

A Mountain Rail Extravaganza

The Shay Locomotive

Conceived by Michigan inventor Ephriam Shay, the Shay Engine was designed for the roughest mountain duty under the worst possible conditions. In the absence of streams to float logs to the mill, loggers had to haul incredibly heavy loads out of the mountains by rail—on steep grades, sharp curves and hastily laid roadbeds where power rather than speed was important. Lumbermen instantly recognized the Shays as the answer to their problems and bought them by the hundreds.

Unlike standard steam engines, every wheel of the Shay engine and tender is a drive wheel—no wheel can spin unless they all spin—giving the Shays tremendous traction. Vertical cylinders and the crankshaft make multiple power strokes per revolution of the gear driven wheels for a smooth, even flow of power to negotiate steep grades with heavy loads effortlessly.



Of the 2,761 Shays built by the Lima (Ohio) Locomotive Works beginning in 1880, the five at Cass are among the few remaining anywhere, as priceless and almost unique relics of those old lumbering days. Rail buffs are amazed to see the complete machine shop at Cass capable of duplicating and rebuilding almost any part of the engines. Since the average life of an engine is about 34 years, these Shays would have ceased operating years ago without such excellent care.

<https://mountainrailwv.com/tour/cassscenicrailroad/>

Greenbrier Express



The original 95-mile section of this railroad was first constructed in 1902 by the Chesapeake and Ohio Railway with an eye toward timber resource development. It continued serving that purpose until rail traffic declined and most of the line was abandoned in 1978. Today's trip takes you on the northernmost 15-mile portion that was purchased by the West Virginia State Rail Authority. Unfortunately, a catastrophic flood in 1985 washed out major portions of this line. Thanks to a private/public initiative between the WV State Rail Authority and Durbin & Greenbrier Valley RR, the track has been reconstructed and now offers a new and different option to visitors at the iconic Cass Scenic Railroad State Park.

From: <https://mountainrailwv.com/tour/greenbrierexpress/>

Cass Scenic Railroad

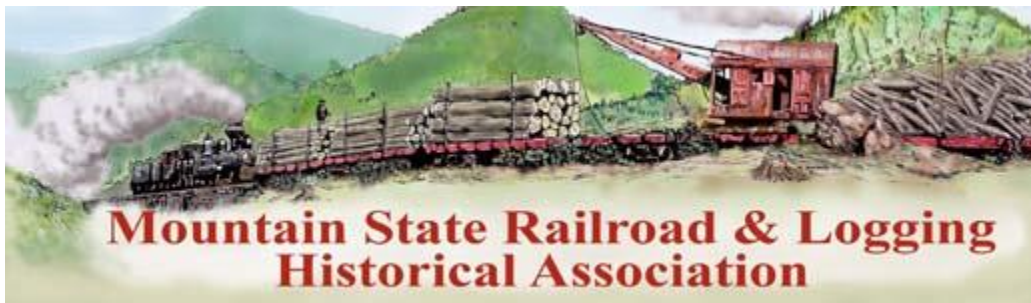
The town of Cass remains relatively unchanged since its founding in 1901 by the West Virginia Pulp and Paper Company. Cass was built as a company town for the loggers who worked in the nearby mountains. Construction of the railroad started in 1901. It was used to haul lumber to the mill at Cass. The railroad track was eventually extended to the top of Bald Knob, the third highest mountain peak in West Virginia. In June 1942, the Cass operation was sold to Mower Lumber Company, which operated the town until July 1960, when the mill and railroad were shut down due to rapid decline of the timber industry in the region. In 1961, Cass was brought into the state parks system. In 1977, the company town also was made part of the parks system. Over the years, the railroad was turned into a tourist line and the town was repaired and restored. Today, the railroad is still in full operation, but is managed by the Durbin and Greenbrier Railroad.

From: <https://wvstateparks.com/park/cass-scenic-railroad-state-park/>



The rugged mountain country of Pocahontas County was a latecomer in the railroad boom that swept America during the second half of the 19th century. The use of trains to haul lumber off the mountains was impractical until 1880, when Ephriam Shay invented a geared steam locomotive capable of managing the steep mountain grades and sharp curves. By 1899, track was being laid at a rate of a mile a day and on October 26, 1900, the first train pulled into Marlinton and by the end of the year, the railroad's primary objective, Cass, had been reached. The traditions and the heritage of railroading and timber come alive for visitors to Pocahontas County. The loggers may be gone, but our trains are still going full steam ahead. The Cass Scenic Railroad is the same line built in 1901 to haul lumber to the mill in Cass. The locomotives are the same Shay locomotives used in Cass during that time. Cass is the home to the world's largest fleet of geared Shay locomotives. Six Shays, one Heisler and one Climax reside here. The legendary turn-of-the-century class C-80 Shay, #5 has been toiling up Cheat Mountain for nearly 100 years, making it one of the oldest engines in continuous service on its original line. It is also the second oldest Shay in existence.

From: <https://www.pocahontascountywv.com/cass-scenic-railroad-state-park>



Track Guide for the Cass Scenic Railroad:

A detailed guide to the trackage you will see on your trip to Whittaker Station or Bald Knob

The Cass Depot: The Cass depot is an adaptation a standard C&O design, constructed in the 1970s to replace the 1923 depot, which burned in 1975. The 1923 depot had replaced the original, which, because of its small size, layout and location, had become obsolete.

The Cass Mill: The parking lot was formerly the storage area for finished lumber produced by the Cass mill. The mill buildings are between the track and the river.

Mill buildings (starting at the end of the parking lot):

The brick structures toward depot were drying kilns.

The metal building was the boiler house.

The farthest brick building was the powerhouse.

The millpond was past the powerhouse (and is barely visible).

Sawmill ruins are in the foreground between the metal boiler house and the track.

The mill was owned by West Virginia Spruce Lumber Co (1902-1910), West Virginia Pulp & Paper (1910-1942), and Mower Lumber Co (1942-60). It burned in 1922, was rebuilt in 1922-23, and closed July 1, 1960. Capacity was 125,000 board feet per 11-hour shift. It produced 35 million feet of lumber per year during peak production. The mill was abandoned when lumber operations ceased in 1960. It was quietly moldering away when it was struck by two arson fires in the 1980's that completely destroyed its wood parts.

The tracks from the depot to the water tank were originally part of the C&O Greenbrier subdivision.

The following guide is keyed to track mileage from the Cass water tank.

Mileage Description

- 0.0 Water tank was shared with C&O Railroad. The logging railroad began here. The line follows Leatherbark Creek to a saddle in the mountain where the line originally gained access to the vast timber resources in the Cheat and Elk River drainages to the north and west. The C&O Railroad was the primary link between Cass and the outside world because the lumber products from Cass were shipped out on this line. The original water tank was replaced by a redwood replica in 2005; the metal parts of the structure are the originals.
- 0.2 Cass Shops. The original (1922) shops were on this site, but were destroyed by a major fire in 1972. The current shop complex includes a locomotive shop, a passenger car shop, and a restoration building where volunteers are rebuilding one of the Cass geared locomotives for eventual return to active service.
- 0.2 Cass dead line. The track on the left side of the train holds a variety of locomotives and other equipment in various states of disrepair. Some of these are slated for repair or restoration; others are beyond reasonable hope because of financial constraints.
- 0.1-0.4 Original trackage in 1901 was on cribbing through the wet bottomland of Leatherbark Creek.

