

AMERICAN NATIONAL STANDARD

Graphic Symbols for Railroad Maps and Profiles

ANSI Y32.7 - 1972

(REVISION OF ANSI Y32.7-1957)

FOR CURRENT COMMITTEE PERSONNEL
PLEASE SEE ASME MANUAL AS-11

REAFFIRMED 1994

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SECRETARIAT

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

PUBLISHED BY

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

United Engineering Center

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New York, N. Y. 10017

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FOREWORD

(This foreword is not a part of American National Standard Graphic Symbols for Railroad Maps and Profiles Y32.7-1972)

This standard supersedes American National Standard Graphical Symbols for Use on Railroad Maps and Profiles, Y32.7-1957. It represents a compilation and correlation of graphic symbols used by the Engineering Division and the Communications and Signal Section of Association of American Railroads. Following approval by Subcommittee 7 and Standards Committee Y32, it was granted approval by the American National Standards Institute on August 8, 1972.

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AMERICAN NATIONAL STANDARD GRAPHIC SYMBOLS FOR RAILROAD MAPS AND PROFILES

GENERAL

SIMILAR OR IDENTICAL GRAPHIC SYMBOLS

It is required that when graphic symbols are used from this standard or another standard, that have a similar or identical shape or configuration, and are shown on the same drawing or set of drawings, steps shall be taken (such as: reference or caution notes, comparison charts, illustrating the conflicting graphic symbols together with proper identification, etc.) to avoid misinterpretation of the symbols used. This requirement is especially critical if the graphic symbols used are from different disciplines and, therefore,

represent devices, conductors, or lines of flow, that if misinterpreted might cause damage to the equipment or be dangerous to the life of servicing or operating personnel.

GRAPHIC SYMBOLS USED IN EXISTING TECHNICAL DOCUMENTS OR DRAWINGS

Unless otherwise specified, any changes or revisions to an existing drawing, specification, standard, or technical document, prepared under a previous edition of this standard, may use the latest graphic symbols, although the superseded graphic symbols may appear elsewhere in the document or drawing.

MAP SYMBOLS FOR NON-RAILWAY FEATURES

1 BOUNDARY AND SURVEY LINES

1.1 Foreign right of way line



1.2 State line



1.3 County line



1.4 Township line



1.5 City or village line



1.6 Reservation line



1.7 Inner parcel line



1.8 Street block or other property line



1.9 Survey line



1.10 Center line; original (track or section) center line. (if monumented, show location and proper symbol)



1.11 Company property right of way line



1.12 Fence (on street line)



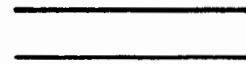
1.13 Fence (on railway property line)



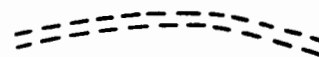
2 HIGHWAYS

2.1 Public and main roads

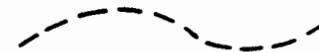
Note 2.1A: Indicate route number (Interstate, U.S., State, or County (Parish)).



2.2 Private and secondary roads

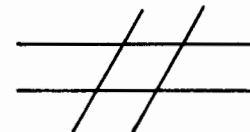


2.3 Trails

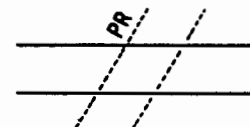


2.4 Road crossing

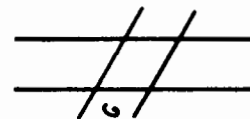
2.4.1 Street and public roads



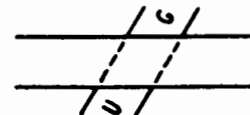
2.4.2 Private



2.4.3 At grade



2.4.4 Under grade



2.4.5 Overhead

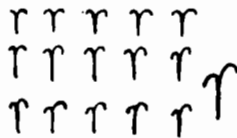


3 AGRICULTURE

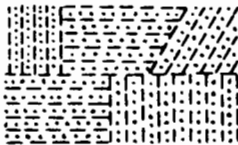
3.1 Cleared land



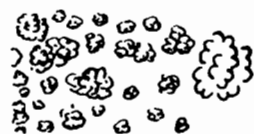
3.2 Corn



3.3 Cultivated land



3.4 Deciduous trees



3.5 Evergreen trees



3.6 Meadow



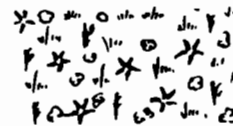
3.7 Oak trees



3.8 Orchard



3.9 Pine, willows and brush



3.10 Tobacco



3.11 Vineyard



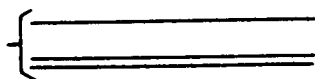
3.12 Willows



4 HYDROGRAPHY

Note 4A: Proper name of feature is to be used wherever appropriate.

