

John B. Gallagher and Edward J. Quinn, Trustees for  
CHICAGO NORTH SHORE AND MILWAUKEE RAILROAD COMPANY

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

1943

Office of Engineer, Maintenance of Way  
Highwood, Illinois  
February 17, 1944

John B. Gallagher and Edward J. Quinn, Trustees for  
CHICAGO NORTH SHORE AND MILWAUKEE RAILROAD COMPANY

MAINTENANCE OF WAY DEPARTMENT

ANNUAL REPORT

FOR THE YEAR 1943

Office of Engineer, Maintenance of Way  
Highwood, Illinois  
February 17, 1944

## F O R E W O R D

This report of the work accomplished by the Maintenance of Way Department in the year, 1943, includes all work done under A.F.E. and extraordinary maintenance by both regular Company forces and by Contractors. It also provides such information and statistics relating to the regular maintenance work as are of interest at this time and will be of value in the future for record and reference purposes.

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TRACK AND ROADWAY DIVISION

ADDITIONS AND BETTERMENTS

RAIL RENEWAL ON SKOKIE VALLEY LINE - A.F.E. 4365

138,100

A total of 48,498 track feet of 80# A.S.C.E. rail was relaid with new 100# R.E. rail on the Skokie Valley Line. 16,167 track feet were laid on the northbound track from a point 2,300 feet north of West Park Avenue to the existing 100# rail north of Westleigh Road and 32,231 track feet were laid on the southbound track from the end of existing 100# rail south of Deerpath to a point 2,600 feet north of Woodridge. Track was lined and surfaced, ties spaced and 6 rail anchors per rail installed.

INSTALLATION OF SWITCH - DOWNEYS, WEST LINE - A.F.E. 4351

See 1941

The south end of the storage track at Downeys, West Line, was connected to the Camp Dewey north lead track with a #10-80# turnout.

CONSTRUCTION OF INSPECTION SHOP - HIGHWOOD - A.F.E. 4422

See B+B

Two tracks, one 216 feet long, and the other 259 feet long, were built to serve the new inspection shop at Highwood. Each track serves an inspection pit inside of the building. All material was 80#. The existing track lying west of the building was realigned to 9'-0" clearance and the old stub track, formerly the C.&N.W. interchange track, was retired.

CONNECTION OF TRACK #2 TO TRACK #3 - HIGHWOOD YARD - A.F.E. 4449

535

Track #3 in Highwood Yard was extended south 100 feet and connected to track #2 with a #5 turnout. 65# material was used.

CONSTRUCTION OF STORAGE TRACK AND CROSSOVER AT DOWNEYS, EAST LINE - A.F.E. 4401

7100

A storage track 975 feet long was built between the two main line tracks south of Downeys subway, Shore Line, with a #10 facing point switch at each end. The northbound switch is connected to the existing switch protection signal and the southbound switch is connected to



## TRACK AND ROADWAY DIVISION

### ADDITIONS AND BETTERMENTS - CONTINUED

#### CONSTRUCTION OF STORAGE TRACK AND CROSSOVER AT DOWNEYS, EAST LINE - A.F.E. 4401 - CONTINUED

the Downeys fire crossing signals. A trailing point crossover was installed between the northbound main and the easterly side track. All main line turnouts are 100# rail; side track turnout is 65# rail; and storage track is 80# rail.

#### REHABILITATION OF TRACK AND PAVEMENT - WAUKEGAN CITY LINE - A.F.E. 4434

Extensive repairs were made to track and pavement on the Waukegan City Line. All broken rails were repaired, joints south of Water Street being thermit welded and joints north of Water Street having standard 6-hole angle bars applied. Track was brought to gauge, surfaced and lined. Low spots were raised on steel and wood shims. Defective brick pavement was removed and relaid, and where brick was low but otherwise sound, cold-lay asphalt was laid to raise the surface. All track drains were cleaned and repaired and new outfall lines installed as needed. Broken and worn out special work was renewed. Unused turnouts at Water and Utica, County and Franklin, Glen Flora and North and Washington and Utica were removed. The rail on North Avenue from Greenwood to Glen Flora was ground with the Goldschmidt grinder.

#### INSTALLATION OF BALLAST IN ILLINOIS - A.F.E. 4457

Under this A.F.E. the railroad forces raised both main line tracks on the West Line from 15th Street to Edison Court. Average lift was 4 to 5 inches. 81 cars of crushed and washed gravel ballast were used and 20 cars of cinders unloaded for shoulder.

#### INSTALLATION OF BALLAST IN ILLINOIS - A.F.E. 4420

A contract was let to the Herlihy Mid-Continent Company for ballasting and other track work from Edison Court to the State Line. Work has been finished on the section between Washington Street and Glen Flora crossover, where both tracks were raised to grade, lined, surfaced and dressed to standard cross section. Average raise on this section was 6 inches. All crossings, except Brookside Avenue, were skeletonized to a depth of 6 inches below the bottom of ties.

## TRACK AND ROADWAY DIVISION

### ADDITIONS AND BETTERMENTS - CONTINUED

#### INSTALLATION OF BALLAST IN ILLINOIS - A.F.E. 4420 CONTINUED

Treated gum crossings were installed at Grand Avenue and Glen Flora Avenue. A total of 65 cars of stone ballast and 21 cars of cinders were used on this section. 976 main line ties and 216 switch ties renewed and 2,034 tie plates were installed. Sidings at Glen Flora, Grand Avenue and from Brookside to Washington Street were repaired and 688 ties renewed.

All cuts were widened and ditches shaped to standard cross section from Washington Street to the State Line. A total of 14,400 cubic yards of earth fill were placed through the "sink hole" north of Golf Road to widen the embankment. At this point the track was raised a maximum of 18 inches on stone ballast. Three lifts were made, the track being brought up in a series of vertical curves over a length of 1,500 feet. 45 cars of stone and 1 car of cinders were unloaded, 79 ties renewed and 158 tie plates installed.

