

**REGULATION**  
**OF THE MINISTER FOR INFRASTRUCTURE <sup>1)</sup>**

of ..... 2025

**on the technical conditions to be met by intersections of railway lines and sidings with  
roads, their location, and the technical conditions for their use <sup>2)</sup>**

Pursuant to Article 7(2)(2) and (3)(2) of the Construction Law Act of 7 July 1994 (Journal of Laws 2024, items 725, 834, 1222, 1847 and 1881), the following is hereby decreed:

Chapter 1

**General provisions**

§ 1. The provisions of the Regulation shall apply to the design, construction, reconstruction, repair and maintenance of intersections of railway lines and sidings with roads, as well as their use.

§ 2. The following shall be taken into account in the design, construction, reconstruction, repair and maintenance of intersections of railway lines and sidings with roads:

- 1) the provisions of the Act of 19 July 2019 on ensuring accessibility for persons with special needs (Journal of Laws 2024, item 1411);
- 2) the risks arising from the vulnerability of these intersections to climate change.

§ 3. The provisions of the Regulation shall not apply to intersections of railway lines and sidings:

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<sup>1)</sup> The Minister for Infrastructure manages the government administration department for transport pursuant to Section 1(2)(3) of the Regulation of the Prime Minister of 18 December 2023 on the specific scope of activities of the Minister for Infrastructure (Journal of Laws [Dziennik Ustaw], item 2725).

<sup>2)</sup> This Act was notified to the European Commission on ..... under the No ....., pursuant to Section 4 of the Cabinet Regulation of 23 December 2002 on the functioning of the national system for notification of standards and legal acts (Journal of Laws, item 2039; and 2004, item 597), which implements the provisions of Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services (codification) (OJ L 241 of 17.9.2015, p. 1).

- 1) with internal roads and service crossings serving the railway manager exclusively for the performance of their tasks;
- 2) that are intersections of a road and a railway line or siding where no rail traffic has been authorised by the railway manager.

§ 4. For the purposes of this Regulation the following definitions shall apply:

- 1) length of level crossing — a section of a road limited on two sides by bar gates or, in the absence thereof, a section of road the extremities of which are defined by a distance of 4 m from each of the outer rails;
- 2) approach road to the level crossing — a 30 m section of a road measured on the road axis on each side of the level crossing from its extremities;
- 3) road — a public road within the meaning of Article 1 of the Act of 21 March 1985 on public roads (Journal of Laws 2024, items 320 and 1222);
- 4) forest road — forest road within the meaning of Article 6(1)(8) of the Forest Act of 28 September 1991 (Journal of Laws 2024, items 530, 1473 and 1907; 2025, item 179);
- 5) internal road — an internal road within the meaning of Article 8(1) of the Act of 21 March 1985 on public roads;
- 6) road of defensive importance — a road of defensive importance within the meaning of Article 4(11b) of the Act of 21 March 1985 on public roads;
- 7) exposure factor — the product of multiplying the number of passing road and railway vehicles and manoeuvres performed at the level crossing over one day;
- 8) semi-automatic crossing system — a crossing system in which traffic protection devices at a level crossing are manually controlled by an employee operating a level crossing;
- 9) level crossing — an intersection of a railway line or siding with a road at the same level, other than a crossing, including a railway crossing referred to in the Road Traffic Act of 20 June 1997 (Journal of Laws 2024, item 1251);
- 10) remote-operated level crossing — a level crossing where the operating site is located at least 60 m from the level crossing axis, measured along the track axis, or where the visibility of the level crossing from the operating site is not maintained;
- 11) pedestrian level crossing — a same-level intersection intended exclusively for pedestrian traffic; a passageway within a railway station or a passenger stop allowing passengers to access the platform—referred to in the provisions issued pursuant to Article 7(2)(2) of

the Construction Law Act of 7 July 1994 regarding the technical conditions to be met by railway structures and their location—are not considered pedestrian level crossings;

- 12) barrier — a set of devices consisting of a barrier drive and a barrier boom closing road traffic and pedestrian traffic at a level crossing or pedestrian level crossing;
- 13) automatic crossing system — a crossing system in which traffic protection devices at a level crossing are automatically controlled by an incoming railway vehicle or another rail traffic control system;
- 14) multi-level intersection — an intersection where a road goes over a railway line or siding or passes under a railway line or siding;
- 15) traffic indicator — a set of optical electrical or optical electronic devices (signalling chambers) used to transmit signals intended for road users, which are of a shape and importance compliant with the regulations on road signs and signals in road traffic and on road safety devices, the conditions to be met by road signs and signals and road safety devices, and the basic conditions for their positioning within the road lane;
- 16) crossing system — a system installed at a level crossing ensuring the operation and performance monitoring of the traffic protection devices forming that system;
- 17) width of the level crossing — width of the road at the level crossing measured between the outermost parts of the road intended for the movement of vehicles and pedestrians;
- 18) semaphore stop signal — a semaphore stop signal referred to in the provisions issued pursuant to Article 17(7) of the Rail Transport Act of 28 March 2003 (Journal of Laws 2024, items 697 and 731) concerning the general conditions for operating railway traffic and signalling;
- 19) railway manager — a railway infrastructure manager or a user of a railway siding within the meaning of Article 4(7) and (10a) of the Rail Transport Act of 28 March 2003, respectively.

## Chapter 2

### **General technical conditions for level crossings and pedestrian level crossings, and the technical conditions for their use**

§ 5. Level crossings and pedestrian level crossings are used on railway lines and sidings at which rail traffic is operated at a speed no higher than 160 km/h.

§ 6. 1. Level crossings and pedestrian level crossings are divided into the following categories:

- 1) A category — level crossings at which road traffic is controlled:
  - a) by authorised employees of a railway manager or railway transport operator who possess the required qualifications,
  - b) by hand signals or crossing systems or devices fitted with barriers closing off the entire width of the road, and traffic signals;
- 2) B category — level crossings at which road traffic is controlled by means of automatic crossing systems equipped with traffic signals and barriers closing off the traffic in the direction of:
  - a) the entry onto the crossing, or
  - b) the entry onto and the exit from the crossing;
- 3) C category — level crossings on which road traffic is controlled by means of automatic crossing systems equipped only with traffic signals;
- 4) D category — level crossings which are not equipped with crossing systems or traffic safety devices, where the traffic is controlled by means of road signs;
- 5) E category — pedestrian level crossings equipped with:
  - a) semi-automatic crossing systems or automatic crossing systems, or
  - b) barriers or safety mazes;
- 6) F category — level crossings or pedestrian level crossings located on internal roads, subject to Section 12(2).

2. For C category level crossings, it is permitted to use non-automatic crossing systems operated by authorised employees of the railway manager or railway transport operator, and in the case of narrow-gauge rail lines, it is permitted to use such systems also for B category level crossings.

§ 7. 1. A category includes level crossings where:

- 1) the road crosses the railway tracks onto which—in accordance with the technical regulations referred to in the provisions issued pursuant to Article 17(7) of the Rail Transport Act of 28 March 2003, concerning the general conditions for operating rail traffic and signalling, or with the rules of procedure of the railway siding—railway wagons are hump shunted or re-directed during re-marshalling operations; or
- 2) the technical conditions laid down for B, C or D category level crossings are not met.

2. A semi-automatic crossing system with either on-site or remote operation may be used at an A category level crossing.

3. In order to increase safety at a level crossing operated on-site or at a level crossing operated remotely, a level crossing may be equipped with:

- 1) semaphore stop signals;
- 2) the 'Radio-STOP' system communication equipment.

4. Where justified by local conditions, taking into account safety at a level crossing, it is permissible that:

- 1) barriers at an A category level crossing are temporarily or permanently lowered and lifted at the request of a road user;
- 2) a level crossing is not operated and the barriers remain open during restrictions on the use of a railway line or siding lasting more than 4 hours.

**§ 8.** 1. B category includes level crossings with intersections of railway lines or sidings with roads where the exposure factor is equal to or greater than 150 000.

2. Level crossings of categories lower than B which do not meet the requirements referred to in paragraph 1 may be classified as B category if it is justified by local conditions or by the need to improve railway or road safety.

**§ 9.** C category includes level crossings with intersections of railway lines or sidings with roads where rail traffic on the given section of a railway line or siding is operated at a maximum speed of no more than 140 km/h and the exposure factor is:

- 1) equal to or greater than 60 000 and lower than 150 000, or
- 2) lower than 60 000, and the visibility of railway vehicles from the road before the level crossing does not comply with the technical conditions specified for a D category level crossing.

**§ 10.** D category includes level crossings with intersections of railway lines or sidings with roads where the road on one level crossing does not go through more than two railway tracks and in the case of sidings and narrow-gauge rail lines, no more than three railway tracks, and:

- 1) the exposure factor is lower than 60 000 and the rail traffic on the given section of the railway line or siding is operated at a maximum speed of no more than 120 km/h, and the visibility conditions laid down in Part B of Annex 3 to the Regulation are met; or

2) regardless of the visibility conditions, the permissible speed of a railway vehicle at the level crossing does not exceed 20 km/h.

**§ 11.** 1. E category includes pedestrian level crossings through railway tracks.

2. If a pedestrian level crossing passes through more than three railway tracks or if it does not meet the visibility conditions laid down in Part C of Annex 3 to the Regulation, it must be equipped with semi-automatic or automatic crossing systems.

3. It is permissible that a pedestrian level crossing be secured by safety mazes or barriers in the case of a pedestrian level crossing through railway tracks onto which railway wagons are not hump shunted or re-directed during re-marshalling operations if:

- 1) the pedestrian level crossing complies with the visibility conditions laid down in Part C of Annex 3 to the Regulation; or
- 2) the speed of the rail vehicle at the pedestrian level crossing does not exceed 20 km/h, regardless of the visibility conditions.

4. A safety maze securing a pedestrian level crossing through railway tracks shall be installed in such a way that the pedestrian needs to change the direction in which they are walking before crossing the railway track.

5. Barriers securing a pedestrian level crossing shall be placed in locations which do not allow for any construction to be built around the maze, in a way that will make a pedestrian change the direction in which they are walking before crossing the railway track.

6. In case of multiple-track lines, barriers, including maze barriers, protecting the entrance onto the railway track, require that pedestrians walk in a direction opposite to the main direction of movement of the railway vehicle on the nearest railway track.

7. A pedestrian level crossing shall provide conditions for the movement of persons with disabilities and persons with reduced mobility, in particular with the use of visual and tactile markings which comply with the technical specifications for interoperability within the meaning of Article 4(33) of the Rail Transport Act of 28 March 2003 relating to accessibility of the Union's rail system for persons with disabilities and persons with reduced mobility.

**§ 12.** 1. F category includes level crossings and pedestrian level crossings located on internal roads.

2. F category does not include level crossings or pedestrian level crossings at intersections of:

- 1) a narrow-gauge railway line with an internal road or a forest road;

2) a railway siding with an internal road or a forest road.

3. F category level and pedestrian level crossings shall be equipped with:

1) continuously closed bar gates, lifted when necessary by users, or

2) crossing systems or devices referred to in Section 6(1)(1)(b) or 6(1)(2).

4. F category level crossings and pedestrian level crossings shall be operated on the basis of a contract concluded between the railway manager and the user of the level crossing or pedestrian level crossing, which shall specify, in particular, the means of securing and using them.

**§ 13.** If a level crossing meets the conditions referred to in Sections 7(1), 8, 9 or 10(1) for more than one category, the higher category shall be applied to that crossing.

**§ 14.** 1. The exposure factor at a level crossing shall be calculated on the basis of measurements of rail traffic and road traffic.

2. The volume of rail traffic and road traffic shall be measured at level crossings of categories A, B, C and D.

3. The volume of road traffic and rail traffic shall be measured at the request of competent authorities, the State Commission for the Investigation of Railway Accidents or the railway commission referred to in Article 28m of the Rail Transport Act of 28 March 2003, a road manager or a railway manager.

4. In order to verify and change the categories of level crossings and the means of securing them, railway managers and road managers shall communicate to each other the up-to-date results of measurements of the volume of rail or road traffic, respectively.

5. The conditions and method of measuring the volume of rail traffic and road traffic and calculating the exposure factor are specified in Annex 1 to the Regulation.

**§ 15.** 1. For a level crossing or a pedestrian level crossing, the railway manager shall draw up a register and keep it up to date.

