

VALUATION SECTIONS WASHINGTON 4, 5, and 5a.

GENERAL LOCATION:

Valuation Section Washington No. 4 covers all property in the City of Seattle jointly or individually owned or used by the Chicago, Milwaukee and St. Paul Railway Company, and also covers this Company's right to use, under a lease, the tracks of the Columbia and Puget Sound Railway (now Pacific Coast Railroad) extending from the end of Valuation Section Washington No. 1 at Maple Valley to Seattle. This comprises about eleven miles of single main track and twelve miles of double main track owned by the Pacific Coast Railroad, and used under lease by the Chicago Milwaukee and St. Paul, several miles of yard tracks in Seattle individually owned by the Chicago Milwaukee and St. Paul, and several miles of industrial tracks in Seattle jointly owned or used.

Valuation Section Washington No. 5 covers the main line between Black River Junction and Tacoma Junction, comprising about 28 miles of single main track. This section was built by the Chicago Milwaukee & Puget Sound Railway Company for the Chicago Milwaukee and St. Paul Railway Company but is at present jointly owned by the Chicago Milwaukee and St. Paul Company and the O. W. R. & N. Company.

Valuation Section Washington No. 5a covers all property either jointly or individually owned or used by the Chicago Milwaukee and St. Paul Railway Company in the City of Tacoma, including the lines known as the Tacoma Local Terminals and the Tacoma Sound Terminals.

RECONNOISSANCE AND SURVEYS:

A reconnoissance was made in July and August 1904 between Maple Valley, Seattle and Tacoma. This report recommended the so-called "Cedar River Line" between Maple Valley and Seattle, and the so-called "Bluffs Line" between Seattle and Tacoma. This seemed a very feasible location and was strongly advocated by the Chief Engineer, who was afraid of the flood conditions in the various streams if a lower line was adopted. This line can be briefly described as hugging the north side of the Cedar River Valley very closely between Maple Valley and Black River Junction, crossing over the Columbia and Puget Sound Railway, the Northern

Pacific Railway, the Puget Sound Electric Railway, and the Duwamish River on a high crossing near our present Black River Junction, and entering Seattle from the south and west. It was planned that the line to Tacoma would leave this line on the west side of the Duwamish River just west of our present Black River Junction and follow the west side of the Duwamish, White, Stuck and Puyallup River valleys to Tacoma. The line to Tacoma was to hug closely the bluffs, crossing the line at its Bluffs station, revising that line to take it over the Chicago Milwaukee and St. Paul tracks. Surveys were started on this route but after a more careful examination of the country had been made the Chief Engineer reluctantly abandoned this so-called Bluff Line and a direct line through the valley between the Northern Pacific Railway and Puget Sound Electric Railway was decided upon.

Strong objections were raised to a route confined between these two Railways, and examinations and surveys were made for a line crossing the Electric Road at what was then called Stuck Station, about two miles south of Auburn and paralleling the Electric Line on the west to a connection with the main line west of Black River Junction. A new survey was made between the point of connection near Black River Junction and Seattle, paralleling the Electric Road to a point south of Riverton, thence swinging to the west, passing back of the Riverton stone quarry, crossing the Duwamish River west of Georgetown, and following Colorado Street to the terminal property in Seattle.

Lines were also surveyed crossing the Northern Pacific Road near Auburn and following the east side of the White River Valley to a connection with the Cedar River Line near Renton. Lines were also investigated through the range of hills lying between the White River Valley and Puget Sound with the thought of shortening the distance between Seattle and Tacoma, but owing to the height of the hills and the short drainages encountered, this project was early abandoned. This range of hills terminates at Sumner in a bluff about 500 feet high, which point became the controlling feature in the location of the line.

