

AUTOMATIC BLOCK SIGNALS

COMPLETED DURING PAST YEAR

Road	Mileage of Line	Between	And	Single or Double Track	No. of Signals	Type of Signals	Control System	Remarks
A. G. S.	3.71	Chattanooga, Tenn.	Lookout Mountain Tunnel	Double	6	U. Q. 3-pos.	A. C.	
	2.39	Lookout Mountain Tunnel, Tenn.	Wauhatchie	Double	8	U. Q. 3-pos.	Polarized track circuits	
A. T. & S. F.	4.41	Woodward, Ala.	Burstall	Double	6	U. Q. 3-pos.	A. C.	
	17.5	No. Pomona, Cal.	Arcadia	Single	36	3-pos. U. Q.	Neutral, track and line	50 cycle. A. C.
	6.6	Standish, Mo.	Carrollton Jet.	Double	12	3-pos. U. Q.	Neutral, track and line	D. C. primary.
	10.1	Le Loup, Kan.	H. U. Tower	Double	9	3-pos. U. Q.		
	4.9	Dodge City, Kan.	Sears, Colo.	Double	10	3-pos. U. Q.		
	9.2	Shoemaker, N. M.	Watrous	Single	13	3-pos. U. Q.		
A. & W. P.	4.3	Near El Paso, Tex.		Single	7	3-pos. U. Q.		
	33	East Point, Ga.	Newnan	2 Mi. Doub. 31 Mi. Single	59	3-pos. U. Q.		
A. C. L.	5.75	Ashley Jet., S. C.	Charleston	Double	7	Union Style "S" U. Q.	Polarized track	In Charleston Terminal.
A. E. & C.	1.81	Geneva Jet., Ill.	Wheaton	Single	4	Model 13 U. S. & S., 2-pos. light	25 Cycle A. C. track circuit	Changed from 3-pos. follow-up movement.
B. & O.	6.80	Standley, Ohio	E. Defiance	Double	11	Style "T"	Polarized track circuit	
	79.65	Engle, W. Va.	Green Spring	2, 3 and 4	295	Style "T"	Neutral line circuit and polarized track circuit	
	4.93	Patterson Creek, W. Va.	Evitts Creek	Double	12	Style "T"	Polarized track circuit	
B. & A.	2.5	Chatham, N. Y.	East Chatham	Third Trk. East-bound	4	Motor U. Q.	Normal danger	Storage Battery.
Boston Elev.	.27	Washington Station	South Station	Double	4	Normal clear, light, 4-indication	Double rail, A. C.	In Dorchester Tunnel
	.5	Cambridge Street	Devonshire Street	Double	30	Normal clear, light, 3-indication	Single rail A. C.	East Boston tunnel.
Cent. of Ga.	1.3	Devonshire Street	Maverick Square	Double	42		Traffic direction	
C. & O.	4	Mogul, Ga.	Macon	Single	9	D. C., 3-pos. U. Q.	D. C. line and track	2-pos. Style "B" signals were changed to 3-pos. by using 3-pos. rack and pinion movement.
	30	Barboursville, W. Va.	Russell, Ky.	Double	60	3-pos. Style "B" 3-pos. Model 2a 3-pos. Style "T2"		
C. & E. I.	10.0	Fort Branch, Ind.	Ingle	Single	17	U. S. & S. Style "S" D. C.	Polarized Line	
C. G. W.	55.0	Marshalltown, Ia.	East Des Moines	Single	54			
	42.8	Jeff, Ia.	Alta Vista	Single	36			
	9.4	Dodge Center, Minn.	Hayfield	Single	9	Federal Type 4, bottom post, U. Q.	Line and Track Circuit Overlaps.	
	1.7	Oelwein, Ia.	Jeff	Double	3			
C. I. & L.	44.7	Bloomington, Ind.	Orleans	Single	106	Upper Quadrant	A. P. B.	
C. & N. W.	55	Wiscona, Wis.	Fond du Lac	Single	107	G. R. S., U. Q., 3-pos.	A. P. B.	
C. B. & Q.	5	Cedar Rapids, Ia.	Beverly	Double	10	Model 2A		
	42.30	Montgomery, Ill.	Mendota	Double	112		Line	Each track signaled both directions with A. P. B.
	49.95	East Dubuque, Ill.	Wis. River Bridge, Wis.	Double	202-arm 841-arm		Relayed track	One direction only.
	11.34	Waverly, Neb.	Lincoln	Double	192-arm 181-arm		Relayed track	One direction only.
	3.5	Omaha, Neb.	South Omaha	Single	21-arm	2-pos., 60 deg., L. Q. 10-volt, Fed. Type 4, top post	Line control	
	39.2	South Omaha, Neb.	Waverly	Single	132-arm 741-arm		Line control, A. P. B.	
	23.01	Holdrege, Neb.	Oxford	Single	162-arm 351-arm		A. P. B.	
	11.58	Indianola, Neb.	McCook	Single	62-arm 181-arm		A. P. B.	
C. M. & St. P.	68.6	Loweth, Mont.	Three Forks	Single	22-arm 109		A. P. B.	
	19.8	Plummer Jet., Ida.	Manito, Wash.	Single	28	Normal clear, light, A. C., 3-pos.		
C. R. I. & P.	2.0	63rd St., Chicago	83rd Street	Double	7	Normal clear, D.C., 3-pos. motor	Line, A. C.	
	1.9	Stony Island Ave., Chicago	South Chicago	Double	8	U. S. & S. Style "B," A. C.		
	1.1	Gresham, Ill.	Brainerd Jet., Ill.	Double	7	G. R. S. "2A," A. C.	Line, A. C.	
	1.0	Rock Island, Ill.	Davenport, Ia.	Double	5	G. R. S. "2A"	Line, A. C.	In connection with interlocking protection.
C. C. C. & St. L.	3.5	Springfield, Ohio	Cold Springs	Single	4	U. S. & S., light		
D. & H.	9	D. J. Tower	Schoharie Jet.	3-track	10	U. Q. normal clear	T. D. B.	
D. L. & W.	9.0	Near New Milford Summit, Pa.				Style "K"		
Denver Tramway	.3	Colfax	W. Myrtle Place	Single	2	Local make	Polarized track	
E. J. & E.	1.25	Brisbane, Ill.	Frankfort	Double	1	U. S. & S. Style "B"	D. C.	One track only.
E. P. & S. W.	25.3	Lee, Tex.	Moore's Spur	Single	46	U. S. & S. Style "S", U. Q., 3-pos.		
Erie	21.5	Meadville, Pa.	Amasa	Single				
	10.4	Amasa, Pa.	Pymatuning	4.9 Single 5.5 Double				
	9.2	Columbus Jet., Pa.	Niobe Jet., N. Y.	Single		Union Style "S", U. Q.	Polarized track circuits	
	26.6	Kent, Ohio	Leavittsburg	Double				
	15.7	Solon, Ohio	Cleveland	Double				
	15.2	Granton Jet., N. J.	North Paterson	1.5 Single 13.7 Double				
G. H. & H.	1.07	M. P. 4.67	M. P. 5.74	Single	2			
G. H. & S. A.	3.78	Manchester, Tex.	Pasadena	Single	8	U. S. & S. Style "B"	D. C. with overlap	
	1.35	I. & G. N. Crossing, San Antonio, Tex.						
G. T.	2.5	Near Lachine, Que.	Alazan	Single	1	U. S. & S. Style "B"	D. C. with overlap	
	1.0	Near Flint, Mich.		Double (one track only)	2	D. C., G. R. S., B. P. low voltage	Line and track	
	1.0	Near Flint, Mich.		Single	1	D. C. Union B. P., low voltage	Line and track	
G. T. P.	4	Mellville Yards, Sask.		Single	4	G. R. S. Style "2A", top post	Line and track circuit	
I. C.	79.7	Gilman, Ill.	Humbolt	Double	136	3-pos. U. Q.		
	8.6	Humbolt, Ill.	Mattoon	Double	13	2-pos. L. Q.		
	2.0	Branch Jet., Ill.	Centralia	Double	8	3-pos. L. Q.		
	6.2	Dugan, Ky.	Cecilia	Single	12	3-pos. U. Q.		
	14.2	East View, Ky.	Leitchfield	Single	27	3-pos. U. Q.		
	9.8	Horse Branch, Ky.	Beaver Dam	Single	18	3-pos. U. Q.		
	10.7	Rockport, Ky.	Mercer	Single	21	3-pos. U. Q.		
	31.3	Eddyville, Ky.	Paducah	Single	59	3-pos. U. Q.		
	9.3	Woodstock, Tenn.	North Yard, Memphis	Single	16	3-pos. U. Q.		
	13.4	East Jet., Tenn.	Neshitt, Miss.	Single	21	3-pos. U. Q.		
	56.7	Amite, La.	Orleans Jct.	Double	82	3-pos. U. Q.		
	1.3	Union Tunnel, Ind.	Unionville	Single	2	2-pos. U. Q.		