2. In the case of a level crossing or pedestrian level crossing through which railway tracks of two or more railway managers run, the register shall be drawn up and updated by the manager, who identifies the highest volume of rail traffic.

3. The register shall be kept for the period of operation of the level crossing or pedestrian level crossing.

4. The register template and scope are set out in Annex 2 to the Regulation.

**§ 16.** Railway managers whose railway tracks run through a level crossing or a pedestrian level crossing shall provide the manager referred to in Section 15(2), according to their competence, with data necessary to draw up and update the records.

**§ 17. 1.** At level crossings and pedestrian level crossings secured in accordance with the technical conditions specified for the D category, the visibility conditions affecting the safe use of level crossings and pedestrian level crossings shall be ensured.

2. The railway manager and road manager shall check the visibility conditions referred to in paragraph 1:

- 1) once a year, between June and September;
- 2) after any accident or significant accident within the meaning of Article 4(45) or (46) of the Rail Transport Act of 28 March 2003 at a given level crossing or pedestrian level crossing.

3. The conditions and method for checking the visibility of level crossings and pedestrian level crossings are set out in Annex 3 to the Regulation.

**§ 18.** No rail joints or guard rails shall be used within a level crossing.

**§ 19. 1.** If the length of the road section between the railway tracks, measured between the internal rails of the railway tracks along the road axis, is 32 m or more, the intersection of each railway track or each group of railway tracks with the road shall be treated as a separate level crossing.

2. The provision of paragraph 1 shall not apply to roads situated within a railway station which allow emergency services access.

**§ 20.** Where access to a level crossing involves several roads, all directions of movement shall be taken into account when determining the way in which it should be secured. In this case, the visibility conditions at a level crossing shall be determined from the locations of the actual course of the road at fixed distances from the railway track.

**§ 21. 1.** Sections between the railway track and the boom barriers shall be separated by handrails hindering access to the railway track by bypassing the barriers, if their location allows for it.

2. The ends of the fence closest to the railway track shall be placed at a distance of 3 m from the outermost rail.

3. A fence impeding access to the rail track by bypassing the boom barriers may be placed parallel to the rail track at a distance of no less than 3 m from the outermost rail.

**§ 22.** 1. The design solutions applied at a level crossing shall ensure efficient departure of road vehicles from the level crossing and their merging into traffic along the traffic route located in the vicinity of the level crossing, in particular by linking the operation of the level crossing systems to the road traffic management systems.

2. Where justified by local conditions, access to a B category level crossing shall be protected against entry of a road vehicle through a lane that allows for the bypassing of a lowered boom barrier, in particular by using traffic islands or separators the construction of which makes it possible to pass through in an emergency.

**§ 23.** As part of the inspection referred to in Article 62(1)(4) of the Construction Law Act of 7 July 1994, the technical condition of level crossings and pedestrian level crossings shall be checked immediately after each of the following:

- 1) an accident or significant accident at the level crossing or pedestrian level crossing;
- 2) an incident, within the meaning of Article 4(47) of the Rail Transport Act of 28 March 2003, relating to a malfunction of rail traffic control equipment as a result of which the road user was not warned and protected against a railway vehicle approaching a level crossing or a pedestrian level crossing equipped with a crossing system.

**§ 24.** 1. Level crossings and pedestrian level crossings shall be operated in such a way as to ensure the safety of rail and road traffic.

2. At a level crossing at which the exposure factor is found to have been exceeded, the speed of the head end of the rail vehicle shall be limited to 50 km/h on the width of the level crossing until the means of securing the level crossing are changed.

3. The detailed conditions for the use of a level crossing and pedestrian level crossing in the event of non-operation of traffic protection devices or the absence of an employee operating a level crossing or pedestrian level crossing are set out in Annex 4 to the Regulation.

## Chapter 3

### **Design of level crossings and pedestrian level crossings**

§ 25. 1. When designing a new railway line or railway siding, the distance between level crossings, measured along the railway line, shall not be less than 3 km.

2. A new level crossing shall not be designed at an intersection of an existing railway line or siding with a road if there is a level crossing or a multi-level intersection at a distance not exceeding 3 km from the planned level crossing.

3. The provision of paragraph 2 shall not apply if the level crossing:

- 1) is temporary;
- 2) is of the F category;
- 3) is used in an area where multi-level intersections are located on motorway and express road routes;
- 4) replaces an existing level crossing if the planned crossing improves the safety conditions, in particular the category of the crossing, the angle of the intersection, the gradeline of the road or the visibility conditions.

§ 26. 1. The level crossing and the pedestrian level crossing shall be designed so that the barrier booms, traffic signals and road signs are visible from an observation point located at a height of 1 m above the axis of the road lane. The minimum distances of the observation point from the level crossing or pedestrian level crossing are set out in Table 1 of Part A of Annex 3 to the Regulation.

2. Within the visibility triangles, referred to in paragraph 2 of Part B and paragraph 2 of Part C of Annex 3 to the Regulation, there shall be no objects limiting visibility, in particular no construction works, with the exception of objects related to railway traffic operation whose location outside the visibility triangle is not possible for functional reasons, trees, shrubs and other high crops, advertisement banners within the meaning of Article 4(23) of the Act of 21 March 1985 on public roads, noise barrier elements and other objects not directly related to railway traffic operation.

3. No devices, advertisement banners or other items that may restrict visibility shall be placed at a level crossing or on the road lane covering a distance of up to 20 m on each side of the level crossing measured from the outermost rail of the track.

§ 27. In the design of a D category level crossing located in a trench, in the area of visibility triangles, defined in paragraph 2 of Part B of Annex 3 to the Regulation, an extension of the bottom of the trench to a height of between 1.0 m and 1.2 m above the top of rail is provided for, taking into account the vegetation and snow cover.

§ 28. 1. The angle of intersection of the road axis with the axis of the track of the railway line or siding, hereinafter referred to as ‘the angle of intersection ( $\alpha$ )’, is:

- 1)  $120^\circ \geq \alpha \geq 60^\circ$  — in the case of level crossings secured in accordance with the technical conditions specified for level crossings of the D category,
- 2)  $135^\circ \geq \alpha \geq 45^\circ$  — for other level crossings

— whereby the angle of intersection ( $\alpha$ ) shall be determined taking into account the course of the road before the level crossing and after the level crossing, in order to simplify the geometry of the road.

2. On narrow-gauge railway lines it is permitted to apply an angle of intersection ( $\alpha$ ) that fulfils the following condition:

$$135^\circ \geq \alpha \geq 45^\circ.$$

3. Where the road intersects with a railway siding, an angle of intersection ( $\alpha$ ) between  $30^\circ$  and  $150^\circ$  is permitted if one of the following conditions is met:

- 1) the visibility of the railway vehicle is maintained on both sides of the road from an observation point at a distance of at least 50 m from the outermost rail of the nearest railway track at the level crossing, assuming that the railway vehicle is at a distance of no less than 150 m from the level crossing;
- 2) rotating barriers are used that close the railway track or the road during the passage of a railway vehicle;
- 3) on-site operated barriers are used.

4. Paragraphs 1 to 3 shall not apply to temporary level crossings.

5. In case of a reconstruction of a level crossing or pedestrian level crossing, if it is not possible to comply with the conditions referred to in paragraphs 1 to 3, the intersection angle ( $\alpha$ ) shall not worsen compared to the conditions before the reconstruction.

§ 29. 1. The angle of intersection ( $\alpha$ ) shall be determined as the angle between the axis of the road and the axis of the railway track situated on the left side of the road user approaching the level crossing, in accordance with Figure 1 of Part B of Annex 3 to the Regulation.

2. The angle of intersection ( $\alpha$ ) in the case of a railway line or siding in an arc shall be determined as the angle between the axis of the road and the tangent to the axis of the railway track at the point of intersection of these axes.

3. The intersection angle ( $\alpha$ ), irrespective of the number of road lanes and the number of railway tracks, shall mean the smallest of the designated angles between the axis of each railway track and the axis of the road.

**§ 30.** 1. The profiling of the gradeline of the road at the length of the level crossing and at the access to the level crossing shall be designed in accordance with the conditions set out in Annex 5 to the Regulation.

2. Road gradeline at the access or access to a pedestrian level crossing shall be designed in such a way so that the longitudinal gradient of the passageway for pedestrians, shared pedestrian and bicycle path and bicycle path, within the meaning of Article 2(4a)–(5) of the Road Traffic Act of 20 June 1997 at the pedestrian or vehicle access to the pedestrian level crossing, respectively, does not exceed 3% at a distance of not less than 3 m, counting from the outermost rail of the railway track. This condition shall be deemed met if the value of maximum longitudinal inclination is retained on a tangent of the vertical curve set at a distance of 3 m from the outermost rail of the rail track.

3. The vertical curve of the road shall not be used between the outermost rails of the level crossing. Where justified by local conditions, vertical curve of the road between the outermost rails of the level crossing may be used if this does not result in a deterioration of railway and road traffic safety.

**§ 31.** 1. A level crossing with a road in a straight line shall be designed so that the beginning of the closest curvature of the horizontal road in the part intended for vehicle traffic is at least 6 m away from the outermost rail of the rail track.

2. A level crossing with a railway line or siding that follows a straight line and a road on a horizontal curve shall be designed to meet the following cumulative conditions:

- 1) for the length of the level crossing, the lateral inclination of the carriageway corresponds to the longitudinal inclination of the railway tracks;
- 2) the widening of the carriageway on the horizontal curves shall be carried out through a level crossing.

3. The level crossing shall be designed so that it is not located on sections of tilt ramps of a railway line or siding.

4. A level crossing through which the road passes in a straight line and the single-track rail line or the railway siding—in a horizontal curve, shall be designed so that the radius of the horizontal curve of the railway track allows the track of both rails to be placed horizontally or in a lateral inclination, in accordance with the longitudinal inclination of the road over the length of the crossing not exceeding 8%, in the case of regular and broad-gauge railway lines, and 2 % in the case of a narrow-gauge railway line.

**§ 32.** 1. The road parameters at the level crossing and its approach roads correspond to the road parameters applicable for the road category and class concerned and enable the construction of traffic safety devices.

2. The construction of the road surface on a level crossing shall be carried out using the same technical and material solutions for the entire length of the level crossing and shall take into account the volume of road traffic.

3. In the case of reconstruction or expansion of a road, the investor shall adapt the road surface at the level crossing to the technical characteristics of the road being reconstructed or expanded.

4. In the construction or reconstruction of a railway track forming part of a level crossing through which a road of defensive importance or a section thereof runs, the provisions concerning technical and defence requirements regarding public roads of defensive importance shall apply.

**§ 33.** 1. The provisions issued pursuant to Article 7(2)(2) of the Construction Law Act of 7 July 1994 concerning technical conditions to be met by public roads and their location shall apply respectively to foot paths, pedestrian and bicycle paths and bicycle lanes at a level crossing or pedestrian level crossing.

2. At a level crossing, foot paths, pedestrian and bicycle paths or bicycle lanes shall not be elevated above the edge of the carriageway.

3. The surface of a foot path, pedestrian and bicycle path and bicycle lane at a level crossing shall be distinguished from the rest of the carriageway surface by means of horizontal marking or contrasting colours of the surface.

4. In the case of distinguishing foot paths, pedestrian and bicycle paths and bicycle lanes, it is permissible that they are secured in the same manner as E category pedestrian level crossings.

§ 34. A level crossing and a pedestrian level crossing shall not be designed along the length of railway turnouts.

§ 35. 1. In the case of dirt roads, on the road section adjacent to the level crossing, a reinforced surface shall be used over a length of at least 10 m from the outermost rail on each side of the level crossing, and where the dirt roads are situated on level crossings comprising two or more railway tracks, also between the tracks. If the slope of the dirt road towards the level crossing exceeds 5 %, this length shall be increased by 10 m.

2. At level crossings and approach roads to level crossings with reinforced surface, which are crossed by military tracked vehicles, at a length of 30 m from the extreme rails, the width of the carriageway with at least reinforced surface shall be at least 4.5 m, and the cross-section of the road and the width of its individual parts shall be at least 7 m.

