



# AMERICAN MINING CONGRESS TURNOUT DATA

## Turnout Data for 42-in. Gage (continued) Heavy Rail – 70-lb to 100-lb rail, inclusive

American Mining Congress Standards

| No. | Angle     | Frog |             |       |                   | Switch |            |       |             |                 | Actual Lead | Closure Rails |          |             |             |
|-----|-----------|------|-------------|-------|-------------------|--------|------------|-------|-------------|-----------------|-------------|---------------|----------|-------------|-------------|
|     |           | Type | Rail Weight | Point | Actual Toe Length | Length | Heel Angle | Point | Heel Spread | Vertex Distance |             | Curved        |          |             | Straight    |
|     |           |      |             |       |                   |        |            |       |             |                 |             | Radius        | MO       | Length      | Length      |
| 3   | 18°55'29" | Cast | 70 to 80    | 1/2"  | 9-1/2"            | 7'6"   | 3°35'00"   | 3/8"  | 6"          | 6"              | 21'7"       | 49'0"         | 5-3/4"   | 13'8-1/16"  | 13'3-1/2"   |
|     |           | Cast | 85 to 100   | 1/2"  | 11"               | 7'6"   | 3°44'35"   | 3/8"  | 6-1/4"      | 6"              | 21'4-9/16"  | 47'2-3/4"     | 5-5/8"   | 13'4-3/16"  | 12'11-9/16" |
|     |           | RBF  | 70 to 80    | 1/2"  | 31"               | 7'6"   | 3°35'00"   | 3/8"  | 6"          | 6"              | 21'7"       | 49'0"         | 4-5/16"  | 11'10-9/16" | 11'6"       |
|     |           | RBF  | 85 to 100   | 1/2"  | 31"               | 7'6"   | 3°44'35"   | 3/8"  | 6-1/4"      | 6"              | 21'4-9/16"  | 47'2-3/4"     | 4-5/16"  | 11'8-3/16"  | 11'3-9/16"  |
| 4   | 14°15'00" | Cast | 70 to 80    | 1/2"  | 12-9/16"          | 7'6"   | 3°35'00"   | 3/8"  | 6"          | 6"              | 25'7"       | 90'0"         | 5"       | 17'4"       | 17'0-1/2"   |
|     |           | Cast | 85 to 100   | 1/2"  | 14-5/8"           | 7'6"   | 3°44'35"   | 3/8"  | 6-1/4"      | 6"              | 25'4-3/8"   | 87'10-3/16"   | 4-7/8"   | 16'11-5/16" | 16'7-3/4"   |
|     |           | RBF  | 70 to 80    | 1/2"  | 40"               | 7'6"   | 3°35'00"   | 3/8"  | 6"          | 6"              | 25'7"       | 90'0"         | 3-3/4"   | 15'0-1/2"   | 14'9"       |
|     |           | RBF  | 85 to 100   | 1/2"  | 40"               | 7'6"   | 3°44'35"   | 3/8"  | 6-1/4"      | 6"              | 25'4-3/8"   | 87'10-3/16"   | 3-3/4"   | 14'9-15/16" | 14'6-3/8"   |
| 5   | 11°25'16" | Cast | 70 to 80    | 1/2"  | 15-11/16"         | 10'0"  | 2°41'12"   | 3/8"  | 6"          | 8"              | 33'1"       | 140'0"        | 5-3/16"  | 22'0-1/16"  | 21'9-5/16"  |
|     |           | Cast | 85 to 100   | 1/2"  | 18-3/16"          | 10'0"  | 2°48'23"   | 3/8"  | 6-1/4"      | 8"              | 32'9-1/4"   | 137'4-9/16"   | 5"       | 21'5-7/8"   | 21'3-1/16"  |