- 0.5 Two Leatherbark Creek bridges were wood stringers until replaced by steel in 1959.
- 0.7 Back Mountain Road grade crossing. The grade steepens to 4%, plus. From here to the top of Cass Hill at mile 6.8, the average grade is 4.55%.
- 1.0 Grade is 5%.
- 1.4 Gum Road crossing.
- 2.3 Lower switchback leads into a 6.3% grade. Switchbacks were commonly used on logging railroads to allow the track to gain elevation in a relatively small space dictated by the rugged topography. They were rarely used on mainline railroads because of the need to stop and restart the train at each switchback.
- 2.6 Gum Curve. 158 degrees of a circle, starting as a 22° curve on a 3.65% grade, it sharpens to 29° on a 2.35% curve.
- 2.7 Cass Cave. About 3,000 feet away, and hidden behind the hill across the valley, is Cass Cave. This wild and dangerous cave is over three miles long and it is likely that part of the cave extends under the tracks. It contains a 150-foot waterfall.
- 2.9 Logging road. Grade is 6.1%.
- 3.1 Limestone Cut. Grade is 6.7%. The cut was made with hand tools and black powder in 1900.
- 3.3 Upper switchback. In the teens a bypass for the switchbacks was proposed, but never built, requiring bridges, a 30° curve and much earthwork.
- 3.5 Road crossing of the access road to Whittaker; begin a 7.1% grade. The steepest rail length is about 8.7 percent on this 0.2 mile long S-curve.
- 3.8 Whittaker Station. (restroom facilities, snack bar, and a reconstructed logging camp).

Once the site of a construction camp from the building of the railroad, here now is the Mountain State Railroad & Logging Historical Association's Whittaker Camp One display. On the west (left) side of the display area are three portable shanties, patterned after the remains of actual shanties at one of the last logging camps in the woods. The saw filer's shack has big windows to provide light for the filer's work. The others housed the foreman, surveyor, train crews, and men deemed more important than those who actually cut the timber, the wood hicks.

Next to the shanties is an abbreviated camp train, representing where the wood hicks washed, slept, and ate their meals. The kitchen and dining car is a reproduction of a typical camp car. The small 4-wheel caboose was constructed in 1883 and used in Clay County, West Virginia, before coming to Cass. The display also includes an original Mower Lumber Company bunk car, but that car is currently in Cass for an extensive restoration.

The center track holds a log loader, built by the Meadow River Lumber Company at Rainelle, West Virginia. This large loader was designed when Meadow River started harvesting whole trees, cutting the trunks into shorter logs in the mill instead of in the woods. The loader rests on a Meadow River skeleton log car, one of a large fleet manufactured at Rainelle. The other flat is a very early example of a steel flat car, from Elk River Coal & Lumber—Georgia Pacific at Swandale, West Virginia. The four-wheel bobber caboose, reportedly ex-B&O, brought up the rear of log trains into Swandale for many years.

The remaining track holds a tower skidder, assembled from older Lidgerwood engines and winches by Meadow River Lumber Company. A tower skidder brought logs on a aerial cable from distant cutting sites to the railroad, where a log loader could stack them on the cars. When all the logs were removed from a site, the far end of the cable was moved so that eventually all timber in a circular area around the skidder was taken out. Every time the cable was moved it meant many hours of back-breaking work as the crew carried 100-foot lengths of small cable through the woods between the skidder and the new anchor site. When these lengths were joined, the crew then used the skidder's rigging engine to stretch the 1" main cable out to the new setting. The skidder remained at the same set for several months.

- 4.0 Culvert over Whittaker Run. On the low side of the track is the old grade with a sharper curve. For the next mile watch below the track for discarded locomotive smokestacks dumped off here in the old days.
- 4.1 The original Lima-built water tender from Cass Shay #2 is in use as a water storage tank.
- 4.5 Logging road crossing from the 1970's. Grade is 5.75% for a short way.
- 4.7 Austin Meadows. Farm fields once came up slope to this spot. A Scenic Railroad stop and overlook were originally planned here.
- 4.8 Skidder set on the uphill side of the track apparently never used, was built here about 1940. Grade is down to 3.25%.
- 5.1 Gobblers Knob.
- 5.4 Skidder set, 225-foot siding on the uphill side of the train, a skidder set in 1940-1941. The main cable stretched nearly 3,000 feet to the far mountainside. Incoming logs hung 500 feet above the creek. A tangle of old cables marks most skidder sets. The grade is a steady 5% plus. A camp was located on the low side between here and the next skidder set.
- 6.0 Overlook. The grade is 5.4% - 6%. The view is the Leatherbark Creek Valley (which the train left at the lower switchback).
- 6.2 Skidder set from 1940-41.
- 6.2 Logging spur to Camp 5, dating from 1911.
- 6.3 Washout. Site of a major 1996 washout that closed access to Bald Knob for almost a year. The large effort to repair the washout cost over \$1M and a man was killed in a construction accident.
- 6.6 Orange cross on the left is rumored to be at the site of an old grave of an Italian track worker.
- 6.7 Old Spruce. A three-mile line cut sharply to the left up to the head of Shavers Fork, logged in 1901-05. In 1945-50, Mower went back with 13 miles of track and 20 skidder sets.

The present track going off to the left actually follows the route of the main logging line that connected to trackage going into the Cheat and Elk River drainages at the long-abandoned mill town of Spruce. Northward, the track follows the Cheat River to Elkins. This trackage was abandoned by the CSX railroad in the 1990s and was purchased by the West Virginia State Railroad Authority. Their contractor, the West Virginia Central RR, now runs excursion trips out of Elkins and Cheat Bridge along this very scenic route.

The track from this point to Bald Knob was actually just a logging spur and was never the main line. It was constructed to allow the last trees to be removed and was some of the last track remaining when railroad logging operations ceased in 1960.

- 7.1 Unused railroad grade on the high side was built in the spring of 1960 to the head of Leatherbark Creek, but the company shut down before track was ever laid.
- 7.4 Spruce overlook. A few foundations from the old town of Spruce are visible in the valley below. Spruce was built in 1905 at an elevation of 3,853 feet and was rumored to be the "highest and coldest town in the east." It featured a large bark-peeling mill for pulpwood, then later became a railroad shop town before it was abandoned in the 1950's. Access was always by train because there were no roads to the town.
- 7.5 Oats Creek water tank is on an 8% grade. The train stops here to take on water. There were few water towers constructed on logging railroads; Shay locomotives can use a steam siphon to draw water from any convenient source. The water from Oats Creek is diverted into an old boiler shell so the engines can draw water here.

- 7.6 Snowshoe Overlook; 8% grade. You can see up toward the head of Shavers Fork, which was logged 1902-05, 1945-50 and has been used by skiers since 1976. The buildings of the Snowshoe ski resort may be visible on top of the distant mountains.
- 8.2 Johnson Run; the grade is 7%.
- 8.9 Camp train siding and skidder set from 1950.
- 9.0 Change in forest type. Notice the forest has changed from mixed hardwoods to red spruce. Red spruce covered most the higher elevations in this area prior to logging, but the trees have been slow to recover since they like cold, wet, shady areas. The hardwood trees that initially grew after logging have provided sufficient shade for the red spruce to regain a foothold. In another hundred years or so the mountaintop may again be a climax red spruce forest.
- 9.1 The Wye in 1950-51 led to a mile-long spur with five skidder sets and a camp train. The side track is now only a few hundred feet long, but allows a train to be turned around if necessary. It used to allow trains to bypass a very sharp curve on the mainline track at this point on their way to Bald Knob. However, the curve was improved by the Cass Track Crew in 2008 and all the Park locomotives can now reach Bald Knob.
- 9.1-9.8 The track averages 1.5% downgrade, passing around the top of the Big Run watershed. Track was built up the Big Run from Shavers Fork in 1910 when horses skidded logs. Steam skidders brought logs up hill to the present track in the 1950's.
- 9.8 Shay No. 4 derailed here in deep snow in 1958 and had to be left several days until Shay No. 1 plowed through to help rerail it.
- 9.9 Skidder set.
- 9.9 DP Switch on the lower side led to the 10-mile Cabin Fork line from 1951-59. Much of the Cabin Fork grade is now Forest Service roads.
- 10.0 Logging road crossing.
- 10.3 Camp on uphill side, late 1950's.
- 10.4 Water tank, seldom used by the Cass Railroad.
- 10.7 Logging railroad grade veers left. There were two skidder sets and a camp on the loop around the summit. The camp (about number 105 in sequence), was used in 1958-59 and was the last full camp in operation.
- 10.8 Grade is about 9%.
- 11.0 End of track; the logging railroad reached this spot by looping around the summit from the opposite direction.

