

Abstract

My Shlow! Project was made also as my bachelor work „Study of communication Pod Stadiony in Praze 5“ is based as variant. I try to find the best solution for all users. This theme have recommended by bureau of transport i my quater, where I live. They wants to solve this unsuitable situation. I choosed this theme, because i know local conditions. Every variant show different point of view to future feasible solution. Work show possible aplications of traffic calming devices at urban roads and see to urban road like on through ways. Primary parameter for proposal is speed.

To find optimal solution I use data about intenstities, speeds and compositon of traffic flow. Solutions are designed for future capacity. To construction I use software Autodesk AutoCAD 2008.

Timetable

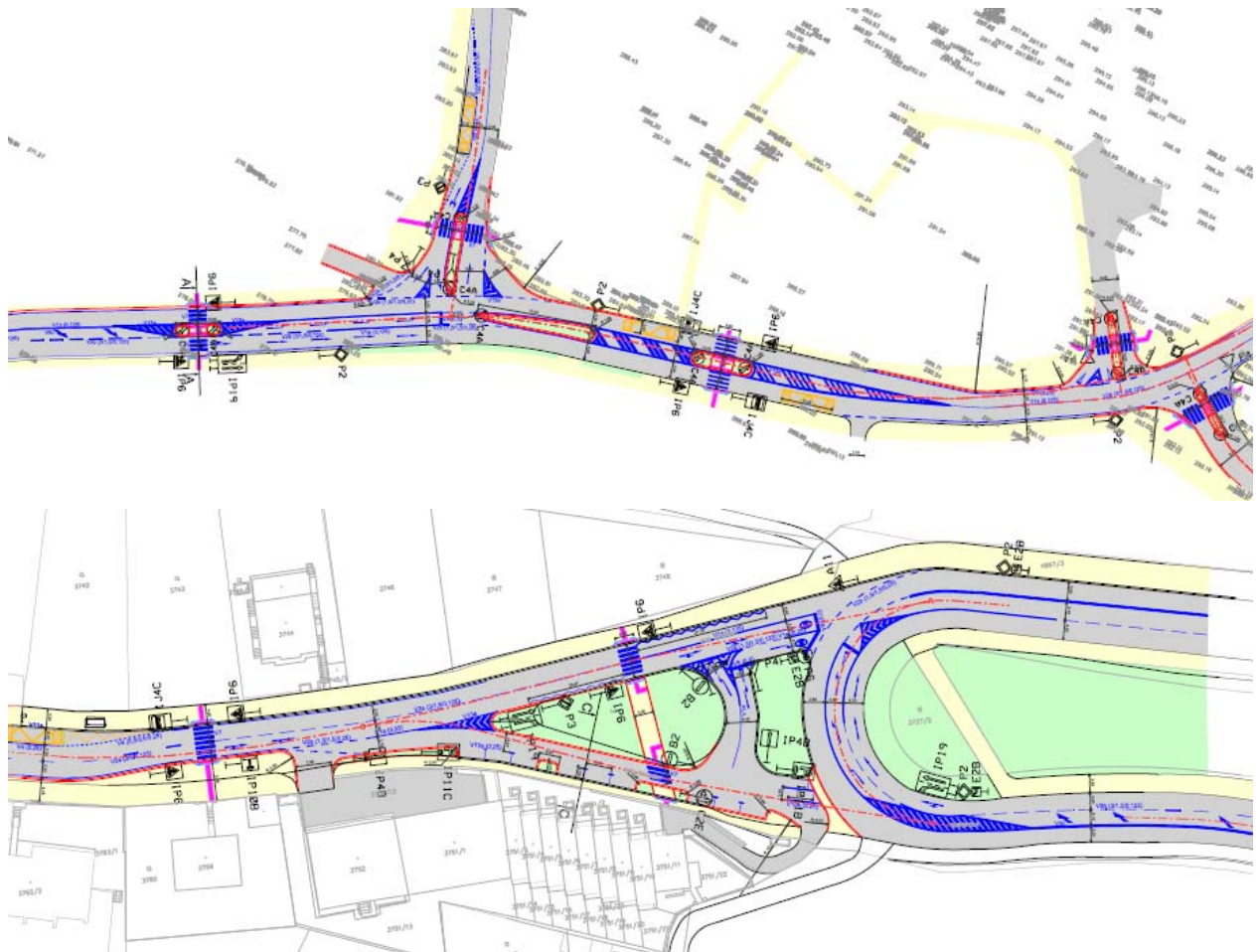
- **5.5.2009**: speed measurement with statistical radar, section speed measurement of speed by two cameras, traffic survey of crossings and hand-made verifying survey of traffic flow.
- **22.5.2009**: visit of Traffic section of local council. Mr. Růžička said me, that he was interested and he would try to help me. He promised me some consultations.
- **29.5.2009**: the first meeting with students in Brno (CDV). Here we presented our PowerPoint presentation in Czech and experts from CDV helped us with our projects. They recommended us some ideas and solutions.
- **15.7.2009**: visit of technical maintenance of roads and municipal authorities of Prague. Authorities said, that this project can't be realized in horizon at least 10 years.
- **25.7.2009**: the second visit of Traffic section of local council to consultate new ideas.
- **30.7.2009**: contacting the local media, but they are not interested in, because in caused long time horizon of realization, they aren't interested. But good news was information, that in future I have a chance to get some article in local magazine.
- **1.8-1.9.2009**: looking for mistakes and thinking about some improves and it was: Work in terrain, measuring with stop-watches, watching traffic and looking for conflict situations (“almostcrashes”). All things which I saw, I implement into design of roads.
- **3.9.2009** : pass the final bachelors exams with classification A.
- **4.9-4.11**: making macroscopic model in simulations software (PTV Vissum – student licence).