AUTOMATIC BLOCK SIGNALS
COMPLETED DURING PAST YEAR—Continued

Road	Mileage of Line	Between	And	Single or Double Track	No. of Signals	Type of Signals	Control System	Remarks
L. & N.	108.89	La Follette, Tenn.	Etowah	Single	219	3-pos. U. Q.	A. P. B.	
	63.0	Calera, Ala.	Montgomery	Single	128	3-pos. U. Q.	A. P. B.	
L. V.	1.91	Ashmore, Pa.	Stockton	Double	2	N. D. 3-pos. U. Q.	Line	
L. A. & S. L.	32.0	Los Angeles, Cal.	Pomona	Single	67	3-pos. U. Q., U. S. & S. Style "S"	A. P. B.	
Mahoning & Shenango	1.8	Logan Ave. Railroad St., Sharon, Pa.	West Side	Single	6	Nachod	Trolley contactor	
	0.6							
M. C.	33	Jackson, Mich.	Sec. 32 Marshall	Single	2	Nachod	Trolley contactor	Changed from 2-pos. L. Q.
M. K. & T.	.5	Hartsburg, Mo.		Double	55	3-pos. U. Q.	Polarized	
	3.8	Atoka, Okla.		Single	2	Style "K", U. Q.		
	2.59	Tushka, Okla.		Double	6	Style "K", U. Q.		
	2.59	M. P. 618, Okla.		Double	2	Style "K", U. Q.		
	2.59	Caney, Okla.		Double	2	Style "K", U. Q.		
	2.59	M. P. 626, Okla.		Double	2	Style "K", U. Q.		
	2.59	Caddo, Okla.		Double	2	Style "K", U. Q.		
	2.58	Calera, Okla.		Double	2	Style "K", U. Q.		
Mo. Pac.	39.0	Piedmont, Mo.	Poplar Bluff	Double	2	Style "K", U. Q.		
N. Y. C. (East)	5.5	Near Poughkeepsie, N. Y.		Single	59	3-pos. U. Q.		
				4-track	16	Hall Style "K"	Line	Line battery charging system.
N. Y. C. (Elec. Zone)	1	Woodlawn, N. Y.	Mount Vernon	4-track	4	A. C. right-hand		
	1.25	Mount Vernon, N. Y.	Bronxville	Double	2	A. C. right-hand		
N. Y. Mun. Rys.	19.87	Various points in New York City in connection with new subways						
				2 and 4	108	A. C. color light	A. C. Line control	
N. Y. N. H. & H.	21.2	Bridgeport, Conn.	Stamford	4-track	108	Semaphore 3-pos. L. H. U. Q. with day and night light indication		
N. & W.	10.1	Poe, Va.	Jack	Single	22	2-pos. L. Q.	A. C.	
	8.1	Jack, Va.	Church Road	Double	18	3-pos. U. Q.	T. D. B.	
	37.0	Burkeville, Va.	Pamplin	Single	86	3-pos. U. Q.	Pol. track circuit	
	3.8	Pepper, Va.	Belspring	Double	6	3-pos. U. Q.	T. D. B.	
	4.7	Dry Branch, Va.	Eggleston	Double	6	3-pos. U. Q.	Pol. track circuit	
	3.1	Dry Branch, Va.	Ripplemead	Double	10	3-pos. U. Q.	Pol. track circuit	
O. S. L.	22.0	Cache Jct., Utah	Dayton, Idaho	Single	51	3-pos. U. Q.	Pol. track circuit	
O. W. R. & N.	19.7	Boardman, Ore	Hinkle	Single	35	G. R. S. Model 2A	Neutral line	
P. M.	22.0	Vine, Mich	New Buffalo	Single	23	3-pos.		
	2.0	Benton Harbor, Mich.	St. Joseph	Double	2			
Pub. Serv. of N. J.	Abt. 0.5	Subway approach to Tremley, N. J.	Newark Terminal	Double	20	Light	A. C. track circuit	
San Francisco-Oakland Term.	3.56	(Subway) Oakland, Cal.	Port Reading Jct.	Double	13	9 semaphore, 4 light	A. C. track circuit	
	3.45		Pier Term	Double	73	31 Style "T2" U. Q., 3-pos. A. C., equipped with auto. stops. 42 Mod. 2A, 3-pos. U. Q. A. C.	A. C. full block overlap	Work consisted in reconstructing and relocating 42 signals and the addition of 31 new signals.
	2.39	E. 14th St., Oakland, Cal.	Leona	Single	4	U. S. E. Signal Co.'s Type K2	Trolley contact system	Signals are of the counting disc and light type.
Southern	35.0	Orange, Va.	Arrowhead	Double	43	A. C., U. Q., N. C.	Polarized	
	9.5	Elma, Va.	Tye River	Double	12	A. C., U. Q., N. C.	Polarized	
	5.0	New Glasgow, Va.	Amherst	Double	5	A. C., U. Q., N. C.	Polarized	
	12.3	Dry Fork, Va.	Danville	Double	18	A. C., U. Q., N. C.	Polarized	
So. Pac.	4.8	Salem Yard, Ore.	Berg	Single	16	Style "B", U. S. & S., D. C.		
	2.0	Binney Jct., Ore.	Wilson	Single	4	Style "B", U. S. & S., D. C.		
U. P.	54	Salina, Kan.		Single	121 sig. blades	U. S. & S. Style "B", single and double arm, L. Q., 2-pos.	Overlaps	
Wabash	13.8	State Line, Ind.	Williamsport	Single	14	Type 4A, Federal, bottom post, one-arm, L. Q., 3-pos.	Polarized overlap control system	
	19.9	Attica, Ind.	LaFayette	Single	21	A. C.		
Wab. Pittsburgh Term.	2.5	Longview, Pa.	Mifflin	Single	2			
W. M.	38	Glyndon, Md.	Thurmont	Single	84	3-pos. U. Q., D. C. Union		
	66	Colmar, Pa.	Connellsville	65 Single	113	Style "S"	A. P. B.	
				1 Double				
Y. & M. V.	1.0	North Baton Rouge Yard, La.		Single	2	2-pos. U. Q.		

