RAILWAY SIGNALING AND COMMUNICATIONS

JANUARY, 1960

Signal Construction Steady in 1959

MODERATE IS THE WORD for signal construction during 1959, but here were gains in two major areas: entralized traffic control and highway crossing protection. Information ompiled this year is more detailed han previously, and also includes ome information not heretofore obained. Electric locks, for example ire included, and spring switches in CTC territory with and without facing point locks. This latter fact accounts for the smaller number of pring switches appearing in that able. Not previously included are afety devices such as hot box detectors, wheel detectors, dragging equipment detectors and slide fences. Thus he grand totals for 1959 appear greater than 1958, but for comparable items, the two figures are within 149 of each other.

Over 2,000 road-miles of CTC were installed in 1959, the largest annual mileage ever reported to **Railway Signaling and Communications.** This compares with 1,086 road-miles installed in 1958. A healthy start was made by the Canadian National on its program of equipping mainlines with CTC. CNR installed 700.4 miles, all of it single-track territory. Much of this is modified CTC with a spring switch at one end of a siding and a power switch at the other end. Next to the CNR in size of CTC projects was the Pacific Lines of the SP, which installed 333.4 road-miles. Over 250 miles of this 1959 total are controlled from a pushbutton type of control machine (RS&C, July 1959, p. 17).

Some railroads which have had CTC in service for several years are re-examining their installations to see if improvements should be made to reflect changed operating conditions (CTC planning RS&C, June 1959, p. 24). The L&N, for example, is re-arranging and simplifying the CTC between Nashville, Tenn., and Stevenson, Ala. The first installation was made in 1943 when trains were hauled by steam power. The advent of dieselization brought about fewer and longer trains, hence today the L&N is lengthening some sidings, and removing others not needed. On 24 miles of double-track CTC in Iowa, the Milwaukee Road retired 18 miles of one main track and converted 6 miles into three 2-mile sidings.

While six fewer railroads installed crossing protection equipment in 1959, 75 roads equipped 1,397 highway-railroad grade crossings or 17 more than in 1958. For the fifth straight year a gain was registered for the number of crossings equipped with the joint use of railroad and government funds (federal, state or local municipalities). Television to permit a watchman to view a highway grade crossing just beyond his range of vision was installed by the

Signal Installations for 1955 through 1959

	1959	1958	1957	1956	1955
Automatic block signaling					
Signals	363	493	423	864	754
Electric locks	21	--	--	--	--
Automatic train stop					
Rolling stock	174	222	--	--	--
Wayside units	155	--	--	--	--
Rolling stock with cab signals	2	--	--	--	--
Centralized traffic control					
Power switches	536	458	586	819	305
Spring switches with facing point lock	12	--	--	--	--
Spring switches without facing point lock	82	--	--	--	--
Electric locks	405	--	--	--	--
Controlled signals	1,485	1,116	1,454	1,948	885
Automatic signals	986	671	1,030	1,453	483
Classification yards					
Car retarders	48	44	61	69	54
Power switches	164	248	383	254	247
Highway crossing protection					
Crossings with flashing-light signals only	1,012	961	1,175	984	781
Crossings with flashing-light signals and gates	387	419	455	336	289
Interlockings					
Power switches	264	432	585	536	561
Home signals	440	826	1,003	1,036	1,021
Distant signals	142	--	--	--	--
Safety devices					
Dragging equipment detectors	23	--	--	--	--
Hot box detectors	121	--	--	--	--
Wheel detectors	10	--	--	--	--
Feet of slide detector fence	39,125	--	--	--	--
Spring switches					
Spring buffer mechanisms	47	80	127	147	107
Spring switches with facing point locks	17	52	59	41	35
Signals at spring switches	61	129	208	268	183
Grand totals	6.957	6,151	7,549	8,755	5,705
Units not included in other years	879	222			

D&H at Cohoes, N.Y. (RS&C, Oct. 1959 p. 15).

Although interlocking construction during 1959 fell considerably below 1958, the drop off was not so steep as the table indicates. Some of this construction and rebuilding is hidden in CTC. Conventional practice is to absorb local interlockings into CTC projects. For example, the NYC Syracuse-Buffalo installation, now nearing completion, will absorb six major interlockings with considerable savings in wages. The City of Philadelphia installed a train identification system in its subway whereby the interlockings are controlled automatically by the trains.