- **5.11-3.12:** correction of mistakes was found, mainly after simulations, consultations and final exams, where was many positive comments.
- **4.12.2009:** the second meeting with students in Brno (CDV). Here we presented our PowerPoint presentation and also report number 2.
- **5.12 – now:** visit or contact of all participants, which help me with the project and thanks for help.

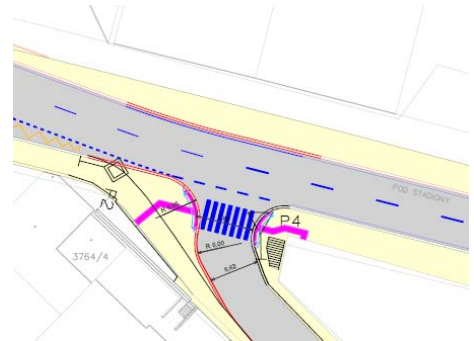
Results and impact

Final situation – some examples

Variant A

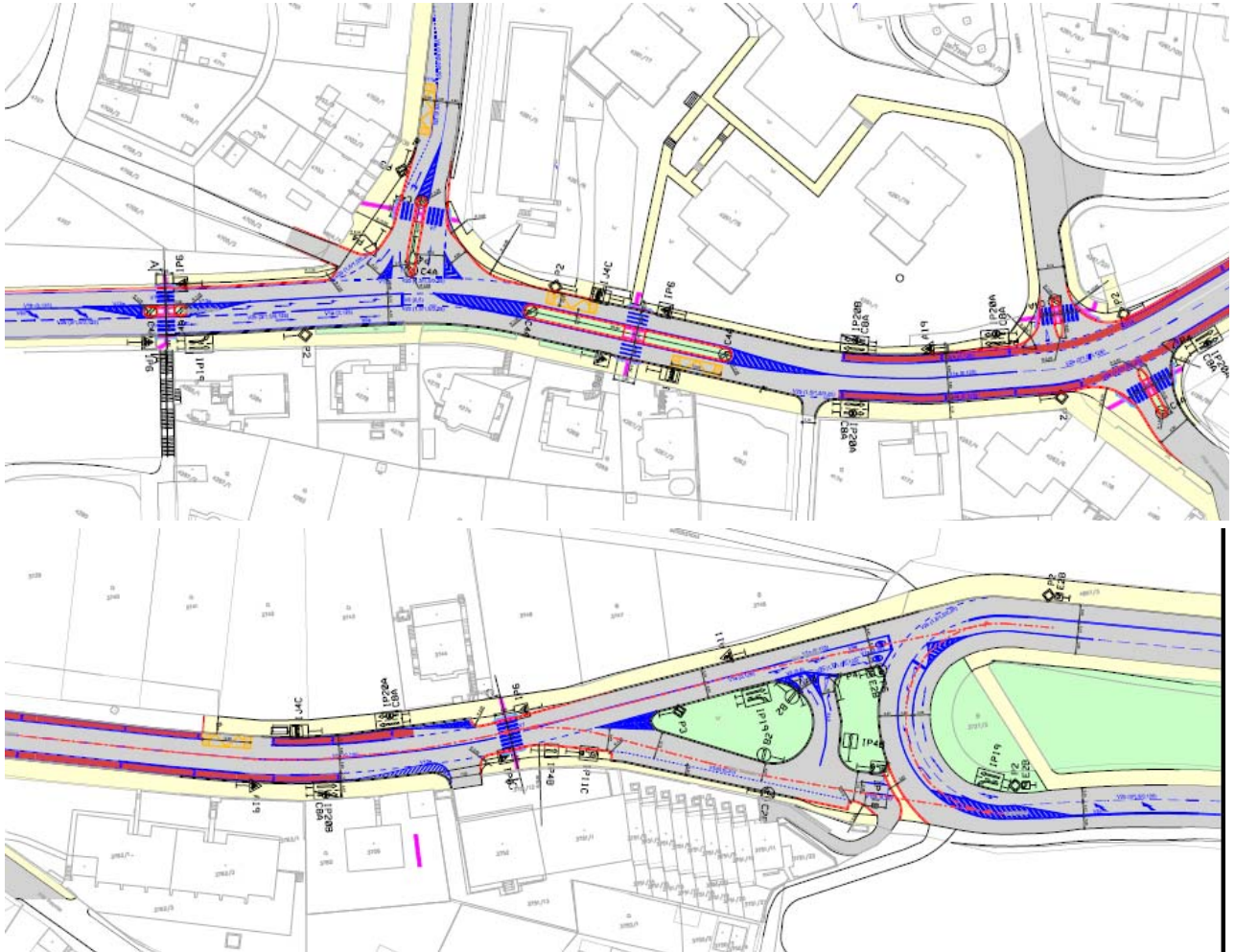