Early in April 1906, the arrangement was made with the Columbia & Puget Sound Railway for the use of their tracks between Maple Valley and Seattle and the survey for the present line between Seattle and Tacoma was then completed. This line crosses the Northern Pacific near Black River Junction, and under the Renton Branch of the Puget Sound Electric near Renton Junction. Between Renton Junction and Auburn it lies between and practically parallel to the Northern Pacific and the Puget Sound Electric Railways, crossing the White River between Kent and Thomas. Near Auburn the Puget Sound Electric diverges to the west and the Chicago Milwaukee and St. Paul continues on south, encircling the bluff at Sumner, thence in a general northwesterly direction down the Puyallup River Valley to Tacoma. In making the surveys great care was taken to ascertain high water information and the grade line was laid accordingly.

It was originally planned to go through the Sumner Bluff in a tunnel about 1000 feet long, but when it developed that a large amount of material would be required to construct the fills in the valley where, owing to swampy conditions, side borrow was not obtainable, it was decided to make a mammoth borrow pit of this point, and a 4 degree, 30 minute curve line was located and a temporary 7 degree, 30 minute line was built. The line is being gradually thrown back to its proper location.

SUMMARIZING:

The surveys on the Tacoma Line were started about November 15th, 1905, with two locating parties, and were completed in May, 1906. Approximately 150 miles of preliminary survey was made to produce the 28-3/10 miles of adopted and constructed line.

CONSTRUCTION ORGANIZATION:

Three Resident Engineers were placed on the Tacoma Line in May 1906 to take charge of the construction. These Engineers reported direct to the Division Engineer in Seattle.

When the so-called Bluffs Line was decided upon in 1905 it was thought work could be commenced at once, and a small outfit of teams was sent to this work from the East by McIntosh Bros., who at that time contemplated handling the construction of the entire Puget Sound Extension. This outfit arrived about November 25th, 1905, but in the meantime the so-called Bluffs Line had been abandoned and the direct line across the valley decided upon. Surveys were in progress but the work had not advanced to such an extent that construction could be started; consequently this team outfit was delayed until December 20th, when they went to work between Auburn and Sumner. This outfit worked until June 1906, at which time a settlement was made and they were moved to the eastern part of the state. In the meantime, the contract with H. C. Henry for the construction of the line west of Butte had been made, and in May 1906 he sublet the work between Seattle and Tacoma to Cross and Sanders, who did most of the grading work themselves. The bridge work was let by H. C. Henry to W. J. Cross.

CONSTRUCTION:

In general, this line between Black River Junction and Tacoma traverses a valley which is to a certain extent boggy and soft. Good side borrow in sufficient amount to finish the embankments could not be obtained in many cases. Consequently the embankments were made low and narrow and were completed with train hauled material from the Sumner pit after the track was laid.

Notwithstanding the fact that considerable attention was paid the matter of high water in laying the grade line, an unprecedented flood occurred in November 1906 and considerable damage was done to the new embankments then under construction. This flood, and the continued wet weather during the winter of 1906-07 seriously delayed the construction work and added to the expense. Numerous standard pile trestles were built in places where side borrow could not be obtained and where high water

conditions were uncertain, many of which trestles have since been filled with material from the Sumner pit.

Some clearing and grubbing were necessary as the land was not entirely under cultivation at the time of construction.

In connection with placing culverts it was necessary to haul in material and to construct a more solid foundation as the culverts necessarily occurred in soft ground. The bridges were built in accordance with the standard plans of the Railway Company.

A large amount of riprap was placed. The greater part of this material was obtained from the Bell-Scott Company, who had quarries at Wilkeson on the Northern Pacific. The cars were received over the transfer track with the Northern Pacific at Tacoma, and hauled to the point of unloading by work train.

TACOMA LOCAL TERMINALS:

All of the grading on the Tacoma Local Terminals for that part of the line between Tacoma Junction and A Street was done by the Railway Company Forces. The material was largely hardpan although some solid rock was encountered. The land between K and G Streets was very swampy and considerable settlement and subsidence has occurred on the fill at this place. The property was largely covered with buildings at the time of purchase, which were moved or razed at considerable expense. It was necessary to regrade the road and street crossings and rebuild sidewalks, where they were encountered. The street in front of the freight house and team tracks was regraded to accommodate those facilities.

