



UVOD U SIMULACIJE U VISSIM-u

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SVEUČILIŠTE
JOSIPA JURJA STROSSMAYERA
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SADRŽAJ

Korisničko sučelje

Vježbe 1:

Prva mikrosimulacija



KORISNIČKO SUČELJE

The screenshot displays the PTV Vissim 6.00-00* software interface. The main window shows a 3D model of a road intersection with various traffic elements. Several panels and toolbars are visible, each labeled with a callout box:

- Network Objects:** A vertical toolbar on the left containing icons for various traffic elements like speed limits, signs, and vehicles.
- Network Window:** A callout box pointing to the main 3D model area.
- Backgrounds:** A panel on the right showing a list of background images, including 'KA_3D' and '05_07'.
- Levels:** A panel on the right showing a list of levels, including 'All levels', '1: Base', '2: 1st Level', and '3: 2nd Level'.
- Quick View (Links):** A panel on the right showing a summary of link data, including Number (15), Name, Driving behavior (1 Urban), Display type (11 Road gray), Number of lanes (3), Length 2D (90.201), Is Connector, Gradient (0.00), CountLanes (3), and Driving behavior.
- List:** A callout box pointing to the 'Links' table at the bottom.
- Smart Map:** A panel on the bottom right showing a small 2D map of the current view area.

The 'Links' table at the bottom contains the following data:

No	Name	BehaviorType	DisplayType	NumLanes	Length2D	IsConn	FromLink	ToLink	Avg:Vehs\DesSpeed	Gradient
1	1	1 Urban (motorized)	1 Road gray	2	212.880					0.00
2	2	motorized)	11 Road gray (invisible)	2	85.772					0.00
3	3	motorized)	1 Road gray	2	49.030					0.00
4	4	motorized)	1 Road gray	1	32.677					0.00
5	5	1 Urban (motorized)	1 Road gray	1	10.739					0.00
6	6	1 Urban (motorized)	1 Road gray	1	117.682					0.00

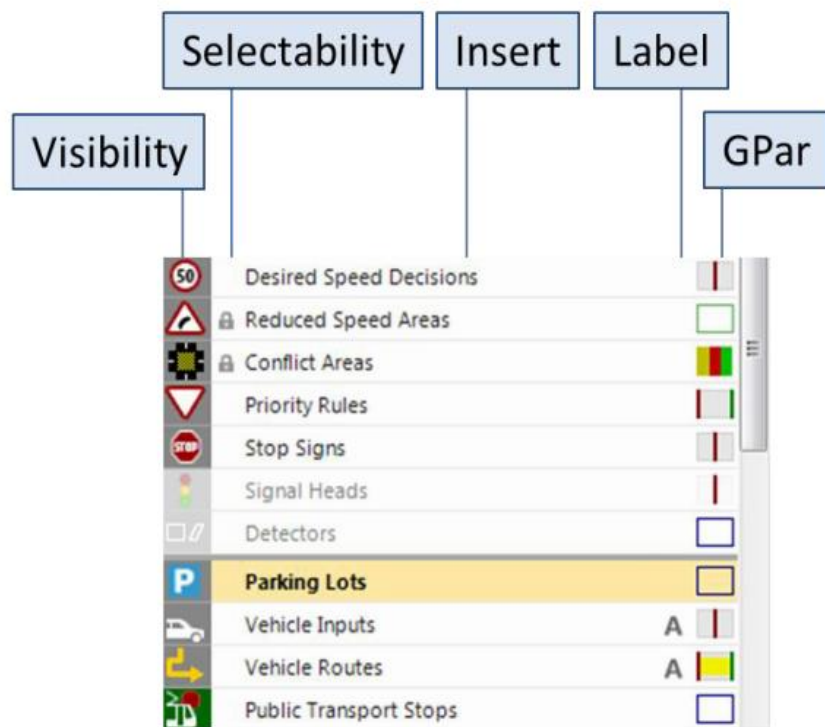
KORISNIČKO SUČELJE

Korisničko sučelje VISSIM sastoji se od više prozora.

Većina funkcija prikazana je u lijevom sporednom meniju "*Network Objects*".

Parametri koje podešavamo, kao i rezultati simulacija, ispisuju se u tabličnom obliku „*List*“ u donjem dijelu zaslona.

