

The Mountain Springs Grade: Conquering San Diego's Mountain Barrier to Commerce with the East

Joe Streetman

Except for an inconvenient accident of geography, the all-weather harbor of San Diego would have been a bustling hub of commerce in 1849-1861 linking the Southwest to the booming gold fields of northern California. San Diego lay only 170 miles almost due west of Fort Yuma, located at the only practicable crossing of the Colorado River within 200 miles. During the US-Mexican War and the Gold Rush that soon followed, San Diego's harbor should have been crowded with the flood of troops, gold-rushers, emigrants, and military supplies passing through Yuma, to connect with steamships from the East bound for San Francisco and the gold fields.



*Mountain Springs Open Air Museum of Road Construction.
Author's Collection.*

During this time, however, San Diego's residents slumbered on beside an empty bay because of that one inconvenient geographic fact—about 80 miles to the east there was a then-impenetrable mountain barrier to wagon travel. That

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Mountain Range. At its eastern approach to the desert, the escarpment is reached, “a steep and rocky declivity,² the jumping off place.”³ There, the terrain plummets precipitously from the rim of the escarpment to the desert down the slope of near solid rock mountains covered with enormous boulders and often choked with thick brush and cactus. For wagons, this barrier was impenetrable with the resources and technology of the 1849-61 period, so the tide of commerce swept to the northeast of San Diego.

The earliest trails circumvented the barrier between Yuma and San Diego by following northwesterly trending valleys that led in relatively easy stages to the Los Angeles area. The best known of these natural routes, later to be known as the Southern Emigrant Trail, was pioneered by the small horseback army of General Stephen W. Kearny in 1846 and further developed by the Mormon Battalion traveling behind Kearny in wagons in 1846-47. During the US-Mexican War of 1846-48, both of these small armies came from New Mexico to occupy California for the United States. The trail ran westward from Yuma, dipping into Mexico to go around the sand dunes, past the sites of the future towns of Calexico and Plaster City, into the “Carrizo Corridor,” past Vallecito, Warner’s Pass and Ranch, then on to Los Angeles. The famous Butterfield Overland Stage used the trail from 1858 to 1861. The route to San Diego was a side trip southwest from the Southern Emigrant Trail across the grain of the mountains. Kearny’s army went south from Warner’s Ranch to Santa Isabel, then to San Pasqual and Mule Hill, where battles with the Mexicans were fought, then on to San Diego.

The Mormon Battalion, with their wagons following behind Kearny as an



The earliest routes to San Diego went around the barrier. Author's collection.

army of occupation, continued past Warner's to Temecula, then followed an existing wagon road to San Diego. Today, the most prominent side route across the mountains is the one now commonly referred to as the "Jackass Mail"⁴ trail, which left the Emigrant Trail near the mouth of Box Canyon to go over the barrier on mule-back on a narrow foot trail that led to Cuyamaca. Wagons then carried passengers and mail to San Diego.

These roads or trails, however, were at best 50 or more miles longer than the more direct route past Mountain Springs. The Mountain Springs route was unknown to all but local Indians until 1851.

The Discovery of Jacumba Pass

The first known pioneer of the Jacumba Pass route was Captain Nathaniel Lyon, quartermaster of the US Army post in San Diego in 1851.⁵ He was looking for a more direct route than the Mormon Battalion Road from San Diego to Fort Yuma. He set out due east from San Diego and found his way to a kind of basin, or large valley surrounded by mountains, called by Indians living in it "Jacum." An Indian from Jacum guided him along a very steep Indian trail directly down from the summit of the mountain ridge to Mountain Springs, then down Devil's Canyon to the desert. Captain Lyon claimed his route "shortens the present wagon road about 80 miles, and with a small amount of manual labor can be made an easy route for pack mules; wagon route cannot be obtained short of much labor previously bestowed."⁶

Five weeks after the above report, the *San Diego Herald* reported that 6,000 sheep driven by a party of Mexicans from Yuma "are coming by the new route recently discovered by Capt. Lyon, U.S.A., and will pass by this place, on their way to Los Angeles."⁷ Over the next five years, there were several reports of very large flocks traveling this route.⁸ The rock corrals, whose ruins can still be seen to the west of Interstate 8 at Mountain Springs, were built by the sheepherders at that time.⁹

General Williston's Wagon Road

The first documented traveler over the Mountain Springs grade with wheeled vehicles was Lieutenant E.B. Williston. *The San Diego Tribune*, citing an interview in 1916 with then-aged General Williston, reported that he "believes he was the first white man to break a trail to Yuma with wagons, if not the first under any conditions."¹⁰ In or shortly after 1856, Williston was a lieutenant in the light artillery stationed in San Diego when he was ordered to take a battery of artillery,

including six-horse teams and wagons, to Yuma. For reasons not stated in the article, he did not take one of the existing wagon roads over to the Emigrant Trail. Instead he followed a route through the South Bay, crossing the border into Mexico, back into the U.S. through Campo to “Jacumba Canyon, Coyote Well, Indian Well, and from there by the old trail to Yuma.” He states, “In covering that part of the trip between Jacumba and Mountain Springs we encountered the worst grades in our experience, and in addition to locking the wheels we cut down oak trees and dragged them behind the wagons.” Williston’s unit stayed in Yuma several months, then returned to San Diego. The article does not state by which route or with what equipment they returned. Inspection of the route makes it appear unlikely he returned up the grade with wagons.