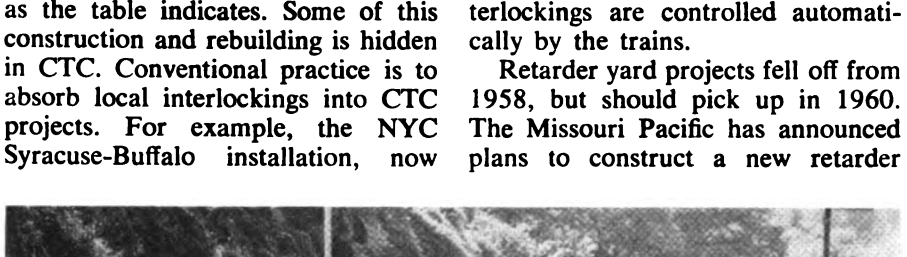
Retarder yard projects fell off from 1958, but should pick up in 1960. The Missouri Pacific has announced plans to construct a new retarder classification yard at North Litt Rock, Ark. The New York Central now constructing a similar yard Indianapolis, Ind., and has plans f a yard at Detroit, Mich., and a thi yard on the Eastern district. The yards are expected to be started 1960. Also, the Erie and the Lack wanna are seriously considering co struction of a retarder yard at Buffal N.Y. During 1959, the RF&P r built the southward hump at Potom yard, providing semi-automatic r tardation and automatic switchin Ten classification tracks were add to the existing yard.

Gains in wayside train stop equi ment installations were due to sign construction and modernization pr grams on the Boston, New York ar Philadelphia subways. Lackawan trains using Erie-DL&W joint trac age between Binghamton and Gibso N.Y. (about 76 miles) were equipp with intermittent inductive train sto The DL&W so equipped 93 locom tives in 1959.

The Jersey Central Lines h equipped 81 units of rolling stoc including some RDC cars, with tra stop equipment capable of being a tuated by subway-type mechanic trips. The trips were installed on t Passaic river and Newark bay dra bridges. Recommendations for t trips and train stop equipment we made by the New Jersey Public Uti ties Commission following a 1958 a cident in which a JCL commuter tra ran through the open Newark b drawbridge, killing 48 persons.

The CRI&P put cab signals o two locomotives that operate betwe Chicago and Joliet, Ill. This was t only cab signal installation report except for retarder yard engines.

Safety detectors including t amount of slide fence installed we obtained for the first time. With few men along the wayside to wat trains, the importance of these d tectors is growing (RS&C, Feb. 195 p. 28). By installing a slide fence a rock cut, the P&LE was able eliminate watchmen's jobs (RS& Dec. 1959, p. 19). One railroad planning to install over 50 hot b detectors on its system. All detect recorders will be monitored at a ce tral location, and train crews will informed of the exact locations of h boxes by two-way radio.



Slide fence installations totaled 39,125 ft.

Classification Yard Projects Installed in 1959

Railroad	& Location	Retarders	Power Switches Installed: Inter-locked	Power Switches Installed: Non-Interlocked	Class Tracks	Engines with Cab Signals	Mfr
B&M	Mechanicville, N.Y.	2 (replaced)	--	--	--	--	GRS
C&O	Presque Isle, Ohio	3	--	9	10	--	US&S
LS&I	West Yard	--	--	3	--	--	GRS
MP	Kansas City, Mo. East Yd.	13	--	39	40	3	GRS
	West Yd.	11	--	31	32	2	GRS
PRR	Conway, Pa.	1	2	--	6	--	US&S
RF&P	Alexandria, Va.	7	--	39	39	--	US&S
Stl-SF	Tulsa, Okla. Cherokee Yd.	11	--	40	40	2	GRS
SAL	Hamlet, N.C.	--	1(added)	--	--	--	US&S
		48	3	161	167	7	

Signal Expenditures to Reach $50 Million

Railroads can be expected to spend about $50 to $60 million in 1960 for additions and betterments in signaling. Heaviest spending will be for subways, retarder yards and centralized traffic control.

The New York City Transit Authority plans to spend upwards of $15 million on signal modernization programs. The Chicago Transit Authority will probably begin signal work on its Lake street line elevation on C&NW right-of-way. Work will begin on six or eight retarder classification yards during the year.

Considerable activity on CTC projects will occur during the year. Several roads are well along on programs of CTCing their mainlines: AT&SF, C&O, CNR, NYC, NP, SP and UP. About 1,500 road-miles of CTC should be installed during 1960.