§ 36. 1. The grooves at level crossings shall comply with the requirements stemming from the lower part of the structure gauge referred to in the provisions issued pursuant to Article 7(2)(2) of the Construction Law Act of 7 July 1994 concerning the technical conditions to be met by railway structures and their location, taking into account the maximum extensions of the railway track resulting from railway track maintenance conditions, and shall allow for the free passage of rail vehicle wheel edges between the road surface at the level crossing inside the track and the rails, and, at the same time, shall be as small as possible to facilitate the movement of road vehicles and pedestrians.

2. The total widths of the grooves may be increased by the permissible railway track gauge tolerances, but by no more than 35 mm.

§ 37. Construction of the track bed on a level crossing shall:

- 1) meet the technical conditions for a track bed on route or at the station level set out in the provisions issued on the basis of Article 7(2)(2) of the Construction Law Act of 7 July 1994, concerning the technical conditions to be met by railway structures and their location, except that, where justified by local conditions, the reinforcement of the track bed shall be used;
- 2) ensure the discharge of water from the surface of the level crossing and the flow of water in drainage structures along the railway track, whereas the design of the drainage structures of the level crossing may be integrated into the drainage system of the road.

§ 38. In the case of heavy traffic on a road situated on a level crossing or its inclination towards the railway track, protection shall be used against:

- 1) The run-off of water and mud from the road to the level crossing;
- 2) the penetration of mud into the ballast between the rails and the road surface at the level crossing.

## Chapter 4

### **General technical conditions for multi-level intersections**

**§ 39.** 1. A multi-level intersection shall be used during the construction of a railway line, railway siding or road if:

- 1) the railway line or railway siding intersects with a motorway or an express road; or
- 2) the movement of railway vehicles on a railway line which intersects with a road is or is planned to be carried out at speeds higher than 160 km/h; or
- 3) the road crosses the station tracks between the outermost turnouts; or
- 4) the railway line or siding intersect with the road where:
  - a) the total closure time of a level crossing for road vehicles is longer than 12 hours a day, or
  - b) favourable terrain conditions exist and the use of a multi-level intersection is economically or defensively justified, or
  - c) it is the case in a built-up area, excluding railway sidings, or
  - d) the traffic volume is at least 10 000 vehicles per day.

2. A multi-level intersection shall be used for the reconstruction of a railway line, railway siding or road in the cases referred to in paragraph 1(1) and (2), and paragraph (4)(a) and (b).

3. The provisions of paragraph 1(3) and (4) shall not apply to multi-level intersections reconstructed or moved in connection with a temporary re-routing of a road or railway line.

**§ 40.** 1. No level crossings may exist at a distance of up to 3 km on either side of the constructed multi-level intersection.

2. The provisions of paragraph 1 shall not apply to:

- 1) multi-level intersections along motorways or express roads;
- 2) level crossings:
  - a) that are temporary,
  - b) of the F category.

**§ 41.** The provisions of Section 28(1)–(3) shall not apply to multi-level intersections.

§ 42. Multi-level intersections shall be designed as permanent structures.

§ 43. 1. The road gauge under a railway flyover shall meet the conditions laid down in the provisions issued pursuant to Article 7(2)(2) of the Construction Law Act of 7 July 1994 concerning the technical conditions to be met by public roads and their location. In the case of roads of defence importance or sections thereof, the provisions on technical and defence requirements for public roads of defence importance shall apply.

2. The minimum height of a road viaduct above a railway line or railway siding, counting from the top of rail, shall not affect the structure gauge referred to in the provisions issued pursuant to Article 7(2)(2) of the Construction Act of 7 July 1994 concerning the technical conditions to be met by railway structures and their location.

§ 44. If natural drainage is not possible through the bed of a road located under a railway viaduct, mechanical drainage of water shall be provided.

§ 45. 1. The design of railway viaducts located over roads shall protect road users from contamination from passing railway vehicles and water overflowing from the viaduct.

2. The design of road viaducts located over a railway line shall protect the railway infrastructure from contamination from passing road vehicles, snowploughing and water overflowing from the viaduct.

§ 46. 1. Advertisement banners that are not related to road traffic shall not be placed on railway viaducts within a roadway.

2. Advertisement banners may be placed on railway embankments and abutments, provided that they do not impede the operation of rail traffic.

## Chapter 5

### **General technical conditions for traffic protection systems and devices at level crossings and pedestrian level crossings**

§ 47. At level crossings and pedestrian level crossings, traffic protection systems and devices shall be used which meet the following cumulative conditions:

- 1) they are placed in service in accordance with the relevant provisions for the placing in service of a given type of equipment intended for the operation of rail traffic;

- 2) they meet the safety conditions for rail traffic control equipment set out in the relevant technical specifications and standardisation documents.

§ 48. Computer-based traffic protection systems for level crossings and pedestrian level crossings shall be capable of recording two groups of operational events:

- 1) failures, faults and other malfunctions in the operation of the system;
- 2) changes in functional states.

§ 49. 1. At level crossings and pedestrian level crossings, road traffic signals shall be used which meet the conditions laid down in the provisions on road signs and signals and road safety devices, the conditions to be met by road signs and signals and road safety devices and the basic conditions for their location in the roadway, provided that:

- 1) the mast of the signalling device forbidding entry onto level crossings and pedestrian level crossings shall be marked with red and white stripes 300 mm wide and the first stripe on the side of the light signals shall be red;
- 2) the horizontal axis of the lights is located between 2.2 m and 2.7 m from the level of the carriageway surface;
- 3) the distance between the vertical centres of the lights (gauge) is 600 mm;
- 4) the traffic signalling device allows for the G-3 or G-4 road sign to be affixed over the light heads ('St Andrew's cross before one-track railway crossing' or 'St Andrew's cross before a multi-track railway crossing');
- 5) red lights on the traffic signalling device flash alternately at a frequency of 50 to 70 times per minute;
- 6) the traffic light signal shall be visible from a distance of at least 100 m in sunny weather and, if possible, not visible to railway vehicle drivers.

2. If it is not possible to achieve the visibility of the traffic signalling device from the distance specified in paragraph 1 of Part A of Annex 3 to the Regulation, it may be placed on a boom above the carriageway.

3. Where justified by local conditions, the traffic signalling device shall be equipped with a device emitting an audible signal.

4. The traffic signalling device shall be located on level crossings of categories A, B and C, with the exception of an A category level crossings at which road traffic is controlled by hand signals.

5. A traffic signalling device located at an A category level crossing operated remotely shall be equipped with acoustic devices activated simultaneously with the traffic signals and emitting signal until the lowest end position of the barriers is reached.

6. At an A category level crossing operated on site, where necessary, in particular in the case of high pedestrian traffic, acoustic devices shall be used by the barriers. The number and location of the acoustic devices shall ensure that the acoustic signal can be heard from a distance of up to 30 m from the place of installation.

7. A traffic signalling device equipped with acoustic devices shall allow for the sound intensity of the signal to be reduced or switched off if its use constitutes a nuisance to the environment and its silencing or switching off does not compromise safety at a level crossing or pedestrian level crossing.

**§ 50.** 1. Barrier booms shall meet the conditions laid down in the provisions on road signs and signals and road safety devices, the conditions to be met by road signs and signals and road safety devices and the basic conditions for their location in the roadway, and the following conditions:

- 1) at least three red flashing lights shall be installed on the barrier booms; however, if the length of the boom is less than 2 m, installation of two lights is permitted;
- 2) for the red flashing lights installed on barrier booms:
  - a) the first light at the free end of the barrier boom closing the entire width of the carriageway shall be placed no more than 750 mm from the free end of the barrier boom and in the case of a barrier boom closing the lanes enabling entry to the crossing, no more than 450 mm from the free end of the boom;
  - b) all lights shall flash at a frequency of 50 to 70 times per minute;
- 3) lights on the barrier booms:
  - a) shall be supplied with safe voltage,
  - b) shall be made with incandescent or non-incandescent technology capable of maintaining the required colour and visibility and they shall not cause glare,
  - c) under normal conditions of visibility at a straight road axis, they shall be visible at level crossing approach roads:
    - from a distance of 300 m at night;
    - from a distance of 100 m during the day;

- d) shall be switched off in the extreme upper position of the barrier boom and reactivated at the same time as the boom starts to lower with a tolerance of 1 second and shall continue until the extreme upper position is reached again;
- 4) the barrier boom shall be equipped with boom continuity control circuits controlled by a traffic protection system, with the exception of booms in a semi-automatic crossing system operated on site;
- 5) the barrier drive shall be deactivated from further operation either manually or automatically if discontinuity of the barrier boom connected to that drive is detected;
- 6) a barrier boom in an automatic crossing system shall comprise a protective device (a fuse) protecting against damage in the event of breakage of the boom;
- 7) the structure of the barrier boom shall ensure resistance to wind speeds of up to 35 m/s.

2. Barrier booms on railway lines or electrified railway sidings the length of which exceeds 6.5 m, shall be made of electrically non-conducting materials.

3. The requirements referred to in paragraphs 1 and 2 shall not apply to barrier booms referred to in Section 12(3)(1).

**§ 51.** A device generating sound signals (acoustic device) shall meet the following conditions:

- 1) it is a mechanical, electrical or electronic device;
- 2) the generated acoustic signal imitates the sound of a bell or is a signal with intermittent or modulated sound;
- 3) the acoustic signal is audible at a distance of up to 30 m from the place where the acoustic device is installed, measured along the axis of the road;
- 4) the frequency of the signal referred to in paragraph 2 is between 50 and 120 times per minute.

**§ 52.** 1. Where justified by local conditions, the traffic protection system on level crossings and pedestrian level crossings shall be equipped with semaphore stop signals.

2. The semaphore stop signal shall display, separately for the railway track and the direction of travel of the railway vehicle, the signals specified in the provisions issued pursuant to Article 17(7) of the Rail Transport Act of 28 March 2003 concerning the general conditions for railway traffic operation and signalling.

3. The indications of the semaphore stop signal shall depend at least on the following conditions of the crossing system:

- 1) the condition and technical fitness of traffic signalling devices;
- 2) the condition of continuity of the barrier booms;
- 3) the determination of the correct functional condition of the barrier drives in the previous warning cycle;
- 4) the condition and technical fitness of track–vehicle interaction devices;
- 5) information on fire hazard in the container.

4. Where the level crossing system is dependent on or connected to a station device system, crossing system conditions referred to in paragraph 3 shall be taken into account.

**§ 53.** The level crossing and pedestrian level crossing traffic protection system shall be equipped with an emergency power supply system ensuring the operation of the system in the absence of electricity from the primary source for at least 8 hours in the case of a level crossing secured as for category A or B and at least 24 hours in the case of a level crossing secured as for category C.

**§ 54. 1.** Boom barriers at a level crossing shall be installed perpendicular to the axis of the road in such a way that the distance measured on the road axis to the axis of the railway track at the point of the barrier boom nearest to the outermost rail of the railway track is no less than 5 m.

2. Boom barriers at a pedestrian level crossing shall be installed perpendicular to the road axis outside the railway structure gauge referred to in the provisions issued pursuant to Article 7(2)(2) of the Construction Law Act of 7 July 1994 regarding the technical conditions to be met by railway structures and their location, taking into account local conditions.

3. Where justified by local conditions, the barriers shall be installed parallel to the railway track within the distance indicated in paragraphs 1 or 2.

**§ 55.** Where justified by local conditions, the following shall be used:

- 1) CCTV system equipment with video recording functionality;
- 2) recording equipment within the meaning of Article 2(59) of the Road Traffic Act of 20 June 1997;
- 3) other devices that support the provision of safety at level crossings, including induction loops, radar-based devices, infrared thermal imaging and ultrasonic sensors.

## Chapter 6

### **Detailed technical conditions for semi-automatic crossing systems ensuring traffic safety on level crossings and pedestrian level crossings**

§ 56. 1. A post of a signalman operating a level crossing or a pedestrian level crossing shall be equipped with a separate guard communication system, which may be:

- 1) a wired communication system with a loud telephone ringing sound repeater installed outside the post, used to ensure the communication of the signalman operating a level crossing or pedestrian level crossing with train dispatchers of the nearest signalling stations;
- 2) a system based on the exchange of information between train dispatchers of the nearest signalling stations and a signalman operating a level crossing or a pedestrian level crossing, with a loud repeater of sound signals installed outside the signalman's post operating a level crossing or a pedestrian level crossing, performing the following functions:
  - a) checks on the approach of a railway vehicle to a level crossing or a pedestrian level crossing,
  - b) vigilance checks of the level crossing or pedestrian level crossing operator,
  - c) secure and rapid exchange of information and instructions (telegrams) concerning rail traffic and operational events,
  - d) registration of all information and instructions.