San Diego did not have a newspaper from 1860, when the *Herald* stopped publication, to October 1868, when *The San Diego Union* began publication of a Weekly. The first wagon road past Mountain Springs was built during this period,¹¹ and the circumstances and dates of construction are unknown.¹² The first documented and dated proof of the actual existence of a road past Mountain Springs is found in a petition for a school district for Milquatay (Campo) dated January 26, 1867. The eastern boundary of the school district was defined as being at “Coyote Wells on the newly opened road from San Diego to Fort Yuma and known as the Jacumba Route.”¹³ So far as known, the circumstances of the building of this road are lost to history. However, its route over the mountain to Mountain Springs and along Devil’s Canyon is known, and the mountain portion



The first wagon road rises steeply above Mountain Springs and Interstate. Author’s collection.



Route of the First Wagon Road. Author's collection.

can be traveled by high clearance, four-wheel drive vehicles today.

Above Mountain Springs, the road climbed over 800 feet in elevation in less than a mile, an average grade of 18.3 percent, with sections of over 30 percent grade.¹⁴ Below Mountain Springs, the road went along the bottom of Devil's Canyon to the desert near current Ocotillo on Interstate 8. Settlers mostly from Texas used the new road in 1868-69 to settle the Milquatay Valley (later called Texas Camp, and now Campo). Using the new route, Milquatay was only about 50 miles from the Mormon Battalion Road at a point near today's Plaster City, but 240 miles by the roundabout route along the Mormon Battalion Road to San Diego, then back east along the Mexican border to Campo.

Several well-known pioneer families left accounts of travel up Devil's Canyon and the steep mountain grade sometime in 1868-69 in wagons that were "double-teamed," pulled by 12-oxen teams, up the mountain.¹⁵

The Stagecoach Road

After the Central Pacific Transcontinental Railroad was completed in 1869, there was a boom in travel between Fort Yuma and the Eastern States via San Francisco. The Indian Wars in Arizona were in progress, and the military based in Fort Yuma created much traffic in passengers and supplies. Before 1868, this

traffic traveled by steamboat via the Isthmus of Panama route. Ocean steamers brought them from Panama to the north end of the Gulf of California (Sea of Cortez), where they were transferred to river steamers for the 135-mile run up the Colorado River to Fort Yuma. After the transcontinental railroad opened in 1869, passengers and supplies from the East came by rail to the San Francisco Bay. From San Francisco, there were two possible routes to Fort Yuma: (1) by steamship around the tip of Baja California, then up the Sea of Cortez to the mouth of the Colorado River, then by river steamer to Fort Yuma; (2) by steamship to San Pedro, then stagecoach or wagon to Fort Yuma over an established wagon road. A third option, by steamship to San Diego, then over the Jacumba Pass road to Fort Yuma, would be a week faster than the all-steamer route and three days faster than the San Pedro route. But this option was not practicable because of the difficulties with the existing Jacumba Pass road.

There was a popular movement by the citizens and the business community of San Diego to improve the Jacumba Pass road and establish stagecoach and freight lines over the Pass to Yuma. *The San Diego Union*, which started publication in October 1868, became the enthusiastic booster and cheerleader of this effort. Two prominent local entrepreneurs made what appear to have been serious attempts to “stage the line.” The first known attempt was by “M.M. Price, Esq.”¹⁶ who, according to the newspaper, would by November 4 start to “run a line of stages between this place and Fort Yuma.”¹⁷ After much announcement and two more *Union* articles,¹⁸ Mr. Price’s plan to operate a stage line disappeared from the pages of the *Union* without explanation, never to be mentioned again. Approximately a month later, on November 21, 1868, the *Union*,¹⁹ stated that “Day begins to dawn, at last, upon our Fort Yuma road” because Seeley and Co. were purchasing stock and equipment “with which they intend to stage the line.”²⁰ After this optimistic article, Seeley’s stage line to Yuma also disappears from the newspaper. The *Union* was apparently in the business of promoting a stage line, not dwelling on the difficulties of doing it.