Hot box detector installations should make significant gains. Several roads plan to install them throughout their systems. Several western railroads may install hot box detectors this year, because the detectors can now be operated in conjunction with the signal system to set a signal to Stop.

erlockings Installed in 1959 (type of construction indicated)

road & Location		No. of Power Switches Installed	No. of Home Signals Installed	No. of Distant Signals Installed	Mfr
SF					
illiamsfield, Ill.	R	5	6	--	US&S
poria, Kan.	N	2	1	--	US&S
linor, Kan.	C	—	--	--	US&S
rong City, Kan.	C	—	--	--	US&S
eva, Kan.	C	--	--	--	US&S
prence, Kan.	C	--	--	--	US&S
ilicia, Fla.	NA	--	4	--	US&S
phyrville, Fla.	NA	—	4	--	US&S
)					
rthur Kill Bridge					
Staten Island, N.Y.	N	--	3	--	GRS
lida, Ind.	NA	—	4	2	GRS
ites, Ohio	R	17	20	--	GRS
A					
iverly, Mass.	R	—	1	--	GRS
nery, N.H.	R	—	2	--	GRS
R					GRS &
ak Point Sub.MP 4.1,Man.	R	--	4	2	US&S
iris, Ont.	R	8	8	3	GRS
. Lambert, Que.	N	6	12	--	GRS
. Louis, Que.	N	1	2	2	GRS
armen, Man.	R	—	4	--	GRS
O					
oover, Ind.	RA	1	5	2	US&S
untington, W. Va.	NA	—	6	1	US&S
oswell, Va.	R	1	3	--	US&S
nn Pere, Mich.	RA	1	5	4	GRS
NW					
arshalltown, Iowa	NA	--	6	2	GRS
averly, Iowa	N	2	3	--	GRS
shkosh, Wis.	RA	—	2	--	GRS
ond du Lac, Wis.	R	1	--	--	GRS
StP&P					
hicago, Ill.	N	13	2	2	GRS
falz, Ill.	RA	—	--	2	US&S
heneyville, Ill.	R	—	--	--	US&S
innickinnic Draw, Milwaukee, Wis.	R	6	--	--	US&S
umham Draw,Milwaukee	R	3	--	--	US&S
A					
hicago, Ill.	R	--	3	--	US&S
hicago, Ill.	R	--	6	--	US&S
&W					
est End, Secaucus,N.J.	N	—	2	--	US&S
ast Kingsland, N.J.	N	4	7	--	US&S
E					
inghamton, N.Y.	N	6	4	1	GRS
est Binghamton,N.Y.	N	4	6	2	GRS
ibson, N.Y.	N	4	6	2	US&S
uffalo, N.Y.	R	--	6	--	US&S
alconer, N.Y.	R	10	--	--	US&S
shley, Ill.	RA	--	6	--	GRS
ives, Tenn.	RA	--	6	--	GRS
S					
hrewbury (New Orleans) La.	NA	--	6	--	GRS
&G					
uskogee, Okla.	N	2	--	--	--
HR					
ndover, N.J.	N	1	--	--	US&S
R					
icksville, N.Y.	N	9	13	--	US&S
reeport,N.Y.(temporary)	N	7	7	1	US&S
N					
oyles (Birmingham) Ala.					
Freight Yard	R	5	7	3	US&S
Black Creek	R	6	6	4	US&S
Bowl	N	2	4	1	US&S
AX	R	3	5	3	US&S
ilford (Atlanta,Ga.)					
ACL Junction	N	1	3	2	US&S