|     |           | RBF  | 70 to 80    | 1/2"  | 42-1/2"           | 10'0"  | 2°41'12"   | 3/8"  | 6"          | 8"              | 33'1"       | 140'0"        | 4-3/16"  | 19'9-1/4"   | 19'6-1/2"   |
|     |           | RBF  | 85 to 100   | 1/2"  | 42-1/2"           | 10'0"  | 2°48'23"   | 3/8"  | 6-1/4"      | 8"              | 32'9-1/4"   | 137'4-9/16"   | 4-1/8"   | 19'5-9/16"  | 19'2-3/4"   |
| 6   | 9°31'38"  | Cast | 70 to 80    | 1/2"  | 18-13/16"         | 10'0"  | 2°41'12"   | 3/8"  | 6"          | 8"              | 36'10"      | 209'0"        | 4-5/8"   | 25'5-9/16"  | 25'3-3/16"  |
|     |           | Cast | 85 to 100   | 1/2"  | 21-13/16"         | 10'0"  | 2°48'23"   | 3/8"  | 6-1/4"      | 8"              | 36'6"       | 205'0-3/4"    | 4-1/2"   | 24'10-5/8"  | 24'8-3/16"  |
|     |           | RBF  | 70 to 80    | 1/2"  | 45"               | 10'0"  | 2°41'12"   | 3/8"  | 6"          | 8"              | 36'10"      | 209'0"        | 3-7/8"   | 23'3-3/8"   | 23'1"       |
|     |           | RBF  | 85 to 100   | 1/2"  | 45"               | 10'0"  | 2°48'23"   | 3/8"  | 6-1/4"      | 8"              | 36'6"       | 205'0-3/4"    | 3-7/8"   | 22'11-7/16" | 22'9"       |
| 7   | 8°10'16"  | Cast | 70 to 80    | 1/2"  | 21-15/16"         | 10'0"  | 2°41'12"   | 3/8"  | 6"          | 8"              | 40'7-13/16" | 294'1-3/4"    | 4-5/16"  | 28'11-7/8"  | 28'9-7/8"   |
|     |           | Cast | 85 to 100   | 1/2"  | 25-7/16"          | 10'0"  | 2°48'23"   | 3/8"  | 6-1/4"      | 8"              | 39'11-3/4"  | 290'6-1/8"    | 4-1/16"  | 28'0-7/16"  | 27'10-5/16" |
|     |           | RBF  | 70 to 80    | 1/2"  | 56-1/2"           | 10'0"  | 2°41'12"   | 3/8"  | 6"          | 8"              | 40'7-13/16" | 294'1-3/4"    | 3-1/2"   | 26'1-5/16"  | 25'11-5/16" |
|     |           | RBF  | 85 to 100   | 1/2"  | 56-1/2"           | 10'0"  | 2°48'23"   | 3/8"  | 6-1/4"      | 8"              | 39'11-3/4"  | 290'6-1/8"    | 3-3/8"   | 25'5-3/8"   | 25'3-1/4"   |
| 8   | 7°9'10"   | Cast | 70 to 80    | 1/2"  | 25-1/16"          | 15'0"  | 1°47'27"   | 3/8"  | 6"          | 12"             | 52'1-5/8"   | 367'3-3/4"    | 5-1/16"  | 35'2-1/2"   | 35'0-9/16"  |
|     |           | Cast | 85 to 100   | 1/2"  | 29-1/16"          | 15'0"  | 1°52'14"   | 3/8"  | 6-1/4"      | 12"             | 51'4-7/16"  | 360'8-7/8"    | 4-13/16" | 34'1-1/8"   | 33'11-3/8"  |
|     |           | RBF  | 70 to 80    | 1/2"  | 61"               | 15'0"  | 1°47'27"   | 3/8"  | 6"          | 12"             | 52'1-5/8"   | 367'3-3/4"    | 4-1/4"   | 32'2-9/16"  | 32'0-5/8"   |
|     |           | RBF  | 85 to 100   | 1/2"  | 61"               | 15'0"  | 1°52'14"   | 3/8"  | 6-1/4"      | 12"             | 51'4-7/16"  | 360'8-7/8"    | 4-1/8"   | 31'5-3/16"  | 31'3-7/16"  |