Inter-track drainage was installed at Grand Avenue, Glen Flora Avenue and Zion Station, the culvert at 13th Street, Winthrop Harbor, was lowered and all drainage facilities cleaned, repaired and extended as required.

#### RAIL RENEWAL ON LIBERTYVILLE LINE - A.F.E. 4435

A total of 11,005 track feet of 65# A.S.C.E. rail were relaid with 80# A.S.C.E. relayer rail on the westbound track of the Libertyville Line from Stewart Avenue to Mundelein. 4 anchors per rail were installed. The crossover and the east switch of the passing track at St. Mary's of the Lake were retired. This work was done by contract by the Herlihy Mid-Continent Company and completes the removal of 65# rail on main line tracks of the system.

14005

TRACK AND ROADWAY DIVISION

ADDITIONS AND BETTERMENTS - CONTINUED

INSTALLATION OF TIE PLATES IN ILLINOIS - A.F.E. 4391

12,993 80#-100# tie plates and 10,894 100# tie plates were installed on ties renewed in main line tracks in Illinois.

<u>Section</u>	<u>Tie Plates</u>	
	<u>80#-100#</u>	<u>100#</u>
1 - Winnetka	743	--
3 - Highwood	326	61
4 - Lake Forest	3597	334
5 - Libertyville	726	--
7 - Edison Court	2686	1204
8 - Beach	--	1333
16 - Howard-Dempster	--	535
17 - Glenayre	--	2950
18 - Briergate	820	1003
20 - Deerpath	4015	1000
21 - South Upton	80	2474
Total	12993	10894

INSTALLATION OF TIE PLATES IN WISCONSIN - A.F.E. 4392

2,979 80#-100# tie plates and 4,033 100# tie plates were installed on main line ties renewed in Wisconsin.

<u>Section</u>	<u>Tie Plates</u>	
	<u>80#-100#</u>	<u>100#</u>
9 - South Kenosha	--	959
10 - Kenosha	--	254
11 - Racine	--	696
12 - 4-Mile Road	1170	--
13 - Carrollville	1686	--
14 - Grange Avenue	--	1475
15 - Milwaukee	123	639
Total	2979	4033



TRACK AND ROADWAY DIVISION

ADDITIONS AND BETTERMENTS - CONTINUED

RENEWAL OF CURVE, SOUTH 6th STREET AND SCOTT STREET,  
MILWAUKEE - A.F.E. 4303

3235

The paved portion of the curve at South 6th and Scott Streets, Milwaukee, was relaid with 127# rail and repaved with brick on a concrete base. All joints were thermit welded, 811 lineal feet of 127# rail were installed.

TRACK EXTENSIONS, WAUKEGAN TERMINAL - A.F.E. 4428

290

The north track at Waukegan Terminal was extended east, 19 feet.

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 on maintenance accounts:-

Renewed 1,551 feet of rail in southbound curve north of Linden Avenue, using 80# relayer rail. A guard rail, made on the job by shearing the base of scrap 80# rail with the acetylene torch, was installed on the low rail. ✓ 2500

Repaired 50 square yards of brick paving on Greenleaf Avenue, Wilmette, and thermit welded 37 rail joints.

A drainage system was installed in the track zone at Wilmette Station between Greenleaf Avenue and Wilmette Avenue. Two catch basins were built and 196 feet of 6" tile laid. The ditch was backfilled with stone. 500

Both tracks were surfaced from Wilmette to Kenilworth.

159 feet of 91# rail renewed at Kenilworth and 120 square yards of brick paving repaired. ✓

Both tracks were surfaced from Mile Post 17, north of Kenilworth station, to Green Bay Road.

Renewed the crossing at South Avenue, Glencoe. All ties were renewed and a plank and asphalt crossing installed. 3250 ✓

Renewed both rails of both tracks in Glencoe gauntlet and reverse curves north of Park Avenue. A total of 3,234 feet of 80# relayer rail was used.

The intertrack drainage system north of Central Avenue, Highland Park, was cleaned and extended south from the station crosswalk to the street. One new catch basin was built.

Extended #4 track in Highwood Yard, south 5 feet. ✓

Renewed #10-65# switch on C&NW interchange track at Fort Sheridan with secondhand 90# material.

TRACK AND ROADWAY DIVISION

MAINTENANCE WORK - CONTINUED

Surfaced both tracks from North Gate to Deerpath Avenue and from Scott Street to Kennedys.

The crossing at Scranton Avenue, Lake Bluff, Shore Line, was rebuilt. All ties were renewed and a plank and asphalt crossing installed. An existing tile drain, laid between tracks through the crossing, was cleaned and backfilled with gravel.

Both tracks from Scranton Avenue to Downeys south crossover, Shore Line, were reballasted with washed, crushed gravel. A total of 48 cars were used on this work.

Surfaced both tracks from Downeys to North Chicago Junction, Shore Line.

Surfaced both tracks from Tower Road to Kotz Road, the northbound track from West Park Avenue to Tower K. O. and the southbound track from Tower K. O. to substation #3, south of Briergate. 90 cars of stone ballast were used on this work.

An intertrack drainage system was installed at Sheridan Elms station. Two catch basins were built and 200 feet of 6" vitrified pipe laid and backfilled with stone.

Ties and crossings were renewed on the southbound track at Deerfield Road, Berkley Road and West Park Avenue and on both tracks at Old Mill Road, Old Elm Road and Westleigh Road.

Surfaced both tracks from Kellys crossover to North Chicago Junction.

Renewed 1821 feet of 100# rail with new 100# rail in the northbound track at Lake Bluff curve, Skokie Valley Line.

Renewed 1914 feet of 80# rail with 80# relayer rail at North Chicago Junction, Milwaukee Division. High rail of south curve on both tracks was renewed.

Surfaced both main freight tracks in Commonwealth Avenue from Pettibone Yard Office to Valley Junction.



TRACK AND ROADWAY DIVISION

MAINTENANCE WORK - CONTINUED

Surfaced both tracks from 22nd Street to 15th Street, North Chicago, West Line.