Railroad & Location		No. of Power Switches Installed	No. of Home Signals Installed	No. of Distant Signals Installed	Mfr
S.E. Yard	N	1	3	--	US&S
Willoughby (Knoxville)Tenn.	R	—	4	6	US&S
Ashley, Ill.	RA	—	6	4	--
Louisville, Ky.	RA	—	10	5	--
MTA					
Boston, Mass. Beacon St.Jct.	NA	2	3	2	US&S
Brookline, Mass.					
Reservoir Yard	NA	2	10	2	US&S
Newton, Mass.					
Riverside Term. Yard	NA	—	3	--	US&S
M&StL					
Hedrick, Iowa	NA	—	4	2	US&S
MP					
Nevada, Mo.	NA	—	2	1	GRS
Conroe, Texas	NA	--	--	--	GRS
NYC					
Mortimer, N.Y.	RA	--	4	--	GRS
Cleveland, O., Clark Ave.	R	--	--	--	GRS
Big Four Wye Jct.	N	1	3	--	GRS
North Liberty, Ind.	RA	--	4	--	GRS
Oris, Ind.	RA	--	6	--	GRS
Toledo, Ohio, Tower K	R	--	8	--	GRS
Broadway	R	8	9	--	GRS
Centerburg, Ohio	RA	—	4	--	GRS
NYCTA					
New York, N.Y.					
De Kalb Ave.., BMT	R	8	15	16	GRS
Liberty Jct.(Aqueduct)BMT	N	2	2	--	GRS
96th St.-7th Ave.					
Broadway, IRT	R	12	14	19	US&S
168th St. BMT		11	--	--	GRS
NYC&StL					
North Findlay, Ohio	RA	2	4	--	US&S
N&W					
Burkeville, Va.	C	4	8	--	US&S
Pamplin, Va.	C	4	10	--	US&S
NP					
Seattle, Wash.	N	9	10	--	GRS
PRR					
Hagerstown, Md.	R	13	6	--	US&S
Shenks Ferry, Pa.	N	2	4	--	US&S
Baltimore, Md.	N	2	--	--	US&S
Baden, Pa.	N	16	17	--	US&S
Pine, Pa.	R	1	3	--	US&S
Hoover, Ind.	RA	--	--	--	US&S
Liverpool, Ind.	RA	—	6	--	US&S
CITY of PHILA					
Philadelphia, Pa.					
Erie Station	NA	7	6	20	US&S
Fairmount-Girard	R	5	5	14	US&S
Walnut-Locust	R	--	--	--	US&S
READING					
Haucks, Pa.	R	9	--	--	GRS
RF&P					
Richmond, Va.	N	5	5	--	US&S
StL-SF					
Kimbrough, Ala.	NA	—	4	4	US&S
Rosedale, Kan.	N	1	1	--	US&S
SOUTHERN					
Louisville, Ky., Fourth Ave.	NA	--	8	4	GRS
Floyd St.	R	2	8	2	GRS
SP (Pacific Lines only)					
Visitacion, Cal.	C	3	6	--	US&S
UNION					
Duquesne, Pa.	C	--	--	--	US&S
WABASH					
Lodge, Ill.	R	1	5	--	US&S
WP					
Sacramento, Cal.	RA	—	--	--	--
Totals		264	440	142	

C = Consolidated R = Rebuilt N = New A = Automatic

Centralized Traffic Control Installed During 1959 in the United States and Canada