In the late nineteenth century, the federal government indirectly encouraged the building of roads by awarding contracts for carrying mail between certain cities along defined

San Diego and Fort Yuma Stage Line. Author's collection.

routes. If the winning mail contractor needed a new road to fulfill his contract, it was his responsibility to get it built. The contractor was expected to help cities along his line by carrying passengers and light freight, in addition to mail. A road suitable for a small, light buckboard²¹ might not accommodate a tall, heavy stagecoach designed to carry passengers and freight. If a city was particularly interested, it could help the mail contractor in building a road suitable for a stagecoach that he alone might not be able to afford.²²

J.C. Capron of Tucson, Arizona, received the contract to carry the mail between Los Angeles and Tucson via San Diego sometime in late 1868.²³ *The San Diego Union* reported on January 2, 1869: "J. C. Capron, Esq., of Tucson, the mail contractor for this route, is in the City."²⁴ The contract value to Capron was \$84,000 per annum (about \$1.5 million in 2015).²⁵ On the San Diego to Yuma segment, mail was carried by buckboard. Sometimes it went via the Jacumba Pass, at other times by a route below the border with Mexico.²⁶ Capron took up residence in San Diego to work on solving the manifest problems with the Jacumba Pass Road and establishing a heavy stage line.

A week after Capron's arrival in San Diego, a public meeting was held on how to improve the road to Yuma.²⁷ Capron stated that the principal difficulty was "a rough steep hill, which needs to be graded around." This is the first direct



Devil's Canyon Road ©SDHC #91:15225-47.



Capron's Mountain Road down to Mountain Springs, 2015. Author's collection.

mention in the *Union* of the problem. A road committee was appointed and about \$2000 in pledges for road improvement was obtained. About ten days later, the *Union* reported "Sixteen men are now busily engaged upon the Fort Yuma road . . . and they intend to have it in perfect condition for the spring trade."²⁸

From February through May 1869, there were ten articles in the *Union* about road construction, mail lines, and related matters. In April, the *Union* reported "our streets were filled with teams, recently arrived, for the purpose of conveying freight from this place to Fort Yuma."²⁹ On June 2, 1869, the *Union* carried an advertisement by Capron stating, "A Weekly Line of Four-Horse coaches will commence running between San Diego and Fort Yuma on and after Wed. next."³⁰ A week later, an article in the *Union* stated, "The good day has come at last. Fort Yuma, the hottest place in America, is connected with San Diego, the best climate on the continent."³¹ Two months later, the newspaper announced, "The stages from here to Fort Yuma are running full." According to the *Union* "Every old croaker in the county" had predicted that Capron's line would fail, but it had paid from the start.³² Capron's improved road down the mountain and through the canyon to the desert appeared to be a success.

The New Turnpike Road

Although the newspaper reports sounded cheerful about the Yuma stage line, something was plaguing the operation. Capron had left for the East in early November 1869, where he was married. When he returned to San Diego with his bride about January 19, 1870, he found his stagecoach operation in crisis.³³ About two days after his return, there was an emergency meeting for the formation of a joint stock company to build a toll road. The *Union* reported "...our road to Fort Yuma...we must do something now, to meet the present emergency."³⁴ This meeting was attended by city leaders including Alonzo Horton, Judge Swift, and Supervisor G.W. McDonald. A committee of five was appointed "to mature a plan of action" to be presented at a future meeting, held three days later. A resolution "in favor of the county giving a franchise to a joint stock company to build the road" was adopted. Civil Engineer C.J. Fox, Capron, and a railroad engineer gave estimates ranging from \$20,000 to \$30,000 for the cost of building the road.

Road building plans continued over the next several months. A meeting of the "San Diego and Fort Yuma Turnpike Road Company" was held in March 1870. The Company organized with a capital stock of \$50,000; share price was \$25 each. The newspaper reported that Fox "was appointed to make a survey of the road and report at the next meeting as to grades, cost of work, etc."³⁵ Three weeks



By stage to Arizona. Author's collection.



Stagecoach roads over the mountain to Mountain Springs. Author's collection.

later, the engineer had completed his survey and gave his report.³⁶ The Devil's Canyon road would be completely rebuilt, including two new bypasses along the canyon walls, one 500-foot and one 700-foot long, with maximum grades to be 12 percent. The mountain road would be abandoned, and a new road would be built. The average grade would be 12 percent with a maximum of about 15-16 percent. Gpc estimated the cost as \$3,000 for the Canyon and \$3,000 to \$4,000 for the mountain. Fox's report was accepted, and a superintendent of roadwork was appointed. Company officers were elected, with Capron one of the directors. Within five days, work on the road began.

