U. S. Geological Survey photo from Mel McFarland's collection

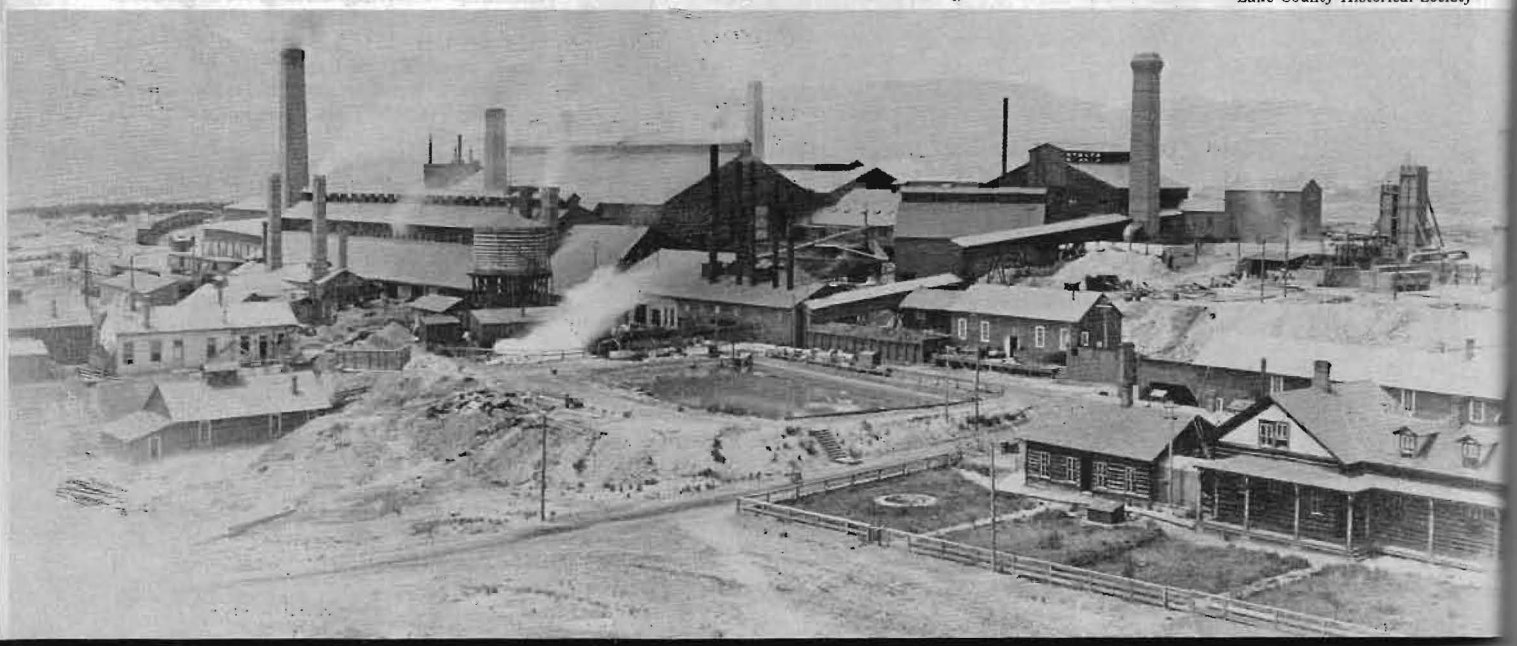
Leadville, Colorado: A mining district you can model

Leadville's early years

It boomed, went bust, and boomed again

Above: A photographer looking west toward the Continental Divide took this photo of Leadville in 1908, when there were working mines right in town. In the foreground are trestles for mine dump tracks. Off in the distance, just to the right of the street (probably East Fourth), you can see the Midland roundhouse. The smoking stacks to the left belong to the Arkansas Valley Smelter. **Below:** The Arkansas Valley Smelter was the major smelting works for Leadville after the turn of the century. This plant was located midway between Malta and Leadville on the D&RG branch.

Lake County Historical Society



DEDICATION

THIS SERIES of articles on Leadville, Colo., would never have been attempted without the keen support of my son, Marc Day Lundberg. He was a major factor in its production, contributing to the research, on-site measuring and checking, and conversion of a host of field notes into drawings. Marc was killed in a job-related accident in June of 1985 before his portion of the work could be completed.

This series is dedicated to Marc with the wish that it is everything we hoped it would be. — Eric Lundberg

Lake County Historical Society

Colorado Historical Society

Above, Colorado Historical Society; below, Lake County Historical Society

BY ERIC LUNDBERG

KANSAS TERRITORY, 1860 — Only the sound of nature breaks the hypnotic melody of the mountain valley: a bird singing, the gurgling creek, the wind whispering among the trees. Nature dominates even the small party of men spread out several hundred feet along the gin-clear, icy-cold mountain stream.

It's summer, but at nearly two miles above sea level snow remains in the shadows, and men with picks and pans are dressed warmly. The sounds of nature are broken only occasionally by the scraping of boot over rock, the clank of metal against small pieces of mountain washed by the runoff of a hundred winters from towering mountain peaks where only animal, Indian, and trapper have trod.

Suddenly the melancholy silence is broken forever. "Boys," one of the men says with excitement in his voice, "I've got all California in this pan!"

The eight words that prospector Abe Lee shouted were to change the face of this part of the world forever. They gave it a name and signaled the beginning of a gold rush. Soon the valleys and hillsides, gulches and ridges would be teeming with prospectors and hard-rock miners. In the next frenzied 30 years many men would become millionaires, and an area that had been virgin wilderness would be turned into a near wasteland.

It was the unceremonious beginning of what became one of the greatest silver camps of the world, of what became the carbonate capital of the new state of Colorado, of what became Leadville.

First came the gold now glittering splendidly in Abe Lee's round pan. Then came silver and a half-dozen other less precious metals that would produce billions of dollars as thousands upon thousands of miners disemboweled the earth for miles around.

Abe Lee's cry named the valley — California Gulch. In two decades it would see the rise and fall of the gold boom and the rise of the silver boom. And this mining area would experience boom and bust and boom and bust again over the next century right through the moment these words are read.

Until Lee's find in 1860 the area had been ignored save for roaming bands of Indians, a few trappers, and unsuccessful

Top right: West of Leadville the Colorado Midland first pierced the Continental Divide through Hagerman Tunnel. Leading to that bore was the spectacular curved Hagerman Trestle. Both of these engineering achievements were named after James J. Hagerman, the road's founder. **Second right:** The famous Little Jonny Mine is left of center in this photo taken at Ibex looking east. That's the Ibex depot in the foreground. The rails to the station appear to have been taken up. That fact, along with the cars to the right of the station, indicate that the photo was taken sometime in the late 1920s. **Third right:** This William Henry Jackson photo shows balloon-stacked DSP&P 2-8-0 no. 217 on the "High Line" near Leadville with four cars and a caboose in tow. The narrow gauge can be seen as a straight line in the distance heading north toward Climax, then continuing on to Breckenridge. **Bottom right:** The Colorado Midland RR built this trestle across California Gulch on its initial approach to Leadville, seen in the rear. The Midland branched to the right, heading into California Gulch.

The famous and the infamous

Doc Holliday

Horace Tabor

Baby Doe Tabor

Molly Brown

General Palmer

Leadville grew quickly from a brawling, lawless mining town to a small yet substantial city. Today, as we'll find out in our next issue, its streets and hills are quiet. But a century ago they were filled with excitement involving some of the colorful characters shown in these photos from the Colorado Historical Society. Here are just a few of the events and people that marked Leadville's early history:

• In 1879 a rash of stagecoach holdups was reported in the area. The accusing finger pointed at a trio and their gang busily working a mining claim in California Gulch — Jesse James and Bob and Charlie Ford.

• The legendary "Doc" Holliday was told by an itinerant gambler to "be out of town by sundown." The ailing dentist turned gunman and gambler ignored the request and awaited his adversary in a Leadville tavern. The gambler entered and drew first on Doc, who coolly outdrew him and blew a hole in the gambler's shoulder. Only fast work by saloon patrons prevented Doc from emptying his .44 into the prone gambler's skull.

• Some legendary names were first heard in the two-mile-high hamlet, names like Guggenheim and Molly Brown and Tabor and Mattie Silks. The Guggenheim fortune originated in Leadville's smelters; Molly Brown, whose husband Johnny was superintendent at the Little Jonny Mine at Ibex, is remembered for her heroics at the sinking of the *Titanic*; Horace A. W. Tabor became one of the richest men in the world yet somehow died a pauper; and Mattie Silks who started her notorious career in Leadville went on to become the most famous shady lady in the capital city of Denver.

• The town had its own Bucket of Blood Saloon, while its most respectable gambling establishment was given the dubious name of the Red Light Hall.

• Oscar Wilde visited the city in 1882, and his manner and dress soon made it apparent that he was very much out of place. He became the target of some miners determined to test his drinking mettle. Legend has it that all six of the miners passed out while Wilde was still going strong. Other tale-tellers place this drinking bout at a lower level of the Matchless Mine.

• George Fryer made the first silver discovery on the hill east of town that bears his name, spent a half-million dollars as quickly as he could, and then committed suicide. Jack McCombe's fortune from the Maid of Erin Mine was spent on gifts for everyone in County Antrim back in his homeland of Ireland. Alva Adams struck it rich on the Blind Tom Mine and later served as governor of Colorado, as did his son.