Railroad and Location	Miles	Power Switches	Spring Switches With Facing Point Lock	Spring Switches Without Facing Point Lock	Electric Locks	Controlled Signals	Automatic Signals	Mfr
AT&SF								
E. Ft. Madison-E. Shopton, Ia.	3.5d	--	--	--	6	--	4	US&S
W. Shopton, Ia.-Medill, Mo.	28.7d	10	--	--	7	16	32	US&S
Strong City, Kan.-Neva	4.1s	--	--	1	--	--	2	US&S
Pampa, Texas	2.6d	5	--	--	9	5	3	US&S
Abajo, N.M.-Isleta	11.0s	5	--	--	11	13	6	US&S
Rowe, N.M.-Lamy	16.0s	2	--	6	1	24	15	US&S
ACL								
Dunnellon, Fla.-N. Croom	36.6s	8	--	--	12	22	13	US&S
Vitis, Fla.-Tampa	28.5s	5	--	--	19	10	13	US&S
B&M								
Somerville Jct., Mass.-Hill Crossing	2.6s	--	--	--	9	7	2	GRS
Concord, N.H.	0.7s	2	--	--	--	3	--	GRS
CNR								
Dugald, Man.-Redditt, Ont.	112.7s	14	--	13	4	42	41	GRS, US&S, SGE
Winnipeg, Man.-Dugald	6.9s	1	--	1	2	4	2	GRS
Boston Bar, B.C.-Port Mann	114.9s	17	--	13	10	49	36	GRS
Capreol, Ont.-Foleyet	148.3s	17	--	15	3	68	32	GRS, US&S, SGE
Homepayne, Ont.-Nakina	131.6s	18	--	13	7	67	31	GRS, US&S, SGE
Coteau, Que.-Hawthorne, Ont.	73.0s	8	--	8	13	32	14	GRS, SGE
Napadogan, N.B.-Edmundston	113.0s	16	--	10	8	58	26	GRS, US&S, SGE
CPR								
Trenton, Ont.-Port Hope	41.4s	8	--	--	5	28	22	GRS
Moose Jaw, Sask-Ernfold	65.1s	18	--	--	5	44	32	US&S
Revelstoke, B.C.-Taft	23.1s	7	--	--	--	21	12	GRS
CofG								
Barnesville, Ga.-Irving	15.0s	--	--	--	4	2	7	US&S
C&O								
Sandstone, W. Va.-Prince	13.1d	29	--	--	14	47	17	US&S
Hinton, W. Va.-CW Cabin	1.9d	2	--	--	--	4	--	US&S
Shelby Jct., Ky.-Elkhorn City	15.6s	7	--	--	18	27	13	US&S
Trowbridge, Mich.-Lansing	2.6s	--	--	--	4	--	2	GRS
CB&Q								
Congress Park, Ill.-Downers Grove	8.1t	8	--	--	10	19	8	GRS
Kansas City, Mo.-St. Joseph	51.1s							
	3.7d	13	--	--	15	65	26	US&S
CMStP&P								
E. Madrid, Ia.-Collins	24.0s	7	--	--	--	--	--	--
D&H								
Buttonwood, Pa.-Hudson	5.7s&d	5	--	--	--	11	2	GRS
Carbondale, Pa.-W. Carbondale	2.0d	4	--	--	--	5	--	GRS
Ballston Spa, N.Y.-Saratoga Springs	13.4s,d,t	19	--	--	9	29	7	GRS
D&RGW								
Avon, Colo.-Bond	60.0s	14	2	--	11	34	27	GRS
DL&W								
E. Lincoln Park, N.J.-Montville	6.1s	4	--	--	2	6	5	US&S
Port Morris, N.J.-Slateford, Pa.	25.0s	8	--	--	2	16	20	US&S
DM&IR								
Biwabik, Minn.-Largo	7.7s	4	--	--	5	12	5	US&S
	8.5d	5	--	--	5	15	3	US&S
ERIE								
Elmira, N.Y.-W. Elmira	1.9d	6	--	--	1	9	--	US&S
Huntington, Ind.-Round Lake	20.3s	1	--	--	5	9	6	US&S
Round Lake, Ind.-Akron	10.3d	1	--	--	3	5	8	US&S
GTW								
Battle Creek, Mich.	2.4s	6	--	--	--	10	--	US&S
GN								
Brookston, Minn.-Gunn	51.0s	16	1	--	4	44	--	GRS
Wheelock, N.D.-Epping	5.2s	2	--	--	1	6	--	GRS
Dodson, Mont.-Pacific Jct.	75.6s	25	--	--	23	53	--	GRS
GM&O								
Mazonia, Ill.-Pequot	4.1s	1	--	--	--	7	3	GRS
	2.7d							
NYC								
Jackson, Mich.-Rives Jct.	5.0s	2	2	--	2	6	8	GRS

entralized Traffic Control Installed During 1959 in the U.S. and Canada (cont'd.)

