CONSTRUCTION OF THE MILWAUKEE, SPARTA & NORTHWESTERN.

The largest mileage of new road completed and placed in service by any railway in the United States during 1911 was the portion of the North Western system known as the Milwaukee, Sparta & Northwestern, extending 130.5 miles from Lindwerm, Wis., to Necedah; 23 miles from Wyeville to Sparta, and 8 miles from West Allis to Butler. The branch line which the company had been operating between Wyeville and Necedah, 15.5 miles, was partially rebuilt to form a link in the new road, making a total mileage of 177 miles.

This line serves two important purposes in the development of the North Western system; first, a belt line around Milwaukee connecting with the Northern Wisconsin division near Lindwerm, and with the Madison division near West Allis; and second, a direct low grade connection from Milwaukee to the Chicago, St. Paul, Minneapolis & Omaha at Wyeville and to the Madison division at Sparta. The advantages of the belt line were shown in a description of the construction work on that portion of the line, published in the *Railway Age Gazette* of October 20, 1911.

Considered as a cut-off for western and northwestern traffic, the new line has the double advantage of directness and ease of operation. The distance from Milwaukee to Wyeville by way of Madison is 179 miles. By the new line it is 155 miles. The distance from Milwaukee to Sparta by way of Madison and Elroy is 190 miles; by the new line it is 178 miles. The maximum grade on the old line between Madison and Sparta and between Madison and Wyeville is 1 per cent. in both directions, while 0.5 per cent. is the maximum grade against eastbound traffic on the new line and 0.7 per cent. against westbound traffic. A large amount of curvature and a number of tunnels were also eliminated by the cut-off. The new through route from Chicago to the Twin Cities and upper lake ports, of which this line forms a part, is the same length as the old one. The operating conditions, however, are materially improved, and in addition, the line touches Milwaukee, an important point for both freight and passenger business.

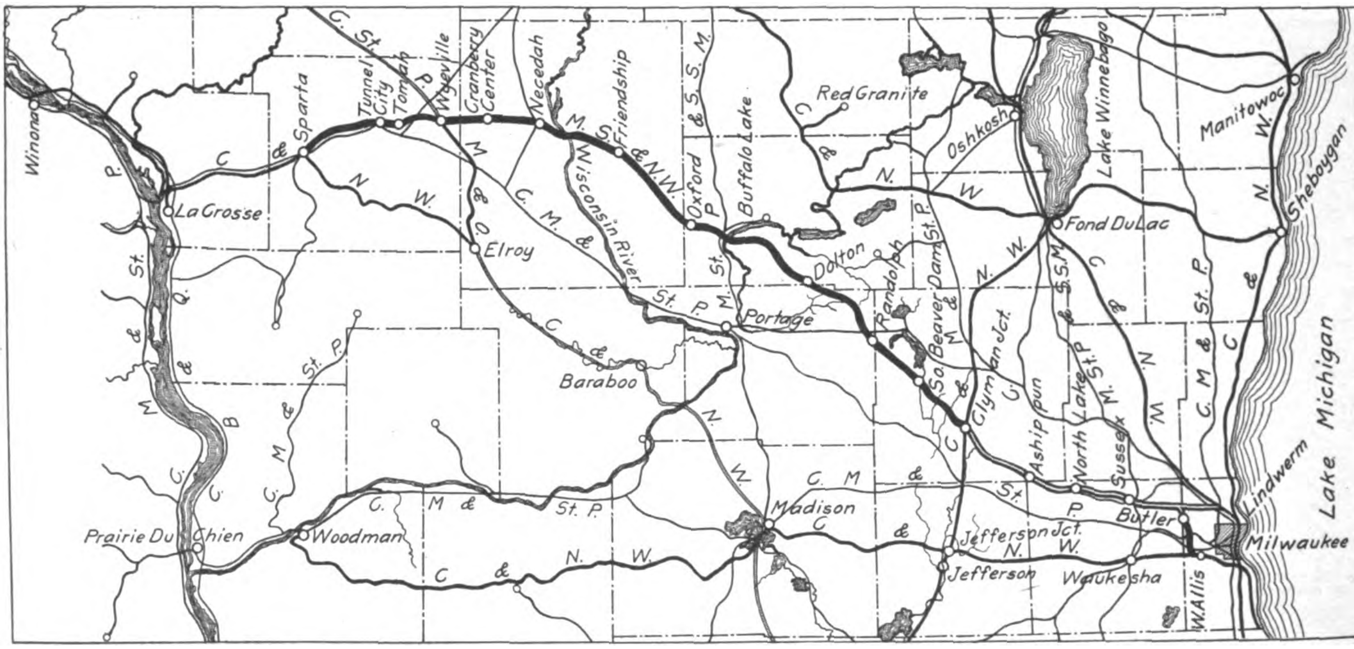
The lower grades allow a considerable increase in tonnage rating over the old line and the movement of through passenger traffic to the Northwest is considerably facilitated. Although the old route through Madison was double tracked, traffic had increased to such a degree that the line was badly congested.

The new line is double track and equipped with automatic block signals east of Clyman Junction, affording a more economical routing for freight from the Northern Wisconsin and Ashland divisions destined through the Milwaukee district than has been available with the 1 per cent. line between Fond du Lac and Milwaukee. In addition to the industrial development which is anticipated on the belt line, the new road will serve a considerable territory that has not before been reached. That portion of the line between North Lake and Necedah, about 109 miles, has practically no competition from other railways in serving the farming country traversed. Construction work on the new road was started in March, 1910, and it was opened for traffic December 11, 1911.