4.1 Canal, ditch or open aqueduct



4.2 Dam



4.3 Dry or intermittent lake



4.4 Falls and rapids



4.5 Ferry



4.6 Ford



4.7 Glaciers



4.8 Intermittent streams



4.9 Lakes and ponds



4.10 Marsh

4.10.1 Fresh



4.10.2 Salt



4.10.3 Submerged



4.11 Springs and sinks



4.12 Streams

4.12.1 Navigable



4.12.2 Unnavigable



4.13 Tidal flat



4.14 Water line



5 RELIEF

5.1 Abutment



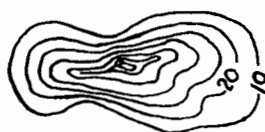
5.2 Wall



5.3 Pier



5.4 Contour system (shown with typical labeling)



5.5 Cribbing

Note 5.5A: Indicate type



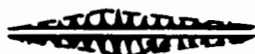
5.6 Cut



5.7 Depression contours (shown with typical labeling)



5.8 Embankment



5.9 Hill shading



5.10 Levees



5.11 Mine dumps



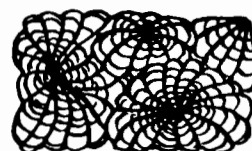
5.12 Sand and sand dunes



5.13 Submarine contours (shown with typical labeling)



5.14 Tailings or mining debris



5.15 Cliffs



5.16 Top of slope (medium line width)



5.17 Bottom of slope (fine line width)



6 CARTOGRAPHY

6.1 Bench mark

Note 6.1A: Asterisk is not part of the symbol.
Always replace with correct value.

B M X *

6.2 Iron monument



6.3 Stone monument

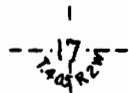


6.4 Triangulation station or transit point

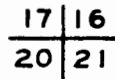


6.5 Section center

Note 6.5A: Letters and numbers are for illustration purposes only)

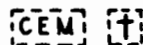


6.6 Section corner



See Note 6.5A

6.7 Cemeteries



6.8 Church



6.9 School



6.10 City



6.10.1 City limits

Note 6.10.1A: Asterisk is not part of the symbol.
Always use hatch or color (transparent) red



6.10.2 Fire limits



6.11 Coast guard station

6.11.1 General



6.11.2 Lifesaving station



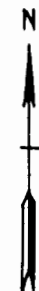
6.12 Coke ovens



6.13 Lighthouse or beacon



6.14 Meridian



6.15 Mine or quarry

Note 6.15A: Asterisk is not part of the symbol.
Always replace by a letter from the following list:

M = Mine

Q = Quarry



6.16 Coal outcrop



6.17 Mine tunnel



6.18 Oil and gas wells



6.19 Prospect or test opening



6.20 Shaft



6.21 Tanks and oil reservoirs



6.22 Village (typical)



7 FENCES AND BARRIERS

Note 7A: Indicate height of fence

7.1 Barbwire



See Note 7A

7.2 Board



See Note 7A

7.3 Electric



See Note 7A

7.4 Intertrack



See Note 7A

7.5 Picket



See Note 7A

7.6 Rail



See Note 7A

7.7 Snow



See Note 7A

7.8 Stone



See Note 7A

7.9 Worm



See Note 7A

7.10 Woven-wire

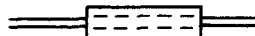


See Note 7A

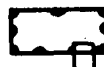
7.11 Hedge



7.12 Rock slide or snow shed



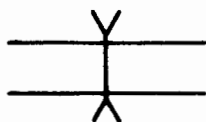
7.13 Stock pens (typical)



7.14 Farm gate (typical)



7.15 Cattle guard



8 OIL AND GAS

8.1 Location, rig, or drilling well



8.2 Oil well



8.3 Dry hole



8.3.1 With showing of oil



8.4 Gas well



8.4.1 With showing of oil



8.5 Small oil well



8.6 Salt well



8.7 Abandonment

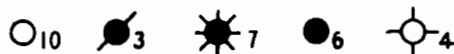


8.8 Typical Applications

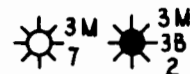
8.8.1 Abandoned



8.8.2 Number of wells



8.8.3 Daily production (typical examples)



M = 1000 Cubic Feet.

B = Barrels.

Injun = name of well.

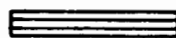
RIGHT OF WAY

9 BALLAST

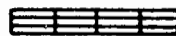
9.1 Broken stone



9.2 Burnt clay



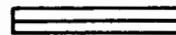
9.3 Chats



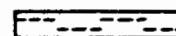
9.4 Cinders



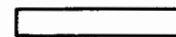
9.5 Earth



9.6 Granulated slag



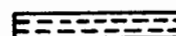
9.7 Gravel



9.8 Sand



9.9 Screenings



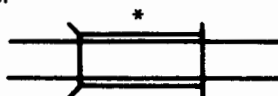
9.10 Slag



10 BRIDGES AND TUNNELS

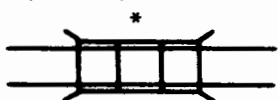
Note 10A: Asterisk is not part of the symbol. Always replace by indicating whether deck, half-through or through bridge and use letters to describe girder and truss bridges. Give loading.