UNDER CONSTRUCTION

A. E. & C.	0.7	College Ave., Wheaton, Ill.	Glen Ellyn	Double	1	Model 13, U. S. & S. 2-pos. light	25 cycle A. C. Track Circuits	One track only. Protection for Siding.
A. T. & S. F.	25.0	San Bernardino, Cal.	No. Pomona	Single	55	3-pos. U. Q.	Neutral track and line	50 cycle A. C. 25 cycle A. C.
	2.0	Redondo Jct., Cal.	Hobart	Single	5	3-pos. U. Q.	Polarized track	
	5.0	Stockton, Cal.	Larson	Single	10	3-pos. U. Q.	Neutral track and line	D. C. Primary Batt.
	3.6	Albuquerque, N.M.	Hahn	Double	6	3-pos. U. Q.		
A. & W. P.	32	Newnan, Ga.	La Grange	Single	42	3-pos. U. Q.		
B. & O.	93.8	Cumberland, Md.	Connellsville, Pa.	Double	226	A. C.		
	11.9	Warwick, O.	Sterling	Double	26	Style "T"	D. C. polarized	
Cent. of Ga.	93.3	Macon Jct., Ga.	Hapeville	Single	89.6	D. C. 3-pos. U. Q.	Traffic direction	
				Double	3.7	D. C. 3-pos. U. Q.	Polarized track	
	8.0	Hapeville, Ga.	Atlanta	Double	21	A. C. 3-pos. U. Q.	Polarized track	
	25.8	Terra Cotta, Ga.	Fort Valley	Single	49	D. C. 3-pos. U. Q.	Traffic direction	
	16.3	Vandiver, Ala.	Weems	Single	34	D. C. 3-pos. U. Q.	Traffic direction	
C. Gt. W.	33.6	McIntire, Iowa	Bailey	Single	29	Federal Type 4, bottom post U. Q.	Line and track circuit overlaps	
						G. R. S. U. Q. 3-pos., Model 2-A		
C. & N. W.	75	Shoreline, Wis.	Manitowoc	Single	170			
	103	Clyman, Wis.	Wyeville	Single	200		A. P. B.	
C. B. & Q.		40 places, principally in Iowa						
C. M. & St. P.	45.6	Harlowton, Mont.	Loweth	Single	66	Normal clear light	A. C. 3-pos.	Station protection signals.
	34.3	Three Forks, Mont.	Piedmont	Single	43	Normal clear light	A. C. 3-pos.	D. C. signals Lennep to Three Forks and St. Regis to Haugan, installed Marengo Jct. to Beverly.
	42.0	Butte Yard, Mont.	Deer Lodge	Single	58	Normal clear light	A. C. 3-pos.	
	173.4	Deer Lodge, Mont.	Haugan	Single	231	Normal clear light	A. C. 3-pos.	
	101.2	Marengo Jct., Wash.	Beverly	Single	123	Normal clear motor	D. C. 3-pos.	
G. T.	1.50	Vaudreuil, Que.		Double	3	G. R. S., D. C.	Line and track	
	.75	Brockville, Ont.		Double	1	G. R. S., D. C.	Track	One track only.
H. & T. C.	24.82	Cypress, Tex.	Hempstead	Single	41	U. S. & S. Style B.	D. C. with overlap	
	3.72	Navasota, Tex.	Nelleva Jct.	Single	6	U. S. & S. Style B.	D. C. with overlap	
	4.5	Mexia, Tex.	Mexia Jct.	Single	3	U. S. & S. Style B.	D. C. with overlap	
	2.3	Ennis, Tex.	Garrett	Single	7	U. S. & S. Style B.	D. C. with overlap	
I. C.	108.6	Nesbitt, Miss.	Canton	Single	264	3-pos. U. Q.		
	21.7	Canton, Miss.	Asylum	Single	41	3-pos. U. Q.		
	109.6	Nogan, Miss.	Amite, La.	Double	160	3-pos. U. Q.		
	24.1	Louisville, Ky.	Tip Top	Single	71	3-pos. U. Q.		
	2.7	Munger, Ill.	Coleman	Single	5	3-pos. U. Q.		

AUTOMATIC BLOCK SIGNALS

UNDER CONSTRUCTION—Continued

Road	Mileage of Line	Between	And	Single or Double Track	No. of Signals	Type of Signals	Control System	Remarks
Int. Rap. Trans.	29.0	2nd, 3rd and 9th Ave. Lines.		3 tracks	444	Elec. light daylight type. A. C. track circuits.		
L. & N. E.	7	Catasauqua, Pa.		Single	5	G. R. S., Model 2-A, low voltage	Combination Semi-Auto. and Auto.	Tunnel protecton.
L. A. & S. L.	26.0	Pomona, Cal.	Riverside.	Single	51	3-pos. U. Q., U. S. & S.	A. P. B.	
	112.0	Rox, Nev.	Modena, Utah	Single	192	3-pos. U. Q., Federal	A. P. B.	
L. & N.	137.0	Henderson, Ky.	Amqui, Tenn.	Single		3-pos. U. Q.	A. P. B.	
	28.0	Howell, Ind.	Maunie, Ill.	Single		3-pos. U. Q.	A. P. B.	
M. C.	3.5	Hoyt, Mich.	Saginaw	Single	19	3-pos. U. Q.	Polarized.	
	9.3	Fordney, Mich.	Zilwaukee	Single	28	3-pos. U. Q.	Polarized.	
	83	Marshall, Mich.	Niles.	Double	154	3-pos. U. Q.	Polarized.	Changed from 2-pos. L. Q.
M. K. & T.	14.5	Parsons, Kans.	Labette	Single	48	Style "S" U. Q.		
	2	McAlester, Okla.	Yard.	Single	10	Style "S" U. Q.		
	3.5	McBaine, Mo.		Single	6	Style "S" U. Q.		
	4.0	New Franklin, Mo.	Boonville Branch.	Single	12	Style "S" U. Q.		
Monongahela.	33.0	So. Brownsville, Pa.	W. Va. line.	Single				
Mo. Pac.	73.5	Washington, Mo.	Cole Jet	68.5 single 5.0 double	106	3-pos. U. Q.		
N. Y. N. H. & H.	18.0	Bridgeport, Conn.	New Haven	4-track	84	3-pos. L. H. U. Q.		
	21.0	Stamford, Conn.	Woodlawn	4-track	138			
N. & W.	25.2	Phoebe, Va.	Forest.	Single	52	3-pos. U. Q.	T. D. B.	
Nor. Pac.	2	Mandan, N. D.		Single	3	10-volt U. Q.	Track and line.	
O. S. L.	39.7	Dayton, Idaho	McCammon	Single	90	G. R. S. Model 2A.		
P. & R.	36.4	Dayton, Idaho	Newberry Jet.	Double	56	A. C., motor, U. Q.	Normal danger.	
R. F. & P.	95.00			Double				
Southern.	9.79	Whittle, Va.	Dry Fork	Double	10	A. C., U. Q., N. C.	Polarized.	
	3.00	Tye River, Va.	New Glasgow	Double	4	A. C., U. Q., N. C.	Polarized.	
	19.00	Arrowhead, Va.	Elma.	Double	28	A. C., U. Q., N. C.	Polarized.	
	138.40	Spartanburg, S. C.	Gainesville.	Double	170	A. C., U. Q., N. C.	Polarized.	
So. Pac.	7.5	Oswego, Ore.	Portland.	Single	17	3-pos. light.	Line.	A. C. track circuits.
U. P.	63	Wilson, Kans.	Ellis.	Single	146	G. R. S. Model 2-A, single and double arm L. Q. 2-pos.	Overlaps.	
Wabash.	1.1	Montpelier, Ohio.		Single	1	Bottom post, one-arm, L. Q. 3-pos.	Direct track control	To protect switches in west end of yards.