ROADBED.

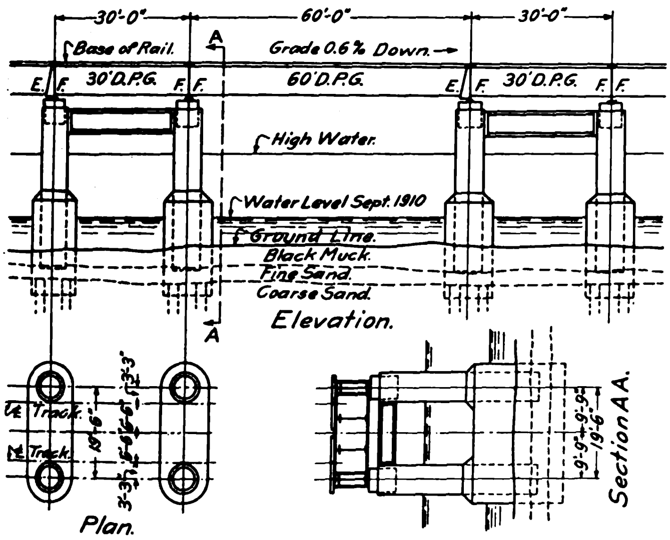
The route through central Wisconsin followed by the new road marks roughly the division between the rolling land of the southwestern portion of the state and the marshes of the lake country. In many cases the roadbed is built alternately across the points of swamps and through cuts in the noses of the hills. The soil on the eastern end is predominantly clay, and that on the western end sand, the division being approximately at the crossing of the Fox river, 75 miles from Milwaukee. The profile is undulating, the maximum difference in elevation being 380 ft. with four summits. All grades are compensated .05 per deg. for curvature. The maximum curvature is 3 deg., and the majority do not exceed 2 deg. The line east of Clyman Junction is graded for double track, and west of that point for single, although provision has been made in the substructures of all permanent bridges for future double track. The standard roadbed is 33 ft. wide for fills and 39 ft. wide for cuts on double track, the corresponding dimensions for single track being 20 ft. and 26 ft. The grading on the section of the line east of Clyman Junction averaged about 80,000 yds. per mile, and for the section between Clyman Junction and Buffalo Lake, about 50,000 yds. per mile. The only heavy excavation required on the west end was that in the approaches to the tunnel at Tunnel City, where an extreme depth of 140 ft. in the east approach cut was reached.

There was little of unusual interest in the grading, most of which was handled by contract in small sections. One contractor working near Necedah used a drag line excavator to very good advantage. This machine is shown in one of the photographs reproduced herewith, working on a fill of considerable length, which was made from a wide shallow borrow pit, for which such a machine is particularly fitted.



General Map of Milwaukee, Sparta & Northwestern and Connecting Lines.

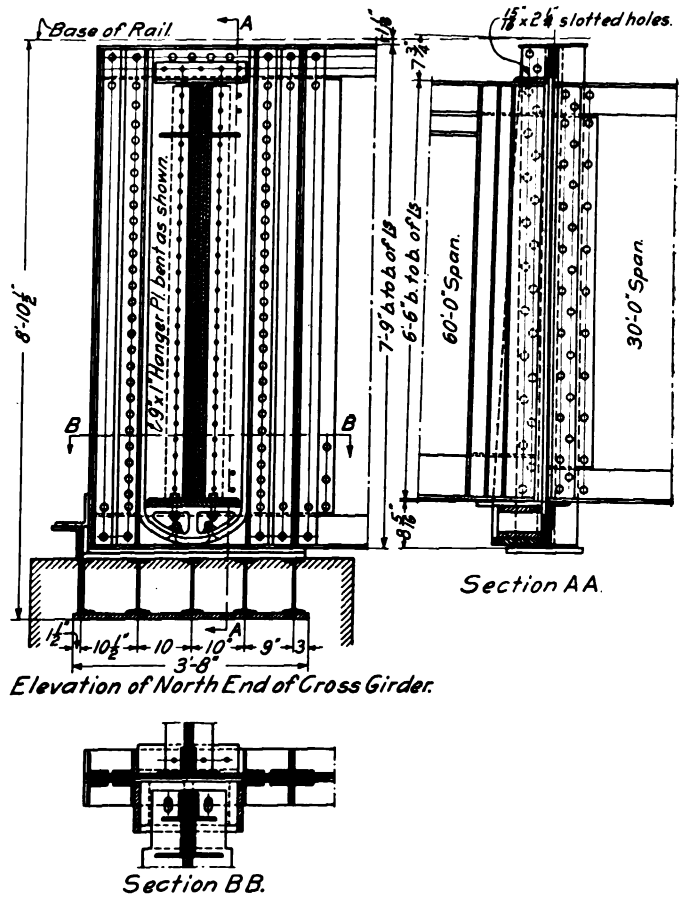
Less trouble was experienced with sink holes in the construction of the new road than is usual in country similar to that traversed. One of the worst sink holes encountered was near North Lake, in which 400,000 yds. of filling material was required in a distance of about 3,500 ft. The grade line at this point was about 20 ft. above the natural surface, and soundings showed soft material as deep as 90 ft. below the surface. The roadbed was finally completed by trestling, although considerable trouble was caused by the trestle sinking and coming up again outside of the right of way. A small bridge on a branch line of the Chicago, Milwaukee & St. Paul, which is parallel and closely adjacent to the new road at this point, was pushed about 20 ft. out of line by the fill made in this sink hole, and required considerable additional work for its replacement. At another point where soundings showed soft bottom in a small swamp shallow ditches were dug parallel to the center line and about 40 ft. each side of it, so that when track was laid across and the fill carried up a few feet the surface broke along these lines and the fill dropped vertically instead of breaking irregularly along one side and turning over, as is frequently the case under similar conditions. In hay marshes ditches were dug 200 ft. from the center line to serve as fire breaks.



