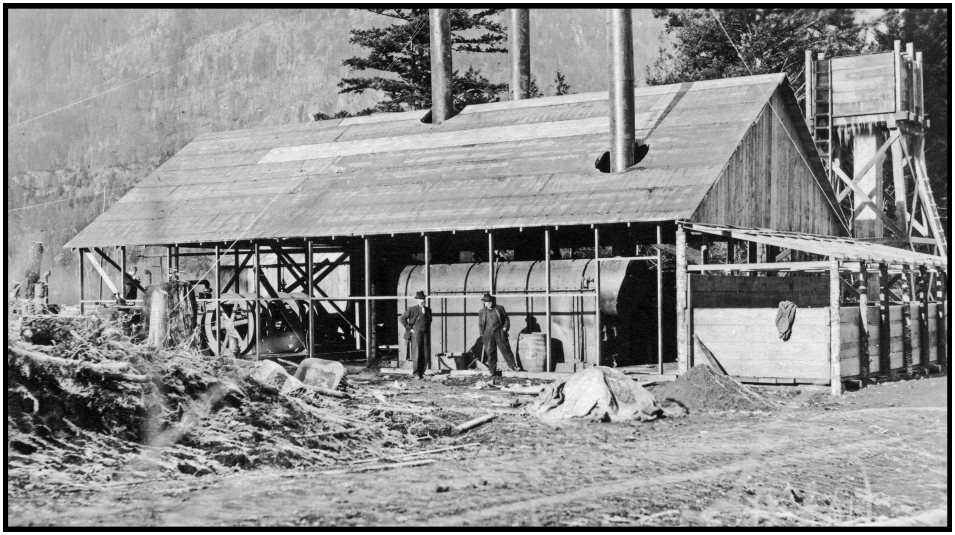
quickly, but they can work at depth for only a very short time, perhaps as little as 15 minutes, and their ascent back to normal pressure must be over several hours. Otherwise, the nitrogen taken into their bloodstream along with life-giving oxygen can form bubbles, leading to very painful paralysis and often death. The only preventive measure is slow decompression on ascent.

Despite the danger, there was no shortage of volunteers for the caisson work on the Hope Bridge after it was discovered that the gravel of the riverbed was sprinkled with gold nuggets missed by the gold seekers of half a century earlier.

Pile-drivers constructed a temporary trestle across the river to hold the three caissons in position and to allow easy access to the caissons from shore for delivery of the huge amount of concrete needed for the piers.

On January 27, 1914, the first caisson was launched from the south shore. The three river piers were numbered from the south end, so this was the caisson for Pier 3, nearest the CPR side of the river. It was immediately towed into position and the sandhogs went to work. Because there was no natural light in the caisson, electrical lighting was provided. The sandhogs worked in three eight-hour shifts, although workers spent much more time in decompression during their shift than actually working.

In early February the caisson for Pier 2, in mid-river, was launched. However, it was not immediately towed into position, but instead was anchored close to shore. This precaution was taken because a massive ice jam had formed in the



A large steam boiler and large compressors were needed to supply the huge amount of compressed air required to keep the caissons pressurized and to operate the pneumatic tools used inside the caissons. "Sandhogs" returning to the surface after working in the caisson had to go through decompression, so the air lost from the decompression chamber as it gradually reduced pressure had to be replaced before the next group of men could enter the chamber.

river about a mile upstream of the bridge site. If the ice broke free as a large unit, it could easily wipe out the one placed caisson and the temporary pile trestle. Crews tried releasing some of the ice with dynamite, but at about 3 p.m. on February 11, the ice let loose and drifted downstream, crashing into the bridge works.

Fortunately, the river current was slow and the damage was relatively minor. About 250 ft. of pile trestle was swept away and two concrete mixers and a donkey engine were knocked into the river. The essential but vulnerable caisson for Pier 3 escaped damage. No one was injured because the sandhogs had been evacuated from the caisson as a precaution. The machinery was later recovered and put back to work.

The caisson for Pier 2 was immediately placed and excavation started. This would be the tallest of the three piers. Once bedrock was encountered, the bottom of the caisson could be sealed with concrete. Crews could then retreat from the caisson, filling it in with concrete as they ascended. The caisson for Pier 1 was launched on March 19.

The last concrete on the foundations was poured on May 2, comfortably before the onset of the annual freshet. The *West Yale Review*, reporting on the occasion, noted: "The work has been completed a month ahead of schedule. But the most gratifying feature to the contractors and the superintendent is that the work has been accomplished without the loss of life and even without serious injury to any one of their employees, whose numbers averaged about 125."

Unfortunately, the bridge's safety record was not to remain unblemished. Charles Neil, aged 23, was killed when struck by a heavy plank on December 30, 1914, while engaged in disassembling falsework used during placement of the steel. He was the only fatality during the bridge's construction.

Assembly of the steelwork on the bridge did not begin until the fall of 1914, owing to the track from the CPR mainline not being completed and the fact that new pile falsework to support the steel during assembly could not be driven until the river flow lessened. Tracklaying crews arrived on September 16, and assembly of the bridge began in early October. Two spans were completed by year-end. Work continued through the winter.

It is not clear exactly when the first train crossed the bridge. On March 1, 1915, Warren sent a telegram to B.C. Premier Richard McBride, stating that work trains were now able to cross the bridge. The *West Yale Review* on March 5 reported that a work train had crossed the bridge the day before and tracklaying through Hope was underway.

The KVR's contract with the Canadian Bridge Co. was only for fabricating and assembly of the main spans of the bridge. The start of World War I in August 1914 had changed government priorities for the allocation steel and gasoline, and in early 1915 serious consideration was being given to delaying construction of the roadway deck until after the war. The opening of the CNoR meant that Hope was no longer dependent on the CPR. However, a decision was made to complete the bridge as planned. On March 20, 1915, the KVR awarded the Canadian Bridge Co. a contract to build the upper roadway deck.

Throughout the spring of 1915 the bridge was painted and work on the wooden plank roadway deck proceeded. The bridge saw frequent use by trains delivering rails, ties and other supplies for continuing construction on the Coquihalla Line.

The exact date of the roadway deck opening to traffic is unknown. Official records in the Provincial Archives are sketchy and news reports in the *West Yale Review* newspaper are sometimes ambiguous. It seems no one was happy with the sharp turns in the roadway where traffic entered or exited the roadway deck. Also, the rudimentary road connecting the north end of the bridge

with the CPR mainline Hope station, satisfactory when only horse-drawn wagons crossed the river by ferry, was the subject of much complaint. Automobiles were becoming increasingly common and motorists were vocal in their demands for better roads.

In early September, the newspaper noted that a new road to the station was being staked out, and a petition was being sent to the government asking that the ferry be kept in operation until the road approaches to the bridge were better. The *West Yale Review* of October 1, 1915, reported that the new road between the bridge and station had opened. Significantly, this was the first issue of the newspaper in which the ferry schedule did not appear. It is reasonable to assume the roadway on the bridge came into use sometime in late September 1915.

During the autumn of 1915, work to complete the KVR's Coquihalla Line was rushed, but heavy snow in December forced work on the line to be halted until well into the following year. A station was constructed near the Hope end of the bridge and a wye, water tank and enginehouse were constructed nearby. The new station was named Hope.

The station on the CPR mainline across the Fraser River, which had borne the name Hope since the 1880s, was renamed Haig. The change greatly pleased Hope residents, who had often suffered delays in receiving shipments on the CPR because of the confusion caused by Hope station being across the river from the town itself.

The name of Haig was chosen to honour Douglas Haig (1861-1928), the British general who

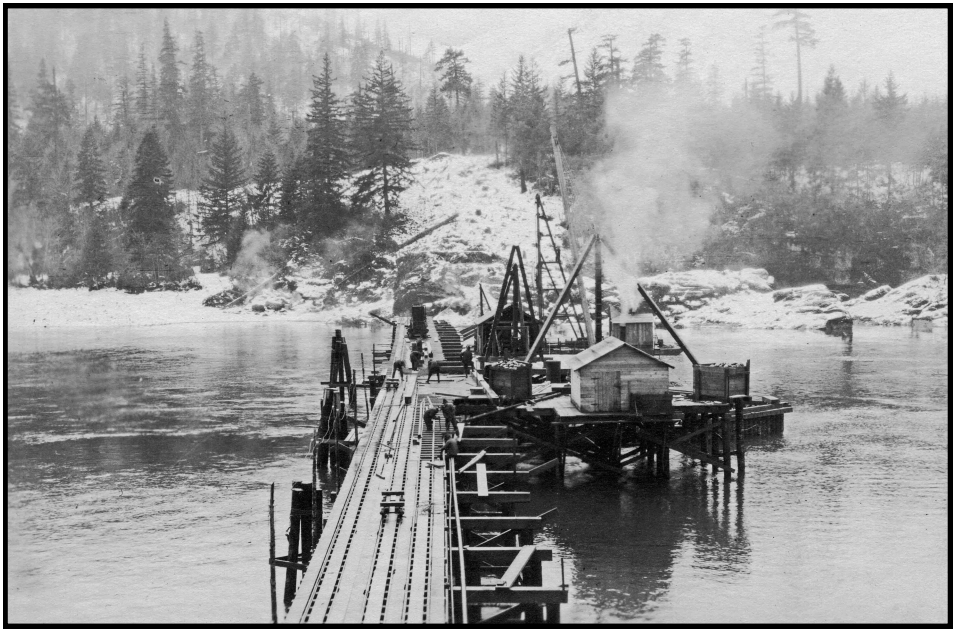
This photo of a caisson under construction shows the steel cutting edge at its base. Once the caisson has fulfilled its purpose in reaching bedrock, it will be abandoned around the base of the pier it helped to create. It will then be buried in rip-rap dumped from the finished bridge to protect the pier against river scour.

became the Commander-in-Chief on the western front later in World War I. Haig is often referred to as Earl Haig, but Earl was his title, not his name. Continuing with the wartime honours, the junction of the CPR and KVR, across the river from Hope, was named Petain. This name honoured Henri Philippe Petain (1856-1951), French hero of the recent Battle of Verdun.

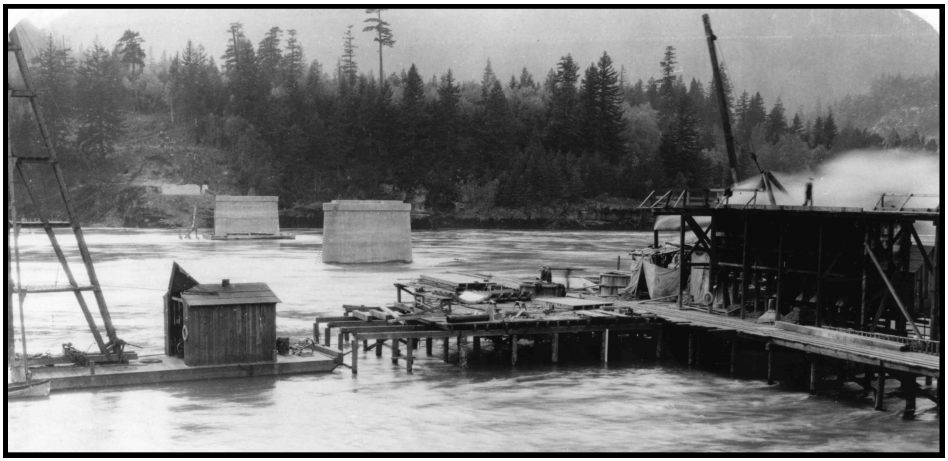
The editor of the *West Yale Review* on July 21, 1916, noted: "What with Haig to the north of us and Petain to the south we have good reason to feel secure from invasion." (When Petain sided with the pro-Nazi Vichy government in 1940, the name of the junction station was changed to Odlum, honouring Victor Wentworth Odlum (1880-1971), head of Canadian forces at the time.)