• While the First Avenue Presbyterian Church was being constructed, armed guards surrounded it to fight off possible claim jumpers. By 1882 there were seven churches, and law and order, suits and countersuits over properties were the order of the day in Leadville. The first $7 million produced from the Iron Silver Mine was spent in legal fees.

• A nameless miner who stopped to rest, supposedly struck his pick into the ground and found a fabulously rich vein. Another asked for directions and was told to "go dig under that tree," where he struck it rich. And after Johnny Brown's wife Molly accidentally burned hundreds of thousands of dollars in the stove where he'd hidden them, Johnny is said to have gone out and discovered a new gold mine. A lot of Hollywood there.

• Settlers also told how Tabor bought a mine from another developer that the man had "salted," that is, sprinkled just enough good ore around to make a seemingly worthless shaft sparkle. Tabor then sank the shaft 25 feet deeper and found a vein worth millions. The mine was named the Chrysolite. Tabor's original property, which belonged to him because he grubstaked two down-on-their-luck miners, was capitalized after one year at $20 million. Folks called it the Little Pittsburgh.

• Then there's the story of Tabor on his deathbed telling his second wife Baby Doe: "Hang on to the Matchless Mine. It will make millions." She did and died in poverty. [Drawings of the Matchless will be published later in this series. — *Ed.*]

• Among scores of other notable mines, the Robert E. Lee on Fryer Hill near Tabor's original holdings was perhaps the most famous one ever opened in Leadville. Its highest production was $118,500 in a single day.

• Finally, no account of early, lusty Leadville would be complete without mention of the Ice Palace. An early "chamber of commerce" style of promotion, this magnificent structure covered 5 acres, was constructed of blocks of ice 8 feet thick with ore samples frozen inside. Gala balls and celebrations were held for several weeks during the winter of 1895 under the watchful eye of huge ice statues inside. It melted in the spring. ✪

prospectors. Lee's party had first heard that there might be gold in the area the winter before in Denver. But they had found nothing during several weeks of poking about as they made their way up the Arkansas River. Camping in the area of Leadville on the river, the group of prospectors reassessed the situation and decided to split, half going to the Collegiate Range of mountains to the immediate west, the others, including Lee, exploring the valleys to the east.

Following Lee's find the word spread quickly, and in a few months 5,000 prospectors were staking claims and finding gold, some making as much as $1,000 a day. The strike in California Gulch spawned a settlement known as Oro City near the mouth of the gulch. A second Oro City was built later farther up the gulch.

But within a year of Lee's discovery California Gulch began to fade. By 1864 it had given up more than $4 million in gold ore and, although the rich Printer Boy Mine was opened in 1868 and a stamp mill erected, Oro City was all but a ghost. The area's first boom was over.

The Printer Boy kept things alive, yielding $250,000 in bullion over the next six years. As was done in other declining mining areas, the claim owners resorted to placer mining. Some "glitter" was recovered, but the miners were greatly troubled by a heavy black sand that clogged their sluice boxes. It became an obstacle to further mining. All seemed to be over for this part of the High Rockies, as one by one the miners abandoned their diggings and moved on.

THE SILVER BOOM

But two miners didn't give up. Instead, metallurgist Alvinus Woods and his partner William Stevens collected a sample of the offensive black sand and sent it for assaying. The report was dramatic. The sample assayed out heavily in favor of carbonate ores — silver. Woods and Stevens kept the news secret, determined to find the mother lode. They finally found it on the side of Iron Hill, the only place in the gulch where the main ore body reached the surface. They confided in *one* worker who, as might be expected, bolted and staked his own claim with others close behind him. It was 1878 and the greatest boom, one that would establish Leadville forever, began.

Oro City had reached a population of 8,000 a few years before, but by 1878 it had dwindled to 1,500. News of the silver strike caused a huge influx of people. The city was incorporated that year and the name changed to Leadville. Since that time Leadville has worn the mantle of the highest incorporated city in the country (10,200 feet). Not surprisingly, it's been nicknamed the Cloud City.

By the end of 1879 the city's population had soared to 18,000. That was enough to support 19 hotels, 41 lodging houses, 82 saloons, 21 gambling halls, 38 restaurants, 13 wholesale liquor stores, 1 lumberyards, 7 smelting and reduction works, 2 sampling works for testing ores, 12 blacksmith shops, 6 livery stables and a like number of jewelry stores and 3 undertakers.

That boom made many millionaires — "Silver Kings," as they say. Some of these men went on to become Colorado governors and U. S. senators. Others ended up as paupers, forgotten by history. But remembered or not, all of these silver-hungry settlers helped unleash a quake in this town that's unlikely to be matched.

In the decade and a half after 1880, the population of Leadville rose dramatically, reaching 60,000 by some accounts. Of course railroad executives took notice of this growth. They saw Leadville as a silver plum ripe for the picking.

Before the 1880s, teamsters supplied the roadless wilderness and carried out its ores. Billions of dollars in bullion were shipped out via pack mules over Mosquito Pass to the eastern rail connections. The return trip brought supplies for the miners. Prices of commodities and services reflected the difficulty of access to the Cloud City. Hay for stock sold for as much as $200 a ton, and town lots sold for $250 a front foot. While two barrels of water could be had for $1, the same amount of whiskey sold for $2,700!

THE RAILROADS ARRIVE

Not until 1880, two decades after Abe Lee's exclamation, did railroad tracks finally reach the 10,000-foot-high boomtown. Actually three lines, each with a unique personality, went into Leadville: the Denver & Rio Grande, the Colorado Midland, and the Denver, South Park & Pacific. This last was a narrow gauge line that lived through several corporate structures and whose remnant still exists in Leadville as the Leadville, Colorado & Southern, a 13-mile tourist operation.

Each railroad served the Mining District over tortuous trestles and breath-taking fills, through looming cuts, and up unrelenting grades. They fought both man and nature to deliver their high and low cars to the mouths of silver and gold mines as high as 11,000 feet. There were tight curves and 5 percent grades; snowsheds and bear-trap stacks; standard and narrow gauge and compromise dual gauge as the railroads joined in one of the greatest and most concentrated mining booms the country had ever seen.

R. H. Kindig

Half a century ago freight trains required two or three articulateds to get over Tennessee Pass. At the head end of this 48-car train approaching the west portal of Tennessee Pass Tunnel in March of 1940 is no. 3602, a 2-8-8-2. There's another 2-8-8-2 helper at the rear.

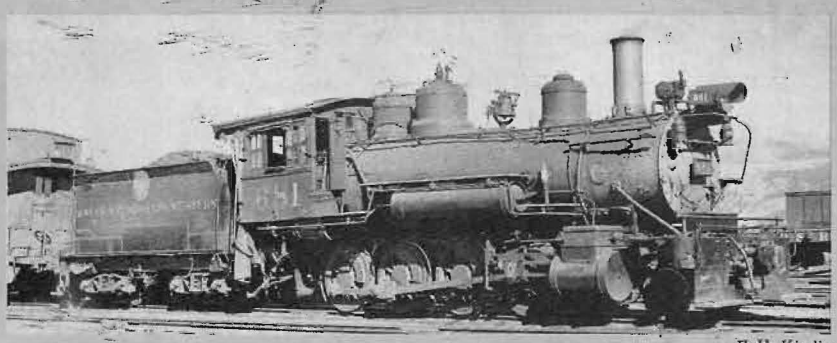
Rio Grande motive power

"Modern" transportation arrived on Rio Grande narrow gauge rails in mid-1880. Delayed two years by the confrontation with the Santa Fe for the rights through Royal Gorge, the Rio Grande nevertheless laid the first rails into the silver capital.

The management of the "Baby Road" had been interested in Leadville for several years following an inspection led by none other than the road's president, General William Jackson Palmer, in 1877. He had a promise from the Harrison Reduction Works that 25 to 75 tons of ore would be shipped daily. David Dodge, another officer of the Rio Grande, believed this shipment alone would pay for building a rail line to the boomtown.

In the heyday of steam two and three articulateds were needed to raise freight over Tennessee Pass to the north. They passed by Leadville, which actually was on a branch line. Only 2-8-0s and smaller locomotives worked their way into and around Leadville and the surrounding Mining District.

Early in its history, the Rio Grande vaulted Marshall Pass with its main line west. The original construction up the Arkansas was also narrow gauge, and it went over Tennessee Pass. But when the road decided that the main line would have to be standard gauge, the Tennessee Pass route superseded Marshall Pass. The first of two tunnels under Tennessee Pass carried the standard gauge rails to the Eagle River Valley and Minturn. The main line eventually paralleled the Colorado River through Glenwood Canyon and headed into Grand Junction, where it met the narrow gauge rails that were coming from Marshall Pass.



R. H. Kindig

Only 2-8-0s and locomotives that were smaller worked their way into and around Leadville and the surrounding Mining District. **Above:** Number 681, a C-28 class Consolidation, is pictured steaming quietly in the autumn sun on October 22, 1939. This engine was the first of its class constructed by Baldwin in 1888. **Below:** Number 1173, a C-48 class 2-8-0 that was built by Schenectady in 1908, was the largest Rio Grande locomotive that operated in Leadville. This photo, which was taken in July of 1941, shows it waiting for work in the Cloud City.

R. H. Kindig

The railroads of Leadville

These three railroads were all built in and around Leadville and maintained separate facilities of some magnitude there. Interestingly, Robert M. Ormes notes in his book *Railroads and the Rockies* (Sage Books, 1963) that more than 20 other lines were planned. Some had great schemes behind them, others simply connected to nearby places. None, however, came close to grading.

