Sam Hill
and the
Columbia River Highway

Historic Photographs
from Maryhill Museum of Art

[Signature]

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Maryhill Museum of Art founder Sam Hill was one of the Pacific Northwest’s foremost early advocates for modern roads. In his zeal, he traveled around Washington giving slide-illustrated lectures about the value of good roads. Hill lobbied the state legislature and was instrumental in prompting the creation of the Washington State Highways Department (1905). He convinced the University of Washington to fund a Department of Highway Engineering (1909). He promoted good roads at the Alaska-Yukon-Pacific Exposition in Seattle (1909). He also founded the Washington Good Roads Association (1899), helped organize the First Congress of American Road Builders (1909), and co-founded the Pacific Highway Association (1910).

By 1909, Hill realized that sceptics needed to actually see the types of roads that he was promoting. Under the supervision of engineer Samuel Lancaster, Hill then spent three years and $100,000 of his own money building ten miles of experimental roads on his Maryhill estate. These were part of a larger plan that Hill had conceived for a Pacific Northwest transportation grid. The cornerstones of his plan were two north-south paved roads, one on the western side of the Cascade Mountains and another on their eastern flank. The western road—The Pacific Highway—roughly corresponded with today’s Interstate 5 and U.S. Route 99. His eastern road—The Everyday Highway—was the equivalent of present-day U.S. Route 97, which runs through central Washington and central Oregon. These two arterials were to be connected by a road running east to west along the Columbia River from Vancouver, Washington, to the Tri-Cities—The North Bank Highway. Washington State Route 14 now follows this route.

Hill attended the First International Road Congress in Paris in 1908 with Lancaster and other Pacific Northwest good roads advocates. A subsequent tour of Western Europe allowed them to see current continental road-building techniques. Roads in park-like settings in the Rhine River Valley and elsewhere inspired Hill to redouble his efforts to build a highway along the Columbia River.

Unable to convince Washington legislators to fund a highway through the Columbia River Gorge, Hill turned to their Oregon counterparts. In February 1913, Oregon Governor Oswald West, numerous lawmakers and a press
corps—a total of 88 people—traveled by train to Maryhill to inspect Lancaster’s experimental roads. The legislators returned to Salem and established the largely unfunded Oregon State Highway Commission. The state’s lack of financial support passed the responsibility for actual roadbuilding onto the counties.

Hill continued cultivating support for his east-west highway and his effort coincided with a groundswell of interest among Portland’s business elite. In August 1913, the Multnomah County Commissioners agreed to begin construction of an automobile route on the south bank of the Columbia River, something that Hill envisioned as “a great highway so that the world can realize the magnificence and grandeur of the Columbia River Gorge.”

Shortly after Multnomah County committed to the project, Lancaster was hired to engineer the highway and he immediately began work. Design and construction techniques developed on the Maryhill experimental roads shaped the protocols used for the developing Columbia River Highway. Lancaster and Hill carefully considered aesthetics—they believed roads should be part of the landscape rather than an imposition upon it. The route thus included adjacent viewpoints, wayside rest areas, picnicking facilities, and walkways. As a result, the finished Columbia River Highway became a showpiece, called by some, the “King of Roads.”

Steven L. Grafe, Ph.D.
Curator of Art
Steamboats have a long history in the Pacific Northwest, beginning with the appearance of the Beaver, which arrived in Oregon City, Oregon, in 1836.

Commercial boat traffic on the Columbia River above Portland was restricted by the presence of the Cascades Rapids. A private, mule-drawn portage railway was built there in 1850, allowing boats to run above and below that point. The Oregon Railroad & Navigation Company, which already owned a near-monopoly of local marine traffic, completed a rail line through the Columbia River Gorge in 1882. The OR&N soon moved its boats off that section of the Columbia River and transferred the carriage of both passengers and freight to its railway. Nevertheless, shippers opposing the OR&N grip on the regional economy convinced Congress to build a canal and locks at the Cascades. Work was begun there in 1893 and completed three years later.

