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A. A. SPRAGUE, RECEIVER FOR
CHICAGO NORTH SHORE AND MILWAUKEE RAILROAD COMPANY

A N N U A L R E P O R T

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Office of Engineer, Maintenance of Way
Highwood, Illinois
January 16, 1941.

A. A. SPRAGUE, RECEIVER FOR
CHICAGO NORTH SHORE AND MILWAUKEE RAILROAD COMPANY

MAINTENANCE OF WAY DEPARTMENT

ANNUAL REPORT

FOR THE YEAR 1940

Office of Engineer, Maintenance of Way
Highwood, Illinois
January 16, 1941.

F O R E W O R D

The Annual Report for the work accomplished by the Maintenance of Way Department in 1940 includes all work done under A. F. E. and extraordinary maintenance, and also provides such information and statistics relating to regular maintenance work, which are of interest at this time and would be of value in the future for record and reference purposes.

I N D E X

	<u>PAGE</u>
TRACK AND ROADWAY - ADDITIONS AND BETTERMENTS	1
TRACK AND ROADWAY - MAINTENANCE WORK	5
TIES RENEWED	7
BRIDGE AND BUILDING - ADDITIONS AND BETTERMENTS	8
BRIDGE REPAIRS	10
BUILDING AND PLATFORM REPAIRS	11
BUILDINGS PAINTED	13
COMPANY HOUSES DECORATED	14
MACHINE SHOP	15
TIN SHOP	15
MISCELLANEOUS BRIDGE AND BUILDING WORK	16
SIGNAL & INTERLOCKING DIVISION - ADDITIONS & BETTERMENTS	17
SIGNAL & INTERLOCKING DIVISION - MAINTENANCE WORK	19
CROSSING GATE OPERATION	19
CROSSING GATES AND SIGNALS MAINTAINED	20
EQUIPMENT	21
WINNETKA GRADE SEPARATION	22
SUMMARY	23

TRACK AND ROADWAY DIVISION

ADDITIONS AND BETTERMENTS

6900

BALLAST ON HOWARD-DEMPSTER LINE - A.F.E. 4251.

40 Cars of cinders and 6 cars of stone were unloaded on the Howard-Dempster Line, 2 cars of stone at the bridge approaches at Hartrey Avenue, 2 at the bridge approaches at the Sanitary Canal and 2 at the Dempster Street Interlocking Plant. 35 cars of cinders were unloaded between Howard Street and the Canal and the balance west of Kostner Avenue. Both tracks from Howard Street to the Canal were lined and surfaced and the superelevation adjusted. All curves were lined by the String Lining Method.

SIDE TRACK EXTENSION AT OAKTON STREET - A.F.E. 4214.

455

The side track serving The Brunswick Fuel Company at Oakton Street, near the Gas Plant, was extended 166 feet. Material used included 80# relay rail, second hand ties and cinder ballast.

RAIL REMOVAL AT GAS PLANT - A.F.E. 4255.

480

315 feet of the north track west of the Gas Plant fence was retired, a 65# turnout was installed in the center track and connection made to the end of the north track. The 80# rail released was sent to Winnetka for the gauntlet tracks.

CROSSING RENEWAL AT SUNSET RIDGE ROAD - A.F.E. 4198.

3235

The Railroad forces installed pre-cast concrete crossing slabs in both main line tracks and the side track crossing at Sunset Ridge Road, formerly Kotz Road, on the Skokie Valley Line. All ties were renewed and tie plated. 640 track feet of 80# rail on the main line was relaid with 100# rail. All joints in the crossings were thermit welded. The Cook County Highway Department furnished the crossing slabs and paved the roadway, including the devil strip. The County also paid the cost of moving the wigwag from the center to the side of the road. This latter work was done by the Chicago and North Western Railway Company forces. 1 car of stone ballast was used on the main line and 4 cars of cinders on the side track.

TRACK AND ROADWAY DIVISION

ADDITIONS AND BETTERMENTS - CONTINUED

2440
800 S.L.
1640

TIE PLATES IN ILLINOIS - A.F.E. 4217.