No more newspaper articles appeared on the progress of the road building. About six months later, however, there is a letter giving a traveler's report of a trip over the new road by stage, starting at San Diego on October 1, 1870.³⁷ The route was through Milquatay, Jacumba, and down the new road to Mountain Springs, with "Vet" the stage driver. A traveler wrote:

...I took a slight snooze, but was recalled to the world by Vet's voice, "Now is the time to keep your eyes open if you want to see some good made road." The moon was just going down and the road before us seemed to strike directly into the mountains: this was the old road. The new road was plainly visible, winding round and round



Frary & Foster Concord stagecoach completed in 1866. On display at the San Diego History Center. ©SDHC #87: 16037-47.

the mountainside, almost beneath us. "That's our road," said Vet, pointing at the same time with his whip where the road went wending downward. "Get up," and the whip snapped, and away we went down the hill, at a good round lively trot, without jolting or jarring, as smoothly as if on a racecourse. We reached Mountain Springs in 20 minutes after we got on the new road; going over in these few minutes, what was formerly a dangerous day's drive for teams. The only way to appreciate it [the new road] properly was to have traveled over it [the old road] in the past two or three times, and have received about as many upsets.³⁸

This letter reveals what the main problem with the old road had been: it had taken a whole day to make the descent of less than a mile to Mountain Springs with coaches often being "upset."

Both the old and the new roads are today intact, if somewhat eroded, and plainly visible on aerial and satellite photos. The old road over the mountain to Mountain Springs was abandoned. It ran southward from Mountain Springs to climb to the summit of the mountain with one switchback, gaining 900 feet of elevation in 0.8 miles. The new road went around rather than over the mountain. It



Stagecoach roads over the mountain to Mountain Springs. Author's collection.

ran northward from Mountain Springs, and rounded the shoulder of the mountain to head southwest along the wall of a canyon to intersect the old road beyond the old road summit, reducing elevation gain by 90 feet. The new road made the climb in about 1.7 miles, at an average grade of about 9 percent, nearly constant, with no steep switchbacks or pitches.

On April 13, 1871, the *San Diego Union* offered a fact-filled account of the first annual meeting of stockholders in the Turnpike Company.³⁹ The first annual report summarized the past year's effort. Road building had started about March 26, 1870.⁴⁰ The road from the "Desert to Jacumba Valley" was completed September 5, after 5 months and 10 days work and a cost of \$13,691.81. The estimated cost had been \$6000 to \$7000. The cost overrun was attributed to the "rocky character of the canyon, the great amount of blasting⁴¹ required, and (chiefly) the difficulty of disposing of the rock after it was broken." A tollgate was erected mid-September at the foot of the mountain grade near Mountain Springs. Toll collections were about \$180 per month.

Further newspaper references to the roads or stagecoach operations are infrequent and indicate only that Capron purchased new horses and equipment for the line, suggesting that the line was prospering.

On October 24, 1870, twenty-year-old George White Marston arrived in San Diego by steamer from San Francisco. That same day, he got a job as clerk at the Horton House hotel.⁴² One of his duties was to dust off the travelers who arrived by stage from Yuma, including Major General George Crook who



A young George Marston. Editor's collection.

traveled over the stage route in June 1871.⁴³ There is little comment about the trip in Crook's autobiography, save a note that the first 100 miles from San Diego was very mountainous, and that the desert heat was unbearable.

In 1874, Capron sold his stage line to Kerens and Mitchell whose intention was to extend their line of Concord coaches from El Paso to San Diego. The *Union* speculated that this would afford "a safe and speedy means of crossing the continent during the season when the *Union Pacific* is blockaded by snow."⁴⁴ Under Kerens and Mitchell, the stage line continued to prosper.⁴⁵ The mail service was increased in the spring of 1877 from three times per week to daily delivery.⁴⁶ Traffic over the line was especially heavy in the winter of 1876-77.

The Railroad Comes to Fort Yuma

During the 1870s, the railway from San Francisco was building its way south to Los Angeles and on towards Fort Yuma. The railroad finally reached the west side of the Colorado River near Yuma on May 21, 1877.⁴⁷ The last article in the *Union* about passengers departing on the stage for Yuma was on February 10, 1877. Operation of the passenger stage may have ended at that time, though San Diego could have lost its stage traffic earlier. It would have been faster to stage from the still building railroad's "end of track" to Fort Yuma than to use the San Diego route.⁴⁸

The last reference to the stage line is an advertisement in the *Union* on August 23, 1877: "Four-Horse Concord coaches leave Yuma daily immediately after arrival at Yuma of [railroad] cars."⁴⁹ Kerens is last mentioned on November 3 as "one of the proprietors of the Southern Overland Mail" who was stopping at the Horton House. There are no further articles about the Fort Yuma stage line after 1877 in *The San Diego Union*.