The Leadville Mining District was really built to narrow gauge standards. That means there were tight curves and grades as severe as 5 percent.

Midland motive power

The Colorado Midland ran parallel to the Rio Grande's tracks up the Arkansas River, having struck due west from Colorado Springs (Colorado City), and arrived in 1887 only six years before the bottom fell out of the silver market. The Midland was the first standard gauge line to pierce the Colorado Rockies on a direct east-west route. Its presence led the D&RG to move more quickly into standard gauge and remain competitive. Thus by 1889 a third rail had been laid from Pueblo to Leadville.

At Leadville, the Rio Grande shared California Gulch with the Midland and Stray Horse and Evans Gulches with the diminutive South Park. Clearly it dominated the scene, and its domination spurred the South Park to add a third rail to much of its Leadville trackage.

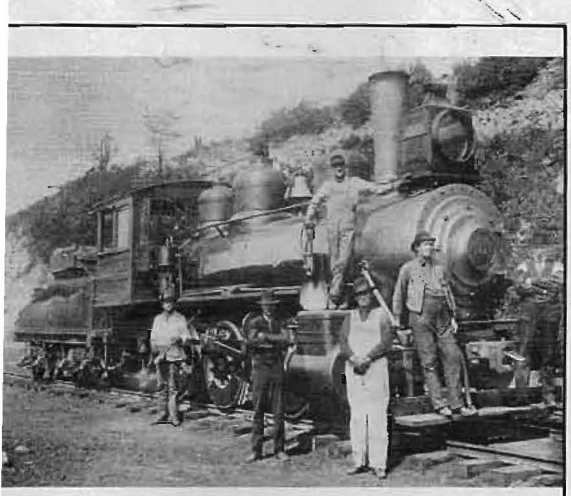
The Midland was the last to come and the first to go, being all but gone by 1920. It approached Leadville from the south and for the first few years came directly into town from the southwest. That soon changed, and the Cloud City became a branch line for it as well.

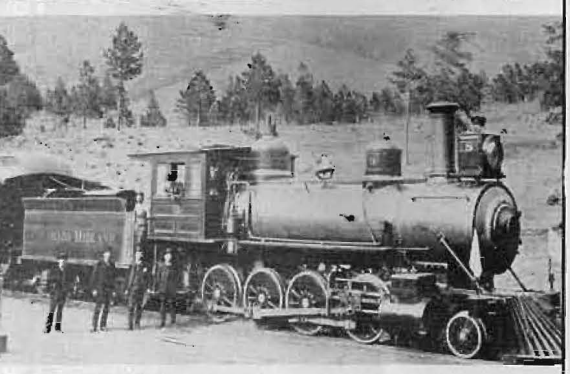
From Leadville the Midland charged westward toward the Continental Divide, first holing through with Hagerman Tunnel at 11,528 feet above sea level and later the Busk-Ivanhoe at 10,930 feet. On down the Frying Pan River it branched at Basalt, going northwest to a compromise with the D&RG at New Castle for access to Grand Junction and southeast to legendary Aspen. It had completed its tracklaying by 1888, with 242 miles to Glenwood Springs and the 19-mile branch to Aspen.

Top right: Number 101 was the first CM locomotive in Leadville. Brought in on a flatcar, it was used in construction of the Midland in the area. **Second right:** CM no. 18, a 4-6-0 built by Schenectady in 1887, is pictured at Tunnel 13 with the Arkansas River and the D&RG tracks in the background. **Third right:** CM no. 8 was a typical 2-8-0 used on passenger trains until about 1900, when it was downgraded to freight and switching service. **Bottom right:** Baldwin-built 4-6-0 no. 36 was used in freight service around Leadville for more than 20 years. The Mel McFarland collection provided all but the second photo, which came from the Lake County Historical Society.

Motive power in that area was, therefore, always small, as shown by the accompanying photographs from the extensive collections of R. H. Kindig, Mel McFarland, and the Lake County Historical Society.

Probably the largest engine to work the Mining District was the 1100 C-48 class 2-8-0 of the Rio Grande, although the Midland's 2-8-0s were also good sized. The D&RG owned bigger road engines, but they rarely if ever ventured up the hill to Leadville from Malta. As for the CM, it had nothing larger than a 2-8-0.





R. H. Kindig

C&S no. 69 was photographed switching the dual gauge Leadville Yard on June 4, 1938.

Colorado & Southern motive power

The second road to lay rails into Leadville was the Denver, South Park & Pacific, coming in from the north in 1884. The South Park, more commonly referred to today as the Colorado & Southern, had to struggle to reach Leadville and to keep itself there.

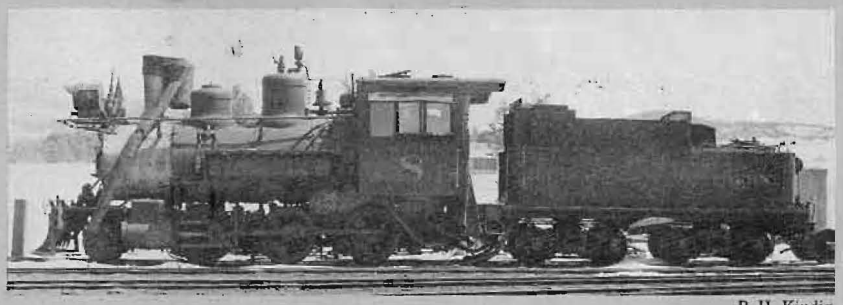
The Rio Grande had come up the Arkansas Valley, and it was expected that the South Park would also take that route. However, corporate tangles between the roads forced the DSP&P to branch at Como. It then passed over the Continental Divide twice, scaling Boreas Pass and then Fremont Pass, to gain access to Leadville.

Although it was the shortest route to Denver, double-jumping the Continental Divide caused endless problems. From its namesake South Park, the DSP&P climbed over Boreas Pass and wound down to Breckenridge and the headwaters of the Blue River, only to run into the Rio Grande, already there with its Blue River Branch.

Undaunted, the DSP&P climbed out of Dillon, went up Ten Mile Valley paralleling the Rio Grande, and topped out at Fremont Pass. The gold camps encountered along the way helped pay the freight. The South Park came down into Leadville from the north on a grade that is now used as a tourist line.

From there the DSP&P built east into the Mining District. It added a third rail to facilitate loading of ore at the mines it serviced for smelting at local works.

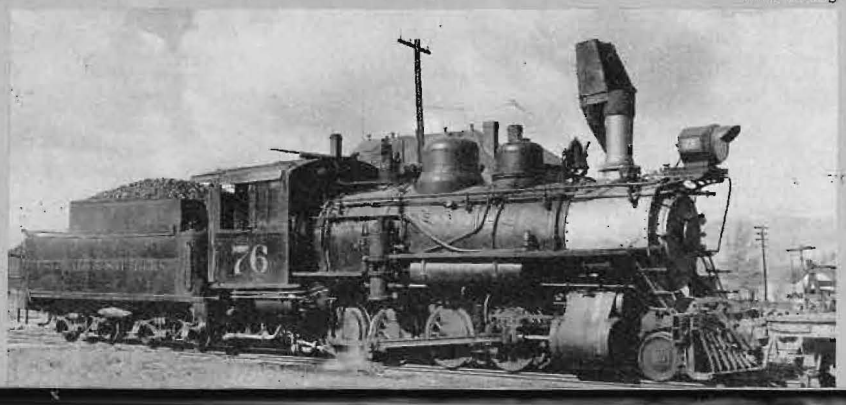
The South Park system all but gave up the ghost in the 1930s. During the next decade the last vestige of its narrow gauge system — Climax to Leadville — was rebuilt as standard gauge.