The Bald Knob overlook provides stunning views to the east on a clear day. Standing on the overlook platform, the furthest mountains in the distance are on the Virginia border and are about 11 miles away. Cass is hidden from view, but is about 45 degrees to the right and about 4 miles away. Below the overlook you can see the radio telescopes of the Greenbank Radio Observatory in the valley.

The overlook is frequently assumed to be the top of Bald Knob, but it is not at the mountain's peak. The overlook is at an elevation of about 4,700 feet and the actual summit is 4,842 feet and about 1/4 mile to the southwest. A fire tower at the summit was abandoned years ago when the second growth trees became tall enough to obscure the view.

From: <http://www.msrlha.org/track-guide.html>

Bald Knob

The long haul of 11 miles to Bald Knob takes about four and a half hours for the 22-mile round trip. Panoramas of the lofty Appalachians become more beautiful as the train climbs higher and higher. Passengers suddenly realize they are entering a completely different world, mainly because of the change in trees, flowers and atmosphere. By climbing the 2,390 feet from Cass (2452-feet) to Bald Knob (4842-feet) on Back Allegheny Mountain and second highest point in West Virginia, passengers have made the equivalent to an 800 mile trip to Canada in climate because of the higher altitude. Here are found spruce trees, snowshoe hares and other plants and animals typical in the far north. The rustic overlook affords one of the most awesome, overwhelming spectacles in the east. Dwarfed by distance and almost lost in the vastness of the panorama is the giant Robert C. Byrd Green Bank Telescope, the world's largest fully steerable radio telescope, at the Green Bank Observatory in the valley near the foot of the mountain. A remarkable contrast between the wilderness at Bald Knob and today's space-age facilities!



<https://mountainrailwv.com/tour/cassscenicrailroad/>

The New Tygart Flyer



This wilderness excursion features mountain grades, an "S" curve tunnel, a high bridge and miles of unspoiled mountain views. Vintage diesel-powered locomotives climb along the cascading Shavers Fork of the Cheat River to the High Falls of Cheat. Enjoy the view relaxing aboard our comfortable climate controlled passenger coaches.

This vintage diesel-powered passenger train has gained a reputation as one of the most relaxing mountain wilderness excursions in our Mountain Rail Adventure portfolio.



<https://mountainrailwv.com/tour/new-tygart-flyer/>

A Brief History of Cass by Philip Bagdon

A rather unsung ingredient of Cass Scenic Railroad State Park is its historical district – mostly intact, partially preserved reminder of a socially stratified company town. After taking backseat to the steam locomotive-powered main attraction, “Company Cass” is the subject of some deserved recognition on this, the occasion of its 100th birthday.

Despite the legacy of its band saw and planing mill’s output, the story of Cass actually begins with pulpwood. The Luke family’s success with “sulphite” papermaking and interest in expanding business put the saga into motion. Upon forming West Virginia Pulp & Paper Co. (today’s Westvaco), a plan for a new production facility led to the need for massive quantities of red spruce as raw ingredient.

Although not its first choice, the paper plant’s location was settled as Covington, Virginia – on the Chesapeake & Ohio Railway’s mainline. That carrier dusted off a plan for building into the upper Greenbrier Valley when WV&PCo began eyeing the red spruce forests of “Cheat Mountain” in Pocahontas and southern Randolph counties. The only viable method for reaching the area was via logging railroad from a point on the C&O branch line. To coax the C&O into commencing work, the Lukes visited its brass on numerous occasions.

In the headwaters region of Shavers Fork, more than 67,000 acres of (mostly) prime red spruce were acquired by John G. Luke during 1899. Foundationally then, what would become Cass met the industry’s requirement for a [shipping](#) center after surveys of rail routes into the holdings determined that a tortuously steep grade up Leatherbark Run was best.

With just one farmland buy – 136 acres in April 1899 – John Luke speculatively set the stage for a community of some size. For just pulpwood in the quantity WV&PCo required, basic needs of an operational base would have included offices, company store and supply commissary, employee housing (a hotel for singles, family homes for managers and laborers), schoolhouse, and a interdenominational church.

Enlarging the sphere beyond pulpwood supply operation was largely the work of Samuel E. Slay maker. A land acquisition, timbering and mill expert who had entered lumber sales/brokering, Slay maker pitched the merits of a supplemental involvement in dimensional lumber, flooring, laths, etc. There were persuasive selling points. Because the Luke’s railroad would be in place, capital outlay would be limited to mill and production machinery (expanded only as profitability was shown) and some additions to rail equipment (an additional locomotive and log cars). Slay maker already had an initial market. WV&PCo accepted the plan – deciding that capitalization and operation would occur under a new subsidiary, West Virginia Spruce Lumber Co.

A pledge to establish the railroad and ship pulpwood post haste allowed Slay maker to implement his scheme with occasional reminder from the Lukes about what was most important to them. His plan to run a mill on two shifts meant an increased company town size. Key to both the startup and the combined operation’s long-term success was Emory P. Shaffer, a Slay maker colleague who arrived to assume general manager’s post in March 1900.

What would become Cass predated the C&O’s arrival by more than eight months. Startup materials and provisions were tediously brought by wagon from Staunton, Virginia. In terms of investment and commitment, it was not feasible to wait until the C&O reached the site. Local portable sawmill operators were contracted to provide rough cut lumber for some initial structures; they then worked at capacity to cut ties for the railroad grade into the timberlands.

A two-story building (kitchen, dining hall and lobby on ground floor, sleeping on top) accommodated Italian labors for the railroad grade. Also erected was a small commissary; the existing farm house was apparently used as a temporary payroll office and managers’ housing. Camp No. 1, as it was called, served its first meal on July 4, 1900. For most of the period prior to October, when telegraph arrived (ahead of the C&O but along its right-of-way), temporary headquarters were maintained in Green Bank – about five miles away.

The town was named in honor of Joseph K. Cass, a successful Pennsylvania paper manufacturer who merged with the Lukes to create WV&PCo in 1899; at the time he was the organization’s vice-president as well as an incorporator of W.Va. Spruce

Lumber Co. Determining exactly when the Lukes announced their choice of name is impossible. For a short time, Shaffer-Slay maker correspondence continued their references to "Leatherbark" (for years local folks had called it Leatherbark Ford) despite a May 24, 1900 Covington Sentinel citing of the place being named Cass.



When the C&O reached Cass after numerous delays on December 22, the company's rail route up Leatherbark and over onto Shavers Fork was near completion except for rail-laying and spiking. Carloads of steel arrived five days later, followed by the first locomotive – a 40-ton Shay. Shipping of the red spruce for Covington began without fanfare on January 28, 1901. The two-car shipment was a humble beginning to a cycling routine that would quickly grow by leaps and bounds.

Passenger service on the C&O from its mainline depot of Ronceverte, Greenbrier County, began in January 1901. Prior to this, most of those who came to Cass "rode shank's mare."

The Cass Mill's first cut occurred in late January 1902. As with all band saw-equipped facilities, it required time to really get up and running. Likely, a night production shift was added by year's end. Single band saw production was joined by another such unit in 1910. There would also be a planing mill.

The intention was for the mill to cut all of the timberland's hardwood plus the larger red spruce logs as Slay maker's sales efforts required. Slabs of red spruce were processed through a pulp shed and loaded out. A considerable amount flowed from the mill, but another facility established at Spruce specifically to process pulpwood cords, opened in 1905, was the major contributor for the large volume of carloads shipped daily via the C&O to Covington (Davis was also supplied for a period).

