



European Transport Safety Council (ETSC)

Students Acting to Reduce Speed (STARS) project - Final Report

Increasing road safety for students near Tallinn Secondary School of Technology



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Introduction of STARS

STARS is an 18 month project which aims at mobilising transport research into speed management to demonstrate how excessive and inappropriate speed can be reduced through existing measures. The main objective of STARS is to run concrete actions that can reduce speed through the work of students. STARS relies on the work of committed young university students who will be encouraged to run a local speed management action to reduce speeding through infrastructure projects or communication projects in road transport with the support of ETSC and its partners.

This year we - Edgar Berman and Rivo Bonder from Estonia had an opportunity to visit Brussels and participate in STARS camp. Lectures were held on 29.01.12 – 04.02.12, where many specialists talked about measures of road safety. We got knowledge of how to run and successfully launch our project. This also is a competition, in where the best projects get awarded. There were 11 groups of students from different European countries in STARS 2012-2013.



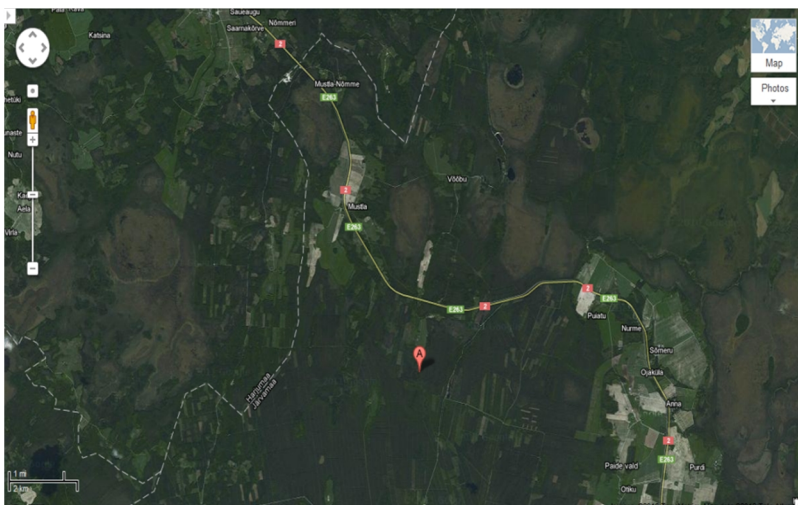


Ideas which we abandoned for some reasons

First Idea for Project – Car Wreck & Informational billboard – NOT ALLOWED



At first we identified a specific site for our project. It is E263 Tallinn-Tartu-Võru-Luhamaa highway, section 65-75 kilometres, near Ussisoo. The section is known for its high rate of collisions. The reasons why accidents occur are the following: the road is located between swamps, which means fog and black ice in wintertime are not rare to occur. In this section all drivers tend to start takeovers, because between and after the section takeovers are forbidden. It also has some visibility issues and it is endangered by animals crossing the highway. It is situated 70 km from Tallinn and 110 km from Tartu, so if drivers are driving from Tallinn to Tartu or vice versa, then at that time they may start get tired and/or lazy.





We had access to all statistics regarding the accidents and collisions, including statistics for injured people and fatalities. We didn't take a deeper look into it because we abandoned the idea after some time, but we have talked to Estonian Police and they gave us the website of their statistics.

Road safety experts agreed, that this section of the road is indeed dangerous, but not the most dangerous section on E263. Regardless of that, we wanted to stop people from referring to the section as the Bermuda Triangle on the highway. Our professors from university were positively tuned for carrying out a project on that site.

Our first idea was to put a car wreck with a billboard with a message on it near the highway and additional reflective traffic sign. That idea was denied due to the fact that it is forbidden to put any additional billboards closer to 50m to the highway. We could not put it more far away because we would have to chop trees in order to do that, and we left the first plan as it was because of that.





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Ussisoo näitel kestab ohtlik lõik 12km, ala lõpp pole autojuhile kuidagi tähistatud



1. Mõlemal pool ohtlikku teelõiku autojuhi tähelepanu äratav teekattemärgistus, nagu näiteks üle sõiduraja ulatuvad ohutusribad.

2. Helkurümbrisega liiklusmärk, mis annab autojuhile teada, et asub liiklusohutuse mõttes kõrgendatud tähelepanu nõudval teelõigul.



Second Idea for Project – Road Security updates for Ussisoo section- TOO MUCH PROBLEMS

Although we faced problems in car wreck idea, we found some contacts from Estonian Road Administration who were interested in our project implementation. They gave us the idea to implement the billboard and a car wreck to rest areas near the highways, so it could be seen from the highway as well. We made a documentation for Estonian Road Administration in which we showed where, how and why we would like to implement it. But we cancelled working on it as we realized that it would not be so effective and we could not measure the effectiveness in any way.

