

**JAMESTOWN, CHAUTAUQUA AND LAKE ERIE RAILWAY.**

(Inspected May 27 and 28, 1903.)

I inspected the Jamestown, Chautauqua and Lake Erie Railway May 27 and 28, 1903, and respectfully submit the following report:

The Jamestown, Chautauqua and Lake Erie Railway Company has constructed a single track, standard gauge railroad from Westfield on the line of the Lake Shore and Michigan Southern Railway and the New York, Chicago and St. Louis Railroad, to a junction with the Jamestown and Chautauqua Railway at Mayville, and has acquired the property of that railway company. The length of the newly constructed road is 10.8 miles. The Jamestown and Chautauqua Railway, which it has acquired, consists of a main line from Jamestown to Mayville Junction—21.17 miles; the Falconer branch, extending from Clifton, on the main line, to Falconer, on the Dunkirk, Allegheny Valley and Pittsburgh Railroad—3.46 miles; the Chautauqua branch, extending from Mayville, on the line of the Western New York and Pennsylvania Railway, to Chautauqua—2.68 miles; also trackage rights from Mayville Junction to Mayville, on the Western New York and Pennsylvania Railway track. All the above mentioned lines are single track and standard gauge.

The operation of trains on the Falconer branch was discontinued in the fall of 1902, since which time nothing has been done toward the maintenance of that line, and it cannot be operated until extensive work has been done upon it. Therefore, this branch is not further treated in this report.

The equipment consists of 2 combination cars, 5 coaches, 5 open cars, 4 small closed cars, 1 baggage car, 17 flat cars and 5 locomotives. The passenger cars are in fair condition, have automatic couplers and air brakes, are heated by steam and lighted with oil lamps. Water for drinking is provided, and emergency tools are properly located in the center of the car. Chemical fire extinguishers are carried in each car. The cars in use are cleaned with a hose and have floor scrubbed daily. The 17 flat cars have automatic couplers and hand brakes; they are used only in construction and maintenance service. All passenger trainmen are uniformed. Since the last inspection (August, 1901) there have been added to the equipment 1 secondhand locomotive, 5 coaches, 1 baggage car and a gasoline inspection car.

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This newly-constructed road is very crooked and has curves as sharp as 12 degrees. The grades are also steep, the maximum being about 106 feet per mile. For a portion of its length the road runs through a territory the soil of which is heavy clay, and the cuts and embankments, while originally made of fair width and ordinary slopes, have, owing to the slippery nature of the material, been greatly injured. The sides of the cuts have slid in—in many cases entirely filling the ditches—and in places necessitating the changing of the line of the track. The embankments have also slipped, and the track has had to be moved away from the edge of the ravine along which the roadway was for a portion of its length constructed. About midway on this line a gulf about 125 feet in depth is crossed. A 20-foot arch culvert of concrete was constructed in the bottom of this gulf and an attempt made to build an embankment of the clay material from the cuts and the hill adjoining. This material was of such a nature that the attempt to make the fill with it was abandoned, and a temporary trestle about 400 feet in length and 70 to 80 feet in height was erected on a mattress of timbers laid upon the material already in place. After this was done trains were put on hauling gravel to make permanent fill. This fill is now about three-fourths completed. The effect of placing the solid filling on the soft clay has been to force much of the clay over the down-stream end of the culvert; also breaking and removing a special concrete parapet not included in the original construction of the culvert, but which was put there in the effort to prevent the clay running over the end

of the culvert. The building of this parapet was ill advised and its removal will in no way interfere with the usefulness of the culvert. A large force of men is engaged, as well as a steam shovel and two construction trains, making this permanent fill, and great care is taken with the temporary trestle and the operation of trains over it. On all parts of the road where the material is of a better character the cuts and embankments are generally of fair width and proper slopes. The ditches have, however, in some cases become filled and will need extensive cleaning before the wet season commences.

