

Guard rails and "stop" signs should be placed as noted in the notes of the track and roadbed inspection.

The requirements noted in the description of the grade and curves along the high bank on the private right of way should be complied with.

A copy of this report was sent to the company, with a letter, making the recommendations of the electrical expert the recommendations of this Board. At the time of writing this report, nothing has as yet been heard from the company on the subject.

LEWISTON AND YOUNGSTOWN FRONTIER RAILWAY.

August 23, 1900.

I have made an inspection of the Lewiston and Youngstown Frontier Railway Company's system and submit the following:

This system extends from Lewiston to Youngstown, a distance of 7 miles, all single track with turnouts, 5 miles of which is located on private right of way. It is constructed of 60-pound T and 9-inch 90-pound girder rail laid in 1896. Ties are cedar and joints are fish plates with four bolts. On the system there is one piece of trestle. The maximum grade is 7 per cent. for $\frac{1}{2}$ mile, and there is one steam railroad crossing.

The company owns 9 cars, 2 of which are closed, 5 open, 1 freight box car and 1 freight flat car. The closed cars are compartment baggage, express and mail: Of the open cars one is 12, and four 8 bench. The closed cars are heated by electricity with oil and electric headlights, sand boxes, no fenders and no lanterns or red flags are carried; open cars are equipped with sand boxes and all cars have single chain hand brakes. The motor equipment on all of the cars except the freight motor are G. E. 1,000. On the freight motor there are two G. E. 1,200. All trucks are double Brill trucks, the tread of wheel is $2\frac{1}{2}$ with $\frac{7}{8}$ -inch flange.

Power.

The power for the operation of the road is rented from the Niagara Falls Hydraulic Manufacturing Company, and is generated by water power.

Car Barn.

The car barn is a one story wooden building with shingled roof, 100 x 150 feet, located in the village of Lewiston on Fifth street. It contains two tracks with pits under one. There is no dryer, lake sand being used. The motormen inspect cars and the conductors clean the cars. The cars are overhauled once a year.

At Youngstown the company own Rumsey Park, consisting of 18 acres of white oak grove.

Track and Roadbed Inspection.

Commencing at Rumsey Park in the village of Youngstown, there is a siding and platform and covered ticket office. Through the park the track is of 60-pound T-rail with cedar ties and 9-inch girder rail for 1,000 feet outside; then 60-pound T-rail with a reverse curve from the lake road to Jackson street. This curve should have guard rails. From Jackson street to Main street with a special work curve and guard rail to the main line. This branch, which extends from the main line to the park and is used only for excursion business, is in good condition except that the grass is above the rail. There are no grades on this branch.,

On the main line from the government grounds to Main street the track is constructed to 60-pound T-rail with a long easy curve on the government grounds to 9-inch girder rail laid in the center of Main street. There is a small covered depot at the government grounds, the terminus of the line. The track extends on Main street, through the village of Youngstown with a special work curve and guard rail to the center of Church street with special work curves and guard rail to Third street. On this street there is a siding for freight purposes 400 feet long. From this point the track is through private right of way and constructed of 60-pound T-rail. On this private right of way the track is constructed over a three bent trestle which extends over low ground. At its highest point it is 8 inches above the ground. The bents are constructed of four 14 x 14-inch up-rights with 14 x 14-inch sills and top caps, two 8 x 16-inch stringer plates under each rail, all pine timbers; bents are 14 feet apart. There are guard rails over the trestle; ties are sawed oak gained for stringer plates. The approaches on either side are straight and level. A car passing over this trestle causes very little vibration. At what is known as Hopkins, there is a dead end switch 75 feet long for freight purposes. And another of the same kind 50 feet long at Rosebank station. The view of the track from the first highway north of the end of the private right of way is obstructed by trees, and there should be a crossing sign at this point. From the private right of way the track is constructed through Fifth street on the side of the road with 9-inch girder; at the car barn there is a grade of 4 per cent. for 100 feet ascending to the north. At this point the track is in the center of the street and extends into Center street with a special work curve and guard rail. Through the center of Center street to Second street, where it is on the side of the street. At First street there is a grade descending to the river of 7 per cent. for 1,000 feet with a sharp curve at the foot. This point is about 150 feet from the New York Central Railroad tracks; from Center street with a

special work curve and guard rail into a highway, then with level track for 1,000 feet with special work curve and guard into Onondaga street and down a 5 per cent. grade for 150 feet to two tracks of the New York Central Railroad Company. This is a cut crossing with special work in good condition. It is open and clear to view in all directions, and is 500 feet north of the Lewiston depot of the New York Central, and these tracks end 500 feet north of the crossing and are used for car storage. There is no switching done over them. Conductors do not go ahead at this crossing.