CONTEMPLATED FOR COMING YEAR

A. G. S.	20.0	Ft. Payne, Ala.	Flanders, Ala.	Double	33	Semaphore U. Q. 3-pos.	D. C.	
A. T. & S. F.	39.0	Gaineyville, Tex.	Ardmore, Okla.	Single	54	3-pos. U. Q.	Neutral track and line.	D. C. Primary Battery.
	3.7	Bartlesville, Okla.	Dewey.	Single	8	3-pos. U. Q.		
	4.4	La Junta, Colo.	Casa.	Double	8	3-pos. U. Q.	25 Cycle, A. C. track circuits.	One track only. Protection for siding.
A. E. & C.	1.5	Albuquerque, N. M.	Abajo.	Double	5	3-pos. U. Q.		
	0.7	Salt Creek, Ill.	Villa Park.	Double	1	Model 13, U. S. & S., 2-pos. light.		
B. & O.	53.0	New Castle Jet., Pa.	Ravenna, Ohio.	Double	157	A. C.		
	17.9	Ravenna, Ohio.	Akron Jet.	Double		A. C.		
	48.9	Sterling, Ohio.	Chicago Jet.	Double		D. C.		
Boston Elevated.	1.53	South Station.	Andrews Square.	Double	16	Normal clear, light, 3-indication type.	Double rail, A. C.	In Dorchester Tunnel.
C. & O.	1.0	Liberty St., Cincinnati, Ohio.	Brighton.	Single	5		D. C. track, A. C. line.	5 signals "tonnage" arm.
C. B. & Q.	13.0	Silver Grove, Ky.	Cincinnati, Ohio.	Double	36	3-pos. Style "B".	D. C. line.	
	117.0	Galesburg, Ill.	Ottumwa, Ia.	Double	207 1-ar 48 2-arm		Relayed track.	
	81.0	Prairie du Chien, Wis.	East Winona.	Double	148 1-ar 28 2-arm		Relayed track.	
	9.0	St. Joseph, Mo.	Amazonia.	Double	14 1-arm 10 2-arm		Relayed track.	
	29.0	Lincoln, Neb.	Dorchester.	Single	48 1-arm 10 2-arm		Line control.	
C. M. & St. P.	15.1	Double Trk. Sw. Minn.	Appleton.	Double	18	Normal clear, motor.	D. C., 3-pos.	
	12.6	Ortonville, Minn.	Milbank, S. D.	Double	14	Normal clear, motor.	D. C., 3-pos.	
C. N. O. & T. P.	6.0	Ludlow, Ky.	Erlanger.	Double	12	3-pos. U. Q.	A. C.	
	3.0	Boyce, Tenn.	Chattanooga.	Double	8	3-pos. U. Q.		
		Science Hill, Ky.	U. S. Junction.	Double	28	A. C.		
Cumb. Valley.	6.0	Newville, Pa.	Oakville.	Double	15		Wireless control.	
E. P. & S. W.	5.5	El Paso, Tex.	Material Yard.	Single	10	3-pos. U. Q.		
	14.5	Tower G., El Paso, Tex.	Mastadoy.	Single	27	3-pos. U. Q.		
	30	Moore Spur, Tex.	Pratt.	Single	40	3-pos. U. Q.		
	3.8	Junction, Tex.	Forrest.	Single	6	3-pos. U. Q.		
Erie.	25.3	Lewis Springs, Tex.	Osborne.	Single	52	3-pos. U. Q.		
	28.7	Salamanca, N. Y.	Cuba Jet.	Double				
	102.5	Salamanca, N. Y.	Meadville, Pa.	21.7 Single 80.8 Double		Union Style "S," U. Q.	Polarized track circuit.	
H. & T. C.	35.0	Lomax, Ind.	Griffith.	Double	12	U. S. & S. Style "B"		
Int. Rap. Trans.	9.51	Eureka, Tex.	Stella Jet.	Double	12			
	5.1	Lex. Ave. Line.		4 tracks	104	Elec. light. A. C. track circuits.		Two tracks blocked throughout. A. C. operation.
	4.0	7th Ave. Line.		4 tracks	122			
L. & N. E.	3	Bath Jet., Pa.	Northampton Jet.	Single	7			
L. V.	1.51	Hazelton Shaft, Pa.	Hazelton.	Double	5	N. D. 3-pos. U. Q.	Line	
	20.63	Laurel Jet., Pa.	Mt. Carmel.	Double	37	N. D. 3-pos. U. Q.	Line	
	5.21	Park Place, Pa.	Barry Jet.	Single	15	N. C. 3-pos. U. Q.	Line	
	16.08	Rochester, N. Y.	Honeye Jet.	Single	39	N. C. 3-pos. U. Q.	Line	
L. A. & S. L.	117.0	Lynn, Utah.	Salt Lake City.	Single	190	3-pos. U. Q.	A. P. B.	
Mahoning & Shenango.	15	Youngstown, Ohio.	Sharon, Pa.	Single 12 Double 3			Color light.	
Maine Cent.	8.0	Waterville, Me.	Clinton.	Double	12	Style "B" U. S. & S.		
N. Y. Mun. Rys.	14.56	Between Manhattan and Brooklyn	Greenbush.	2 and 4 Double	173 49	A. C. color-light Semaphores 3-pos. L. H. U. Q.	A. C. line control.	
N. Y. N. H. & H.	20.0	Braintree, Mass.		4 tracks				
N. & W.	107.7	E. Radford, Va.	Bristol.	Single	204	3-pos. U. Q.	T. D. B.	
	5.0	Tug, W. Va.	Wilcoe.	Single	8	3-pos. U. Q.	T. D. B.	
No. Pac.	216	Mandan, N. D.	Glendive, Mont.	Single	362	10-volt U. Q. Mod. 2A.	Track and line.	
N. W. Pac.	1.74	Almonte, Cal.	Mill Valley.	Single	2	A. C.		
O. S. L.	52.0	Pocatello, Idaho.	Idaho Falls.	Single	125	G. R. S. Model 2A.		
Pac. Elec.	3	Los Angeles, Cal.	Tropico.	Double	7	3-pos. light.	A. C.	Special crossover circuits.
So. Pac.	2.3	Deming Yard, Ore.		Single	16	Style "B" U. S. & S., D. C.		
U. P.	34.8	Pine Bluffs, Neb.	Archer, Wyo.	Double	90 signal blades 29 signal blades 138 sig. blades	G. R. S. Model 2A, single and double arm, 2-pos., L. Q.	2-arm home and distant signals without overlaps	
Wabash.	1.0	Decatur, Ill.		Double	1	Bottom post, 1-arm, L. Q.	Neutral line control	
	13.5	LaFayette, Ind.	Delphi.	Single	14	50 signals will be bottom post, 1-arm U. Q. 3-pos.	Polarized overlap.	
	15.4	Delphi, Ind.	Logansport.	Single	23			
	10.1	Logansport, Ind.	Peru.	Single	15			

NON-AUTOMATIC BLOCK SIGNALS

COMPLETED DURING PAST YEAR

Road	Mileage of Line	Between	And	Single or Double Track	Manual, Controlled-Manual or Staff	Remarks
A. E. & C.	.15	Chicago Ave.	Industrial Siding, East	Double	Staff	One track only. Controlled from a security switch stand.
C. P. R. (East)	9.1	Boundary, Man.	Ditchfield, Que.	Single	Staff	
	8.5	Brownville, Me.	Banard	Single	Staff	
	3.1	Lennoxville, Que.	Sherbrooke	Single	Staff	
	6.8	Sherbrooke, Que.	Rock Forest	Single	Staff	
	4.4	Megantic, Que.	Glen River	Single	Staff	
Long Island	131			Single	Controlled Manual	
Mahoning & Shenango	1	Center & Poland Ave.	Stop 6, Poland Ave.	Single	Manual	Hand throw lights.
N. C. & St. L.	10.5	Cowan	Sherwood	Single	Controlled Manual	
N. Y. N. H. & H.	14.1	Farmington, Conn.	New Hartford	Single	Morris Tel. Block	
	10.3	Westfield, Mass.	Holyoke	Single	Morris Tel. Block	
	9.0	South Deerfield, Mass.	Turners Falls	Single	Morris Tel. Block	
	6.9	Williamsburg Jct., Mass.	Williamsburg	Single	Morris Tel. Block	
	3.6	Amston, Conn.	Colchester	Single	Morris Tel. Block	
P. & R.	1.80	Elsmere Jct., Del.	Wilmington	Single	Manual	
	10.56	Eastwicks, Pa.	Chester	Single	Manual	
St. L. & S. F.	1.6	Bridge Jct., Ark.	Memphis Toll House	Single	Staff	
T. & P.	245.7	Texarkana, Tex.	Ft. Worth	Single	Manual	
	71.6	Ft. Worth, Tex.	Whitesboro	Single	Manual	
	80.5	Westwego, La.	Addis	Single	Manual	
W. M.	.5	Hillen Station, Baltimore, Md.	Hillen Jct.	Single	Manual Block	
	15.9	Walbrook, Md.	Emory Grove	Double	Manual Block	

UNDER CONSTRUCTION

A. T. & S. F.	44	Hicks, Cal.	Summit	Single	Manual	3-pos. U. Q. sigs.
Erie	11.9	Goshen, N. Y.	Pine Island	Single	Manual	
	10.2	Goshen, N. Y.	Montgomery	Single	Manual	
	42.1	Bloesburg, Pa.	State Line	Single	Manual	
	11.7	Carrollton, Pa.	Bradford	Single	Manual	
	46.0	Salamanca, N. Y.	Dunkirk	Single	Manual	
G. T.	5.5	Valparaiso, Ind.	Sedley	Single	Saxby & Farmer Staff	Special pusher attachment included.
T. & P.	118.5	Addis, La.	Boyce	Single	Manual	

CONTEMPLATED FOR COMING YEAR

A. E. & C.	.15	Church Road	Industrial Siding, East	Single	Staff	Controlled from a security switch stand.
N. Y. N. H. & H.	9.4	Berlin, Conn.	Middletown	Single	Staff	