The only iron bridge in the roadway is a 22-foot span deck plate girder over a highway, near Westfield; this is a proper structure and is erected on concrete masonry. There are several trestles in the roadway in addition to the temporary one above mentioned; they are of proper construction and of sufficient strength. No inside guard rails have been placed on any of the structures.

The open culverts and cattle passes have masonry constructed of small field stone laid in cement; several of them were built on insecure foundation and have failed, and will require rebuilding. The arch and stone box culverts and iron and vitrified pipe drains are in good condition.

The crossties—about one-half oak and balance chestnut—are 6x8 inches, 8 feet in length, and are laid at the rate of 2,816 to the mile of track; they are fairly well spaced, and full spiked. The track is laid entirely with new 70-pound steel rail, connected by angle plates 34 inches in length with 6 bolts. All angle plates are full bolted, and all bolts tight. All switches are split point and have rigid stands, with targets in proper condition. Rigid frogs are used entirely, and none are protected by foot guards. The track is lightly ballasted with gravel.

One track of the Western New York and Pennsylvania Railway (operated by the Pennsylvania Railroad Company) is crossed at grade at Mayville; the crossing, as well as switches connecting with the Western New York and Pennsylvania at this place, are protected by a modern and complete interlocking plant. The two main tracks of the Lake Shore and Michigan Southern Railway are crossed at grade at Westfield; this crossing is also protected by a modern and complete interlocking plant.

All trees on the right of way are cut; much of the timber, however, as well as small brush and rubbish yet remain, and should be burned or removed. The fences are of woven wire and in good condition. The highway crossings are well graded, properly planked, and protected by signs of the diamond form. Four crossings are protected by electric bells. No cattle guards are maintained. Mile posts are of plank, and whistle posts are at the prescribed distance from all highway crossings. There are no overhead obstructions.

The track sections are about five miles in length, and a foreman and five laborers are employed upon each.

#### *Recommendations.*

That the cuts and embankments injured by the sliding of the clay material be properly repaired; that the roadway be thoroughly ditched; that the poor masonry of open culverts and cattle passes be rebuilt; that inside guard rails be placed upon all bridges and trestles; that all frogs and guard rails be protected by foot guards; that all timber and brush on the right of way be burned or removed, and that cattle guards with proper guard fences be put in at each boundary of all highways crossed.

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The cuts and embankments are generally of good width and proper slopes. The ditches have been improved since the last inspection (August 30, 1901); there are still remaining some which need to be made wider and deeper. No sub-drains are used.

There is one Howe truss bridge yet remaining; it is in Jamestown yard, and only freight trains operate over it; this bridge, together with trestle approach, is very old and will require renewal or being replaced with a

better structure in the near future. There are no iron bridges in the roadway. There are a large number of pile and frame bent trestles, most of which are short and low structures; they are of standard construction and generally in good repair; a few have poor ties, arrangements for renewal of which have been made; also slight repairs are needed to others, and this is also arranged for. Inside guard rails are not maintained. All open culverts and cattle passes are built entirely of wood, with timber or pile bents, planked behind, for abutments; these are in much better condition than when last inspection was made, and several have been replaced with iron pipe and filling. All box culverts are constructed of wood; these are being replaced with iron pipe as rapidly as renewal becomes necessary; a few were observed which should be replaced promptly.

The cross ties—about one-half oak and balance chestnut—are 6 x 8 inches, 8 feet in length, and are laid at the rate of 2816 to the mile of track; their condition has been improved since the last inspection; about 10 per cent. of renewals will be required this season. The track is laid entirely with 60-pound steel rail connected by angle plates 24 inches in length with 4 bolts. The rail is in very fair condition generally; a few rails which had been injured by wheels of locomotives slipping were observed; these should be replaced. On the main line, practically all angle plates were full bolted, and no loose bolts were observed; on the Chautauqua branch many bolts were missing, and should be supplied. All main track switches are split point with the exception of one stub switch yet remaining in the Chautauqua branch. The switch stands are rigid and have targets which are generally well painted. Rigid frogs are used and only a portion of them are protected by foot guards. The track is very lightly ballasted with gravel and cinders, and grass and weeds are growing plentifully between the ties. Additional ballast should be put in, and the track re-aligned and resurfaced—the alignment and surfacing now being very ordinary. The curves are generally light, and grades on a large portion of the road practically level.