- Variant A is based on big quantity of physical island, which determinate slowing down speed and they are important element of speed management. All pedestrians crossings was narrower under the level of Czech norms. Pedestrians crossings are also divided which is more safety. Passing the pedestrian crossing is divided to 2 parts,



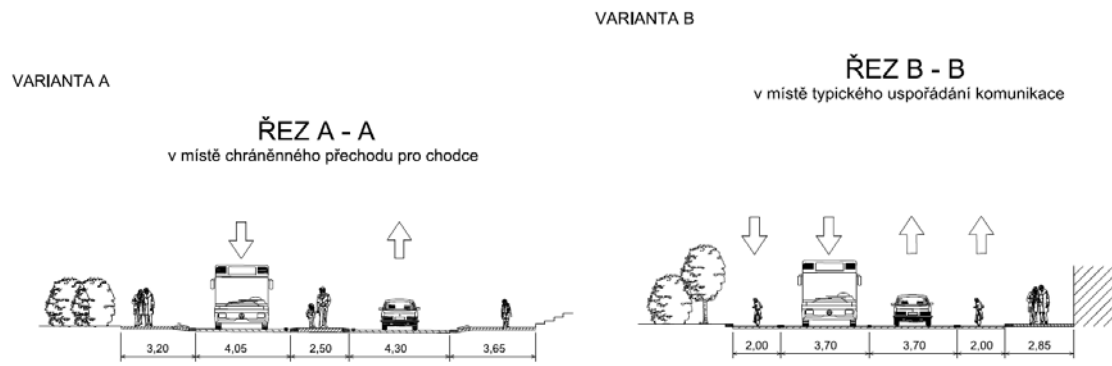
where pedestrians after passing one part have time to look around the cars. Lanes are 3.5 – 4 m wide, which depend on local situation.