On July 31, 1916, the Coquihalla Line officially opened and daily passenger service over Hope Bridge commenced. On September 15, CPR President Thomas Shaughnessy rode over the Coquihalla Line and Hope Bridge on board a special westbound train, accompanied by McCulloch and Warren. It is not recorded if Shaughnessy specifically commented about Hope Bridge, but upon arrival at Vancouver he told reporters he was "greatly impressed" with his train ride that day. Hope Bridge was now serving its intended function.

In the next issue, Barrie continues with the story of Hope Bridge during its years of operation as a dual road-rail bridge and later road-only

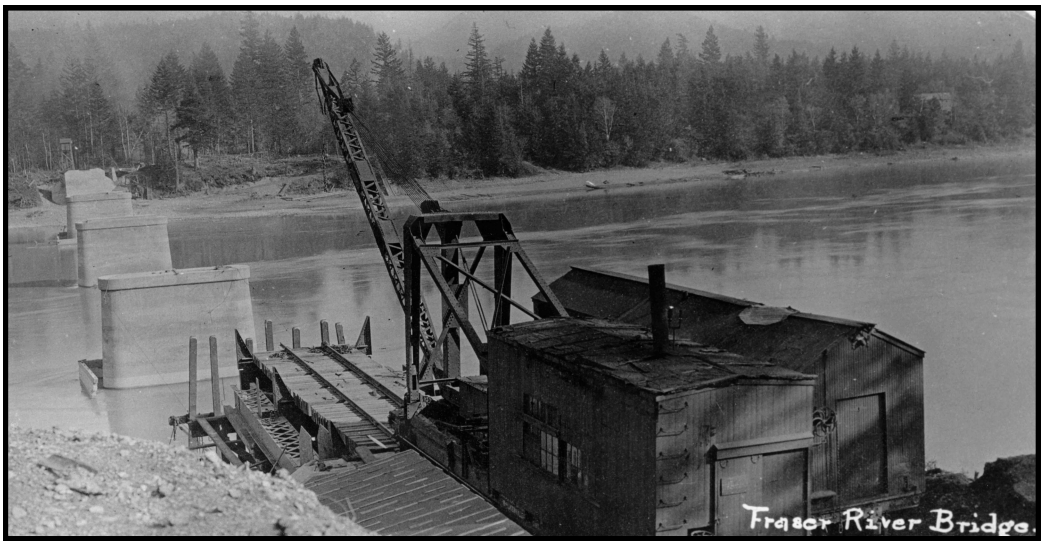


This photo looks toward the Fraser River's north bank and was probably taken from one of the pile drivers used in construction. It is dated February 1914 and was likely taken immediately after the falsework trestle was struck by floating ice on February 11, judging by the slight misalignment of the trestle at the far end, beyond the caisson for Pier 3. Note the caissons in the river to the right of the trestle.



Above: The north shore abutment and Piers 1 and 2 have been completed in this photo taken on April 14, 1914, looking across the river from the Hope side. Construction of Pier 1 continues on the right. The temporary trestle seen on the opposite page has been largely removed since it would not have been capable of withstanding the coming freshet. When the river is more sedate, a new pile trestle will have to be driven to support the steel superstructure during assembly.

Below: A crane of the Canadian Bridge Co. positions steel during the start of assembly of the superstructure in October 1914. One of the many laced channel truss members in the bridge can be seen just to the left of the track, in this view looking toward the Hope side.



bridge, including its significant rehabilitation between 1993 and 1996.

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Vancouver Daily Province, February 12, 1914, p. 20: "Caisson Saved; False Work Gone"
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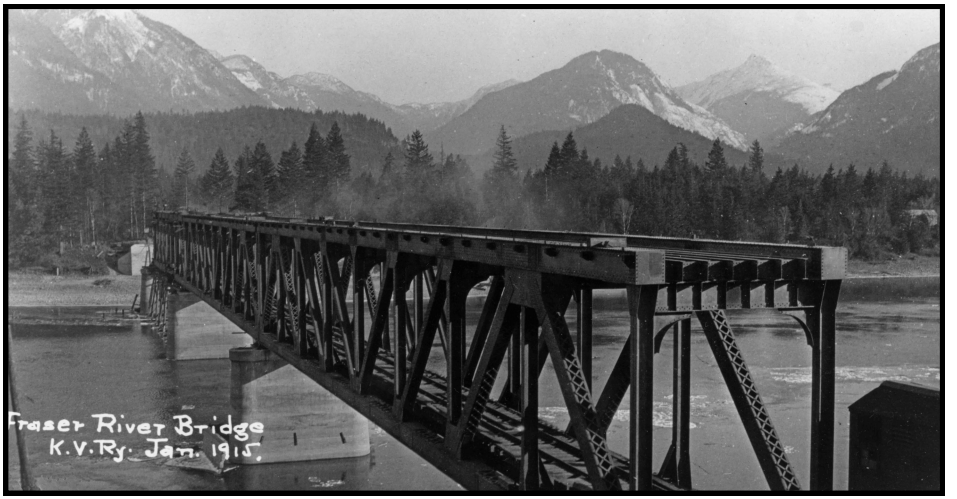
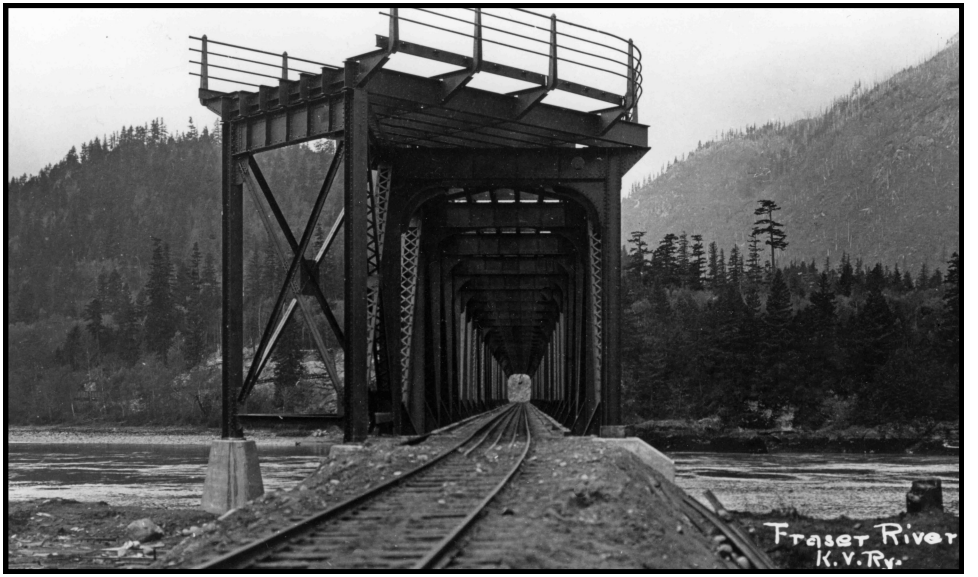


Above: By mid-January 1915, three of the four bridge trusses were in place. The laced-channel bridge members are clearly visible in this view looking toward the Hope side of the river.

Below: This photo, likely taken in March 1915, shows the bridge with tracks now in place, looking across the river from the Hope side. The roadway deck has not been completed. The abrupt turn at the end of the roadway deck frustrated motorists until its removal.



Amtrak's Vancouver revival marks 20 years

by Ian Smith

Since passenger rail service between Vancouver, B.C. and Seattle, Wash., was restored 20 years ago this May, it has made a strong comeback after an interruption of almost 14 years.

Amtrak's Pacific International had made its last trip between the two largest cities of the Cascadia region on September 30, 1981, cancelled owing to low ridership. Last year, 148,000 passengers either boarded or got off the Amtrak trains that now serve Vancouver daily, two in each direction.

The revival of cross-border rail service to Vancouver came entirely as an American initiative, as U.S. federal and state authorities sought to create a rail corridor in the Pacific Northwest region. Today, that corridor stretches 467 miles between Vancouver and Eugene, Ore., attracting 781,000 riders last year, with Vancouver traffic accounting for nearly one in five of them.

Agitation to create the corridor began in the early 1990s, and by l992 the Washington state legislature had authorized the spending of an initial $5 million on track and crossing improvements, with more to come, and the U.S. government had approved the corridor's eligibility for federal funding.

By 1994, these efforts were in high gear.

On March 29 that year, a media event was held at Vancouver's Pacific Central Station, featuring a Spanish-built Talgo Pendular 200 articulated trainset that had been leased by Washington State Department of Transportation (WSDOT) for a six-month trial service between Seattle and Portland.

B.C. Premier Mike Harcourt spoke to the assembled dignitaries, media and onlookers, but did not pledge any provincial funding, and indeed none was forthcoming. It would be many years before the province would make any form of financial contribution and to this day that remains meagre, despite the tourism benefits for the local economy.

The next visible evidence of the train's revival came on August 16, when an inspection train formed of an Amtrak P32-8 locomotive and four Amtrak and Burlington Northern business cars made an appearance in Vancouver. Aboard was Amtrak president Thomas Downs and, along the way from Seattle, the train picked up the mayors of Surrey and White Rock.

Finally, on December 13, came the big announcement. Service from Seattle to Vancouver would start in May 1995. WSDOT would pay for $24 million in track improvements between Everett and the border at Blaine, while the $3 million needed for work north of the border would be covered by the host railway, Burlington Northern Railroad (soon to become Burlington Northern and Santa Fe Railway). B.C. paid nothing.

On April 28, 1995, a special train headed by Amtrak P32-8B No. 512 and five bilevel Superliner cars came north, making a stop en route at White Rock to promote public safety. White Rock and Surrey politicians had already voiced fears about dangers to the numerous trespassers who walk the tracks in those cities.

Then, on May 24, a VIP train operated with

Amtrak F40PH No. 297 leading the Talgo set, whose lease had been extended by WSDOT. It spent the night at Pacific Central, and returned to Seattle the next day with dignitaries and media aboard, generating advance news coverage.

Finally, launch day arrived – May 26.

The inaugural train was formed with the same equipment as the VIP train, but this time it sat at Pacific Central on track 8 after the northbound arrival around noon, completely enclosed in a quarantine cage consisting of high chain-link fencing, including a gate across the tracks ahead of the engine. This sealed off any access to the train except via the controlled route through the U.S. immigration checkpoint.

The new train service was named the Mount Baker International, numbered 760 northbound and 761 southbound.

The initial schedule took into account the upgrading work still in progress along the route, with an overall journey time of four hours, 35 minutes. Southbound departure was scheduled for 18:00, with arrival in Seattle at 22:35. The northbound train left Seattle at 07:15, with arrival in Vancouver at 11:50.

Clearly, this schedule favoured the U.S. traveller, and quite reasonably so, since it was paid for by American governments. It would allow an American tourist to come north to Vancouver for a day trip or, with a single overnight hotel stay, the better part of two days in Canada.

Ironically, that meant that Vancouver was getting the economic benefits of such tourism, even though no funding was provided by any level of Canadian government.

On May 28, 1995, the third day of service, F40PH 237 trails the consist of low-profile Talgo 200 Pendular cars, displaying the marked difference in height, as the train crosses Mud Bay trestle in Surrey. Mt. Baker looms in the distance. (Photo by Ian Smith)

Conversely, the schedule was less beneficial to Canadian travellers going south for a day trip to Seattle. After spending an evening on the train, a Canadian would have to spend that night and the following night in a Seattle hotel, before returning on the morning of the third day.