Two main tracks and one side track of the Erie Railroad are crossed at grade at Jamestown; the crossing is protected by an interlocking plant. One track of the Jamestown Street Railway crosses at grade in Jamestown; there is a steep grade in the street railway track at this point, also a heavy grade approaching the crossing from a westerly direction on the steam railroad. To overcome this grade locomotives have to run fast in order to not get stalled at the crossing. The conductors of the electric road are required to pilot their cars across the tracks of the steam railroad. In addition to this, when locomotives or trains are to be run over the crossing a man is sent in advance to protect the crossing. Only freight trains use the track over this crossing. In order to be certain that the conductors do their duty and that the crossing is properly protected, derailing switches should be put in the track of the street railway which open automatically, and to close which the conductor would have to cross the track of the steam railroad, closing the derail and holding it closed by means of a lever placed there for that purpose.

The right of way is free from trees and brush, much small brush having been cut and removed since the last inspection. The fences are of wire and out of repair in places. The highway crossings are well graded, properly planked, and are protected by signs of the diamond form. No cattle guards are maintained. Mile posts are of plank, and whistle posts are in place at the proper distance from all highways crossed. There are no overhead obstructions less than 20 feet above the track.

The track sections are about five miles in length, and a foreman and five laborers are employed upon each.

The station buildings are generally small, and in some places only small shelter is provided. Most are flag stops, and agents are only maintained at a few of the more important places. At stations where agents are maintained buildings are in good condition; drinking water is furnished and time tables are posted. The station platforms are of plank or gravel and in fair repair.

Since the last inspection about 18,250 cross-ties have been renewed. A new coal trestle and dock have been constructed at Jamestown, a new water station at Midway. An addition has been made to the Jamestown freight house. Four new sidings have been added to the Jamestown yard—one at Fluvanna, one at Griffiths, one at Dewittville and one at Point Chautauqua. Several station buildings have been repaired and most of them repainted.

*Recommendations.*

That ditches be put in proper condition; that necessary renewal of ties and trestle timbers be made; that all angle plates be full bolted and bolts made tight; that inside guard rails be placed upon all bridges and trestles; that all frogs and guard rails be protected by footguards; that sufficient ballast be put in to enable the track to be put and maintained in proper line and surface; that necessary repairs be made to fences, and that cattle guards with proper guard fences be maintained at each boundary of all highways crossed.

A copy of this report was sent to the company, with a letter, making the recommendations in the report the recommendations of this Board. The company informed the Board that "Many of the recommendations which you made have already been complied with, and we expect in the spring to continue the work of cleaning the cuts injured by sliding of clay mentioned in the report and complete the ditching. The defective masonry is being carefully watched, and we expect to make the repairs where necessary. All of the other recommendations are also carefully noted and will be followed." (No. 6—1903.)

**KANONA AND PRATTSBURGH RAILWAY.**

(Inspected June 24, 1903.)

I inspected the Kanona and Prattsburgh Railway June 24, 1903, and respectfully submit the following report:

The Kanona and Prattsburgh Railway connects with the Rochester branch of the Erie Railroad at Kanona and extends to Prattsburgh. The length of the road is 11.44 miles.

A portion of the cuts are narrow, the embankments sagged and weak in places. The ditches are generally poor.

The iron bridges are of the plate girder type, somewhat light, but sufficient for the motive power and rolling stock used; the paint on them is generally poor; the masonry to two of them was partially destroyed by high water, and the ends of the bridges are now supported on pile bents; some masonry has been rebuilt. There are no timber trestles. Most of the open culverts and cattle passes have masonry abutments; a few are entirely of wood; the ties are poor on a portion of them, and also some poor bents and stringers were observed. The attention of the officials in charge was called to all such, and assurance given that necessary renewals would be made promptly. The box culverts and iron pipe drains are in fair condition.