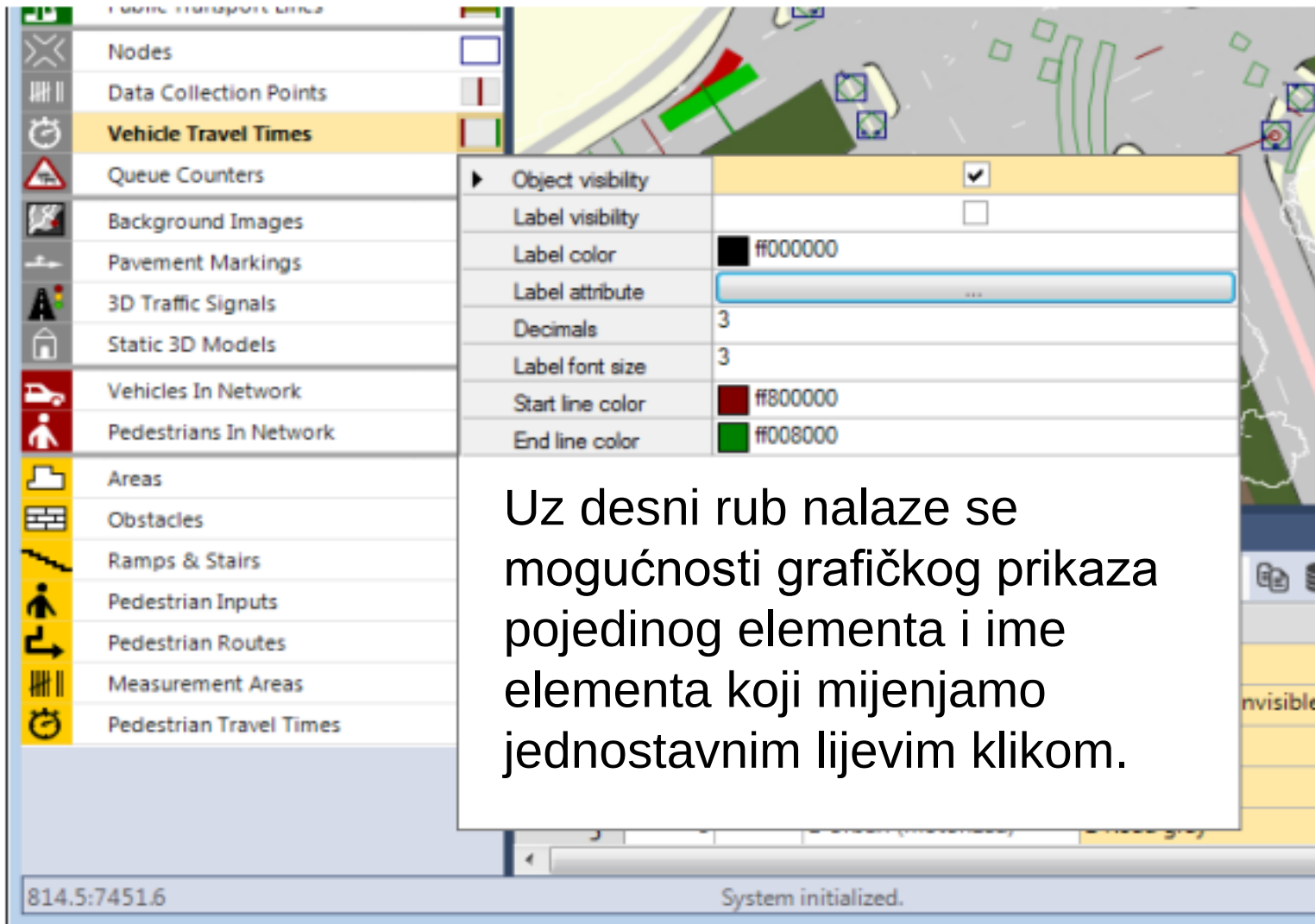
KORISNIČKO SUČELJE



U sporednom meniju "*Network Objects*" možemo podešavati aktivne elemente lijevim klikom.

Pojedine elemente možemo zaključati (lijevi klik na ključanicu pokraj imena) i tako ih zaštititi od nenamjernog mijenjanja.

KORISNIČKO SUČELJE



Uz desni rub nalaze se mogućnosti grafičkog prikaza pojedinog elementa i ime elementa koji mijenjamo jednostavnim lijevim klikom.