Lorne Nicklason, editor of The Sandhouse at the time, rode the first southbound train, returning the next day. The southbound left one minute late and arrived eight minutes late, on account of track work (see photo, back cover).

Along the way, the train stopped at Blaine to allow U.S. Customs officials to board and carry out inspections on the way to the first station stop at Bellingham. Twenty years later, this remains the practice for southbound trains, but WSDOT has lobbied throughout that time for the customs check to be performed alongside the U.S. immigration check at Vancouver.

Customs and immigration requirements have also prevented a second stop to be made in Canada, presumably at White Rock (the Pacific International stopped at New Westminster). On northbound services, the Canadian inspections are performed at the end of the journey at Pacific Central, so trains cross the border on the fly.

Leaving his Seattle hotel at 06:00 after a brief sleep, editor Nicklason was back at King Street Station well in time for the scheduled 07:15 departure of Train 760. This time, there was a locomotive at both ends of the train, presumably to avoid having to turn the train on the wye at Vancouver before entering the quarantine cage, as the Talgo trainset itself had no operating cabs.

Again departure was one minute late, but arrival was 20 minutes off the advertised, mainly on account of a dragging air hose that took 15 minutes to fix during the Mount Vernon stop.

Stops along the way were at Everett, Mount Vernon and Bellingham, where a new station was under construction in the Fairhaven district, adjacent to the Alaska ferry terminal. The first scheduled stop north of Seattle, at Edmonds, was omitted because a safety fence had not been completed.

On May 28, the train ran with the same two engines, but by June 1 had reverted to operating with just one locomotive, which would remain standard practice for the three years of operation with the leased Talgo trainset.

As the year wore on and track improvements were completed, time was cut from the schedule. On October 29, the arrival time in Vancouver was cut by 20 minutes to 11:30, and the Seattle arrival time was similarly slashed to 22:15.

Then, on February 1, 1996, another 20 minutes was cut in both directions, producing a journey time of three hours, 55 minutes. The northbound train now left Seattle half an hour later at 07:45, arriving in Vancouver at 11:40. Southbound departure from Vancouver remained at 18:00, with the Seattle arrival now at 21:55. These times would remain intact for eight years, and indeed there have been only five-minute variations in the northbound timing to this day (the southbound timing is another matter).

Meanwhile, corridor service south of Seattle was progressing well, and WSDOT soon leased a second Talgo set for the Seattle-Portland service. This enabled some swapping of cars within these semi-permanently coupled sets, and the one allocated to the Mount Baker International gained an extra car, boosting capacity from to 223 seats from 196.

A year after the launch, WSDOT and Amtrak announced that they would purchase three new 12-car Talgo sets for delivery in 1998, each with a capacity of 250 seats.

Mudslides between Seattle and Everett that began in late April 1996 presaged a regular source of disruption to the Vancouver service. For nearly three weeks until May 18, passengers had

to be bused between those points. More slides in January 1997 led to outright cancellation of the train for several days. Eventually, host railway BNSF would adopt a protocol that sees a 48 -hour moratorium imposed after a slide severe enough to block the tracks.

As delivery of the new Talgos approached, Amtrak reshuffled the equipment used on corridor trains. The leased set used on the Vancouver train was redeployed to operate south of Seattle, where recent track improvements would enable the use of Talgo's tilting system to take curves at higher speeds. It made its last run from Vancouver on May 15, 1998.

In its place, the Mount Baker International would operate with bilevel Superliner cars.

But for the first two days, the train had a consist of six stainless-steel Amfleet cars, plus a full-length dome car spliced in the middle. The dome was AMTK 10030, the former Great Northern car *Mountain View*. Superliner service began on May 18, with a consist of five coaches and one dining car.

Along with the new Talgo sets, Amtrak had ordered 21 F59PHI locomotives from General Motors, with five of these to be allocated to the Pacific Northwest, the others to California. These began to appear in late 1998, before the new trainsets were ready.

One of them, AMTK 467, was assigned to the Mount Baker International and its Superliner consist in late October. It came in a special liv-

In the transition from the leased Talgo 200 set to Superliners on the Vancouver train, the weekend of May 16-17, 1998, saw an unusual consist of six Amfleet cars spliced by ex-Great Northern dome car Mountain View. That equipment is seen northbound at Braid Control in New Westminster on May 16. *(Photo by Ian Smith)*

ery for what would now be branded as Amtrak Cascades service in the Cascadia corridor.

The colours were green, brown and cream, meant to reflect the natural environment of the Pacific Northwest, but this livery was soon dubbed "evergreen and cappuccino", supposedly in a reference to the region's lifestyle as well as its geography.

Finally, it was time to unveil the new Series 6 Talgo cars, which had been assembled in Seattle by the union-owned firm of Pacifica Marine for Talgo Inc., the American subsidiary of the Spanish firm. Each cost about $10 million US. A fourth set was purchased by Amtrak for a proposed Los Angeles to Las Vegas service.

A non-revenue preview train for invited guests ran south from Vancouver on November 30, departing Pacific Central at 10:30, using a 12-car set named *Mt. Baker,* which was christened at Bellingham during a 15-minute stopover. The train was powered by AMTK 470 and the whole train wore the "evergreen and cappuccino" look.

The new Talgos featured a bold pair of tail fins on the roof of the cars at either end of the set, intended to blend in with the roofline of the much-higher F59PHI locomotives dedicated to Amtrak Cascades service. The end cars were likened to the appearance of Batman's mask, with its upwardly protruding ears, earning them the name "Batmobiles" by railfans.

Each consist originally had 12 cars: a power-generating car, two custom-class cars with 2+1 seating, a dining car, a bistro car, one coach class car with 2+1 seating, five coach-class cars with 2+2 seating, and a baggage car (some sets now have 13 cars).

The interiors featured an in-seat audio system, overhead video monitors, outlets for laptop computers, bicycle racks and wheelchair lifts. A global positioning satellite system kept track of a train's progress, displaying its location on the monitors, which could also show movies.

Passengers on the Vancouver-Seattle run would have a choice of cafeteria-style food and beverage service in the bistro car, or full-service meals in the dining car. Trains operating south of Seattle would offer bistro service only.

Regular Amtrak Cascades service was supposed to have started December 1, but various interior details in the cars had not been finished, so the launch for services south of Seattle was postponed until January 11, 1999. The Seattle-Vancouver service was delayed further because its dining car was not ready.

So Vancouver service continued with Superliner consists, occasionally hauled by F59PHI units wearing the California livery of silver and blue.

At long last, the final Superliner train ran southbound with just three cars behind AMTK 470 on February 23, 1999, bringing the Superliner era between Vancouver and Seattle to a close, for the second time. The first such occasion had been September 30, 1981, when Amtrak terminated service between the two cities.

February 23 also marked the end of the Mount Baker International named train. With the introduction of Amtrak Cascades service, the names were dropped from intercity train services in the Pacific Northwest. Instead, the end cars in each set wear the names of principal peaks in the Cascade Range. The consist named *Mt. Hood*, with its full diner, was regularly used for the Seattle-Vancouver run at first. The other two sets acquired in 1998 were named *Mt. Baker* and *Mt. Rainier*.

The first revenue run of the new Series 6 Talgos to Vancouver came on February 24, with AMTK 468 leading the *Mt. Hood* set and AMTK 469 trailing. The train was plagued by slow orders north of Seattle owing to mudslides, making it 17 minutes late at Everett and 22

Above: Vancouver's second Superliner era began on May 18, 1998, with F40PH 389 hauling the first such southbound train under the Brunette overpass in New Westminster. Below: The new F59PHI units in Amtrak Cascades livery arrived before delivery of the new Series 6 Talgo sets. AMTK 466 hauls five Superliner cars northbound past Braid Control on January 30, 1999. (Both photos by Ian Smith)

minutes late at Vancouver. Its southbound run that day was terminated at Everett, and slides would annul services on February 27 and 28 too.

When service resumed on March 1, northbound train 760 was led by what appeared to be an F40PH locomotive in the Cascades livery, numbered 90251. But in fact, this was a de-engined vehicle called a Non-Powered Control Unit (NPCU), whose role was simply to provide a cab at the other end of the train from the actual locomotive, to enable push-pull operation. On the Vancouver service, this would avoid the need for the train to be wyed before entering Pacific Central on the northbound trip.

Six of the 22 F40PH units converted to NPCUs were given the Cascades livery. As service has expended over the years, however, it has become commonplace to see powered locomotives at both ends of Cascades trains, and trains also run regularly with just a single locomotive, and therefore need to be wyed at Vancouver.

Accompanying the launch of Cascades service was a range of advertising using clever slogans and bold depictions of the stylish new trains.

Billboards appeared with the statements "It's the train of your dreams. Except everyone is wearing clothes" and "Plug in your laptop and pretend you're working. Just like at the office."

Ads on the sides of buses declared "Equal parts '57 Chevy and Space Shuttle", "There's nothing quite like that new car smell", "Until your couch is street legal", and "650 feet of legroom".

Service north of Seattle was ramped up on Sep-

The "batwings" of Series 6 baggage car 7100 swoop up to the roofline of Non-Powered Control Unit 90250, which trails the southbound train in New Westminster on June 24, 2000. Note the single wheels on each articulated car. (Photo by Ian Smith)

tember 2, 1999, with the addition of a train between there and Bellingham. WSDOT would cover the $6-million annual operating costs and pay $4.2 million for track and infrastructure upgrades. At the same time, negotiations were under way with the B.C. government to fund track improvements north of border for eventual extension of this train to Vancouver, but it would be a full decade before that bore fruit.

The new southbound train departed Bellingham at 10:15, with a connecting bus service from Vancouver leaving at 08:00. The northbound train arrived at Bellingham at 20:00, with the connecting bus reaching Vancouver at 21:30.

To add capacity for this service expansion, the fleet was bolstered with a fourth Series 6 Talgo set, named *Mt. Olympus*.

The new southbound train was given the number 761 previously used by the southbound service from Vancouver, which was renumbered 763. The new northbound to Bellingham was numbered 762.

These numbers lasted for three more years until 2002, when a wholesale renumbering of Cascades trains took place. The northbound Vancouver service became Train 510, with the southbound numbered 517. The northbound Bellingham service was renumbered 513 and the southbound 516.

The Seattle-Vancouver service got new equipment in September 2000, when its regular trainset was reassigned to cover service expansion south of Seattle. The Vancouver run got a longer 14-car set owned by Amtrak and painted in a unique blue, black and grey livery. It had been

The quintessence of the Amtrak Cascades brand is on display as F59PHI 467 and the Series 6 Talgo set named Mt. Adams descend the BNSF trestle from New Westminster Bridge in Surrey on a southbound train on March 27, 2010. (Photo by Ian Smith)

intended for the Los Angeles-Las Vegas service that never materialized.

By then the Cascades locomotive fleet had become somewhat mongrelized, and this new set often operated with an F59PHI locomotive and an NPCU both in the California livery of silver and blue, but it was also seen with "evergreen and cappuccino" units.

The "Las Vegas" set was the regular equipment for the Vancouver service until September 14, 2004, when the 12-car *Mt. Hood* was assigned to this run. The move came after WSDOT purchased the "Las Vegas" set from Amtrak and withdrew it from service for repainting into the Cascades livery. During that process, it was reduced to 12 cars and then returned to Vancouver service in late 2005, now wearing the name *Mt. Adams*.