Corresponding with the pulpwood and mill product peak years, Cass thrived between 1909 to 1920. Although incorporated in 1902, Shaffer as the Boss maintained firm control of what took place in the company-owned sections of town. In 1910, he went to work directly for WVaP&PCo, after it absorbed the West Virginia Spruce Lumber Co. An already bustling environment received added dimension with the building of an extract plant south of town in 1914.

As it developed, Cass came to include unincorporated East Side and its outskirts (Blackhurst Addition) as well as an area north of the company section called Bohunk Hill, and several to the south, including Ralston Hill, Slabtown and the area of company-owned dwellings built in conjunction with the extract plant. The total population of this greater Cass is estimated to have been between 1,600 and 1,800. For a long period, Cass grade school enrollment hovered at around 400.

The company town was comprised of three basic districts. The large store/warehouse, meat market, business office and railroad depot defined "Downtown." Up the hill, with its first row of houses hugging the river knoll, "Uptown" came to include more than 50 nearly identical two-story, weatherboard and wood frame family dwellings for mill workers, railroaders, machine shop/foundry employees and clerks, plus mayor's office/jail, church and Masonic lodge hall.

North of Uptown was the section predominantly occupied by management families (there was also a privately owned doctor's house, a short-lived hospital, horse barn and later a small doctor's office). Apparently, it had no official name. Non-occupants tagged the area with numerous names, including "Big Bug Hill." Those who didn't live there understood the unwritten rule: stay out if you weren't invited or didn't have business. The largest house in the managers' section was built for Charles Luke in 1916. After he left, the Shaffer family occupied the house for 19 years.

All company dwellings were built with running water – not taken for granted back in those days. Never touted as model community, Cass was well designed and maintained. Coal was delivered from the company store. A clerk visited each house

daily for grocery orders and the company store wagon subsequently made deliveries. A doctor's fee was deducted from each worker's pay.

Two-hole outhouses and coal/wood sheds were features of all backyards. For many years, residents were allowed to let their cows wander around town between milkings. Picket fences kept the cows out of yards while plank walkways served another vital purpose – more often than not, the streets were a muddy, sloppy mess. Once a month the outhouse-related “honey wagon” would make its rounds and the prevailing odor of fresh-cut lumber would be annihilated. Indoor toilets began appearing in management houses in 1919. A high-pressure water line from the mill pump house and valve houses with hoses were the backbone of fire-fighting; there was also a hand-powered apparatus used to combat blazes.

The company store played heavily in town life – a place to meet and greet. C&O passenger train arrivals from the south were daily social events.

Cass had neither a bank nor recognized cemetery. An undeterminable small number of immigrant laborers had been buried in a potter's field above town, but the bodies were later removed so a tennis court could be installed for some of the managers' children.

The expansion of the woodland cutting in relationship to accidents (the nearest medical facility was in Ronceverte – 83 miles from Cass via only two daily southbound passenger trains) brought establishment of the small Pocahontas Hospital in 1903. It lasted a decade, then the needs were handled in Marlinton

In the mid-1920s, the Covington plant's needs turned to other species. Cass retained WVaP&PCo's favor despite not shipping pulpwood. The mill remained profitable, but a big draw for status quo was coal. Mining had been a side endeavor since 1908 – steam coal requirements solely of the Cass job, including town coal, was the original mission; WVaP&PCo instituted production at various sites in its 178,000-acre holdings and began shipping more and more coal to its paper mill locations; by 1930, the Baldwin mines (served by rail out of Slaty Fork) were important to the company.

Fire destroyed most of the Cass mill complex in February 1922. New, higher-capacity band saw and planing mills, as well as a large flooring products warehouse, were soon erected. Tallying the production of the first and second mills, one estimate is that during 58 years of activity about 1.2 billion board feet of lumber was cut.

Emory Shaffer's retirement in 1933 marked the beginning of the end for WVaP&PCo at Cass. A tribute to his all-round management and production acumen, Shaffer was irreplaceable. The end had just about come for virgin timber; the last coal mine segment played out in 1939. In failing health, Shaffer departed Cass in 1940.

Apparently, WVaP&PCo had such respect for Shaffer that it got past notions to sell only after he was gone. Ed Mower entered

the picture in 1942. There is no way of telling how things would have gone without Mower's involvement with the Cass job, but likely a buyer would have been found to continue things.



The Cass Scenic Railroad purchased Shay #3 in 2002. It was located in Washington so they had to have it trucked across the country. This photo shows the locomotive coming through Cass on its way to the shop complex. The photo also shows the type of standardized white wood houses and boardwalks that characterize the historic company town even today. (Photo by Bill Liebman(?))

One of the most interesting aspects to Cass is its longevity as a mill town. Although there were operational cutbacks, everything structure-wise remained essentially the same for almost 40 years

after the boom period. All dwellings remained occupied until the mill went down.

For the 14 years prior to his death, Ed Mower and wife Dorothy spent time at Cass during summer months. The former Shaffer home was also his accommodations for inspection trips.

After Ed Mower's death, the operation was reportedly visited by several prospective buyers. The June 30, 1960 closure of the band saw mill and rail-logging came as somewhat of a surprise to even the firm's Cass-based general manager. Fred Weber received a call at his home from a company principal and, following instructions to drive out of town and place a return call, soon learned that announcement notices were to be posted the following day. A buyer had been found, but there was no interest in the mill or town – just the company's undeveloped landholdings.

It's not hard to imagine what things would be like today if not for the preservation of the old Cass logging railroad; the ravages of time (and fire) would have claimed most of the former company sections. Already in declining condition when the mill complex closed, structures and their lots would have fallen into private hands. As the result of a miraculous turn-of-events in 1960-61 which saved the railroad, its three remaining Shay locomotives and assorted essential equipment and facilities, our marking of the Cass Centennial is framed by living history of the iron horse variety.

Events leading to the scenic railroad's creation directly stem from the mill sawing its last log 40 years ago this June 30. Service began in 1963, but the unproven nature of such an attraction, combined with expensive rehabilitation required to reopen the line all the way to Bald Knob, thwarted incorporating company town sections into the plan despite their obvious historic value. Two years after Don Mower's death in 1964, this property and the Cass Mill fell into the hands of an out-of-state speculator. Instead of splitting it all up to attract buyers, the company town sections remained intact, but suffered considerable neglect.

Florida attorney J.W. Harrell recognized sizeable profit potential in the property. He bought it and almost immediately jacked rents beyond what the market would bear. Within a short period of time, there was an abundance of vacant houses. To lower tax assessment, he tore down the 1902-era company office building; the structure was sound and – due to its proximity to the railroad depot – would have made a wonderful park facility.

Lasting through one season of scenic railroad excursions, the former hospital, then Shaffer residence welcomed overnight guests as a boarding house. Bertha Haislop then operated the old company hotel (apartments later) and offered room and meal to town visitors. After Bertha closed, Kyle Neighbors rented a house and hosted train and history buffs. It was known as the "Johnny Pulp Club" (after a term for WVaP&PCo employees).

Don Mower Lumber Co. under Harrell's control experienced marginal success in renting some of the "cottages" to tourists. A 1975 newspaper advertisement touted weekend (Friday evening to Monday morning) rates of \$100 – other days \$25 per night; full weeks for \$150. Harrell initiated a plan to reopen part of the mill, but didn't get very far. Numerous local residents reasoned that a tax write-off was the motive; others guessed the gentleman was a bit touched in the head.

Renovating the town was only an ambitious dream until Federal funds opened the way for inclusion into Cass Scenic Railroad State Park. West Virginia Hillbilly Editor Jim Comstock, writing about the State's acquisition (in December 1976 at a cost of just under \$700,000), described the affair as a midnight hour rescue and lamented how the owner had allowed most of the company property to deteriorate to the point of collapse.

In 1981, 96 structures were added to the National Register of Historic Places, but the renovation process was slow; efforts first centered on stabilizing the town. Then a water and sewage system was installed. Three years passed before five of the old dwellings (four in the old Uptown and one in the manager's section) were suitably repaired for rental as Park "cottages."