The crossings at Broadway and 20th Streets were rebuilt out of face. Old ballast was dug out, new ties and stone ballast placed and plank and asphalt crossings installed. Broadway crossing was extended 8 feet on each end.

An intertrack drainage system was constructed at Racine station starting at 12th Street and extending to a manhole at the south side of Linderman Avenue. Two catch basins, 168 feet of 8" and 332 feet of 6" pipe were installed.

The north leg of the wye track at Harrison Street Yard and the curved portion of the track leading to the transfer table were both realigned to facilitate movements of Electroliners.

The asphalt in the track zone on the north and south approach spans of the 6th Street viaduct was renewed by Henry Danischefsky through his subcontractor, the Wm. F. Hunt Company.

The track and pavement was rebuilt from the end of special work on Clybourn Street to the north end of the curve on 5th Street. New 102# rail was installed on the old ties and brought to grade with steel plates and wood shims. Tie rods were installed and all joints thermit welded. The existing guard rail was used with new bolts. Track zone was paved with brick on a ready-mixed concrete base. Rail for the curves was bent by the Transport Company.

Surfaced both tracks on the East Line from North Chicago Junction to 10th Street.

The crossing over Sheridan Road to North Chicago Barn was renewed in connection with the resurfacing of Sheridan Road. New ties and stone ballast were installed and the track zone paved with asphalt.

Surfaced both tracks from Knollwood to Des Plaines River and surfaced southbound track from Wheeler Road to St. Mary of the Lake.

Renewed 1689 feet of 80# rail in east end of Rondout scale track with secondhand 80# rail.



TRACK AND ROADWAY DIVISION

MAINTENANCE WORK - CONTINUED

65# rail was relaid with secondhand 80# rail  
at the following locations in yards and sidings:- ✓

507 feet in #1 track - Highwood Yard  
596 feet in "loop track" - Highwood Yard  
3658 feet in gas plant lead track - East  
Prairie Road  
2838 feet in passing track south of Lake  
Avenue, Skokie Valley Line  
561 feet in Menoni and Mocogni lead at  
West Park Avenue  
3010 feet of rail and 3 turnouts in Pettibone Yard  
3267 feet in south interchange track at  
Rondout

7200  
25056  
6956

214437  
72485

TRACK AND ROADWAY DIVISION

MAINTENANCE WORK

TIES RENEWED

<u>SECTION</u>	<u>MAIN LINE</u>	<u>SIDE TRACK</u>	<u>SWITCH</u>
1 - Winnetka	261	--	--
3 - Highwood	1,200	319	185
4 - Lake Forest	1,319	--	35
5 - Libertyville	818 <sup>2780</sup>	297	16
6 - Waukegan East	--	92	--
*7 - Waukegan West	2,274	856	366
8 - Beach Road	687	--	--
9 - McKeon Road	550	65	--
10 - Kenosha	307	140	--
11 - Racine	534	35	--
12 - 4-Mile Road	555	--	--
13 - Carrollville	969	--	--
14 - Grange	700	13	--
15 - Milwaukee	397 <sup>4973</sup>	160	144
**16 - Howard-Dempster	1,444	--	22
17 - Glenayre	1,490	47	1
18 - Briergate	2,669	--	19
20 - Deerpath	4,825	230	26
21 - South Upton	1,323 <sup>11751</sup>	907	25
	<hr/> 22,122	<hr/> 3,161	<hr/> 839

\*Includes 1,036 main line, 606 side track and 215 switch ties installed by ballast contractor.

\*\*Includes 670 3rd rail chair ties.

BRIDGE AND BUILDING DIVISION

ADDITIONS AND BETTERMENTS

NEW BAGGAGE ROOM - 507-509 SOUTH STATE STREET, CHICAGO - A.F.E. 4424

39485

The rear portion of the 3-story brick building located at 507-509 South State Street, Chicago, was re-modeled for use as a baggage room. New tile partitions were installed, heating, lighting and plumbing rearranged and reconditioned and the elevator was reconditioned. All work was done by the W. J. Scown Company.

IMPROVEMENTS AT MONTROSE AVENUE, CHICAGO - A.F.E. 4414

3285

The existing frame shelter, south of Montrose Avenue, used by men working on the trailer ramp, was retired and a new, one-story building erected. Building is 9'-4" x 29'-10" built of 8" precast concrete blocks with concrete floor and tar and gravel roof. The Montrose freight station was remodeled and repaired, the locker room enlarged, a new storage room built, the water pipes under the floor covered, and a drinking fountain installed. All work was done by the W. J. Scown Company. A 3-ply asphalt roof with a 5-year guarantee was installed on the freight station by the Forrester Roofing Company.

TRAINMEN'S ROOM - HOWARD STREET, CHICAGO - A.F.E. 4390

19,040

A frame building, 15' x 48' was built at the north end of the east platform at Howard Street, Chicago. Building is supported on steel posts on top of the canopy with stairway to platform and overhead bridge over tracks to west of platform. This building is used for trainmen's quarters and is equipped with lockers, electric lights and toilet facilities. Temporary electric heat is provided. All work was done by the W. J. Scown Company.

SHELTERS AT KENILWORTH - A.F.E. 4364

See 1942

The existing shelter on the southbound platform at Kenilworth was moved farther south to a location requested by the Village Manager. Asphaltic floors were laid in both shelters and shrubbery planted around the northbound platform. This completes the work authorized and started in 1942.



## BRIDGE AND BUILDING DIVISION

### ADDITIONS AND BETTERMENTS

#### NEW STATION AT GLENCOE - A.F.E. 4453

5400

A temporary frame station, 14' x 30' was built on the south side of Park Avenue, Glencoe, east of the tracks. The northbound platform was widened to 10 feet and extended south 175 feet, using standard fill platform construction. Work was done by the W. J. Scown Company, and was completed at the end of the year, except for the heating plant.