INTERLOCKING PLANTS

COMPLETED DURING PAST YEAR

Road	Location	Layout—Crossing, Junction, Terminal, etc.	Number of Levers		Type—Mechanical, Electrical, etc.	Special Features
			Frame	Working		
A. G. S.	Chattanooga, Tenn.	Junction	24	16	Electrical	A. C. track circuits advance and route locking.
	M. P. 288.9	Double Tk. Jct.	8	8	Mechanical	
A. T. & S. F.	Los Angeles Cal.	Crossing	80	66	Electric	
	Sears, Colo.	Station	8	8	Mechanical	
	Ileta, N. M.	Junction	16	10	Mechanical	
A. C. L.	Waycross, Ga.	2 crossings	20	19	Mechanical	
	Bowden, N. C.	Crossing	6	6	Mechanical	Door locked.
	Cyrene, Ga.	Crossing	6	6	Mechanical	Door locked.
B. & M.	West Lynn, Mass.	Junction	28	{ 21 Mech. 14 Elect. 15 Mech. 7 Elect.	Elec.-Mech.	A. C. Sigs.
	Newburyport, Mass.	Yard	20		Elec.-Mech.	A. C. Sigs.
C. P. R. (East)	St. John, N. B.	Crossing	4	4	Mechanical	Automatic signal territory.
	Victoria Mills, N. B.	Crossing	4	3	Mechanical	Automatic signal territory.
	Chatham, Ont.	Crossing	20	16	Mechanical	Automatic signal territory.
	Speedwell, Ont.	Crossing	16	14	Mechanical	Automatic signal territory.
	Sudbury, Ont.	Crossing	8	8	Mechanical	Automatic signal territory.
C. & A.	Pontiac, Ill.	Crossing	80	60	Electrical	
C. I. & L.	Haskells, Ind.	G. T. crossing	24	21	Mechanical	
C. N.	Frederick St., Ft. William, Ont.	Elec. Ry. crossing	6	5	Half interlocking.	60 cycle 110-volts, A. C. power.
	Yorkton, Sask.	Crossing, G. T. P.	16	13	Mechanical	One lever for time lock.
	Yorkton, Sask.	Crossing, C. P. R.	16	13	Mechanical	One lever for time lock.
C. & N. W.	Deering, Ill.	Drawbridge	44	37	Electrical	
C. R. I. & P.	Rock Island, Ill.	Drawbridge	6	4	Special type	
	Thompson, Neb.	Crossing	16	12	Mechanical	Power distant signals.
C. C. C. & St. L.	Springfield, Ohio	Junction Cincinnati and Peoria Divisions.	32	24	Elec.-Mech.	
D. & H.	Schoharie Junction	Beginning of third track	8	8		
	Cherry Valley Junction	Junction of C. V. Branch	24	23	Mechanical	{ Route and section locking, high speed style "K" signals. Time locks on all mechanical signals.
D. L. & W.	Buffalo River, Buffalo, N. Y.	Drawbridge and junction with N. Y. C. & St. L.	31	26	Elec.-Pneu.	
	Bailey Ave., Buffalo, N. Y.	P. R. R. crossing	40	33	Elec.-Mech.	
	Mountain Station, N. J.	End of third track	16	14	S. & F. Mech.	(Temporary.)
	Liberty St., Binghamton, N. Y.	Crossing	16 added		G. R. S. Elec.	Detector circuits.
Detroit United Lines	Royal Oak, Mich.	Grand Trunk crossing	24	17	Mechanical	Elec. Dist. Sigs. and Route Locking
	Rochester, Mich.	Mich. Cent. crossing	32	20	Mechanical	Elec. Dist. Sigs. and Route Locking
G. H. & S. A.	San Antonio, Tex.	Crossing with I. & G. N.	16	16	Mechanical	Approach and detector locking.
G. T.	Richelieu River	Swing bridge	4	4	Mechanical	
H. & T. C.	Bellaire, Tex.	Crossing with S. A. & A. P.	21	13	Mechanical	Approach and detector locking.
	Oasis	Crossing with M. K. & T.	4 added	3 added	Mechanical	
Int. Rap. Trans.	Canal St.	3d Ave. Line	19	13	Elec.-Pneu.	
	129th St.	3d Ave. Line	31	25	Elec.-Pneu.	
K. C. Term.	Kansas City, Mo.	Rock Creek Junction	59	40	Elec.-Pneu.	

INTERLOCKING PLANTS
COMPLETED DURING PAST YEAR—Continued

Road	Location	Layout—Crossing Junction, Terminal, etc.	Number of Levers		Type—Mechanical, Electrical, etc.	Special Features
			Frame	Working		
L. & N.	Lexington, Ky.	Terminal	36	35	Mechanical	
	Binghamton, Tenn.	Elec. Ry. Crossing	16	14	Mechanical	
	Caborn, Ind.	Elec. Ry. Crossing	12	9	Mechanical	
L. V.	Port Reading Jct., Pa.	Crossing and Junction	36 Elec. 36 Mech.	24 Elec. 32 Mech.	Elec.-Mech.	Approach, route and detector locking
	Scott St., Buffalo.	Crossing	16	12	Electrical (A. C.)	Four electric crossing gates interlocked with signals.
M. C.	Rochester, Mich. (Main St.)	Crossing	32	20	Mechanical	Power home and distant signals on M. C.
Mo. Pac.	Nepesta, Colo.	Crossing	24	19	Mechanical	
N. C. & St. L.	Sherwood, Tenn.	End of double track	24	17	Union type "S-7" Elec.-Mech.	
	Rockledge, Tenn.	End of double track	12	10	Elec.-Mech.	
N. Y. C. (East)	Oak St., Nashville, Tenn.	Junction with L. & N.	36	31	Mechanical plant with electric and electro-pneumatic signals	All of these plants were remodeled, except Lewis St., Chattanooga, which was newly built.
	Lewis St., Chattanooga, Tenn.	Belt Line of Chattanooga crossing N. C. & St. L.	31	17	Union Type "F" Electric	
	Utica, N. Y.	Station terminal	130	142	Electrical	Approach and route locking.
	Corning, N. Y.	Junction	8	7	Elec.-Mech.	
	Poughkeepsie, N. Y.	Universal layout, four tracks	56	50	Elec.-Mech.	Approach and route locking.
N. Y. C. Elec. Zone	Fonda, N. Y.	Crossovers	41	38	Elec.-Mech.	
	Mount Vernon, N. Y.	Yard	36	32	Electrical	Approach locking.
N. Y. Mun. Rys.	Broadway and Lexington Ave.	Junction	20	12	Electrical	
	Gold St., 4th Ave. subway	Junction	32	23	Electrical	
	Pacific St., 4th Ave. subway	Crossovers	32	19	Electrical	
	88th St., 4th Ave. subway	Terminal	12	7	Electrical	
	38th St. and 5th Ave.	Junction	12	11	Electrical	
	38th St. and 8th Ave.	Junction	112	61	Electrical	
	Bay Parkway	Crossovers	24	16	Electrical	
	Green's Farms, Conn.	Main Line Crossovers	Mech. 16 Elec. 32	12 23	Elec.-Mech.	Approach and route locking.
	Westport, Conn.	Main Line Crossovers	Mech. 16 Elec. 12	15 12	Elec.-Mech.	Approach and route locking.
	N. & W.	City Point Jct., Va.	Junction with Branch Line	16 Mech. 16 Elec.	14 Mech. 6 Elec.	Elec.-Mech.
Burkeville, Va.		Junction two S. T. Lines	19	15	Type "F.A.C." Electrical	
Pamplin, Va.		Junction two S. T. Lines	43	33	Type "F.A.C." Electrical	
Jack, Va.		Junction two S. T. Lines	24 Mech. 24 Elec.	22 Mech. 14 Elec.	Elec.-Mech.	
No. Pac.	Iaeger, W. Va.	Junction Branch Line	18 Mech. 18 Elec.	16 Mech. 5 Elec.	Elec.-Mech.	
	Berwind Jct., Duluth, Minn.	Junction with Soo Line and D. W. & P.	40	34	Mechanical	
Pac. Elec.	Riverside, Cal.	Crossing, L. A. & S. L.	24	14	G. R. S. Electric	
P. R. R.	Orange, Cal.	Crossing, A. T. & S. F.	16	8	G. R. S. Electric	
	Muncy, Pa.		12		Elec.-Mech.	
	Nisbet, Pa.		12		Elec.-Mech.	
	Cadwalader, N. J.		12		Mechanical	
	Climax, Pa.		2		Mechanical	
	Keating, Pa.		24		Elec.-Mech.	
	Assowoman Canal Draw	Drawbridge	4		Elec.-Mech.	
	Wawa, Pa.		20		Mechanical	
	North Eddystone, Pa.		24		Elec.-Mech.	
	Wehrum, Pa.		2		Mechanical	
Pub. Serv. of N.J.	Newark, N. J.	Terminal (Three Towers)	6 4	6 4	Elec.-Pneu.	Automatic control of signals governing converging movements.
	South Eastern Jct., Mo.	Junction	13	13	Elec.-Mech.	
St. L. & S. F.	Nichols, Mo.	Crossing Nor. & East. Div.	16	20	Elec.-Mech.	
	West Tulsa, Okla.	Two ends double track over gauntlet track	16	20	Elec.-Mech.	
			5	4	Electrical	Low voltage switch movements.
San Francisco-Oakland Term.	Oakland, Cal.	Pier terminal	49	48	Elec.-Mech.	Plant equipped throughout with automatic stops.
Southern So. Pac.	Cary, N. C.	Crossing	36	25	Mechanical	
	Snodgrass Slough	Drawbridge	4	4	Mechanical	
U. P.	Denver, Colo.	Terminal	120	93	Electrical	Single rail. A. C. track circuits.
	North Junction	Terminal	103	82	Elec.-Pneu.	
Union Term. of Dallas, Tex.	South Junction	Terminal	71	53	Elec.-Pneu.	
			24	20	Mechanical	
Wabash	Eseex, Ill.	C. C. C. & St. L. Crossing	24	20	Mechanical	
			8	6	Mechanical	
W. M.	Kirk, Md.	Junction with P. R. R.	24	23	Mechanical	
	Jerome, W. Va.	Lap Sidinz.	8	6	Mechanical	