Replica plank walkways and picket fences came into the picture during 1986-87. Over time, 10 additional dwellings were renovated for rental by visitors. Last year, several other houses received new porches and other repair. A considerable amount of work is yet to be done, but the company sections offer lots of old-time atmosphere.

In particularly sad shape are two structures in the old managers' residential area – the doctor's home and latter logging-era boarding house. Just south of Uptown, the big schoolhouse fell on hard times years ago.

Today's visitor can not only explore an old company town, but enjoy accommodations in one of the refurnished family dwellings. Year-round, the State Park offers houses (all built prior to 1909) for up to a week. Several times daily during train excursion season, CSRR SP provides free interpretive walking tours. There has been recent discussion about renovating the Clubhouse as a bed and breakfast.

Cass reverted to unincorporated status in 1985; although a few of the houses are still occupied as residences, it really is more of a museum/park than actual town. Cass Community Center, spearheaded by a group of townspeople, survives. Lefty Meeks still offers haircuts and shaves in the space he first rented from Mower Lumber Co. in 1950. Although its congregation is tiny, the Southern Methodist church remains active. The Masonic lodge hall continues in service.

There are no surviving citizens of the the town's heyday, but old-timers can only lend first-hand accounts to what followed. But still, they testify to the pristine conditions of the company sections, the frequent carousing and brawling that occurred across the river and two shifts of band saws and whistle signals. Family life, church and civic activities, special events and simple pleasures are offset by memories of hard work on the company's behalf.

Selections from: <http://msrlha.org/nutshell.html>

The Ghost Town of Spruce by Richard Sparks

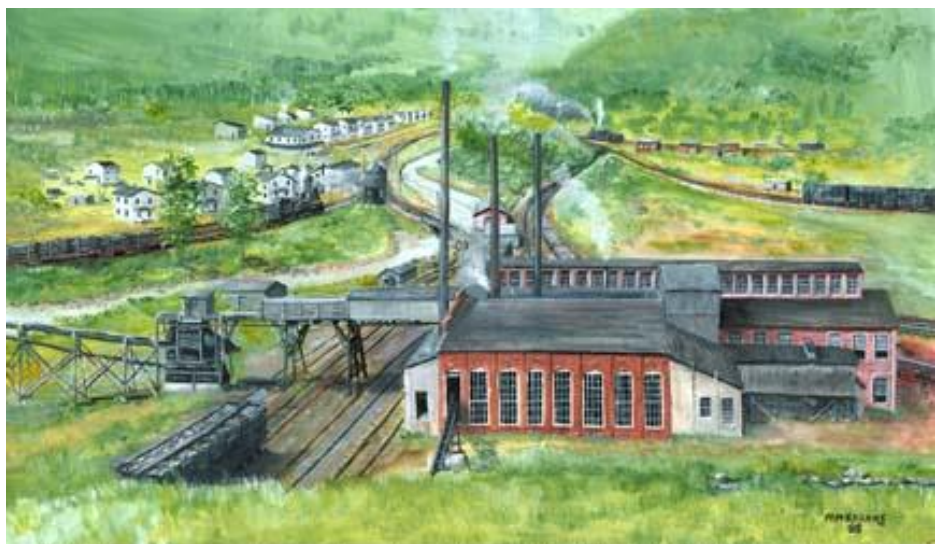
Pulp Mill, 1904-1925

A settlement called Spruce was established in 1902 near the headwaters of Shavers Fork of Cheat River. The location was renamed Old Spruce after the West Virginia Pulp and Paper Company (WVP&P) built a pulp mill and supporting community, called Spruce, about one and one half miles down river, at an elevation of 3,853 feet. Known as the "highest and coldest town east of the Mississippi," the Spruce complex was built during 1904-1905 to supply pulpwood for the company paper mills in Covington, Virginia, and West Piedmont (now known as Luke), Maryland.

At Spruce, the tracks were originally in the shape of the letter "Y." The base of the Y pointed south toward Cass and the arms toward the west into the Elk River valley, and down Shavers Fork to the north. The rail lines out of Spruce had many branch tracks which tapped timber as well as coal. All this traffic was collected at Spruce, with three main yard tracks, each one about 1500 feet long.

The Spruce Hotel, had electric lights, hot running water and steam heat. The mill, locomotive shop, company offices and the homes of officials, also had electric lights. The amenities made the hotel a phenomenon at the turn of the century. It was a two-story structure with a reported 30 rooms, housing company employees as well as transients.

In a row south from the hotel were ten houses, five duplex and five single-family. The single houses were identical to the company houses



Painting of the town of Spruce from the north as seen in 1923, at its height of development.

seen at Cass today. The row of houses and the hotel were "Main Street," but, except for a wide boardwalk, there was no street. In 50 years as a town, Spruce never had a road.

1923 view of Spruce (artist's impression)

East of Main Street was a row of three small houses and the two-room schoolhouse. Northwest of the hotel, was the company store. In a row, east from the store were the company office and a row of three or four single houses. Northeast from the store, along the yard tracks, was another row of five single houses. There also were a number of non-company dwellings for those who couldn't or wouldn't rent from the company.

At the north end of town was the two-stall locomotive shop. At the south end of town was the railroad water tank, later replaced by a larger tank adjacent to the store. The mill complex was across the river. The sawmill produced only pulpwood: debarked, split, short slabs. This was shipped to company paper mills, often in special C&O pulp cars, slat-sided open-top cars, somewhat resembling livestock cars. While other mill buildings were wood, the power house was mainly brick. In the 1920's, concrete additions, the most visible remains today, were added. In 1925-26 the Spruce mill closed and the machinery was moved to the company paper mill at Luke, Md.; locomotive servicing was transferred to the shop at Cass and the town was abandoned.

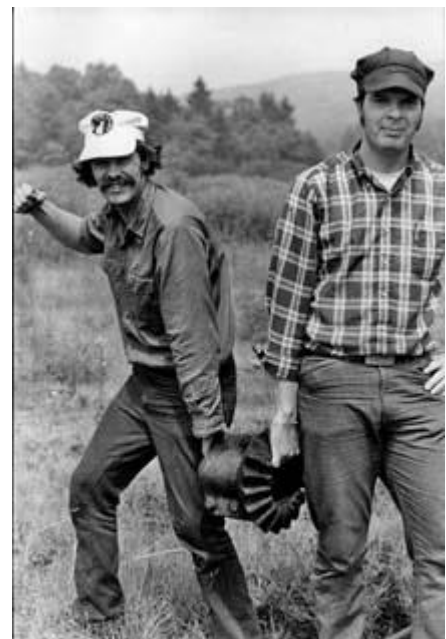
Western Maryland 1928 -1961

In 1928-1929, the Western Maryland Railway took over the greater portion of the GC&E railroad (and the name) to take advantage of the developing coal industry of the area. WM railroaders moved into the town, which became a terminal for helper locomotives employed in pushing trains over the steep grades over the summit at Big Cut between Slaty Fork (Laurel Bank) and Spruce. Another bridge crossing Shavers fork was added at Spruce in 1929, forming a wye for turning locomotives. A new main line was built east of town, making a big horseshoe that crossed Shavers Fork at the south end of town and rejoined the original logging grade on the long climb toward the Big Cut. The new line went right across Main Street, eliminating one house. The earth fill for the Shavers Fork bridge was dumped right over the former logging main line, burying a stretch of track. The hotel was demolished. A sand tower and a tall 75-ton coaling station were added in 1931 near the water tower. In 1941 WM built a new engine house in the center of town.

In October 1949 construction began on a new engine terminal at Slaty Fork which was to replace the facilities at Spruce. By 1951 the twenty plus families that had occupied Spruce for a quarter-century quickly left for other jobs on the railroad. In 1953, diesel locomotives made their first run over the branch. In December of 1954, the water tank was retired; in November 1956, the wye and remaining sidings were pulled out. Only a couple of houses were left for the occasional use of track gangs, and they were gone by the early 1960's.

