

CHICAGO NORTH SHORE AND MILWAUKEE RAILWAY COMPANY

ANNUAL REPORT

FOR THE YEAR 1952

WAY AND STRUCTURES DEPARTMENT

Highwood, Illinois  
February 4, 1953

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## FOREWORD

This report is an account of the work accomplished by the Way and Structures Department during the year 1952 and includes all A.F.E. and extraordinary maintenance work performed by contractors and regular company forces, as well as information and statistics relating to the regular maintenance work, which is of interest at this time and will be of value in the future for record and reference purposes.

In 1952 the installation of automatic gates continued, six more crossings being protected during the year. In addition to providing improved and safer crossing protection, these installations saved the wages of 13 men who were employed as gatemen.

A small ballast program was carried out and the two tracks from Hamlin Avenue to the Canal Bridge on the Howard-Dempster Line were rehabilitated by raising, surfacing and lining the tracks with new crushed stone ballast and at the same time installing new ties, plates and angle bars as needed.

The station repair and painting program was curtailed during the year because of a force reduction made in the carpenter and painter gangs. It is hoped that these forces can be re-established soon so that this work can be kept up.

For the first time since 1947 some main line rail was renewed. 2223 track feet of new 115# rail and fastenings were installed on the northbound main track between Oakton Street and Niles Center Road. It is hoped that additional renewals can be made in 1953, with the rail on hand, as we are behind in regular rail renewal work.

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## TRACK AND ROADWAY DIVISION

### ADDITIONS AND BETTERMENTS

#### TRACK REHABILITATION ON HOWARD-DEMPSTER LINE - A.F.E. 5022

Both main line tracks were ballasted from the East Prairie Road crossover to the Canal Bridge. The old cinder ballast was removed to the bottom of ties and used to widen the shoulders. Ties were spaced and renewed where necessary and the track raised an average of 2 inches on stone ballast. A total of 34 cars or 1894 tons of stone was used. This completes the ballasting program authorized under A.F.E. #5022.

#### GRADE CROSSING IMPROVEMENT - HOWARD STREET, SKOKIE - A.F.E. 5122

Railway forces installed a precast concrete slab crossing on the interchange track at Howard Street, Skokie. All ties were renewed and 349 lineal feet of 80# rail replaced with 100# relayer rail. The track through the crossing was ballasted with stone. This improvement was required by the Cook County Highway Department paving program. The County furnished the crossing slabs.

#### RETIREMENT OF GAUNTLET TRACKS ON HOWARD-DEMPSTER LINE - A.F.E. 5227

Gauntlet tracks at East Prairie Road, Kostner Avenue and Main Street were removed. Bridge and Building forces cut back the station platforms and canopies to permit operation of freight trains on the main line tracks. At East Prairie Road the main line third rail was retired and the original gauntlet track third rail adjusted for main line operation.

#### SPOOL COTTON COMPANY SIDETRACK - A.F.E. 5224

This A.F.E. covers the Railway portion of the cost of a new sidetrack approximately 810 feet long built to serve the above industry at School Street, Skokie. Company forces built 200 feet of track starting from a No. 10 facing point switch in the northbound track. Construction is of 100# relay material on new ties and stone ballast. Track is fully electrified.



## TRACK AND ROADWAY DIVISION

### ADDITIONS AND BETTERMENTS - Continued

#### RAIL RENEWAL - HOWARD-DEMPSTER LINE - A.F.E. 5236

2223 track feet of 100# rail was relaid with new 115# rail and fastenings on the northbound track from School Street to Niles Center Road on the Howard-Dempster Line. Track was fully tie-plated and has 10 rail anchors per rail.

#### MYSTIC ADHESIVE PRODUCTS SIDING - NORTHFIELD - A.F.E. 5244

This authority covers the Railway's portion of a sidetrack to serve the above industry which is building a new plant south of Winnetka Avenue and east of the right-of-way. The track on Railway property is 475 feet long and extends from a No. 6 turnout installed in the lead track serving Wagner Brothers material yard south to the north line of Winnetka Avenue. Construction consists of 100# relay material on mixed new and secondhand ties and cinder ballast. Work was started late in December and by the end of the year was complete, except for electrification and final surfacing. The industry has not yet started its portion of the work.

#### NORTHBROOK LUMBER COMPANY SIDING - A.F.E. 5207

This A.F.E. covers the Railway's portion of a siding 600 feet long built to serve the Northbrook Lumber Company located south of Dundee Road and east of the right-of-way. The 180 feet of track on Railway property was laid in 1951 but not ballasted. In 1952 a carload of stone ballast was used to raise and surface this track.