10.1 Girder



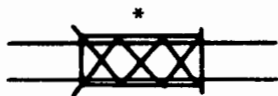
See Note 10A

10.2 Trestle (wooden)



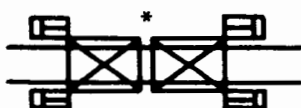
See Note 10A

10.3 Truss



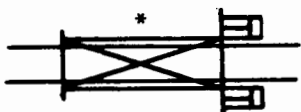
See Note 10A

10.4 Bascule, double-leaf



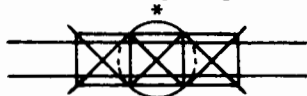
See Note 10A

10.5 Bascule, single-leaf



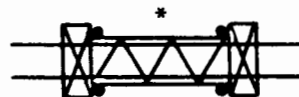
See Note 10A

10.6 Draw span or swing bridge



See Note 10A

10.7 Lift span



See Note 10A

10.8 Movable bridge circuit controller



10.9 Movable bridge lock



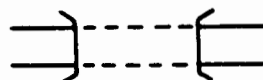
10.10 Movable bridge pipe coupler



10.11 Movable bridge rail lock



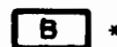
10.12 Tunnel



11 BRIDGES AND STRUCTURES

Note 11A: Asterisk is not part of the symbol. Always replace by indicating use and number of stories

11.1 Brick



See Note 11A

11.2 Concrete



See Note 11A

11.3 Corrugated iron



See Note 11A

11.4 Frame



See Note 11A

11.5 Stone



See Note 11A

11.6 Passenger station



11.7 Freight station



11.8 Platform or driveway

Note 11.8A: Indicate kind and character

Note 11.8B: If underground add UG



11.9 Section house



11.10 Section tool house



11.11 Privy



11.12 Generating station



11.13 Substation



11.14 Engine house

11.14.1 Circular



11.14.2 Rectangular

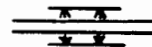
Note 11.14.2A: Indicate kind and character



11.15 Diesel shop



11.16 Car or locomotive washer



11.17 Turntable

Note 11.17A: Asterisk is not part of the symbol.
Always replace by indicating type and construction
by combination of letters



11.18 Cinder pit (with cinder hoist)



11.19 Coaling station

11.19.1 Mechanical



11.19.2 Trestle



11.20 Oil column

Note 11.20A: Asterisk is not part of the symbol.
Always replace with a letter combination from the
following list:

DO = Diesel oil
FO = Fuel oil
LO = Lubricating oil



11.21 Oil storage and delivery



See Note 11.8b

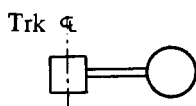
11.22 Lightning-arrester house



11.23 Grain elevator



11.24 Sanding tower



11.25 Interlocking or block station

11.25.1 With operator facing track



11.25.2 Operator with back to track (Operator symbol (•) optional)



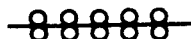
12 LIGHTING

12.1 Electric light location

Note 12.1A: Indicate type of lamp and power



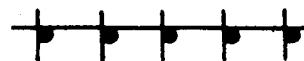
12.2 Flood lighting tower



13 POLE LINE WIRES

13.1 Power transmission, signal telephone, and telegraph lines

Note 13.1A: Designate wires and ownership



14 SIGNAL PIPE AND WIRE LINES

Note 14A: For detailed plans select symbols from other American National Standards in the Y32 Series.

14.1 Directional arrow (indicates direction of movement of pipe lines normal to reverse)



14.2 Compensator



14.3 Compressed air



14.4 Duct and air



14.5 Mechanical pipe and air



14.6 Mechanical pipe and duct



14.7 Mechanical pipe duct and air



14.8 Oil enclosed pipe line



14.9 Pipe adjusting screw



14.10 Pipe (mechanical)



14.11 Splicing chamber



14.12 Underground or aerial cable



Note 14.12A: Not in duct.

15 WATER SUPPLY AND PIPE LINES

See Note 14A

15.1 Water (company pipe)

15.1.1 Hot



15.1.2 Cold



15.2 Condensate



15.3 Gas



15.4 Oil line



15.5 Refrigerant



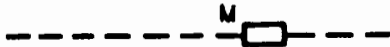
15.6 Steam

Note 15.6A: Indicate size and type of pipe and direction of flow.



15.7 Meter

Note 15.7A: Indicate name and size.

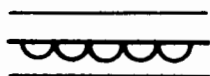


15.8 Riser

Note 15.8A: Indicate size and type of pipe.



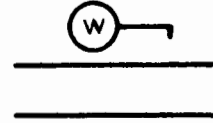
15.9 Track pan



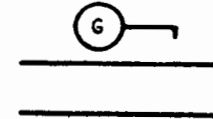
15.10 Column

15.10.1 Water

Note 15.10.1A: Indicate size and type



15.10.2 Gas



See Note 15.10.1A

15.11 Water tank

Note 15.11A: Indicate character, diameter, height, and capacity in gallons.

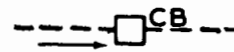


16 CULVERTS, SEWERS, ETC.

Note 16A: Arrow (→) indicates direction of flow.

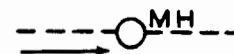
Note 16B: Indicate size and kind.

16.1 Catch basin



See Note 16A

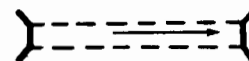
16.2 Manhole



See Note 16A

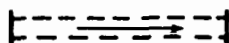
16.3 Masonry arch of flat-top culvert

Note 16.3A: Indicate size, hor-vert-lgth.