Note: RBF denotes "Rigid Bolted Frog."

## Turnout Data for 44-in. Gage Light Rail – 20-lb to 60-lb ASCE rail, inclusive

American Mining Congress Standards

| No.   | Angle     | Frog |             |       |                   | Switch |          |       |             |                 | Actual Lead | Closure Rails |          |            |            |
|-------|-----------|------|-------------|-------|-------------------|--------|----------|-------|-------------|-----------------|-------------|---------------|----------|------------|------------|
|       |           | Type | Rail Weight | Point | Actual Toe Length | Length | Angle    | Point | Heel Spread | Vertex Distance |             | Curved        |          |            | Straight   |
|       |           |      |             |       |                   |        |          |       |             |                 |             | Radius        | MO       | Length     | Length     |
| 2     | 28°04'21" | Cast | 20 to 60    | 1/4"  | 6-11/16"          | 3'6"   | 6°19'20" | 3/8"  | 5"          | 4"              | 13'2"       | 24'0"         | 5-15/16" | 9'8-3/4"   | 9'1-1/4"   |
|       |           | WPF  | 20 to 30    | 1/4"  | 17"               | 3'6"   | 6°19'20" | 3/8"  | 5"          | 4"              | 13'2"       | 24'0"         | 4-15/16" | 8'10-1/2"  | 8'3"       |
|       |           | WPF  | 40 to 60    | 3/8"  | 20"               | 3'6"   | 6°19'20" | 3/8"  | 5"          | 4"              | 13'2"       | 24'0"         | 4-5/8"   | 8'7-1/2"   | 8'0"       |
| 2-1/2 | 22°37'12" | Cast | 20 to 60    | 1/4"  | 8-1/4"            | 5'0"   | 4°25'15" | 3/8"  | 5"          | 5"              | 17'7"       | 37'0"         | 6-3/16"  | 12'4-1/2"  | 11'10-3/4" |
|       |           | WPF  | 20 to 30    | 1/4"  | 16-1/2"           | 5'0"   | 4°25'15" | 3/8"  | 5"          | 5"              | 17'7"       | 37'0"         | 5-9/16"  | 11'8-1/4"  | 11'2-1/2"  |
|       |           | WPF  | 40 to 60    | 3/8"  | 20"               | 5'0"   | 4°25'15" | 3/8"  | 5"          | 5"              | 17'7"       | 37'0"         | 5-1/4"   | 11'4-3/4"  | 10'11"     |
| 3     | 18°55'29" | Cast | 20 to 60    | 1/4"  | 8-3/8"            | 5'0"   | 4°25'15" | 3/8"  | 5"          | 5"              | 19'11"      | 55'0"         | 5-13/16" | 14'7-1/4"  | 14'2-1/2"  |
|       |           | WPF  | 20 to 30    | 1/4"  | 16-1/2"           | 5'0"   | 4°25'15" | 3/8"  | 5"          | 5"              | 19'11"      | 55'0"         | 5-5/16"  | 13'11-1/4" | 13'6-1/2"  |
|       |           | WPF  | 40 to 60    | 3/8"  | 24"               | 5'0"   | 4°25'15" | 3/8"  | 5"          | 5"              | 19'11"      | 55'0"         | 4-7/8"   | 13'4"      | 12'11"     |
| 4     | 14°15'00" | Cast | 20 to 60    | 1/4"  | 11-1/16"          | 5'0"   | 4°25'15" | 3/8"  | 5"          | 5"              | 24'0"       | 102'0"        | 4-15/16" | 18'4-3/4"  | 18'0-3/4"  |
|       |           | WPF  | 40 to 60    | 3/8"  | 27"               | 5'0"   | 4°25'15" | 3/8"  | 5"          | 5"              | 24'0"       | 102'0"        | 4-5/16"  | 17'0-3/4"  | 16'9"      |
| 4     | 14°15'00" | Cast | 20 to 60    | 1/4"  | 11-1/16"          | 6'0"   | 3°40'49" | 3/8"  | 5"          | 6"              | 25'8"       | 99'0"         | 5-1/2"   | 19'0-1/2"  | 18'8-3/4"  |
|       |           | WPF  | 40 to 60    | 3/8"  | 27"               | 6'0"   | 3°40'49" | 3/8"  | 5"          | 6"              | 25'8"       | 99'0"         | 5-1/16"  | 18'3"      | 17'4-1/2"  |
| 4     | 14°15'00" | Cast | 20 to 60    | 1/4"  | 11-1/16"          | 7'6"   | 2°56'44" | 3/8"  | 5"          | 8"              | 28'0"       | 97'0"         | 6-1/8"   | 19'10-1/4" | 19'6-3/4"  |
|       |           | WPF  | 40 to 60    | 3/8"  | 27"               | 7'6"   | 2°56'44" | 3/8"  | 5"          | 8"              | 28'0"       | 97'0"         | 5-5/16"  | 18'6-3/4"  | 18'3"      |
| 5     | 11°25'16" | Cast | 20 to 60    | 1/4"  | 13-13/16"         | 7'6"   | 2°56'44" | 3/8"  | 5"          | 8"              | 32'3"       | 156'0"        | 5-7/16"  | 23'10"     | 23'7"      |
|       |           | WPF  | 40 to 60    | 3/8"  | 30"               | 7'6"   | 2°56'44" | 3/8"  | 5"          | 8"              | 32'3"       | 156'0"        | 4-7/8"   | 22'6"      | 22'3"      |
| 6     | 9°31'38"  | Cast | 20 to 60    | 1/4"  | 16-9/16"          | 7'6"   | 2°56'44" | 3/8"  | 5"          | 8"              | 36'3"       | 233'0"        | 4-7/8"   | 27'6-3/4"  | 27'4-1/4"  |
|       |           | WPF  | 40 to 60    | 3/8"  | 36"               | 7'6"   | 2°56'44" | 3/8"  | 5"          | 8"              | 36'3"       | 233'0"        | 4-5/16"  | 25'11-1/2" | 25'9"      |
| 6     | 9°31'38"  | Cast | 20 to 60    | 1/4"  | 16-9/16"          | 10'0"  | 2°12'32" | 3/8"  | 5"          | 10"             | 40'5"       | 223'0"        | 5-3/4"   | 29'2-1/2"  | 29'0-1/4"  |
|       |           | WPF  | 40 to 60    | 3/8"  | 36"               | 10'0"  | 2°12'32" | 3/8"  | 5"          | 10"             | 40'5"       | 223'0"        | 5-1/8"   | 27'7-1/2"  | 27'5"      |

Note: W.P.F. denotes "Welded Plate Frog."