With this acquisition, WSDOT owned three trainsets (*Mt. Hood, Mt. Olympus* and *Mt. Adams*), while Amtrak owned the *Mt. Baker* and *Mt. Rainier* sets.

Ten years after Vancouver service began, variations in the type of locomotive used started to appear. Instead of the usual NPCU at the north end and an F59PHI at the south end, at least one train in January 2005 had Amtrak P32-8 units at each end, and P42DC No. 183 worked the train for several days starting February 7. The latter type would become commonplace in the years ahead.

Now seven years old, the Bellingham service was extended to Portland as of July 1, 2006, becoming the first Amtrak Cascades service to run through Seattle, rather than originating and terminating there. This involved an earlier southbound departure of train 513 (08:45 instead of 10:25), arriving in Portland at 15:00. Northbound 516 would depart Portland at 14:50 and reach Bellingham at 21:05. Corresponding changes were made to the times of connecting buses to and from Vancouver.

During 2006, the *Mt. Adams* trainset was reassigned, leaving Vancouver service with just the short 10-car *Mt. Hood*, which was missing two economy-class coaches after an accident in Portland on a different service.

But a much bigger change of equipment was in the offing. Inspectors had noted cracks in the distinctive Talgo tail fins, so repairs of the whole fleet were required. This process took longer than expected, and ultimately would be followed directly by a $9-million refurbishment of the cars' interiors, including new floors, new leather seats, and upgraded washrooms and vestibules.

This extensive work required a full trainset to be out of commission for an extended period, with the result that the Vancouver service was assigned Superliner bilevel cars for the duration of the work, beginning April 10, 2007. This was the first regular use of Superliners since the nine-month interval between the old and new Talgo sets in 1998-99.

What had initially been planned as a short-term substitution actually lasted until August 3, 2009, when the *Mt. Adams* trainset returned to Vancouver service.

The 28 months without Talgos saw some equipment oddities. From mid-February through early April in 2008, an ex-Santa Fe bilevel converted to a "Pacific Parlour" lounge car was spliced between two Superliner coaches to serve as the meal and lounge car. And from September 26 to 28 that year, a Superliner sleeper was added to the usual three coaches to handle extra traffic – it's not known how the sleeping compartments were allocated to daytime passengers.

During the Christmas season in 2008/09, the Superliners were needed elsewhere to meet high demand on long-distance trains. That resulted in Amfleet coaches and a Horizon-class clubdinette car being used for several weeks until mid-January.

An F59PHI in the silver-and-blue livery for California trains is southbound at MP 145. 1 in New Westminster on April 25, 2004, pulling the 14-car Talgo set intended for Las Vegas service, which featured a grey roofline, black window band, and dark blue lower bodysides. That set was later reformed into a 12-car consist in Cascades livery named Mt. Adams, and in that guise is seen below at Sperling in Burnaby on August 5, 2005, dwarfed by P42DC 137, the trailing unit in a southbound train. These large locomotives are now commonplace on Amtrak's Vancouver services. (Both photos by Ian Smith)

A breakthrough came in the spring of 2007, when the B.C. government announced it would pay $4.5 million for a siding in Delta to accommodate BNSF freights, amounting to 57% of the project's cost. That would create the operating flexibility to enable the Bellingham-Portland service to be extended to Vancouver, thus finally providing the long-sought second daily train.

But this second service did not start on August 1, 2008, as planned, even though all necessary track and signalling upgrades had been completed (Oliver siding in Delta had become operational in March). The hold-up was the Canada Border Services Agency, which had not agreed to the necessary staffing levels to screen passengers arriving on the northbound train in the late evening.

Finally, with Vancouver's hosting of the 2010 Olympic Winter Games approaching, the federal government bowed to pressure and agreed to waive CBSA's fees for overtime manpower, estimated at $1,500 daily. But that would only be for a trial period, ending with the closing of the Paralympic Games in March.

The second train began service with the northbound's arrival on August 19. The schedule called for southbound Train 513 to leave Vancouver at 06:40, with arrival in Portland at 14:55. Northbound Train 516's departure from Portland was slated for 14:50, with arrival in Vancouver at 22:45.

With the second service, crew duties were rearranged so that the crew arriving in Vancouver on Train 516 at night is assigned to the next day's late afternoon departure of Train 517 to Seattle. The crew of Train 510 arriving in late

During the 28 months of Superliner operation from 2007 through 2009, P32-8 509 leads three bilevel cars southbound past MP 150 in Burnaby on June 14, 2009. These units have also operated with the Talgo sets. *(Photo by Ian Smith)*

morning from Seattle handles the next morning's Train 513 to Portland.

Another change for the Olympic Games was a later evening departure for Train 517 to Seattle, giving U.S. visitors more time in Vancouver. From February 1 to March 31, 2010, the train left at 19:45, with arrival in Seattle at five minutes past midnight.

Soon before the end of the trial period for the second train, the federal government agreed to an extension to September 30, while CBSA assessed whether traffic volumes justified the extra cost of its border control services. That was extended to October 31, and just before that deadline, Ottawa agreed to absorb the cost for at least another year. Finally, on August 16, 2011, it agreed that CBSA would eat the costs, permanently.

U.S. border control issues continue to detract from the service, however.

There appeared to be a breakthrough for a station stop in White Rock in 2001, when the city and Amtrak signed an agreement on August 30 that called for about $100,000 in community-funded improvements. Canada Customs had agreed to inspect northbound passengers there as well as at Pacific Central, making a stop feasible in that direction, at least.

Those hopes were dashed just 12 days later, when terrorist attacks struck New York and Washington. U.S. Customs began stopping trains at the border for 20 to 30 minutes to carry out searches. Eventually that ended, but if the U.S. authorities had their way, stopping southbound trains would be normal procedure, rather than the onboard inspections between Blaine and Bellingham. To date, Amtrak and WSDOT have successfully lobbied against that.
They continue to press for a combined U.S. immigration and customs check in Vancouver, saying that would cut 10 minutes off the southbound train's time by avoiding the Blaine stop. However, that would also rule out another station stop north of the border.

Another impact of U.S. border control is a change in the published departure time from Vancouver.

With the May 12, 2008, timetable, the published departure time of Train 517 was advanced to 17:45, after 13 years of leaving at 18:00, with no improvement in the Seattle arrival time. However, an internal Amtrak document stated that the train would actually depart 15 minutes after the new published time, which was to ensure adequate time for immigration control, meaning that there was effectively no change.

Nevertheless, this does not seem to be actual practice. The published time has since been moved up to 17:35, and the train on May 1 this year left at 17:38 and the May 2 train left right on the advertised, which is apparently commonplace. The result is a trip scheduled for four hours and 25 minutes, some 30 minutes worse than the scheduled time from 1996 to 1994.

On top of that, boarding for the train starts at 16:30, resulting in as much as five and a half hours on board if Seattle is reached at the scheduled time of 22:00. That's hardly an incentive to take the train instead of driving.

Mudslides continue to be a bugbear. After a 100-ft mudslide at Everett derailed a passing BNSF stacked container train on December 17, 2012, service was suspended for 19 days during the busy holiday season. Altogether, 164 trains were annulled in the slide-prone October-June months in four years to 2013, according to a WSDOT study, which notes this has an effect on the public perception of service reliability. Given that there are four trains daily between Seattle and Vancouver, this equates to 41 days without trains, an average of 10 days per year.

On the positive side, the route has seen steady improvements in facilities over the years. New

multimodal stations were opened at Everett in February 2002 and at Mount Vernon in 2004. An extra stop was added at Stanwood, midway between those two stations, on November 21, 2009.

There have been continued improvements in the trains, too.

Refurbishment of the Seattle-built Talgos continued, with upgrading of their bistro and lounge cars in 2012/13, while the rest of each train underwent a deep cleaning. Suspensions and onboard computers have been upgraded, and wi-fi reception and new video monitors installed.

That work led to more Superliner substitutions on Trains 510-517, from mid-March to May 23 and September 6 to mid-November in 2012 and from February 27 to May 23, 2013. Together with the earlier lengthy substitutions, Superliners have been used for roughly 45 months since service to Vancouver was restored 20 years ago.

But that should be rare in the years ahead, what with the repairs and improvements to the Series 6 fleet and the latest additions to the fleet – two new Series 8 Talgo sets built in Wisconsin and introduced in 2013.

The state of Oregon paid $37 million for two 13-car sets, named *Mt. Jefferson* and *Mt. Bachelor*. The most distinctive difference from the five Series 6 sets is a driving cab at one end, featuring a long protruding nose to protect the engineer. This avoids the need for a second locomotive or NPCU on a train to provide a driving position at both ends.

One of the new sets made a test run to Vancouver on June 14, 2013, arriving under the cover of darkness at 03:00, and departing soon after. The first Vancouver appearance of a Series 8 set in revenue service came on December 12, 2013, when the *Mt. Bachelor* set was used on Trains 510-517, making a few more showings over the coming week. The *Mt. Jefferson* set then appeared those trains on January 11, 2014, and worked them for most of the next two weeks.

Trains 510-517 then reverted to a Series 6 set, and the new sets are more likely to be seen in a regular rotation on Vancouver-Portland trains 513-516 (see Winter 2013/14 issue, pages 20-25, for details and photos of all three types of Talgos used in Vancouver service).
Soon, the seven-train Talgo fleet will be joined by new locomotives. WSDOT has ordered eight Siemens Charger locomotives in a group buy with rail authorities in five other states. The units will be built in California and enter service in 2017.

That should bring some uniformity to the Cascades motive power fleet. After starting 20 years ago with F40PH units and then moving to F59PHI locomotives paired with NPCUs, the power allocation has become more eclectic in later years, with P32-8 types seen occasionally and P42DC units appearing regularly. Neither of the latter two wear the Cascades livery.

Mechanical breakdowns have contributed to unusual power assignments over the years. In the earlier days, GP38-2 and GP39V units in BN green were drafted in when the regular locomotives were unavailable, and there was at least one appearance with a leased LMX B39-8. Now, the substitute is most likely to be a BNSF C44-9W unit in orange and green, and for a week in March 2011 a Union Pacific SD70M powered Trains 510-517.

Over 20 years, Amtrak service to Vancouver has become an entrenched part of the region's transportation options, with Pacific Central seeing 148,000 passengers using the four daily services in 2014. That's well behind Seattle and Portland, both in the 400,000 range, but ahead of Tacoma at 94,000.

Fares are still good value, with one-way Vancouver to Seattle adult tickets costing from $41 to $74 (the 1995 base fare was $29) and Van-

couver to Portland costing $64 to $114 (all figures in $US).

The $4.5 million US from trips between the Vancouver-Seattle city pair represented 16% of Amtrak Cascades ticket revenues in 2014, and the $1.3 million from the Vancouver-Portland city pair accounted for another 5%. Altogether, $3.4 million in ticket revenue was attributed to Vancouver.

But the financial situation has become uncertain, with the U.S. federal government withdrawing subsidies to Amtrak for intercity services of less than 750 miles, as of October 1, 2013. Since then, funding of Cascades services has been entirely the responsibility of Washington and Oregon, which have to absorb the roughly 40% of costs that are not covered by ticket revenue. B.C. contributes nothing to operating costs, despite the gains for the local economy.

While Washington has been the enthusiastic driver of Cascades service over the past two decades, Oregon's commitment now appears shaky, with the state legislature recently proposing to provide $5 million less than needed to maintain current services. If that is approved, the Portland to Eugene segment of the Cascades corridor will be in jeopardy.