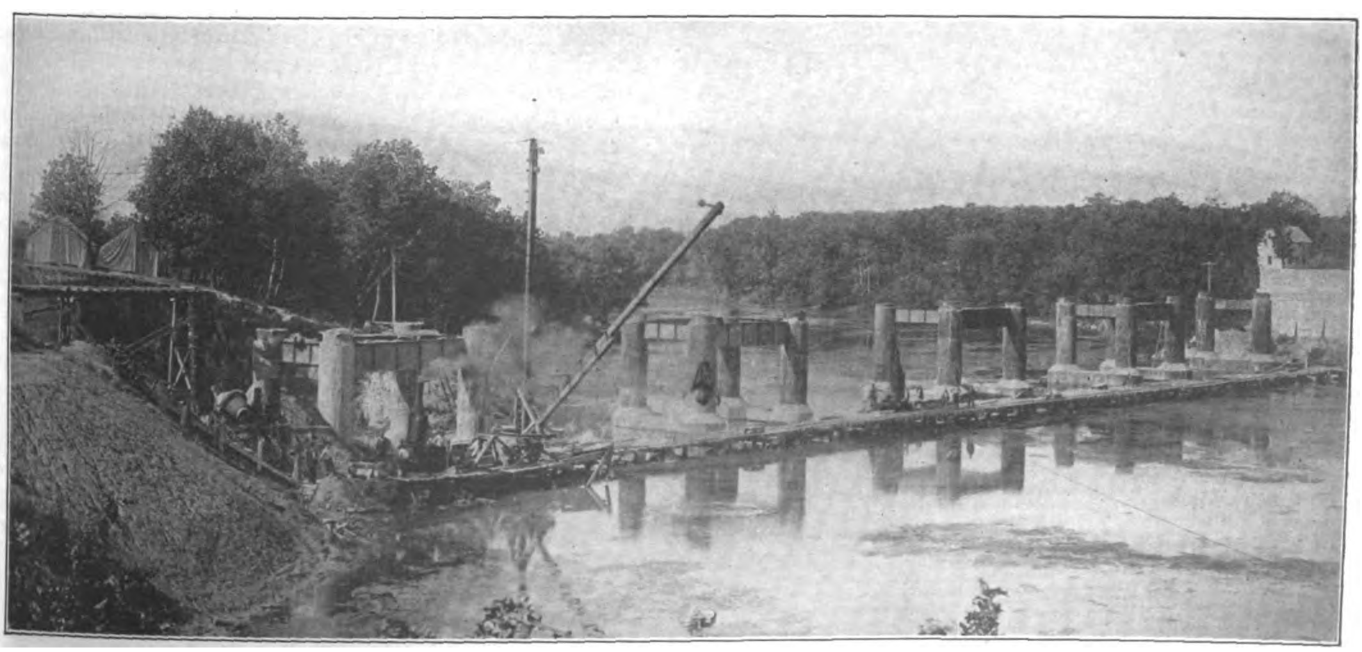
General Design of Oxford Mill Pond Cylinder Pier Bridge.

BRIDGE WORK.

Highway grade crossings were eliminated as far as possible in the construction of the new road, overhead crossings being of temporary construction, pile or frame trestles, and undercrossings being of concrete or steel. There are seven overhead crossings with the Chicago, Milwaukee & St. Paul and one with the Minneapolis, St. Paul & Sault Ste. Marie. The only railway grade crossings are at Clyman Junction, Wyeville and Tomah, the first two being with the company's own lines, and the third



Details of Fixed and Expansion Connections of Longitudinal to Transverse Girders.

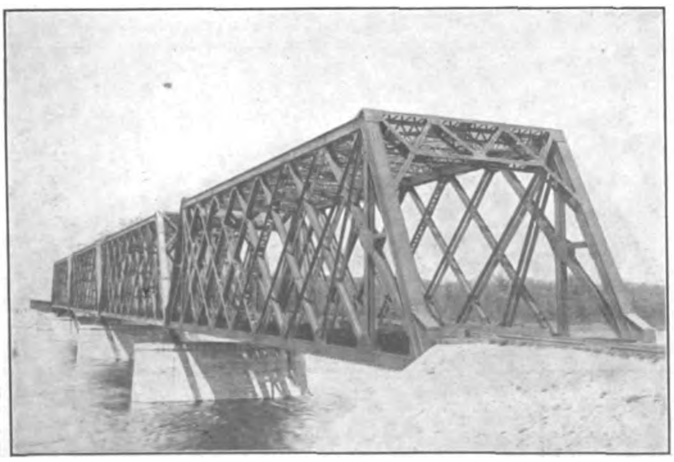


Sub-structure of Oxford Mill Pond Bridge, Showing Cylinder Piers.

with the Chicago, Milwaukee & St. Paul. Cast iron pipe was used for small culverts and concrete boxes and concrete arches for larger openings. One of the largest arches was that over the Menominee river near Butler, described in the former article on the Belt line. The concrete work on the eastern half of the road averaged 1,200 yds. per mile east of Clyman Junction, and 500 yds. per mile west of that point. To provide for future double-tracking, the through steel structures and all permanent sub-structures were designed for double track. Superstructures of deck spans are for single track at present. Concrete was used throughout for abutments and piers, the tendency being in most cases to favor mass in preference to heavily reinforced designs.