TACOMA SOUND TERMINALS:

The fills for the yards at the Tacoma Sound Terminals were largely made from material obtained in dredging the waterways to the docks and wharves. Substantial bulk heads with riprap and brush were placed to prevent washouts during the filling. Entrance to these terminals was originally obtained on a long pile trestle which has since been filled and the line double tracked.

Many of the industrial spurs to the mills, etc. in these terminals were built across land that had been previously filled with slabs and sawdust, making the construction of the trestles unusually expensive.

SEATTLE TERMINALS:

About the same conditions held true in the Seattle terminals as in the Tacoma Sound Terminals, although with the exception that a large amount of the property in the Seattle Terminals lies close to the city water front while that in Tacoma is in a more outlying district. It was necessary to dredge and place a large amount of material in the Seattle Terminals as much of the adjacent property which is now improved was not improved at the time of construction.

Numerous complications in the way of street, water and railway crossings occurred in these terminals, which added materially to the delay and expense of the work. A large amount of paving and planking for roadways and crossings was required at the freight house and various team tracks. An extensive trackage layout was constructed near Georgetown at the Van Asselt yards for storage purposes and for the separation and classification of the Tacoma and Seattle freight.

MAIN LINE MAPLE VALLEY TO SEATTLE:

In accordance with the terms of the lease with the Columbia and Puget Sound Railway a large amount of improvement work was done by that Company to bring their railroad up to the standard of the Chicago, Milwaukee and St. Paul Company. In addition to the work done by the Columbia and Puget Sound Company the Chicago, Milwaukee and St. Paul Company built a passing track for their individual use adjacent to the track of the Columbia and Puget Sound at Maple Valley; and at Black River Junction the Chicago, Milwaukee and St. Paul together with the O. W. R. & N. Company did considerable work in changing the line of the Columbia and Puget Sound to permit a revision of the connections at this point.

BUILDINGS:

The station buildings belonging to the Columbia and Puget Sound Railway are used in common with that Company on the line between Maple Valley and Seattle. Between Black River Junction and Tacoma, combination freight and passenger depots were built at Kent, Auburn, Sumner and North Puyallup, and section facilities at places convenient to the work.

At the Tacoma Local Terminals a large freight house, capable of handling the business, with rooms for the Agent's offices, was built. A two story frame passenger station which was purchased from the Tacoma Eastern Railroad is used temporarily. In the Tacoma Sound Terminals complete and extensive engine and terminals shops, car construction and repair shops, etc. were built, together with large docks, wharves, warehouses and grain elevators for the transfer of shipments from cars to ocean going vessels, and vice versa.

At Seattle a large freight house and several large storage warehouses were built in addition to the docks, wharves and warehouses, on the water front. The O. & W. passenger station in Seattle is used jointly with that Company. A small engine terminal is maintained to care for the yard engines and the comparatively few road engines that tie up at this point.

It is not within the limits of this article to go into any detail in regard to the extensive building construction and the difficulties encountered in obtaining satisfactory foundations, etc. in Seattle and Tacoma.

MISCELLANEOUS:

Track laying was started at Black River Junction on August 6th, 1908. New 85 pound rail and native fir ties were used. The right of way has been fenced and the proper crossing facilities provided where the conditions require it. Material was distributed by work train and construction carried out by the Railway Company Forces. Telephones are used for train dispatching purposes, being placed in the depots and in booths at blind sidings. Automatic block signals are used over the entire section.

ELECTRIFICATION:

From Maple Valley to Tacoma the line has been equipped and is operated by electricity. This is a continuation of the electrification described in Section Washington 1 with substations at Renton and Tacoma.

OPERATION AND MANAGEMENT:

The line used under the trackage right lease with the Columbia and Puget Sound Railway Company's is operated under the supervision of that Company's officials. Operation on the remainder of these sections is supervised by the Coast Division officials, with offices in Tacoma.

The O.W.R. & N. trains are operated between Black River Junction and Tacoma Junction under the supervision of the Chicago, Milwaukee and St. Paul Railway Company officials.