Passenger transportation BMEKOKUM208

Task 2

Park & Ride (P+R) parking facility planning

Find a location in Budapest which is suitable for a P+R parking facility. Identify the edges of the facility. Define the type of the facility (**parking space** *or* **parking garage** *or* **parking house**)! The necessary size can be measured by satellite images, like Google Maps. Justify your choice! Make a SWOT analysis about the topic.

Briefly describe the related public transport services!

Based on the characteristics of the surrounding area (traffic volume, traffic composition, the quality and competitiveness of the public transport, etc.) determine the composition, extent, time characteristic and the number of the necessary parking places of the emerging parking needs for the followings:

- passenger vehicles (with regard to the disabled people),
- bus,
- bicycle,
- motor.

Develop a parking layout in the parking area where the highest number of vehicles can be placed. Define the parking regulations and traffic rules considering the entrances and exists. Take into consideration the surrounding road network with their traffic rules and volume and decide whether traffic light is necessary or not. During the planning use the technical specification available in Moodle system.

Use CAD (Computer-aided design) software to prepare the technical drawing (Siemens provides a free student version of Solid Edge). The proposed scale is 1:200. The final drawing should be submitted in PDF format.

During the planning take into consideration the followings:

- the walking ways in the parking facility,
- minimalize the vehicle-vehicle and vehicle-passenger conflicts,
- minimalize the walking distance between the public transport stop and the parking facility, (the walking distance cannot exceed 300m)
- the entrance and exit don't reach directly the main road,
- it must be enough at least for 100 vehicles,
- environmental friendly (e.g. deploying green areas).

Install the information management system for the facility considering the following points:

- roadside collective indoor and outdoor parking signs
  (e.g.: static/dynamic information signs),
- charging,
- enhance traffic safety,
- enhance protection (security)
  (e.g. use manpower, deploy cameras),
- collect utilization data.

Consider the following points during the planning of the information system:

- system architecture
  (e.g. attributes and location of the recommend hardware components),
- external relations,
- types of data,
- characteristics of the information management processes
  (e.g. cycle time related or incident-related operations),
- recommendations for further development (with particular regard to the upcoming Information and Communication Technologies).

The prepared documentation (with technical specification and the design aspects) in Microsoft Word, the drawing in PDF format should be submitted via Moodle system. The name of the files should be your name (Firstname_Familyname).

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