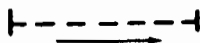
See Note 16A

16.4 Pipe (over 36 in. Diam)



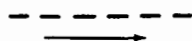
See Notes 16A and 16B

16.5 Pipe drain or wood box (36 in. diam. and under)



See Notes 16A and 16B

16.6 Sewer



See Notes 16A and 16B

16.7 Sump



17 AIR PIPE LINES

17.1 Combination cock and union



17.2 Expansion joint



17.3 Manifold condenser



17.4 Pipe anchor



17.5 Plug cock (drain or blow-off)



17.6 Reducer or bushing

Note 17.6A: Arrow points to smaller pipe.

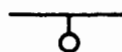


17.7 Reservoir

17.7.1 Main



17.7.2 Auxiliary



17.8 Tee

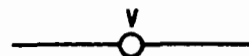


17.9 Union



17.20 Valve

Note 17.20A: Indicate size of valve.



18 FIRE PREVENTION

Note 18A: Where possible indicate and name pipe fittings, valves, and other water-supply fixtures.

18.1 Automatic sprinkler



18.2 Check valve

Note 18.2A: Indicate size, kind and direction of flow.



18.3 Chemical fire extinguisher (hand or wheel carriage)

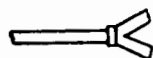


18.4 Fire alarm box

Note 18.4A: Indicate box and number



18.5 Fire Dept connection



18.6 Fire hydrant

Note 18.6A: Indicate size, number of hose and pumper connections.

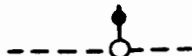


18.7 Hose and hydrant house



18.8 Post indicator valve

Note 18.8A: Indicate size.



18.9 Wall reel or hose rack



RAILWAY FEATURES

19 RAIL

Typical progressive rail symbols (weights to be inserted to suit individual road's condition. Solid lines of colors shown may be used in place of symbols.)

———— (BLACK)	OR	
———— (WHITE)	OR	
———— (RED)	OR	
———— (YELLOW)	OR	

———— (GREEN)	OR	
———— (ORANGE)	OR	
———— (BROWN)	OR	

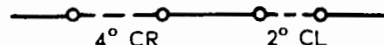
LIGHTEST RAIL

———— (LIGHT BLUE)	OR	
-------------------	----	--

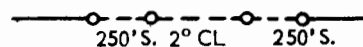
20 RAILWAY

20.1 Profiles (typical applications)

20.1.1 Alignment: 4° curve to right 2° curve to left



20.1.2 Alignment: 2° curve to left 250' spiral



20.1.3 Vertical curves

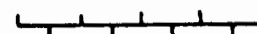


20.2 Topographical maps

20.2.1 Electric



20.2.2 Narrow gauge



20.2.3 Steam (diesel)



20.2.4 Street railway



20.3 Track maps


Note 20.3A: Signify steam (diesel) or electric where electric tracks cross or join steam (diesel) tracks.

Note 20.3B: Use of single or double lines is optional.

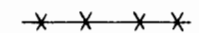
Note 20.3C: When colors are used to replace symbols they must be drawn in the manner specified as the alternative.

20.3.1 For company owned tracks


20.3.1.1 Existing tracks to remain


OR
BLACK-SOLID


20.3.1.2 Existing tracks to be removed


OR
YELLOW-SOLID


20.3.1.3 Existing tracks to be lined


OR
YELLOW-DASHED


20.3.1.4 New location of tracks to be lined


OR
RED-DASHED

20.3.1.5 New tracks to be constructed

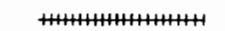

OR
RED-SOLID

20.3.1.6 Proposed future tracks

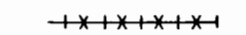

OR
BLACK-SYMBOL

20.3.2 For foreign line or private tracks

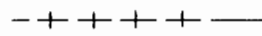
20.3.2.1 Existing tracks to remain


OR
BLACK-HATCHED

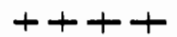
20.3.2.2 Existing tracks to be removed


OR
YELLOW-HATCHED

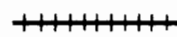
20.3.2.3 Existing tracks to be lined


OR
YELLOW-SYMBOL

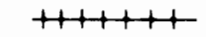
20.3.2.4 New location of tracks to be lined


OR
RED-SYMBOL

20.3.2.5 New tracks to be constructed


OR
RED-SYMBOL

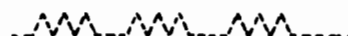
20.3.2.6 Proposed future tracks


OR
BLACK-SYMBOL


21 ELECTRIFIED LINES

21.1 Overhead rail or wire

Note 21.1A: Indicate kind.




21.2 Third rail


Running rail or C.L. of track

21.3 Jumpers

21.3.1 Running rail


Running rail or C.L. of track

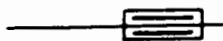
OR


Running rail

21.4 Feeder



21.5 Switch



22 SWITCHES AND DERAILS

Note 22A: The symbols shown in this section are for interlocked switches and derails. For non-interlocked switches and derails the same symbols are used without the shading.

Note 22B: Where hand-throw switches and derails are pipe-connected to others, at least one switch and derail (the one farthest from point of operation) should have the letters "PC" shown next to it.

See also section 5.

See also appendix A for drawing application.