R. H. Kindig

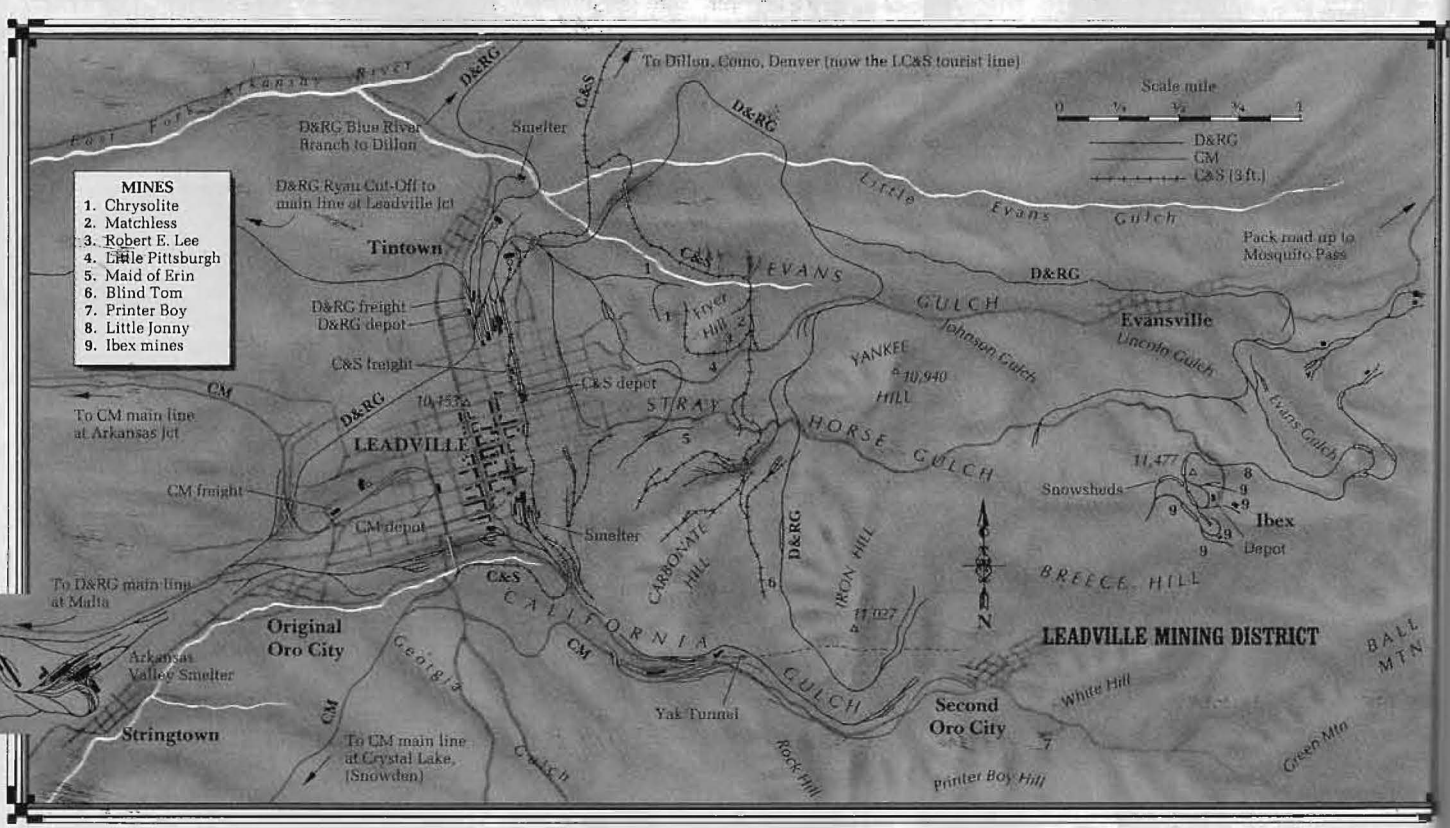
C&S motive power was always small, and these photos show this was especially true in Leadville. **Above:** Number 8, a narrow gauge 2-6-0 built by Cooke in 1884, stands at the local enginehouse in April 1938. **Below:** Number 76, a 2-8-0 built by Brooks in 1898, rests in Leadville on June 16, 1943, a short time before standard gauge track was laid to Climax. This engine pulled the last C&S narrow gauge train between Climax and Leadville later in the year.

R. H. Kindig



Colorado Historical Society

Here is a 1920s-era photo of Leadville's Harrison Ave. The condition of the buildings shows that by this time the once booming city had fallen on hard times.



Leadville, Colorado: A mining district you can model

The Cloud City & Western Railway & Mining Co.

A track plan with Leadville as the focus

BY ERIC LUNDBERG

THE CLOUD CITY & Western Railway & Mining Co. is a 40 x 20-foot HO layout that has Leadville, Colo., as its centerpiece. My goal is to present a variety of the elements that were — and to a degree still are — contained in the three railroads that served Leadville.

DENVER & RIO GRANDE

Salida is the point where we first pick up the Rio Grande from the east. It emerges from a tunnel right at the yard and from a track that actually completes the basic oval coming from Minturn, the western end of the layout. I've designed a major engine terminal at Salida. Until the early 1950s, Salida was still a dual gauge facility. Narrow gauge power was stabled here for the run down the San Luis Valley to Alamosa, over Marshall Pass to Gunnison and beyond, and up the switchbacks on the limestone-gathering Monarch Branch. You could make Salida dual gauge and even have a short version of the switchback to Monarch on a peninsula built to the right of the yards.

The D&RG leaves Salida westbound and immediately begins the climb up the Arkansas River Valley to Leadville. After crossing the river it encounters the Colorado Midland on the opposite bank, just as it really did in the early part of the century. The two railroads soon enter Leadville and pass the first of three connections between them. Leadville's yard is a common facility for the two lines due to space limitations. The Rio Grande's service point to Leadville was Malta, and access into the Cloud City was by branch lines. Yards in Leadville served the surrounding Mining District. Later we'll take a closer look at Leadville.

West of Leadville the D&RG drops into a tunnel, not prototypical yet necessary for separation at Hagerman and effective scenicking. It soon emerges and curves along Tennessee Creek, where the line gains two passing sidings. Then the D&RG rounds the Tennessee peninsula and enters the second of two tunnels at the site.

Finally the Rio Grande arrives at Minturn, a helper base and division point in the Eagle River Valley. Long passing sidings mark this yard, as does a "fake" roundhouse built along the back wall. Only three or four of the stalls are real; the rest are part of the backdrop.

At Minturn no. 4 turnouts are used for service tracks, no. 6s for major sidings. The 16" turntable should handle all D&RG power. Beyond Minturn the Rio Grande is back at Salida to complete the basic oval.

COLORADO MIDLAND

Colorado City was the Midland's headquarters, and its facilities there were extensive. I've tried to give just a glimpse of this in the space allowed.

As modeled, the CM leaves the eastern terminus and goes into a relatively deep cut, then is next seen alone just to the right of Salida. It gradually disappears into a cut as the D&RG line emerges from the tunnel east of Salida, then the two lines parallel each other as they head up the Arkansas Valley toward Leadville. The CM shares Leadville/Malta Yard with the D&RG, then circles west as it approaches a curving trestle.

After rolling across the trestle, the Midland plunges into the darkness of Hagerman Tunnel. A short distance away it emerges from the tunnel to encounter the Basalt wye. There the prototype branched off to Aspen or continued to Glenwood Springs, then New Castle where it joined the D&RG to form the Rio Grande Junction Ry. and gain access to Grand Junction.

At Basalt there's a two-stall enginehouse and a raised coal dock. Again, we depart from the prototype on which these structures and other railroad-oriented facilities were located inside the wye. Also, the main line from Leadville ran right down the town's main street.

Beyond Basalt, the line soon completes an oval similar to the D&RG and is back in Colorado City.

COLORADO & SOUTHERN

The Colorado & Southern was in many ways the most spectacular of the Colorado slim gauges. Certainly so in its approach to Leadville, where it grappled twice with the Continental Divide on its way to the Cloud City.

The model C&S takes aim at Leadville from Como and is a point-to-point run. I've included the well-known Como roundhouse (available in kit form by Model Masterpieces); the 50-foot, wrought-iron turntable; and the wye. Two interchanges are possible in this yard as was the case in the prototype. The first has traffic coming and going to Gunnison through the short-lived Alpine Tunnel, while the second goes to Denver.

Pulling out of Como to Leadville on the CC&W version of the C&S, trains immediately hit grades on the pull to Boreas Pass that are 3 percent and even steeper. Thus goes their first encounter with the Continental Divide!

A mine siding is the first facility on the line, and it would be appropriate to include a second one before the big curve to Boreas. For operational purposes, these are mines that carve out perhaps a carload of ore each week.

Boreas is a stop to drop helpers, turn them, and send them back whence they came. I've suggested a small turntable inside the wye, which was the prototype's arrangement at Boreas. It was covered by a stone structure, and much of the wye was covered with snowsheds. At 10,000 feet winter weather can last nine, even ten months a year.

This peninsula is a second level above Tennessee Pass that's supported by what I call "T braces," which are made of 1 x 4 vertical members and 1 x 2 horizontal ones.

The track now begins a similarly steep descent. Next on the line is Breckenridge, situated at the head of the Blue River Valley. More mines reflect the heavy concentration of that industry there.

From Breckenridge the C&S runs to Kokomo, a mining town in the Ten Mile Creek Valley that's now covered by piles of tailing removed from the Climax molybdenum mine atop Fremont Pass. Long ago, Kokomo and nearby Robinson were served by the C&S and the Blue River extension of the D&RG from Leadville.

Next is a scenic treat in the form of scenery dropping to the floor. Depicted here is the "High Line" as it clings to the mountainsides above the Arkansas River Valley. This line, running from Climax to Leadville, exists today as a tourist operation.

The track quickly reaches the outskirts of Leadville and passes the C&S yards. It encounters dual gauge trackage beyond the roundhouse.

LEADVILLE

Leadville consists of the two peninsulas of California Gulch and Stray Horse Gulch, along with the large yard patterned

after prototype Malta. Space considerations precluded modeling the modest run from Malta into Leadville proper. Rather, access is almost direct into the two gulches.

The Denver & Rio Grande dominated Leadville, thanks to its access to the mines. It shared the California Gulch area with the Midland and the main district with the C&S. Stray Horse Gulch on the plan represents the Mining District.

The narrow gauge Colorado & Southern has only a small amount of trackage in this area, and I've left it all at 3 feet. Having it dual gauge would be more prototypical and enable standard gauge cars to be loaded out at the mines for movement to the giant Arkansas Valley Smelter west of Leadville.

California Gulch. California Gulch was the first of the mining areas, so let's start there. Both the CM and the D&RG laid standard gauge tracks up the gulch. Several mines will generate good ore traffic out of the area to the smelter and other points. The stream, or creek as they call them in the West, isn't much, and it's pretty polluted. Evidence of hydraulic mining might be worked into the area. Except for the high hills around it, the gulch is fairly devoid of trees.