Steamboats remained active on the Middle Columbia River but by 1916, the railroad and Columbia River Highway were forcing their demise. The sole surviving steamboat made its last run through the Columbia River Gorge in 1947.
Between 1909 and 1912, Sam Hill spent $100,000 of his own money building more than seven miles of experimental roads on his Maryhill property. Among these was the three-and-a-half-mile stretch called the Maryhill Loops or Maryhill Grade. The route ascended 850 feet up from the village of Maryhill towards Goldendale. Its gentle grades and horseshoe curves became the prototype for the figure-eight loops used on the Columbia River Highway.

In February 1913, Governor Oswald West, numerous Oregon legislators and a press corps—88 people in all—traveled to Maryhill to inspect Hill’s work. Inspired, the lawmakers returned to Salem and established the Oregon State Highway Commission. Soon afterward, the Multnomah County Commissioners agreed to begin construction of an automobile route through the Columbia River Gorge and work began in late 1913.

The dry masonry retaining walls with guard rocks that are visible here were the work of Italian stonemasons. Hill had convinced 20 Italian masons who were working on his Massachusetts estate to come west and turn their skills to the building of roads. This style of retaining wall was replicated at several points on the Columbia River Highway.
J.C. Potter was a long-time associate of Sam Hill. He was an officer and director of Portland’s Home Telephone & Telegraph Company and president of the North Canal Company, which sought to provide irrigation and electrical power to rural Oregon communities. He was present at the August 27, 1913, Chanticleer Inn meeting that ended with the Multnomah County Commissioners approving the construction of the Columbia River Highway. Potter was affiliated with the effort to build the Stonehenge Memorial at Maryhill. He was also present with Hill at the 1921 recovery of a reputed Mayflower relic from England, taken for enshrinement in the Peace Arch in Blaine, Washington.

Amos S. Benson was a civil engineer who worked for John Yeon as the Assistant Multnomah County Roadmaster for the construction of the Columbia River Highway. He was the son on Simon Benson and discharged major responsibilities in the family timber business. Like his father, Amos was also a philanthropist. In 1922, Amos purchased the newly built Columbia Gorge Hotel from his father, but only retained ownership for a short time. He later moved to the Los Angeles area and became a financier there.
The Columbia River Highway construction camp was established at Multnomah Falls in October 1913. The following March, another was founded near Chanticleer. It provided housing for 135 more workers. A total of five camps were created in Multnomah County, all of them were near the existing railroad line. This provided for the convenient transportation of people and supplies.

Much of the highway’s earthmoving work was done by hand, although horses were sometimes used as well. As the road grade began to take shape, rails were laid, and ore cars moved earth and rock away from work sites. During the course of the 1914–1916 construction activity in Multnomah County, 2,200 workers were involved in the project. In addition, volunteer day-laborers occasionally came out from Portland as part of organized work parties.

These ore cart lines were probably east of Crown Point. Standing left to right are Assistant Multnomah County Roadmaster Amos S. Benson, Multnomah County Roadmaster John B. Yeon, Sam Hill, and an unidentified man.
The promontory that is now called Crown Point was once known as Thor’s Heights, a name inspired by the Norse god of thunder and applied by the Danish immigrants who owned it. Lancaster convinced them to donate the property so that it could be incorporated into the route of the Columbia River Highway. He then designed his road to traverse the circumference of the point and placed a sidewalk—built on piers—on the outside of that curve.

Although it was originally touted as a farm-to-market road, the Columbia River Highway gained immediate appeal for the recreational opportunities it provided affluent automobile owners. Before the highway was even completed, Crown Point was identified as an ideal location for a comfort station. A groundbreaking ceremony there was included in the road’s June 6, 1916, dedication events.

Vista House’s initial plan called for a modest structure built with equal shares of private and public funding. The final design produced a building that cost nearly $100,000—five times the original estimate. During construction, private fundraising efforts failed, and Multnomah County ultimately had to absorb most of the construction costs.
Samuel Lancaster believed that Crown Point and its sweeping panoramic views were ideal for “an observatory from which the view both up and down the Columbia could be viewed in silent communion with the infinite.” His idea for constructing a building on the promontory’s summit stemmed from his desire to inspire travelers on the Columbia River Highway and make the wonders of the Columbia River Gorge accessible to them.