A type of U abutment used for a number of highway crossings is shown in one of the accompanying drawings. Comparative estimates for this type and for wing abutments were made for locations in high fills, the advantage of the U type being apparent in most cases. For crossings on excessive skews it was necessary in some cases to provide retaining walls at the toe of the slope to prevent encroachment of the fill on the highway. The side walls are non-reinforced, except for twenty-nine ¾-in. square bars 9 ft. long used as bonds to the front wall. Three tie walls are provided to resist the outward thrust of the earth embankment, these walls being 3 ft. thick and 31 ft. 6 in. high, reinforced by twenty-six ¾-in. square rods in each wall extending into the side walls to within one foot of the outer surface. The footing is 4 ft. thick carried down to rock and designed for an average bearing of three tons per square foot. The top of the abutment is open, the entire space between the walls being filled with earth which directly supports the track. To prevent the formation of voids this fill is compacted in place for a depth of 6 ft. over the footings. Openings at the bottom of the partition walls 4 ft. wide and 5 ft. 6 in. high are provided for the convenience of workmen during the construction of the abutment. Drainage is provided for by cast iron pipes in the side walls placed as shown in the drawing, and the interior of the abutment is waterproofed with an asphalt mastic compound. The top of the footing is sloped ⅛ in. in 1 ft. from back to front, drainage collecting over this area being carried through the front wall by a 6-in. cast iron pipe, the outer end of which is covered by broken stone. The two abutments for the location shown required 2,492 yds. of concrete and 12,000 lbs. of steel.

In addition to the new bridge work, the extension of three permanent bridges on the old line near the connection at Lindwerm was made necessary by the double-tracking of the old line from that point into Milwaukee.



Wisconsin River Bridge, Near Necedah, Wis.

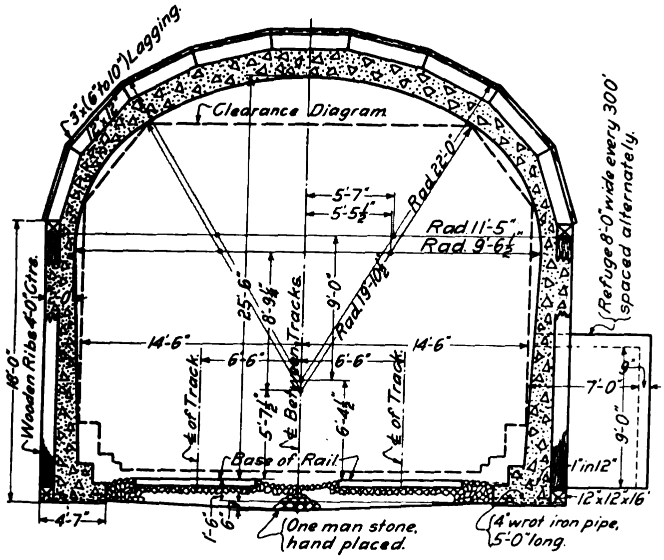
The most important stream crossings are over the Wisconsin river, Yellow river, Fox river and Oxford mill pond. The Wisconsin river at the point of crossing flows between a high sandstone bluff on the east bank and a low valley on the west. At times of high water this valley is flooded for a considerable distance back from the channel, and shortly after the completion of the new grade and the placing of the bridge abutments, an unusually high water stage seriously damaged the new bank back of the west abutment. To prevent the recurrence of trouble from this source a dike was built about 1,100 ft. west of the west abutment, paralleling the river for a distance of 8,000 ft. up stream. The river slope of this dike and the upper slope of the grade supporting the track were protected by riprap. The dike is 8 ft. wide on top with a 2:1 slope on the river side and a 1½ : 1 slope on the opposite side. The fill was made by scraper outfits from borrow alongside and riprap was brought in by dinky engines and cars from a nearby stone cut on the new railway line. The riprap was dumped to place and roughly smoothed by hand to a depth of 2 ft. The bridge consists of six 80-ft. deck plate girders and four 150-ft. through lattice riveted truss spans, making a total length of 1,096 ft. 9 in. face to face of back walls.

Yellow River and C. M. & St. P. Crossing.

The Yellow river bridge consists of a 150-ft. through riveted lattice span, a 78-ft. through plate girder, and three 69-ft. 4½ in. deck plate girders, making a total length of 440 ft. The through girder spans a single track line of the Chicago, Milwaukee & St. Paul, and a public highway.

The Fox river at the point of crossing widens to a shallow lake known as Buffalo Lake, which is underlaid with soft muck. The main channel of the river is navigable and is crossed by a double track through riveted swing bridge 205 ft. 6 in. long, providing two 75-ft. clear channels. In addition to this swing span, the bridge consists of eight 60-ft., eight 30-ft. and two 40-ft. deck plate girders. The piers, excepting those under the swing span, consist of two steel cylinders 8 ft. in diameter, filled with concrete. The cylinders at eight of these piers are carried down to hard material, and at the other eight they are supported on clusters of piles driven in the overlying sand and clay. Sixteen piles were used in each cluster, driven on concentric circles with a minimum spacing of 1 ft. 8½ in. The pressure under the piers founded on hard material is 6.2 tons per square foot, and the pressure on each pile in the pile-supported cylinders is 35,800 lbs. The tops of the 8-ft. cylinders are just above the elevation of high water, the superstructure being carried on 6-ft. sections of 5-ft. diameter cylinders set concentrically in the top of the large cylinders, and extending about 3 ft. above them. The cylinders are spaced 19 ft. 6 in. apart center to center between rows and alternately 30 ft. and 60 ft. center to center between cylinders in each row, the adjacent pairs of cylinders being connected by the superstructure to serve as towers. The columns supported on the cylinders are braced diagonally in both directions in each tower and support the transverse plate girders on which are carried the longitudinal girders under the tracks. This construction is clearly shown in one of the accompanying drawings. In placing the cylinders they were floated out to the desired location and sunk through the muck by weighing them with rails and dredging out the enclosed material. They were then filled with 1:3:6 concrete.

