



Investigation of potential deformations developed by elements of transport and pedestrian traffic restricting gates during motor vehicle-gate interaction

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The mathematical model of transport and pedestrian traffic restricting gate is designed. One section of the gate restricted the traffic of motor vehicles while the other limited the traffic of pedestrians. The gate was modelled based on the first-order one-dimensional finite elements taking into account only the resilience of the gate elements and the impact of soil on the ground-embedded parts of the gate support and auxiliary posts. The potential deformations of gate elements were determined based on the mathematical model designed. The specific traffic event was investigated using the mathematical model of gate designed – four situations of motor vehicle-gate interaction were simulated and investigated.

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