The appearance of Crown Point would be very different today if entrepreneurs had fulfilled with their ideas for its development. In 1915, plans were announced for an enormous Tudor Gothic-style hotel that would wrap around the site. An adjacent gondola would bring visitors up from a railroad station at Rooster Rock. Most egregious was the planned hotel’s idea for a giant pipe organ and chimes that would broadcast music throughout the Columbia River Gorge. These ideas all came to naught with the 1916 death of the developer, Richard T. Dabney. Nonetheless, 96 home plots were plotted around Crown Point that same year. Happily, construction of Vista House also began in 1916 and the locale is now a protected part of Oregon’s state park system.
Samuel Lancaster’s recollection of the Maryhill Loops Road proved beneficial when he located the Columbia River Highway route between Crown Point and Latourell Falls. A crow flying between the two points need cover only a mile and a half of distance, but the highway takes two and a half miles to traverse the same ground. The resulting slopes are fairly gentle—and the road parallels itself five times.

Each on the highway’s bridges was designed to fit with their specific topography. They were designed to be as light, graceful, and durable as period construction techniques allowed. Latourell Creek Bridge is one of eight deck arches built on the highway. It is 316 feet long and its main piers extend 97 feet up from streambed to bridge deck.

When it was first built, travelers could see the falls from the bridge, but vegetation has now grown up to obscure the view. This wild, forested look contrasts with Lancaster’s original idea that the Columbia River Highway would be bordered by a tame and cultivated European landscape.

In 1911, Guy W. Talbot of Portland bought land that included Latourell Falls. A later donation of 220 acres to the State of Oregon became Guy W. Talbot State Park.

Here, an American flag flies above the Columbia River Highway at the east end of the bridge above Young’s Creek at Shepperd’s Dell. A group that includes Samuel Lancaster may be seen in an automobile in the foreground.

Shepperd’s Dell was a name applied to this locale by its owner, a dairy farmer named George Shepperd. The creek and its nearby falls were sacred to Shepperd and his wife, Martha. Although he had previously donated a portion of his property for highway right-of-way, he did not want to release the 11-acre parcel after his wife died. Lancaster convinced Shepperd to turn the land over by arguing that automobile access would allow many people an opportunity to share the beauty of the spot. He subsequently gave the property to city of Portland as a memorial to Martha.

The bridge above Young’s Creek is 100 feet high. A stairway down and a short trail to a viewpoint were built at the bridge’s east end and provide visual access to the 220-foot-tall falls.
Mist Falls lies between Bridal Veil Falls and Wahkeena Falls. Samuel Lancaster described it as “a clear wisp of water which falls over the high cliffs in a series of cascades from an elevation of 1,500 feet. In … its last wild leap [it] is lost in mist and spray, for every wind that blows drives it about, and sometimes carries it straight up, before it settles on the trees and vegetation below.” The dense vegetation along the Columbia River Highway now hides it from view but it can be seen from Interstate 84.

Many early travelers on the Columbia River Highway were accustomed to hearty Sunday dinners and they found the fare they sought at the highway’s many roadhouses. These included Chanticleer Inn (1912–1930), Crown Point Chalet (1915–1927), Latourell Falls Chalet (1914–1915), and Bridal Veil Lodge (1927–1940s). Most vestiges of these once-busy concessions are now gone. Multnomah Lodge was built below Mist Falls in 1916. Also called Mist Lodge, the facility served light lunches and dinners and provided lodging. A 1921 winter storm caused its roof to cave in, but it was rebuilt. The lodge did not, however, survive a 1929 fire and the concurrent onset of the Great Depression. Its moss-covered fireplace is still visible on the south side of the highway below Mist Falls.
Albert H. Barnes (American, 1876–1920), *Sam Hill and Others on the Columbia River Highway near Wahkeena Falls*, c. 1915; Gift of Samuel Hill, Collection of Maryhill Museum of Art, 1938.1.294

As the Columbia River Highway was being constructed, Sam Hill made numerous trips through the project with a variety of prominent individuals. One of Hill’s more noteworthy trips occurred in July 1915, when he, Chief Forester of the U.S. Forest Service, Henry S. Graves, and Assistant Forester E.A. Sherman toured the highway with Samuel Lancaster, Amos Benson, and more than 30 prominent Portlanders. The party covered the route of a proposed loop road around Mount Hood from Portland, though the Columbia Gorge and up the Barlow Road to Government Camp.