11,967 80#-100# Tie Plates were installed on ties renewed at the following locations in Illinois:-

<u>Section</u>	<u>Tie Plates</u>
1 - Winnetka	621
3 - Highwood	1,671
4 - Lake Forest	1,106
5 - Libertyville	1,182
7 - Edison Court	1,312
8 - Beach	1,857
9 - Winthrop Harbor	989
17 - Glenayre	498
18 - Briergate	858
20 - Deerpath	810
21 - South Upton	<u>1,063</u>
TOTAL	11,967

11,690

BALLAST IN ILLINOIS - A.F.E. 4249.

60 cars of stone ballast were unloaded to fill in the devil strip and tie cribs at various points on the Skokie Valley and Milwaukee Divisions between Dempster Street and the State Line. Track was lined and surfaced at the following locations:-

Glenayre to Indian Creek	S.B.	6,800 Feet
Glenayre to Lake Avenue	N.B.	4,000 "
Winnetka Avenue Curves	Both	4,000 "
Westleigh Road to Onwentsia Road	Both	4,600 "
Tower #10 to Kelly Switch	Both	12,000 "
Blodgett to North Chicago Junction	N.B.	12,000 "
Eleventh St. to Ninth St.	Both	2,400 "
Holdridge Road to Beach Sub.	Both	<u>7,000 "</u>

52,800 Feet

Alinement for curves was run by the String Lining Method.

TRACK AND ROADWAY DIVISION

ADDITIONS AND BETTERMENTS - CONTINUED

1540

CROSSING IMPROVEMENTS, TENTH STREET, WAUKESHA - A.F.E. 4257.

The Plank crossing at Tenth Street, West Line, was replaced with an Emulsified Asphalt crossing. All ties were renewed and tie plated. 2 cars of stone ballast were used to bring the track up to the grade established by the City.

TURNOUT AT NAVAL STATION - A.F.E. 4266.

640

An 80# No. 6 turnout was installed in the siding East of the Shore Line main tracks north of Downeys crossing to connect our tracks to a new siding built by the Government at the Naval Training Station;

RAIL RENEWAL ON LIBERTYVILLE LINE - A.F.E. 4204 and 4212.

2800

2,872 track feet of 65# rail between Bradley Road and Rockland Road was relaid with second hand 80# rail. The crossover East of Rockland Road was retired and not replaced.

RAIL RENEWAL AT MUNDELEIN - A.F.E. 4236.

870

700 track feet of 65# rail and 1 turnout were relaid with second hand 80# rail on the west end of the south Interchange Track at Mundelein.

BALLAST IN WISCONSIN - A.F.E. 4250.

16910

55 cars of cinders were unloaded on Section 13 to fill in the devil strip and tie cribs. 3 cars of stone were unloaded at Roosevelt Road, Kenosha, and 4 cars of stone at Ryan Road. Track was lined and surfaced from the south end of the curve at 75th Street, Kenosha, to 64th Street, a distance of 4,500 feet of double track. The curve alignment was run by the String Lining Method. Plank crossings at 67th Street and Roosevelt Road, Kenosha, were replaced with Treated Gum Wood sections.

TRACK AND ROADWAY DIVISION

ADDITIONS AND BETTERMENTS - CONTINUED

TIE PLATES IN WISCONSIN - A.F.E. 4218.

5,249 80#-100# Tie Plates were installed on ties renewed at the following locations in Wisconsin:-

<u>Section</u>	<u>Tie Plates</u>
10 - Kenosha	972
11 - Racine	940
12 - Four Mile Road	780
13 - Carrollville	1,201
14 - Grange Avenue	670
15 - Milwaukee	686
TOTAL	5,249

TRACK REMOVAL AT RACINE QUARRY - A.F.E. 4256.

Track #2, 1018 feet long, and 726 feet of the tail track at the Racine Quarry were retired. The 80# rail salvaged was used in the Winnetka Gauntlet Tracks. 3 - 80# turnouts were removed and shipped to Highwood.

TRACK RECONSTRUCTION ON 6th STREET, MILWAUKEE - A.F.E. 4226.

The track and pavement on South Sixth Street, from National Avenue to the Viaduct, a distance of 1,585 feet, was rebuilt in a total elapsed time of 7 weeks. New 102# rail was laid on the old ties which were found to be in very good condition. Tie rods were installed and all joints thermit welded. Oak shims and flat steel tie plates were used to bring the rail up to grade. The crossover at Virginia Street was renewed and paved with granite block. The track zone, except at the crossover, was paved with Ready-Mixed High Early Strength Concrete installed by a contractor. Single track was operated while this work was in progress and the street was closed to vehicular traffic.