#### TRACK CONSTRUCTION - PETTIBONE YARD - A.F.E. 5214

In order to provide additional storage and classification space for freight cars at Pettibone Yard, the following work was done:

(1) A new track 380 feet long was built south of the Yard Office and west of the lead track for the storage of cabooses.

(2) The siding serving the North Chicago Freight House on Commonwealth Avenue was retired and Yard Track No. 1 extended 313 feet north.



## TRACK AND ROADWAY DIVISION

### ADDITIONS AND BETTERMENTS - Continued

#### TRACK CONSTRUCTION - PETTIBONE YARD - A.F.E. 5214 - Cont'd.

(3) An additional track 712 feet long was built between existing tracks 6 and 7.

(4) An additional track 829 feet long was built between existing tracks 7 and 8.

All tracks are built of 80# relay rail on mixed new and secondhand ties and cinder ballast. Grading work was done by contract.

#### NASH SIDING - KENOSHA - A.F.E. 5215

A new siding 400 feet long was built from a point of switch in the northbound main track north of the Kenosha substation south to the north line of 46th Street. This track connects with the main switching lead of the new Nash yard located between 46th and 52nd Streets. Construction is of 100# relay material on new ties and stone ballast.

#### TRACK RECONSTRUCTION - MILWAUKEE - A.F.E. 5230

In order to meet the new grade established by the City of Milwaukee in their paving program, it was necessary to rebuild the track and pavement on South 5th Street from the south line of Greenfield Avenue to the Madison Street cut-off. Existing 102# rail was replaced with 128# rail on tangent track and with 149# rail in the curve at Madison Street. Brick pavement was replaced with 10" concrete pavement placed by the Schneider-Borchert Company of Milwaukee, who had the contract for widening and paving the street. The new grade, which varies from 1" to 6" above the old grade, was met by laying the rail on wood blocks fastened to the original ties. Total length of project is 530 feet of double track.

#### RAIL RENEWAL - GLENCOE - A.F.E. 5210

2354 feet of 80# rail and 2 special double spring frogs were relaid with 100# relayer rail and new No. 10 rigid manganese frogs on both tracks through the gauntlet at Glencoe. ✓

TRACK AND ROADWAY DIVISION

ADDITIONS AND BETTERMENTS - Continued

RAIL RENEWAL - SOUTH UPTON - A.F.E. 5212

4071 feet of 80# rail was relaid with new 100# rail in both main line tracks of the Libertyville Line between Green Bay Junction and South Upton Tower. The turnout to the Flexicore siding was renewed with 100# relay material.

EXTENSION OF STORAGE TRACK - MUNDELEIN - A.F.E. 5213

The passenger car storage track at Mundelein was extended 297 feet west using 80# relay rail on new ties and cinder ballast.



## TRACK AND ROADWAY DIVISION

### MAINTENANCE WORK

In addition to the routine work of maintaining the track, cutting weeds, cleaning ditches, greasing curves, filling switch lamps and fighting snow, the following work was done:

Renewed all rail joints between the Canal Bridge and the south end of Oakton curve. 768 new 100# joints were installed.

Raised low spots and retamped all joint ties from Hamlin Avenue crossover to beginning of Oakton curve.

Surfaced both tracks from Oakton to Dempster and from Gross Point Road to Simpson Street.

Renewed plank in Crawford Avenue crossing.

Renewed plank and asphalt in Main Street crossing. No ties were renewed.

The full plank crossing at Clavey Road was renewed with plank and asphalt. The ties were in good condition and were not renewed.

Retired the middle sidetrack at Briergate. Inasmuch as this work was required under the terms of a contract by which the property was sold, all expenses were charged to the Real Estate Account.

Renewed the positive guard rail chairs through the Commonwealth Avenue crossing at Valley Junction.

In order to provide proper clearance for proposed automatic gates at 23rd Street, Zion, the team track was moved 2.5 feet east through the crossing and the grade raised 6 inches. A new plank and asphalt crossing was installed on new ties and stone ballast.

Renewed the full plank crossing at Winthrop Harbor Road with plank and asphalt.

Rebuilt 250 feet of the northbound track north of Klinkert's Road following a derailment. 507 lineal feet of new 100# rail, 110 ties and 1 car of stone ballast were used.

## TRACK AND ROADWAY DIVISION

### MAINTENANCE WORK - Continued

Crossing frogs at Ryan Tower were welded twice during the year by the Teleweld Co.

8 cars of stone ballast were unloaded for dressing track between College Avenue and Austin Avenue.

Renewed all plates, braces and switch rods in the double slip switch at Harrison Street, Milwaukee.

Repaired broken rails in Milwaukee and made 17 thermit welds.

Weimer Welding Company repaired the National Avenue crossing and built up special work at the Terminal.

Repaired broken rails on Greenleaf Avenue, Wilmette. ✓  
Made 45 thermit welds.