UNDER CONSTRUCTION

A. G. S.	Tuscaloosa, Ala.	Crossing	32	16	Elec.-Mech.	
	Fresno, Cal. (Tower 1)	Crossing	48	38	Mechanical	
	Dallas, Tex. (M. K. & T.)	Crossing	92	82	Electric	Reconstructed from 24-lever plant.
B. & O.	Hahn, N. M.	Station	8	8	Mechanical	
	Haltheorpe, Md.	Junction	32 Elec. 32 Mech.	49	Elec.-Mech.	
B. & A.	Mountain Lake Park, Md.	Helper Station	24 Elec.	37	Elec.-Mech.	
	Pittsfield, Mass.	Station and Yard	56	45	Electrical	Approach and route locking.
B. & M.	North Cambridge, Mass.	Junction	28	22 Mech. 7 Elec.	Elec.-Mech.	
	Hurricane, W. Va.	Double crossover	32	16 Mech. 10 Elec.	Elec.-Mech.	Approach, route, time and detector locking.
C. & O.	Milton, W. Va.	Double crossovers	16	2 Mech. 1 Elec.	Elec.-Mech.	Additions made account interlocking spur track.
	Barboursville, W. Va.	Double crossovers and junction	36	33	G. R. S. Electrical	
	Kellogg, W. Va.	Double crossovers	24	2 Mech. 10 Elec.	Elec.-Mech. "SS" Garber S. & L. M. with electric locks	Approach, time, route and detector locking. Signals arranged for running in both directions.
C. & A.	Alderson, W. Va.	Passing tracks and crossover	12	10	Mechanical	
	Corwith, Ill.	A. T. & S. F. Crossing	104	86	G. R. S. Electrical	
C. & N. W.	Washington St., Milwaukee, Wis.	Junction and Crossing	128	99	Electrical	A. C. lighting and A. C. illuminated diagram.
	Bay View (Milwaukee, Wis.)	Crossing C. & N. W.	8 Added		Mechanical	
C. M. & St. P.	Kinnickinnic (Milwaukee, Wis.)	Draw Bridge	12 Added			
	West End Harrisburg Yard, Pa.	Terminal	15	14	Type "F" Elec	
Detroit United Lines	Davison Road, Detroit	Grand Trunk Crossing	28	24	Mechanical	
	Milwaukee Ave., Detroit	Grand Trunk Crossing	12	11	Mechanical	Half interlocking.
	Van Dyke Ave., Detroit	Grand Trunk Crossing	20	15	Mechanical	Electrical route locking.

INTERLOCKING PLANTS
UNDER CONSTRUCTION—Continued

Road	Location	Layout—Crossing Junction, Terminal, etc.	Number of Levers		Type—Mechanical, Electrical, etc.	Special Features
			Frame	Working		
G. T.	Highland Park, Detroit, Mich.	D. U. R. Crossing	24	24	Mechanical	Semi-automatic home and distant signals on G. T. together with route and detector locking.
	Mount Olivet, Detroit, Mich.	D. U. R. Crossing	20	15	Mechanical	
	Chatham, Ont.	C. P. R. Crossing and Junction	20	16	Mechanical	
I. C.	Pullman, Ill.	Junction I. C., M. C. and C. L. S. & S. B.	67	53	Electrical	
	East Jct., Freeport, Ill.	Junction I. C. main and branch lines	32	27	Mechanical	
	Rockport, Ky.	Green River Draw Bridge	16	11	Electrical	
Ist. Rap. Trans.	Rector St., 9th Ave. Line		39	31	Elec.-Pneu	
	Christopher St., 9th Ave. Line		11	9	Elec.-Pneu	
	56th St., 9th Ave. Line		19	15	Elec.-Pneu	
	128th St., 9th Ave. Line		31	22	Elec.-Pneu	
	179th St., 3rd Ave. Line		43	34	Elec.-Pneu	
	125th St., 2nd Ave. Line		55	49	Elec.-Pneu	
	149th St., Jerome Ave. Line		15	8	Elec.-Pneu	
	167th St., Jerome Ave. Line		23	15	Elec.-Pneu	
	Hunter's Point Ave., Steinway Tunnel Line		6	3	Elec.-Pneu	
	West End Queensboro Bridge Plaza		15	9	Elec.-Pneu	
	East End Queensboro Bridge Plaza		11	6	Elec.-Pneu	
	Ditmars Ave., Astoria Line		11	8	Elec.-Pneu	
	Flak Ave., Corona Line		15	11	Elec.-Pneu	
	West Farms Connection, White Plains Road Line		51	43	Elec.-Pneu	
	Gun Hill Road, White Plains Road Line		19	12	Elec.-Pneu	
L. V.	Chicago St., Buffalo	Crossing, junction and terminal	104	90	Electrical	Approach, route and detector locking. A. C. track circuits.
Maine Cent.	Waterville, Me.	Junction	24 Mech. 24 Elec.	18 Mech. 12 Elec.	Elec.-Mech.	
M. C.	St. Thomas, Ont.	Crossing	10 Added		Mechanical	Power home and distant signals on M. C.
M. K. & T.	Canfield, Ont.	Crossing	4 Added		Mechanical	
	Ft. Scott, Kan.	Crossing Mo. Pac.	16	15	Mechanical	
	Chetopa, Kan.	Crossing Mo. Pac.	16	15	Mechanical	
	Selma, Kan.	Crossing Mo. Pac.	12	10	Mechanical	
	Kincaid, Kan.	Crossing Mo. Pac.	12	10	Mechanical	
	Moran, Kan.	Crossing Mo. Pac.	24	19	Mechanical	
	Paola, Kan.	Crossing Mo. Pac.	24	20	Mechanical	
	Moody, Kan.	Crossing Mo. Pac.	24	17	Mechanical	
	South Coffeyville, Okla.	Crossing Mo. Pac.	24	16	Mechanical	
	Wagoner, Okla.	Crossing Mo. Pac.	24	41	Mechanical	
	Owego, Kan.	Crossing St. L. & S. F.	20	18	Mechanical	
	Vinita, Okla.	Crossing St. L. & S. F.	24 Mech. 6 Elec.	22 Mech. 5 Elec.	Elec.-Mech.	
	Durant, Okla.	Crossing M. O. & G.	16	12	Mechanical	
Mo. Pac.	Sedalia, Mo.	Crossing	48	39	Mechanical	
	Council Grove, Kan.	Crossing	24	17	Mechanical	
	Harrisonville, Mo.	Crossing	12	10	Mechanical	
N. C. & St. L.	Bridgeport Draw, Ala.	Tower on Draw Bridge	12	10	Mechanical (Johnson Type)	
	Bridgeport Yard, Ala.	End of Double Track and controlling movements over Draw	24	15	Elec.-Mech., Union Type "S.7"	Simply controls Draw and locks signals in danger position when Draw is to be opened.
N. Y. C. (East)	Carman, N. Y.	Junction and crossovers	68	62	Elec.-Mech.	Approach and route locking
	Hoffman, N. Y.	Junction and crossovers	72	69	Elec.-Mech.	Approach and route locking
	Herkimer, N. Y.	Crossovers	48	47	Elec.-Mech.	
	Rochester, N. Y. (Jay Street)	Junction and crossovers	24	24	Elec.-Mech.	
N. Y. N. H. & H.	Stamford, Conn.	Main Line Crossover	53	50	Electrical A. C. Model 14, Type "F"	All switches, signals and track circuits are operated by A. C.
N. & W.	Low Grade Tunnel, Va.	Single Track Tunnel	32	6	Electrical	
	Christiansburg, Va.	Middle Pass. Siding	16 Mech. 16 Elec.	9 Mech. 16 Elec.	Elec.-Mech.	
No. Pac.	Clear Lake, Wash.	Crossing	12	10	Mechanical	
	Between Duluth, Minn., and Superior, Wis.	Grassy Point Draw Bridge	4 Added		Electrical, Unit Type, G. R. S.	Single track over draw increased to double and junction with Soo Line brought into interlocking.
O. W. R. & N. Pac. Elec.	Aberdeen, Wash.	Draw Bridge	12	11	Electrical	
	La Manda Park, Cal.	A. T. & S. F. Crossing	24	16	G. R. S. Electric	A. C. approach and detector locking on P. E. D. C. on A. T. & S. F.
P. L. W.	Sixth and Main Sts., Los Angeles, Cal.	Terminal	24	18	Elec.-Pneu	
P. R. R.	Lima, Ohio	Crossing of C. H. & D. and L. E. & W.				
	Heaton, Pa.		20		Mechanical	Pos. Light Dist. Signals.
	Broad Creek, Pa.		12		Elec.-Mech.	Pos. Light Signals.
	Seaford, Del.		8		Elec.-Mech.	Pos. Light Signals.
	Driftwood, Pa.		16		Elec.-Mech.	
	Hulings, Pa.		12		Elec.-Mech.	
	Westport, Pa.		12		Elec.-Mech.	
	Frenchtown, Md.		16		Elec.-Mech.	
	Tyrone, Pa.		24		Elec.-Mech.	
	Clover Creek, Pa.		16		Elec.-Mech.	
	Port Allegany, Pa.		4		Mechanical	
	Childs, Pa.		4		Mechanical	
	Keating Summit, Pa.		4		Mechanical	
	Rynd Farm, Pa.		4		Mechanical	
	Skinner, Pa.		4		Mechanical	
	Turtle Point, Pa.		12		Mechanical	
	Bullis Mills, Pa.		12		Mechanical	
	Seneca, Pa.		12		Mechanical	
	Kenilworth, Pa.		16		Mechanical	
	Parker Ford, Pa.		16		Mechanical	
	Durham, Pa.		8		Mechanical	
	Frenchtown, Pa.		8		Mechanical	
	Milford, Pa.		8		Mechanical	
	Washington Crossing, N. J.		8		Mechanical	
	22nd St., Phila., Pa.		83	70	Elec.-Pneu	
	Woodlands, Pa.		32		Elec.-Mech.	
	Chestnut Hill, Pa.		8		Mechanical	Pos. Light Signals.
	Watsonstown, Pa.		16		Elec.-Mech.	
	Montandon, Pa.		24		Elec.-Mech.	
	Fisher's Ferry, Pa.		12		Elec.-Mech.	
	Hyner, Pa.		12		Elec.-Mech.	
	Halifax, Pa.		12		Elec.-Mech.	
	Mahantango, Pa.		12		Elec.-Mech.	
	Clarks Ferry, Pa.		12		Elec.-Mech.	
	Glen Union, Pa.		12		Elec.-Mech.	