The bridge over Oxford mill pond was designed to use the type of cylinder piers and tower superstructure described above.



Cross Section of Tunnel, Showing Timbering and Concrete Lining.

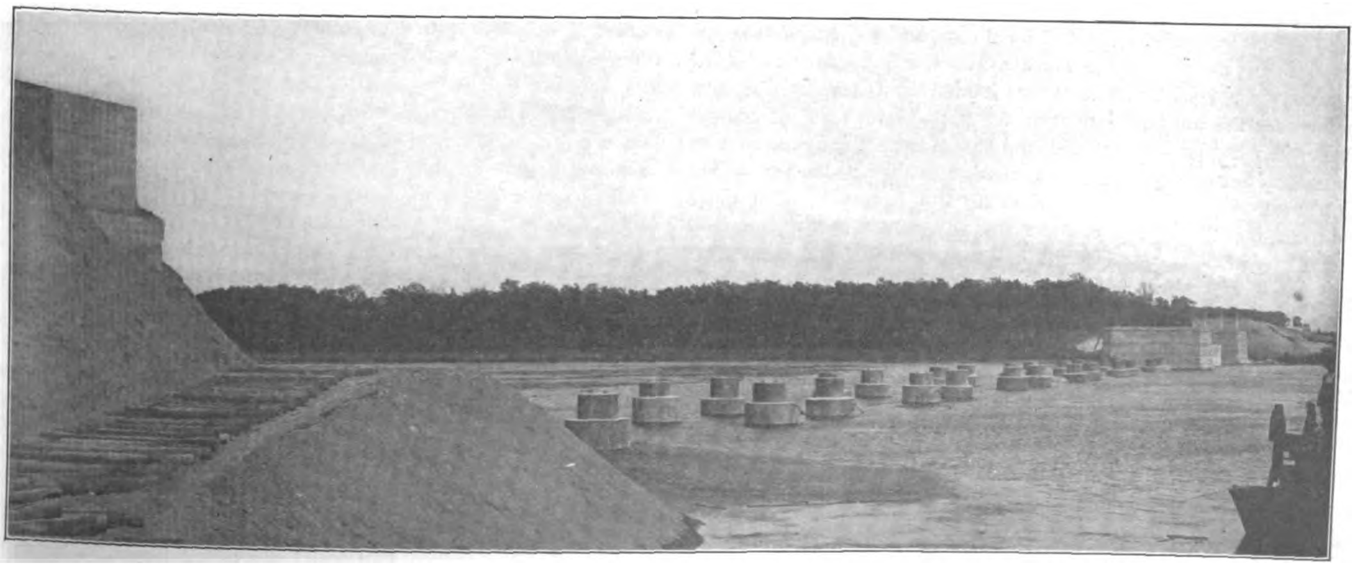
Owing, however, to a proposed water power development which, if installed, will materially raise the high water level, this design had to be modified. The condition of foundations was such that all piers had to be founded on piles. In place of two 8-ft. cylinders a single steel form of oval cross sections was used for the base of the piers. This form was 10 ft. wide and 29 ft. 6 in. long, with semi-circular ends, built up of 5/16 in. open hearth structural steel plates with riveted lap joints. Concentric with the semi-circular ends were placed 6-ft. diameter cylinders 33 ft. 7 in. high. The superstructure was carried directly by 6-ft. sections of 5-ft. diameter cylinders as described in connection with the Buffalo lake bridge. The large cylinders and the oval forms are filled with 1:3:6 concrete and the small cylinders supporting the superstructure with 1:2:4 concrete. The tops of the large cylinders are braced in both directions by plate girder diaphragms which make the four cylinders act as a rigid tower. The superstructure consists of transverse plate girders connecting each pair of cylinders and supporting longitudinal deck plate girders in the manner shown in one of the accompanying drawings. The 30-ft. longitudinal girders are made rigid at both ends. At the expansion ends of the 60-ft girders a special design of hanger plate was used. The end of the girder rests directly on a casting, whose lower surface is curved and is supported by a 9-in. x 1-in. hanger plate extending up to the top of the transverse girder and riveted to the stiffener angles. The lower flange of the longitudinal girder is bolted to this casting, but the holes are slotted to provide for necessary expansion.

TUNNEL WORK.

The only tunnel on the new line is through the divide between the Mississippi and Wisconsin river basins, about 12 miles east of Sparta. It is 1,300 ft. long and double-tracked, the cross section being shown in the drawing reproduced herewith. The tunnel was driven through soft sandstone, the maximum depth above the arch ring being 182 ft. Deep rock cuts approach the tunnel from both directions, the maximum cut being about 140 ft. These cuts were sloped ½ : 1 in the layer of loose material near the ground surface and ¼ : 1 in the solid rock. The first headings were driven at the height of the wall plates, and these were enlarged to the full arch section. The timbering consisted of nine

East Portal of Tunnel, Tunnel City, Wis.

