

## Impact of the Operation and Infrastructure Parameters to the Railway Track Capacity

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**Abstract :** The railway transport is considered as a one of the most environmentally friendly mode of transport. With future prediction of increasing of freight transport there are lines facing problems with demanded capacity. Increase of the track capacity could be achieved by infrastructure constructive adjustments. The contribution shows how the travel time can be minimized and the track capacity increased by changing some of the basic infrastructure and operation parameters, for example, the minimal curve radius of the track, the number of tracks, or the usable track length at stations. Calculation of the necessary parameter changes is based on the fundamental physical laws applied to the train movement, and calculation of the occupation time is dependent on the changes of controlling the traffic between the stations.

**Keywords :** curve radius, maximum curve speed, track mass capacity, reconstruction

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