#### PLATFORM EXTENSIONS ON SHORE LINE - A.F.E. 4402

700

The northbound platform at Beach Street, Highland Park, and both platforms at Green Bay Road, Braeside, Ravinia and Lincoln Avenue, Highland Park, were lengthened to approximately 350 feet to accommodate an 8-car train. Extensions were made by placing cinders to top of rail height. No curbs have been installed yet, although A.F.E. provides for them in all cases.

#### ADDITION TO HIGHWOOD SECTION HOUSE - A.F.E. 4409

665

A frame addition, approximately 10' x 10', was built on the west side of the section house at Washington Street, Highwood, to provide an additional room for the section foreman. Electric lights were installed and a connection made to the hot-air heating system.

#### ADDITION TO HIGHWOOD OFFICE BUILDING - A.F.E. 4382

23,400

Work was completed on a one-story, brick addition, 52' x 43', on the east side of the Highwood Office Building. This was built by the W. J. Scown Company. The railroad forces built and installed shelving and bins and installed a rolling ladder in the new ticket storage room in this addition.

#### CONSTRUCTION OF INSPECTION SHOP AT HIGHWOOD - A.F.E. 4422

62700

The west half of the old power house at Highwood was remodeled and repaired to make the building suitable for an inspection shop. New doors and windows were installed, all brick work pointed up, roof trusses repaired and painted, new wood roof deck and 3-ply asphalt roof



## BRIDGE AND BUILDING DIVISION

### ADDITIONS AND BETTERMENTS - CONTINUED

#### CONSTRUCTION OF INSPECTION SHOP AT HIGHWOOD - A.F.E. 4422 - CONTINUED

applied. A concrete floor was laid throughout the building and two, concrete inspection pits were built. Building is equipped with electric lights and heated by unit heaters, supplied from the existing steam plant. The basement in the east half of the power house was repaired for use as a storage room. A storage shed and sand drier building, 23' x 100' was erected immediately west of the new inspection shop. All work, except painting, has been completed. All work was done by the W. J. Scown Company.

#### ADDITION TO TRANSPORTATION OFFICE - HIGHWOOD - A.F.E. 4423

A one-story, fire-proof addition, 16' x 50' was built on the west end of the Annex Building at the Highwood Office. Construction is of concrete block and face brick on concrete footings with a concrete floor and precast roof deck covered with a 3-ply asphalt roof. All work was done by the W. J. Scown Company, and was about 90% completed at the end of the year.

#### CONSTRUCTION OF PLATFORM AND STAIRWAY - DOWNEYS, SHORE LINE-A.F.E. 4401

A wooden stairway, 6 feet wide, was built up the south bank, between main line tracks, at Downeys subway on the Shore Line. Cinders were placed for an 8-car platform on the west side of the northbound track, south of the bridge. This work was done in connection with the construction of the new storage track at this location.

#### CONSTRUCTION OF PLATFORMS AT GREAT LAKES - A.F.E. 4399

The existing northbound platform at Great Lakes was extended south, 184 feet, with standard low fill platform construction. The existing high platform located south of the station and west of the west side track was extended south, 120 feet; construction was plank decking on timber bents. This platform replaces the existing low platform which was retired.

BRIDGE AND BUILDING DIVISION

ADDITIONS AND BETTERMENTS - CONTINUED

CONSTRUCTION OF RETAINING WALL - GREAT LAKES - A.F.E. 4455

Work was started on the construction of a reinforced concrete retaining wall and a reinforced concrete stairway at the Great Lakes Main Gate Station. The stairway is 16 feet long by 6 feet wide, located on the east platform, south of the mouth of the pedestrian underpass, and leads up to a concrete landing 10 feet by 6 feet at the level of Sheridan Road. The retaining wall extends south from the stairway 125 feet along the east bank, giving a platform width of 16 feet. All work is being done by the Herlihy Mid-Continent Company. At the end of the year about 50% had been completed.

SEP  
1944

STATION IMPROVEMENTS - CYCLONE STATION, NORTH CHICAGO - A.F.E. 4459

Two standard, 16 foot, open shelters were built, one on each platform, at Cyclone Station (Stanley Avenue), North Chicago. The original frame station at this point was retired. Work remaining to be done consists of 48 foot extensions to both platforms.

745

RETIREMENT OF STATION FACILITIES IN ILLINOIS - A.F.E. 4404-C and 4408-C

Station facilities at South Avenue, Glencoe; Laurel Avenue, Highland Park; Washington Avenue, Highwood; North Gate; Calverts; Kennedy's; Crab Tree Farm; 8th Street Waukegan; Golf Road; 13th Street, Winthrop Harbor; Dubas Crossing, Thornbury Farm and Stewart Avenue, Libertyville were retired. Two locations in Zion remain to be retired. The shelter from Calverts was moved to the east platform at Farwells and the shelter at 8th Street was moved to Belvidere Street, Waukegan. The Washington Avenue shelter was brought in the yard to be used at Rondout.

520

RETIREMENT OF TRESTLE AT EDISON COURT - A.F.E. 4410-C

The Rynksel Coal trestle, located at Edison Court, Waukegan, was retired, except for the piles, which were left in place. These will be taken out when all the coal has been removed.

635



## BRIDGE AND BUILDING DIVISION

### ADDITIONS AND BETTERMENTS - CONTINUED

#### CONSTRUCTION OF CONCRETE BRIDGE AT HAWTHORNE DRIVE, RACINE, A.F.E. 4437

Work has been started on the construction of a reinforced concrete bridge to replace the existing timber trestle at Hawthorne Drive, Racine. The north-bound trestle has been removed and trains are operated over the southbound bridge on a temporary gauntlet track controlled by manually operated color light signals. At the end of the year, piles had been driven and footings excavated for the east half of the bridge. All track and bridge work is being done by the Herlihy Mid-Continent Company.