Spruce Today

The most prominent terrain feature today is the hill inside the horseshoe curve. This is the earth moved in 1990 to build the new interchange between the Cass Railroad and the CSX (successor to the WM). This covers much of the former Main Street area.



In 1970, Tom Landrigan and Richard Sparks retrieve a log loader drive cog, long-buried at the ghost town of Spruce (David Newcomb)



A view of the site of Spruce from the north in 1994, the remains of one of the mill smokestacks is in the foreground. The only standing ruins are from the concrete walls of the power house. (Photo by Richard Sparks)

of the powerhouse is readily seen in low mounds of shattered brick, and the stone footings for the big, single cylinder steam engines are still in place. The concrete addition to the west end of the building is standing and the tops of the brick fireboxes of the mill boilers are visible. boilers are visible.

From: <http://msrlha.org/spruce/index.html>

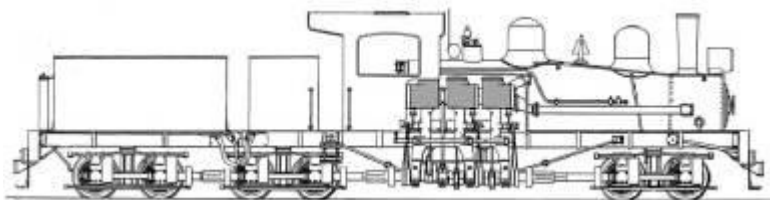
Next to the river, the railroad grades and concrete foundations of the WM shop and water tower are visible. Piles of sand and coal mark the location of the sand house and coal tower. One can easily spot the concrete abutments for the two bridges that carried the legs of the wye across Shavers Fork. Just upstream are the remains of the WM erosion control dam.

Across Shavers Fork, there are still a few ties on the WM grades. On the mill site are foundations of the buildings, major machines and overhead conveyors. The steel uprights of the conveyor trestle and endless chain are easily found. Next to the river, there still is a large mound from the mill waste pile. Pipes and plumbing, and heavy chains are scattered all over the area. The mill pond dam is quite distinct and some of the old mill trackage is still in place, its rails over 100 years old. The outline

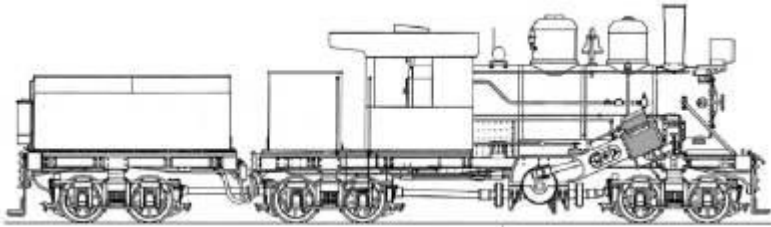
Shay, Climax and Heisler Geared Locomotives

Logging railroads often had rough, temporary track, steep grades and sharp curves. Conventional steam locomotives, long and heavy with large driving wheels, would derail on the crooked track and lose traction on inclines. Specialized locomotives were required. Three principal designs were used in the United States: the Shay, Climax and Heisler. The Cass Scenic Railroad has examples of all three.

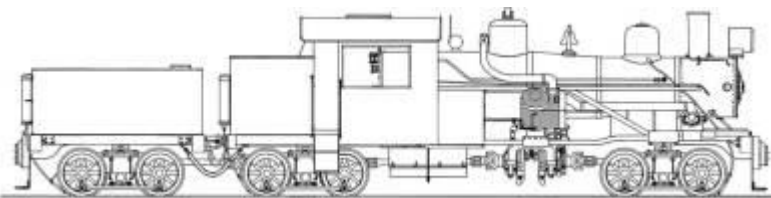
While details differ, the basic concept of all three types is similar. The pistons rotate a crankshaft, powering a long, jointed drive shaft that turns the wheels through reduction gears. Unlike conventional rod locomotives, all the wheels of geared locomotives are drivers, arranged in short-wheelbase, swivel trucks. Slow and steady, all their weight used for traction, geared locomotives produce far more useful power on hills than conventional locomotives of similar weight. Because of their flexible trucks, they negotiate poor quality track that would stop a rod engine cold.



The **SHAY** was built by the Lima Locomotive Works of Lima, Ohio from 1880 to 1945. There were over 2,700 Shays constructed ranging in size from about 10 tons to well over 150 tons. Today, there are about 85 left. Cass has examples of 70, 80, 90, and 150-ton models. The Shay's vertical cylinders (shaded in the diagrams), and drive shaft are on the right side of the locomotive and transmit power through gears on the wheels. In order to balance the drive machinery, the Shay boiler is off-set to the left of center on the frame.



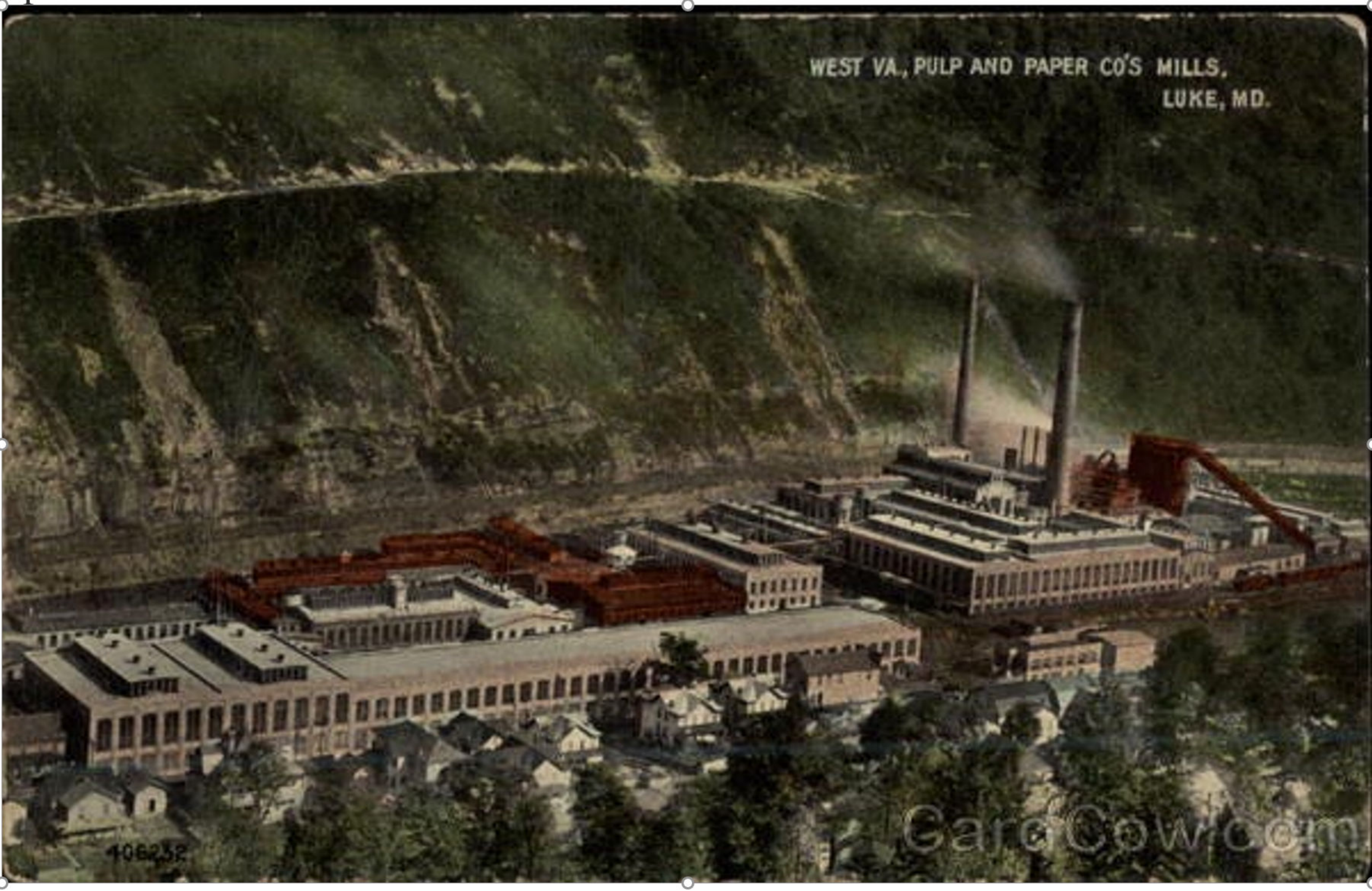
The **CLIMAX** was built by the Climax Manufacturing Company of Corry, Pennsylvania from 1884 to 1928. There were about 1,100 constructed, of which fewer than 20 still exist. There were some of 90 to 100-tons and a number around 10-tons; most were 30 to 70-tons. Cass has one 70-ton Climax. The Climax has two parallel cylinders, one on each side of the boiler. The transverse crankshaft is geared to the drive shaft running down the center of the locomotive. Unlike the Shay, the wheels are powered through gears on the axles and the boiler and the drive machinery are centered on the locomotive's frame.