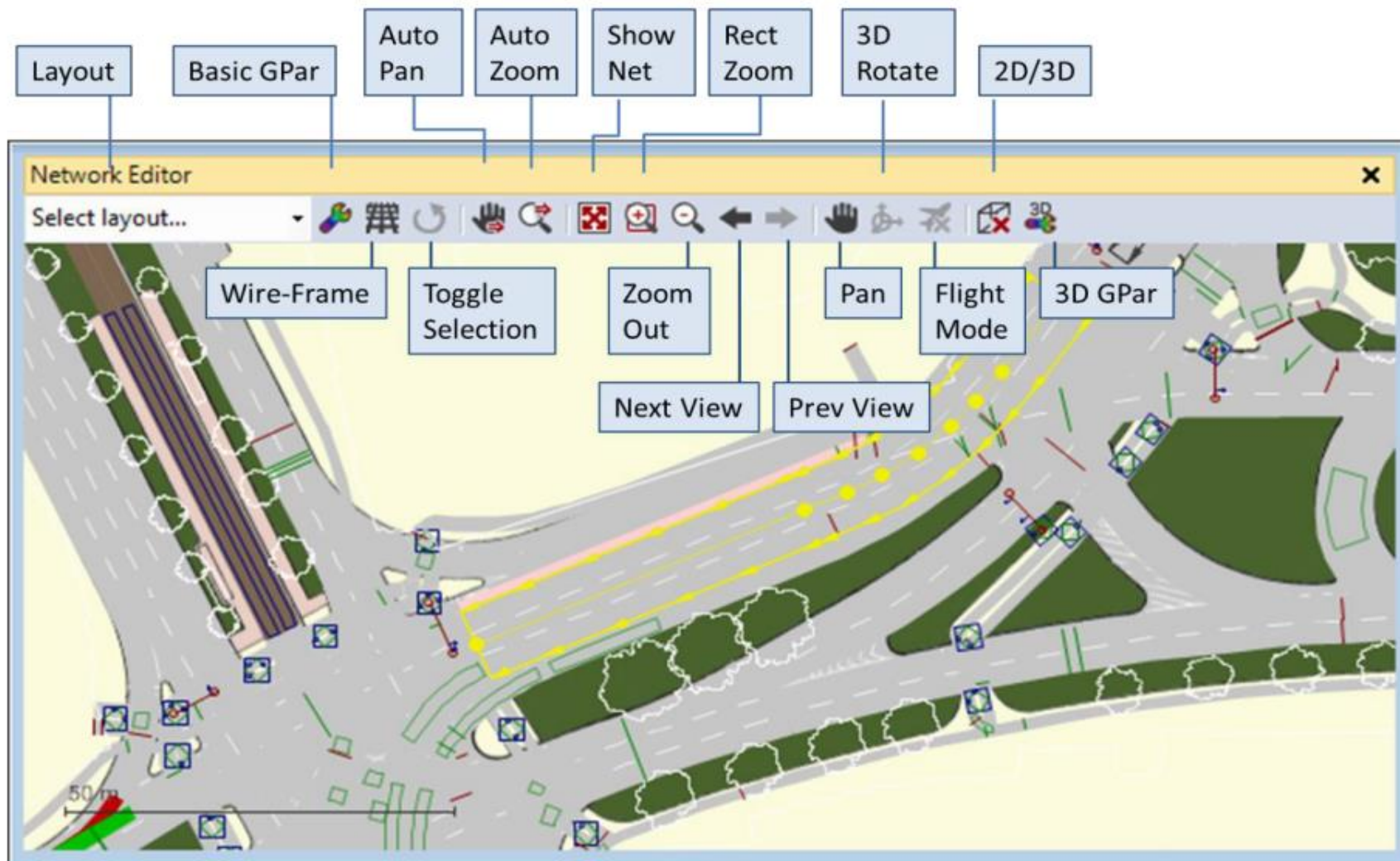
KORISNIČKO SUČELJE

U VISSIM-u možemo prikazati jedan ili više prozora za uređivanje mreže (*eng. Network Editor*).

Na gornjoj alatnoj traci za uređivanje mreže nalaze se postavke grafičkog prikaza mreže (*eng. Basic GPar*) i naredbe za pomicanje (*eng. Pan*) te povećavanje/smanjivanje slike (*eng. Zoom*).

Sve postavke korisničkog sučelja pohranjuju se zajedno s mrežom i prilikom idućeg otvaranja podešavaju se prema stanju prije pohranjivanja. U slučaju da želimo vratiti tvorničke postavke izgleda korisničkog sučelja, trebamo slijediti naredbu iz glavnog menija *Edit/User Preferences/ GUI/General/ Reset Dialog Positions*.