That wouldn't have direct impact on Vancouver's services, but it would represent a rare setback for the Cascadia passenger rail corridor, which has seen nothing but success for the past 20 years. Let's hope this does not come to pass, and that Amtrak Cascades can keep going from strength to strength.

The Series 8 Talgo set named Mt. Bachelor is seen trailing in northbound Train 510 on December 15, 2013, as it skirts Gunderson Slough in North Delta. The photographer is standing beside the new South Fraser Perimeter Road. (Photo by Chris Wasney)

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Arbutus Line follies continue with track repairs

Restoration of CP's Arbutus Line for car storage has been in full swing over the past months, following the railway's court victory over the City of Vancouver on January 20 (see previous issue, page 37).

Vegetation clearance work resumed on February 10, working northward from West 70th Avenue. This was handled by A&B Rail Services.

A few days in advance, CP sent notices to nearby residents and schools that the work would be resuming, stating that: "It is neither safe nor legal for anyone to use CP's land along the Arbutus corridor as a commuter route (walking, running, cycling), for storing personal goods or for gardening (planting or removal."

About 150 metres had already been cleared by last August, but CP had halted the work pending the outcome of the B.C. Supreme Court hearing

Brush clearing was completed all the way to the West First Avenue crossing, where local condo dwellers had a long established garden on both the Arbutus Line and the short remaining stub of the former South Shore Branch, which runs southeast from the crossing as far as West Second (see "With the trains gone, a ferro-garden emerges," Winter 2009/10 issue, pages 30-32).

Replacement ties are laid out beside the Arbutus Line awaiting installation, in this view looking downgrade toward West 33rd Avenue on April 3 this year. Most of these have been recycled from earlier use. *(Photo by Corwin Doeksen)*

Although the South Shore stub is severed from the Arbutus Line, it was cleared too.

Then, in late March, Central Cariboo Railroad Contracting of Kelowna moved in to begin the job of tie replacement and ballasting. The firm used a small fleet of leased track equipment for the work, comprising a spike puller, a tie remover/inserter, two tie cranes with trailers, a spiker, a ballast tamper and a ballast regulator.

In the O Yard adjacent to West Kent Avenue, seven gondolas of recycled ties and associated hardware were spotted by a CP transfer freight from Coquitlam on March 30.

By April 3, rotten ties had been removed as far as King Edward Avenue. In its court pleadings, CP said it would not be storing cars north of that point, so the clearance work north from there to West First was apparently for political effect.

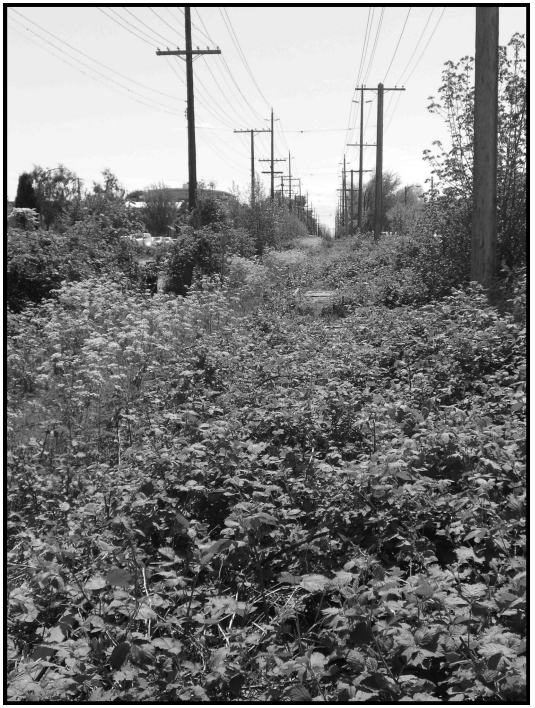
Tie replacement was nearly finished by April 8, and that day 16 hoppers of ballast were seen at the O Yard. There it was transferred by a Komatsu shovel into hi-rail dump trucks.

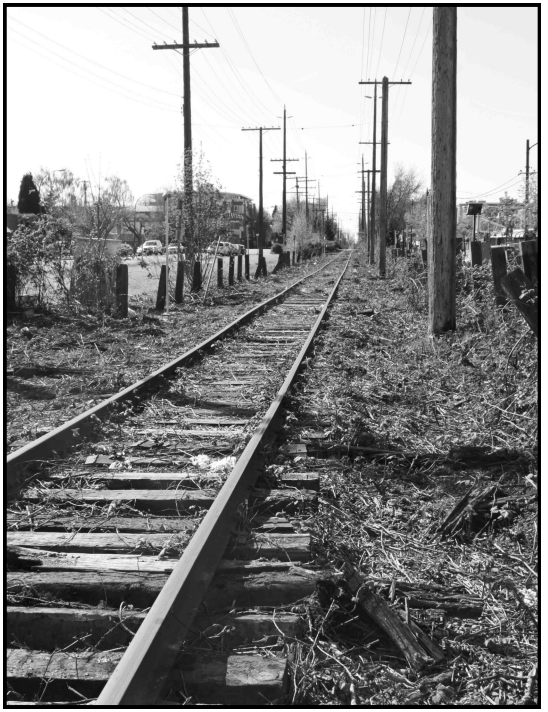
The application of ballast was largely complete by the third week of April. In some spots, it can best be described as a "sprinkling" or a "dusting", lying loosely atop the vegetation that can still be found between the ties in places.

Next phase of the work will involve rehabilitating the grade crossing control gear, after which CP can call in Transport Canada for track inspection.

(Thanks to PCD members Corwin Doeksen and Eric Johnson for detailed field observations.)

A Nordco tie exchanger ties up traffic on busy West 41st Avenue on April 8. Work will include upgrading the crossing control gear here. (Photo by Ian Smith)





Tracing the progress of the Arbutus Line's fall and rise, Eric Johnson took these photos — two years apart — from the same spot, at a point adjacent to West 39th Avenue where the line runs between East Boulevard and West Boulevard in the heart of Kerrisdale. The view is looking south toward the West 41st Avenue crossing.

Clockwise, from top, the springtime vegetation has completely obscured the track on May 9, 2012. Next, top right, the track as it appeared on April 5 this year after brush clearing had been completed, but before tie replacement. Finally, at bottom right, this view on May 1 shows replacement ties and new ballast.

Elevated guideway all done, but tunnelling hits more snags

The Evergreen Line project passed a major milestone on March 3, as the launching girder completed its work. But the tunnelling delays reported in the previous issue led to the announcement on February 13 that the line will not open until the autumn of 2016, rather than the summer.

In the meantime, though, there will be a visible sign of progress as testing of trains begins this summer on the completed guideway between Como Lake Avenue and the junction with the Millennium Line at Lougheed Town Centre.

When the launching girder reached the end of its drive along Pinetree Way in Coquitlam, just south of Guildford Way, it had lifted 1,005 pre-cast concrete segments into place. In the following month, an 846-metre stretch of guideway stretching west from Coquitlam Central Station, built with cranes lifting long precast spans, was finished. With that, all the elevated guideway structures have been completed.

But tunnelling continues to hit snags. The tunnel boring machine (TBM) finally moved on from its maintenance stop under Cecile Drive on February 12, some 11 weeks after arriving there. The following day, the project's management announced that the delay, coming about one-third of the way through the TBM's southward drive, would set back the line's opening until the autumn of 2016. The news release stated that "the contractor is responsible for all costs related to the schedule delay under the terms of the fixed-price contract."

To avoid the sinkhole problems that had arisen at the TBM's first two maintenance stops, efforts had been under way since early January to prepare the sub-surface conditions for its next stop beneath Clarke Road at Seaview Drive, the half-way point of its 2-km drive.

The TBM reached Seaview around March 20, and the project announced that "for the next three weeks, crews will be inspecting and changing the cutterhead tools and undertaking regular maintenance on the TBM before it advances."

But it soon became apparent that the injection of concrete grouting to create a "grout wall" directly in front of the TBM's stopping point, some 45 metres below the surface, had not been adequate to prevent soils from entering the chamber where its crew would carry out maintenance. This was announced on March 23.

Next, on April 9, the project announced that a sinkhole had opened up in the surface of Clarke Road, requiring detours of southbound traffic on this busy artery between Port Moody and Coquitlam. Although one northbound lane could be kept open, southbound vehicles would need to detour through a residential neighbourhood, leading to irate complaints from Port Moody's city council.

On April 15, the detour was lifted, with one southbound lane opened on Clarke, while the grouting and water-pumping machinery remained in place in the centre of the road.

The next announcement, on May 7, conveyed more gloomy news: "This work has taken longer than anticipated due to the challenging ground conditions in this area. The jet grouting operations will continue over the next few weeks [mid to late May] until we are certain it will be safe for the crews to enter the chamber behind the cutter head . . . The changing of the cutterhead tools will take approximately one

On February 27, the launching girder had only two spans to complete. In this view looking north on Pinetree Way, a section of guideway built with cranes lies north of the gap.

(All photos by Ian Smith)

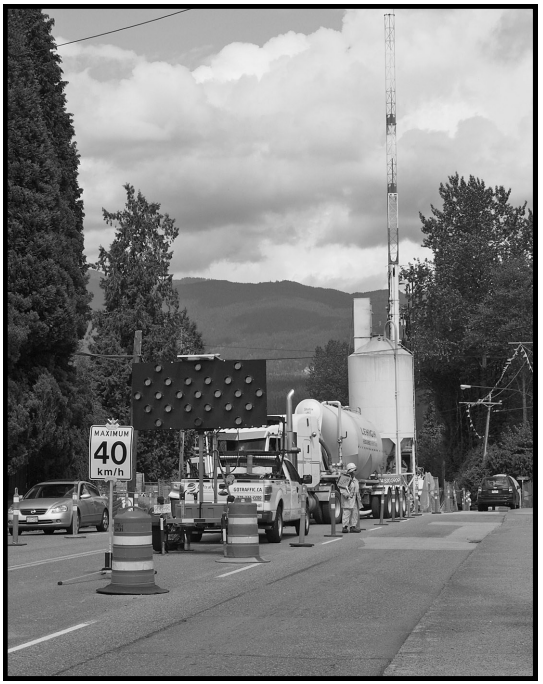
On the afternoon of March 3, the launching girder had completed its work, as crews make final adjustments to the alignment of the last segments. This view looks south on Pinetree Way. Coquitlam city hall is behind the photographer.

month and then tunnel boring will resume."

Thus it won't be until late June before the TBM moves on from this point. (For a video on tunnel boring, visit www.evergreenline.gov.bc.ca)

With tunnelling paused and the elevated guideway complete, another focus has been the at-grade guideway alongside the Canadian Pacific Railway mainline between Lansdowne Drive and Bond Street in Coquitlam. This is not literally at-grade – rather, the guideway here will sit atop an earth fill held in place by retaining walls formed with interlocked concrete segments.

The wall on the south side along the railway was nearly complete at press-time. To the east, it joins the elevated guideway section that continues as far as Coquitlam Central. To the west, it reaches a concrete ramp that extends east from Inlet Centre station.



Tunnel grouting work is underway in the middle of Clarke Road on May 1, looking north.

Farther west, for about 2 km through Port Moody, work on the ground-level at-grade section is well advanced. The track in this stretch has been completed to a point west of Douglas Street, with the two side-collection power rails installed. Also, the flat induction rail that sits between the two running rails is complete to a point near Kyle Street.

Where the at-grade guideway runs closely parallel to the apartment buildings on Golden Spike Lane, a concrete noise barrier wall has been installed, and the roadway fully repaved.