See 1944

#### CONSTRUCTION OF CONCRETE BRIDGE AT DREXEL BOULEVARD - A.F.E. 4436

Preliminary work started on the construction of a reinforced concrete bridge to replace the existing timber trestle at Drexel Boulevard, South Milwaukee. Test pits were dug, a signal tower built and work commenced on a gauntlet track. All work is being done by the Herlihy Mid-Continent Company.

See 1944

#### REHABILITATION OF BRIDGES AND CULVERTS - A.F.E. ~~4434~~ 4433

Under this A.F.E. the following work was done by Henry Danischefsky:

##### ROOT RIVER BRIDGE

All 4 piers of this bridge were reinforced in accordance with plans prepared by I. F. Stern, Consulting Engineer. Work consisted in removing all defective concrete and pouring a new reinforced concrete jacket, with a minimum thickness of 12 inches around the entire pier. Jackets were carried down to the footing, except on the land side of the two piers next to the abutments where the jackets were extended down to good bearings on the earth fill. Defective concrete in the abutments was replaced and all concrete surfaces given a white cement wash.

28,810  
See 9/30/1944

##### HOWARD AVENUE BRIDGE

Reinforced concrete wing walls were built at both ends of the Howard Avenue overway. All concrete

BRIDGE AND BUILDING DIVISION  
ADDITIONS AND BETTERMENTS - CONTINUED

4433

REHABILITATION OF BRIDGES AND CULVERTS - A.F.E. 4433 -  
CONTINUED

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HOWARD AVENUE BRIDGE - CONTINUED

surfaces were covered with a white cement wash.

C. M. St. P. & P. Ry. BRIDGE

Work was begun on the painting of this bridge. All rust spots were cleaned and spot coated with red lead and most of the structure covered with a prime coat and finish coat. The upper part of the through truss remains to be done.

OKLAHOMA AVENUE BRIDGE

All defective concrete in this structure was removed and replaced and all exposed concrete surfaces given a white cement wash.

St. FRANCIS CUT-OFF BRIDGE

Defective concrete was cut out and replaced. The wing walls were extended and raised 12 inches according to plans and specifications prepared by I. F. Stern, Consulting Engineer. Concrete curtain walls were built in the back of both abutments to hold back the fill. Caisson shafts were sunk back of the northwest wing wall in order to determine the condition of the first 2 buttresses. These were found to be sound and without cracks. All exposed concrete surfaces were coated with a white cement wash. Part of the work on this bridge was charged direct to operating.

MADISON DIVISION BRIDGE

Defective concrete was removed and replaced and the stair treads and hand railing repaired. All exposed concrete surfaces were given a white cement wash. Part of the work on this bridge was charged direct to operating.

KINNICKINNIC RIVER BRIDGE

All defective concrete in the west wing wall and both barrels was cut out and repaired. New concrete floors were laid in both barrels. New concrete wing walls, built according to plans made by I. F. Stern, Consulting Engineer, were erected at the east end of the bridge. All exposed



BRIDGE AND BUILDING DIVISION  
ADDITIONS AND BETTERMENTS - CONTINUED

4433

REHABILITATION OF BRIDGES AND CULVERTS - A.F.E. 4434 -  
CONTINUED

KINNICKINNICK RIVER BRIDGE - CONTINUED

concrete surfaces were given a wash coat of white cement.

HARRISON STREET, MILWAUKEE

A frame building, 8' x 12', with a concrete floor was erected between ramp tracks 2 and 3 at Harrison Street Yard. This building is used to provide shelter for the men working on the ramp. A new 5-ton, wooden coal box, with a concrete floor, was built south of the passenger station, replacing the existing box which was beyond repair.

EXTENSION OF INSPECTION PIT - MILWAUKEE TERMINAL - A.F.E. 4400

Pit No. 3, the east inspection pit, at Milwaukee Terminal was extended north, 31 feet, and south 90 feet. Construction is of concrete, following the same plan as the existing pits and includes electric lights and drainage. The work of removing and restoring the track was done by railroad forces and the pit construction was done by contract by Henry Danischefsky.

CONSTRUCTION OF INSPECTION PIT AT MUNDELEIN - A.F.E. 4427

A reinforced concrete inspection pit, 67 feet long, was built on the storage track at Mundelein west of the station. Drainage and electric lights were installed and a stairway built at the east end. All work, except removal and replacement of track, was done under contract by Richard T. Jenkins.

INSTALLATION OF STOKERS - A.F.E. 4429

Automatic stokers were installed under the heating boilers at Wilson Avenue Station, North Chicago Barn, and Waukegan Garage. All 3 units are 200# Link-Belt Company Stokers.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BRIDGES AND TRESTLES

The steel bridges on the Shore Line at Hazel Avenue, Glencoe; Sheridan Place, Vine Avenue and Bloom Street, Highland Park; Illinois Road and Woodland Avenue, Lake Forest and Lake Bluff were cleaned and painted two coats of brown Wardway paint. 1200

2 caps were renewed in the Mutual Coal Trestle at Vine Avenue, Highland Park.

Renewed 16 stringers in Oak Creek trestles.

Renewed 4 piles, 3 caps and 10 stringers at South Milwaukee Road and also replaced 1 stringer, 6 ties and 1 length of guard rail with secondhand material.

Renewed 6 piles at Drexel Boulevard.

Renewed 8 piles, 8 caps, 2 tower braces and 15 stringers at Bolivar Avenue.

Finished repairing concrete piers and wing walls on the C. M. St. P. & P. Bridge at Milwaukee. Built a curtain wall in the south abutment and covered all exposed concrete surfaces with a white cement wash. This work was done by Henry Danischefsky under contract. 900

The Green Bay Road bridge at Lake Bluff was cleaned and painted with two coats of Wardway paint.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BUILDINGS AND PLATFORMS

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

The space occupied by the Commissary Department at Wilson Avenue Station was rearranged and remodeled. The humidifier was relocated, partitions removed and changed and an office enclosure built. A rolling ladder was installed to serve the storage shelves.

A wood platform and stairway was built on the north end of the west platform at Church Street, Evanston, to facilitate the handling of sea bags from the platform to the ground.