2. The wired communication referred to in paragraph 1(1) shall be used as a backup emergency communication feature for the system referred to in paragraph 1(2).

3. In the case of a level crossing or pedestrian level crossing located at or near a railway station and equipped with the system referred to in paragraph 1(2), the railway vehicle approach control function in that system shall be blocked from the side of the railway station.

§ 57. The post of the signalman operating a level crossing, cabinets and apparatus containers shall be located in such a way that they do not restrict the visibility of the head end of the railway vehicle and of the level crossing from the road at a distance of 5 m.

§ 58. 1. The systems referred to in Section 56(1) shall allow for lowering of the barrier booms at a level crossing or pedestrian level crossing at least 120 seconds before the head end

of the railway vehicle passes through the level crossing or pedestrian level crossing, until the railway vehicle leaves the level crossing or pedestrian level crossing.

2. Paragraph 1 shall not apply to a level crossing or a pedestrian level crossing where the barriers are operated by a train or shunting crew after the railway vehicle or shunting formation has been stopped before the level crossing or pedestrian level crossing.

3. The systems referred to in Section 56(1) shall allow the lowering of the barrier booms at a level crossing or pedestrian level crossing at least 60 seconds before the head end of the railway vehicle passes through the level crossing or pedestrian level crossing, until the railway vehicle leaves the level crossing or pedestrian level crossing, if the post of the signalman operating the level crossing or pedestrian level crossing is equipped with:

- 1) devices for notifying the signalman operating the level crossing or pedestrian level crossing of a railway vehicle's passing through an impact point situated at a fixed distance from the level crossing or pedestrian level crossing, or
- 2) the full-configuration information exchange system referred to in Section 56(1)(2), or
- 3) an auxiliary notification system notifying the signalman operating the level crossing, ensuring the signalman's vigilance control and the exchange and recording of information between neighbouring signalling stations and the post of the signalman operating the level crossing or pedestrian level crossing; or
- 4) automatic light signalling and semaphore stop signals as a means of warning the driver of the status of the crossing devices.

4. Information exchange systems and other devices performing the functions of controlling the approach of a railway vehicle to a level crossing or pedestrian level crossing shall ensure the appearance of automatic information about a moving railway vehicle in no less than 95 seconds.

5. Automatic level crossing systems used as auxiliary equipment for A category level crossings shall be switched on automatically by the moving rail vehicle, irrespective of the position of the barrier booms, with a warning time calculated in accordance with Section 70(4)–(6).

6. The control panel of a signalman operating the level crossing shall allow for an emergency activation of traffic signalling devices and semaphore stop signals to the warning signal 'Osp 1', irrespective of the position of the barrier booms.

7. The semaphore stop signal shall display the warning signal ‘Osp 1’ when the railway vehicle overrun the switching sensors, if:

- 1) the signalman operating the level crossing or pedestrian level crossing has not lowered the barriers;
- 2) no continuity is determined on the barrier boom at a level crossing operated remotely or a pedestrian level crossing operated remotely;
- 3) no traffic signalling device displays a signal in accordance with road traffic regulations on road signs and signals and road safety devices, the conditions to be met by road signs and signals and road safety devices and the basic conditions for their location in the roadway.

**§ 59.** 1. If the barriers are lowered in a way referred to in Section 7(4)(1), an A category level crossing shall be equipped with:

- 1) an actuator protected against unauthorised lifting of the barriers;
- 2) boards informing about the lifting of the barriers at the request of the road user and the manner of making this request, placed in a visible place;
- 3) devices allowing for the communication with the signalman operating the level crossing.

2. At an A category level crossing opened on request, the traffic lights shall be switched off manually or automatically when the barriers are fully lowered, with the possibility of automatically switching on the circuit of the traffic lights at the next barrier lowering cycle.

**§ 60.** An A category level crossing with barriers or a pedestrian level crossing with barriers shall be equipped with traffic signalling devices to warn road users of lowering barriers and leaving the system in a state of warning, which shall be activated with an initial warning time of no less than:

- 1) three seconds for level crossings and pedestrian level crossings operated on-site,
- 2) eight seconds for level crossings and pedestrian level crossings operated remotely — before the barriers are lowered, and kept in operation until they are completely raised again.

**§ 61.** 1. In the absence of visibility of the level crossing with approach roads or pedestrian level crossing from the place of operation, remotely operated barriers shall be equipped with CCTV equipment with image-recording functionality.

2. CCTV system equipment intended to control a level crossing or pedestrian level crossing shall be equipped with an image recording functionality where it is foreseen that a signalman operating a level crossing or a pedestrian level crossing equipped with remotely controlled barriers will be assigned other activities related to the movement of railway vehicles or will operate more than two level crossings or pedestrian level crossings.

3. Barriers with a locked drive, which prevents unauthorised persons from lifting the boom, shall be used in the crossing system associated with station traffic control equipment. The association includes the states of the crossing system referred to in Section 52(3) and the lower limit positions of the barriers.

4. In semi-automatic level crossing systems associated with station equipment, the signal authorising the movement of the railway vehicle shall be emitted only if the booms are in the lower limit position, locked in that position and with barrier drives fixed. The fixation shall not prevent the emergency lifting of the barriers.

5. The barriers closing traffic in the direction of entry to the level crossing and the pedestrian level crossing shall be locked and fixed.

6. The barriers closing traffic in the direction of exiting the level crossing and the pedestrian level crossing shall not be locked or fixed.

7. Barriers closing road traffic in the direction of exiting the level crossing and the pedestrian level crossing shall be equipped with a boom position control, which means that any lifting of the boom at an angle of more than 15 ° from the lower limit position of the boom signals this condition on the control panel.

8. Locking and fixing shall be required for the lower limit positions of the barriers.

9. Position control is required for the lower limit positions of the barriers and the upper limit positions of the barriers.

§ 62. A level crossing or a pedestrian level crossing equipped with remotely controlled semi-automatic crossing systems shall allow for the connecting of a local control panel and on-site emergency service.

§ 63. 1. Where justified by local conditions, the level crossing and the pedestrian level crossing shall be equipped with an adequate number of safety barriers within the level crossing and the pedestrian level crossing.

2. Where left and right carriageways are closed with separate barriers, they shall be separated into two independent functional circuits.

3. The circuits referred to in paragraph 2 shall close or open separately on both sides the entry to a level crossing or pedestrian level crossing and the exit from a level crossing or pedestrian level crossing.

§ 64. The semi-automatic crossing system shall be equipped with a control panel operated by a signalman operating a level crossing or a pedestrian level crossing, allowing for the control and check of the functional conditions of the system.

§ 65. 1. The dashboard referred to in paragraph 64 shall perform the following functions:

- 1) generate signals for lowering and raising the barriers, except that in the case referred to in Section 63(2) these are two independent signals for the barriers closing road traffic in the direction of entry to a level crossing or a pedestrian level crossing and exit from a level crossing or a pedestrian level crossing;
- 2) signals the lower limit position and intermediate position of the barrier booms optically, and signals the raising of a non-locked barrier boom acoustically; in the case referred to in Section 63(2) these are two independent signals for the barriers closing road traffic in the direction of entry onto a level crossing or a pedestrian level crossing and exit from a level crossing or a pedestrian level crossing;
- 3) initiate the signal of activation of the initial warning and signal the activation of the traffic signalling device lights;
- 4) permit the emergency activation of traffic signalling devices and semaphore stop signals in the event of failure of the barrier drives;
- 5) allow for controlled, unconditional deactivation of traffic signalling device lights at A category level crossings;
- 6) allow for the emergency closing of level crossings and pedestrian level crossings without initial warning time;
- 7) signal:
  - a) no voltage in the primary power supply network or no battery charging,
  - b) operation of an emergency power supply system,
  - c) low battery status.

2. If a level crossing is equipped with semaphore stop signals, the control panel shall have the ‘open barriers’ function blocked when there is a railway vehicle approaching a level

crossing between the semaphore stop signals and the level crossing. The ‘open barriers’ function shall be activated in special command mode or using other similar safety measures.

§ 66. 1. Traffic signalling devices placed at level crossings and pedestrian level crossings and barriers are components of a system of traffic protection devices at level crossings or pedestrian level crossings, and shall comply with the requirements set out in the relevant technical specifications and standardisation documents for the construction, maintenance and control of level crossing systems and ancillary devices at level crossings or pedestrian level crossings.

2. Traffic signalling devices placed on level crossings and pedestrian level crossings shall be installed taking into account the following conditions:

- 1) at a level crossing with barriers, at least two signalling devices shall be placed that display a flashing red signal on both sides of the intersection, whereas, if possible, the traffic signalling devices shall be positioned on the right-hand side of the road immediately before the barrier;
- 2) depending on local conditions, signalling devices shall be placed on both right and left hand side of the road, outside the structure gauge referred to in the provisions issued pursuant to Article 7(2)(2) of the Construction Law Act of 7 July 1994 regarding the technical conditions to be met by railway structures and their location, taking into account local conditions;
- 3) at intersections where two or more roads converge, the number of signalling devices shall ensure their visibility from each road;
- 4) signalling devices shall be placed at the crossing, which display a red flashing signal on both sides of the intersection, each at a distance of 3 m from the axis of the outermost railway track.

§ 67. 1. Where justified by the conditions of rail traffic or road traffic, A category level crossings shall be equipped with the systems and equipment referred to in Section 58(3).

2. The track–vehicle interaction points, which activate the system controlling railway vehicle approach to the level crossing or pedestrian level crossing, shall be placed on the railway track at such a distance from the level crossing or pedestrian level crossing that the automatic information is displayed at least 95 seconds before the appearance at the level

crossing or pedestrian level crossing of the head of the fastest railway vehicle on the railway line in question.

3. The automatic activation by a railway vehicle of the devices signalling its approach to a level crossing or a pedestrian level crossing shall be independent of the position of the barrier booms and of the functional states of the other crossing system devices.

4. A device controlling the approach of a railway vehicle to a level crossing or a pedestrian level crossing, installed at the post of the signaller operating the level crossing or pedestrian level crossing, shall consist of an optical and acoustic part, the acoustic part being equipped with a loud signal repeater installed outside the post.

## Chapter 7.

### **Detailed technical conditions for automatic crossing systems ensuring traffic safety on level crossings and pedestrian level crossings**

§ 68. The warning status of the automatic level crossing signalling system shall be indicated:

- 1) at B category level crossings — by means of light signals emitted by traffic signalling devices, by means of a number of barriers depending on the local conditions and, where justified by local conditions, by means of acoustic devices generating sound signals;
- 2) at C category level crossings — by means of light signals emitted by traffic signalling devices, and, where justified by local conditions, by means of acoustic devices generating sound signals.

§ 69. 1. The activation of warning devices of the automatic crossing signalling system shall take place through the passage of a railway vehicle on a track in the direction of a level crossing or a pedestrian level crossing.

2. The deactivation of warning devices of the automatic crossing signalling system and their transition to standby shall take place under the following conditions:

- 1) the acoustic devices generating the sound signal of acoustic signalling devices shall be switched off after the rail vehicle enters onto the impact devices located at the level crossing, provided that no other railway vehicle is located in the area affected by those devices;

- 2) the traffic signalling devices at a C category level crossing shall be switched off or barriers at a B category level crossing shall begin to be raised immediately, but not later than six seconds after the last unit of the railway vehicle has rolled off the impact device located at the level crossing, provided that there is no other railway vehicle in the area affected by those devices;
- 3) traffic signalling devices at a B category level crossing shall be switched off when the barrier booms reach the top limit position, with a permissible deviation of not more than 15 °;
- 4) barrier boom lights shall be switched off when the barrier booms reach the top limit position, with a permissible deviation of no more than 15 °,

**§ 70.** 1. When determining the place of activation of the warning devices of the automatic crossing signalling system, the length of the danger zone of the level crossing and the maximum road speed applicable to the section of railway line or siding shall be taken into account in determining the time that elapses between the moment when the rail vehicle lights activates a red flashing light on the traffic signalling devices and the moment when the head of the railway vehicle reaches the level crossing or the pedestrian level crossing.