TRACK RECONSTRUCTION ON WELLS STREET, MILWAUKEE - A.F.E. 4243.

The track and pavement on Wells Street, between Fifth and Third Streets, was rebuilt under service. New 102# rail was laid on the old ties and brought to grade with oak shims. Tie rods were installed and all joints thermit welded. The brick paving was relaid on a base of Ready-Mixed High Early Strength Concrete. Normal rail and street traffic was maintained during the progress of this work.

TRACK AND ROADWAY DIVISION

MAINTENANCE WORK

In addition to the routine work of maintaining the track and right of way, the following work was done under operating accounts:-

96 joints were thermit welded and 65 square yards of brick paving repaired on Greenleaf Avenue, Wilmette.

2 joints were thermit welded and 10 square yards of brick paving repaired at Kenilworth.

The 2 asphaltic crossings leading to the Chicago and North Western Railway Company Station at Glencoe were rebuilt. Ties were renewed in one crossing and tie plates installed in both.

The asphaltic crossing at Braeside was rebuilt. 3 - 80# joints were thermit welded.

The brick paving between Laurel Avenue and Central Avenue, Highland Park, was resurfaced with asphalt. 7 joints were thermit welded.

The west passing track and about 400 feet of the southbound main track in Highwood Yard were raised and surfaced. 3 side dumps of gravel were unloaded on the passing track.

3 catch basins and about 100 feet of 6" tile were installed to drain the track in front of the Highwood Office.

64 additional Winter King Switch Heaters were placed in Highwood Yard.

The northbound track from the Chicago and North Western Railway Company crossing to North Gate was lined and surfaced.

The south end of Farwells Siding was rehabilitated. The ties were renewed and 3 side dumps of gravel used to surface the track.

Track was lined and surfaced on the northbound track from Crabtree to Downeys and on the southbound from Crabtree to Arden Shore.

The plank crossings at Kostner Avenue, Howard-Dempster Line, were rebuilt. All ties were renewed and the track lined and surfaced.

TRACK AND ROADWAY DIVISION
MAINTENANCE WORK - CONTINUED

46 additional Winter King Switch Heaters were installed at the Dempster Interlocking Plant.

40 Winter King Switch Heaters were installed at Tower No. 10 and 82 at South Upton.

Track was lined and surfaced between Mile Posts 45 and 48.

14 Winter King Switch Heaters were installed at Kenosha Tower, 12 at Racine Tower, and 20 at Ryan Tower.

Unloaded 5 cars of cinders in the devil strip on Section 13.

The asphalt crossing at Ryan Road was rebuilt at the request of The Milwaukee County Highway Department. The track was raised 4 inches on new stone ballast. All ties were renewed and tie plated. 11 tons of prepared asphalt were used in the crossing.

64 Winter King Switch Heaters were installed in Harrison Yards, Milwaukee.

Cracks in concrete pavement in Milwaukee were filled with hot asphaltic cement. 150 square yards of brick pavement were repaired.

Section 22 was abolished February 15 and the limits of Sections 5 and 21 extended to cover the territory formerly included in Section 22.

The track zone on South Genesee Street, Waukegan, was surfaced with asphalt from Tenth Street to Browning Avenue. 1600 square yard of brick paving was repaired throughout the City.

8 Winter King Switch Heaters were installed at Mundelein Station.

TRACK AND ROADWAY DIVISION
MAINTENANCE WORK - CONTINUED

TIES RENEWED

<u>Section</u>	<u>TIES</u>		
	<u>Main Line</u>	<u>Side Track</u>	<u>Switch</u>
1 - Winnetka	408	-	-
3 - Highwood	969	372	44
4 - Lake Forest	546	303	3
5 - Libertyville	600	890	63
6 - Waukegan City	-	118	5
7 - Edison Court	652	353	40
8 - Zion	995	-	-
9 - McKeon Road	427	--	-
10 - Kenosha	601	-	-
11 - Racine	502	-	17
12 - Four Mile Road	387	-	-
13 - Carrollville	663	30	40
14 - Grange Avenue	300	9	8
15 - Milwaukee	148	4675 234	40
16 - Howard-Dempster Line	22	-	92
17 - Glenayre	532	97	28
18 - Briergate	845	-	19
20 - Deerpath	534	80	29
21 - South Upton	492	2425 485	39
	9,623	2,971	467

421 ties for Third Rail Chairs installed on Section 16.