Considerable repair work was done at Indian Hill in the furnace room and men's wash room after a fire there. A new Hart Oil Burner was installed to replace the Aldrich burner, destroyed in the fire.

At the Elm Street, Winnetka, Station, the oil burner was removed and the heating plant converted to hand-fired coal operation.

A new oil burner was installed in the Hubbard Woods station to replace the original burner.

Rebuilt the south canopy roof of the Ravinia Station. 1060

Repaired concrete platform curbs at Highland Park and resurfaced platforms with asphalt.

The southbound platform at Highwood Avenue was extended north 60 feet by spreading cinders to rail height.

The following work was done in Highwood Yard:

Rearranged toilet room in the garage to permit access from main part of building when shop part is closed.

Remodeled northwest corner of north storehouse to provide facilities for women car cleaners.



BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BUILDINGS AND PLATFORMS - CONTINUED

Built new glass racks for the store house.

Rebuilt north parapet wall on car barn. The height of the wall was reduced to about 18".

Built an elevated loading platform and approach ramp back of old commissary building to facilitate loading of military personnel.

Repaired interior of old commissary building to provide storage space for Maintenance of Way material.

Installed a new smoke stack 40" diameter by 57' high at boiler room replacing 40' stack which blew down.

Repaired brick work on car barn and shops. This work was done by W. J. Scown Company.

A new 4-ply tar and gravel roof was installed on the main office building by the Grady Roofing Company.

The roof over the entire barn was repaired and recoated by the Grady Roofing Company. Defective roofing in valleys and scuppers was removed and replaced with one layer of 30 and 2 layers of 15# asphalt felt, all other loose felts were nailed down and 2 - 15# felts laid over entire roof which was then coated with hot asphalt.

Repaired concrete platforms at Lake Forest station.

Extensive repairs were made to the northbound platform at Lake Bluff.

The roof on the Lake Bluff Substation was removed and a new 3-ply tar and gravel roof applied by the Grady Roofing Company.

The State constructed a 12 foot reinforced concrete pedestrian subway under Sheridan Road from the Great Lakes Main Gate to our northbound platform.



BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BUILDINGS AND PLATFORMS - CONTINUED

At North Chicago Junction both Shore Line Division platforms were extended north to accommodate 7-car trains. Extensions were made by unloading cinders to top of tie level.

The northbound platform at 22nd Street, East Line, was extended north 100 feet by spreading cinders to top of tie level.

At North Chicago Barn the Grady Roofing Company applied a 3-ply asphaltic roof over the old roof. The W. J. Scown Company repaired and pointed all brick walls and parapets and installed new sheet metal gutter and downspouts on the west side of the building.

The large wooden doors at North Chicago substation were renewed.

A headlight rack was installed at the Waukegan Terminal.

Timber curbs were repaired and renewed on all Skokie Valley platforms from Dempster Street to Deerpath.

At Harmswoods station a small room was built in the space formerly occupied by the concession. Pyrobar was used for the walls and plastered to match the rest of the station.

Extensive repairs were made to the Deerpath section house.

The ticket offices at Downeys Station were rebuilt and relocated.

The southbound platform at 22nd Street, West Line, was extended north 230 feet by spreading cinders to top of tie level.

At Waukegan Garage, the W. J. Scown Company rebuilt the high parapet and coping at the east end of the building, and repaired all other parapets and copings. A new cap was installed on the chimney and the brick pointed up. The Grady Roofing Company installed a new 4-ply tar and gravel roof over the east, or office, portion of this building. The west (Sawtooth) Section was covered with 3 layers of 15# asphalt felt

960 Pk  
1403  
2365

Roof 1340  
Roof 1740  
308

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BUILDINGS AND PLATFORMS - CONTINUED

and coated with hot asphalt.

A frame shed, 7' x 8', was built for the car cleaners at Edison Court. A water line was installed in the building and a hot water heater and storage tank provided.

A new 3-ply asphalt roof was installed on the McKeon Road substation. Work was done by the Twin Six Roofing Company of Kenosha. 175

Repaired concrete platforms at Kenosha Station.

At Racine Station the brick platforms were repaired and the concrete platforms resurfaced with asphalt.

A new roof was applied to the 4-Mile Road section house.

A safety exit door was installed in the east wall of the substation at 4-Mile Road.

The station at 5-Mile Road was rebuilt.

Section houses at Carrollville and Grange Avenue were insulated by blowing "Pal-O-Pac" into the walls and ceilings.

The timber retaining wall south of the south trailer loading track in Harrison Street Yard was moved back to give safe clearance for men working on the cars.

The space above the wash rooms in Harrison Barn was enclosed and converted into a storeroom. A new stairway was built to serve this room.

The ticket office at Harrison Street was insulated by blowing "Pal-O-Pac" into the walls and ceilings.

At Libertyville Station the concrete platform was resurfaced with asphalt.

The concrete sidewalk and approaches at Mundelein station was rebuilt by the Richard T. Jenkins Company.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

MACHINE SHOP

Overhauled three section gang motor cars and three signal gang speeders. Made running repairs to all speeders and push cars on the System.

Repaired 18 frogs and 23 switch points.

Built up crossings at 5th and Greenfield and 5th and Wisconsin and special work at Milwaukee Terminal.

Maintained all Way Department tools and work equipment.

Made and repaired parts for Signal and Interlocking Division.

Cut bars and pins and welded parts as requested by the Mechanical Department.

TIN SHOP

Performed all necessary work required by repairs to buildings and heating plants.

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



BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

MISCELLANEOUS

Rebuilt 2,400 square feet of concrete side walk at various locations in Racine.

Built a roof over the Goldschmidt Grinder.

Unloaded 35 side-dump cars of birds-eye gravel for backfill behind southwest wing wall of C.M. St. P.&P. bridge at Milwaukee.

Maintained stations in Chicago at Adams and Wabash, Wilson Avenue and Howard Street, Montrose freight station and Congress Street baggage room.