2. The length of the danger zone of a level crossing is the sum of the lengths of:

- 1) the road vehicle stopping distance of 3 m, adopted for this purpose as a fixed value;
- 2) the level crossing, measured in metres along the road axis, counting:
  - a) from the traffic signalling device to the barrier drive on the other side of the level crossing — for A and B category level crossings,
  - b) between the traffic signalling device and the structure gauge, referred to in the provisions issued on the basis of Article 7(2)(2) of the Construction Law Act of 7 July 1994, concerning the technical conditions to be met by railway structures and their location, on the opposite side of the level crossing — for C category level crossings;
- 3) a coupled combination of road vehicles of 22 m.

3. The minimum operating times of the individual warning devices of automatic crossing systems shall be calculated for road vehicles passing through the danger zone of a level crossing at a speed of 2 m/s.

4. The minimum automatic crossing system warning time shall be at least 8 seconds longer than the time required for a road vehicle to pass through the danger zone at the speed specified in paragraph 3.

5. The minimum automatic crossing system warning time calculated for the maximum speed applicable on the given section of railway line shall be at least:

- 1) at a B category level crossing with barriers closing the entry onto the level crossing and at a C category level crossing — 30 seconds;
- 2) at a B category level crossing with barriers closing the entrance to and exit from the level crossing — 46 seconds.

6. At a B category level crossing, the warning time including the times referred to in paragraphs 3 to 5 shall take into account the time of:

- 1) an initial warning time for the lowering of the barriers, which means the initial operation time of the light signal until the moment of commencement of the lowering of the barriers — not less than 13 seconds;
- 2) lowering the barriers — no longer than 10 seconds;
- 3) after lowering the barriers until the head of the railway vehicle reaches the level crossing — not less than 7 seconds.

7. The combined warning time for an automatic crossing system shall be no longer than 120 seconds for the fastest railway vehicle on a given railway line in a single warning sequence.

**§ 71.** 1. Where an automatic crossing system is located on a level crossing or a pedestrian level crossing located within a traffic station or on a route, in their vicinity, where local conditions justify such a solution, the display of a semaphore permit signal may be subject to the activation of a system warning or a declaration of its technical fitness and readiness for use, and may occur with a delay ensuring a minimum warning time before the head of the railway vehicle reaches the level crossing or pedestrian level crossing, as specified in accordance with Section 70.

2. In an automatic crossing system, the states of the crossing system referred to in Section 52(3) and the state of activation of traffic signalling devices are dependent on the station rail traffic control equipment.

§ 72. The automatic crossing system shall be equipped with a remote control device located outside the location of the system, intended to supervise the operation, send control commands to a selected system, and to record emergency and functional states of the system. The device shall be installed at the nearest post which operates rail traffic within a given level crossing or pedestrian level crossing, and in the case of railway sidings, separated railway lines with no signalling stations and narrow-gauge railway lines — at another location indicated in the register.

§ 73. 1. At a B category level crossing, the barriers shall close:

- 1) the entry onto a level crossing on either side of the crossing on two-way carriageways, if one pair of barriers is used, or
- 2) the entire width of the carriageway including the entry onto and exit from the level crossing at two-way and one-way carriageways, if one pair or two pairs of barriers are used, whereas if two pairs of barriers are used that close the entire width of the carriageway are used, the entry barriers are lowered first, and then the exit ones.

2. The delay time between reaching the lower limit position by the entrance barriers and the start of lowering of the exit barriers, and in the case of a one-way carriageway — between reaching the lower limit position by the entry barrier and the start of lowering of the exit barriers depends on the actual time of lowering of the barriers and the length of the level crossing.

3. In determining the delay time, account shall be taken of the time needed to for a 22 m road vehicle to leave the dangerous area of the level crossing.

§ 74. In the event of damage to the barriers at a B category level crossing, the operation of traffic lights on traffic signalling devices shall be ensured.

§ 75. Where a B category level crossing has a separate foot path, pedestrian and bicycle path or bicycle lane, where local conditions justify such a solution and technical possibilities exist, it shall be secured by means of barriers operating in a sequence of barriers closing the entrance to the level crossing and additional traffic signalling devices shall be placed.

§ 76. In the event of a failure of an automatic crossing system with barriers that endangers the safety of rail traffic and road traffic, its design shall ensure that the barrier booms are lowered to the lower limit position or that red lights on traffic signalling devices prohibiting entry placed at level crossings and pedestrian level crossings are activated.

§ 77. 1. Traffic signalling devices at a level crossing with barriers or at a pedestrian level crossing shall be positioned directly before the barriers, looking from the road side, maintaining the road gauge on both sides of the level crossing or pedestrian level crossing. Where justified by local conditions, an additional traffic signalling device that prohibits entry onto a level crossing or to a pedestrian level crossing may be placed on the left side of the road or above the road axis while maintaining the road gauge.

2. The distance of the traffic signalling device from the outermost track of the railway shall not be less than:

- 1) 5 m for level crossings;
- 2) 3 m for pedestrian level crossings.

## Chapter 8.

### **Signals, signs, indicators and boards used at level crossings and pedestrian level crossings**

§ 78. 1. Whenever reference is made to road signs or signals or road safety devices in this chapter, they shall mean road signs and signals referred to in the provisions on road signs and signals and road safety devices, and the conditions to be met by road signs and signals and road safety devices.

2. Signs, traffic signalling devices and road safety devices shall be located in accordance with the regulations on the basic conditions for the positioning of traffic signs and signals and road safety devices in the roadway.

§ 79. In order to warn road users approaching a level crossing and a pedestrian level crossing, the following shall be placed:

- 1) warning signs:
  - a) A-9 ‘railway crossing with barriers’ — before a level crossing equipped with barriers, or the sign A-10 ‘railway crossing without barriers’ — before a level crossing not equipped with barriers; before C or D category crossings that are particularly dangerous due to the sharp angle of the intersection of the road with the railway line (below 60 °), the proximity of the railway track running parallel to the road axis or the course of the railway line in an arch – a T-7 plate indicating the

- layout of the tracks and road at the crossing shall be placed under the sign A-10 ‘railway crossing without barriers’;
- b) plate T-10 — indicating the intersection of a road with a railway siding or a railway track of a similar nature — under sign A-30 ‘other danger’, to indicate an A category level crossing without barriers, where road traffic is stopped by an authorised employee during the passage of a railway vehicle;
- 2) prohibitory sign — B-20 ‘stop’ — before a D category level crossing where visibility conditions are not met and before level crossings of categories A, B and C — in the cases specified in Annex No 4 to the Regulation;
- 3) additional signs before level crossings:
- a) G-1a ‘indicator post with three lines placed on the right side of the carriageway’,
  - b) G-1b ‘indicator post with two lines placed on the right side of the carriageway’,
  - c) G-1c ‘indicator post with one line placed on the right side of the carriageway’,
  - d) G-1d ‘indicator post with three lines placed on the left side of the carriageway’,
  - e) G-1e ‘indicator post with two lines placed on the left side of the carriageway’,
  - f) G-1f ‘indicator post with one line placed on the left side of the carriageway’;
- 4) horizontal signs:
- a) P-2, ‘single white line’ — on approach roads to the level crossing and at the level crossing to separate traffic lanes intended for travelling in the same direction,
  - b) P-4, ‘double white line’ — on approach roads to the level crossing and at the level crossing to separate opposite directions of traffic,
  - c) P-7b ‘continuous edge line’ — on the access roads to the level crossing and at the level crossing in order to indicate the edge of the carriageway,
  - d) P-12 ‘absolute stop line - stop’ sign with the P-16 ‘Stop’ sign,
  - e) P-14 ‘conditional stop line consisting of rectangles’ on level crossings of categories A, B, C and D;
- 5) optical traffic management devices — delineating posts U-1a or U-1b:
- a) on approach roads to level crossings without barriers on a road section between 15 m and 20 m from the outermost rails of the track, at intervals of 3 m on either side of the road; if local conditions allow for it, the delineating bars closest to the track shall be located 4 m from the outermost rails of the railway track,
  - b) outside the barriers — in the case of level crossings equipped with barriers;

- 6) information board ‘Automatic signalling’ — under sign A-9 ‘railway crossing with barriers’ and sign A-10 ‘railway crossing without barriers’ — before level crossings of categories B and C.

**§ 80.** 1. In order to warn road users about approaching A category level crossings not equipped with barriers and C and D category crossings, as well as E category pedestrian level crossings not equipped with barriers, the G-3 or G-4 sign shall be placed – ‘St Andrew’s cross before one-track level crossing’ or ‘St Andrew’s cross before a multi-track level crossing’, respectively.

2. For E category crossings not equipped with barriers, a ‘Railway track crossing. Beware of trains.’ warning boards shall be placed below G-3 or G-4 signs (‘St Andrew’s cross before one-track level crossing’ or ‘St Andrew’s cross before a multi-track level crossing’, respectively) or on the fence elements. The boards shall be designed in a way that makes them legible during the day and at night.

**§ 81.** 1. On an electrified railway line, the G-2 sign ‘High voltage’ shall be affixed at the level crossing:

- 1) of categories A, B and C — on the traffic signalling device mast prohibiting entry, below the signal heads or on a separate pole 2.5 m high and placed 5 m from the outermost rail of the railway track;
- 2) of category D — on both sides of the level crossing on the pole to which the G-3 or G-4 sign is affixed (‘St Andrew’s cross before one-track level crossing’ or ‘St Andrew’s cross before a multi-track railway crossing’, respectively), below these signs.

2. At E category pedestrian level crossings, the sign G-2 ‘High voltage’ shall be affixed on a separate pole 2.5 m high and at a distance of 5 m from the outermost rail of the railway track. The sign G-2 ‘High voltage’ may be affixed on the pole to which the G-3 or G-4 sign is affixed (‘St Andrew’s cross before one-track railway crossing’ or ‘St Andrew’s cross before a multi-track railway crossing’, respectively), below these signs.

3. At a level crossing or a pedestrian level crossing where the cables of the overhead contact line are suspended at a height of less than 5.6 m, an information board shall additionally be affixed indicating the height of their suspension.

**§ 82.** If justified by local conditions, the level crossing marking required pursuant to Sections 79–81 may be supplemented by:

- 1) active signs, variable message signs or variable text boards, in line with the conditions laid

down in the provisions on road signs and signals and road safety devices, the conditions to be met by road signs and signals and road safety devices and the basic conditions for their location in the roadway;

- 2) horizontal marking by means of traffic calming lines (rumble strips), speed bumps or additional road surface colouring.

**§ 83.** 1. The W-6a or W-6b signs shall be placed before a level crossing and a pedestrian level crossing by a railway track.

2. The W-6a or W-6b signs shall be placed at a distance, expressed in metres, which is the product of the number of the maximum permitted speed of railway vehicles for a given railway track at the level crossing and pedestrian level crossing, expressed in km/h, multiplied by a factor between 6 and 8, depending on the local conditions.

3. Where a level crossing or a pedestrian level crossing is located at the beginning or at the end of a railway line or track, and it is not possible to place the W-6a or W-6b sign at the distance indicated in paragraph 2, these signs shall be placed at the stopping point of the head end of the railway vehicle starting its journey.

## Chapter 9

### **Technical conditions for the lighting of level crossings and pedestrian level crossings**

**§ 84.** At an A category level crossing with level crossing systems or equipment, a B category level crossing and an E category crossing with supported safety devices, lighting shall be provided at night and, in conditions of reduced air transparency, also during the day.

**§ 85.** Level crossing and pedestrian level crossing lighting shall be placed in a way that does not cause glare to rail vehicle drivers and road users.

**§ 86.** The lighting of the level crossing and pedestrian level crossing shall be designed taking into account the following conditions:

- 1) with regard to the lighting of carriageways, foot paths, bicycle lanes, pedestrian and bicycle paths and other elements of level crossings or pedestrian level crossings:
  - a) the entire level crossing or pedestrian level crossings shall be illuminated,
  - b) the lighting shall not interfere with the visibility of railway signals and indicators and signs at the level crossing or pedestrian level crossing;
- 2) with regard to lighting installations:

- a) light fittings shall be adapted to the conditions of the location of the level crossing or pedestrian level crossing and their width and length,
- b) lighting at level crossings or pedestrian level crossings shall be automatically controlled; manual lighting control may be used at level crossings or pedestrian level crossings operated on site,
- c) light fittings shall be placed 2-4 m before barrier booms, on poles with a height that ensures the required lighting parameters depending on the length and width of the level crossing or pedestrian level crossing, and at an angle of 0-5 ° to the plane of the illuminated area,
- d) the lighting poles shall not limit the visibility of the barrier booms, traffic signalling devices or G-3 and G-4 road signs ('St Andrew's cross before one-track railway crossing' or 'St Andrew's cross before a multi-track railway crossing', respectively) and shall not pose a risk to the safety of rail traffic and road traffic.