All Ties are Creosoted Red Oak.

BRIDGE AND BUILDING DIVISION

ADDITIONS AND BETTERMENTS

890

STATION CHANGES AT LINDEN AVENUE AND GLENAYRE - A.F.E. 4232.

At Linden Avenue a vacant store located west of the tracks was rented for use as a station. The ticket booth and concession fixtures from Glenayre were installed in the new station and a new ticket booth was built at Glenayre. The old station at Linden Avenue was retired and a standard 32 foot open shelter, salvaged from Elm Street, Winnetka, was erected on the northbound platform.

SHELTER AT KENILWORTH - A.F.E. 4240.

185

A standard 16 foot open shelter was erected on the southbound platform.

HEATING CHANGES AT GLENCOE - A.F.E. 4268.

130

A gas fired steam radiator complete with automatic controls was installed in the station at Park Avenue, Glencoe. This unit, which replaces a coal stove, was installed to conserve space and furnish more uniform heat.

SHELTER AT BRAESIDE - A.F.E. 4241.

300

A standard 16 foot open shelter was built on the northbound platform at Braeside replacing an old style station and canopy.

ERECTION OF STEEL BUILDING IN HIGHWOOD YARD - A.F.E. 4209.

690

A Truscon Steel Building, 20 x 30 in size, was erected in the South Yard at Highwood for the storage of screens, storm windows and miscellaneous material. This building was formerly located at 61st Street, Chicago, and was dismantled and shipped to Highwood in 1939. A new paper roof was put on the building and all side sections, which had rusted away, were replaced with wood panels.

SHELTER AT FARWELL STATION, LAKE FOREST - A.F.E. 4220.

250

A standard 16 foot open shelter was built on the southbound platform replacing an old style station and canopy formerly located on the northbound platform. The shelter erected at this point was salvaged from Tower Road, Winnetka.

BRIDGE AND BUILDING DIVISION
ADDITIONS AND BETTERMENTS - CONTINUED

TICKET OFFICE AT GREAT LAKES - A.F.E. 4281.

430

In order to facilitate sale of tickets at Great Lakes Naval Training Station on Liberty Days, a frame ticket office, 6 feet by 10 feet was built on the street level. This office has room for 3 ticket agents and is equipped with electric heaters and lights.

STATION FACILITIES AT HOWELL AND RAWSON - A.F.E. 4215.

2 station platforms, 100 feet long and 13 feet wide, a 6 foot plank crosswalk, cinder walks, downspout drains, station lights and trolley trough extensions were installed at the Howell-Rawson Overway by the Railroad Forces at the expense of the State of Wisconsin. The platforms are the cinder fill type with concrete curbs. Concrete was purchased Ready-Mixed and delivered by truck to the site. The lights and trolley trough extensions were put up by the Electrical Department.

SEWER AT NORTHFIELD - A.F.E. 4262.

300

About 90 feet of 6 inch vitrified pipe was laid to connect the Northfield Station into the new Sanitary Sewer recently constructed by the Village of Northfield.

TRANSFER TABLE AT MILWAUKEE - A.F.E. 4234.

8025

A 30 ton motor operated transfer table was installed in a concrete pit at the Milwaukee Barn. Forms for the pit were built at Highwood and shipped to the job. All concrete was High Early Strength purchased ready-mixed.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BRIDGES AND TRESTLES

Renewed 10 caps, 20 stringers and 2 pieces of guard rail at Highmoor.

Renewed 9 stringers at Lamb's Crossing.

Renewed 4 piles at South Upton.

Renewed 9 piles at Oak Creek.

Renewed 7 piles at Puetz Road.

Renewed 6 piles and 1 cap at South Milwaukee Road.

Renewed 6 piles and 2 caps at Layton Avenue.

Renewed 3 caps at Austin Avenue.