ailroad and Location	Miles	Power Switches	Spring Switches With Facing-Point Lock	Spring Switches Without Facing-Point Lock	Electric Locks	Controlled Signals	Automatic Signals	Mfr
N&W								
S. Norfolk, Va.-Gilmerton	5.0d	10	--	--	6	23	--	US&S
Petersburg, Va.-Camp Lee Jct.	2.7s	--	1	--	--	3	--	US&S
Belspring, Va.-Eggleston	6.8s	2	--	--	1	6	4	US&S
Shepherdstown, W. Va.	--	1	--	--	--	1	--	US&S
Berryville, Va.	--	1	--	--	--	1	--	US&S
Ashby, Va.	--	1	--	--	--	1	--	US&S
Waynesboro, Va.	--	2	--	--	--	--	--	US&S
Carbo, Va.	--	--	--	--	--	2	--	US&S
Omega, Ohio-Lunbeck	10.0s	3	--	--	--	6	6	US&S
NP								
Garrison, Mont.-Missoula	67.0s	17	1	--	16	64	42	GRS
RR								
Milton, Pa.-Williamsport	24.2s	5	--	--	9	15	11	US&S
Nisbet, Pa.-Pine	9.8s	1	--	--	2	3	2	US&S
Columbus, Ohio	0.4s	--	--	--	1	1	--	US&S
NS&L								
Sept Iles, Que.-Knob Lake-Schefferville	--	6	--	--	3	18	5	GRS
EADING								
Barnesville, Pa.-E. Mahanoy Jct.	0.7s	1	--	--	1	3	--	US&S
tL-SF								
W. Cherokee, Okla.-Norris	1.7d	1	--	--	--	4	--	US&S
Norris, Okla.-Oma	5.0s	--	--	--	--	--	2	US&S
Oma, Okla.-Sapulpa	1.5d	1	--	--	3	4	--	US&S
AL								
Hermitage, Va.-Richmond	2.9d	2	--	--	2	4	4	US&S
	1.1s	--	--	--	--	--	1	US&S
OUTHERN								
Springfield, Va.-Bristow	19.4d	12	--	--	11	12	34	GRS
P (Pacific Lines only)								
Massie, Nev.-Perth	47.0s	11	--	--	--	36	40	US&S
Mescal, Ariz.-Lordsburg, N.M.	124.1s	39	1	2	14	122	106	US&S
Lordsburg, N.M.-Anapra	140.5s	34	--	--	9	100	130	US&S
Corporal, Cal.-Logan	6.7s	--	2	--	1	4	6	US&S
Tucson, Ariz.-PFE Yard	2.5s	6	2	--	3	10	2	US&S
Tresend, Utah-Bridge	12.6s	3	--	--	1	9	12	US&S
&P								
Dothan, Tex.-Clyde	25.0s	7	--	--	--	18	--	GRS
IP								
Reverse, Ida.-Glenns Ferry	15.0d	9	--	--	4	24	24	US&S
Nampa, Ida.-Orchard	44.0s	7	--	--	36	28	50	US&S
ABASH								
Lodge, Ill.-Gibson City	25.0s	4	--	--	13	9	--	US&S
143.5d 8.1t	1,855.3s	536	12	82	405	1,485	986	
Road Miles	2,006.9							

utomatic Block Signaling and Train Stop Equipment Installed During 1959

ailroad	& Location	Miles	Signals	Locks	Stops	Mfr
&M	System	6.9d	8	--	--	GRS
		1.8s	4	--	--	GRS
TA	Chicago, Ill.	1.0d	13	--	--	US&S
L&W	Scranton, Pa.-Taylor	2.5t	7	--	--	US&S
	Cayuga, Pa.-Clarks Summit	4.0s	2	--	--	US&S
	Binghamton, N.Y.-Gibson		--	--	93*	--
I&E	Griffith, Ind.-Van Loon	2.8d	2	--	--	GRS
IE	Waverly, N.Y.-Big Flats		--	3	--	US&S
CL	Bayonne, N.J.	1.5f	--	--	81*	US&S
	Mechanical trip-type stops		--	--	10	US&S
EC	Winthrop, Me-Waterville	28.6s	28	--	--	GRS
TA	Boston, Mass.	12.2d	87	3	33	US&S

Railroad	& Location	Miles	Signals	Locks	Stops	Mfr
NYCTA	New York, N.Y	1.0f	9	--	9	GRS
		1.1f	18	--	18	US&S
		1.5d	43	--	43	US&S
NP	System	18.0s	36	2	--	GRS
		26.0d	28	--	--	GRS
ONL	Swastika, Ont.-Bourkes	20.0s	27	1	--	--
CYofPA	Philadelphia, Pa.	3.0d	45	12	40	US&S
SOU	Knoxville, Tenn.-Coster	1.0s	2	--	2	--
SP&S	Cliffs, Wash.	1.6s	2	--	--	GRS
UP	Council Bluffs, Iowa	0.5s	2	--	--	US&S
75.5s, 53.4d, 2.5t, 3.6f			363	21	155	
Road Miles		135.0	* Rolling stock		174*	

Spring Switches Installed in 1959

Railroad	Spring Switches	Facing-Point Locks	Signals at Spring Switches
AT&SF	2	--	4
ACL	1	--	--
B&M	2	--	--
CNR	1	--	1
C&NW	10	4	--
CB&Q	2	2	3
DL&W	2	--	5
DT&I	1	--	1
ERIE	3	3	9
GN	1	1	2
IC	1	--	--
L&NE	2	--	2
LIRR	1	1	--
L&N	3	--	--
MTA	2	--	2
NYC	1	--	2
NYC&StL	1	1	2
SAL	1	1	1
SP (Pacific Lines only)	7	4	18
T&P	3	--	9
	47	17	61