§ 87. The number of lighting points shall be determined according to the length and width of the level crossing or pedestrian level crossing, taking into account the values of illuminance and uniformity of illumination in accordance with the standard 'PN-EN 12464-2 Light and lighting — Lighting of workplaces — Part 2: Outdoor workplaces' and subject to the following conditions:

- 1) at a level crossing or pedestrian level crossing up to 8 m wide and 25 m long, one lighting point shall be used on each side of the level crossing or pedestrian level crossing, located on the right side of the road;
- 2) additional lighting points shall be placed on a level crossing or pedestrian level crossing of more than 25 m in length to illuminate the surface of the level crossing or pedestrian level crossing in a way that does not restrict visibility.

## Chapter 10

### **Interim provisions and the final provision**

§ 88. 1. For intersections of railway lines or railway sidings with roads with regard to which, before the date of entry into force of this Regulation:

- 1) an application for a building permit, or an application for a separate decision on approval of the development of the land or premises, or an architectural and construction project, or an application for modification of a building permit, has been submitted;
  - 2) a building permit or a separate decision approving a plot or land development project or building plans and specifications has been issued;
  - 3) a notification of construction or of the performance of other construction works has been submitted in a situation where obtaining a building permit is not required,
  - 4) a decision on legalisation, referred to in Article 49(4) of the Construction Law Act of 7 July 1994, or decisions referred Article 51(4) of the same Act have been issued
- the hitherto regulations shall apply.

2. At the investor's request, submitted to the competent authority of the architectural and construction administration within 21 days of the entry into force of this Regulation, in cases referred to in paragraph 1, the provisions of this Regulation shall apply.

**§ 89.** 1. The existing provisions shall apply in the case of railway investments involving the construction or reconstruction of intersections of railway lines or sidings with roads, for which the tender procedure for the award of a project or construction contract was completed before the entry into force of the draft Regulation.

2. At the investor's request, submitted to the competent authority of the architectural and construction administration within 21 days of the entry into force of this Regulation, in cases referred to in paragraph 1, the provisions of this Regulation shall apply.

**§ 90.** 1. Railway infrastructure managers, railway siding users and road managers shall adapt level crossings and pedestrian level crossings to the requirements set out in this Regulation within seven years from the date of entry into force of the Regulation.

2. On level crossings existing before the date of entry into force of this Regulation, it shall be permissible to leave existing longitudinal slopes of the road.

3. In the event of a change in the location of reused crossing systems which were installed before the date of entry into force of this Regulation, where those systems do not comply with the requirements set out in Chapters 5–7 of this Regulation, the existing rules under which they were installed may apply.

§ 91. This Regulation shall enter into force 14 days after its publication.<sup>3)</sup>

**MINISTER FOR INFRASTRUCTURE**

**in agreement with the:**

**MINISTER FOR DEVELOPMENT**

**AND TECHNOLOGY**

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<sup>3</sup> ) This Regulation was preceded by the Regulation of the Minister for Infrastructure and Development of 20 October 2015 on the technical conditions to be met by intersections of railway lines and sidings with roads and their location (Journal of Laws, item 1744; 2018, item 1876; 2020, item 710; 2023, item 2453; and 2024, item 1552), which, pursuant to Article 66 of the Act of 19 July 2019 on ensuring accessibility for persons with special needs (Journal of Laws 2024, item 1411), expires on the date of entry into force of this Regulation.

**Annex No 1**

**CONDITIONS AND METHOD FOR THE MEASUREMENT OF RAIL TRAFFIC AND  
ROAD TRAFFIC VOLUME AND THE CALCULATION OF THE EXPOSURE FACTOR**

1. Road traffic volume at a category A, B or C level crossing shall be measured at least every five years.

2. Road traffic volume measurements at a D category level crossing shall be made at least every:

- 1) five years — in the case of crossings located along dirt roads or if the last exposure factor did not exceed 20 000;
- 2) two years — if the last exposure factor was between 20 000 and 40 000;
- 3) year — if the last exposure factor exceeded 40 000.

3. The exposure factor of rail traffic at a level crossing shall be measured during the same periods and days as when the road traffic volume was determined.

4. Rail traffic volume at a level crossing shall be measured in April–May or September–October over two consecutive days (Tuesday and Wednesday or Wednesday and Thursday).

5. If there is no rail traffic during the periods referred to in paragraph 4, the arithmetic mean of the two most traffic-intense days in the 12 months preceding the road traffic volume measurements shall be taken as the rail traffic volume. If the calculated rail traffic volume is less than one, rail traffic volume equal to one must be used to calculate the exposure factor.

6. The road manager shall notify the railway manager of the planned date of road traffic volume measurements at the level crossing.

7. A representative of the railway manager shall have the right to participate in the measurement of road traffic volume at the level crossing.

8. All vehicles crossing the level crossing, including bicycles, mopeds, electric scooters and other personal transport equipment, shall be taken into account when measuring road traffic volume at a level crossing. The average daily road traffic volume at the level crossing

shall be calculated as the arithmetic mean of the measurements taken over a period of two days.

9. For the purpose of calculating the exposure factors at level crossings on national and provincial roads, the annual average daily traffic determined on the basis of the latest results of the general traffic measurement shall be assumed to be the traffic volume.

10. The provisions of paragraph 9 shall not apply to the calculation of the exposure factor at D category level crossings for which the last exposure factor exceeded 20 000.

11. When calculating the rail traffic volume, all rail vehicles which have travelled through the level crossing on the given day shall be taken into account. The average daily rail traffic volume at a level crossing is calculated as the arithmetic mean of the measurements taken on two of the same days as the days when road traffic measurements are carried out.

12. When calculating the rail traffic volume at a level crossing where only railway siding access tracks intersect with the road, all crossings of railway vehicles over the month when the road traffic volume measurement was carried out are summed up, and the calculated value is divided by the number of days during which railway traffic was recorded.

13. The obtained results of road traffic and rail traffic volume measurements and the calculated exposure factor shall be recorded in the register.



**2. ROAD/STREET DETAILS (to be provided by the road manager)**

NO	NAME	CAT.	CLASS	KM	NUMBER OF LANES, FOOT PATHS, BICYCLE LANES, PEDESTRIAN AND BICYCLE PATHS / DIVIDING LANES	Speed limit $V_{DOP}$

**3. LOCATION DETAILS (to be provided by the railway manager)**

MUNICIPALITY	DISTRICT	PROVINCE
Area		

**4. LEVEL CROSSING /PEDESTRIAN LEVEL CROSSING DETAILS\*)**

<b>a) road gradient of approach roads to the track (indicate the direction of inclination)</b>	left-hand side		%	long.		m
	right-hand side		%	long.		m
<b>b) width of the road (street) at the level crossing / pedestrian level crossing*)</b>						m
<b>c) width of the carriageway of the road (street) at the level crossing / pedestrian level crossing*)</b>						m
<b>d) width of the carriageway on approach roads</b>	left-hand side		m	right-hand side		m
	<b>e) width of foot paths, bicycle lanes, pedestrian and bicycle paths on approach roads to the level crossing / pedestrian level crossing*)</b>					
pavement	left-hand side		m	bicycle lane	left-hand side	m
	right-hand side		m		right-hand side	m
<b>f) width of the dividing lane on approach roads to the level crossing / pedestrian level crossing*)</b>					left-hand side	m
					right-hand side	m

<b>g) length of a straight road section, as measured from the outermost rail</b>				left-hand side		m
				right-hand side		m
<b>h) length of on the level crossing / pedestrian level crossing*)</b>						m
<b>i) angle of intersection of the road with the railway tracks</b>						degrees
<b>j) railway surface within the level crossing / pedestrian level crossing*)</b>						
track no		construction standard		straight		
				arc radius	m	cant
track no		construction standard		straight		
				arc radius	m	cant
track no		construction standard		straight		
				arc radius	m	cant
<b>k) road surface of the level crossing / pedestrian level crossing*)</b>						
track no		surface type		track no		surface type
<b>l) road surface between the tracks at the level crossing / pedestrian level crossing*)</b>						
intertrack space		surface type				
intertrack space		surface type				
intertrack space		surface type				
<b>m) road surface on the approach roads to the level crossing / pedestrian level crossing*)</b>						
left-hand side		right-hand side				
<b>n) method and design of restricting access to the level crossing / pedestrian level crossing*)</b>						
<b>o) lighting at the level crossing / pedestrian level crossing*)</b>				YES/NO*)		
number of poles:			number of light fittings:			

**5. SITE PLAN OF THE LEVEL CROSSING / PEDESTRIAN LEVEL CROSSING\*), (\*\*)**

A large, empty rectangular box with a thin black border, occupying the majority of the page below the header. It is intended for a site plan or drawing related to the level crossing mentioned in the header.







	side				
	right-hand side		m		m
	left-hand side		m		m
	right-hand side		m		m

## 7. RAIL TRAFFIC PROTECTION AND COMMUNICATION EQUIPMENT

<b>a) system execution technology*)</b>		mechanical			relay		
		relay and computer			computer		
		other					
<b>b) barrier drives</b>							
number	type of drive	boom length	number	boom type	boom length		
<b>c) barrier boom equipment*)</b>		flashing lights			boom continuity check		
		reflecting film			boom fuse		
		other:					
<b>d) principle position of the barriers*)</b>					open	closed	
<b>e) technical data of the crossing system*)</b>			semi-automatic			automatic	
type:							
number and type of signalling devices prohibiting entry placed at level crossings and pedestrian level crossings:							
location of the remote control device:							
number and type of semaphore stop signals:							
<b>f) approaching signal*)</b>		YES	NO	Comments			
<b>g) connection to the station system*)</b>		YES	NO	Comments			
<b>h) acoustic devices*)</b>		YES	NO	Comments			

<b>i) CCTV equipment*)</b>			YES	NO	Comments	
registration	YES	NO	Comments			
number of cameras		pcs	Comments			
location of the monitor						
<b>j) communication equipment at the level crossing / pedestrian level crossing*)</b>					YES	NO
type:						

**8. OPERATION OF LEVEL CROSSING / PEDESTRIAN LEVEL CROSSING\*)**  
 (categories A, E and F with semi-automatic safety devices)

<b>a) operating unit</b>					
<b>b) place of operation (post)</b>					
on-site		remotely			m
<b>c) signalman post</b>					
<b>d) number of level crossings operated from the post</b>					pcs
line		km		cat.	
line		km		cat.	
line		km		cat.	
line		km		cat.	
<b>detailed method of operation is specified in the Regulations for the operation of level crossings or pedestrian level crossings attached to the register</b>					

**9. TRAFFIC VOLUME / EXPOSURE FACTOR**

<b>date of measurement</b>					
<b>road traffic volume</b>					

<b>rail traffic volume</b>					
<b>exposure factor</b>					

<b>date of measurement</b>					
<b>road traffic volume</b>					
<b>rail traffic volume</b>					
<b>exposure factor</b>					

<b>date of measurement</b>					
<b>road traffic volume</b>					
<b>rail traffic volume</b>					
<b>exposure factor</b>					

<b>date of measurement</b>					
<b>road traffic volume</b>					
<b>rail traffic volume</b>					
<b>exposure factor</b>					

<b>date of measurement</b>					
<b>road traffic volume</b>					






**12. LIST OF ANNEXES TO THE REGISTER\*\*\*)**

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Explanatory notes:

	to be completed by the road manager		to be completed by the railway manager
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\*) Delete as appropriate.

\*\*) The site plan shall include the cross section, railway and road markings and the visibility triangles for categories D and E. The site plan shall not contain rail traffic control equipment. If the traffic organisation design is attached to the register, only the railway marking shall be marked on the drawing.

\*\*\*) In the case of a level crossing of categories A, E and F, the register shall be accompanied by the Regulations for the operation of the level crossing or pedestrian level crossing.