INTERLOCKING PLANTS
UNDER CONSTRUCTION—Continued

Road	Location	Layout—Crossing, Junction, Terminal, etc.	Number of Levers		Type—Mechanical, Electrical, etc.	Special Features
			Frame	Working		
Southern	Danville, Va.	Crossing	40	34	Mechanical	
	Charlottesville, Va.	Crossing	72	41	Electrical	
	Ocmulgee River, Ga. (2 plants)	Drawbridges	3 each	3 each		
So. Pac.	Raleigh, N. C.	Crossing	24 Added		Mechanical	
	Cooe Bay, North Bend, Ore.	Drawbridge	8	7	Mechanical	Low voltage movements on derails. D. C. signal circuits, route and approach locking. Single rail A. C. track circuits.
	Suislaw River, Ore.	Drawbridge	8	6	Mechanical	
Umpqua River, Ore.	Drawbridge	8	6	Mechanical		
U. P.	Denver, Colo.	Terminal	128	106	Electrical	

CONTEMPLATED FOR COMING YEAR

A. T. & S. F.	Galveston, Tex.	Causeway—three plants			Elec.-Pneu		
	Casa, Colo.	Station	8	8	Mechanical		
	Abajo, N. M.	Station	8	5	Mechanical		
A. C. L.	Fayetteville, N. C.	Crossing N. C. A. & Y.	20	17	Mechanical		
	Big Ogeechee, Ga.	Draw Bridge	8	6	Mechanical		
	McGirts Creek, Fla.	Draw Bridge	5	5	Mechanical		
	Black Creek, N. C.	Draw Bridge	5	5	Mechanical		
	Rice Creek, Ala.	Draw Bridge	5	5	Mechanical		
	Buffalo Bluff, Fla.	Draw Bridge	5	5	Mechanical		
	Near Monroe, Fla.	Draw Bridge	5	5	Mechanical		
C. N.	Moose Jaw, Sask.	Elec. Ry. Crossing	2	2	Half-Interlocking	60 cycle, 110 volt A. C. power.	
C. & O.	Silver Grove, Ky.	Yard tracks	16	6 Elec. 7 Mech. 7 Elec. 18 Mech.	Elec.-Mech		
	Moss Run, Va.	Middle siding and crossovers	40		Elec.-Mech		
	Fort Spring, Va.	Gauntlet, through tunnel	17	17	Electric	Approach, route, time and detector locking.	
	Prince, W. Va.	Single track through tunnel	24	18	Electric		
		Kenova, W. Va.	Yard tracks and double crossovers	40	36	Elec.-Mech	
		Big Sandy Jct., Ky.	Junction and double crossovers	32	24	Elec.-Mech	
		Limeville, Ky.	Junction and crossovers	24	16	Elec.-Mech	
	C. M. & St. P.	Deming, Wash.	Crossing of Bellingham & Nor. and N. P.	16	12	Mechanical	Normal indication and route locking
	C. R. I. & P.	Peoria, Ill.	Crossing	16	15	Mechanical	2 power distant signals.
	C. C. C. & St. L.	New London, Ohio	Crossing N. O. Tract	56	45	Elec.-Mech	
Cleveland, Ohio		Junction Erie	56	45	Electrical		
D. L. & W.	Cleveland, Ohio	Bridge 2	40	40	Elec.-Mech		
	Buffalo, N. Y.	Passenger Terminal	31	24	Elec.-Pneu		
Detroit United Lines	Orange, N. J.		31	21	Elec.-Pneu		
	Jos. Campau Ave., Detroit	M. C. and G. T. Crossing	52	46	Mechanical	Elec. route locking.	
	West Warren Ave., Detroit	Pere Marquette Crossing	24	18	Mechanical	Fixed dist. signals.	
G. H. & S. A.	Sibley, Mich.	Crossing	8		Mechanical		
	Near Houston (Stella Wye)	Junction with H. & T. C.		Probably 21 levers	Electrical	Approach and detector locking. No detector bars.	
G. T.	San Antonio, Tex.	Crossing with S. A. & A. P.		4 Added	Mechanical		
	San Antonio, Tex.	Crossing with I. & G. N.	4 Added	3 Added	Mechanical	Power distant signals on G. T.	
	Woodstock, Ont.	C. P. R. Crossing	24	20	Mechanical		
	Washington St., Battle Creek, Mich.	Mich. Cent. Crossing	8	7	Mechanical	Power distant signals on G. T.	
	Milwaukee Ave., Detroit, Mich.	D. U. R. Crossing	36	34	Mechanical		
	Hamilton, Ont.	Int. Harv. Co.'s Spur	8	6	Mechanical		
G. T. P.	Prince Albert, Sask.	Single track crossing with C. N.	20	13	Mechanical		
H. & T. C.	Houston, Tex. (Bonners Point)						
	Eureka, Tex.	Crossing with M. K. & T.	40	28	Electrical	Partly detector locking.	
	Dallas Cent. Jct., Tex.	Crossing with M. K. & T.	4 Added	3 Added	Electrical		
	Waco, Tex.	Crossing with G. C. & S. F.		8 Added	Electrical		
		Crossing with M. K. & T. and St. L. S. W.		3 Added	Electrical		
I. T. S.	Litchfield, Ill.	Crossing	8 Added		Mechanical		
Int. Rap. Trans.	104th St., 9th Ave. Line		15	9			
	127th St., 9th Ave. Line		15	9			
	34th St., 3rd Ave. Line		15	9			
	98th St., 3rd Ave. Line		39	35			
	120th St., 3rd Ave. Line		15	10			
	138th St., 3rd Ave. Line		11	6	Elec.-Pneu		
	143rd St., 3rd Ave. Line		15	12			
	150th St., 3rd Ave. Line		17	9			
	Fordham Road, 3rd Ave. Line		27	24			
	11th St., 2nd Ave. Line		11	8			
	51st St., 2nd Ave. Line		19	12			
	59th St., 2nd Ave. Line		4	3	Mechanical		
	Wall St., 7th Ave. Line		7	5			
	Rector St., 7th Ave. Line		7	3			
	Chambers St., 7th Ave. Line		23	16			
	14th St., 7th Ave. Line		15	9			
	Penna. Sta., 7th Ave. Line		19	16			
	South of Times Sq. Sta., 7th Ave. Line		19	16			
	South of Grand Central Sta., Lexington Ave. Line		15	10			
	North of Grand Central Sta., Lexington Ave. Line		15	12			
	59th St., Lexington Ave. Line		11	6			
	Upper level 86th St., Lexington Ave. Line		7	3			
	Lower level 86th St., Lexington Ave. Line		7	3	Elec.-Pneu		
	110th St., Lexington Ave. Line		19	13			
	Lower level 125th St., Lexington Ave. Line		11	10			
	Upper level 125th St., Lexington Ave. Line		27	23			
	South of Mott Ave. Sta., Jerome Ave. Line		19	15			
	North of Mott Ave. Sta., Jerome Ave. Line		7	5			
	South of Mott Ave. Sta. Sub., Jerome Ave. Line		6	4			
	Fordham Road, Jerome Ave. Line		19	11			