Made extensive repairs to the ground track at Mutual Coal Company, Highland Park. Renewed 162 ties and 924 lineal feet of rail with 80# relay material. ✓

Renewed turnout in lead track east of Highwood Office Building and also "diner track" turnout with new 80# material. ✓

Renewed 297 feet of 100# rail on the high rail of the north curve, southbound track at Northgate. Reversed 9 rails in the south curve at the same location. ✓

Built a new plank and asphalt crossing for the Wire Mill at 11th Street, North Chicago, East Line. 2 spring frogs in the crossing were replaced with second-hand rigid frogs. All expense was borne by the Wire Mill. The old crossing was removed.

Installed 2 Pettibone-Mulliken Hub Safety Switch Stands on the Scale Track at Rondout to prevent derailments caused by failure to clear the switch points on a reverse movement.

Unloaded 6 cars of cinders and 5 cars of stone for ballast on the Libertyville Branch east of the Des Plaines River.

Rebuilt the crossings at Prospect Avenue, Mundelein, and on Hawley Street at the Soo Line interchange. All ties were renewed and plank and asphalt surfacing installed.



## TRACK AND ROADWAY DIVISION

### MAINTENANCE WORK - Continued

Renewed 825 lineal feet of 80# rail with 100# relay rail on the south track of the north leg of the interchange track at Mundelein. Due to the shortage of 80# relay rail it was necessary to use 100# material. The best of the 80# rail released was used to repair the balance of this track.

### FENCING

Rebuilt east right-of-way fence between Main Street and Niles Center Road, between Dempster Tower and the alley south of Dempster Street and from Dempster Street to Gross Point Road, a total of 2500 feet.



TRACK AND ROADWAY DIVISION

MAINTENANCE WORK - Continued

Installed 7692 - 100# double shoulder tie plates  
as follows:

<u>Section</u>	<u>Tie Plates</u>
1 - Dempster Street	530
2 - Glenayre	1390
3 - Briergate	320
4 - South Upton	20
5 - Waukegan	132
6 - Zion	1745
7 - Kenosha	794
8 - South Racine	1510
10 - Carrollville	1000
11 - Grange Avenue	<u>251</u>
Total Tie Plates	7692

TIES RENEWED

Ties were renewed by company forces as follows:

<u>Section</u>	<u>Main Line</u>	<u>Sidetrack</u>	<u>Switch</u>
1 - Dempster Street	1136	5	46
2 - Glenayre	1461	-	2
3 - Briergate	1760	-	-
4 - South Upton	507	-	35
5 - Waukegan	575	226	53
6 - Zion	1409	65	-
7 - Kenosha	505	10	1
8 - South Racine	944	-	-
9 - North Racine	261	-	-
10 - Carrollville	582	-	-
11 - Grange Avenue	732	-	37
12 - Milwaukee	135	51	-
13 - Libertyville	1059	166	29
✓ 14 - Winnetka	482	-	-
✓ 15 - Highwood	857	229	69
✓ 16 - Lake Forest	<u>1410</u>	<u>-</u>	<u>2</u>
	13815	752	274

## BRIDGE AND BUILDING DIVISION

### ADDITIONS AND BETTERMENTS

#### FREIGHT OFFICE AT OAKTON STREET - A.F.E. 5228

Concrete block partitions were constructed to enclose a space 9' x 18' in the southeast corner of Oakton Street station to serve as an office for the Skokie Freight Agent, who was formerly located at Glenayre. The double doors at the south end of the building were remodeled to provide separate entrances for the agent and the tenant who uses the rest of the station. Telephone and electrical facilities were provided. Heat is furnished by a space heater using bottled gas.

#### EXTENSION OF PARKING SPACE AT NORTHBROOK - A.F.E. 5232

Parking space for 27 additional automobiles was provided by extending the north end of the existing lot east to the fence. Dirt fill was obtained from the right-of-way north of the parking area and 3 cars of cinders used for surfacing. A timber bumper was erected between the original lot and the extension to keep the cars in line.

#### EXTENSION OF PLATFORMS - SKOKIE VALLEY AND LIBERTYVILLE - A.F.E. 5233

In order to provide platform facilities for 5-car trains, station platforms were extended as follows:

<u>Location</u>	<u>N.B.</u>	<u>S.B.</u>
Northbrook	32'	80'
Woodridge	80'	80'
Briergate	80'	80'
Highmoor	16'	16'
Deerpath	32'	32'
Libertyville	48'	64'

All extensions are of standard platform construction with wood posts, plank curbs, cinder fill and screenings surface.