Renewed 18 piles and repaired walks and railings at Harrison Street Material Trestle.

Applied second coat of paint on Canal Bridge between the span over the Chicago and North Western Railway Company and the Canal. The portion of the bridge spanning the Canal was cleaned and painted 2 coats and the bridge from the Canal east to the bridle path was cleaned and painted 1 coat.

Cleaned Howard Avenue Bridge, Milwaukee, and painted 1 coat.

Repaired defective concrete in the E. J. & E. Railway Bridge at North Chicago, West Line.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BUILDINGS AND PLATFORMS

In addition to making minor repairs to all buildings and platforms on the system, the following major work was done:-

The heating plant at Wilson Avenue was overhauled. One boiler was rebuilt and 5 new sections installed. New traps were put on all radiators.

A hot water heating system was installed in the new station at Linden Avenue.

A hot air heating system was installed in the Highwood Section House. The furnace is second hand, salvaged from the company house at Indian Hill.

Relined the boiler in the Highwood heating plant.

The roof on the Old Public Service Building at Highwood was completely removed. At the north end of the east half 3 panels were replaced with new lumber and 2 panels with lumber salvaged from the old roof. The rebuilt portion of the roof was covered with Mule Hide Roofing. 1000

A ventilating fan was installed in a pent house on the roof of the Highwood Car Barn Paint Shop.

Painted the water tank in Highwood Yard.

The Mechanical Department Blacksmith Shop was rebuilt.

A second ticket window was installed in the Fort Sheridan Station. Considerable plaster was repaired and 1 toilet reconditioned.

A small ticket booth was built at Great Lakes Naval Training Station. This was removed and a larger booth built under A.F.E. No. 4281.

Timber sills were renewed in part under all Skokie Stations, except Northbrook and Deerpath.

The garage at Northfield was moved out from under the Public Service Company wires.

The garage at Deerpath was moved closer to the station.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BUILDINGS AND PLATFORMS - CONTINUED

The fill portion of the northbound platform at North Chicago Junction, Milwaukee Division, was covered with Emulsified Asphalt.

The south end of the Edison Court Freight House was reroofed, using roll roofing.

Repaired the tile roof at Zion.

At Kenosha Freight House the roof was renewed with roll roofing, the gutters and downspouts repaired and the hot air furnace replaced with a larger one.

Roofs were renewed and gutters repaired on the Racine Passenger and Freight Stations.

General repairs were made to windows, gutters and downspouts on the buildings at Harrison Street, Milwaukee.

Relined and repaired the boiler at Harrison Car Barn.

Repaired Kinnear doors at Highwood, North Chicago Barn, Tenth Street Garage and Milwaukee Barn.

Rebuilt 2 skylights at North Chicago Barn.

Repaired pits at Waukegan Terminal.

Repaired tile roof on Libertyville Station.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BUILDINGS PAINTED AND DECORATED

LOCATION

Roosevelt Road Trainmens Room	Painted Inside.
Wilson Avenue Station	Washed Commissary Office.
Linden Avenue Station	Painted Inside.
Wilmette Station	Painted Inside.
Glencoe Station	Painted Inside.
Ravinia Station	Painted Inside.
Highland Park Station	Painted Inside.
Highwood Station	Painted Inside.
Fort Sheridan Station	Painted Inside.
Lake Forest Station	Painted Inside.
Lake Bluff Station	Painted Inside.
Harmswoods Station	Refinished all floors.
Glenayre Station	Painted Inside, Refinished all floors.
Northfield Station	Painted Living Quarters.
Northbrook Station	Refinished all floors.
Woodridge Station	Refinished all floors.
Briergate Station	Painted Living Quarters.
Highmoor Station	Refinished all floors.
Sheridan Elms Station	Painted Inside.
Tower No. 10	Painted Outside.
Racine Substation	Painted Outside.
Racine Tower and Outbuildings	Painted Outside.
Racine Freight House	Painted Outside.
Racine Station	Painted Inside and Outside.
Milwaukee Barn	Painted Outside.
Harrison Street Sheds	Painted Outside.
Harrison Street Substation	Painted Outside.
Harrison Street Station	Painted Outside.
Milwaukee Terminal	Painted Inside and Outside.
Milwaukee Freight House	Painted Outside.
Mundelein Station	Painted Outside.
Mundelein Freight House	Painted Outside.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