The roofs at all six new stations are in place, even at Lincoln, where construction could not start until February after the launching girder had passed through. Burquitlam and Inlet Centre have reached the point where glass has been installed. The third platform at Lougheed Town Centre has also been glassed-in and the new structure housing the stairs and escalators to that platform has been completed, too.

Along North Road and Clarke Road south of Como Lake Avenue, finishing touches are being put on the repaved road beneath the guideway, and soon this section will be like new. This will present a tidy vista when trains start testing along this section in the months ahead.

Looking west along the westbound side of the island platform at Moody Centre Station on May 10, this view shows the track with the induction rail in place in the centre, and the two side-collection power rails at right. This photo was taken from a temporary public walkway to access the West Coast Express platform, situated off-camera to the right.

The view below looks east along Aberdeen Avenue at the foot of Bond Street on March 8. Here, interlocked concrete segments form a wall to retain the earth fill for the at-grade guideway, which connects at left with an 846-metre elevated section built from precast spans erected by crane. That section continues east to Coquitlam Central station.

The entrance to the third platform at Lougheed Town Centre station is seen above in this view looking south on April 26. Below, work on Lincoln station could not begin until the launching girder passed through in February. Here, on May 1, the platform roof is already in place, as seen looking east from the northeast corner of the Coquitlam Centre shopping mall parking lot.

SHORT HAULS

The Events of Today are the History of Tomorrow

Rockslides closed the ex-BC Rail mainline for several weeks in late winter.

The chain of events began around February 3-4, with a slide at Mile 150.8, north of Retaskit siding, alongside Seton Lake. The rockfall was so heavy that the roadbed was pounded away down to water level and some of it was washed away, creating a gap of about 200 ft.

The washout was severe enough that CN considered building a small bridge across the gap. In the end, repairs were made without a bridge and the line re-opened around February 12-13, but with some work still to be done.

In the following week, a helicopter inspection determined that some 5,000 square metres of rock above this site was unstable and the line was closed again, followed by a blasting operation. The line finally re-opened to traffic on March 11.

Yet another order of ES44AC locomotives has been received by CN, totalling 51 units.

This batch is split into two groups: 26 numbered 2925-2950 and 25 numbered 2951 to 2975. Nos. 2951-2975 are export units that do not meet the tougher Tier 4 emissions standards that took effect on January 1, 2015, and thus will not be allowed to operate in the U.S. In contrast, 2925-2950 will be allowed to work in U.S. revenue service, although built to Tier 3 standards, as a credit against 26 Tier 4 units that CN will purchase in the future. For that reason, they are classified as ES44AC T4C (Tier 4 Credit).

Initially, 2925-2950 were to be numbered 3025-3050, which would help to identify their U.S.-permitted status, but after the first 10 were delivered with those numbers, CN changed its mind and decided to use the 29xx numbering for this batch.

The export units restricted to Canada have begun to make appearances in B.C. on the former BC Rail territory. Units 2952, 2954, 2965 and 2967 were seen on trains 570-571 on the Squamish Subdivision on April 11 and 12.

With this order, CN has 176 ES44AC locomotives. (*Branchline*/*Tempo Jr.*/Chris Wasney)

CN's 1,800 engineers in Canada have a new three-year contract lasting through 2017.

A tentative agreement between the Teamsters Canada Rail Conference (TCRC) and CN on February 14 was ratified in April. (CN/TCRC)

A tentative agreement between CN and 4,800 mechanical tradesmen, intermodal/clerical workers, truckers and excavator operators was reached just before a deadline set by the railway to impose a lockout.

CN and the Unifor union announced the tentative deal late on February 23, with a lockout looming at 23:00. The deal came after the union had rejected CN's proposal that the dispute be submitted to binding arbitration, and followed a declaration by the federal government that it would not impose back-to-

work legislation.

One stumbling block in the negotiations was a Unifor demand that CN contribute five cents per employee per hour to a union-administered fund from which the union would make charitable donations to causes of its choice. CP had agreed to such contributions in a deal reached with its 1,800 employees represented by Unifor (see next page). CN flatly refused this "on principle", although it said it would consider making joint donations with the union to mutually agreeable causes.

When Unifor responded by saying it would take a strike vote among its members over three weeks, CN hit back by giving 72 hours' notice that it would lock out the workers, with chief executive Claude Mongeau stating: "The differences separating the company and the union are as clear as they will ever be, and they will not become any clearer over a month-long strike mandate process." (Bloomberg/CN/ Unifor)

CANADIAN PACIFIC

Cranbrook Yard was closed as of April 19, leaving only a siding and another track.

The remaining tracks, including all shop tracks, will be removed. It is expected that the roundhouse will be demolished and the turntable pit filled in.

CEO Hunter Harrison had passed through town on a business train in March, and it's rumoured the changes are not a coincidence.

Also in the Kootenay region, the Boundary Subdivision (Nelson to Castlegar) and Rossland Subdivision (Castlegar to Warfield) have been combined and renamed the Columbia Subdivision. The current Nelson Subdivision, which runs from Curzon to Nelson, is to be renamed the Kootenay Subdivision. (Mark Johnson/ Kevin Dunk)

An SD30C-ECO locomotive worked the Huntingdon Turn wayfreight from Coquitlam on at least two days in early April. CP 5016 was seen on this job paired with SD40-2 CP 5939 on April 7 and 10.

The small fleet of 20 SD30C units is based at Golden. They are usually used as the trailing head-end unit in coal trains. (Editor/Ken Storey)

GP7u 1507 had been retired to the deadline at Coquitlam and is listed for sale, but in late February was leased to Viterra Inc. for switching Pacific Terminals on the Vancouver waterfront. It was spotted working there on February 27 and was still in use in April.

But it was seen on May 11 in CP's Vancouver yard with GP38-2 3050, suggesting its lease might be over and a return to the deadline imminent. (Marc Simpson)

Fire damage to the Marpole bridge has finally been repaired, following the blaze on July 9 last year that severed CP's access to the remaining stub of track on the south shore of the Fraser River's North Arm. Work underway in April has been completed, including new ties, a new timber walkway and curbs, and a new platform at the top of the access stairway. However, as of May 8, the swing bridge had not been used. The 20-some tank cars that had been stranded at the Univar Inc. facility since last summer were still there and the rails leading to

the plant were rusty. Univar, a chemical distribution firm, has been served by truck since the bridge was damaged. (Eric Johnson)

A strike by 3,300 engineers, conductors, trainmen and yardmen represented by the Teamsters Canada Rail Conference (TCRC) was cut short on the second day when the union and CP agreed to send the dispute to binding arbitration.

The move came as the Harper government was poised to introduce and pass back-to-work legislation all in a single day's sitting of Parliament. In the previous dispute in 2012, the back-to-work law was passed nine days into the strike. The strike had begun at 00:01 on February 15, after members voted 93% in favour of striking.

The union said that fatigue management and crew scheduling were key points of the dispute.

"CP is completely unable to provide the majority of our members with any sort of accurate information on when they are required to work," said TCRC president Douglas Finnson, on the eve of the strike. "The CP negotiators have admitted their line-up model is completely unpredictable and they are simply unable to fix it. Furthermore, CP is either unwilling or unable to comply with the collective agreements that require train crews stop operating and obtain rest after 10 continuous hours of work."

At the same time, the railway said: "CP proposed changes to work schedules to improve the quality of life for engineers and conductors. TCRC leadership claims that lack of time off is at the heart of its reluctance to negotiate, yet 72% of all engineers and conductors do not take the time off they are entitled to. Furthermore, 60% of the conductors and engineers at CP make between $80,000 and $160,000, while working an average of 31 to 35 hours a week."

CP said its offer included wage increases, better benefit plans, and re-instatement of the employee share purchase plan in a long-term agreement. (*Globe & Mail*/TCRC/CP)

A strike by 1,625 shop workers and car men represented by Unifor local 101R was averted at the last moment, when a tentative four-year deal was reached just before the deadline.

Unifor said the deal was favoured by 79% of those voting. As well as wage and benefit increases, the pact includes a commitment to continue operations at Weston Shops in Winnipeg, which employs 160 workers.

The Unifor members had voted 97% in favour of striking and the union had given notice that would have allowed a strike to begin at 00:01 on February 15, at the same time that engineers and conductors were set to strike. (Unifor/CP)

Chief financial officer Bart Demosky resigned his position effective May 31, after only 17 months on the job. He had given notice on February 11, calling it "the right time for me to focus on my family and other opportunities."

Demosky started at CP on December 28, 2013, after holding a similar position with Suncor Energy, also based in Calgary. His predecessor at CP, Brian Grassby, lasted only 14 months in the job, after replacing Kathryn McQuade in November 2012. That made Demosky the company's third CFO since Hunter Harrison took over as chief executive in July 2012. (CP/*Globe & Mail*/Editor)

A "Pennsylvania Railroad" locomotive in the classic Tuscan Red livery made two appearances in the Vancouver area this winter.

How can that be? The locomotive in question is actually Norfolk Southern 8102, a modern General Electric ES44AC unit that is one of 20 NS diesels painted in the livery of a predecessor railway.

NS 8102 came north twice on BNSF's daily M-INBVBC (Seattle Interbay-Vancouver, B.C.) train, the first time on February 27. It left the following morning, leading the train south, but returned on March 5, departing the next day.

Its livery re-creates the look worn by Pennsy's famed GG-1 electric locomotives and General Motors' F and E units used in PRR passenger service, complete with five gold pinstripes and the "keystone" herald.

NS had 20 new locomotives painted in predecessor liveries when they were delivered in 2012. (Chris Wasney/Steve Goodman)

Norfolk Southern ES44AC No. 8102, wearing heritage Pennsylvania Railroad livery, is caught by the camera crossing the Canada-U.S. border with a southbound BNSF train at Blaine on February 28. Unfortunately, black-and-white printing does not do justice to its gorgeous Tuscan Red paint scheme. (Photo by Steve Goodman)

Rail Industry

The Harper government has allowed the minimum grain shipping thresholds imposed on the railways to lapse as of March 29, with the expiry of such provisions in its Fair Rail for Farmers Act. It said the railways had worked to restore the backlog of grain awaiting rail shipment to normal levels and there was no need to continue enforcing the legislated volumes with the threat of fines.

In response, shippers of small volumes and specialty crops complained that the minimum thresholds had driven the railways to focus on shipping large volumes through the three largest ports (Vancouver, Prince Rupert and Thunder Bay) and ignore routes into U.S. markets for such products.

While the minimum volumes were in place, the federal government fined CN $100,000 and CP $50,000 for failing to meet the weekly threshold. CP has appealed its fine (see previous issue, pages 38-39). (*Globe & Mail*)

New standards for tank cars carrying highly-flammable liquids have been jointly adopted by Canada and the United States, as announced on May 1.

Under these standards (designated TC-117 in Canada and DOT-117 in the U.S.), tank cars will be built with features such as increased shell thickness (9/16 in.), full-height half-inch-thick head shields, minimum 11-gauge jackets, a reclosable pressure relief valve, thermal protection, and roll-over protection for top fittings.

The new regulations also set the timetable for the retrofitting or retirement of existing DOT-111 cars and the newer industry-sponsored CPC-1232 cars constructed since 2011. Those cars must be upgraded to meet DOT-117 standards by May 1, 2025, or retired.

There is also a timetable for withdrawing cars from handling volatile commodities. The schedule requires unjacketed DOT-111s to be removed from the most-volatile Packing Group I crude oil service by January 2018, jacketed DOT-111s by March 2018, and unjacketed CPC-1232s by April 2020.