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

Repaired asphalt crossings over the system.

Operated the weed killer.

Operated the ditcher as required for loading and unloading rail, loading scrap and unloading cinders, stone and coal.

Repaired company owned houses and buildings as requested by Real Estate Department.

Rebuilt right-of-way fence on the east side from Holdridge Road to Beach substation.

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BUILDINGS PAINTED AND DECORATED

LOCATION

Adams & Wabash Station	Painted Inside
Wilson Avenue Commissary	Painted Inside
Howard Street Station	Painted Inside
Church Street Station	Painted Inside
Wilmette Avenue Station	Painted Outside
Forest Avenue Shelter, Gate Shanty and Fence	Painted Outside
Indian Hill Station	Painted Inside
Beech Street Station	Painted Outside
Highland Park M. D. Station	Painted Outside
Highland Park Station	Painted Inside
Vine Avenue Station	Painted Outside
Highwood Avenue Station	Painted Inside
Washington Street Section House	Painted Inside
Highwood Car Shop Washroom	Painted Inside
Farwells Shelter	Painted Outside
Scott Street Shelter	Painted Outside
Noble Avenue Tool House	Painted Outside
Lake Bluff Substation and Tower	Painted Outside
22nd Street, North Chicago	Painted Inside
Waukegan Terminal Trainmen's Room	Painted Inside
Dempster Street Station	Painted Inside
Northfield Station	Painted Inside
Northbrook Station	Painted Inside
Taylor Avenue, Racine substation and Tool House	Painted Outside
Racine, All Gate Towers and Shantys	Painted Outside
Middle Road Gate Motor Shed	Painted Outside
Quarry Substation and Tool Shed	Painted Outside
Rapids Road Shelters	Painted Outside
3-Mile Road Shelter	Painted Outside
4-Mile Road substation, Tool House, Section House	Painted Outside
4-Mile Road Station	Painted Outside
5-Mile Road Station	Painted Outside
6-Mile Road Station	Painted Outside
7-Mile Road Station	Painted Outside
Ryans Road Tower and Sheds	Painted Outside
Carrollville Section House and Substation	Painted Outside

BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

BUILDINGS PAINTED AND DECORATED - CONTINUED

LOCATION

Oakwood Road Station	Painted Outside
Oak Creek Station	Painted Outside
Drexel, Peutz Road, South Milwaukee	Painted Stair Railings
College Avenue Station	Painted Outside
College Avenue Substation	Painted Outside
Grange Avenue Section House and Shelter	Painted Outside
Layton Avenue Station	Painted Outside
Bolivar Avenue Station	Painted Outside
Austin Avenue Station	Painted Outside
Oklahoma Avenue Station	Painted Outside



BRIDGE AND BUILDING DIVISION

MAINTENANCE WORK

COMPANY HOUSES DECORATED

LOCATION

1054 Linden Avenue, Wilmette	Wash Interior
1062 Linden Avenue, Wilmette	Wash Interior
416 Railroad Avenue, Wilmette	Paint & Paper Interior
367 Wilson Street, Winnetka	Wash, Paint, Plaster Interior
Libertyville Station, South Apartment	Wash, Paint & Paper Interior
15 S. Utica Street, Waukegan	Wash, Paint & Paper Interior
1102 22nd Street, North Chicago	Paint Exterior
1239 Greenfield Street, North Chicago	Paint Interior & Exterior
1241 Greenfield Street, North Chicago	Paint & Paper Interior and Paint Exterior
1210 Washington Street, Waukegan	Wash & Paint Interior
1135 Porter Street, Waukegan	Paper Interior
6505 28th Avenue, Kenosha	Paper Interior
6607 28th Avenue, Kenosha	Wash Interior
6509 28th Avenue, Kenosha	Wash & Paint Interior
1105 Grove Avenue, Racine	Paint & Paper Interior
503 Michigan Street, Milwaukee	Wash & Paint Interior
Harrison Street, Glenayre	Paint Exterior & Paint and Paper Interior

SIGNAL AND INTERLOCKING DIVISION

ADDITIONS AND BETTERMENTS

RETIRE DERAILS AT SOUTH UPTON AND K. O. TOWERS - A.F.E. 4454 and 4454-C

1015

All derails, together with associated switch machines, circuit controllers, relays, local cables and guard rails, were removed at the South Upton and Skokie Junction (K.O.) Interlocking Plants.

REPAIRS TO SIGNAL CABLES IN ILLINOIS - A.F.E. 4451

11,865

The aerial signal cable from 22nd Street, North Chicago, to the State Line and from South Upton Tower to the eastbound distant signal, was painted with D.M.C. cable paint. All cable hangers were renewed with new Marlin hangers. This work was done by the Monroe Electric Company.

REPAIRS TO SIGNAL CABLES IN WISCONSIN - A.F.E. 4452

2690

The aerial signal cable from Roosevelt Road to 60th Street in Kenosha, from 16th Street to 13th Street in Racine and from Austin Avenue to Oklahoma Avenue, was painted with D.M.C. cable paint and retied with new Marlin cable hangers. All other aerial signal cables in Wisconsin were painted. Work was done by the Monroe Electric Company.

SIGNAL AND INTERLOCKING DIVISION

JOB ORDERS

PROTECTION OF FIRE CROSSINGS AT GREAT LAKES - J. O. 310

Signal protection was installed for the fire crossing at Downeys Road, Great Lakes. Existing block signals were utilized on the Skokie Valley Line and new dwarf signals installed on the Shore Line. Signals are arranged to show stop indication when gates are opened.



## SIGNAL AND INTERLOCKING DIVISION

### MAINTENANCE WORK

In addition to the routine work of maintaining interlocking plants, block signals and crossing protection devices, the following major items of maintenance work were done:-

The southbound distant signal at Kenosha was repaired and reset after being struck by overhanging equipment.

The southbound semaphore-type home signal at Kenosha was replaced by a 2-position color light signal equipped with a white marker light. This work was done to afford better view of the signal.