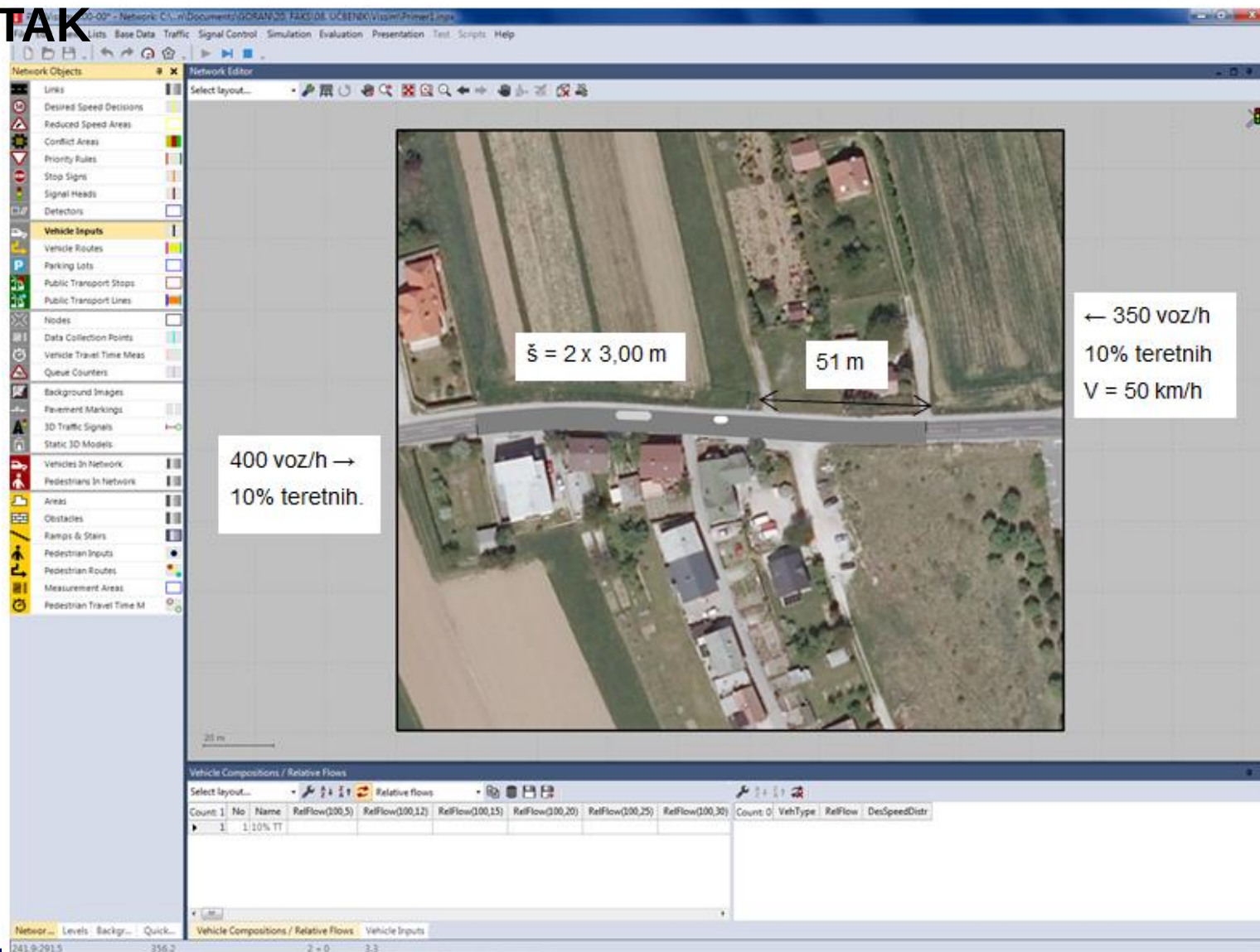
KORISNIČKO SUČELJE



VJEŽBA 1

PRVA MIKROSIMULACIJA

ZADATAK



ZADATAK

PTV Vissim 6.00-19

File Edit View Lists Base Data Traffic Signal Control Simulation Evaluation Presentation Test Scripts Help

Network Objects

- Links
- Desired Speed Decisi
- Reduced Speed Areas
- Conflict Areas
- Priority Rules
- Stop Signs
- Signal Heads
- Detectors
- Vehicle Inputs
- Vehicle Routes
- Parking Lots
- Public Transport Stop
- Public Transport Lines
- Nodes
- Data Collection Points
- Vehicle Travel Times
- Queue Counters
- Sections
- Background Images**
- Pavement Markings
- 3D Traffic Signals
- Static 3D Models
- Vehicles In Network
- Pedestrians In Network

Network Editor

Select layout...