**CONDITIONS AND METHOD OF CHECKING VISIBILITY AT  
LEVEL CROSSINGS AND PEDESTRIAN LEVEL CROSSINGS**

**A. Visibility of the level crossing and pedestrian level crossing from the road**

1. Under normal weather conditions, the driver of a road vehicle or a pedestrian, when approaching a level crossing, shall have appropriate visibility of barrier booms, traffic signalling devices and road signs. The minimum distances measured on the road axis at a height of 1 m above the road lane axis, from which, depending on the permissible speed of the road vehicles, the visibility of the level crossing for vehicle drivers is ensured, are set out in Table 1.

Table 1

Permissible speed of road vehicles on the road km/h	Observation point distance [m]
100	140
90	120
80	100
70	80
60	60
50	50
40	40
≤ 30	30

2. The distance from the observation point on the road to the level crossing shall be at least 30 m and for pedestrian level crossings — up to 5 m.

3. Inspection of the visibility distance of the level crossing and pedestrian level crossings shall be carried out from the road side within the time limits specified in Section 17(2) of the Regulation. The results of the verification shall be recorded in the register.

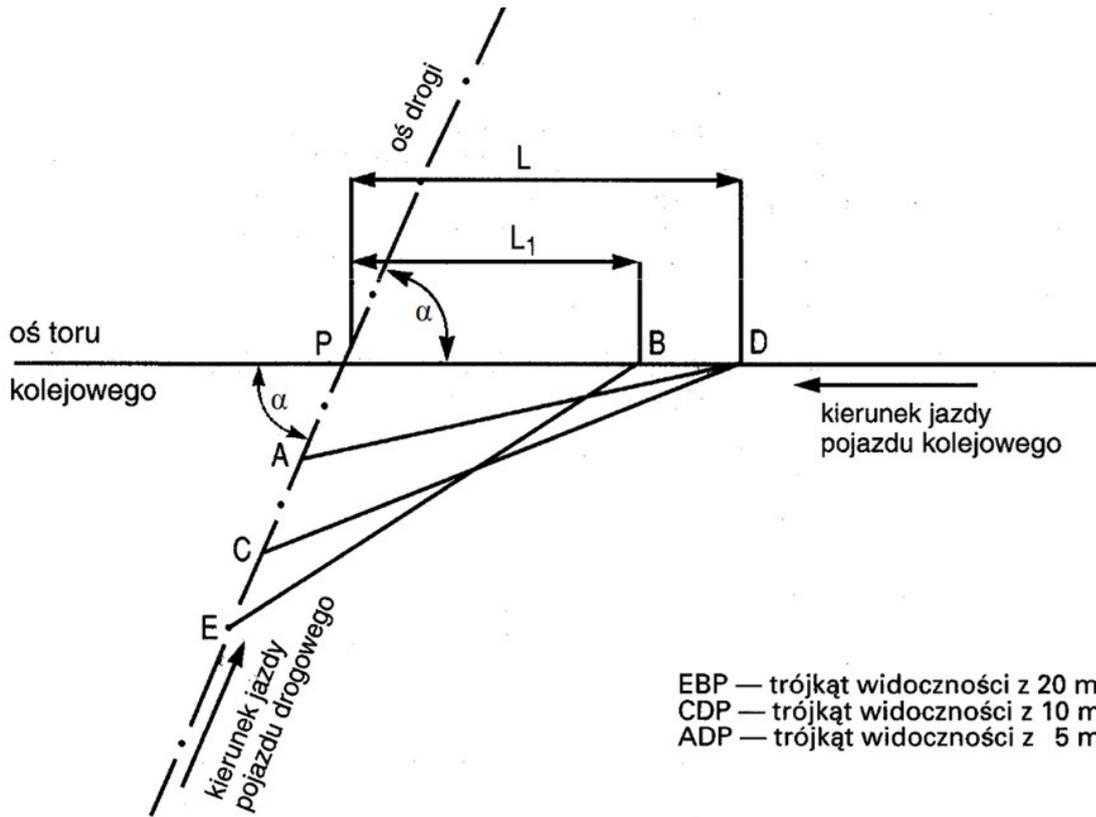
4. In the absence of adequate visibility determined in accordance with Table 1, the speed limit on the road shall be set to the value corresponding to the actual visibility determined in accordance with Table 1.

**B. Visibility of the head end of a railway vehicle from the road before a D category level crossing**

1. Under normal atmospheric conditions, the head end of an approaching railway vehicle, or at least one of its head lights, shall be visible to road vehicle drivers at a distance of at least 20 m measured from the outermost rail on the road axis throughout the whole time when the road vehicle is approaching a D category level crossing.

2. The method for checking the visibility conditions of the head end of a railway vehicle from the road before a level crossing (visibility triangles) is presented in Figure 1.

Figure 1



oś toru  
kolejowego

E

C

A

a

P

L<sub>1</sub>

L

oś drogi

B

D

kierunek jazdy

pojazdu drogowego

kierunek jazdy

pojazdu kolejowego

EBP

trójkąt widoczności z 20 m

CDP

trójkąt widoczności z 10 m

ADP

trójkąt widoczności z 5 m

rail track

axis

E

C

A

a

P

L<sub>1</sub>

L

road axis

B

D

direction of travel

of the road vehicle

direction of travel

of the railway vehicle

EBP

visibility triangle from 20 m

CDP

visibility triangle from 10 m

ADP

visibility triangle from 5 m

3. From observation point E (20 m from the level crossing), the head end of the railway vehicle is visible starting from point B. As the road vehicle approaches the level crossing, the

visibility distance of the head end of the railway vehicle is increased so that at the distance of 10 m from the outermost rail (point C), the head end of the railway vehicle is visible at least from point D. The visibility of the head end of the railway vehicle from the road is established for both sides of the level crossing.

4. The visibility of the head end of a railway vehicle shall be verified in conditions similar to those of road users. Observation of the head end of an approaching railway vehicle shall be carried out from a height of 1 m to 1,2 m above the axis of the road lane. The visibility of the head end of the railway vehicle shall be recorded in the register.

5. If a D category level crossing does not meet the conditions set out in paragraph 3, the head end of the railway vehicle shall be visible from the road at least 5 m from the outermost rail (observation point A) over the entire section of visibility of the head end of the railway vehicle from road L, starting from point D.

6. Where at a D category crossing the visibility conditions for the maximum scheduled speed at a distance of 5 m are not met, the railway vehicle speed at which the visibility conditions at a distance of 5 m are met shall be determined.

7. Where, for a given railway vehicle speed, only visibility from a distance of 5 m is maintained, the B-20 'Stop' sign shall be placed by the road from the side of a D category level crossing at which visibility is maintained only from a distance of 5 m, in accordance with Section 79(2) of the Regulation. On bituminous and concrete roads, the P-12 sign 'absolute stop line - stop' with the P-16 'Stop' sign are also placed in accordance with Section 79(4) of the Regulation.

8. The speeds of the railway vehicles referred to in paragraphs 6 and 7 shall apply for the entire length of the section of visibility of the head end of the railway vehicle from road L.

9. The length of the sections of visibility of the head end of a railway vehicle from the road L and L<sub>1</sub> as shown in Figure 1, shall be determined according to the formulas set out in Table 2.

Table 2

Length of the section of visibility of the head end of the railway vehicle from the road [m] for level crossings through:	
one railway track	at least two railway tracks

$L=5,5 \times V_r$	$L=(5.5+0.25d) \times V_r$
$L_1=3.6 \times V_r$	$L_1=(3.6+0.07d) \times V_r$

where:

$V_r$  — represents the maximum permissible speed of railway vehicles in the level crossing area [km/h],

$D$  — represents the distance between the axes of the outermost railway tracks [m].

10. Where at a D category level crossing the visibility conditions are not met from a distance of 5 m for the railway vehicle speed of up to 40 km/h and the length of the section of visibility of the head end of the railway vehicle from road L is greater than 125 m, the permissible speed limit for railway vehicles  $V_{ogr}$  shall be limited to 40 km/h over the entire length of the section of visibility of the head end of the railway vehicle from road L, and the sign B-20 ‘Stop’ shall be placed before the level crossing on the road.

11. If the visibility conditions at a D category level crossing are not met from a distance of 5 m for a railway vehicle speed of 40 km/h, and the length of the section of visibility of the head end of the railway vehicle from road L is between 95 m and 125 m, the speed limit of  $V_{ogr}$  to 30 km/h shall be introduced for the length of the section of visibility of the head end of the railway vehicle from road L, and the sign B-20 ‘Stop’ shall be placed before the level crossing on the road.

12. If the visibility conditions set out in accordance with paragraphs 10 and 11 are not met at a D category level crossing, a speed limit of 20 km/h for the head end of railway vehicles shall be introduced for the width of the level crossing, and the sign B-20 ‘Stop’ shall be placed before the level crossing on the road.

13. The values indicated in paragraphs 1–12 apply to level crossings for which the intersection angle is no less than 60 ° and at which the G-3 or G-4 sign (‘St Andrew’s cross before one-track railway crossing’ or ‘St Andrew’s cross before a multi-track railway crossing’, respectively) is placed at the distance of 5 m from the outermost rail of the railway measured along the road axis. If the distance of these signs from the outermost rail of the railway track is greater than 5 m, the distance of the section of visibility of the head end of the railway vehicle from road L shall be increased by 0.25  $V_r$ , and the distance of the section of visibility of the head end of the railway vehicle from road  $L_1$  shall be increased by 0.07  $V_r$  per

metre of the increased distance of the sign placement. If the intersection angle is less than  $60^\circ$ , for each  $5^\circ$  below  $60^\circ$  the distance of 20 m (EP section) shall be increased by 1 m when determining the distance of the section of visibility of the head end of a railway vehicle from road  $L_1$  from the acute angle side.

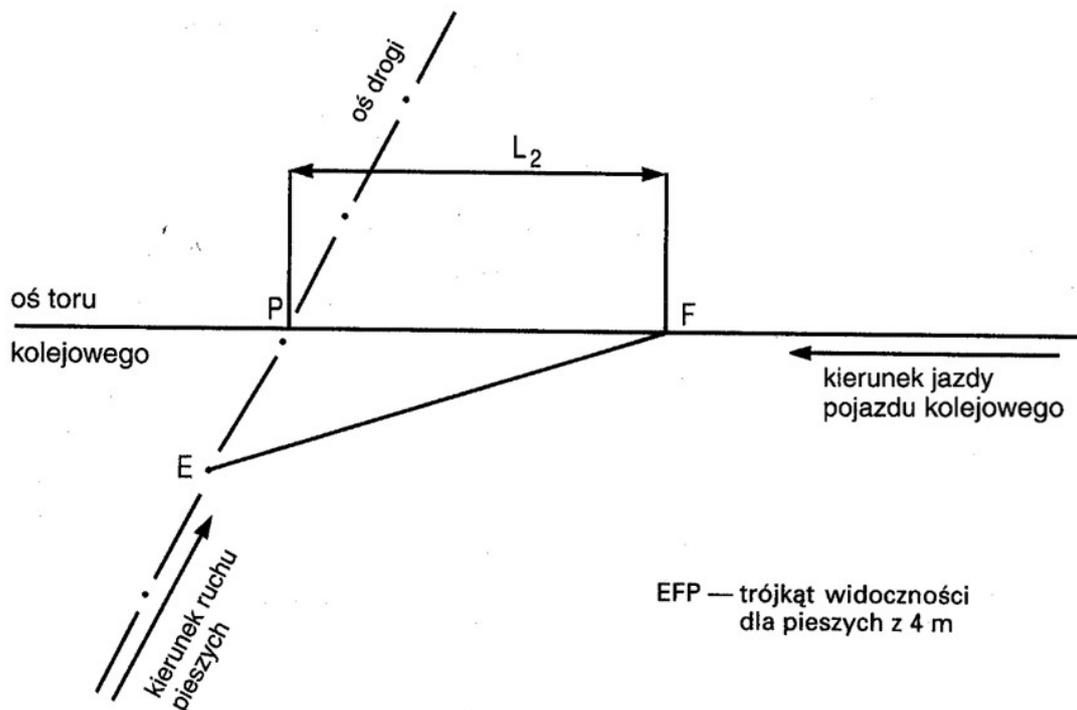
14. The verification of the distance of visibility of the head end of a railway vehicle from the road before the level crossing or the pedestrian level crossing shall be carried out within the deadlines specified in Section 17(2) of the Regulation and recorded in the register.