Variant B

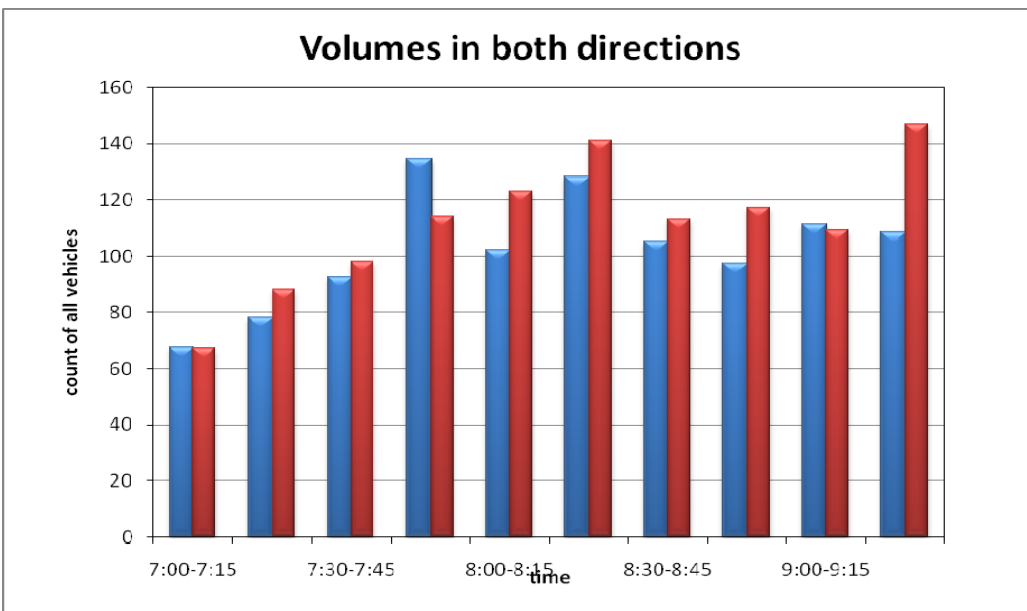


- Variant B is based on cyclist lanes on all over length, so order in that making easy the moving in middle part, where isn't main crossings. Cyclists lanes have 1.75m in both directions.

Cross sections

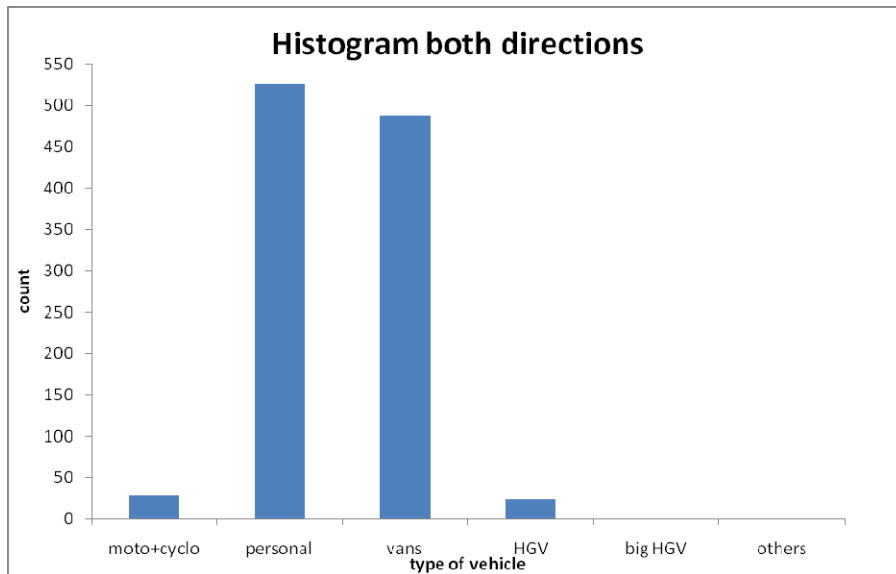


Volumes:



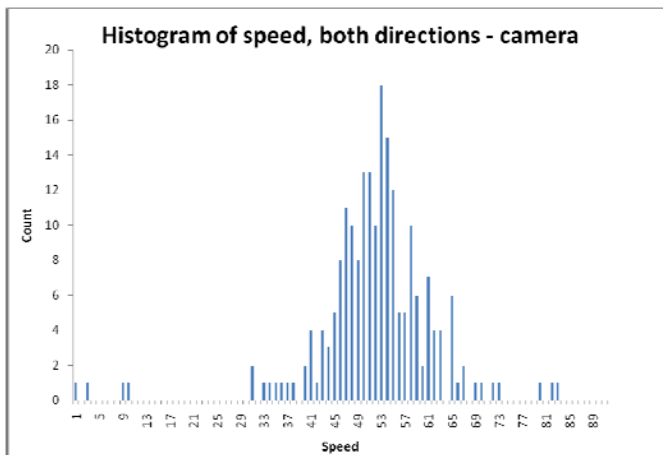
Blue bars are manual counting, red bars are automatic counting

Composition of traffic flow:



Speed:

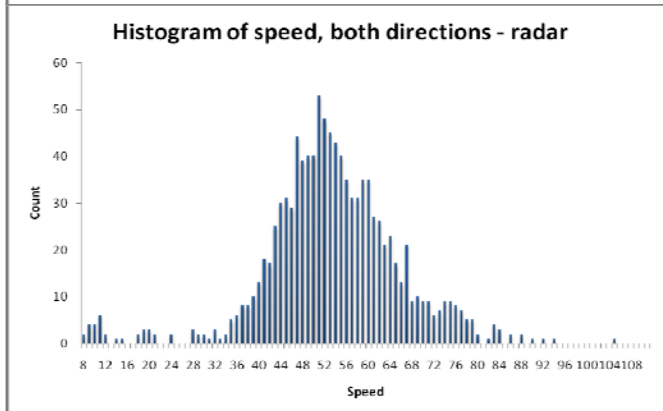
Data was evaluated and compile inside project. Time of measurement was 7:30 – 9:00, work day – Thursday



Evaluation of speed:

Camera:

$V_{85\%}$ both directions is 60 km/h
 $V_{average}$ both directions is 52 km/h
 V_{max} = 83 km/h
 V_{min} = 30 km/h
 Number of veh. = 200



Radar:

$V_{85\%}$ both directions is 65 km/h
 $V_{average}$ both directions is 53,4 km/h
 V_{max} = 105 km/h
 V_{min} = 30 km/h
 Number of veh. = 1064

Differences between measurement by radar and camera is caused by at first number of data and in general camera measuring is more invasive then radar. Camera is better to view by drivers, which in moment slow down speed. Actual values of speed are in real higher. This example shows how easy can be slow management, two cameras and $V_{85\%}$ speed is approximately about 10% lower. When we include the adjustments in design we get almost ideal situation. This is measured section with narrower lanes and canalize all traffic flows. And just this order I use in simulation.

For reasons which is mentioned above (“mission imposible”), I use the simple simulation model way in PTV Vision software PTV Vissum. This simulations showed, that narrower lanes and “cameras” (instead of cameras is used tool per transit) have influence for speed, after 10 simulations I got anticipate results. Here it is:

$V_{85\%}$ both directions is 58 km/h

$V_{average}$ both directions is 50 km/h

V_{max} = 75 km/h

V_{min} = 32 km/h

Number simulated veh. = 2000

I am sure that my proposals will in future some use. Therefore I make new simulation model, which will be more accurate and will be count with differents types of routes and what have influence on what. My objective is , that I make simulation which I will present to local authorities. My solution have positive influence to environment, polutans, safety and speed, which is general thing in nowadays traffic. We have to count with this, that every group of drivers have another style of behavior and here depends on three things – Education, Enforcement and engineering. I participate on third part – engineering and I hope that only cooperation of this three things is faces tu true goals. It is necessary to communicate and recruit into authorities, so they believe, thah one rescued live is good for all society and brings positive state of mind to every user at all roads.