Little is known of use of the Jacumba Pass road through Mountain Springs after the railroad closed the stage line. Rather than driving his own rig over the desolate road to the Imperial Valley, or Yuma, a private traveler from San Diego almost certainly would have taken the stage to Los Angeles, then the train to Yuma. Any traffic must have been limited to locals, miners (if any), the occasional

excursionist, or the adventurer. By the turn of the century, the old stagecoach road lay largely abandoned and neglected.

The Imperial Valley and the Automobile

The development of the Imperial Valley and the advent of the automobile demanded that Jacumba Pass be used once again. Imperial Valley development began in 1901 when a system of canals brought water about 50 miles from the Colorado River into the Valley to create one of the richest farming areas in the United States. Almost overnight, what had been barren, unoccupied desert was



Devil's Canyon Road. ©SDHC #9978.

developed into about 1,000 square miles of rich farms and several new towns. The center of the Imperial Valley is about 50 miles west Yuma and about 120 miles from San Diego via the Jacumba Pass.

The automobile and the truck opened the possibility of private and commercial travel in a day or less between San Diego and the Imperial Valley, even with the primitive vehicles of the time. In 1903, San Diego county road supervisor James Jasper and Bryon Naylor, an early auto dealer, drove a single-cylinder Cadillac from San Diego to Jacumba via the Jamul-Campo route in 7 hours and 45 minutes driving time “including all stops for teams.”⁵⁰ Supervisor Jasper reflected:

When we reached the summit of Jacumba Pass, I paused and I gazed wistfully out over the surrounding country to the east, floating in the fascinating mirage, lay the great Imperial Valley, an empire in itself – “so near and yet so far,” our heritage: lost for want

of transportation...An auto road to Imperial would be one of the best investments the people of San Diego could make....The auto is the coming vehicle. In fact, it is already here, and it's come to stay: best we welcome it, and in the future build our roads with an eye to its requirements.

It was only 50 miles further to Imperial, but the route down the mountain and in Devil's Canyon was all but impassable. Ed Fletcher traveled the old stage road from Jacumba to the desert in about 1910: "It took us two days. Going down the thirty percent grade into Mountains Springs, we had to jack-up our car a number of times and rebuild sections of the highway to make it passable. This went for Devil's Canyon, too."⁵¹

Given the growing economic importance of the Imperial Valley, public pressure mounted for a real "auto road" over the Pass. This would result in the building of a new road that abandoned both the mountain and the Devil's Canyon routes.

The First Automobile Route

Ed Fletcher, after whom Fletcher Hills and Fletcher Parkway and other San Diego places were named, was the guiding spirit behind the movement for the



Devil's Canyon Road. ©SDHC #91: 18564-1199.

new road. He pulled the ropes, greased the skids, and raised the funds for a new road, on which construction began in late 1911 or early 1912, using Fletcher's grading machines.

The first automobile route is known as the Boulder Canyon Route. The new road abandoned the mountain route of the old stage road 4 to 5 miles east of Jacumba, then ran eastward over In-Ko-Pa summit (where Interstate 8 currently runs) and along Boulder Creek canyon to Mountain Springs. The road did not run along the canyon bottom, but ran in a "notch" cut in the very rocky canyon walls well above flash flood waters. The road was still under construction but passable in April 1912 when the *Union's*



The Mountain from the summit of the barrier to Mountain Springs. Author's collection.

"pathfinder" car, a Chalmers 40, used it then passed through Devil's Canyon to



Mountain Springs automobile route. ©SDHC #12155.18.



Mountain Springs grade, 1913 . ©SDHC #16-408.

the desert.⁵² On April 25, an “Automobile Stage,” a seven-passenger six-cylinder Franklin, completed its first round trip from San Diego to El Centro and back. The return trip took 11 hours, 2 minutes, and the “trip was enjoyed by each of the six passengers.”⁵³ Apparently these auto stage “buses” began running as soon as the new road was passable.

The next road to be built was the Myer Canyon Route. After completion of the Boulder Canyon segment, the road over the barrier was serviceable, but the Devil’s Canyon section left much to be desired. The road was rough, tortuous, and slow even in the best of condition. Most of the road was in the canyon bottom, subject to washout or rock slides with every heavy rain and requiring frequent closures and expensive repairs. The decision was made to abandon Devil’s Canyon for a new, all-weather road running along Myer Canyon (also called In-Ko-Pa canyon or gorge). Although the entire road was in Imperial County, it was built by San Diego County and largely, if not completely, funded by San Diego. Imperial County gave enthusiastic support, but their financial contribution was not significant. San Diego’s cost was \$70,000.

On April 10, 1913, *The San Diego Union* reported, “Construction was begun

November 3, 1912. Road completed yesterday."⁵⁴ This new road did not run along the bottom of the wash, as in Devil's Canyon, but along the steep walls of the canyon at a relatively constant grade. The roadbed was "dirt," appearing to be rather coarse decomposed granite. It followed every convexity and concavity in the canyon walls along which it passed. It therefore had almost continuous curves, some of very short radius. A large bridge had to be built across the mouth of Myer Canyon at its entry to the desert. The new road was 6.5 miles in length, with a maximum grade of 7 percent.