Unošenje slike u Vissim

Desnim klikom miša na radni prostor otvara se prozor

Objects At Click Position

Add New Background Image

Show List

Read Additionally Here

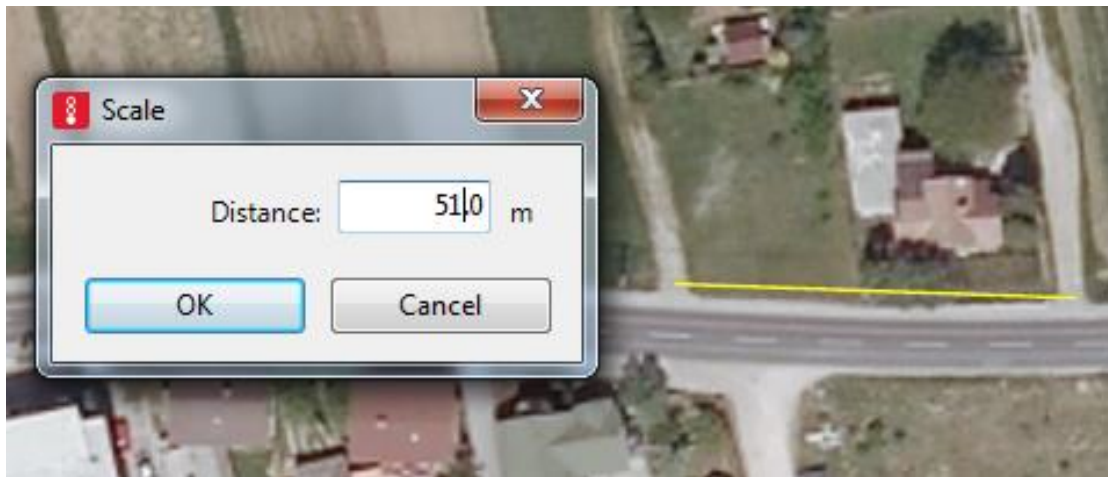
Pritiskom na ikonu dobije se cijela slika na ekranu

Show entire network

ZADATAK

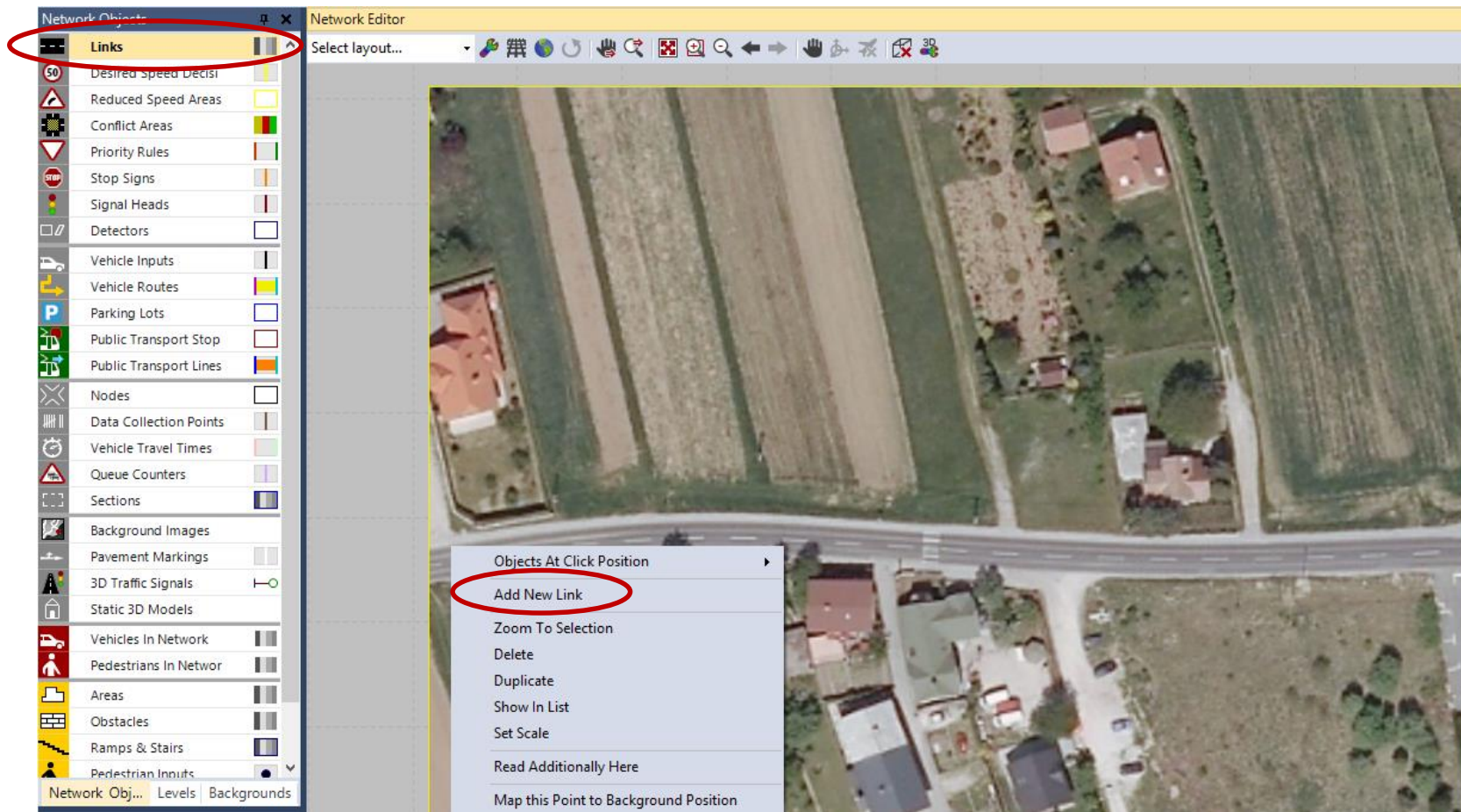
Potrebno je odrediti mjerilo učitane podloge (*Set scale*) – *desnim klikom miša na podlogu*.