I've drawn in a 16" turntable to serve the roundhouse. It's larger than the prototype would have been in Leadville, but will permit turning the big engines. The roundhouse can be a shared facility for the two standard gauge lines, though each railroad actually had its own facility.

Stray Horse Gulch. Over the hill (the aisle, in this case) is Stray Horse Gulch. It's a modeling combination of that gulch and Evans Gulch, in addition to a couple of other minor areas.

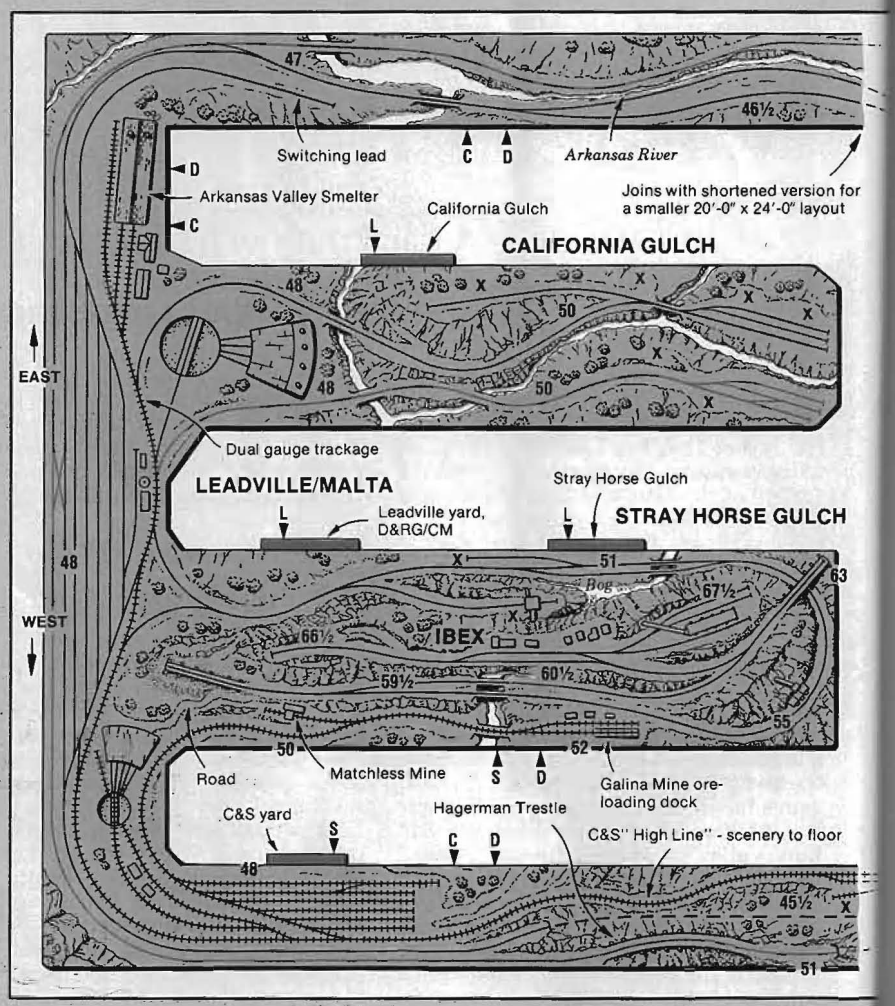
Two railroads also occupy this unit: the narrow gauge C&S and the standard gauge D&RG. Grades reach 4 percent before the Rio Grande gets to the 11,000-foot level of Ibex, so short trains are a way of life. The "X" marks indicate possible mine sites in both gulches. Some parts of the district had no mine sidings, relying instead on the main line.

The C&S facilities include an 8" turntable similar to those in Como and Boreas and a five-stall roundhouse. The small yard could be enlarged, depending on your wants, with the scenic tabletop-to-floor effect on the right.

The C&S has only a small portion of the mining traffic. It reaches the famous Matchless Mine and farther up the heavy-producing Galina Mine. Both are silver mines, though as was true with most properties around Leadville they also produced varying amounts of other, less precious metals.

THE SHORTENED VERSION

I've also suggested a more modest approach to this plan that would end up as a 20 x 24-foot HO layout. This smaller version of the CC&W would lose many of the larger layout's secondary attributes, but its focus on Leadville would be sharper.



There won't be enough distance to gain altitude for separate levels. Even so, the three yards in the shortened plan are designed in a step effect. Lowest and in front is the C&S at Como; next comes the Rio Grande, with an operationally combined Minturn/Salida; and finally there's a similar combination yard for the CM called Basalt/Colorado City.

This version retains the basic around-the-room oval for the two standard gauge lines and the point-to-point design of the C&S. The narrow gauge contains both a turntable and wye. It's prototype, but for the purposes of the layout it's probably a sort of "turning overkill." If I were to eliminate one, it would probably be the wye.

THE STATISTICS

The two standard gauge lines are built to 36" radius and hold to grades of 2 percent or less, with the exception of the Mining District and the Colorado Midland's wye at Basalt. As noted, the grades zoom and the radii shrink in the Mining District. The wye at Basalt is 30" radius.

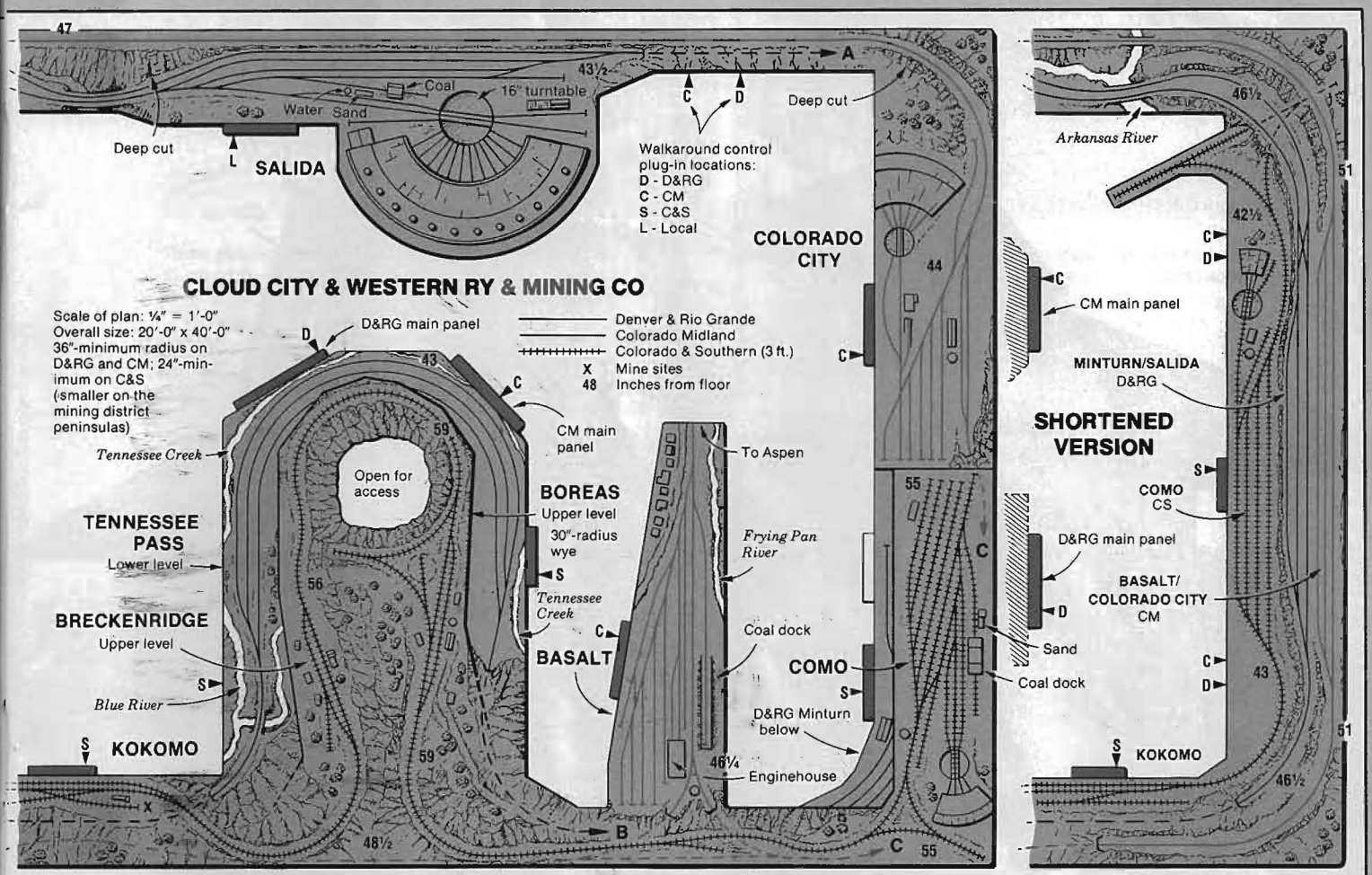
At the time of its abandonment, the Midland operated with 2-8-0s and 2-8-2s as its largest engines. That means the smaller Basalt radius would present no problem for these locomotives. The Rio Grande used 2-8-0s or smaller locomotives in the Mining District.

The C&S is a bit more restrictive. Its basic radius is 24", and grades run slightly higher than 3 percent in some places. This will work well even if you decided to use narrow gauge Rio Grande K-series engines instead of the more diminutive C&S 2-6-0s and 2-8-0s.

