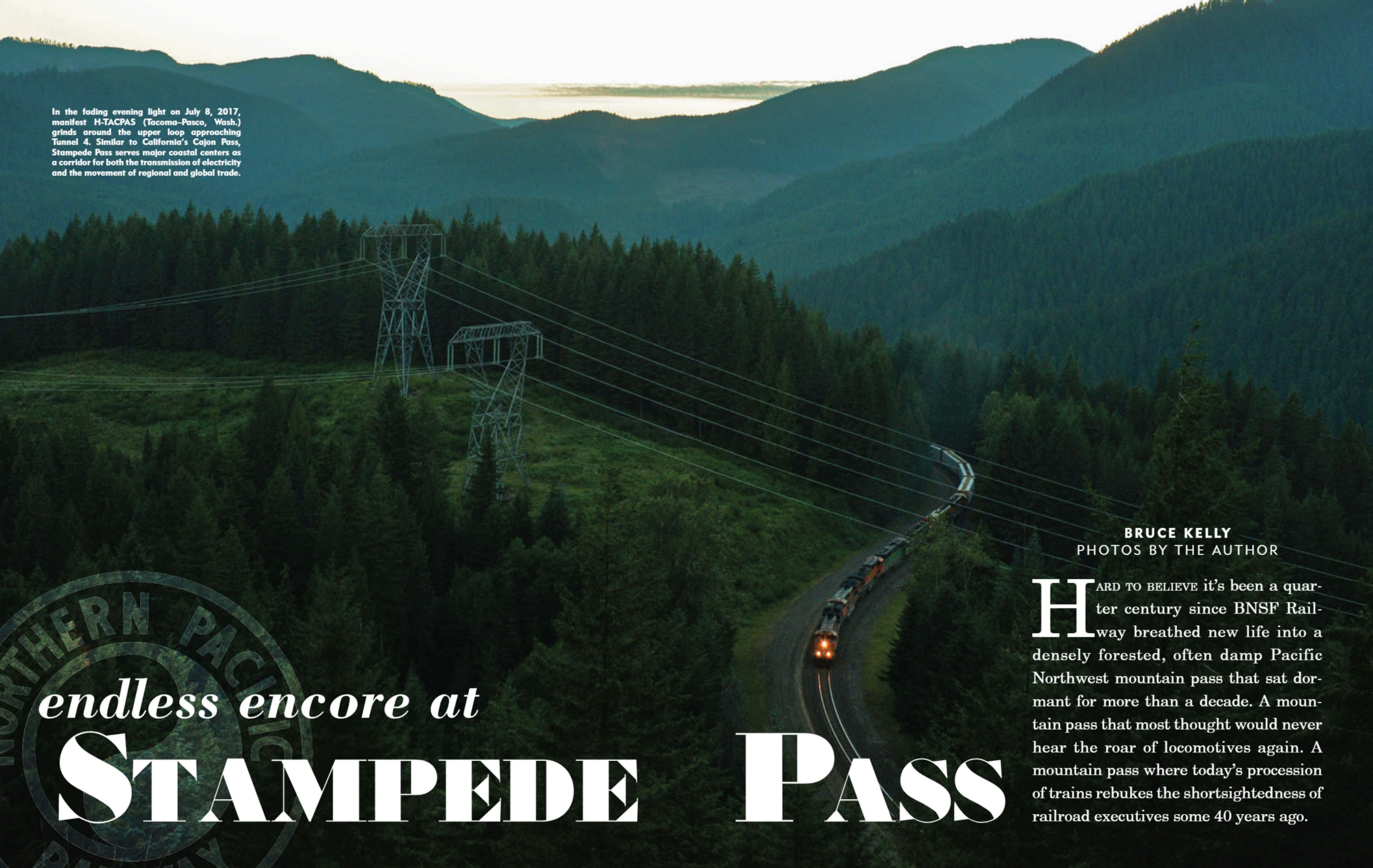


In the fading evening light on July 8, 2017, manifest H-TACPAS (Tacoma–Pasco, Wash.) grinds around the upper loop approaching Tunnel 4. Similar to California's Cajon Pass, Stampede Pass serves major coastal centers as a corridor for both the transmission of electricity and the movement of regional and global trade.

endless encore at STAMPEDE PASS

BRUCE KELLY
PHOTOS BY THE AUTHOR

HARD TO BELIEVE it's been a quarter century since BNSF Railway breathed new life into a densely forested, often damp Pacific Northwest mountain pass that sat dormant for more than a decade. A mountain pass that most thought would never hear the roar of locomotives again. A mountain pass where today's procession of trains rebukes the shortsightedness of railroad executives some 40 years ago.