## BRIDGE AND BUILDING DIVISION

### ADDITIONS AND BETTERMENTS - Continued

#### EXTENSION OF TICKET OFFICE - EDISON COURT - A.F.E. 5217

The ticket office in the Edison Court, Waukegan, station was extended south 4 feet using the same type of construction as that in the original office.

#### REPLACEMENT OF CONCESSION EQUIPMENT - WINNETKA - A.F.E. 5220

This A.F.E. was obtained by the Commissary Department and provided for retiring old concession equipment at Winnetka station and transferring modern equipment from Great Lakes, Main Gate, to Winnetka. Bridge and Building forces did all the work of dismantling the old fixtures and moving and setting up the new ones. ✓

#### HEATING PLANT CHANGES - HIGHWOOD - A.F.E. 5234

This project included the modernization of the entire heating system for the general offices and car shops at Highwood, including the installation of a new boiler, a complete oil-burning system, oil storage facilities, fuel economy and safety controls, automatic firing system requiring minimum attendance, installation of unit heaters in the old barn, and zone and temperature controls. The new installation was made without disturbing the existing coal-fired boiler, which is retained as a standby. ✓

#### EXTENSION OF PLATFORM - RACINE STATION - A.F.E. 5161

In connection with the installation of automatic gates at Washington Avenue, Racine, the southbound platform was extended 166 feet north to Lindermann Avenue to permit trains to stop 100 feet north of Washington Street, thereby releasing the automatic gates at the crossing. Extension is standard fill platform construction.



BRIDGE AND BUILDING DIVISION  
MAINTENANCE WORK  
BRIDGES, TRESTLES AND CULVERTS

The following repairs were made by company forces:

CANAL BRIDGE

Repaired catwalks on both tracks and also walk between tracks. Used 214 pieces of 2x6-16, 184 pieces of 2x6-4, 24 pieces 2x4-20 and 6 pieces 4x4-16. All lumber was new creosoted pine.

SOUTH UPTON, S.V.L.

Renewed 4 piles at this location. Installed bracing between bents of southbound bridge.

PUETZ ROAD

Renewed 8 piles, 1 mud sill and 2 sway braces on the southbound bridge.

SOUTH MILWAUKEE ROAD

Renewed 4 piles and bulkhead timbers in the south bent of the northbound bridge. Renewed 12 piles, 2 mud sills and 2 sway braces in the southbound bridge.

BOLIVAR AVENUE

Renewed 3 piles, 2 caps and 1 sway brace and 1 stringer on the southbound bridge.

DES PLAINES RIVER

Renewed 10 piles, 3 mud sills and 9 braces in the southbound bridge.

MUTUAL COAL CO., HIGHLAND PARK

Renewed 10 piles, 1 mud sill, 4 caps, 7 braces and 66 ties. Repaired catwalks and railings. ✓



## BRIDGE AND BUILDING DIVISION

### MAINTENANCE WORK

#### BUILDINGS AND PLATFORMS

In addition to routine minor repairs to buildings and platforms, the following major work was done:

At 509 South State Street, Chicago, brick work in walls and parapets was repaired and tuckpointed by Hoffman and Klemperer Co. of Chicago. Work done consisted of tuckpointing all bad joints in the north wall, tuckpointing the south wall above the adjoining building, tuckpointing the chimney and reanchoring stones in the west wall. The west portion of the north parapet wall was taken down to roof line and rebuilt with new common brick and new salt-glazed coping. Balance of north parapet wall, east section, was repaired and poor bricks replaced on the inside. Approximately 500 old bricks were replaced on the inside of the south parapet wall with new brick. Contract price was \$2300.

Upon completion of the above work, a contract was let to Christiansen and Company of Chicago for painting all metal doors, window sash and frames, iron window gratings, elevator door, bumpers and corner guards of doors with one coat of red lead and one coat of exterior black rust-inhibitive paint. The large wood roll-up door was painted with one coat of black paint.

The old heating boiler at the above location was rebuilt by the A.H.&P. Co. The entire bottom, inside and outside sheets of the fire box and the throat sheet were removed and replaced with 3/8" steel boiler plates welded in place with hand-hole and clean-out openings according to the original pattern of the boiler. All 46 boiler tubes were replaced with new 12 gauge electronite seamless tubes.

The station roofs, canopies and high concrete platforms of the old C.T.A. stations at East Prairie-Crawford and at Oakton Street were cut back to permit operation of freight trains on the main line without using the gauntlet tracks.

Removed the canopy over the high platform formerly used by C.T.A. trains at Dempster Street.

Made necessary repairs to stations and shelters on the Skokie Valley Line in conjunction with painting program.



BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BUILDINGS AND PLATFORMS - Continued

Extensive repairs were made to the foundations of the section house at Glenayre.

Repaired and renewed existing platform curbs in connection with platform extension program on the Skokie Valley Line.