For Packing Group II, jacketed and non-jacketed DOT-111s may remain in service until May 2023, non-jacketed CPC-1232s until July 2023, and jacketed CPC-1232s until May 2025. (*Railway Age*)

SRY Rail Link

A four-month lockout of SRY crews ended on May 5 after ratification of a new contract a day earlier.

The seven-year deal, retroactive to April 1, 2014, preserves post-retirement benefits, improves dental benefits, training and working conditions, and provides a cumulative wage increase of 11% over the life of the contract. The contract was approved by two-thirds of CUPE Local 7000 members voting at a ratification meeting on May 4.

During the 120-day lockout, Southern Railway managers operated the system.

The dispute saw the union winning a case before the Labour Relations Board. The union had protested SRY's use of A&B Rail contractors to replace switch ties on Annacis Island. The LRB sided with the union, issuing a cease-and-desist order against SRY forbidding the use of private contractors to perform union work and awarding the union $5,000 in damages. (CUPE 7000)

The defunct Central Park Spur is being lifted, although the work had been suspended while the lockout of SRY union staff continued.

The four-mile line between 14th Street Junction in New Westminster and Nelson Avenue in Burnaby – part of the former B.C. Electric Railway interurban mainline to Vancouver -- had already been severed at numerous locations years ago, with some track lifted, but SRY now apparently intends to lift the remaining track.

Work to date had been carried out by Westcan Rail Ltd. of Abbotsford.
The initial work focused on a short spur between Gilley and Buller avenues in Burnaby, which was the final remnant of the original single-track route to New Westminster, opened in 1891 by the Westminster & Vancouver Tramway Co.

By early April, this track had been lifted westward as far as Buller. There it connected with the later double-track route opened in 1912 by BCER, known as the Highland Park cut-off, which today is followed closely by the SkyTrain guideway.

Last use of the Central Park Spur to serve the few remaining freight customers is believed to have been in 1997. (Editor/Chris Wasney)

The original W&VT route to New Westminster diverges to the left, while the 1912 line curves to the right, in this scene of the track lifting work on April 8, looking east. Highland Park station lay just beyond the junction. (Photo by Ian Smith)

The Canadian's 60th anniversary on April 24 went officially unremarked by VIA, but the event was recognized in a small way in Vancouver. By good fortune the anniversary date fell on a departure day for the eastbound train from Vancouver, which was well patronized with 18 cars.

On his own initiative, Greg Menard, who works in the baggage room at Pacific Central Station, produced a commemorative poster for the lounge used by sleeping car passengers, and a sign made by local railfan Bob Walters was taped to the drumhead of observation car *Laurentide Park*. The sign remained affixed to the drumhead all the way to Toronto and was still in place when the same trainset returned to Vancouver on May 2.

VIA's indifference to the occasion was a far cry from its enthusiastic observation of the 50th anniversary in 2005, when anyone born in April 1955 could travel the full distance of the train's route for just $50 throughout that month (see Spring 2005 issue, pages 24-25). That said, the timing of the difficulties noted in the next item would have made a repeat of the 2005 promotion impractical. (Editor)

Transcontinental service was suspended for five weeks after a crude oil train derailed in northern Ontario on March 7, severing CN's single-track mainline.

VIA baggage handler Greg Menard (left) and railfan Bob Walters pose with the 60th anniversary sign that Bob made for the drumhead of the Canadian departing Vancouver on April 24. (See also page 54) *(Photo by Terry Muirhead)*

The accident, near Gogama on the Ruel Subdivision, saw numerous tank cars catching fire and a bridge heavily damaged.

Although limited freight service through the area resumed on March 10 when a temporary bypass was completed, VIA had already cancelled westbound service from Toronto on the Canadian until March 21, owing to "unfavourable operating conditions for passenger trains."

But by the time the CN line was fully re-opened on March 18, VIA had decided to cancel all Toronto-Winnipeg service indefinitely, and the suspension continued until April 10, when the first ex-Vancouver train continued eastward from Winnipeg. The first westbound departure from Toronto was on April 11.

With the re-opening on March 18, CN had issued a 35-mph speed restriction, for a 60-day period, from Winnipeg to Capreol, Ont., on any train carrying more than 20 loaded railcars of flammable liquid products. VIA said this slowdown of freight traffic would prevent it from maintaining its passenger train schedules and would result in significantly longer trip times.

Service between Winnipeg and Vancouver was maintained throughout the disruption.

Passengers on the cancelled trains were offered full refunds or a later trip at the same fare as their original booking. (CN/VIA)

ROCKY MOUNTAINEER®

The North Vancouver-Whistler day excursion trip will be cancelled following the 2015 season, after 10 years in operation.

Instead, Rocky Mountaineer service over that part of the route will be added to the once-a-week train that currently operates between Whistler and Jasper, with an overnight stay in Quesnel. As of 2016, this will become a three-day trip between North Vancouver and Jasper, with an additional overnight stop in Whistler. (RMV)

Banff will be the eastern end of all Rocky Mountaineer trips via the CP route in the 2015 season.

All eastbound trains will terminate at Banff, and continue empty to Calgary for servicing.

Westbound trains will originate at Banff. Buses will transport passengers directly between Banff and various Calgary hotels.

Last year, eight of the 48 trains in each direction started or terminated at Calgary.

Significantly more trains on this route will make a stop at Lake Louise than last year, when 29 of the 48 trains stopped there. Lake Louise was added as a stop in 2013, with 19 trains making a stop there. ("eminence_grise"/RMV)

Red Leaf service will not be offered after the 2015 season.

The base level service will be discontinued, with passengers offered only the current mid-level Silver Leaf and premium Gold Leaf services. Silver Leaf service was first offered on a limited basis in 2011, on just four trains in each direction. It began with the two "Glacier Dome" cars (numbered 2001-2002) that had been

customized for the top-level service on the Whistler Mountaineer. These are not actually dome cars, but instead are single-level ex-CN/ VIA cars with windows cut into the roofline as on a sightseeing motorcoach (see Autumn 2006 issue, page 25).

In recent years, some Gold Leaf bilevel cars have been used to accommodate demand for Silver Leaf service. Meanwhile, some of the ex -CN/VIA cars used for Red Leaf service are being converted to the Silver Leaf configuration.

Like Red Leaf passengers, those in Silver Leaf eat meals at their seats, while Gold Leaf passengers eat in a dining room on the lower level of the bilevel Gold Leaf cars. Silver Leaf provides hot meals, although not the same as the upscale Gold Leaf fare, while Red Leaf meals are "chilled".

As with Gold Leaf, passengers in Silver Leaf have their luggage delivered to their hotel room for the overnight stop in Kamloops. In contrast, the baggage of Red Leaf passengers is not available during the trip and they are advised to pack an overnight, carry-on bag for their second-day clothing and toiletries.

The overnight hotel accommodation varies with each class of service and there is even a Gold Leaf Deluxe class that provides the most luxurious hotel rooms.

In the final season to offer all three levels of service, Red Leaf service between Vancouver and Jasper or Banff/Lake Louise is priced at $1,259, while Silver Leaf costs $1,679 and Gold Leaf $2,099. (RMV/Editor/Earl Roberts)

Ten Silver Leaf cars will be in operation this year, as Rocky Mountaineer puts more emphasis on its middle level of service (see previous item).

Conversion of former Red Leaf coaches to Silver Leaf configuration began in 2013, when coach RMRX 5717 became RMRX 2003, the next number in the series following the two cars converted in 2006 for the Whistler Mountaineer.

Those two original cars were produced from rolling stock owned by the New Brunswick firm that did the conversion, Industrial Rail Services Inc. of Moncton, which is now defunct.

The work includes enlarging the side windows and cutting new rounded windows into the roofline.

The current round of conversions is being carried out in the United States by an unidentified firm, using cars from Rocky Mountaineer's fleet of Red Leaf cars, built in 1954 for CN and later used by VIA.

Three more conversions were performed in 2014: car 5722 was converted to 2004, 3252 to 2005, and 3220 to 2006.

Another four will be completed for the 2015 season: 3244 to 2007, 3213 to 2008, 3240 to 2009, and 3215 to 2010. (Earl Roberts)

The 16 Gold Leaf bilevel coaches will have their interiors fully refurbished, including a rebuild of their electrical and heating & air conditioning systems. The work will be performed over three years by Canarail Consultants Inc., with much of it subcontracted to a firm in Quebec's Gaspé region.

Rocky Mountaineer says this will be the largest capital investment since it started in 1990. For Montreal-based Canarail, this will be its largest project to date. (*Branchline*)

January's on-time performance was the worst for a single month since WCE service began in November 1995, at 87%.

That month marked the start of an intensive rail replacement on CP's Cascade Subdivision that was to last until mid-April. CP had not notified WCE about the schedule for the track work. (*Maple Ridge News*)

Delays to WCE trains have continued past the expected end of track maintenance in April.

Freight train congestion caused delays to the first afternoon train (15:50 from Waterfront) on May 6 and 7, by 35 and 15 minutes respectively. The first morning train on May 7 was delayed more than 20 minutes after debris on the track severed a brake pipe hose, causing an emergency brake application.

A TransLink spokesman said that more than 100 WCE services had been delayed in the previous six months.

This performance forms the backdrop to TransLink's negotiations with CP for a new track access contract. The original 20-year contract expires October 31 this year. (Global TV News)

All five afternoon trains were cancelled on March 4 as CP's tracks along the Vancouver waterfront were engulfed in thick smoke from a chemical fire in a container at the Centerm terminal that affected a large part of the surrounding neighbourhoods (see Port News, page 52).

As the fire raged in mid-afternoon, TransLink issued an advisory that the first departure, at 15:50, would be cancelled and that passengers should seek alternative transport.

By 16:00, all trains and the three evening Train-Bus services had been cancelled. Passengers were advised to travel by SkyTrain to Lougheed Town Centre station, from which a "bus bridge" would be operated to the suburban WCE stations. Buses carried passengers to stations out to Maple Meadows, and from there the TrainBus coaches were used to take onward passengers to Port Haney and Mission City.

As fate would have it, the fire occurred on a Wednesday, the routine day for one of the five consists to be run over to VIA's maintenance centre for inspection and light repairs. In this case WCE 906 and its 10-car train were at the centre and were unable to return to Waterfront.

As the fire receded by mid-evening, the trains trapped at the Waterfront layover yard began to deadhead back to Mission for the next day's service. WCE 901 with a nine-car consist left at 19:40 but got only as far as the fire zone, when it was ordered to stop. Meanwhile, 906 and its train were approaching the mainline from the VIA shops, but it also had to stop, and eventually returned to the VIA yard.

At 20:07, with its crew complaining of burning throats and eyes, 901 started its return to Waterfront, where it finally got clearance to leave at 20:30. It was followed at 21:37 by 902 and eight cars, and then at 22:32 by a combined "J train" consisting of 903 and ten cars, with 904 and four cars coupled behind.

WCE 906 and its train stayed overnight at the VIA shops, and with only four trainsets returning to Mission City that evening, there were only four westbound departures the following morning, with the earliest train being cancelled. Only 31 cars were in service that morning, com-

pared with the usual 41. (Corwin Doeksen/ TransLink)

All three elevators at Metrotown station in Burnaby were taken out of service on February 26 while the station undergoes a substantial renovation that will take a year to complete.

To provide access for those needing an elevator to reach the platforms, a HandyDART bus shuttle is operating between Metrotown and Patterson, the next station to the west, with shuttles leaving each station every 20 minutes. (TransLink)

TransLink paid $13.9 million to purchase the former Bombardier facility in Burnaby where the first batch of Mark II cars was assembled from 2001 to 2002.

The province had bought the facility from Bombardier after the company did not win a five-year contract to maintain the cars it had built. This was a provision of Bombardier's agreement with the province.