22.1 Single switch (double line plan)

22.1.1 Set for straight track

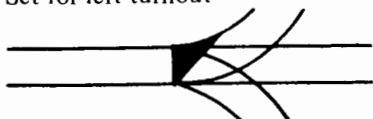


22.1.2 Set for turnout

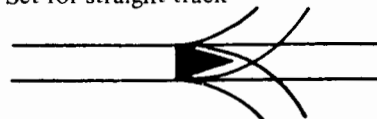


22.2 Three-way switch (double-line plan)

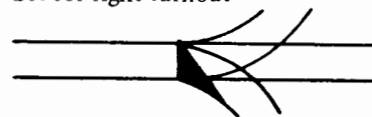
22.2.1 Set for left turnout



22.2.2 Set for straight track



22.2.3 Set for right turnout



22.3 Derailing (double-line plan)

22.3.1 Single point



22.3.2 Double point



22.3.3 Lifting rail type



22.3.4 Combined lifting block and point



22.3.5 Lifting block



22.4 Nonderailing (double-line plan)

22.4.1 Single point



22.4.2 Double point



22.4.3 Lifting rail type



22.4.4 Combined lifting block and point



22.4.5 Lifting block



22.5 Derailing (single-line plan)

22.5.1 Single point



22.5.2 Double point



22.5.3 Lifting rail type



22.5.4 Combined lifting block and point



22.5.5 Lifting block



22.6 Nonderailing (single-line plan)

22.6.1 Single point



22.6.2 Double point



22.6.3 Lifting rail type



22.6.4 Combined lifting block and point



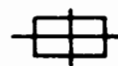
22.6.5 Lifting block



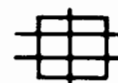
23 LEADOUTS, BOLT LOCKS, CRANKS, AND
DEFLECTING BARS

23.1 Bolt Locks

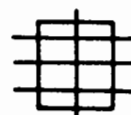
23.1.1 One way



23.1.2 Two way



23.1.3 Three way



23.2 Cranks

23.2.1 One way

23.2.1.1 Continuous motion



23.2.1.2 Reversed motion



23.2.2 Two way

23.2.2.1 Continuous motion



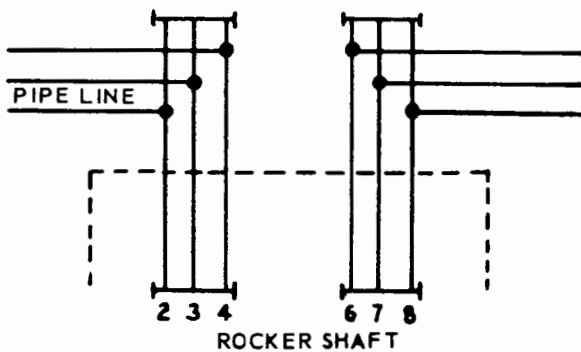
23.2.2.2 Reversed motion



23.3 Leadouts (typical applications)

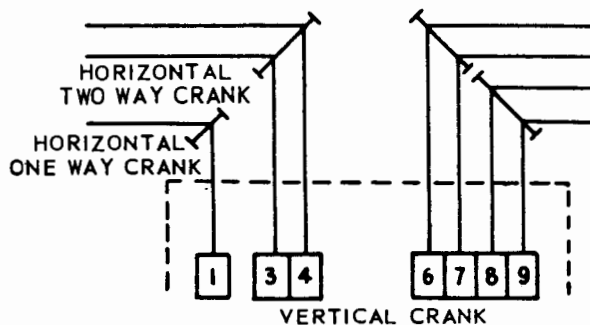
Note 23.3A: Words and numbers are for explanatory purposes only.

23.3.1 Rocker shaft



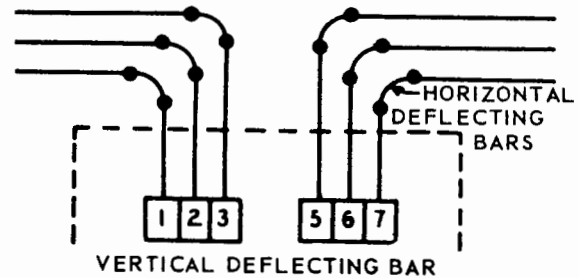
See Note 23.3A

23.3.2 Crank type



See Note 23.3A

23.3.3 Deflecting bar type



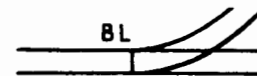
See Note 23.3A

24 MISCELLANEOUS DEVICES AND FIXTURES APPLIED TO TRACKS

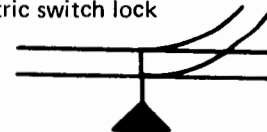
24.1 Crossing



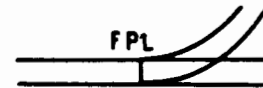
24.2 Bolt lock



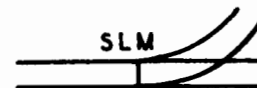
24.3 Electric switch lock



24.4 Facing point lock



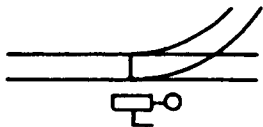
24.5 Mechanical switch and lock movement