Built and installed new frame outhouses at Racine Tower and at Ryan Tower.

Renewed approximately 100 lineal feet of wood decking on both platforms at Milwaukee Terminal.

All frame window sash in the north, east and south walls of the Pollyanna Building, Harrison Street, Milwaukee, were replaced with steel sash. Work was done under contract by Henry Danischefsky.

At Winnetka station the lower half of the window openings in the south and east walls, behind the concession, were bricked up and new plate glass windows installed. Brick work was done by Edward Olson of Highland Park and the glass set by Pittsburgh Plate Glass Co. ✓

Covered approximately 60% of exterior wall surfaces of Carpenter Shop in Highwood Yard with Johns-Manville asbestos shingle siding. ✓

Made necessary alterations to Highwood boiler room and installed a concrete foundation to support the new boiler. ✓

ADAMS AND WABASH STATION

Following the fire of December 15, 1951, which resulted in a complete loss of the first floor and heavy basement damage, the architectural firm of Travelletti and Suter was retained to work with the owners on plans for rebuilding and modernization of Railway equipment and facilities in the building.

By December 17, 1951, our forces had cleaned up the second floor, provided temporary facilities for the



## BRIDGE AND BUILDING DIVISION

### MAINTENANCE WORK

#### BUILDINGS AND PLATFORMS - Continued

agents, parcel checking and information clerks and all business was handled through the C.T.A. stairways, platforms and our connection to the C.T.A. platform. On December 20, 1951, the mezzanine level, women's rest room and toilets were restored to service.

The owner's contractor cleaned out the first floor and basement and restored the first floor to its original construction of steel center beam, columns, and 3" x 14" wood joints. A temporary planking and railing was laid over the joists to provide access to the basement stairs leading to men's toilets and wash room. These were placed in service on February 8, 1952. By March 3, 1952, the subflooring had been laid on the first floor and the street level entrance to the station was again used.

After this the main floor remodeling went ahead. A new ticket booth, parcel checking counter, information facilities and storage room was provided and the entrance lobby enlarged. The building was completely redecorated and new fluorescent lighting provided on the first and second floors. The agents, parcel checking and information services were transferred to the first floor on September 24, 1952. At the close of the year The Interstate Company had not set up or opened the lunch counter and fountain on the first floor. It was opened, however, on January 22, 1953. All other work was complete, except the installation of new illuminated signs which have been ordered but not received.

### MACHINE SHOP

In addition to the routine work of maintaining tools and work equipment for all divisions of the Way and Structures Department, the following work was done:

Overhauled 7 section gang motor cars and 5 small inspection speeders.

Rebuilt 6 push cars.

Repaired 8 frogs and 11 switch points.

Made 30 steel gear racks for automatic gates.



BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

SHEET METAL SHOP

About 75% of the time of this shop is devoted to making water coolers, flush tanks, water supply tanks, card holders, toilet chutes, destination sign box panels, car heater magazines, roof flanges, roof jacks and ventilators for the Mechanical Department.

In addition to the foregoing work for the Mechanical Department and miscellaneous spot maintenance to heating plants and sheet metal work on buildings, the following was done:

Made platform railing braces, sign braces, sign blanks, sandbox corners, trash cans, tilt-top cans, roofs for switch cabinets and manual control boxes for automatic gates.

Renewed the hot air furnaces at Northbrook, Ryan Tower and Ravinia.

Renewed gutters on Racine and Carrollville substations, the south side of Highwood Transportation Building, the west side of Electrical and Tin Shop Building and on the east side of the North Chicago Freight House.

Repaired gutters on shelters at Edison Court and Highland Park.

Installed new smoke stacks on Highwood Carpenter Shop and Speeder Shop and at Ryan Tower.

Repaired 100 switch lamps, 100 marker lamps and 30 headlights.



BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

MISCELLANEOUS

Enlarged parking lot at Glenayre.

Repaired crosswalks through North Chicago and Waukegan.

Overhauled the track scale at Rondout after a derailment. 12 new dead-rail chairs were installed.

The concrete car inspection pit at Mundelein was filled in with 35 yards of bank-run gravel.

The sprinkler system in the Highwood Car Shops was thoroughly cleaned. All pipe lines were blown out with air and all sprinkler heads gone over. This work was done by contract. ✓

The east retaining wall on the north side of Woodland Avenue, Lake Forest, was braced with old rails set in concrete and a tie rod was put through the fill under the tracks and fastened to the west wall. ✓

Repaired all blacktop crossings on the system.

Made annual fire inspection at all stations, towers and section houses.

Delivered store room supplies to all points on the Shore Line, Skokie Valley Line, Libertyville Line and in Chicago.

Operated the weed killer over the system.



BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

PAINTING

Location

Wilson Avenue  
Ridge Avenue  
Asbury Avenue  
Oakton Street

Dempster Street

Harmswoods  
Glenayre  
Northfield  
Northbrook  
Woodridge  
Briergate  
Highmoor  
Sheridan Elms  
Deerpath

Glenayre Section House  
Glenayre Station  
Briergate Section House  
Sheridan Elms  
Deerpath Section House  
North Chicago Junction  
Edison Court  
Kenosha  
Racine  
✓ Winnetka

✓ Highland Park  
✓ Highwood Office & Shops

✓ Lake Forest

Washed halls and toilet rooms  
Painted outside - building only  
" " " "  
Painted interior of new freight  
office  
Painted outside of entire building  
Painted waiting room inside

Painted exterior of station  
buildings - interior of waiting  
rooms - all shelters and all  
signs

Painted exterior and interior  
Painted apartment for new agent  
Painted exterior  
Painted apartment for new agent  
Painted exterior  
Washed interior  
Painted ticket office  
Painted interior of station  
Painted interior of station  
Painted interior - refinished  
concession fixtures  
Painted exterior of station building  
Painted exterior of Garage - varnished  
Restaurant floor, painted Cashier's  
Office, washed halls and office of  
G.T.&B.A. - painted washrooms in  
Car Shops  
Painted ticket office

## SIGNAL AND INTERLOCKING DIVISION

### ADDITIONS AND BETTERMENTS

#### AUTOMATIC GATES AND FLASHERS - WASHINGTON AVENUE, HIGHWOOD - A.F.E. 5154

Two Griswold automatic gates with flasher signals and two automatic sidewalk gates were installed at this crossing replacing manual gates operated jointly with the C&NW Ry. Gates are interconnected with automatic gates installed by the C&NW Ry. so that the east gate, east side of east flasher and both sidewalk gates will operate for a C&NW train; C&NW west gate, west side of west flasher and sidewalk gate will operate for North Shore trains. A short track circuit was installed on the sidetrack east of the main line to give protection for switching moves. The new crossing protection was put in service on September 25, 1952. ✓

#### AUTOMATIC GATES AND FLASHERS - FARWELL'S, LAKE FOREST - A.F.E. 5160

One Griswold automatic gate with sidewalk arm and flasher signal, one automatic gate with flasher signal and one automatic sidewalk gate were installed at this crossing replacing manual gates operated jointly with the C&NW Ry. Pending installation of automatic gates by the C&NW, their manual gates are interlocked to control the east gate on the North Shore for C&NW train movements. The automatic gates were put in service on February 4, 1952. ✓

#### AUTOMATIC GATES AND FLASHERS - LAKE BLUFF, SHORE LINE - A.F.E. 5157

Automatic gates and flasher signals were installed at Scranton Avenue, Lake Bluff, in 1951 and described in the Annual Report for that year. To complete this project the crossing and manual gates at North Avenue and the gate tower at Scranton Avenue were removed. ✓

#### AUTOMATIC GATES IN RACINE - A.F.E. 5161

Four automatic crossing gates with flashers and sidewalk arms and three automatic sidewalk gates were installed at Kinzie and Osborne; two automatic gates with flashers and sidewalk arm and two automatic sidewalk gates were installed at Washington Avenue and at 17th Street. All gates and



## SIGNAL AND INTERLOCKING DIVISION

### ADDITIONS AND BETTERMENTS - Continued

#### AUTOMATIC GATES IN RACINE - A.F.E. 5161 - Cont'd.

flashers are from the Griswold Signal Company. Power for operation and control is supplied from a new 2200 volt line installed from Durand Road to Middle Road. Track circuit controlled annunciators were installed in the Racine station.

At Washington Avenue a special circuit has been installed which causes the gates to raise and allows street traffic to clear after a southbound train stops at the station, provided it does not pass the gate indication signal located 85 feet north of the crossing. When train is ready to proceed, the conductor operates a push button located in a box mounted on a pole north of the signal which causes the gates to go down. Gates will stay down for a non-stop train, provided its speed is not less than 12 m.p.h. through the station.

In connection with this work, relays and other apparatus formerly housed in a frame building at Middle Road were removed to a standard relay case and the building retired. Gate shanties and manually operated gates were retired at the several crossings involved and the flagman at 17th Street discontinued. All track circuits and automatic gate controls from Durand Road to Middle Road, including the track circuits for Racine Tower, were transferred to the new 2200 volt power line.