The B.C. government later sold the facility, which was then used for some time by a clothing manufacturer.

TransLink had been leasing the building since 2012 to serve as the site for refurbishing the original 114 Mark I SkyTrain cars. It bought the building in December 2014 and has also spent $309,000 on restoring the rail connection with its adjacent Operations & Maintenance Centre yard, as well as adding a paint booth. (*Vancouver Sun*)

A new TransLink chief executive is being recruited, following the removal of Ian Jarvis from that post on February 11.

Announcing the change, TransLink chair Marcella Szel said: "TransLink must restore public confidence, and new leadership is the first step."

The change came in the run-up to the plebiscite on a 0.5% increase in the provincial sales tax to fund expansion of TransLink's services. A common theme from opponents of the tax increase has been distrust of the agency's senior management and criticism of its past record of allegedly not operating cost-efficiently.

Doug Allen was appointed to the job on an interim basis for up to six months, but he will not seek the permanent job. Most recently, from 2011 to 2014, he had been chief executive of InTransit BC, the private-sector consortium that designed and built the Canada Line, and operates and maintains it through Protrans BC Operations Ltd. Earlier, he had been the deputy minister of various ministries of the B.C. government over a 15-year period.

TransLink's official announcement said: "Ian Jarvis has stepped aside as CEO to become an advisor to the Board of Directors until the conclusion of his contract in June 2016. The Board would like to extend its thanks to Mr. Jarvis, who has served TransLink since 1999, and as CEO since 2009. In the past three years, he has delivered a net improvement of a quarter-billion dollars to TransLink's bottom line." (TransLink)

TransLink fared well in an academic analysis of messages about public transit posted by users of the Twitter social media channel.

In an article titled "Planning and Social Media: A Case Study of Public Transit and Stigma on Twitter," published in the *Journal of the American Planning Association*, researchers found that TransLink was the subject of more positive comments than any of the other 10 North American transit agencies in the study. Portland's TriMet and the Toronto Transit Commission ranked second and third.

At the bottom of the rankings was Washington, D.C., with Boston, Philadelphia and Chicago also faring poorly. Rankings for New York, Los Angeles and San Francisco's BART system were somewhat less negative.

The researchers noted that TransLink issues about 90 "tweet" messages a day to interact with its passengers. (*Metro* e-newsletter)

Port News

A raging chemical fire in a container at Vancouver's Centerm terminal burned throughout the afternoon and evening of March 4, causing massive disruption to road and rail transport and forcing nearby residents to stay indoors.

The fire started in an imported container of trichloroisocyanuric acid (*Ed.: Say it quickly*), which is used as an industrial disinfectant and to chlorinate swimming pools. The Vancouver fire department was called at 13:40, responding with more than two dozen firefighters in 10 trucks, later reinforced by two fireboats.

Huge clouds of smoke billowed as firefighters rained water down on the stack of containers that included the one in which the fire started.

A partial evacuation zone was established between Nanaimo and Main streets north of Hastings Street, with nearby businesses advised to close and send their employees home.

Residents south from Hastings to First Avenue were told to keep their windows closed. The fire chief lifted the "shelter in place" advisory shortly before 18:00 and the fire was deemed to be under control soon after. It was completely extinguished by 20:00 on the following day, more than 30 hours after it started.

Centerm and nearby port properties were evacuated, and port operations on the south shore of Burrard Inlet were shut down, including rail and truck access. CPR moved most of its locomotives away from the area and all West Coast Express service was cancelled (see WCE section, pages 50-51). No buses were allowed to operate north of Broadway between Boundary Road and Cambie Street.

Sixteen people were hospitalized with skin and eye irritation, but all were released after treatment. (Port Metro Vancouver/*Vancouver Sun*)

A second-straight record year for Port Metro Vancouver volumes was posted in 2014.

Overall tonnage reached 139.7 million tonnes, which topped the record 135 million tonnes of 2013.
Import cargo rose 4.1% to 29 million tonnes, while exports were up 3.3% to 111 million tonnes.

The port handled 2,915,928 TEU (20-ft

equivalent) containers, which beat the previous year's record of 2,825,475, despite a 28-day trucking strike in March.

Loaded inbound containers increased by 6% per cent, but loaded outbound containers dropped by 7%. Container lines shipped more empty containers to Asia to meet higher demand for inbound cargo and facilitate quicker turn-around of ships recovering from scheduling delays as a result of U.S. west coast port congestion.

Other annual records were set for dry bulk tonnage (87.9 million tonnes), grain (23.3 million tonnes), and potash (7.5 million tonnes).

Bulk coal volumes remained strong, with greater volumes shipped to several emerging markets.

Automotive volumes declined, largely due to a shift in vehicle production from Asia to North America. Breakbulk volumes also fell slightly, owing to a decrease in log exports. (Port Metro Vancouver)

Preservation

CPR locomotive 374 now graces the reverse side of a $100 gold coin issued by the Royal Canadian Mint, surmounting a map of Canada, with the bust of Prime Minister John A. Macdonald looking on. The 14-karat coin commemorates the 200th anniversary of Macdonald's birth. Price is $599.95.

Royal Hudson 2860 turns 75 this year and its custodians, the West Coast Railway Association, will stage a birthday party on June 27 at the West Coast Railway Heritage park in Squamish. Both daytime and evening events are planned. (*WCRA News*)

Restoration of ex-CN FP9 6520 is a priority for the WCRA, which has launched a fundraising drive aimed at securing the $50,000 to $60,000 needed for the job. The goal is return the 1957-built locomotive to full operating condition in its original appearance. Contact WCRA at info@WCRA.org. (*WCRA News*)

Ex-CN 2-8-0 No. 2141 is expected to return to service in June. The Kamloops Heritage Railway Society said the boiler overhaul work should be completed in time for the special Canadian Northern centennial event on June 19 and then will start its first operating season since 2012. KHRS said the City of Kamloops has approved operating funding for this year's season. (*Kamloops This Week*)

Special Events

The Canadian Northern centennial event noted in the previous issue (page 45) will be held in Kamloops on June 19 and 20.

Activities on June 19 will include a trip behind ex-CN 2-8-0 No. 2141, a tour of the Kamloops Heritage Railway shops, a Friday evening dinner event with guest speaker Barrie Sanford and slide presentations, and a night photography session.

On June 20, participants will tour the last spike site at Basque, travelling in private car pools.

Registration fee is $25. For details, contact Les Kozma at lkozma@telusplanet.net or 780-405-4021. (*WCRA News*)

THE SANDHOUSE

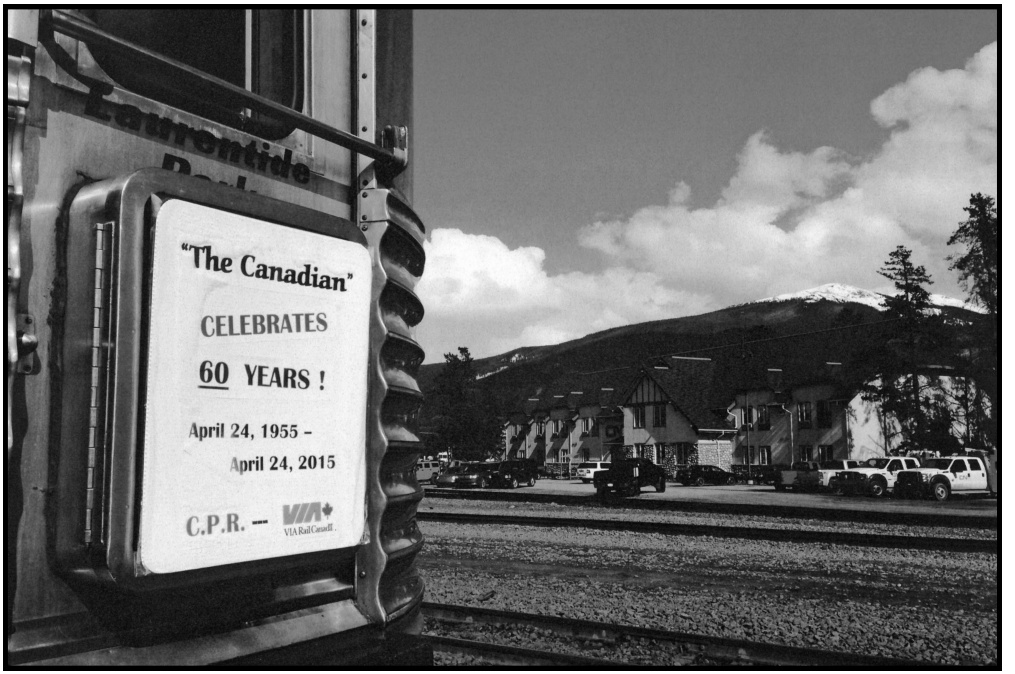
THE SANDHOUSE is normally published once each quarter, in Spring, Summer, Autumn and Winter, and mailed to paid-up members. Copies can also be purchased from the following retail outlets:

Central Hobbies, 2825 Grandview Hwy., Vancouver (604) 431-0771
Kelly's Kaboose, 634 Victoria St., Kamloops (250) 377-8510

All contributions are gratefully received, but are subject to editing. Please send all news items, photos and articles to the Editor, care of the Division address (see page 2).

Ian Smith — Editor

Parting Shot



The unofficial commemorative drumhead sign for the Canadian's 60th anniversary is seen at Jasper during the eastern leg of its cross-country odyssey on April 25 (see page 47).

Canadian Railroad Historical Association, Pacific Coast Division

P.O. Box 1006, Station A Vancouver, B.C. V6C 2P1

WE INVITE YOU TO JOIN US

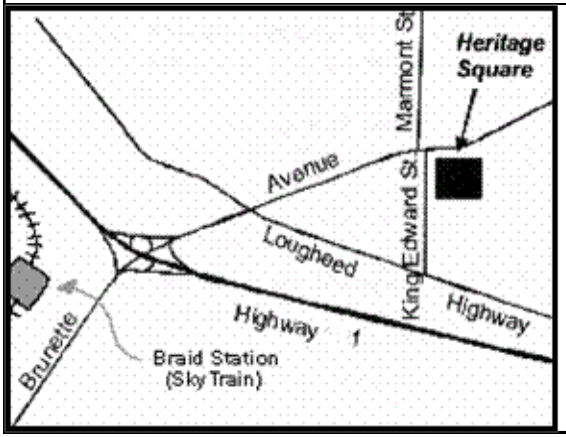
Get together with fellow railway enthusiasts and take part in the varied activities of the CRHA's Pacific Coast Division.

We meet nine times a year on the 3rd Thursday of the month (see below)

- Meetings feature slide shows, video programs, talks by railway officials and writers on railway subjects, and the opportunity to socialize with other railway enthusiasts.
- We publish **THE SANDHOUSE**, a quarterly journal on B.C. railway matters. Membership dues include a subscription.
- We operate a museum in the preserved Fraser Mills CPR station at Heritage Square.
- We're restoring a CP Rail caboose at Heritage Square.

We hope you'll join us. Please send your address details (name, full address, phone number, e-mail), together with your payment, to our postal address or bring it to one of our regular meetings.

Annual dues are: $30 for Canadian residents; $30 U.S. for U.S. residents and $40 Overseas



Pacific Coast Division's regular meetings are held on the third Thursday of each month (except July, August and December) at

Heritage Square, Place Des Arts
1120 Brunette Avenue
Coquitlam, B.C.

Informal socializing starts at 7:15 p.m.
Presentations begin at 7:30 p.m.

It was 20 years ago this May . . .