### C. Railway vehicle head end visibility before E category pedestrian level crossings not equipped with traffic protection devices and crossing systems

1. In normal atmospheric conditions, the head lights of the approaching railway vehicle shall be visible from both sides of the pedestrian crossing throughout the time of the railway vehicle's approaching the pedestrian crossing from the distance measured along the road axis of at least 4 m from the outermost rails of the railway track.

2. The method for checking the visibility conditions of the head of a railway vehicle before an E category crossing is illustrated in Figure 2.

Figure 2.



oś toru	rail track
kolejowego	axis
oś drogi	road axis
P	P
L <sub>2</sub>	L <sub>2</sub>
F	F
E	E
kierunek ruchu	direction of
pieszych	pedestrian traffic
kierunek jazdy	direction of travel
pojazdu kolejowego	of the railway vehicle
EPP	EPP
trójkąt widoczności	pedestrians triangle of
dla pieszych z 4 m	visibility from 4 m

3. The minimum length of the section of visibility of the head end of a railway vehicle from road L<sub>2</sub>, measured from the pedestrian level crossing axis from a distance of 4 m from the outermost rails of the railway track, shall be determined according to the formula:

$$L_2 = 3 \times V_r$$

where:

V<sub>r</sub> is the maximum permissible rail vehicle speed [km/h] in the pedestrian level crossing area.

4. If the visibility conditions for the highest speed of railway vehicles in the pedestrian level crossing area are not met at the crossing, the permissible speed of railway vehicles in that crossing area shall be determined on the basis of the actual length of the section of visibility of the head end of the railway vehicle from road L<sub>2</sub>.

5. If the visibility conditions for railway vehicle speed of 30 km/h for regular-gauge and broad-gauge railway lines are not met at the level crossing, and for narrow-gauge railway lines, for railway vehicle speed of 25 km/h, a speed limit of 20 km/h for the head end of the railway vehicle at the level crossing width shall be introduced.

6. The verification of the distance of visibility of the head end of the railway vehicle from the side of the road before a pedestrian level crossing not equipped with traffic protection devices shall be carried out within the time limits specified in Section 17(2) of the Regulation and shall be recorded in the register.

**Annex 4**

THE DETAILED CONDITIONS FOR THE USE OF A LEVEL CROSSING AND  
PEDESTRIAN LEVEL CROSSING IN THE EVENT OF NON-OPERATION OF TRAFFIC  
PROTECTION DEVICES OR THE ABSENCE OF AN EMPLOYEE OPERATING A  
LEVEL CROSSING OR PEDESTRIAN LEVEL CROSSING

1. If in the event of non-operation of traffic protection devices at A category level crossings, it is possible to have an authorised staff member control road traffic at an intersection within a level crossing:

- 1) the road traffic control carried out by that staff member at the level crossing shall be ensured without delay;
- 2) the level crossing shall be marked with the sign B-32b ‘Damaged barrier’ or the sign B-32c ‘Damaged signalling’, which is placed on both sides of the level crossing; on the right side of the road, immediately before the barrier or traffic signalling device placed at level crossings and pedestrian level crossings at a distance of 1 m from the edge of the carriageway.

2. If in the event of non-operation of traffic protection devices at A category level crossings, it is not possible to have an authorised staff member control road traffic at an intersection within the level crossing and at B and C category level crossings, railway vehicles shall be operated after:

- 1) the introduction of a limit of 20 km/h for the speed of the head end of railway vehicles over the entire width of the level crossing;
- 2) ordering multiple emissions of the acoustic signal Rp-1 ‘Attention’.

3. The provisions of paragraphs 2 and 3 shall also apply to an A category level crossing in the absence of a staff member operating the level crossing.

4. In the case referred to in paragraph 2, the level crossing shall be immediately marked with the sign B-20 ‘Stop’ and the sign B-32b ‘Damaged barrier’ or B-32c ‘Damaged signalling’ shall be placed under that sign. These signs shall be placed on both sides of the level crossing, on the right-hand side of the road, immediately before the barrier or traffic signalling device, at a distance of 1 m from the edge of the carriageway.

5. In the case of closure of one of the railway tracks for the traffic of railway vehicles on a dual-track or multiple-track railway line due to the need to operate a service train in the area covered by the automated crossing system devices, while deactivation of the automated crossing system device on that track has taken place, the provisions of paragraphs 2, 3 and 8 to 11 shall not apply, and the traffic of railway vehicles on the active railway track or tracks shall be carried out without limiting the speed of the head end of the railway vehicles over the entire width of the level crossing or the pedestrian level crossing — following:

- 1) the ordering of an additional acoustic signal Rp-1 ‘Attention’ to be emitted at the section from the W-6a or W-6b sign to the level crossing or pedestrian level crossing;
- 2) the deactivation of an automatic level crossing system device on a closed railway track in a level crossing area or a pedestrian level crossing area;
- 3) the activation of an automatic level crossing system device on a closed railway track in a level crossing or pedestrian level crossing area, at the request of the manager of the service train, for the duration of the passage of that train or, if a service train needs to enter the level crossing or pedestrian level crossing, after:
  - a) stopping the service train immediately before the level crossing or pedestrian level crossing,
  - b) controlling road traffic at a level crossing or pedestrian level crossing by a service train manager or another employee authorised to control road traffic,
  - c) the ordering by the manager of the service train or another employee authorised to control road traffic, after having ascertained that the road vehicles have stopped, that the operator of the service train drives at the permissible speed for the head end of the service train not exceeding 10 km/h over the entire width of the level crossing or pedestrian level crossing,
  - d) the signal Rm-1 ‘Approach’ is given by the manager of the service train or another authorised traffic controller to the operator of the service train.

6. The provisions of paragraph 5 shall also apply in the case of modernisation or maintenance works on railway infrastructure, if there is a need to temporarily dismantle the sensors of the railway vehicle's impact on the devices of the automatic crossing system in a closed railway track.

7. In the case of the construction of traffic protection devices at a level crossing or pedestrian level crossing, until they are put into service, signal chambers and background

discs, together with masts on traffic signalling devices, shall be obscured and the acoustic equipment generating sound signals shall be switched off.

8. Where, for a period of more than seven days, there is no member of staff operating a level crossing at an A category level crossing or where the traffic protection device at level crossings of categories B and C is not operational, the railway manager shall without delay:

- 1) apply to the road manager:
  - a) to change the sign A-9 ‘Railway crossing with barriers’ on level crossings of categories A and B to sign A-10 ‘Railway crossing without barriers’,
  - b) to place a B-20 ‘Stop’ sign positioned before the level crossing,
  - c) where justified, to affix the A-30 ‘Other danger’ sign with a T-14d plate indicating a level crossing where local conditions give rise to a particular risk of accidents, and to introduce a speed limit for road vehicles before the approach road to the level crossing;
- 2) disassemble barrier booms at A and B category level crossings and affix the G-3 sign ‘St Andrew’s cross before one-track level crossing’ or the G-4 sign ‘St Andrew’s cross before a multi-track level crossing’ and, at level crossings of categories B and C, place the B-32c sign ‘Damaged signalling’;
- 3) set the maximum speed of railway vehicles before the level crossing, which is set for the visibility conditions measured at the road axis from the distance of 5 m from the outermost rail of the railway track in accordance with Part B of Annex 3 to the Regulation; the maximum speed of railway vehicles above 20 km/h is permitted at level crossings where the road intersects no more than two railway tracks and the exposure factor does not exceed 60 000;
- 4) order multiple emissions of the Rp-1 ‘Attention’ sound signal;
- 5) establish, in agreement with the road manager, a deadline for restoring the operation or repair of the traffic safety devices at the level crossing of no more than three months from the beginning of the absence of a signalman operating an A category level crossing or the failure of the traffic safety devices.

9. In cases referred to in paragraph 8, the police chief constable competent for the area and the competent road manager shall be notified of the changes in the way the level crossing is secured and of any difficulties.

10. In the event of failure of the crossing traffic protection devices, the following shall be immediately carried out:

- 1) a speed limit of 20 km/h shall be introduced for the head end of the railway vehicles over the entire width of the crossing;
- 2) multiple emissions of the Rp-1 'Attention' sound signal shall be ordered.

11. Where the pedestrian level crossing traffic protection device is not operational for more than seven days, the following shall be carried out immediately:

- 1) the barrier booms shall be removed and the G-3 sign 'St Andrew's cross before one-track railway crossing' or the G-4 sign 'St Andrew's cross before a multi-track railway crossing' and, at level crossings equipped with traffic signalling devices, the B-32c sign 'Damaged signalling' shall be placed;
- 2) the speed limit of 20 km/h for the head end of the railway vehicles shall be maintained over the entire width of the crossing;
- 3) multiple emissions of the Rp-1 'Attention' sound signal shall be ordered;
- 4) a time limit of no more than three months from the date of occurrence of the fault shall be set for the restoration of the proper functioning of the traffic protection devices.

## Annex 5

### PROFILING OF THE GRADELINE OF THE ROAD AT THE LENGTH OF THE LEVEL CROSSING AND AT THE ACCESS TO THE LEVEL CROSSING

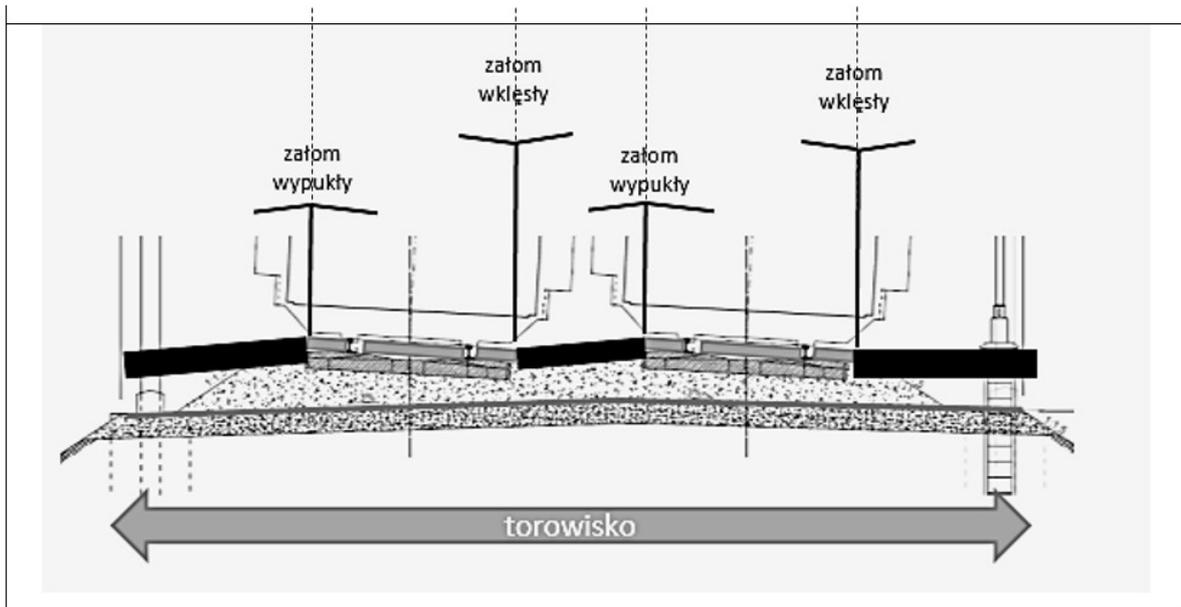
1. Under convenient terrain conditions, the gradeline of the road along the level crossing and at the access to the level crossing shall be designed without profile offsets in order to achieve either a common gradeline of railway tracks without cant or an appropriately differentiated gradeline of railway tracks with cants and maintain the longitudinal slope of the road:

- 1) on the length of the level crossing not exceeding 8%;
- 2) not exceeding 3% on approach roads to a level crossing over the length of 20 m.

2. If justified by local conditions, it is allowed to use the longitudinal profile of approach roads to the level crossing and on the length of the crossing in accordance with technical and construction regulations for public roads.

3. In difficult terrain conditions at the planned level crossings, the offset differences shown in Figure 1 shall not exceed 5%. Larger offsets shall be permitted, provided that an analysis of the trafficability in the plan and profile for the relevant vehicles within the meaning of the technical and construction regulations for public roads is carried out after the road manager has identified such vehicles. As a result of such an analysis, the organisation of road traffic at a level crossing shall be adapted accordingly.

Figure 1



załom  
wypukły  
załom  
wklęsły  
torowisko

convex  
rail surface  
concave  
rail surface  
track