A new 2-position color light signal was installed 30 feet south of Harrison Street platform to indicate position of puzzle switch for southbound trains.

A third light was installed at the top of gate arm of automatic gates at Dundee Road, Knollwood, Belvidere Street, Deerpath Avenue and Westminster Avenue. This light is controlled by a mercury switch and burns steadily while gate arm is lowered.

Automatic gate pedestals were renewed at Niles Center Road, Dempster Street and Dundee Road because of damage by automobiles.

Automatic gate pedestals were replaced at the following locations and taken to the shop for overhauling:

Willow Road, Dundee Road, Briergate, Mawman Avenue, Belvidere Street, 75th Street, Kenosha, (2 gates), 73rd Street, Kenosha, Roosevelt Road, 52nd Street, Kenosha, (2 gates), Taylor Avenue, Racine, (3 gates), 21st Street, Racine, and Westminster Avenue, Lake Forest.

Block signal 164 and the relay case at Lake Avenue, Skokie Valley Line, were replaced after being damaged in a train-auto collision.

A temporary, manually operated signal system was installed at Hawthorne Drive, Racine, to control train operation through the gauntlet track during construction of a new concrete bridge.

SIGNAL AND INTERLOCKING DIVISION

MAINTENANCE WORK

CROSSING GATE OPERATION

57 automatic gate locations, including Middle  
Road Barrier

	<u>1943</u>	<u>1942</u>
Gates broken by automobiles	103	149
Other interruptions*	302	259

20 manually operated crossing gate locations

Gates broken by automobiles	33	38
Other interruptions	104	82

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

CROSSING GATES AND SIGNALS MAINTAINED

Automatic Gates	54	54
Automatic Gates & Flashers	3	3
Manual Gates	20	20
Flasher Signals	4	4
Autoflags Track Circuit	17	17
Autoflags - Manual Control	3	3
Block Signals - S.T. Miles	84.1	84.1
Switch Protection Signals	7	7
Fire Crossing Signals	4	--
Interlocking Plants	5	5
Smash Gates	3	3

## EQUIPMENT

### PURCHASE AND RETIREMENT OF SPEEDERS - A.F.E. 4403 and 4403-C

850

Two, one-man, gasoline-powered Fairmont speeders were bought for the Signal Division and one, one-man Buda speeder for the Electrical Department. Three Adams Model 2-A one-man speeders were retired.

### PURCHASE OF TRACK MOTOR CAR - A.F.E. 4407

1205

A Buda, Model K-1 Heavy-duty motor car was purchased for extra gang work. This car is equipped with 4-wheel drive, electric starter, lights and horn and is powered with a 54-horsepower, gasoline engine.

Miscellaneous equipment purchased during the year includes one gasoline-powered Mall portable grinder, 1 Fairmont Derrick Car and 1 Barco Tytammer.



SUMMARY

TRACK CONSTRUCTION - LINEAL FEET

	<u>1943</u>	<u>1942</u>
Main Line Retired	--	1,000
Side Track Constructed	1,898	5,303
Side Track Retired	232	--

RAIL INSTALLED - SINGLE TRACK FEET

127#	406	249
102#	532	840
100#	48,498	33,594
80#	21,460	20,193
65#	295	1,544

RAIL REMOVED - SINGLE TRACK FEET

95#	532	1,089
80#	48,498	33,396
65#	20,089	17,662

TIE PLATES AND RAIL ANCHORS INSTALLED

80#-100# Tie Plates	18,164	17,202
100# Tie Plates	14,927	9,698
100# Rail Anchors	13,183	10,100

SPECIAL WORK

Crossovers Installed	1	1
Turnouts Installed	6	8
Crossovers Removed	1	--
Turnouts Removed	1	--
Crossings Built Up	2	3
Frogs Repaired	18	16
Switch Points Repaired	23	23
Thermit Welds	400	215

# SUMMARY - CONTINUED

## TIES RENEWED

	<u>1943</u>	<u>1942</u>
Main Line	21,452	16,112
Side Track	3,161	1,865
Switch	839	178
Bridge	6	370
3rd Rail Chair	670	--

## TIES INSTALLED ON NEW WORK

Main Line - new	--	733
Main Line - secondhand	--	170
Side Track - new	362	1,247
Switch - new	287	433
Switch - secondhand	--	109

## BALLAST - CARS

Stone - main line	236	17
Gravel - main line	141	--
Cinders - main line	136	95
Gravel - side tracks	--	80
Cinders - side tracks	11	7

## BROKEN RAILS

100#	3	2
80#	16	35
65#	13	12

## BRICK PAVING REPAIRS - SQUARE YARDS

Wilmette	50	75
Kenilworth	120	47
Highland Park	100	90
Waukegan	10,000	500
Milwaukee	1,000	3,700

SUMMARY - CONTINUED

SWITCH HEATERS INSTALLED

	<u>1943</u>	<u>1942</u>
Winter King Switch Heaters	--	50

CROSSINGS

Gumwood crossings installed	2	--
Asphalt crossings rebuilt	7	1
Plank crossings rebuilt	5	2

BRIDGE REPAIRS

Bridges repaired	12	9
Bridges painted	8	--

PAINTING

Buildings painted and decorated	60	74
Company houses painted and decorated	17	17

CROSSING PROTECTION

Automatic gates installed - locations	--	3
Automatic flaklers installed - locations	--	3
Autoflags retired - locations	--	2
Automatic gates damaged by automobiles	103	149
Manual gates damaged by automobiles	33	38

FENCING

Right-of-way fence rebuilt - feet	3,500	15,000
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WEED KILLER

One application - single track miles	200	199
Total solution used - gallons	37,500	50,000



SUMMARY - CONTINUED

CARLOAD MATERIAL

	<u>1943</u>	<u>1942</u>
Sand and stone	473	178
Coal	29	40
Ties	80	85
Cinders	159	131
Miscellaneous	70	24
	<hr/>	
Total	811	458