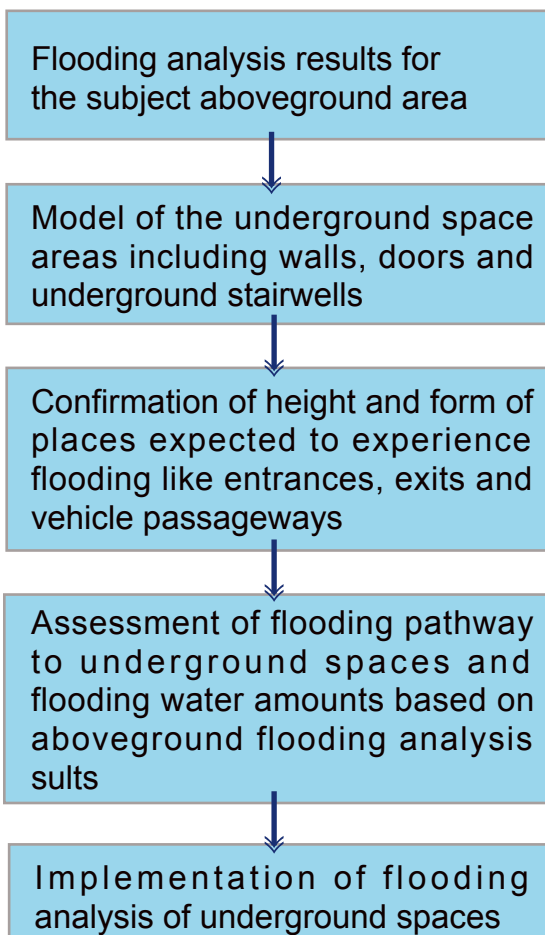


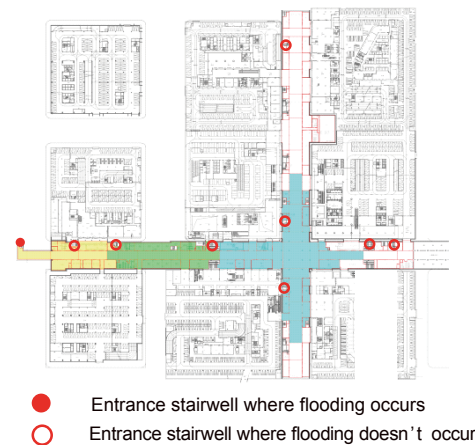
Disaster prevention - Disaster Prevention for Urban Facilities -

There are many kinds of urban facilities that may suffer heavy damage caused by water-related hazards, like underground shopping complexes, hospitals and other public facilities, as well as data centers. In recent years, public institutions have been providing more information on water-related hazard risks, but there are districts which haven't still been provided such information, and instances where more detailed risk assessments are needed. At Nikken Sekkei Civil Engineering, we've been making proposals on evacuation guidance and disaster mitigation measures that should be taken by managers of underground facilities, by implementing flooding analyses combined with pedestrian flow simulations or the like seeing aboveground and belowground sites as integrated spaces.

Moreover, we've been also conducting water-related hazard risk assessments for individual urban facilities based on flood hazard maps, etc. This allows us to foresee the flooding situations of building neighborhoods and building interiors and countermeasure proposals and formulation support of business continuity planning (BCP).



Procedure for flooding analysis of underground spaces



Example of flooding analysis of underground spaces (Flooding entrance analysis results)



Example of flooding analysis of underground spaces (Pedestrian flow simulation)