There are nine dual gauge turnouts either splitting one gauge from another or turning both gauges both directions. These are not simple turnouts to construct, nor are they cheap to purchase. Still, the effect in a yard is exciting, and it does match the prototype. The addition of stub switches on the C&S and in parts of the gulches would match early prototype as well.

GETTING CONTROL

The CC&W demands, or perhaps cries for, walkaround control. I personally favor the memory-style walkaround with plenty of remote stations, but command control would work equally well on this layout. Either way, operation will be



more effective and enjoyable if you can follow your train as it moves.

As for the yards, in particular the two gulch peninsulas at Leadville, a simpler system of a centralized control panel or a standard, tethered rheostat and direction control would work well.

Two main panels are located at Tennessee Pass. These are designed for dispatchers and are not necessarily train-operating positions. A mainline plug-in should be put here, however. On the shortened version, these panels would be shifted to the ends of California and Stray Horse Gulches.

The dispatcher controls the main line, and local yard panels handle the yards.

"WHAT IF"

In model railroading you're always free to "run the railroad your way." That's the license available in the Cloud City & Western. There are unlimited opportunities to mix and match the different eras that Leadville and Colorado have seen. Right on the money and true to prototype, there is a 30-year period for which you can model the CC&W and realistically have the three lines running intact.

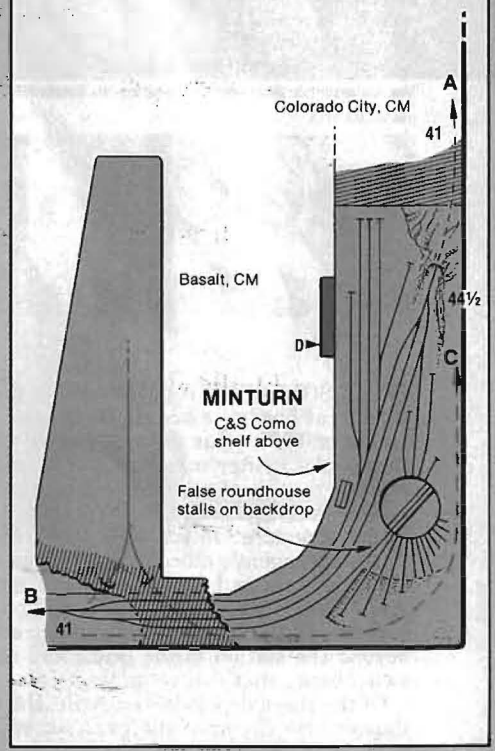
Some modelers feel obliged to stick strictly to the historical facts. They take pains to model only the actual era in which the prototype ran. But there's another way, and it's a concept I call "What if," for lack of a better term.

What if, on the imaginary CC&W that I've based on Leadville, Colo., you want to model the years between 1935 and 1950? How would you depict the time when steam was at its peak and the diesel was arriving on the scene? Let's shift history around to see what *might* have happened.

Suppose precious metals mining had remained as profitable in the middle of the 20th century as it had been at the start. Such a scenario might have the Midland surviving into the 1950s and the C&S still running through Climax to Denver.

Why not adjust the calendar? The fun is just beginning as you "create" history and use it to direct the building of your layout.

Just be positive. Yes, the odds that these railroads could have survived intact and not had their trackage torn up for the war effort were remote. But maybe history *could* have happened that way. Then how would either version of the CC&W look? Start with my notion of "What if," and see where you end up.



The Colorado & Southern Ry. station in Leadville, built in 1893, as it looked on April 10, 1937, the day the last narrow gauge passenger train pulled out of town.

The Colorado & Southern's Leadville station

THE SOLID BRICK depot serving the Colorado & Southern Ry. at Leadville saw its last passenger train depart in the spring of 1937. [Our drawings show the station as it looked then. — *Ed.*] After a half-century hiatus, it is once again in service, though of a different kind than before.

The brick depot was built in 1893 and replaced an earlier frame structure. It contains the traditional waiting room, ticket and agent's office, and baggage room.

Tracks ran on both sides of the station, but most photographs show passenger trains using the small yard on the east side of the station. The single track on the west side ran beyond the station to the south and connected to a couple of switchbacks that ran to mines.

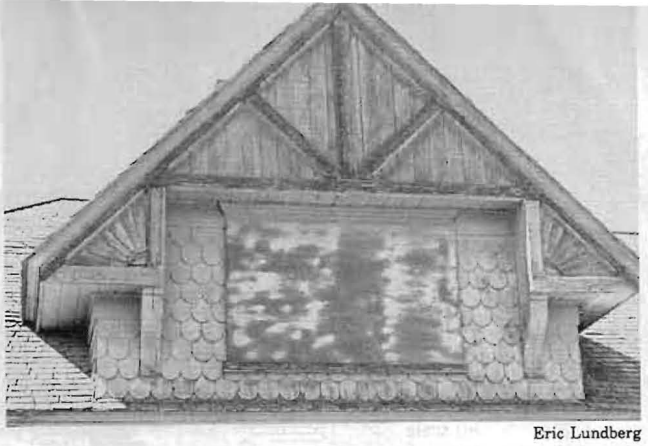
Of the three depots in Leadville, the C&S was the smallest, though also the only one constructed of brick. And perhaps because of that construction, it is the only one left today.

All the windows have six panes, except for the two in the sides of the operator's bay, which have four. The two baggage doors are identical. Between 1929 and 1937 the baggage door on the east side was widened. At some time a wooden "lean-to" was added at the southwest corner, covering two windows there, but it's recently been removed.

The dormers on the north, south, and west sides are identical. The larger dormer facing east is part of the operator's bay.

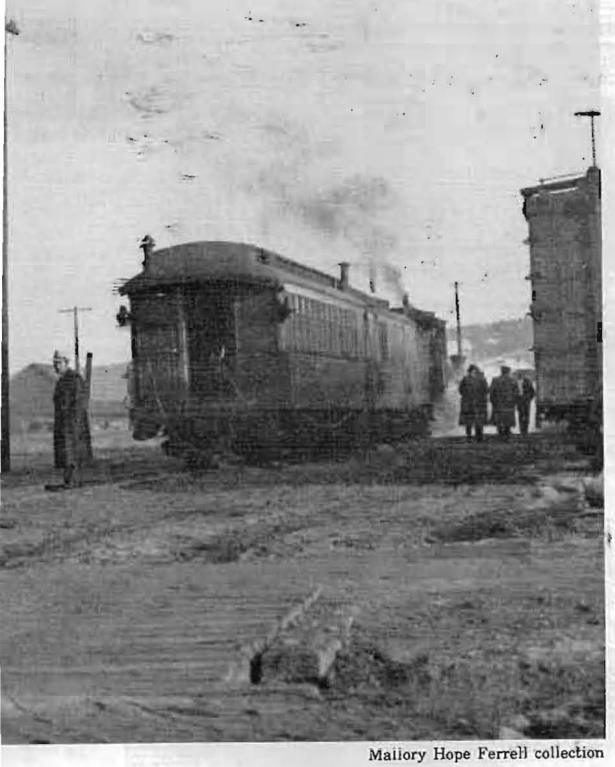
The station, idle for nearly 50 years, was purchased last year by the Leadville, Colorado & Southern RR, a new tourist line running round-trips to Climax on the old C&S/BN right-of-way. Now the operating headquarters of the LC&S, it's again used by passengers. Today, however, SD9s pull tourists in modified standard gauge freight cars on a 24-mile trip instead of bear-trap-stacked 2-6-0s and 2-8-0s hauling narrow gauge varnish over the Continental Divide to Denver. — *Eric Lundberg*

Plans on foldout



Eric Lundberg

These closeups of the dormers should help those of you who decide to model the station. Both ends and the front of the station have dormers like the one shown in the photo above, left. The east side of the station has a larger dormer, which is shown in the photo above, right.