COMPANY HOUSES DECORATED

LOCATION

1904 Jenks Street, Evanston	Clean wallpaper, paint 5 rooms.
2720 Eastwood Avenue, "	Paint and Paper Interior.
2727 Woodbine Avenue, "	Paint and Paper Interior.
2728 Woodbine Avenue, "	Paint Interior.
2737 Woodbine Avenue, "	Paint and Paper Interior.
2738 Woodbine Avenue, "	Paint and Paper Interior.
2740 Woodbine Avenue, "	Paint and Paper Interior.
1057 Linden Avenue, Wilmette	Paper 3 rooms.
1062 Linden Avenue, "	Paint and Paper Interior.
1064 Linden Avenue, "	Paint and Paper 2 Rooms.
408 Railroad Avenue, "	Paint and Paper Interior.
440 Railroad Avenue, "	Paper 3 Rooms.
1133 Greenleaf Avenue, "	Paint Interior of Store.
1135 Greenleaf Avenue, "	Paint Interior of Store.
546 Lincoln Avenue, Winnetka	Paint Interior of Store.
557 Green Bay Road, Glencoe	Paint and Paper 2 Rooms.
1101 22nd Street, North Chicago	Paint and Paper 3 Rooms.
1210 Washington St, Waukegan	Wash west flat, paint outside.
709 Linden Avenue, "	Paint and Paper Interior.
1109 Grove Avenue, Racine	Paint and Paper Interior.
1121 Grove Avenue, "	Paint Interior.
Pollyanna Building, Milwaukee	Paint Outside.
Harrison Street, Skokie Valley	Paint and Paper.
North Flat, Libertyville	Paint and Paper 2 Rooms.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

MACHINE SHOP

Overhauled 6 section speeders, 9 signal speeders, 8 push cars and 3 hand cars.

Repaired 6 frogs, 13 switch points and 4 manganese frog inserts.

Maintained Way Department tools and work equipment.

Maintained oil burners at Winnetka and Lake Forest Stations.

Made and repaired parts for crossing gates.

Cut bars and pins and welded parts for the Mechanical Department.

TIN SHOP

Made water coolers, copper flush tanks, water supply tanks, card holders, toilet chutes, destination box panels, car heater magazines, roof flanges, ventilators, roof jacks and other work requested by the Mechanical Department for repairs to cars.

Made air ducts for cars being reconditioned.

Rebuilt 2 section house cook stoves.

Did necessary sheet metal work required by repairs to buildings and heating plants.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

MISCELLANEOUS

Maintained stations in Chicago at Adams and Wabash, Wilson Avenue and Howard Street, Montrose M. D. Station, and Congress Street Baggage Room.

Operated steam heating plants at Wilson Avenue Station, Highwood Office, North Chicago Barn, Waukegan Garage, and Milwaukee Barn.

Set posts for parking space at Church Street, Evanston.

Repaired fences from Pipers Road north 1500 feet on the east side; from Osborne Road to Hawthorne Drive on both sides; from Middle Road north 1000 feet on the east side; from Six Mile Road south 1000 feet on the east side; from Nechuta Road 1000 feet north on the east side; from Elm Road to Oakwood Road on the east side; from Oakwood Road to Ryan Road on the west side.

Repainted all crossing, station and whistle signs, mile posts and switch stands from Milwaukee to Waukegan.

Rebuilt 5,300 square feet of sidewalk in Racine. Ready-Mixed Concrete was bought locally for this work.

Repaired all asphaltic crossings in Illinois and Racine.

Operated the Weed Killer over the system.

Made repairs to company houses as requested by Real Estate Department.

SIGNAL AND INTERLOCKING DIVISION

ADDITIONS AND BETTERMENTS

CHANGES IN AUTOMATIC GATE CONTROL CIRCUITS - HOWARD-DEMPSTER
LINE CROSSINGS - A.F.E. 4259. 1065

A time selector circuit was installed in the southbound control circuit for the gates at Crawford Avenue and East Prairie Road, providing a 4,200 foot control circuit for North Shore Trains and a 2,240 foot control circuit for Rapid Transit Trains.