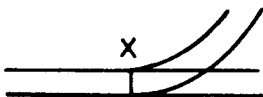
24.6 Power switch machine



24.7 Dual-control power switch and lock movement



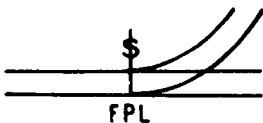
24.8 Switch circuit controller



24.9 Spring switch



24.10 Spring switch with mechanical firing point lock



24.11 Turnout and switch stand

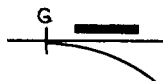


24.12 Insulated switch rod



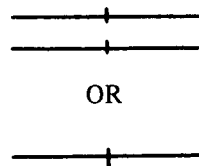
24.13 Switch heater

Note 24.13A: Indicate gas using "G" and for electric use "E"

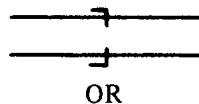


24.14 Insulated rail joints

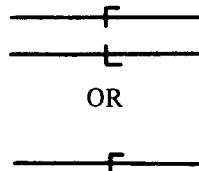
24.14.1 Track circuits in both directions



24.14.2 Track circuit on left none on right



24.14.3 Track circuit on right and none on left



24.15 Inductive train stop

24.15.1 Clear



24.15.2 Stop



24.15.3 Unwound (stop)



24.16 Trip train stop

24.16.1 Nonautomatic (mechanical)

24.16.1.1 Stop

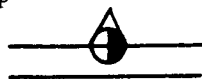


24.16.1.2 Clear



24.16.2 Nonautomatic (power)

24.16.2.1 Stop



24.16.2.2 Clear



24.16.3 Automatic

24.16.3.1 Stop



24.16.3.2 Clear



24.16.4 Semiautomatic

24.16.4.1 Stop



24.16.4.2 Clear



24.16.5 Slotted

24.16.5.1 Stop

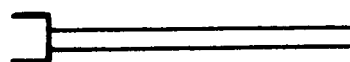


24.16.5.2 Clear



24.17 Bumping Post

24.17.1 Double line



24.17.2 Single line

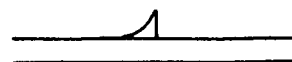


24.18 Friction car stop skates



24.19 Skate machines

24.19.1 Manual



24.19.2 Power



24.20 Car retarders

24.20.1 Single

24.20.1.1 One rail



24.20.1.2 Two rail



24.20.2 Double

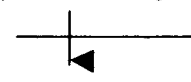
24.20.2.1 One rail



24.20.2.2 Two rail



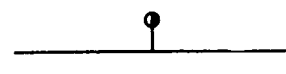
24.21 Train speed measuring device (radar)



24.22 Track scale



24.23 Track instrument



24.24 Rail Lubricator

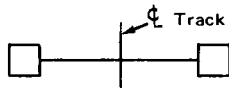


24.25 Dragging equipment detector

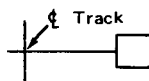


24.26 Automatic car journal oiler

Note 24.26A: Indicate location



24.27 Hot box detector



See Note 24.26A

24.28 Weight differential device



24.29 Light communication

24.29.1 Transmission source



24.29.2 Receiver



24.30 Train identity

24.30.1 Initiation coil



24.30.2 Cancellation coil

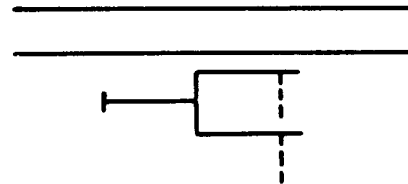


SIGNALS AND SIGNS

25 SIGNAL SUPPORTS

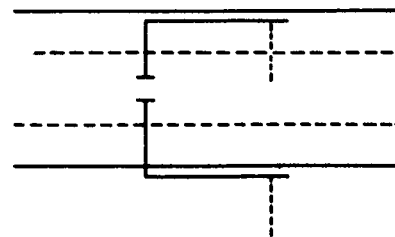
Note 25A: Signal governs movement on solid lines.

25.1 Bracket post



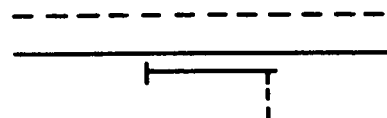
See Note 25A

25.2 Cantilever post



See Note 25A

25.3 Ground mast



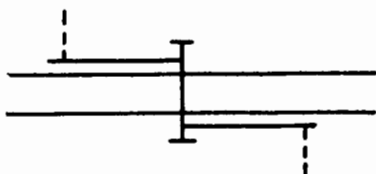
See Note 25A

25.4 Ground mast with bracket attachment



See Note 25A

25.5 Signal bridge



See Note 25A

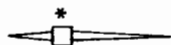
26 CROSSING GUARDS

26.1 Crossing gate

Note 26.1A: Asterisk is not part of the symbol.
Always replace within or adjacent to the symbol a letter(s) from the following list.

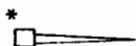
A = Automatic
M = Manual
A-M = Auto-manual

26.1.1 Gate arm with sidewalk arm



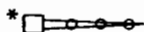
See Note 26.1A

26.1.2 Gate arm without sidewalk arm



See Note 26.1A

26.1.3 Gate arm with lamps



See Note 26.1A

26.1.4 Sidewalk arm only

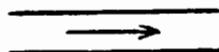


See Note 26.1A

26.2 Signals-highway crossing

Note 26.A: As required combination of symbols may be used.