The **HEISLER** was built by the Heisler Locomotive Works of Erie, Pennsylvania from 1892 to 1941. There were about 850 built and approximately 32 survive. The size range was from about 15 tons up to 90-tons. A Heisler has one cylinder on each side of the boiler, slanted inward at a 45-degree angle, powering a longitudinal crankshaft. Like the Climax, the drive shaft is on the center line of the locomotive and the boiler and the drive machinery are centered on the frame. Unlike the Shay and Climax, the drive shaft is geared to only the inner axle of each truck; the outer axle is coupled by wheel cranks and side rods.

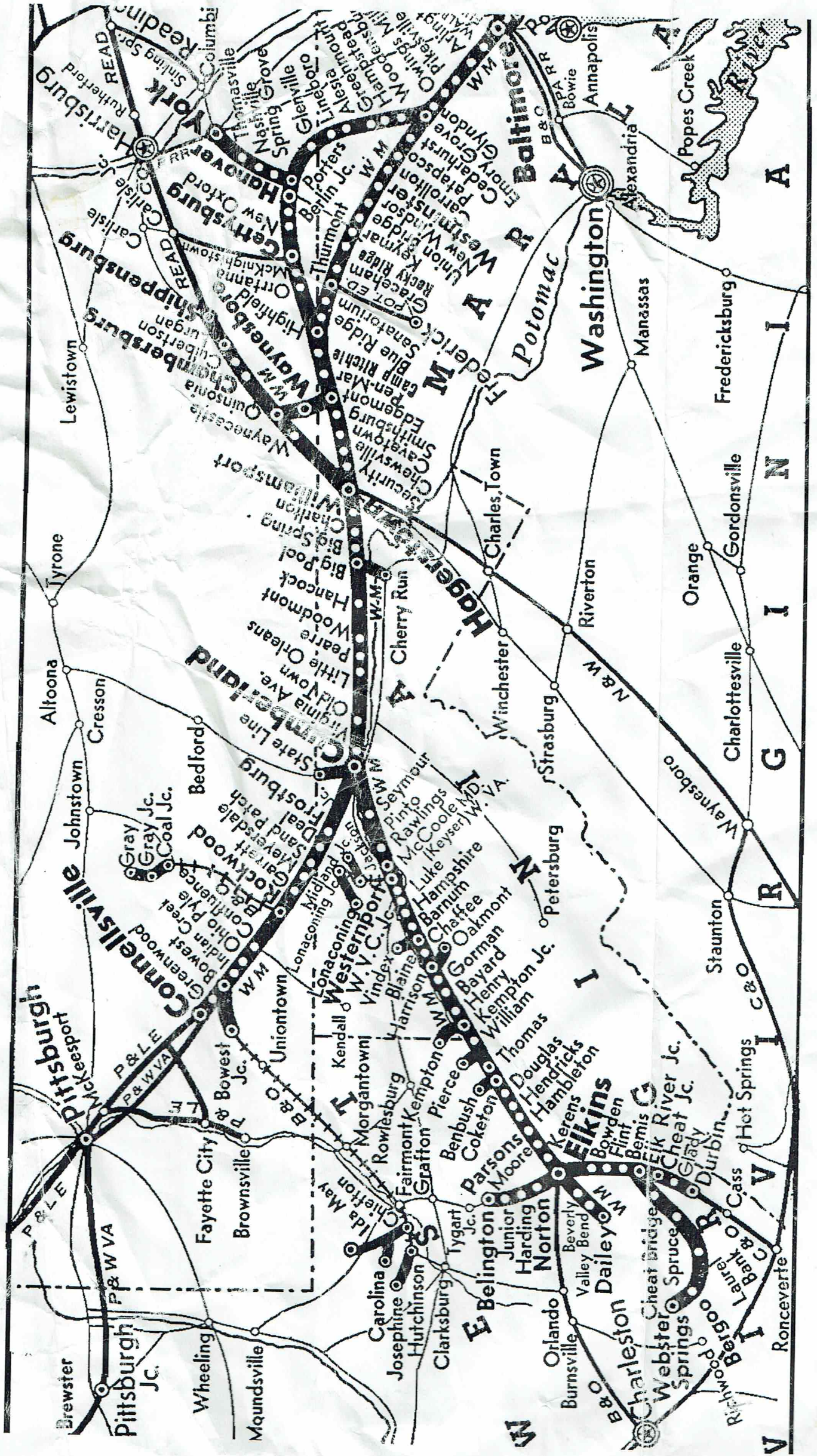
The centrally located drive shafts of the Climax and Heisler give them greater flexibility than the Shay. However, the Shay is easier to maintain with its machinery all in the open, a major factor in the Shay's popularity.