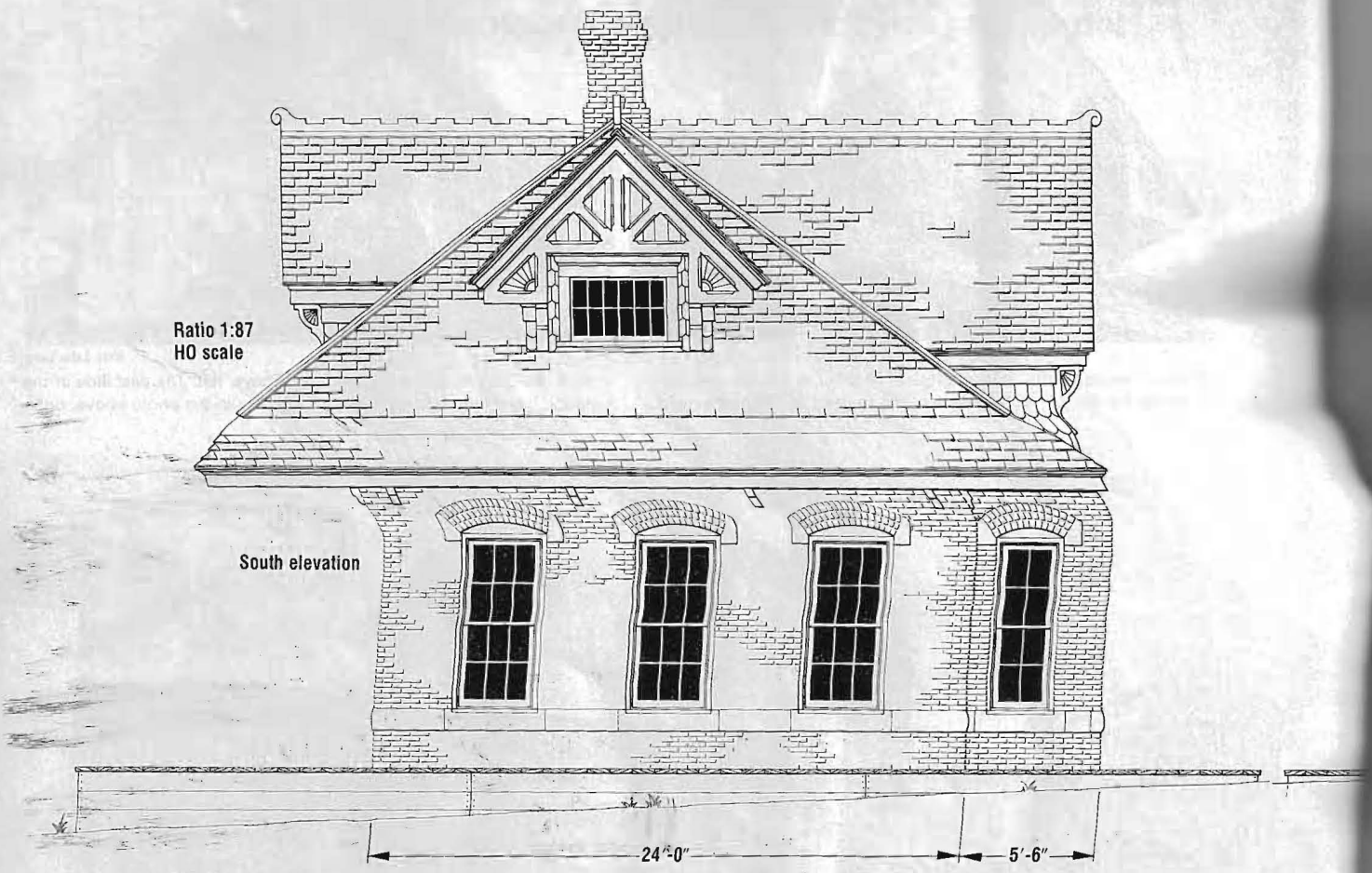
Mallory Hope Ferrell collection

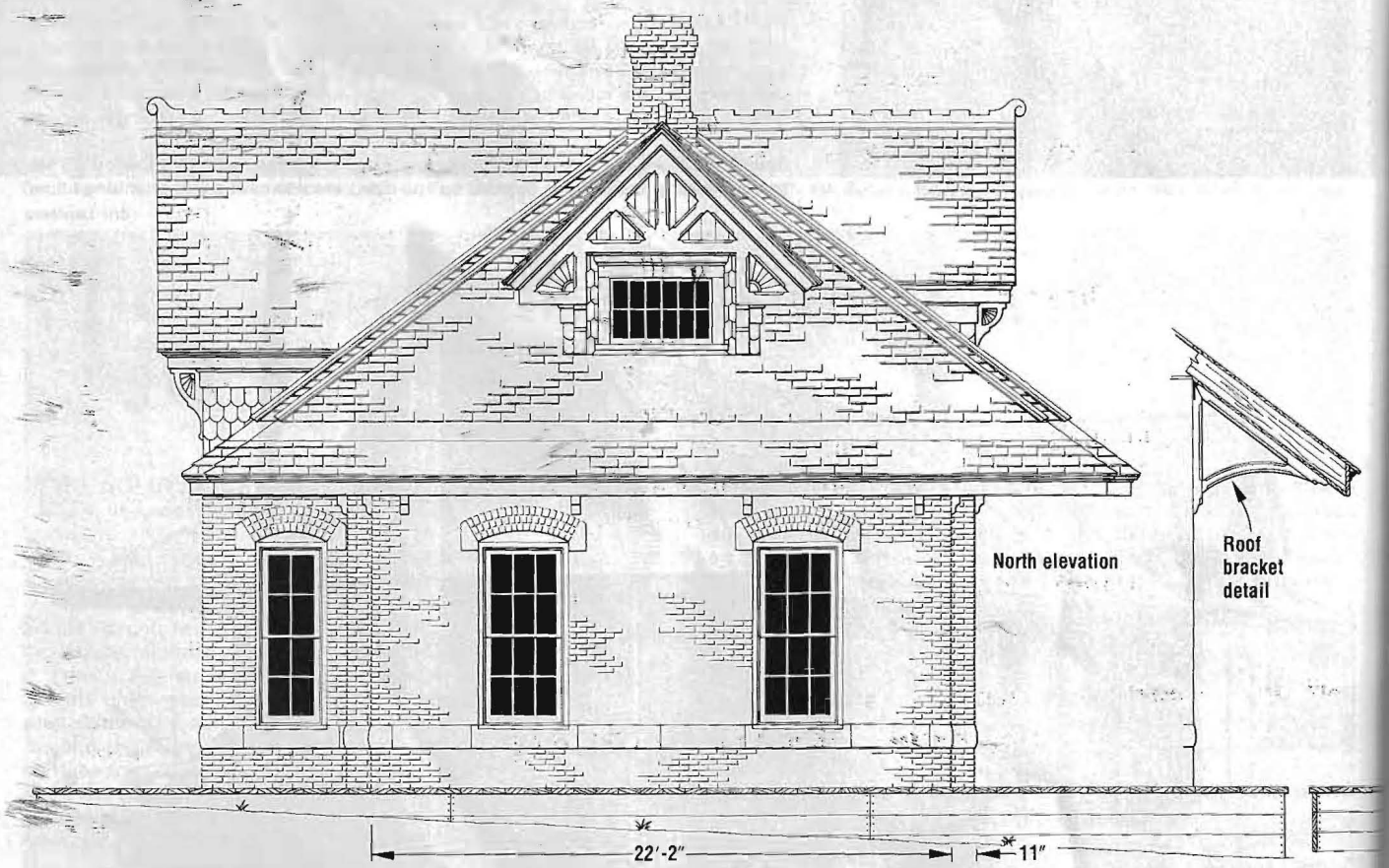
Eric Lundberg

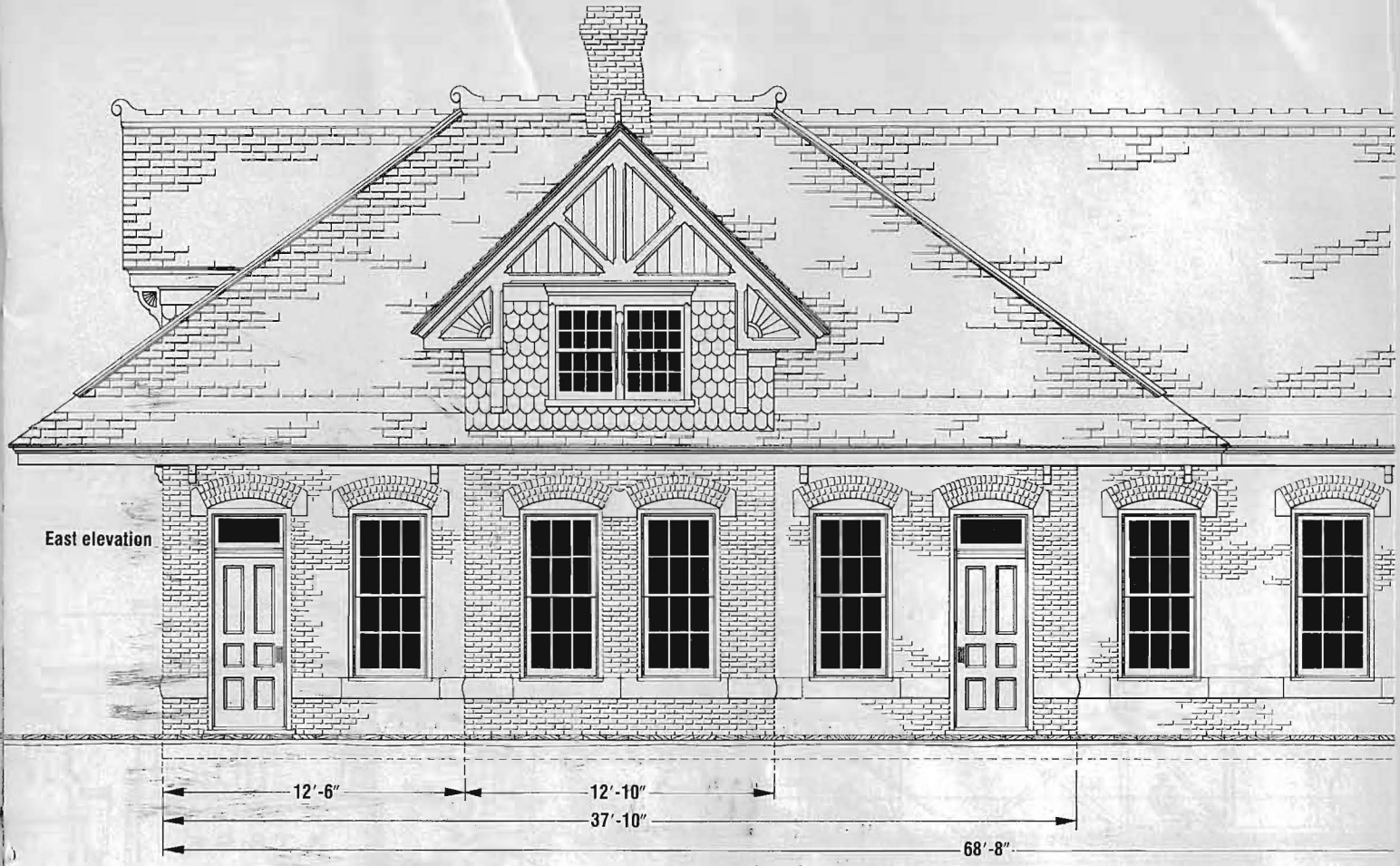
The Leadville station received a new lease on life in 1988, when it was purchased by the Leadville, Colorado & Southern RR, a tourist operation. When the author last visited the area on Memorial Day weekend, 1988, he discovered that restoration work was already under way. In little more than a year this memorable station has been repainted and given a new roof. In addition, its interior has been renovated for passenger service.