12-in. x 12-in. arch ribs and 3-in. lagging supported on 12-in. x 12-in. wall plates 16 ft. long. All falls over the arch were packed with cord wood tightly wedged, the stone being too soft for this purpose. The lower part of the tunnel section was taken out in a single bench. Light charges of 40 per cent. Monobel dynamite which produced practically no fumes were used, the rock being so soft that it shattered very easily. There was no difficulty in handling the drilling rapidly, as in some places the material was so soft that augers could be used. The rock shot down from the



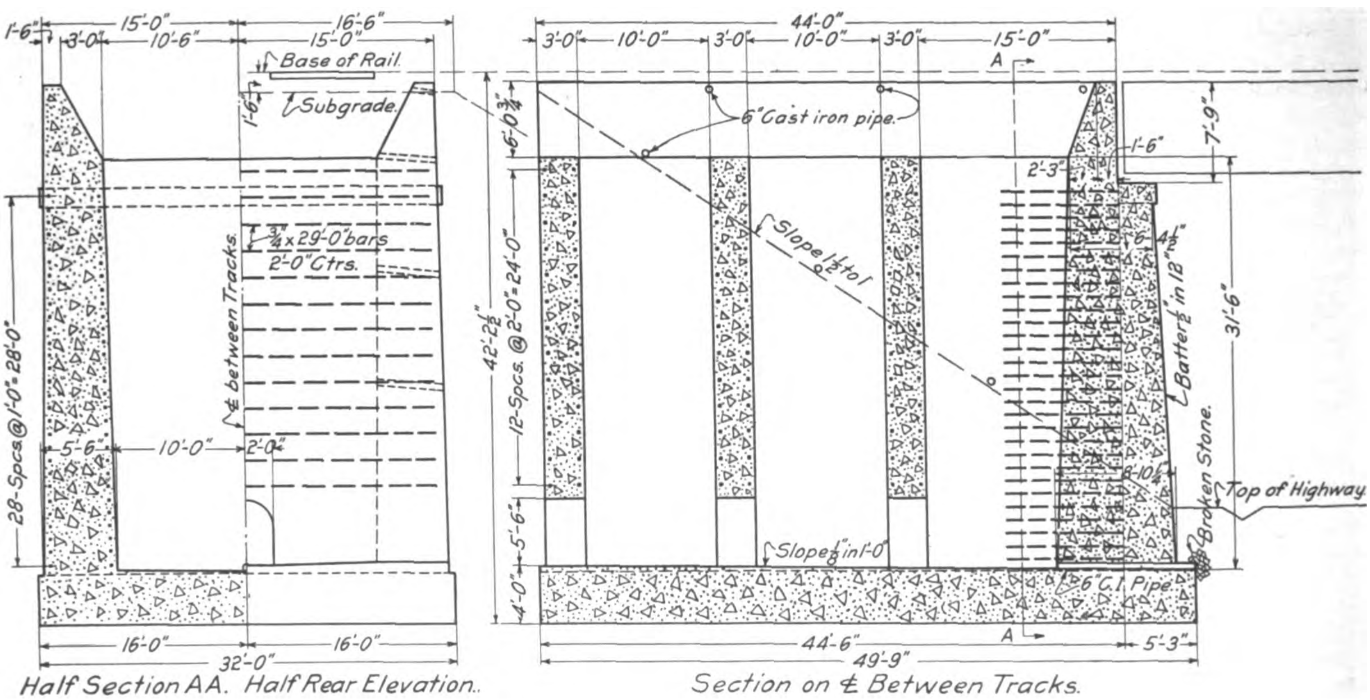
Cylinder Piers for Buffalo Lake Bridge; Milwaukee, Sparta & Northwestern.

working face was shoveled into 1-yd. narrow-gage cars running on a track laid on the center line of the tunnel and hauled out by mules, usually in 8-car trains. Work was carried on from both portals, working two shifts at each end. About 140 men were required for each shift, the excavation averaging about 16 trainloads per shift. The total excavation was approximately 45,000 yds.

A mixer plant was established at each portal for placing the concrete lining. At the east end concrete materials were unloaded at Tunnel City, where stock piles were maintained and provision was made for heating during the cold weather. From these stock piles the material was hauled by dump wagons over a new road crossing over the portal of the Chicago, Milwaukee & St. Paul tunnel, which is adjacent to the new one, and dumped over the mixer location into chutes leading to storage hoppers. From these hoppers the mixer feed could be properly proportioned, the elevation of the plant being such that all handling of materials was done by gravity. The mixer dumped on the level of a trestle extending into the tunnel about 20 ft. above the base of the rail. At the west end the material was unloaded from a siding at the end of the approach cut, a stiff-leg derrick being used to unload gravel and stone from cars, and a clamshell to load small dump cars from the stock pile. These dump cars had a capacity of 3¼ yds., and each was hauled up a steep incline to a point over the mixing plant near the portal by a team of horses. Here the material was dumped into chutes hoppered at the bottom to control the mixer supply in a manner similar to that described at the other plant. The gravel chute was heated by four pipes laid on the floor of the chute up and down the incline and supplied with live steam from a boiler at the top. A cement storage house was also provided above the chutes, and the sacks of cement were dropped to the mixer platform in a wooden chute as needed. Smith mixers of ¾-yd. capacity were used in both these plants, the mix being 1:2:4 of gravel and broken stone. The concrete was carried into the tunnel in push cars with an average capacity of about 15½ cu. ft. The footings and side walls were placed directly from these dump cars through wooden chutes. The lower part of the arch was placed by dumping the cars to boards, from which it was shoveled into the forms, one form board being added at a time. The key section of the arch was placed by shoveling back into 4-ft. sections of the forms. This section was 3 ft. wide, placed in two pieces, which were bolted together and wedged tightly in place. Every second section of wall plate between posts was cut out and the space filled when the side walls were placed. The side walls were concreted in sections 70 ft. long and the arch in 16-ft. sections. The contractor's typical concrete gang at the west plant consisted of 12 men operating the three push cars, 6 spaders, 16 carpenters, 9 shovelers, 2 foremen, 2 men operating the feeding hoppers at the mixer, one dropping down cement sacks from the storage house, one engineer for the heating boiler, one engineer at the mixer and one operator at the mixer. In addition to these, 8 men and 4 teams were required to operate the four dump cars supplying the material from stock piles to mixer, and several other men were required around the stock piles for unloading the material, blacksmithing and caring for the camp. This gang could place about 100 yds. of concrete in a 10-hour shift. Actual construction work on the tunnel was begun about April 15, 1911, and it was opened for traffic January 14, 1912.