The grade in the track continues over the crossing and there is a curve 10 feet from the crossing with special work and guard rail into Water street, then to the end of the line at the New York Central depot and the Gorge Railroad terminus.

Cars are operated on this road on a 40-minute headway in summer and 50-minute in winter, from 6.30 a. m. to 9 p. m. in summer and 7 a. m. to 7 p. m. in winter. The running time between Lewiston and Youngstown is 30 minutes. Extra cars are run on regular car's time as a second section. A single fare of 20 cents is charged between Lewiston and Youngstown. Round trip tickets are sold for 35 cents. A 25-cent round trip ticket is sold on holidays and Sundays and excursion rates are made with the New York Central and Gorge Railroad companies; both of these companies sell coupon tickets good over this company's road. The maximum number of passengers carried in one day last year was 914, on July 4, 1899. The company does a freight and express business and carries mail. The freight and express business is done with the freight box car, and mail is carried on the regular cars.

On October 30, 1899, this company transported the Forty-second Regiment, 1,327 soldiers, from Youngstown to Lewiston, between the hours of 8.30 in the morning and 11.30 in the evening, and in addition carried 105 regular passengers. The company does considerable freight business in car load lots. These cars are hauled over the road in trains, 7 loaded cars and 10 empties being handled in one train by two men in addition to the motorman. The freight cars are not taken over the grades on the Lewiston end of the line, there being a branch connection with the New York Central Railroad about one quarter of a mile in length, extending from the main line at the car barn to the New York Central tracks. This connecting track is laid on the side of the highway and is level and straight. There is practically no grade in the track between Lewiston and the New York Central tracks over this route.

Between June 1 and December 31, 1899, 2,594 tons of freight were taken from Lewiston to Youngstown and 1,915 from Youngs-

town to Lewiston. The number of cars operated each way, 235. The motor car is a 15-foot car with single trucks and two G. E. 1,200 motors. Cars are not operated over the heavy grades in Lewiston during the winter months.

Lewiston has a population of 600 and Youngstown the same. The company has a telephone on the line at the New York Central depot, at the New York Central freight house, at the car barn, at Rumsey's station, at Wilkinson station and at El Dorado Hotel, Youngstown.

The dangerous features on the line of this road is the heavy grade in the village of Youngstown. There are several curves on this grade and the crossing of the switch tracks of the New York Central Railroad. Cars do not now make a stop at this crossing. While there is very little danger connected with the operation of cars over these steam tracks, they should come to a stop after coming around the curve and before crossing the steam tracks. It is not necessary that the conductor should go ahead at this point. The roadbed, ties and rails on this line are in fair condition, but on account of the operation of freight cars over the track the rails should be well braced on the curves.

In conclusion, I would make the following

Recommendations.

That a stop sign should be placed at the top of the fill at First street, in the village of Youngstown, and all cars should come to a stop before going over the crossing. That all cars operated on the heavy grades in the village of Youngstown should be equipped with one of the brakes approved by your honorable Board in your report on the test of brakes for street cars.

A copy of this report was sent to the company, with a letter, making the recommendations of the electrical expert the recommendations of this Board. The company informed the Board that it would comply with the recommendations.

MIDDLETOWN AND GOSHEN ELECTRIC RAILWAY.

December 18, 1900.

I have made an inspection of the Middletown and Goshen Electric Railway Company's system and submit the following:

This system consists of 10½ miles of single track with turn-outs, all located in the city of Middletown and the village of Goshen, and the towns of Wallkill and Goshen, in Orange county. The main line of the system extends from the west portion of the city of Middletown to the village of Goshen, a distance of 8 miles, and a branch known as the city line extends through