Building the Lake Division to Duluth differed in several ways from the 1883 construction of the mainline to Soudan. The terrain was relatively flat with no large hills or steep grades to contend with. There were no large swamps to cross and the curves were not sharp.

What it did have was many creeks and rivers to deal with, rock to blast, and red clay -- lots and lots of red clay along the entire length of the new track. Disposing of this material became an annoying problem. Then someone came up with the idea of hauling it to a trestle on flatcars and dumping it into the river. Then it was just a matter of letting the stream carry it away to Lake Superior. It was a cheap and easy solution to the problem, but as with many seemingly great ideas, there was an unseen flaw in the plan. Once the streams delivered the mud to the lake, the current took over and carried it toward Duluth. The city pumping station was at Lester Park and the water it drew from the lake was unfiltered and untreated. Thus if the water was full of mud in the lake, that was exactly what you got from the city water line. It didn't take long before the railroad men noticed the fouled water being carried in that direction. Luckily, the current kept it away from the intake pipe, but the practice of dumping into the rivers was immediately stopped.

At one point a horse team became mired in a mud hole and another team had to be brought over to pull them out. As the work began to wind down, on December 15th a rock from the last dynamite charge hit contractor F. L. Erickson in the head. He survived his injury, but two other workmen had been killed during the course of the work on the 26-mile long line. One of these fatalities occurred when a rock rolled down on a man, and a premature explosion caused the other.

A total of 300,000 cubic yards of earth and 35,000 cubic yards of rock had been moved. 4,500 yards of masonry walls were built and 1,500,000 feet of lumber used. Also required were 70,000 pounds of bolts, 80,000 railroad ties, and 21,000 feet of timber pilings. On December 20, 1886 the first regularly scheduled train, which was a passenger train, left Duluth at 8:10 A. M. and arrived at Soudan at 12:45 P. M. The D&IR had fulfilled its obligation to build to Duluth and received its long awaited land grant. December 20th was a very good day.