TRACK WORK.

The line is laid with 90-lb. rails on treated hemlock ties. It is double-tracked from Clyman Junction to Butler, and single-tracked for the remainder of the distance, although, as mentioned above, provision has been made in all permanent structures for future double-tracking. There are two yards and engine terminals on the new road, one at the crossing at Wyeville, and one at Friendship. Trains between Milwaukee and St. Paul use the Wyeville terminal, and those between Milwaukee and Winona change engines at Friendship. The former yard has 10 tracks 3,000 ft. long, an 18-stall engine house and an 80-ft. turntable. The latter yard has, in addition to a similar layout of ten 3,000-ft. tracks, a separate caboose and repair yard and a receiving yard of four 3,000-ft. tracks. The engine house at this point has 24 stalls. Both engine houses are of the company's standard brick construction on concrete foundations. At Clyman Junction four Y's are provided for connection with the old line in all directions. The typical passing track layout on the single track section is shown in an accompanying sketch. Passing tracks are 3,400 ft. long in all cases.

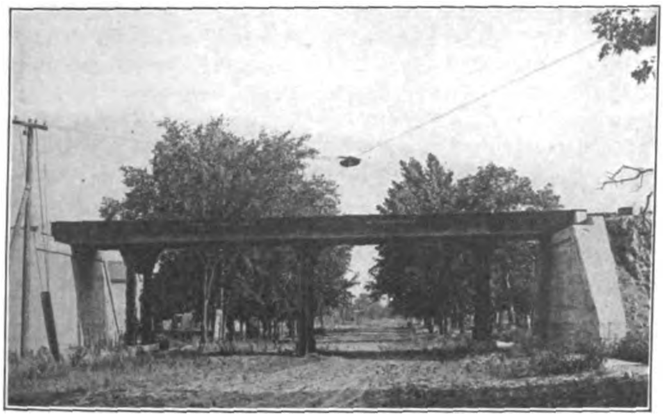


Details of Typical U Abutment for Short Plate Girder Spans.

STATIONS, COALING AND WATER PLANTS.

The standard stations used at the new towns established along the line are of frame construction 20 ft. x 72 ft., having a waiting room, office, and combined baggage and freight room. Platforms are 200 ft. long, constructed of brick in front of the buildings, and of gravel fill covered with a layer of granite screenings at the ends. A concrete curb is used along the brick station and a wooden curb along the gravel. Two other standard stations of larger dimensions are used at towns, where prospective passenger traffic seems to warrant their construction.

Coaling plants are located approximately 50 miles apart, and water stations 17 miles apart. The coaling plants are of the balanced bucket type. Water stations located inland secure a supply from 12-in. deep wells. The stations at Friendship and Butler



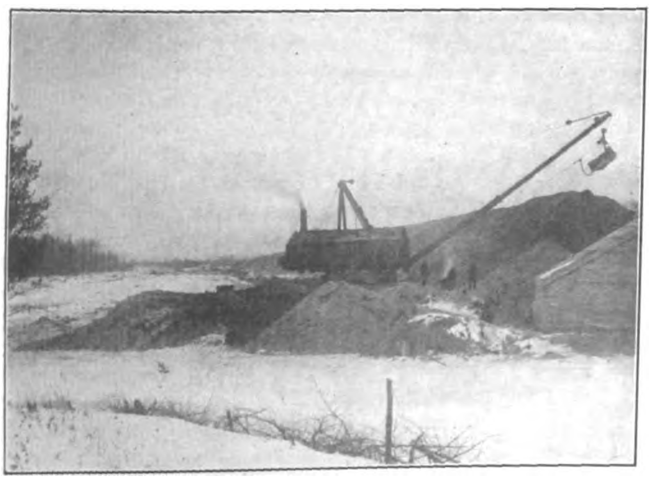
Standard Steel Highway Crossing.

are operated by electricity, and all others by gasoline. No water softeners were required.

SIGNALING AND INTERLOCKING.

The line from Clyman Junction to Butler, 18 miles, is equipped with automatic block signals, the remainder being provided with standard train order signals. Two mechanical interlocking plants were installed, one to protect the drawbridge at Fox river having 15 working levers in a 24-lever frame, and one at the C. M. & St. P. crossing near Tomah having 12 working levers in a 16-lever frame. Two electric plants were installed, one of 36 working levers in a 48-lever frame governing the crossing of the Chicago & North Western at Clyman Junction, and one of 49 working levers in a 64-lever frame at the crossing of the Omaha Line at Wyeville.

All construction work on the new line was handled by contract.



Drag Line Excavator Making Long Fill from Adjacent Borrow Pit; Milwaukee, Sparta & Northwestern.