Below: When the author and his son photographed and measured the Leadville C&S station in the early 1980s, it was boarded up and didn't seem to have a very promising future.

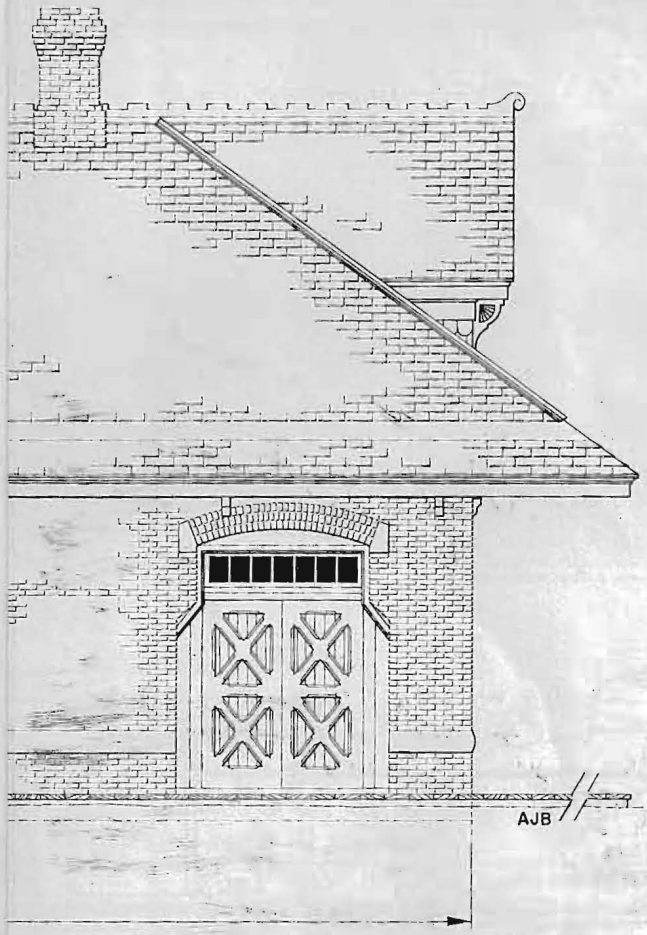
Eric Lundberg

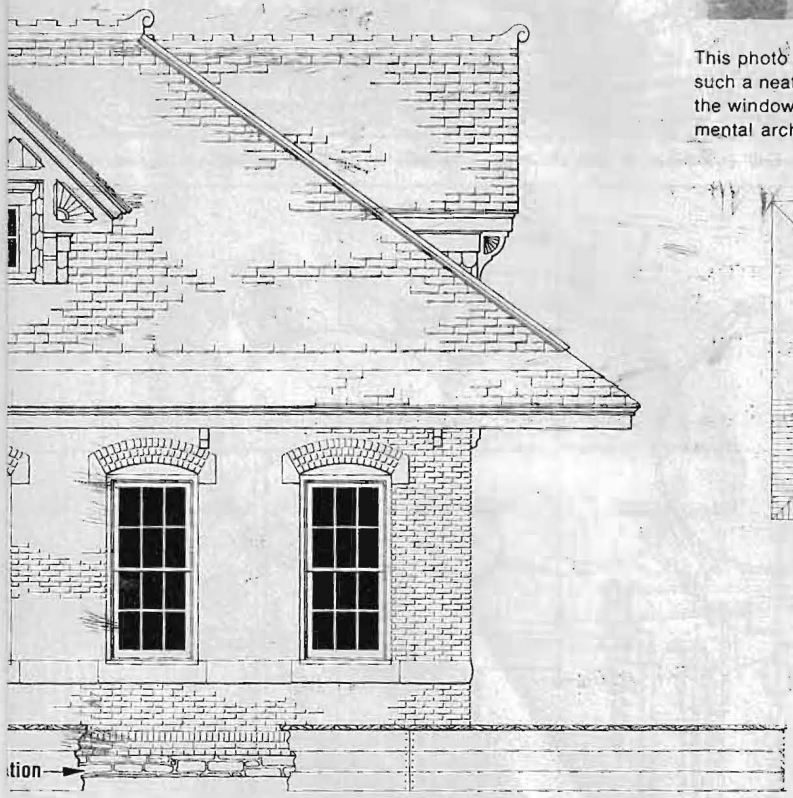

Ratio 1:87
HO scale
South elevation
24'-0"
5'-6"

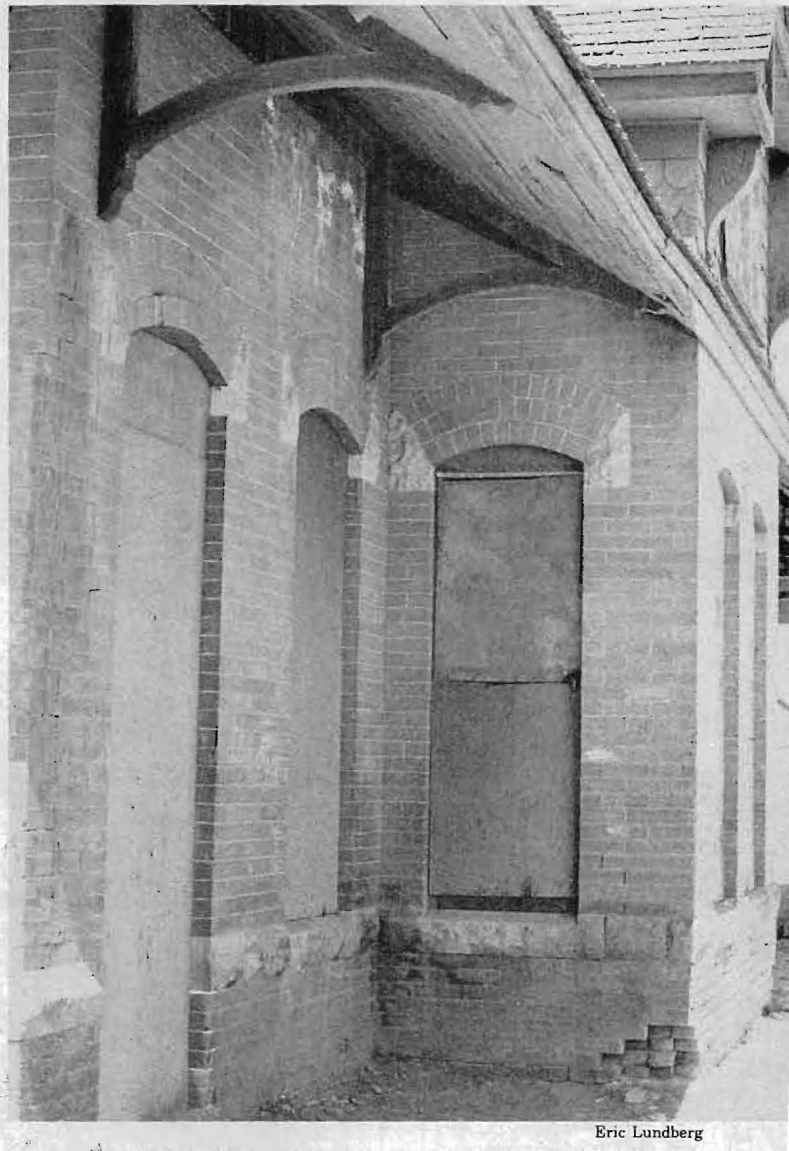

North elevation
Roof
bracket
detail
22'-2"
11"


East elevation
12′-6″
12′-10″
37′-10″
68′-8″


West elevation
Rock founda

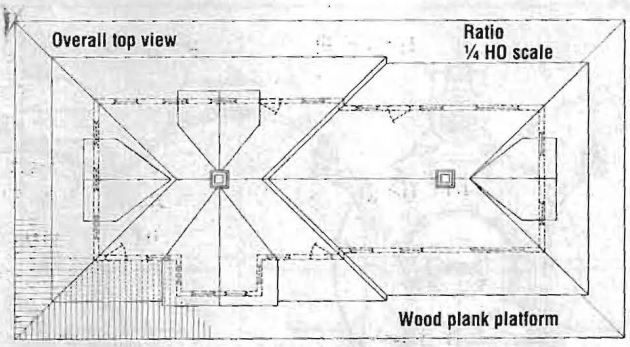






Eric Lundberg

This photo of the operator's bay shows some of the stonework that makes this such a neat station. There's a course of cut stone running along the bottom of the windows, along with cut stone in each corner of the window and door segmental arches. The wooden arched roof overhang supports also add interest.



Drawn for MODEL RAILROADER MAGAZINE by

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