26.2.1 Traffic direction



26.2.2 Bell



26.2.3 Crossing sign

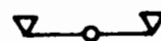


26.2.4 Wig-wag

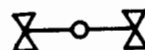


26.2.5 Flashing lights

26.2.5.1 One way



26.2.5.2 Two way



26.2.6 Flashing light and "No turn" sign

Note 26.2.6A: Asterisk is not part of the symbol.
Always replace within or adjacent to the symbol a letter(s) from the following list:

FY = Flashing yellow
NLT = No left turn
NRT = No right turn



26.2.7 Illuminated stop sign



26.2.8 Rotating disk; stop sign



26.2.9 Stop on red signal sign



26.2.10 Stop when swinging sign



26.2.11 Number of tracks sign (mounted on signal post)

Note 26.2.11A: Number of tracks to be shown on plan or covered by a note.



27 WAYSIDE FIXTURES

27.1 Boom crane



27.2 Gantry crane



27.3 Gas container



27.4 Housings

Note 27.4A: Asterisk is not part of the symbol. Always replace within or adjacent to the symbol a letter(s) from the following list:

- I = Instrument house
- J = Junction box
- L = Lightning-arrester box
- M = Manhole
- R = Relay box
- T = Telephone

27.4.1 Above surface



See Note 27.4A

27.4.2 Below surface



See Note 27.4A

27.4.3 Half-above surface



See Note 27.4A

27.4.4 Instrument house



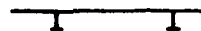
27.4.5 Mail crane



27.4.6 Motor truck or stock scale



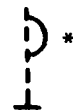
27.4.7 Rail rest (rail storage)



27.4.8 Indicator

Note 27.4.8A: Asterisk is not part of the symbol. Always replace within or adjacent to the symbol a letter(s) from the following list:

- S = Take or leave siding
- DE = Dragging equipment



27.4.9 Train indicator



27.4.10 Switch indicator and switch circuit controller

Note 27.4.10A: Asterisk is not part of the symbol always replace within or adjacent to the symbol a letter(s) from the following list:

E = East
W = West
N = North
S = South

Note 27.4.10B: The type of indicator is to be covered by a note.

27.4.10.1 Switch indicator



See Notes 27.4.10A and B.

27.4.10.1.1 With circuit controller



See Notes 27.4.10A and B.

27.4.11 Cable post

27.4.11.1 Post only



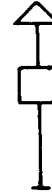
27.4.11.1.1 With one indicator



27.4.11.1.2 With two indicators



27.4.11.1.3 With relay box



27.4.11.1.4 With relay box and one indicator



27.4.11.1.5 With relay box and two indicators



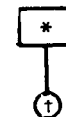
27.4.12 Relay box and post

Note 27.4.12A: Asterisk is not part of the symbol. Always replace by proper capacity value.



27.4.12.1 With battery chute

Note 27.4.12.1A: Dagger is not part of the symbol. Always replace by battery chute number.



See Note 27.4.12A

27.5 Ground levers



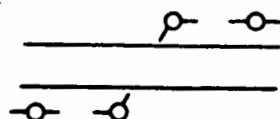
27.6 Dwarf machine



27.7 Pole line (signal)

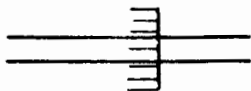


27.7.1 Application: Crossover



28 SIGN BOARDS AND POSTS

28.1 Bridge and tunnel warning; telltale



28.2 Flanger sign

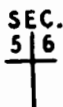


28.3 Mile post

Note 28.3A: Numbers are for illustration purposes only.



28.4 Section post



See Note 28.3A

28.5 Whistle post



28.6 Yard limit and roadway signs

Note 28.6A: Asterisk is not part of the symbol. Always replace with legend as required.

YL = Yard limit



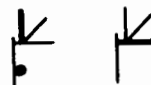
28.7 Other posts



See Note 28.6A

29 WAYSIDE SIGNAL OPERATING CHARACTERISTICS

Note 29A: Heavy line indicates normal position or its equivalent — thus



Note 29B: Designations to be used only where more than one type of signal is shown on plan. Prefix the designation with the letter "A" if used for approach lighting.

Designations

- E = Electric semaphore
- P = Position light
- CP = Color position light
- M = Mechanical
- C = Color light
- SL = Searchlight

29.1 Nonoperating



See Note 29B

29.2 Automatic (typical)



See Notes 29A and B

29.3 Non-automatic (typical)



See Notes 29A and B

29.4 Semiautomatic

29.4.1 Stick (typical)



See Notes 29A and B

29.4.2 Non-Stick (typical)



See Notes 29A and B

29.5 Applications

Note 29.5A: As required, reference shall be made to explanatory notes for special types.

See Appendix A for additional applications.