INSTALLATION OF STOP SIGNAL AT DEMPSTER STREET - A.F.E. 4227. 90

To provide additional prewarning, a standard illuminated "Stop" signal was installed ahead of the southwest gate at Dempster Street. The signal lights up when the gates start to go down and stays lighted until they go up again.

CHANGES TO CONTROL CIRCUITS FOR AUTOMATIC GATES AND AUTOFLAGS -
DEMPSTER TO STATE LINE - A.F.E. 4260. 2290

In order to provide adequate crossing protection for faster trains track circuits for automatic gates and autoflags were extended for Gross Point Road, northbound; Simpson Street, both directions; and Dundee Road, both directions. Further work will be done from North Chicago to the State Line in 1941.

INSTALLATION OF UNDERGROUND CABLE AT SOUTH UPTON - A.F.E. 4231. 2700

Underground cable, replacing existing aerial cable, was installed along the Chicago and North Western Railway tracks for approximately 1,150 feet. The cable carries interlocking plant and Chicago and North Western Railway Company block signal circuits between the home signals. This work was paid for in part by the Chicago and North Western Railway Company.

CHANGES TO CONTROL CIRCUITS FOR AUTOMATIC GATES IN WISCONSIN -
A.F.E. 4261. 3320

Track circuits for automatic gates were extended at South Kenosha, both directions; 75th, 73rd and 60th Streets, Kenosha, southbound; 52nd Street, Kenosha, both directions; and Taylor and Durant, Racine, northbound. Further work will be done in Racine in 1941.

SIGNAL AND INTERLOCKING DIVISION

ADDITIONS AND BETTERMENTS - CONTINUED

CHANGES TO RYAN INTERLOCKING PLANT - A.F.E. 4238.

5165

Three position color-light home signals with markers and call-ons were installed for the Chicago and North Western Railway Company. The Chicago and North Western Railway Company dwarf signals were changed to upper quadrant operation and main line detector bars removed. A 220-volt commercial power supply was installed in the tower. This work was required by the Chicago and North Western Railway Company in order to incorporate the interlocking plant signals into their new block signal system. Work to be done in 1941 includes removal of derails on the Chicago and North Western Railway and installation of a trap circuit through the crossing.

SIGNAL AND INTERLOCKING DIVISION

MAINTENANCE WORK

In addition to the routine work of maintaining interlocking plants, block signals, manual and automatic gates and auto-flags, the following major items of maintenance work were done:-

Installed new autoflag at Sunset Ridge Road after the existing one was demolished by an automobile. At a later date replaced relays and wiring in relay case burned out when a Public Service Company power line fell on the 2300-volt line during a storm.

Replaced worn rocker links, lever latches and parts in machines at Kenosha and Racine Interlocking Plants.

Replaced northwest gate at Knollwood and southeast gate at Milwaukee Avenue after they were damaged by automobiles.

CROSSING GATE OPERATION

52 automatic gate locations, including Middle Road Barrier.

	<u>1940</u>	<u>1939</u>
Gates Broken by Automobiles	151	109
Other Interruptions*	357	192

21 Manually operated crossing gate locations.

	<u>1940</u>	<u>1939</u>
Gates Broken by Automobiles	32	27
Other Interruptions*	74	106

*Includes interruptions due to power failures, blown fuses, mechanical failures, frosted contacts, line trouble, track circuit trouble, sleet, etc.

SIGNAL AND INTERLOCKING DIVISION

MAINTENANCE WORK - CONTINUED

CROSSING GATES AND SIGNALS MAINTAINED

	<u>LOCATIONS</u>
Automatic Gates	52
Manual Gates	21
Flasher Signals - Track Circuit	3
Autoflags - Track Circuit	21
Autoflags - Manual Control	3
Block Signals - D.T. Miles	41.6
Switch Protection Signals	7
Interlocking Plants	5
Smash Gates	3

EQUIPMENT

PURCHASE OF MOWING MACHINES - A.F.E. 4206.

2 gasoline-powered mowing machines were purchased and used for cutting weeds on the right of way. These machines have been equipped with snow blades and sent to Milwaukee and Racine for cleaning sidewalks.

PURCHASE OF SPEEDERS - A.F.E. 4264.

2 one-man gasoline-powered Fairmont Speeders were bought for the Signal Division.