A gala opening ceremony was held at Mountain Springs on April 9, 1913. "San Diego and Imperial Valley Celebrating Opening of Highway Cut Along Rocky Canyon's Sides," reported the *Union*, and "Devil's Canyon exists no more."⁵⁵ At the opening, there were 175 cars from San Diego, and 55 from various Valley cities. After the ceremony, the entourage went down to the desert on the new Myer Canyon road, then back to Mountain Springs on the old Devil's Canyon road. This was done so that the achievement of the new road could be fully appreciated. The Devil's Canyon route was then officially closed to traffic.

Roads in the 1920s and 1930s

In 1926-27, both the mountain and canyon sections of the 1913 road were paved with concrete 20-feet wide. According to the newspaper, the road was



The 1926 road runs under Interstate 8 on toward Mountain Springs. Author's collection.

“practically the same climb as it was before paving, except that the dangerous curves have been eliminated.”⁵⁶ At about the same time, the wooden plank road over the infamous sand dunes west of Yuma was replaced by a paved road: “Dreaded Barrier Converted to Splendid Highway,” reported the *Union*.⁵⁷ San Diego was now within six hours of the Colorado River.

The newly paved road, however, had many curves, some of very short radius. This made for slow and dangerous going, both up and down grade, especially for trucks. Many truckers preferred hauling Imperial Valley produce to San Pedro, even though it required an extra 100 miles of desert travel, rather than risk the hazards of the Mountain Springs grade. The cost for hauling cotton to San Pedro was \$3.50 per ton compared with \$4.00 to San Diego. The *Union* commented that the problem was “the barrier of the Mountain Springs Grade.”⁵⁸

In late 1938, the city began the “Mountain Springs grade realignment project.”⁵⁹ The first construction unit of 255 miles from near the summit down to Mountain Springs was completed by January 1940.⁶⁰ The new road eliminated all of older road’s sharp curves. It was 30-foot wide while the old road was 20 feet, and the minimum curve radius was 600 feet compared to 128 feet on the old.

The new road stayed lower in Myer Canyon in the upper two miles below Mountain Springs and separated from the old 1926 road by as much as a half mile. The cut-off section of the 1926 road has therefore survived, since it was not obliterated by the new construction. This road is accessible by high clearance vehicles today.



The steepest part of the downgrade—a challenge for big rig drivers. Author’s collection.



Wind Fence on Devil's Canyon Bridge No. 1. Author's collection.

Interstate 8

Interstate 8 was built from the 1960s to early 1970s. It has an average grade from Coyote Wells to the In-Ko-Pa summit of 4.2 percent with a maximum of about 7.5 percent just above Mountain Springs. Modern automobiles can maintain the legal 70 mph or higher both up and down grade without slowing. Older cars with marginal cooling or less efficient fuel systems can have problems because of the 11-mile sustained climb and high temperatures. Temperatures at the foot of the grade often top 110 degrees Fahrenheit in the summer, and still be 100 degrees at the summit. To assist drivers with overheating problems, there are 25 pull-outs with radiator water reservoirs on the up-grade side, placed about every half-mile.

Drivers of heavy big rigs manage their speed carefully on the downgrade. A runaway truck ramp is located 5 miles below the summit. The last 3.2 miles before the ramp averages over 6 percent grade. The ramp is located to stop runaway trucks before they enter the narrow and winding Myer Canyon. The truck driver's challenge continues for about 5 miles in Myer Canyon, where the grade averages 5 percent, there are numerous curves, and sight lines in the twisty canyon are short.

In September 1976, much of the Myer Canyon downgrade washed away in the Hurricane Kathleen flood. Over 10 inches of rain fell in about 6 hours in the Mountain Springs basin and Myer Canyon. The flood that raced down Myer Creek also washed away the bridge over which the westbound lanes of Interstate 8 crossed Myer Creek wash. Interstate 8 was completely closed for 7 days, until a temporary road across Myer Creek wash was built and the former uphill only lanes were converted to two-way traffic. It took about a year to rebuild the downhill lanes and the washed out bridges and to restore full freeway operation.



Cuts near Desert View Tower, 1912-1975. Author's collection.

At this time, almost all traces of the old Devil's Canyon roads vanished. A popular jeep road ran along the bottom of the Canyon before the flood, but it disappeared and has not been rebuilt.