RIGHT: Six months after Stampede's reopening, BNSF still looked like BN on the morning of June 14, 1997, when four Geeps led an empty grain train down the east slope two miles below Martin. The fill beneath white-faced GP40M 3517 and company was part of a 1950's line change that bypassed Tunnel 2 (also known as Dingle's Tunnel).

BELOW RIGHT: On September 28, 1999, the peaceful silence of Stampede's west slope was shattered by the pulsing exhausts of GE locomotives in pre-BNSF paint, leading empty grain train X-TACMIN (Tacoma, Wash.–Minot, N.D.) up the compensated 2.2 percent and exiting the wooden snowshed that guards Tunnel 4's east portal.

After St. Louis-San Francisco Railway merged with Burlington Northern in 1980, former Frisco officials who rose to new positions of power declared a number of BN routes and facilities to be redundant or too costly to maintain. This included the old Northern Pacific main line via Stampede Pass in the Cascade Range of western Washington. BN closed, but did not fully abandon, Stampede in 1983. Three years later, ex-NP trackage east of the pass, between Cle Elum and Kennewick, Wash., was sold to newly formed regional Washington Central. BN figured that its ex-Great Northern route via Stevens Pass to the north and its ex-Spokane, Portland & Seattle route through the Columbia River Gorge to the south were capable of handling all its traffic to and from Puget Sound, Portland, and the surrounding coastal region.

For the most part, Stampede Pass was left to rust and rot, but BN managed to pull it out of the mothballs on a handful of occasions. During 1984, three B32-8 demonstrators, painted in BN green and numbered 5497–5499, toured the BN system in General Electric's attempt to prove that its latest four-axle technology could do the same work as a six-axle SD40-2, while using less fuel. For one week in July, the GEs had free run of Stampede, lugging ballast cars up and down the west slope, with a GE test car capturing the performance data. A few weeks later, in September 1984, it was EMD's turn, making use of Stampede's grades and curves to test an articulated, self-steering, four-axle truck that had been installed under BN SDP45 6599. But none of that compared with the action-packed week in August 1985 when a flurry of trains was detoured over Stampede after a derailment and bridge fire east of Wenatchee, Wash., had closed the Stevens Pass route.

Fast forward to 1996. Within months of BN merging with Santa Fe Railway to form BNSF, some 500 men were hard at work restoring more than 200 miles of track from Kennewick west to Auburn. At a total cost approaching $200 million, BNSF rebuilt Stampede Pass from the ground up with new ties, rail, and ballast, and pre-cast concrete snowsheds at both ends of Stampede Tunnel. The steep, twisting grades of the pass received long ribbons of "transition rail," which seamlessly joined 132-pound rail custom-measured for each tangent with 136-pound rail rail tailored for areas of curvature. Trackage east of Cle Elum was purchased back from WCRC and rehabbed to connect Stampede with the rest of the BNSF system.

Northern Pacific had opened its first line over Stampede Pass in 1887, a temporary array of switchbacks, 15-degree curves, timber trestles, and grades exceeding 5 percent. The permanent route through 1.8-mile-long Tunnel 3, better known as Stampede Tunnel, was opened in 1888, lowering the summit by nearly a thousand feet and reducing the maximum grade on both slopes to approximately 2.2 percent. Grades within the tunnel itself ease to 0.74 percent on the west slope and 0.2 percent on the east slope, cresting near the middle of the tunnel at a subterranean elevation of 2,837 feet.

Great Northern didn't cross the Cascades at Stevens Pass until 1893, nearly six years after NP, and The Milwaukee Road at Snoqualmie Pass not until 1909. Southern Pacific over the Cascades in Oregon came even later.

What led NP to carve its contorted path across Stampede is what ultimately brought BNSF back — expansion of trade through the Pacific Northwest, serving domestic and foreign markets. However, BNSF's initial plans of enlarging Stampede's tunnels to accommodate doublestacked container trains got sidelined in the rush to simply reopen the pass for

LEFT: With winter well underway, work train power stood outside the east portal of Stampede Tunnel at Martin on December 5, 1996. Contractors were finishing work on the new pre-cast concrete snowshed and on the interior of the tunnel itself. BNSF's first commercial trains would roll through just two days later.