EQUIPMENT RETIRED

The Rex 21 cubic foot concrete mixer and the Erie steam shovel were sold for scrap.

WINNETKA GRADE SEPARATION

SEP 1941

The Maintenance of Way forces performed the following work on the Winnetka Grade Separation:-

Built 2 boxes for housing telephone control apparatus and 6 standard telephone booths.

Installed a hand throw derail on the northbound facing point switch at Ivy Court.

Installed permanent crossover in Chicago and North Western Railway Company tracks near Pine Street.

Built up rail ends at points where old rail was used against new special work.

Made connections to new permanent tracks.

Constructed block signal system from Kenilworth to South Avenue, Glencoe.

Built 20 sand boxes for station platforms.

S U M M A R Y

TRACK CONSTRUCTION*

	<u>1940</u>	<u>1939</u>
Side Track Constructed - Lineal Feet	166	1,287
Side Track Removed - Lineal Feet	2,059	-

RAIL INSTALLED - SINGLE TRACK FEET*

128#	167	-
102#	4,181	-
100#	640	1,231
80#	3,735	11,682

RAIL REMOVED - SINGLE TRACK FEET*

95#	4,348	-
80#	2,699	1,174
65#	3,569	11,352

TIE PLATES AND RAIL ANCHORS INSTALLED*

80#-100# Tie Plates	17,319	12,795
100# Rail Anchors	168	312
80# Rail Anchors	3,240	-

NOTE *Does not include material involved in Winnetka Grade Separation Project.

S U M M A R Y - C O N T I N U E D

SPECIAL WORK*

	<u>1940</u>	<u>1939</u>
Turnouts Installed	2	2
Turnouts Removed	3	-
Railroad Crossings Renewed	-	2
Crossings Built Up	-	1
Frogs Repaired in Shop	6	11
Joints Built Up	-	50
Thermit Welds	301	125

TIES RENEWED*

Main Line	9,623	7,920
Side Track	2,971	2,371
Switch	467	1,811
Third Rail	421	-
Bridge	-	95

TIES INSTALLED ON NEW WORK*

Side Track	80	397
Switch	38	99

BALLAST CARS*

Stone - Main Line	76	20
Cinders - Main Line	105	34
Cinders - Side Tracks	4	-

NOTE

*Does not include material involved in Winnetka Grade Separation Project.

S U M M A R Y - C O N T I N U E D

BROKEN RAILS

	<u>1940</u>	<u>1939</u>
100#	1	1
80#	17	22
65#	21	-
Total	<u>39</u>	<u>23</u>

PAVING REPAIRS - SQUARE YARDS

Wilmette	-	Brick	65	175
Kenilworth	-	Brick	10	-
Waukegan	-	Brick	1,600	250
Milwaukee	-	Brick	150	900

SWITCH HEATERS INSTALLED

Winter King Switch Heaters	350	50
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CROSSINGS

Concrete Slab Crossings Installed	1	-
Gumwood Crossings Installed	2	2
Asphalt Crossings Installed	1	1
Asphalt Crossings Rebuilt	4	1
Plank Crossings Rebuilt	1	5
Grade Crossings Eliminated	-	13

BRIDGE REPAIRS

Bridges Repaired	9	9
Bridges Painted	2	-

S U M M A R Y - C O N T I N U E D

PAINTING

	<u>1940</u>	<u>1939</u>
Buildings Painted Outside	15	16
Buildings Painted Inside	18	1
Buildings Painted Inside and Outside	2	8
Company Houses Decorated	24	21

CROSSING PROTECTION

Manual Gates Retired - Locations	-	5
Automatic Flashers Retired - Locations	-	1
Manual Gates Broken By Automobiles	32	27
Automatic Gates Broken By Automobiles	151	109

FENCING

Right of Way Fence Rebuilt - Feet	16,800	-
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WEED KILLER

One Application - Single Track Miles	160	16
Two Applications- Single Track Miles	21	174
Total Solution Used - Gallons	65,000	71,300

CARLOAD MATERIAL

Sand and Stone	130	79
Coal	39	44
Ties	32	25
Cinders	136	70
Miscellaneous	23	28
Total Cars Unloaded	<u>360</u>	<u>246</u>