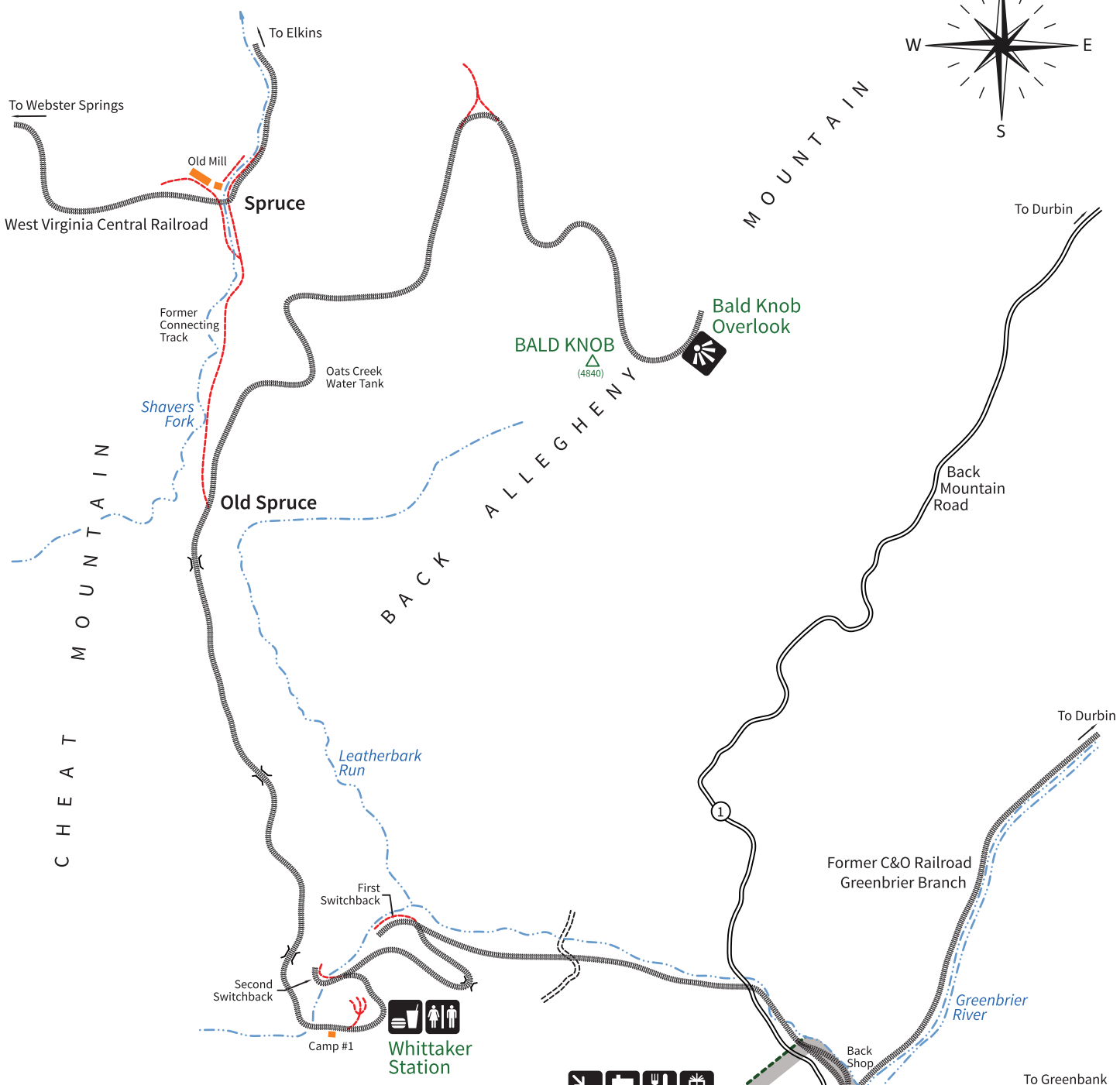
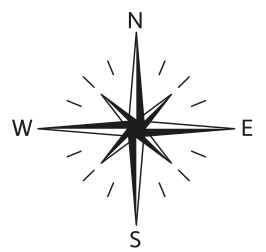
WEST VA., PULP AND PAPER CO'S MILLS,
LUKE, MD.



406252

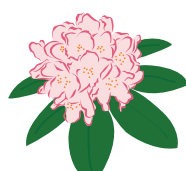
CareCow.com





Legend

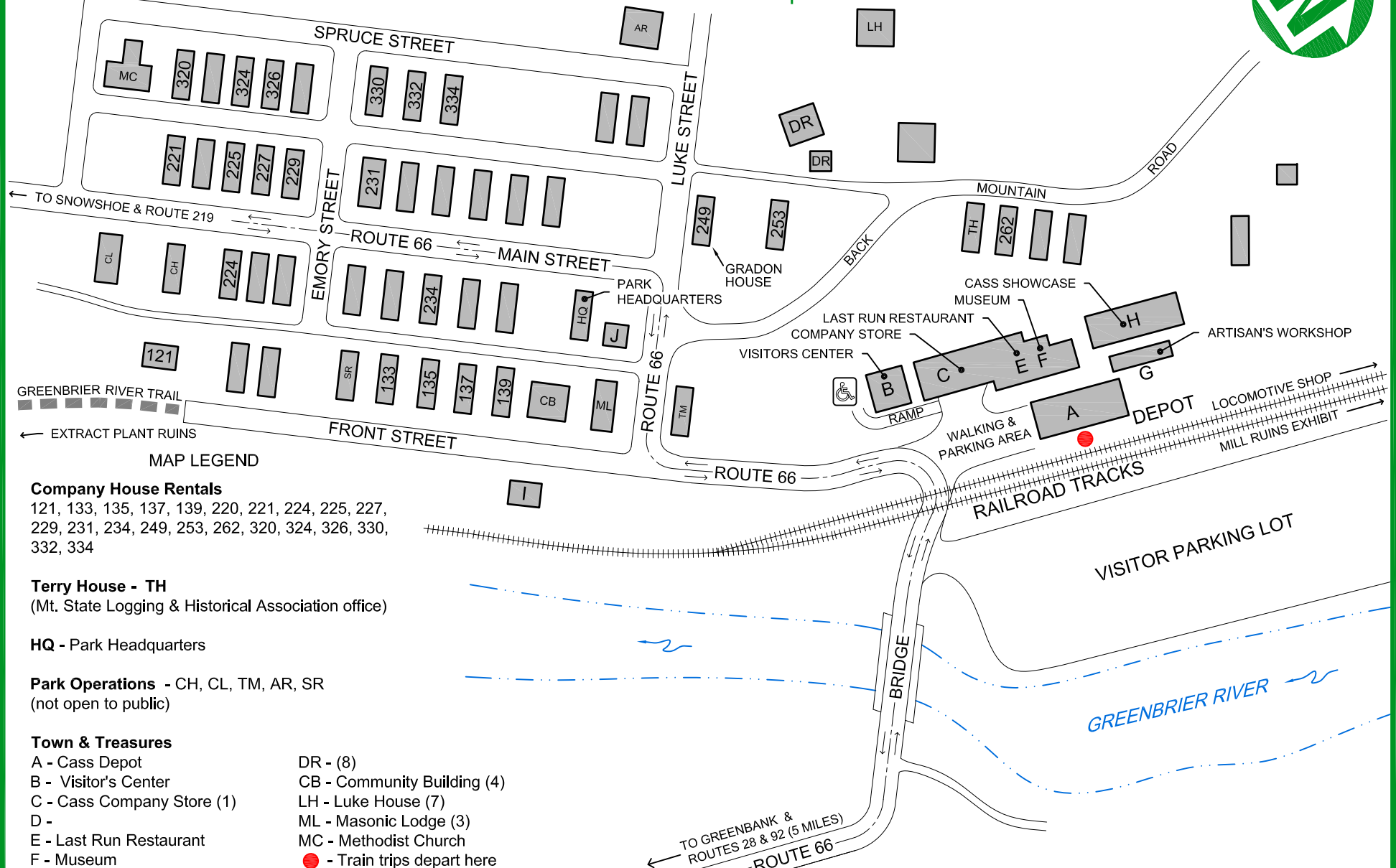
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|--|--------------------|--|---------------------------|
| | Railroad | | Company houses for rent |
| | Paved road | | Food service |
| | Unimproved road | | Point of interest |
| | Hiking trail | | Restrooms |
| | Multiple-use trail | | Scenic viewpoint/overlook |
| | Stream/river | | Snack bar |
| | | | Souvenir shop |



CASS SCENIC RAILROAD STATE PARK

Cass Scenic Railroad State Park

Town of Cass Map



MAP LEGEND

- Company House Rentals**
121, 133, 135, 137, 139, 220, 221, 224, 225, 227, 229, 231, 234, 249, 253, 262, 320, 324, 326, 330, 332, 334
- Terry House - TH**
(Mt. State Logging & Historical Association office)
- HQ - Park Headquarters**
- Park Operations - CH, CL, TM, AR, SR**
(not open to public)
- Town & Treasures**
 - A - Cass Depot
 - B - Visitor's Center
 - C - Cass Company Store (1)
 - D -
 - E - Last Run Restaurant
 - F - Museum
 - G - Artisans Workshop
 - H - Cass Showcase (10)
 - I - Lefty's Barbershop
 - J - Jail & Mayor's Office (5)

- DR - (8)
- CB - Community Building (4)
- LH - Luke House (7)
- ML - Masonic Lodge (3)
- MC - Methodist Church
- - Train trips depart here
- ADA Parking

Cass Scenic Railroad State Park

242 Main Street, Cass, WV 24927, (304) 456-4300, www.cassrailroad.com