The new gates were put in service on the following dates:

Kinzie and Osborne	-	August 15, 1952
Washington Avenue	-	September 11, 1952
17th Street	-	November 24, 1952

SIGNAL AND INTERLOCKING DIVISION

MAINTENANCE WORK

In addition to the routine work of maintaining interlocking plants, block signals and crossing protection devices, the following work was done and charged to maintenance accounts:

The street arms of the automatic gates at Main Street were lengthened and a steady-burning lamp added at the tip of each arm. A precast concrete battery box was installed and one cell added to the battery.

Changed out the magnetic-type autoflag head at Westleigh Road, Skokie Valley Line. The old head was taken to the Signal Shop for overhauling.

At South Upton Tower approximately 600 feet of trunking was repaired and reset on new oak stakes.

Racor type "M" insulated vertical head rods were installed on switches at South Upton Junction, South Upton Tower and on the northbound slip switch at Green Bay Junction replacing old style No. 1 rods. Similar rods for the southbound slip switch at Green Bay Junction are on hand but not installed as of December 31, 1952.

An insulating transformer was installed at Scranton Avenue, Lake Bluff, Skokie Valley Line, to comply with the ICC rules against grounded power supply for block signal systems.

Renewed the 4-cell Exide DME-13 battery at Mawman Avenue and installed it in a precast concrete battery box.

The motor driven autoflag at Golf Road, Waukegan, was completely overhauled.

Renewed cables to autoflags at 29th Street and Lebanon Avenue, Zion, and Winthrop Harbor Road.

The style "N" signal head on Block Signal No. 441 at 26th Street, Zion, was replaced by a style "N-2" head to improve visibility and reduce lamp burnouts.

At Bain Road, South Kenosha, the gate battery was replaced with a heavier Exide 4-cell DME9A battery.



## SIGNAL AND INTERLOCKING DIVISION

### MAINTENANCE WORK - Continued

All gate cables at 67th Street and Roosevelt Road, Kenosha, were renewed and a larger battery installed in a precast concrete battery box.

12 new Griswold gate lamps with mercury controllers were installed on the gate arms at Taylor Avenue, Racine. The battery was renewed and moved to a precast concrete battery box.

Installed one run of 3" and one run of 4" steel pipe under Ryan Road. Installed a secondhand relay case at each end and renewed all signal wires through the crossing.

Renewed all three signal units in Block Signal No. 758 at Drexel Blvd.

Installed Racor type "M" insulated vertical head rods on switches at Austin and Oklahoma.

At Elm Place, Highland Park, the underground cable was renewed from the junction box to the switch protection signal. ✓

The style "N" signal head on the switch protection signal, southbound at Highwood Yard, was replaced with a style "N-2" signal head to improve visibility and reduce lamp burnouts. ✓

4 Mechanical Switchmen were changed out and sent to the factory for reconditioning.

Mechanical Switchmen were installed on the south switch of the southbound gauntlet at Oakton Street, on the south end of the Willow Road crossover and on the south end of the trailing crossover at Mundelein.

Old and obsolete "turtle back" switch circuit controllers were replaced with Union Switch and Signal Company style U-5 switch circuit controllers at the following locations:

Green Bay Junction	1
Downey's, Lead to Pettibone	1
14th St., West Line - Siding	1
12th St., West Line - Siding	1
10th St., West Line - Siding	1
Glen Flora - Siding	1
Glen Flora - Crossover	2

## SIGNAL AND INTERLOCKING DIVISION

### MAINTENANCE WORK - Continued

Highwood - Passing Track So.Bo.	1
Highwood - Smash Gates	1
Downey's, Shore Line - Crossover	2
Downey's, Shore Line - Siding	1

During the year 227 relays were repaired in the Highwood Relay Shop.

31 gate motors were repaired by Cote Electric Co. of Waukegan, 6 motors by Holt Electric Co. of Milwaukee and 3 motors by A. & A. Electric Co. of Zion.

8 automatic gate pedestals were replaced and taken to the Highwood Signal Shop for overhauling. Locations are as follows:

*Main Street	1 gate
*Simpson Street	1 gate
Willow Road	1 gate
Deerfield Road	2 gates
Rockland Avenue, Lake Bluff	1 gate
Roosevelt Road, Kenosha	1 gate
4th Street, Libertyville	1 gate

\*Gate pedestal damaged by automobile.