Alard Tallo from Estonian Road Administration gave us feedback all the way as we discussed our project ideas with Estonian Road Administration and our professors from university. He gave us many ideas, which some of them we were trying to implement at that time. The reason we did not overlook them, was that if someone from Estonian Road Administration already suggests these ideas, it may be a chance to get them implemented.

On the website <http://www.mnt.ee/public/kiirused3.pdf> can be seen that speed limit for cars and motorcycles in summer period is 100km/h. The rule does not expand to buses and lorries. People travelling with maximum allowed speed have to overtake in order to keep steady speed. On the road where is plenty of traffic and overtaking places are limited the speed limit 100km/h in summer needed to be cancelled. Save in time while travelling 10km/h faster for 10 km(the length of our section) is only 39 seconds. This fact makes raising the speed limit during summertime even more fractional:

$$90 \frac{km}{h} = \frac{90 km}{60 min} = 1,50 \frac{km}{min}; \quad 10 km : 1,50 \frac{km}{h} = 6 \text{ min } 40 \text{ s}$$

$$100 \frac{km}{h} = \frac{100 km}{60 min} = 1,66 \frac{km}{min}; \quad 10 km : 1,66 \frac{km}{h} = 6 \text{ min } 1 \text{ s}$$

We were thinking of setting up additional traffic signs on kilometres 65 to 75. Idea was to inform drivers of the potential danger in Ussisoo highway.

Add reflective traffic signs as shown on the picture:



Pic. 1

Curves, where have been lots of collisions should be marked with additional traffic signs:



Pic. 2



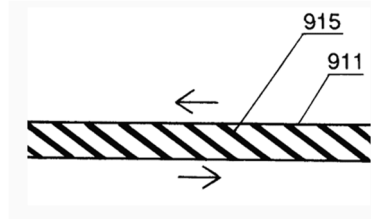
Pic. 2.1



At places where there have been collisions caused by overtaking, deny the overtaking with traffic signs. In addition we were planning on changing the road covering to permanent line. Where the road width allows, more efficient solution could be detached island between road directions.



Pic. 3



Pic. 4

Effective highway edge marking. Edges should be marked with multi-dot-line technology, where water stays on the marking while reflecting the light also in rainy conditions.



Kammjoon

Pic. 5

The main objective of the project was to decrease collisions on dangerous highway and we thought that these relatively cheap solutions would bring us closer to our achievement.

As we proposed these ideas to Estonian Road Administration, we faced a lot of problems and questions we could not answer to. For example we would need a study of road accidents in this area before adapting the reflective warning sign (See pic. 1). Traffic signs for curves (Pic 2, Pic 2.1) can be used only by the terms of standards EVS 613:2001 and EVS 613:2001/A1:2008. In conclusion Estonian Road Administration did not agree that this section of the road should be made more secure and we abandoned the idea after long work and wait for their answer.



STARS Project

Site

There were many ideas and sites we had in mind for STARS Project, but many of them failed and/or came out unsuitable. Although at that point we already had faced many closed doors and negative attitude towards our ideas, we wanted to try once more to launch our project. This time we thought of implementing our project in urban area.

We identified a specific secondary school – Tallinn Secondary School of Technology located in Mustamäe area, Tallinn, in where we found a potentially dangerous long narrow road. The speeds of young drivers coming from or going to school rose up to 70-90 km/h in 20 km/h speed limit area. Just traffic signs and speed limits do not work within this area. Something more effective needed to be implemented.





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Progress

We went to see the headmaster of this school near which we would like to implement our STARS project. She was pleased that we chose this location and supported our idea. She also gave us contacts in Local Authority to who we could talk to. From Local Authority we got base project drawing of the area on where we then started designing our project.

Very first proposal for the site – traffic signs, plastic road bumps and road covering.



Town council banned our idea of using plastic road bumps, because Estonia switched to using only asphalted road bumps in 2011. We needed to remake our project drawing and then hand it to town council for evaluation.

Before looking for sponsors we wanted to finish our project drawing and get it signed in Local Municipality and permitted completely. Permissions are mandatory in Estonia for carrying out any road works. We could not search for finance sponsors if we did not know the final, permitted solution and its cost.

We held many meetings with City Council and listened to every proposal and demand regarding the project. The final version which they were satisfied with can be seen on the picture.