BELOW: Roadmaster Steve Ince (top left) gestured to the winch operator as his gang prepared to offload another strand of new rail along the west slope near the old station site of Kennedy on September 28, 1996.

ABOVE: Mere months after leaving the factory, two Dash 9-44CWs in BNSF's Heritage II colors led former BN units down the Borup Loop on September 28, 1999, with Pasco, Wash.–Vancouver, B.C., manifest H-PASVBC. Directly above the second unit is the wooden snowshed outside Tunnel 4, which the train passed through minutes earlier.

RIGHT: The morning of September 28, 1996, saw a rail train backing east up the 2.2 percent grade across the Green River viaduct, about three miles east of Lester. Power was two GP40-2s and an SD40SS, one of five BN SD40-2s equipped with a prototype of EMD's Super Series wheel slip control system.

all other forms of traffic, most notably empty unit trains returning east from coastal terminals.

Also sidelined was the potential for reopening Snoqualmie Pass instead, which BN had acquired after The Milwaukee Road vacated its properties in the West. Snoqualmie offered easier grades and better tunnel clearance than Stampede. An easy connection between the ex-NP and ex-MILW could have been made at Easton, where both lines began their westward climb into the Cascades. But like Stampede, Snoqualmie had been written off by BN's ex-Frisco management. And by the time BNSF was looking to augment its Stevens Pass and Columbia River Gorge routes with a third line to the Northwest coast, the existence of public trails on the ex-MILW right-of-way and suburban encroachment on its western end made Snoqualmie Pass a more daunting candidate for reconstruction than Stampede.

December 7, 1996, marked the return of Stampede Pass to revenue service. Over the next few years, it saw an average of a half dozen trains per day, manifests linking Washington state terminals such as Pasco–Interbay, Everett–Pasco, Spokane–Tacoma, and Pasco–Tacoma, as well as eastbound empty grain and coal trains. Routing this traffic over Stampede freed up much-needed capacity on BNSF's busier Stevens Pass and Columbia Gorge lines.

Resurgence in the 21st Century

By late 2007, daily train counts via Stampede Pass dropped to the point where BNSF took a shot at sending

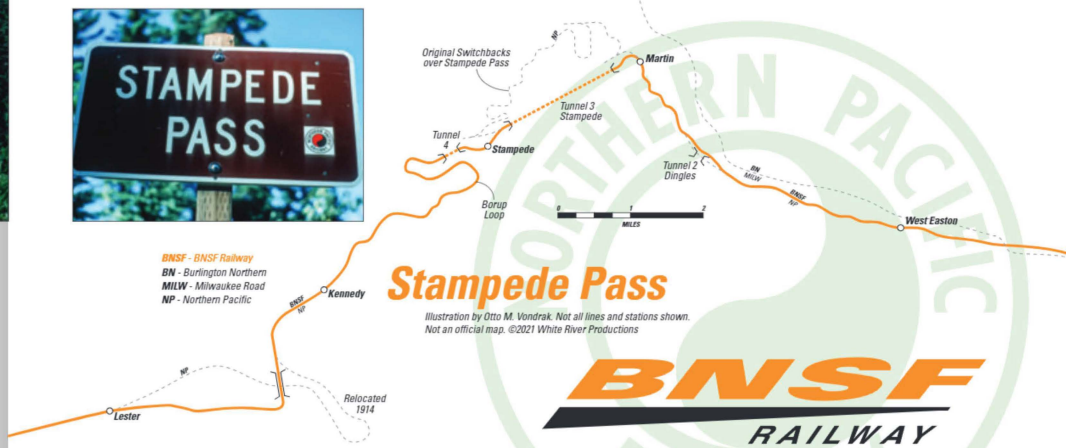
westbound loaded grain trains that way, with manned helpers lending both muscle and dynamic braking for the mountain. This continued sporadically until 2009, when business became so low that BNSF shaved operations on its Stampede route down to local service only. Some folks in the railfan, railroad, and business communities feared that BNSF might mothball the pass all over again.

Then came a surprising turnaround in America's energy sector. Crude oil handled by U.S. Class I railroads increased from less than 11,000 carloads in 2009 to roughly 235,000 carloads in 2012. Refineries and shipping terminals in the Pacific Northwest began receiving enough unit trains of crude, in addition to other terminals already receiving unit grain and coal, that BNSF and regional transportation officials concluded Stampede Pass was the perfect outlet for getting some of those unloaded unit trains moving eastward from the coast and over the Cascade Mountains. And what better way than to make Stampede an eastbound-only railroad?