29.5.1 Three-position – Semiautomatic stick 45° to 90°; Semiautomatic non-stick 0° to U.Q. 45°



29.5.2 Four position – Semiautomatic 0° to U.Q. 45° to 90°; Nonautomatic 0° to L.Q. 45°



29.6 Markers

29.6.1 Normally not lighted – non-stick



29.6.2 Normally lighted – non-stick



29.6.3 Normally not lighted – stick



29.6.4 Normally lighted – stick



29.7 Grade signal



29.8 Smashboard signals

29.8.1 Power



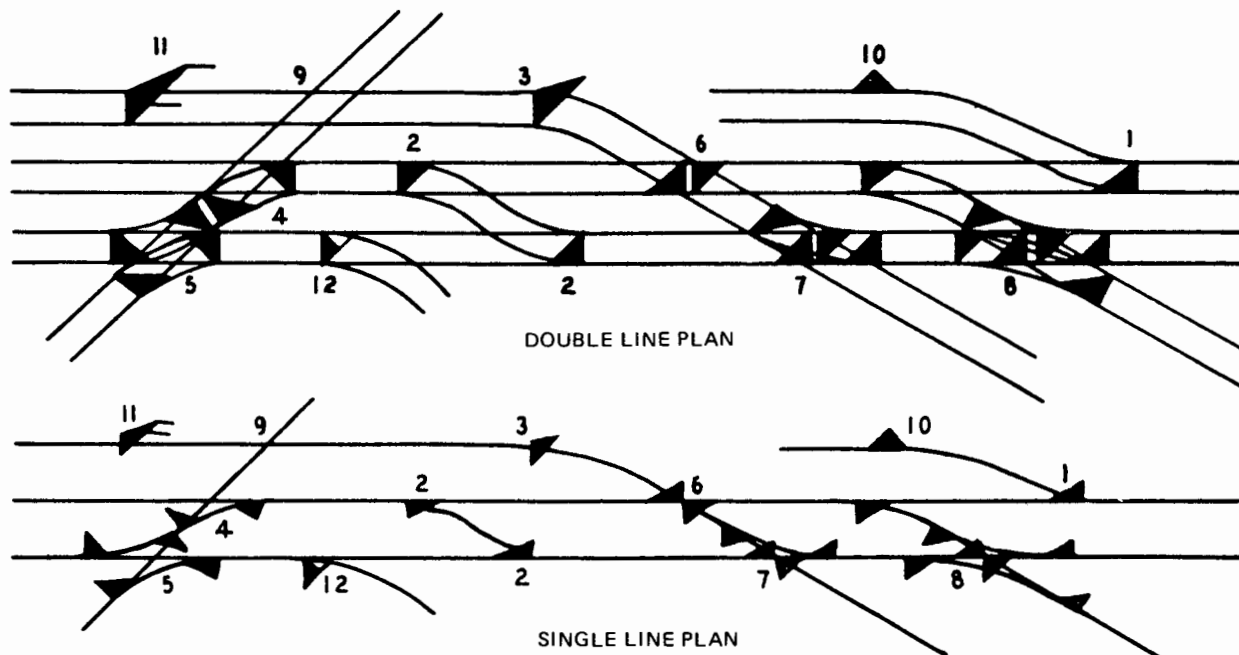
29.8.2 Mechanical



APPENDIX A

ADDITIONAL APPLICATIONS

SWITCHES AND DERAILS








Wayside Signals (Operating Characteristics)

EXPLANATION

- 1 SINGLE SWITCH
- 2 CROSSOVER
- 3 SINGLE-POINT DERAIL
- 4 SINGLE-SLIP SWITCH
- 5 DOUBLE-SLIP SWITCH
- 6 MOVABLE-POINT CROSSING FROG
- 7 SINGLE-SLIP SWITCH WITH M.P.F.
- 8 DOUBLE-SLIP SWITCH WITH M.P.F.
- 9 RIGID-CROSSING FROG
- 10 LIFTING-BLOCK DERAIL
- 11 LIFTING-RAIL DERAIL
- 12 DUAL-CONTROL SWITCH

POSITION OR EQUIV- ALENT	NON- AUTOMATIC	SEMI-AUTOMATIC		AUTOMATIC	SPECIAL REQUIRES REFERENCE TO NOTES
		STICK	NON STICK		
0° U.Q. 45°					
0° L.Q. 45°					
0° U.Q. 90°					
U.Q. 45° L.Q. 45°					
U.Q. 45° 90°					
L.Q. 45° U.Q. 90°					
0° U.Q. 45° L.Q. 45°					
0° U.Q. 45° 90°					
0° U.Q. 90° L.Q. 45°					
U.Q. 45° 90° L.Q. 45°					
0° U.Q. 45° 90° L.Q. 45°					

APPENDIX B
REVISED AND DELETED SYMBOLS

REVISED AND DELETED SYMBOLS ASA Y32.7-1957	Recommended Symbols In ANSI Y32.7-1972 If Not Otherwise Specified
6.11 Meridian <div style="text-align: center;">  </div>	6.14
15.5 Tunnel; Mine <div style="text-align: center;">  </div>	6.17
10.4 Fire Alarm Box (Give box number) <div style="text-align: center;">  </div>	18.4
14.1 Electric Light Location (Give type of lamp and power) <div style="text-align: center;">  </div>	12.1
9.9 Snow Shed <div style="text-align: center;">  </div>	7.12

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