Mjerilo se unosi pomoću izmjerenog stvarnog razmaka susjednih priključaka (51 m).



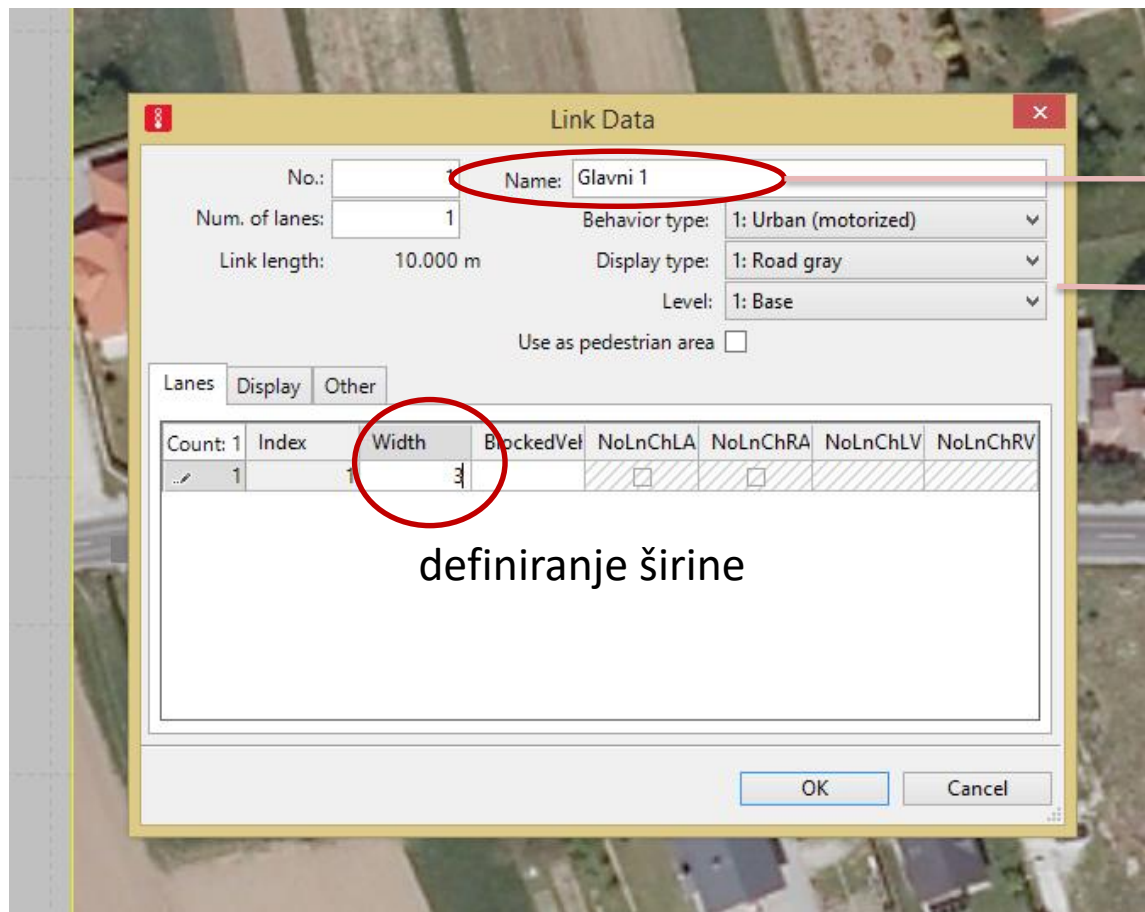
Unošenje prometne infrastrukture – novog Linka

U izborniku Network objects aktivan je izbor Links - desnim klikom miša na podlogu otvaramo izbornik i odabiremo Add New Link