The summit of Jacumba Pass is one of the windiest places in Southern California. Superheated air rising up from the vast below-sea-level Colorado Desert to the east induces a strong flow of cooler air from the Pacific coastal area near San Diego. The wind whistles eastbound through the peaks of Jacumba Pass, down across the Mountain Springs basin, and down Devil's and Myer Canyons. The interaction of vehicles and wind speeds produce strong side forces that buffet and can overturn tall vehicles. Several times each year, Interstate 8 is temporarily closed to "high profile" vehicles by the California Highway Patrol and includes most 18-wheelers and motor homes. Wind fences have been built at three locations where the wind problem is at its worst.

Over a period of almost one hundred years, the development of six versions of the road from the summit of Jacumba Pass down the mountain and through the canyons to the desert illustrates San Diego's commitment to infrastructure and communications. The success of Interstate 8 has been made possible through a remarkable series of engineering innovations that continue until the present time.

NOTES

1. Before its artificial harbor was developed after 1909 by dredging and building rock breakwaters, San Pedro harbor was completely exposed to winds from the south. In the mid-1800s, when southwestern storms blew, ships had to leave the harbor and ride out the storm in the open ocean.
2. *San Diego Herald*, June 2, 1851.
3. *San Diego Union*, October 17, 1868.
4. Officially the San Antonio and San Diego Mail Line The initial contractor was James E. Birch who carried the mail (and passengers, if any) over the barrier by pack mule over the "Jackass Trail" (exact route now lost) to Cuyamaca, then by wagon into San Diego. See also Ellen L. Sweet and Lynne Newell, *Historic Stage Routes of San Diego Count.*. Charleston: Arcadia Publishing, 2011.
5. H.M.T. Powell is often said to have been the first traveler past Mountain Springs to leave a record of his journey (*San Diego Tribune*, October 6, 1934). Analysis of a detailed mileage log in his journal of his journey in late 1849 proves that he went along the Emigrant Trail to Carrizo, a watering place, where he spent the night near the stream. He then went four miles further west, and turned south to climb the barrier in the vicinity of Bow Willow Canyon, then past the vicinity of Live Oak Springs and into Mexico. He followed the border into the South Bay and on to San Diego. Curiously, his journal clearly states that he went by "Carrisa Creek," so it is difficult to understand how the misconception that he went by Mountain Springs began. H.M.T. Powell, *The Santa Fe Trail to California, 1849-1852*, Wangenheim Collection, San Diego Public Library, Central.
6. *San Diego Herald*, June 12, 1851.
7. *Ibid.*, July 17, 1851, 2:3
8. *Ibid.*, April 11, 1857. The article stated that San Diego County had a flock of 28,000 sheep, but that "this isn't a sprinkling (compared) to some droves that cross the Colorado, and are driven directly up the country."
9. Robert L. Sperry, "The Old Stone Corrals," *High Country* 42 (Autumn 19xx), 35. Sperry writes "it is said that lambing ewes were held in the corrals at night to protect them from coyotes."
10. *San Diego Tribune*, October 6, 1938
11. Richard F. Pourade, *The History of San Diego: Vol. 4, The Glory Years* (San Diego: San Diego Union-Tribune Publishing Company, 1964), 9. Pourade gives a very brief account of this period, without specific dates that appears to confuse the activities of several different individuals over a wide period of time. The "Smith-Groom route" of c. 1858 is sometimes erroneously shown on old maps as going past Mountain Springs. It actually went northward from the vicinity of Live Oak Springs over the barrier to Carrizo. In any case, it was only a planned "route," never an actual road.
12. A historical monument placed adjacent to the Desert View Tower commemorates the "Mountain Springs Station Site." The documentation required to obtain recognition as an historic site is contained in San Diego Public Library RCC 979.498/Chamberlin, "Mountain Springs Station Site," by Eugene K. Chamberlin, typewritten manuscript, 1991. Contained on the monument plaque is the statement, "In 1862-70 about a mile north of here [at Mountain Springs] Peter Larkin and Joe Stancliff used a stone house as a store from which ox teams pulled wagons up a 30% grade."
13. Ella McCain, *Memories of the Early Settlements Dulzura, Potrero, and Campo* (San Diego: n.p., 1955), 51.
14. Interstate 8 gains this same 820 feet in 3.3 miles, with an average grade of 4.6 percent and maximum grade of 7.7 percent.