The cross-ties are about two-thirds hemlock and the balance chestnut and oak; they are 6 x 8 inches, 8 feet in length, and laid at the rate of 2,640 to the mile of track. Extensive renewals have been made, and about 15 per cent. of ties now in track need to be replaced. The track is laid entirely with 60-pound steel rail, connected by angle plates 26 inches in length with four bolts. The rails, with the exception of a few which have been injured by drivers of locomotives slipping, are in very good condition; these worn rails should be replaced. All the angle plates are full bolted and the bolts are tight. The switches are split point and have rigid stands, all in fair condition. All frogs are rigid and none are protected by footguards. The track is very lightly ballasted with shale and gravel, and grass and weeds are growing between the ties. The alignment

and surface of the track are irregular. The elevation of the outer rail on curves is somewhat irregular. Considerable small brush is growing on the right of way.

The fences are of wire, and some repairs are needed. The highway crossings are in fair condition. The crossing signs are of the banner form. Most cattle guards are missing; the few in place are of the wooden slat design. There are no mile posts. Whistle posts are properly located. The track is maintained by a foreman and eight laborers. There are no overhead obstructions less than 20 feet above the track.

There are but two stations at which agents are maintained; they are in fair condition and properly equipped.

The road owns one locomotive, one combination baggage and passenger car, one baggage car, five box cars, four gondolas and two flat cars. All are equipped with automatic couplers; the combination car has air brakes and the baggage car is piped for air; all others have hand brakes. These cars are used only in local service and mainly for hauling the company's materials and supplies. The locomotive is properly equipped with automatic couplers and air brakes. The passenger trainmen are uniformed.

#### *Recommendations.*

That narrow cuts be widened and proper ditches made; that the weak and sagged embankments be raised and strengthened; that all the poor timber in open culverts and cattle passes and ties on them be replaced promptly; that the iron bridges be repainted to prevent injury from rust; that necessary tie renewals be made; that the grass and weeds be removed from the track and the track properly surfaced and aligned; that necessary repairs be made to fences; that the missing cattle guards be supplied; that all frogs and guard rails be protected by footguards, and that all brush on the right of way be cut and removed.

A copy of this report was sent to the company with a letter making the recommendations in the report the recommendations of this Board. The company informed the Board that it would carry out the recommendations to the best of its ability. (No. 14—1903.)

#### KEESEVILLE, AUSABLE CHASM AND LAKE CHAMPLAIN RAILROAD.

(Inspected September 8, 1903.)

On September 8, 1903, I inspected the Keeseville, Ausable Chasm<sup>o</sup> and Lake Champlain Railroad, and respectfully submit the following report:

The Keeseville, Ausable Chasm and Lake Champlain Railroad is a single track, standard gauge line, connecting with The Delaware and Hudson Company's railroad at Port Kent, and extending to Keeseville, 5.64 miles.

The roadway is well graded and properly drained.

The only iron bridge is across Ausable Chasm, and consists of two spans of 75 feet each and one of 100 feet; it is a viaduct structure built on the cantilever plan; it is in good condition, excepting that it would be benefited by an additional coat of paint.

A few of the ties and a portion of the guard timber are somewhat decayed, and should be replaced. Inside guard rails should also be laid on this structure, as well as across the trestle at each end. There are two other timber trestles from 150 to 200 feet in length and from 15 to 20 feet in height, which should also have inside guard rails. The trestles are of standard construction and in good repair. Very nearly all the open culverts and cattle passes are constructed entirely of timber, and all are in very fair condition. Most box culverts are of wood, and while in very fair repair, is poor construction, and should be replaced with stone box culverts or iron pipe.

The crossties, oak and chestnut, are in good condition, properly spaced and full spiked.

The track is laid with 60-pound steel rail, partly connected with angle