

Methods of accelerated design of ecological overbridges

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In some special cases, mainly if the migration needs change rapidly, there is a need to build an ecological overbridge during the operation of the motorway. The paper presents construction systems of ecological bridges which satisfy this need. Three structural systems are studied in detail, the hinged arch mode of timber, reinforced concrete buried arch and the integral frame. The structural description is accompanied by the summarization of the specifics of the construction and demands on traffic limitations. The construction sequence is studied in detail, together with time needs for construction processes. Innovative pre-cast structures, which can be built after the start of the operation of the motorway without influencing it, can on one hand mitigate the habitat fragmentation and on the other hand save financial resources by being built only when really necessary and when all the compensation measures were depleted. With the use of buried arch structures, the soil-structure interaction has to be studied in detail.