The John Marsh Company had the general contract for the line east of Clyman Junction, and Winston Brothers for the portion west of that point. The work was done under the supervision of E. C. Carter, chief engineer, and under direct charge of W. H. Finley, assistant chief engineer. D. Rounseville was resident engineer in charge of field work east of the Fox river, and F. H. Bainbridge west of that point. L. J. Putnam was in charge of the tunnel work, and was later made resident engineer, succeeding Mr. Bainbridge. The bridges were designed under the direction of Mr. Finley and I. F. Stearn, formerly bridge engineer of that road.

TRAIN ACCIDENTS IN JANUARY.[1]

Following is a list of the most notable train accidents that occurred on railways of the United States in the month of January, 1912. This record is based on accounts published in local daily newspapers, except in the case of accidents of such magnitude that it seems proper to write to the railway manager for details or for confirmation.

Collisions.

Date.	Road.	Place.	Kind of Accident.	Kind of Train.	Kil'd.	Inj'd.
1.	Denver & R. G.	Salt Lake.	bc.	F. & F.	2	3
2.	Wabash	Brooklyn.	rc.	P. & F.	0	8
3.	Rock Island	El Reno.	bc.	P. & P.	1	20
3.	Georgia & F.	Normantown.	bc.	P. & F.	0	6
5.	Atchison, T. & S. F.	Wright, Kan.	bc.	P. & P.	2	18
6.	Long Island	Hempstead.	xc.	F. & F.	1	1
*6.	Pecos & N. Tex.	Hereford.	rc.	F. & F.	1	3
*7.	Grand Trunk	Durand.	rc.	P. & F.	0	1
8.	L. S. & M. S.	Cleveland.	xc.	F. & F.	0	4
8.	Chi., R. I. & P.	St. Joseph.	rc.	F. & P.	0	12
9.	L. S. & M. S.	Dunkirk.	rc.	P. & F.	0	3
9.	L. S. & M. S.	Ripley.	rc.	P. & P.	0	2
11.	L. S. & M. S.	Chicago.	xc.	P. & P.	0	10
11.	St. Louis & S. F.	Fort Smith.	xc.	P. & F.	0	12
*12.	N. Y. N. H. & H.	E. Freetown.	rc.	P. & F.	1	2
15.	A. C. L. } G. S. & F. }	Valdosta.	xc.	P. & F.	0	3
15.	Pitts. & L. E.	New Castle.	bc.	P. & P.	5	5
16.	L. & Nash.	Long Run.	bc.	P. & F.	4	17
*†16.	St. Louis S. W.	Illmo.	rc.	F. & P.	1	0
†18.	Central of Ga.	Jonesboro.	bc.	P. & F.	5	3
18.	West. Md.	Parter's.	bc.	P. & F.	1	2
20.	Pere Marquette	McCord.	rc.	F. & F.	0	6
†22.	Ill. Central	Kinmundy.	rc.	P. & P.	4	3
†23.	Del., Lack. & W.	Chenango Forks.	rc.	P. & P.	2	5
24.	Grand R. & Ind.	Sand Lake.	xc.	F. & F.	2	4
26.	Central of Ga.	Leesburg.	bc.	P. & F.	4	8
29.	Grand Trunk	Durand.	rc.	F. & F.	2	3
31.	Atch., T. & S. F.	Watrous.	bc.	F. & F.	3	2

Derailments.

Date.	Road.	Place.	Cause of Derailm't.	Kind of Train.	Kil'd.	Inj'd.
*1.	Wabash	St. Peters.	unx.	P.	0	14
†2.	Minn. & Int'l	Farley	d. switch.	P.	1	13
3.	Texas & Pacific	El. Paso.	b. flange.	P.	..	..
4.	Chicago Gt. West'n.	Welch.	b. rail.	P.	0	0
5.	Lake Shore & M. S.	N. Olmsted Fs.	unx.	P.	0	0
6.	Seaboard A. L.	McKenney.	eq.	P.	0	3
7.	Nor. Pacific	Little Falls.	unx.	P.	..	..
10.	Great Northern	Java.	avalanch.	F.	2	0
10.	Central Ga.	Americus.	d. track.	P.	0	1
11.	Penn.	Lime Lake.	b. rail.	P.	0	12
*14.	Missouri Pac.	N. Lyndon.	d. bridge.	F.	3	3
14.	C., C., C. & St. L.	Carey, O.	d. track.	P.	0	34
19.	Penn.	Davis, Ind.	b. rail.	F.	0	0
29.	Penn.	Phila. (y)	b. rail.	F.	1	2

y On a yard track.

Other Accidents.

Date.	Road.	Place.	Cause of Accident.	Kind of Train.	Kil'd.	Inj'd.
26.	N. Y. Central	Oneida.	boiler.	P.	1	1

The collision near Salt Lake City, Utah, on the 1st, about 9:15 p. m., was between eastbound freight train No. 52, Ogden to Salt Lake, running at about 35 miles an hour and a switching

[1]Abbreviations and marks used in Accident List:

rc, Rear collision——bc, Butting collision——xc, Other collisions——b, Broken——d, Defective——unf, Unforeseen obstruction——unx, Unexplained——derail, Open derailing switch——ms, Misplaced switch——acc. obst., Accidental obstruction——malice, Malicious obstruction of track, etc.——boiler, Explosion of locomotive on road——fire, Cars burned while running——P. or Pass., Passenger train——F. or Ft., Freight train (including empty engines, work trains, etc.)——Asterisk, Wreck wholly or partly destroyed by fire——Dagger, One or more passengers killed.