INTERLOCKING PLANTS
CONTEMPLATED FOR COMING YEAR—Continued

Road	Location	Layout—Crossing, Junction, Terminal, etc.	Number of Levers		Type—Mechanical, Electrical, etc.	Special Features
			Frame	Working		
Int. Rap. Trans... (Continued)	Woodlawn, Jerome Ave. Line.....		11	7		
	180th St., White Plains Road Line.....		51	44		
	Neried Ave., White Plains Road Line.....		39	32	Elec.-Pneu.....	
	Beebe Ave., Astoria Line.....		15	12		
	Rawson St., Corona Line.....		15	12		
La. Ry. & Nav....	Alburtis Ave., Corona Line.....		11	8		
	Frellson, La.....		40	33	Elec.....	
L. & N.....	Christiansburg, Ky.....	Junction.....	24	18	Elec.-Mech.....	
L. & N. E.....	Benders, Pa.....	Junction.....	12	8	Mechanical.....	
	Stockertown, Pa.....	Crossing.....	4	4	Mechanical.....	Power distant and approach locking.
L. V.....	Bath, Pa.....	Crossing.....	4	4	Mechanical.....	
	Park Place, Pa.....	Junction.....	12	10	Mechanical.....	Approach, route and detector locking.
Maine Cent.....	Barry Junction, Pa.....	Junction.....	8	8	Mechanical.....	
	Waterville, Me.....	Terminal.....	16 Mech. 16 Elec.	14 Mech. 4 Elec.	Elec.-Mech.....	
M. K. & T.....	Fairfield, Me.....	Junction.....	24 Mech. 24 Elec.	23 Mech. 7 Elec.	Elec.-Mech.....	
	Clinton, Mo.....	Crossing K. C. C. & S.....	24	18	Mechanical.....	
	Chanute, Kan.....	Crossing A. T. & S. F.....	20	16	Mechanical.....	
	Ada, Okla.....	Crossing St. L. & S. F.....	24	19	Mechanical.....	Electric dist. locking and power dist. signals.
	Parsons, Kan.....	Crossing St. L. & S. F.....	32	29	Mechanical.....	
N. C. & St. L.....	Council Grove, Kan.....	Crossing Mo. Pac.....	20		Mechanical.....	
	Crowder, Okla.....	Crossing Ft. S. & W.....	16	15	Mechanical.....	
N. Y. Mun. Rys...	Wauhatchie, Tenn.....	A. G. S. connection.....	56	29	Electrical.....	
	Nashville, Tenn.: Eleventh Ave.....	Terminal.....	35	21	Elec.-Pneu.....	
	N. C. & St. L. Shops.....	Terminal.....	35	26	Elec.-Pneu.....	
	Bostwick Street.....	Terminal.....	19	13	Elec.-Pneu.....	
	Church Street.....	Terminal.....	63	51	Elec.-Pneu.....	
N. Y. N. H. & H.	Passenger Station.....	Terminal.....	63	49	Elec.-Pneu.....	
	18 new plants.....	Junctions, Terminals and Crossovers.....		579	15 Electrical, 2 Elec.-Pneu., 1 Mechanical.....	
Pac. Elec.....	Midway, Conn.....	Terminal.....	44	40	Mechanical.....	Fireproof brick tower.
	South Lyme, Conn.....	Main line crossovers.....	20	20	Mechanical.....	Fireproof brick tower.
	Rye, N. Y.....	Main line crossovers.....	16 Mech. 32 Elec.	12 Mech. 23 Elec.	Elec.-Mech.....	Fireproof brick tower.
	Greenwich.....	Main line crossovers.....	16 Mech. 32 Elec.	10 Mech. 21 Elec.	Elec.-Mech.....	Fireproof brick tower.
	Mamaroneck, N. Y.....	Main line crossovers.....	20 Mech. 20 Elec.	12 Mech. 15 Elec.	Elec.-Mech.....	
P. L. W.....	New Haven, Tower 75.....	Terminal.....	80	80	Mechanical.....	
	New Haven, Tower 78.....	Terminal.....	41	39	Electrical.....	
	Bungay St., N. Y.....	Terminal.....	23	23	Electrical.....	A. C. Track Circuits.
	Stanley, Mass.....	Main Line.....	8	8	Mechanical.....	Mechanical home signals changed to electric.
P. R. R.....	Los Nietos, Cal.....	Crossing with A. T. & S. F. and S. P.....	40	34	Electrical.....	
	Marion, Ind.....	Crossing C. C. C. & St. L. and T. St. L. & W.....				
P. & L. E.....	Dravosburg, Pa.....		16		Elec.-Mech.....	
	McKees Rocks, Pa.....		68	54	Electrical.....	
St. L. & S. F.....	Neville, Pa.....		104	90	Electrical.....	
	Muskogee, Okla.....	Crossing.....	36	33	Mechanical.....	
So. Pac.....	Fairland, Okla.....	Crossing.....	16	16	Mechanical.....	
	Durant, Okla.....	Crossing.....	48	46	Mechanical.....	
T. & N. O.....	Rock Island, Okla.....	Crossing.....	8	8	Mechanical.....	
	Potrero Tower, San Francisco, Cal.....	Yard Tower.....	23	18	Elec.-Pneu.....	
Virginian.....	Modesto, Cal.....	Crossing.....	12	8	Mechanical.....	
	Near Houston, Tex.....	Crossing with H. B. & T.....	4 Added	3 Added	Mechanical.....	
Wabash.....	Coleman Place, Va.....	Norf. So. Crossing.....	20	16	Mechanical.....	
	Alvordton, Ohio.....	Crossing with Cin. Nor.....	24	21	Mechanical.....	Route locking.

Thousands of cells of gravity battery have been replaced by caustic soda battery and all the manufacturers of this type have improved their product to meet the demand. One company has placed a high-voltage cell upon the market differing radically from previous types of caustic soda battery.

The manufacturers of highway crossing protection apparatus have made additional improvements in their product during the year, and it may be said that the manufacturers have kept well ahead of the demand for such appliances. With the exception of a few roads which did a considerable amount of work in highway crossing protection the tendency seems to be to hold back on the installation of such warning devices in spite of the recognized fact that the hazard at grade crossings is rapidly increasing. A considerable amount of uncertainty has been occasioned by the lack of standards among the various roads and the desire to agree on some form of protection which can be generally adopted. There is more hope of accomplishing results in this line at the present time than ever before as the American Railway Association, the National Association of Railroad Commissioners, and the various state commissions individually have taken up the question vigorously. The railroads are also co-operating freely with the public authorities in

these efforts. There is a need for legislation in the various states to define clearly where the responsibility of a railroad company begins and ends in highway crossing protection. The railroads cannot feel free to invest very heavily in warning devices until this responsibility is settled.

There has not been a great deal of visible progress in the development of automatic stops during the past year. The San Francisco-Oakland Terminal placed in service a section of automatic signals and terminal interlocking on its Oakland pier in which automatic stops were used throughout and excellent results under actual operating conditions are reported for the automatic train control installation which is being made on the New York Municipal Railways. The Chesapeake & Ohio is installing five miles of automatic stops of the American Train Control Company's system between Gordonsville, Va., and Lindsay, 32 locomotives being equipped. The other prominent installations which have been made are still in service, and in most of them important developments of minor details have been made.

PERSONNEL OF THE SIGNAL FIELD

The appointment of three new signal engineers has been noted in our personal mention column during the