Although some departments were pleased with the solution, we still needed different permissions from different institutions in order to get building permit. From Tallinn Transport Department we got their signature (permission) instantly, they did have a slight remark about marking works which we agreed changing on. After we went to Commune Department, they did not want to accept it prior Mustamäe Local Council (Mustamäe is an area in Tallinn, in where the project will be implemented) approval. So we drove to another part of Tallinn just to get it signed there. As we were familiar with the persons working in Mustamäe Local Council already (they gave us AutoCAD drawings of the site in summer), they recognized us and gave their full permission for the road bump.

We had setback with Commune Department, as they did not want to approve it when they did not know the proper heights and slopes of this road where we want the road bump to be implemented. They asked us to write heights of different points on the drawing, so they could see in which direction rain water would flow. That new demand made us negatively amazed although we figured out a plan to get these heights. We used to take geodesy lessons in Tallinn University of Technology and we had connections with our lecturers from this course. The professor loaned us a surveyor's level and all other instruments we needed so we could do the heights measurement on site. We decided to do that on the same day and completed the work within 3 hours.

Commune Department checked our drawing, checked that everything were okay and then accepted it and gave their full permission. So from that time we had full approval for the project by Tallinn.

What we did not have though, were sponsors to implement the project.



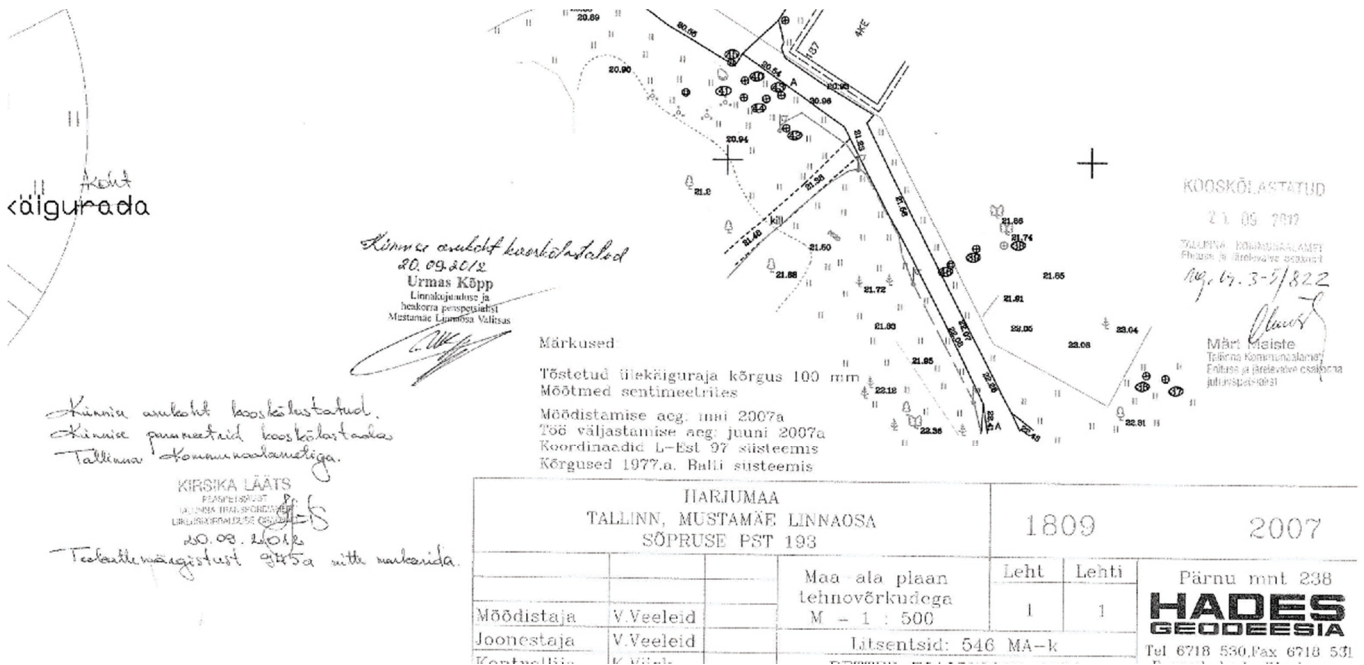


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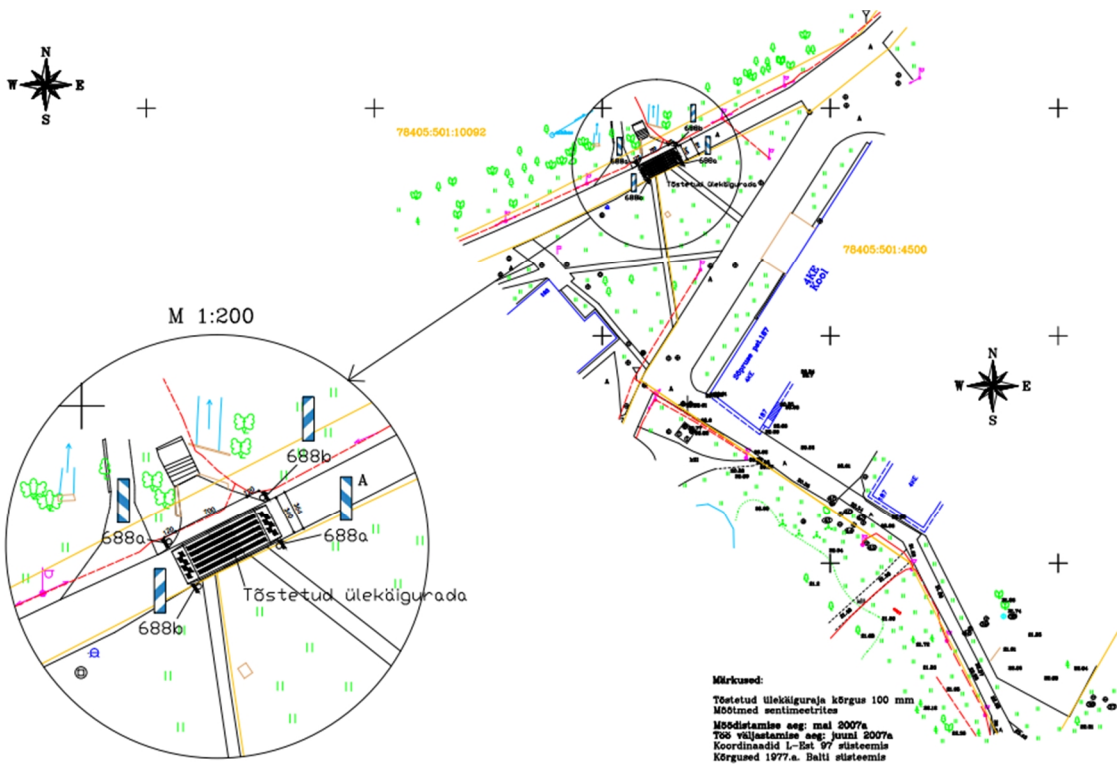
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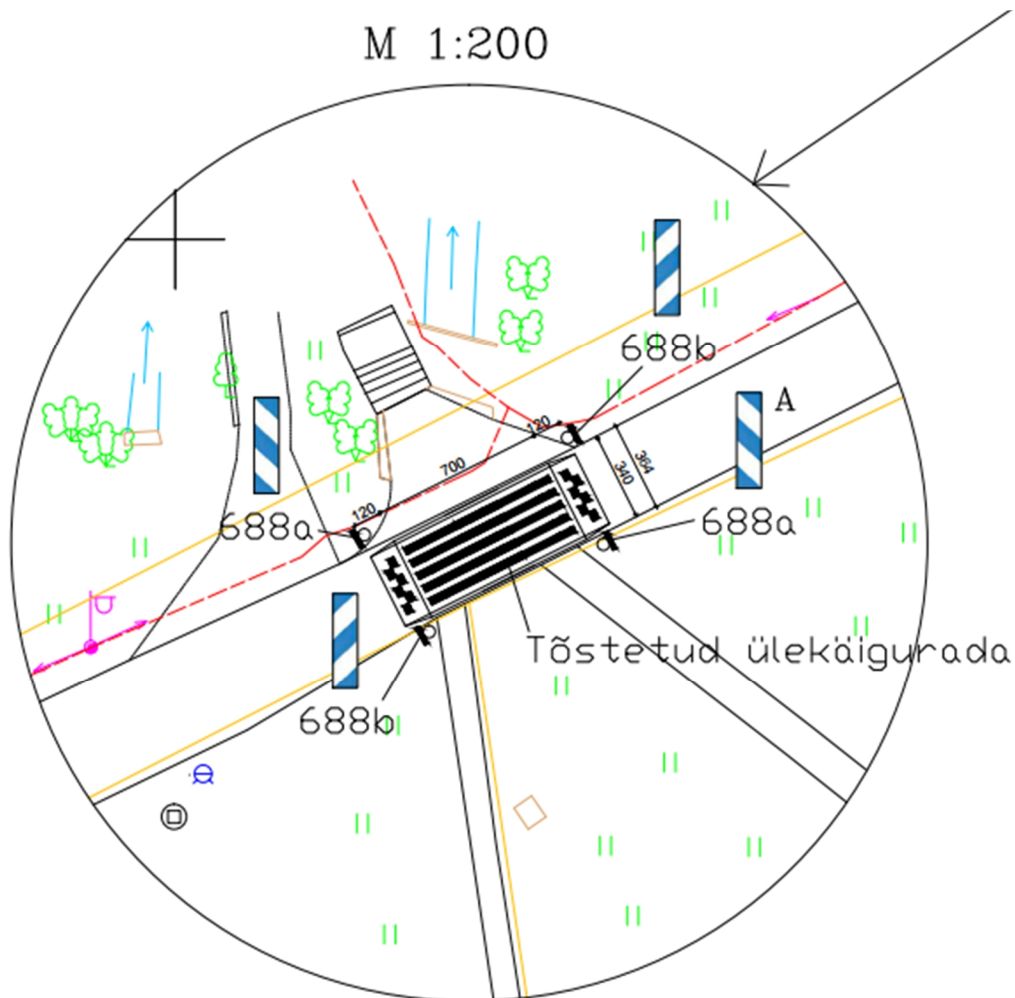
Tallinn would consider it in their budget for next year, but we did not have the time to wait because this project had a deadline. We looked for companies willing to give us price offer for the road works, so we could get final cost for this and hand to potential sponsors.