Unošenje prometne infrastrukture – novog Linka

U izborniku Network objects aktivan je izbor Links - desnim klikom miša na podlogu otvaramo izbornik i odabiremo Add New Link



Link Data

No.: Name:

Num. of lanes: Behavior type: 1: Urban (motorized) ▼

Link length: 10.000 m Display type: 1: Road gray ▼

Level: 1: Base ▼

Use as pedestrian area ☐

Lanes Display Other

Count	Index	Width	BlockedVel	NoLnChLA	NoLnChRA	NoLnChLV	NoLnChRV
1	1	3		☐	☐		

OK Cancel

Naziv traka da ga
možemo prepoznati u
rezultatima

karakteristike

definiranje širine

Krajnju točku Linka razvučemo do kraja, CTRL+desni klik miša dodajemo točke Linku koje su pomične i omogućavaju prilagođavanje geometrije priključka modela geometrijskim karakteristikama ceste



Drugi trak generiramo automatski desnim klikom miša otvaramo izbornik i odabiremo opciju Generate Opposite Direction



Odabiremo broj trakova za suprotan smjer

Unošenje prometnog opterećenja

U padajućem izborniku Traffic odabiremo opciju Vehicle Compositions i dodajemo zeljene postotke teretnih vozila

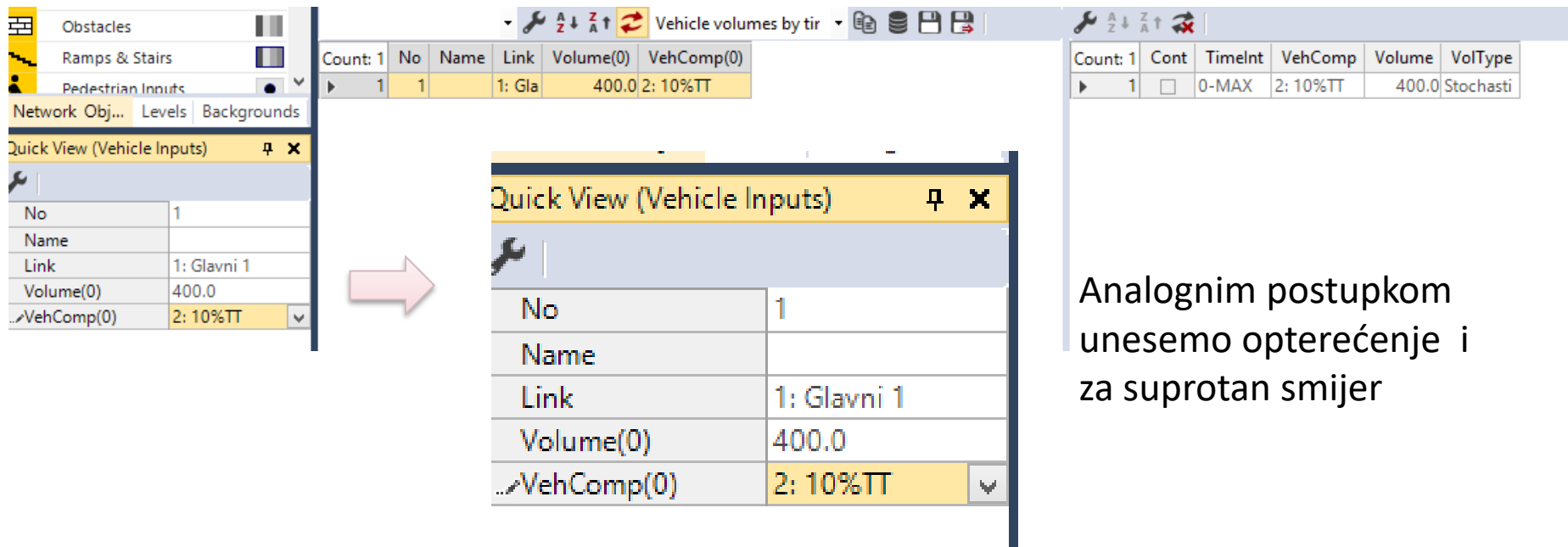
The screenshot shows the 'Traffic' menu with 'Vehicle Compositions' selected. Below, the 'Vehicle Compositions / Relative Flows (3)' table is shown with a context menu open over the '10%TT' entry.