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15. J.L. Kelly, "Life On A San Diego County Ranch," unpublished manuscript, c. 1925, SDHC Research Archives.
16. Pourade states that J.J. Tomlinson and Co. operated "stages" from San Diego over the grade to Yuma sometime after 1866. Tomlinson did operate from Los Angeles to Tucson, but he went via San Bernardino and the Desert. His contract was for mail, and it is not stated whether he operated stagecoaches or buckboards. The mail contract was modified in mid-1868 to specify that the mail had to go through San Diego. Tomlinson, who had lost \$12,000 in four months operation, refused to come on the San Diego route, and discontinued his line. Pourade, *The History of San Diego: Vol. 4, The Glory Years*, 9; *San Diego Union*, October 24, 1868, 2, col. 2.
17. *San Diego Union*, October 10, 1868.
18. *Ibid.*, October 24, 1868, October 17, 1868.
19. *Ibid.*, November 21, 1868.
20. Alfred L. Seeley owned the Cosmopolitan Hotel in San Diego's Old Town and was the operator of mail and stage lines around San Diego from 1869 through 1874.
21. A buckboard was a light wagon with a spring-mounted seat for two, and a small bed for light freight, normally pulled by two horses.
22. The first major mail contracts in this area were for the San Antonio and San Diego Mail of 1857-60, and the Butterfield Overland Mail of 1858-61, which ran from Saint Joseph, Missouri to San Francisco via El Paso, Yuma and Los Angeles.
23. *San Diego Union*, October 24, 1868.
24. *Ibid.*, January 2, 1869.
25. Measuring Worth, <https://www.measuringworth.com/uscompare/> (accessed January 22, 2016); William E. Smythe, *History of San Diego, 1542-1908: Volume I, Old Town* (San Diego: The San Diego History Company, 1908), 254. Smythe says that Capron went to Washington "and secured the contract," actually a subcontract. He adds that Capron started operating the line in 1867 (actual date mid- to late 1868 (buckboard mail only).
26. *San Diego Union*, May 26, 1869.
27. *Ibid.*, January 9, 1869.
28. *Ibid.*, February 20, 1869.
29. *Ibid.*, April 21, 1869. Freightage apparently didn't have the glamour of stage coaching. There are no freightage entries in the *Union* index, but occasionally freightage is mentioned in the stage indices. The last article indexed was in the *Union*, February 19, 1876, for a fast freight to any part of Arizona operated by F. Piazza.
30. *San Diego Union*, June 2, 1869.
31. *Ibid.*, June 9, 1869.
32. *Ibid.*, August 11, 1869.
33. *Ibid.*, January 20, 1870.
34. *Ibid.*, January 27, 1870.
35. *Ibid.*, March 3, 1870.
36. *Ibid.*, March 24, 1870.
37. *Ibid.*, October 27, 1870.
38. *Ibid.*
39. *Ibid.*, April 13, 1871.

40. Bertram B. Moore, "History of Road Development in San Diego County," in Carl H. Heilbron, ed., *History of San Diego County*, Part II (San Diego: The San Diego Press Club, 1936), 381. Moore states that the turnpike road, which went into service in late 1870, was built in or shortly after 1900. This clearly an error as proven by several contemporary documents, including a detailed survey map of 1895 showing the road exactly where it is today. Survey Number 99, Field Book 19, Third Road District, 1895, by R.M. Vail, Co. Surveyor.
41. This is the first known mention of blasting associated with road building in this area.
42. Pourade, *The History of San Diego: Vol. 4, The Glory Years*, 77.
43. H.B. Warfield, *Fort Yuma on the Colorado River* (El Cajon: n.p., 1968).
44. *San Diego Union*, April 28, 1874.
45. At this time, the Union Pacific had not yet solved the problem of deep snow in the Sierra Nevada, which stopped their trains, by building many miles of snow sheds.
46. *San Diego Union*, April 13, 1877.
47. Warfield, *Fort Yuma on the Colorado River*.
48. Contracts for stages from "end of track" to some destination were common. The last contract for stages between the two ends of track on the transcontinental railway was for an initial 110 miles, awarded in April 1869. *San Diego Union*, April 14, 1869.
49. The advertisement reads: "New Today. Southern Pacific Mail Line from San Diego Cal to Mesilla, New Mexico. Four Horse Concord Coaches leave Yuma daily immediately after arrival [railroad] of cars ..." for points east. *San Diego Union*, August 23, 1877.
50. *Ibid.*, August 13, 1903
51. Ed Fletcher, *Memoirs of Ed Fletcher* (San Diego: Pioneer Printers, 1952).
52. *San Diego Union*, April 24, 1912.
53. *Ibid.*, April 26, 1912.
54. *Ibid.*, April 10, 1913.
55. *Ibid.* For unknown reasons, the date of this celebration is almost universally dated incorrectly as "April 1912." This oft repeated error might have started as a typographical error in the August 14, 1938, issue of the *Union*. It showed a photograph of the 1913 ceremony and gave the date as April 1912 in the caption. A photo on the wall of the Desert View Tower museum in April 2000 repeats the error.
56. *San Diego Union*, June 12, 1927.
57. *Ibid.*, June 26, 1927.
58. *Ibid.*, January 11, 1936.
59. *Ibid.*, October 23, 1938.
60. *Ibid.*, January 31, 1940.