What became known as the "Iron Triangle" got underway in 2012, utilizing a newly formed labor pool serving BNSF's Stampede Pass route as well as two other Washington routes. Crews who bring trains east over Stampede to Pasco make

LEFT: A westbound manifest was aimed toward the northeast while midway through the zigzag of the west slope's dual horseshoes, the lower one being Borup Loop, on September 29, 1999. Most of the logged-out hillsides are now thick with evergreens again.

BELOW LEFT: A Northern Pacific sticker adorns the sign where FR 54 crosses Stampede Pass.



RIGHT: In the first rays of west slope sunlight on July 9, 2017, an empty grain train climbs out of Borup Loop, approaching a cut where Tunnel 6 once stood. NP eliminated several tunnels when it double tracked portions of Stampede Pass.

BELOW RIGHT: Trading Yellowhead Pass for Stampede, CN power on the front and rear lifts empty BNSF oil Train U-AWATND (Arco/Cherry Point, Wash.–Trenton, N.D.) across the 1,100-foot-long Green River viaduct east of Lester on July 9, 2017. In NP days, the bridge carried two main tracks.

their next trip west down the Columbia River to Vancouver, followed by a third trip back north to Auburn. Fleeting empty unit trains and occasional manifests east via Stampede not only improved the flow of traffic over this mostly dark (un-signaled) route, it also eased some of the growing congestion at Stevens Pass and the Columbia Gorge. There are enough sidings along the Stampede route to facilitate easy meets between opposing trains if needed, but for now, the majority of interaction between the dispatcher and crews is the issuing, read-back, and release of track warrants to simply keep eastbound trains advancing from one line segment to the next.

In February 2018, BNSF moved 18 trains over Stampede in one day, which the railroad said marked a record since the line's reopening. In March 2019, double-length empty grain trains totaling 230 cars and powered 3x2x1 were tested via Stampede. Today, these so-called "super trains" or "mega trains" — sometimes pairing empty grain with empty coal or oil — make their way over the pass at least once or twice each day. As of mid-2021, traffic flow on Stampede Pass ranged from just four trains per day to as many as a dozen. Higher counts can be expected during the fall and winter months when grain exports (via the Columbia Gorge) and the return of empty grain trains eastward (some via Stampede) increase sharply.

Following the Action

Leisurely visits to Stampede Pass can make use of lodging in Ellensburg, Cle Elum, Roslyn, or Snoqualmie Pass, as well as campsites at Lake Easton State Park. But the ultimate experience comes from spending a night on the west slope, away from the lights and noise of civilization, at one of the forest road turnouts or the primitive campsites directly atop Tunnel 4, a 650-foot bore located one mile west of Stampede Tunnel. Trains ascending the 2.2 percent out of Lester can be seen and heard for miles as they twist and turn up the Sunday Creek valley, zigzag through a pair of horseshoe curves, then pass beneath you through Tunnel 4.

Forest Road 54/Stampede Pass Road (exit 62 off I-90) will get you there on a steep, winding, but reasonably maintained course of dirt and gravel. Crossing Stampede Pass at an elevation of roughly 3,700 feet, FR 54 traces portions of the original NP grade over the summit. Good tires, decent ground clearance, and a vehicle in reliable mechanical condition are a must, along with food and drink and basic survival supplies. Wildlife deterrents ranging from bug spray to bear spray are also recommended. Winter snowpack can cover FR 54 well into spring, making a snowmobile the only practical means to explore the pass.

When shooting from the ridge above Tunnel 4, if the crackling buzz of power lines directly over your head bothers you, just wait until you touch your tripod or camera and feel the tingle of electricity being conveyed from the air to the ground. It's all part of the magic that makes Stampede Pass an unforgettable place to witness trains tackling the Cascade Range — and one of the biggest comeback stories in all of railroading, 25 years and counting.

LEFT: Another grain empty emerges from Stampede Tunnel at Martin and starts down the east slope on August 19, 2018. Mountain mists and wildfire smoke cast a haze over the scene, not unlike the days when Jim Frederickson photographed articulated steam and FT diesels here.

BELOW: Adding tonnage to what is otherwise an eastward flow of empty unit trains, Everett–Pasco manifest H-EVEPAS crosses the Green River viaduct at 6:58PM on July 9, 2017. Along for the ride is Savage Services SW1200RS 1361.