As a result of the trip, Graves promised that 14,000 acres of Forest Service land near the Columbia River Highway would be set aside for recreation. He also announced that the Forest Service would fund a location survey for a 20-mile stretch of road on the east side of Mount Hood—allowing for the eventual completion of the loop.

Sam Hill is standing here by the passenger side of the car at left. One-fourth of the large rock on the right-hand shoulder of the road was cut away to accommodate placement of the road. It is still visible just west of Wahkeena Falls.
Samuel Lancaster sought to build the Columbia River Highway to highlight the many “beauty spots” in the Columbia River Gorge. During the second half of the 19th century, Multnomah Falls had attracted numerous steamboat travelers. The Oregon Railroad & Navigation Company also built a station and loading platform for its excursion passengers there when trains began traversing the Columbia River Gorge in 1883.

On June 6, 1916, an estimated 10,000 people attended the dedication of the Columbia River Highway at Multnomah Falls. The falls is now Oregon’s premier tourist destination and attracts between two and three million visitors annually.

A temporary wooden structure called the Multnomah Hazelwood served ice cream and refreshments at the falls from 1916–1919. Construction on the Multnomah Falls Lodge also began in 1919. It was designed by Portland architect Albert E. Doyle, was also responsible for the Benson Hotel, the Meier & Frank Building, the Multnomah County Central Library, and buildings at Portland’s Reed College. The lodge was dedicated in 1925 and its ownership transferred to the U.S. Forest Service in 1939.
Multnomah Falls is comprised of adjacent cataracts that drop 542 feet and 69 feet. They together form one of the tallest waterfalls in the United States.

Samuel Lancaster felt that Multnomah Falls was set in an ideal location—“It is pleasing to look upon; and in every mood, it charms like magic, it woos like an ardent lover; it refreshes the soul; and invites to loftier, purer things.” He also considered it one of the most important sites on the route of the Columbia River Highway.

Footbridges above the lower falls date to at least the 1880s, where they were used by visitors who arrived by steamboat and railroad. In 1914, Lancaster suggested to Simon Benson that a concrete footbridge could appropriately be built there, and Benson paid for the bridge himself. The structure is 45 feet long and is more than 100 feet above the base of the lower falls. Benson ultimately purchased the area surrounding Multnomah Falls and donated it to the City of Portland in 1915.

The highway bridge across Multnomah Creek is less than 70 feet long. On average, it accommodates more than 5,000 vehicles every day.
Immediately east and west of Multnomah Falls, the Columbia River Highway was afforded only a narrow right-of-way between the existing railroad line and the foot of steep, unstable hillsides. Even minimal modification of the adjacent slopes presented the possibility of landslides that would have covered both the highway and railroad.

When completed, the East Viaduct was 860 feet long. It was built above the height of the adjacent trains and is a freestanding structure for most of its length. Lancaster insisted that flowering shrubs be planted along the south (uphill) side of the viaduct to provide travelers with the impression that the road surface had been placed on solid ground.

The concrete railing here shares affinities with the design of bridge rails at Oneonta Creek, Horsetail Falls, and elsewhere. It employs course of posts and arches with beveled caps, all sitting on a concrete curb.

Oneonta Gorge is located off the Columbia River Highway about two miles northeast of Multnomah Falls. Oneonta Creek forms Lower Oneonta Falls a short distance upstream from the road, at the end of a short, 200-foot-high ravine. The higher elevations of the gorge are home to three additional waterfalls: Middle Oneonta Falls, Upper Oneonta Falls and Triple Falls. This view looks downstream (north) from inside the narrow, lower gorge.

The Columbia River Highway crossed Oneonta Creek on an 80-foot-long bridge with railings that were similar to those used on the long viaducts constructed immediately east and west of Multnomah Falls. The depth of the gorge made it impossible for travelers to see Oneonta Falls from the road, but adventuresome souls who were willing to get wet could walk up the creek bed to see it.

Oneonta Gorge was named by photographer Carleton Watkins, who first took photos there during the 1880s. He named it after his hometown of Oneonta, New York. The gorge’s cool, damp environment is home to more than more than 50 species of plants.