Scanned piece of project drawing (3 permits from different institutions)



Actual project drawing





Our next step was to search for suitable sponsors to finance our children safety project in the sum of 2540.39 € (+ VAT 20%). That turned out to be a harder task than we had previously thought. After experiencing whole bunch of closed doors, unanswered calls and “unnoticed e-mails”, we had to stop and reconsider what we were doing wrong.

We contacted everyone from the European Road Safety Charter (~ 25 companies & organizations), Tallinn Local Council, our university and also Tallinn Secondary School of Technology. We also thought of option to lobby parents of pupils in the secondary school, so they would finance it, but the school headmaster declined the idea.

Tere, Edgar

Täname Teid, et tutvustasite meile oma plaane ning pakkusite koostöövõimalust. Palun vabandust, et meie vastus saabub pärast 19. oktoobrit, kuid tutvustasime teemat ka teistele osakondadele, kes võiksid projekti panustamisest huvitatud olla.

Swedbanki jaoks on ühiskonna arengusse panustamine ja toetus üks meie peamisi eesmärki. Meie toetusvaldkonna suunad ja tegevused on juba paika pandud pikaajalised. Antud projekti raames me Teid kahjuks toetada ei saaks, kuna meil ei ole kokkulepped koostööpartneritega juba sõlmitud ning uusi valdkondi võtmas ei ole.

Loodame, et mõistate meie selgitusi ning soovime Teile jõudu ja julgust teie mõtete elluviimisele!

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Tere!

Täname pöördumise eest!
Tutvustasime Teie poolt saadetud taotlusega, kuid kahjuks ei näe me praegu võimalust antud projekti toetada.

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Tere!

Täname teid taotluse esitamise eest, kuid LKF ei toeta tee ehitust, tee objektide rajamist ega teisi sarnaseid tegevusi. Meie liiklusohutuslaste tegevuste profiilist annavad aimu need kohustused, mille Euroopa Liiklusohutuse Hartaga liitudes võtsime.

Lugupidamisega
Erik Ernits

Eesti Liikluskindlustuse Fond
kahjuennetuse valdkonna juht
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Some examples of declined sponsorships



Conclusion, state of play

Time went by and autumn arrived. Our project seemed to be in dead end. We as students did not have the possibility to finance the project ourselves, and everyone we had thought of had declined to be a sponsor. Time was our enemy, and for 2 reasons. First of all, road construction works in Estonia are halted in end September – mid October, depending of the year, due to unsuitable weather conditions for asphalt. Main season for asphalt works in Estonia is from April to September. Second reason was the fact that Edgar had to leave for mandatory military service for 8 months on 10th of October, 2012.

Despite of sending e-mails and contacting potential sponsors once again they did not agree of financing the project. Edgar is currently in military service and can skip it for 2-4 days each month (weekends). Rivo did everything on his own, but lack of motivation after so many closed doors is inevitable. Although we both met when we could and still discussed whether we could still do something about STARS.

All we needed to successfully launch our project was finances. Everything else was prepared, documents and papers signed and workers ready to start. We contacted Ilyas Daoud and informed him about the problem we were and are still facing.

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