### CROSSING GATE OPERATION

#### Automatic Gate Locations

	<u>1952</u>	<u>1951</u>
Gates broken by automobiles	85	99
Other interruptions*	239	321

#### Manually Operated Crossing Gate Locations

Gates broken by automobiles	29	24
Other interruptions*	36	82

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



SIGNAL AND INTERLOCKING DIVISION

MAINTENANCE WORK - Continued

CROSSING GATES AND SIGNALS MAINTAINED AS OF DEC. 31

	<u>1952</u>	<u>1951</u>
Automatic Gates	41	41
Automatic Gates and Flashers	31	25
Manual Gates	7	13
Flasher Signals	6	6
Autoflags - Track Circuit	16	16
Autoflags - Manual Control	3	3
Block Signals - S.T. Miles	111.0	111.0
Switch Protection Signals	8	8
Interlocking Plants	4	4
Smash Gates	3	3
Gate Indication Signals	14	12

## EQUIPMENT

### ADDITIONS AND BETTERMENTS

#### PURCHASE OF TRACK MOTOR CAR - A.F.E. 5198

A Fairmont M.T. 14, Series H, section gang motor car complete with steel top and rear and side curtains was purchased to replace a 1922 Buda 19-L motor car which had been damaged beyond repair.

#### PURCHASE OF ONE-MAN INSPECTION CAR - A.F.E. 5216

A Fairmont M9, Series E, one-man inspection car was purchased. Originally intended for the Freight Car Checker at Glenayre, it was turned over to the Electrical Department.

#### PURCHASE OF TRAFFIC COUNTING MACHINE - A.F.E. 5219

To facilitate making traffic checks at grade crossings, a Streeter-Amet Company, Model R.C., traffic counting machine with battery and all accessories was purchased. This machine gives an accurate printed record of traffic flow at 15-minute intervals for as long a time as is desired.

#### PURCHASE OF TRACK MOTOR CAR - A.F.E. 5229

A Kalamazoo, Model 56A, section gang motor car with electric starter, generator, battery and steel frame windshield was purchased to replace a 30-year old Buda 19-L car.



WAY AND STRUCTURES SUMMARY

	<u>1952</u>	<u>1951</u>
<u>TRACK CONSTRUCTION - LINEAL FEET</u>		
Sidetrack Constructed on Railway Right-of-Way	3,606	1,593
Sidetrack Constructed on Private Property	610	1,540
Sidetrack Retired	787	5,896
 <u>RAIL INSTALLED - SINGLE TRACK FEET</u>		
149#	366	--
128#	682	--
115#	2,223	--
100#	4,875	--
90#	--	853
80#	<u>3,125</u>	<u>740</u>
TOTAL	11,271	1,593
 <u>RAIL RENEWED IN KIND - SINGLE TRACK FEET</u>		
100#	402	561
80#	<u>--</u>	<u>998</u>
TOTAL	402	1,559
 <u>RAIL REMOVED - SINGLE TRACK FEET</u>		
102#	1,048	--
100#	2,223	2,360
80#	3,980	975
65#	<u>1,201</u>	<u>2,561</u>
TOTAL	8,452	5,896
 <u>TIE PLATES INSTALLED</u>		
100#	7,692	18,800
 <u>ANGLE BARS RENEWED - PAIRS</u>		
100#	894	150

WAY AND STRUCTURES SUMMARY - Continued

	<u>1952</u>	<u>1951</u>
<u>SPECIAL WORK</u>		
Crossovers Removed	--	5
Turnouts Installed	6	5
Turnouts Removed	1	6
Crossings Built Up	2	3
Frogs Repaired	8	19
Switch Points Repaired	11	6
Thermit Welds	114	84

TIES RENEWED

Main Line	13,815	16,972
Sidetrack	752	780
Switch	274	655
Bridge	66	206
3rd Rail Chair	--	182
TOTAL	14,907	18,795

TIES INSTALLED ON NEW WORK\*

Main Line - New	--	362
Sidetrack - New	942	311
Switch - New	102	90

BALLAST - CARS

Stone	52	78
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BROKEN RAILS

100#	--	2
80#	7	6

\*Does not include ties installed at Weber by Deckert Corporation as no inventory has been taken.



WAY AND STRUCTURES SUMMARY - Continued

	<u>1952</u>	<u>1951</u>
<u>CROSSINGS</u>		
Concrete Slab Crossings Installed	1	---
Gumwood Crossings Installed	---	1
Asphalt Crossings Rebuilt	6	6
 <u>BRIDGE REPAIRS</u>		
Bridges Repaired	7	2
 <u>PAINTING</u>		
Buildings - Painted and Decorated	22	24
 <u>CROSSING PROTECTION</u>		
Automatic Gates and Flashers Installed - Locations	6	7
Automatic Gates Damaged by Automobiles	85	99
Manual Gates Damaged by Automobiles	29	24
 <u>FENCING</u>		
Right-of-Way Fence Rebuilt - Lin. Feet	2,500	13,300
 <u>WEED KILLER</u>		
One Application - Single Track Miles	200	200
Total Solution Used - Gallons	44,000	40,150
 <u>CARLOAD MATERIAL</u>		
Sand and Stone	66	97
Coal	6	24
Ties	39	30
Cinders	47	74
Miscellaneous	31	12
 TOTAL	 189	 237