Construction workers are here clearing out the tunnel through Oneonta Bluff. The basalt there was not as solid as was initially believed. Lancaster subsequently developed a scheme whereby crews injected concrete into the crevasses in the rock so that when blasting and digging began, many tons of rock would not fall onto the adjacent railroad tracks.

Once it was safe to proceed, dynamite charges were detonated and workers loaded the resulting debris into ore cars that were moved on rails to the tunnel’s portals, where the material was dumped. Crews trimmed the roof and walls with picks and hammers after each shot and this material was also moved out to the portal areas.
Oneonta Bluff sits immediately east of Oneonta Creek. When the Columbia River Highway passed Oneonta Gorge, the proximity of the railroad line left the road builders with only a single option: tunnel through the rock.

A 125-foot-long hole was drilled to create the tunnel. Lancaster also lobbied for the creation of a lining inside the tunnel because of fears that frost action and moisture would cause the porous and seamed rock to fall and injure motorists as they traveled through. The surplus area between the raw, blasted hole and the finished lining was filled with cordwood. The completed tunnel was slightly more than seventeen feet high and seventeen feet wide.

In 1948, the Columbia River Highway was re-routed around the bluff on what had been the old railroad right-of-way. The tunnel was then abandoned and filled. Restoration efforts resulted in its being re-opened for pedestrians in 2006. The restored timber lining burned away during the 2017 Eagle Creek Fire and the tunnel is now closed to the public.

Despite the widespread use of hand labor, the Columbia River Highway section between Troutdale and Hood River—50 miles—was begun in 1913, completed in 1915, and paved by June of the following year.

These workmen are working on a section of the highway between Horsetail Falls and Oneonta Gorge. They are moving rock and earth debris in an ore car, a technique that was used throughout the construction project. The slope above the road is now heavily forested and the basalt bluff in the distance can no longer be seen.
Horsetail Falls is a 50-foot cataract that lies just east of Oneonta Bluff and its tunnel. The Columbia River Highway is situated so near to the falls that spray can drift onto sight-seeing pedestrians and passing cars.

A nearby path leads hikers to the upper reaches of Horsetail Creek and a waterfall that is called Upper Horsetail Falls or Ponytail Falls. In addition to his work on the Columbia River Highway, Samuel Lancaster also initiated the creation of a trail system that allowed visitors to explore the backcountry that was above the newly built road.

The 60-foot-long bridge over Horsetail Creek was constructed of reinforced concrete and completed in 1914. It is a shorter version of the bridge that was built across nearby Oneonta Creek. The railing of the Oregon-Washington Railroad and Navigation Company bridge is visible in the lower foreground.

As the Columbia River highway moved east from Horsetail Falls towards McCord Creek, its builders enjoyed four miles of generally gentle grades, no creek crossings, and no rocky obstacles that needed to be skirted or modified.
The crossing of McCord Creek occurs a little more than six miles northeast of Multnomah Falls. Unlike many of the other bridges on the Columbia River Highway, Karl Billner designed the McCord Creek Bridge with utility rather than aesthetic appeal in mind. Lancaster’s choice of road alignment caused the structure to be 365 feet long and it was constructed without the arches that appear in the bridges further to the west.

In 1950, when what is now Interstate 84 bypassed the Columbia River Highway, the McCord Creek Bridge received major renovations and carried the eastbound lanes of the new road. It was replaced entirely in 1997.

The Oregon-Washington Railroad and Navigation Company railway line is here visible just north of the bridge. Beacon Rock can be seen across the Columbia River in Washington State.
The Mitchell Point Tunnel and Viaduct were the most difficult obstacles overcome during the construction of the Columbia River Highway. The undertaking produced a 192-foot reinforced-concrete slab viaduct that led into the west end of a 390-foot windowed tunnel.

Crews had difficulty locating viaduct footings because of the unstable talus slope. Excavations were made by hand, with cribs being placed and men working as much as 65 feet below ground level. Excavated materials were dumped into buckets and hoisted up by hand with the help of a windlass. Several columns were nonetheless founded on unstable rock.