Safety Detectors Installed in 1959

Railroad	Wheel Detectors	Dragging Equipment Detectors	Hot Box Detectors	Slide Detector Fence, feet	Other
ACL	--	1	2	--	--
B&M	--	--	7	--	--
CPR	--	--	--	235	--
C&O	--	--	11	--	--
C&NW	--	--	--	200	--
CB&Q	1	2	--	--	--
CMStP&P	--	--	1	--	--
Clinchfield	--	--	1	1,724	--
D&H	--	--	2	--	--
D&RGW	--	--	2	400	--
DM&IR	--	--	1	--	--
ERIE	--	6	--	--	--
GN	--	--	--	3,683	--
L&N	1	1	7	--	--
NYC	--	--	16	--	--
NYCTA	--	--	--	--	2 smoke detectors
N&W	--	--	3	--	--
NP	--	--	--	2,000	--
PRR	--	5	19	--	--
P&LE	--	2	4	4,000	--
RF&P	--	2	--	--	--
StL-SF	--	--	2	--	5,032 feet fire protection(bridge)
SAL	1	--	--	--	--
SOUTHERN	7	2	36	--	--
SP (Pac. Lines only)		2	4	580	--
SP&S	--	--	--	20,925	--
T&P	--	--	2	--	--
UP	--	--	--	3,923	--
VGN	--	--	1	--	--
WP	--	--	--	1,455	--
	10	23	121	39,125	

Highway Crossing Protection in 1959

Railroad	Flashing Light Signals	Gates and Flashers	Number of Crossings Equipped: Sources of Funds: Railroad	Non-Railroad	Joint
AT&SF	42	16	14	15	29
A&WP	1	--	1	--	--
ACL	40	10	9	6	35
B&O	11	7	5	2	11
BAR	2	--	--	--	2
B&M	5	10	10	1	4
CNR	119	19	4	7	127
CPR	106	17	1	4	118
CofG	3	1	1	--	3
C&O	21	7	2	1	25
C&EI	4	2	1	--	5
C&NW	52	28	24	--	56
CB&Q	11	11	4	--	18
CGW	8	6	7	3	4
CMStP&P	37	13	36	--	14
CNS &M	--	2	--	2	--
CRI&P	45	8	25	3	25
CSS&SB	--	3	3	--	--
Clinchfield	--	1	--	1	--
D&H	1	8	4	1	4
D&RGW	6	1	2	4	1
DL&W	4	3	1	2	4
DT&I	5	--	--	--	5
DM&IR	--	1	--	--	1
DSS&A	2	--	--	--	2
EJ&E	1	--	1	--	--
ERIE	9	11	8	3	9
FEC	5	20	7	9	9
FW&D	1	--	--	--	1
G&F	3	2	--	--	5
GTW	6	2	--	--	8
GN	10	10	10	2	8
GM&O	6	1	--	1	6
IC	11	16	7	5	15
IT	1	--	--	--	1
JCL	2	3	2	2	1
KCS	2	--	--	--	2
KO&G	6	--	--	--	6
L&NE	2	--	--	--	2
LIRR	4	11	6	--	9
L&N	10	7	4	6	7
MeC	5	--	1	1	3
M&StL	7	1	--	1	7
MKT	6	--	5	--	1
MP	21	5	10	1	15
NYC	59	29	26	7	55
P&LE	--	1	--	1	--
NYC&StL	10	1	5	--	6
NYNH&H	4	2	2	4	--
N&W	4	6	1	--	9
NP	15	2	5	--	12
ONL	2	--	--	--	2
PGE	--	2	2	--	--
PRR	27	16	25	4	14
P-RS	1	--	1	--	--
QC	1	--	--	--	1
READING	4	15	14	2	3
RF&P	--	4	--	--	4
Stl-SF	15	3	4	1	13
StLSW	10	--	7	--	3
SAL	17	10	7	1	19
SOO	17	1	--	1	17
SOUTHERN	22	11	5	6	22
SP (Pac. Lines only)	83	13	18	20	58
SP&S	2	--	--	--	2
TRRS L	2	--	--	--	2
T&P	10	1	2	1	8
TP&W	9	--	1	6	2
TH&B	7	--	--	--	7
UP	24	5	6	3	20
VGN	2	--	--	--	2
WABASH	8	2	5	--	5
WM	5	--	3	--	2
WP	9	--	1	3	5
	1,012	387	355	143	901