The proximity of the railroad line caused the needed concrete plant to be built on a platform at the toe of the slope. Crews then hoisted concrete in half-yard buckets up nearly 100 feet to the road level, where it was dumped into cars that ran along a track to the viaduct site.
The Mitchell Point Tunnel allowed the Columbia River Highway to pass through a massive stone outcropping rather than skirt it by way of a precipitous and lengthy detour. It was designed by Elliott and inspired by a windowed tunnel that Lancaster had seen on Switzerland's Axenstrasse.

The tunnel was blasted through 390 feet of solid basalt at an elevation that was almost 100 feet above the Columbia River. Five windows provided a view of the landscape below. The tunnel's 18-foot-wide roadbed was adequate for two-way traffic when it was built, but as larger passenger cars and truck traffic became more common, signals were installed at the tunnel's two portals. These allowed one-way traffic to proceed while avoiding collisions.

A wider, river-level route was eventually built around Mitchell Point and the tunnel was closed in 1953. The windows were filled with bricks, the passage was filled with rocks and the adjacent viaducts were blocked. It remained intact until 1966, when it was destroyed during widening of the interstate highway below.
Who Was Who in the Construction of the Columbia River Highway

Samuel Hill—entrepreneur and promoter of the Columbia River Highway. Hill was a committed good roads advocate who famously said, “Good roads are more than my hobby, they are my religion.” With several of his friends, he formed the Washington State Good Roads Association in 1899 and served as its president until 1910. Hill viewed scenery as a “marketable asset” that could be developed and sold to tourists through a network of good roads. He once said, “We will cash in, year after year, on our crop of scenic beauty, without depleting it in any way.”

Samuel C. Lancaster—engineer who was appointed chair of the Highway Engineering Department at the University of Washington. Lancaster attended the First International Road Congress with Hill in 1908. With friends, the two then took an auto tour of Europe, examining the continent’s road systems. Lancaster designed the experimental roads on Hill’s Maryhill property and pioneered the route of the Columbia River Highway through Multnomah County. He established the standards for the highway’s construction and championed Crown Point as a site for an observatory. Lancaster’s design for the Columbia River Highway ultimately melded European style with American engineering standards.

John B. Yeon—timber baron and prominent Portland businessman. Yeon served as Multnomah County Roadmaster during the construction of the Columbia River Highway. As Roadmaster, he had oversight of the 2,200 men who ultimately worked with picks and shovels to complete the project. Yeon’s own financial assets allowed him to discharge his duties and receive only one dollar per year for the two years that he worked on the highway.

Simon Benson—timber baron and Portland businessman and philanthropist. Simon Benson was a political and economic force behind the development and construction of the Columbia River Highway. He purchased and donated to the City of Portland the area that encompassed Multnomah Falls, Wahkeena Falls, and what is now Benson State Park. In 1914, Hood River County voters approved a $75,000 bond issue to pay for construction of the highway between the Multnomah County line and Hood
River. When sales proved sluggish, Benson purchased the entire issue and promised to pay for any construction cost overruns.

**Amos S. Benson**—business associate of his father, Simon Benson. During the construction of the Multnomah County section of the Columbia River Highway, Amos Benson worked under John B. Yeon as Assistant Multnomah County Roadmaster.

**John Arthur Elliott**—former engineering student of Samuel Lancaster at the University of Washington. Elliott was appointed to locate the highway’s route through Hood River County and Wasco County. This included the design and construction of the Mitchell Point Tunnel.

**Karl P. Billner**—bridge designer who worked for the State of Oregon. Billner was responsible for designing many of the bridges and viaducts between Crown Point and Horsetail Falls.

**Lewis W. Metzger**—State of Oregon bridge designer. Metzger designed several of the bridges on the route of the Columbia River Highway, including the crossings over Moffett Creek, Tanner Creek, and Eagle Creek.

**Conde B. McCullough**—Oregon State bridge engineer. McCullough was designer of the Mosier Creek and Dry Canyon bridges and the crossing of Chenoweth Creek in The Dalles. He became head of the Oregon Department of Transportation’s Bridge Division in 1919 and was responsible for a series of celebrated bridges on Highway 101 along the Oregon coast.
Further Reading

Fahl, Ronald J. “S.C. Lancaster and the Columbia River Highway: Engineer as Conservationist.” *Oregon Historical Quarterly* 74.2 (June 1973): 101–44.