Count	No	Name
1	1	Default
2	2	10%TT

Count	VehType	DesSpeedDistr	RelFlow
1	100: Car	50: 50 km/h	0.900
2	200: HGV	50: 50 km/h	0.100

Unošenje prometnog opterećenja

desnim klikom miša na Link otvaramo izbornik i odabiremo opciju Add New Vehicle Input



The screenshot shows the software interface for traffic simulation. On the left, a sidebar contains 'Obstacles', 'Ramps & Stairs', and 'Pedestrian Inputs'. The main area displays a table titled 'Vehicle volumes by tir' with columns: Count, No, Name, Link, Volume(0), and VehComp(0). The table contains one row with values: Count: 1, No: 1, Name: 1: Glavni 1, Link: 1: Glavni 1, Volume(0): 400.0, and VehComp(0): 2: 10%TT. A red arrow points from the 'Link' column to a 'Quick View (Vehicle Inputs)' dialog box. The dialog box has a toolbar with a wrench icon and a table with columns: No, Name, Link, Volume(0), and VehComp(0). The table contains one row with values: No: 1, Name: 1: Glavni 1, Link: 1: Glavni 1, Volume(0): 400.0, and VehComp(0): 2: 10%TT. On the right, another table titled 'Vehicle volumes by tir' is visible, with columns: Count, Cont, TimeInt, VehComp, Volume, and VolType. The table contains one row with values: Count: 1, Cont: 1, TimeInt: 0-MAX, VehComp: 2: 10%TT, Volume: 400.0, and VolType: Stochasti.

Count: 1 No: 1 Name: 1: Glavni 1 Link: 1: Glavni 1 Volume(0): 400.0 VehComp(0): 2: 10%TT

Quick View (Vehicle Inputs)

No: 1 Name: 1: Glavni 1 Link: 1: Glavni 1 Volume(0): 400.0 VehComp(0): 2: 10%TT

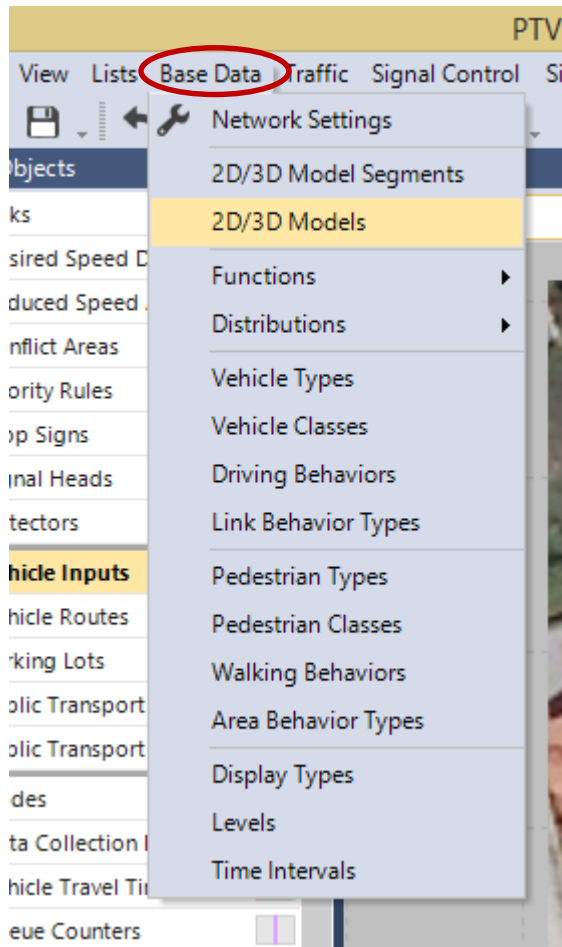
Count: 1 Cont: 1 TimeInt: 0-MAX VehComp: 2: 10%TT Volume: 400.0 VolType: Stochasti

Analognim postupkom unesemo opterećenje i za suprotan smijer

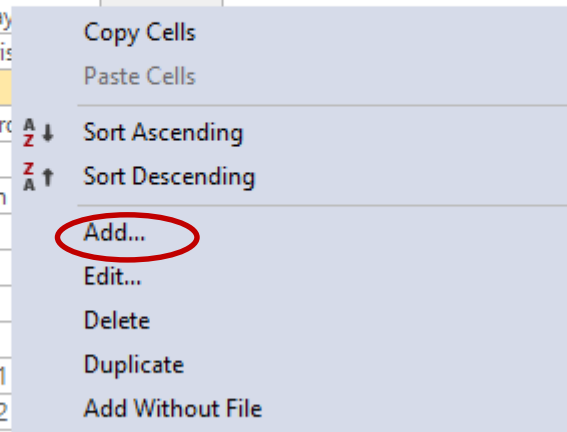
Upisujemo prometno opterećenje i odabiremo udio teretnih vozila koji smo u prethodnom koraku definirali

Unošenje prometnog opterećenja

Iz padajućeg izbornika Base data biramo 2D/3D models

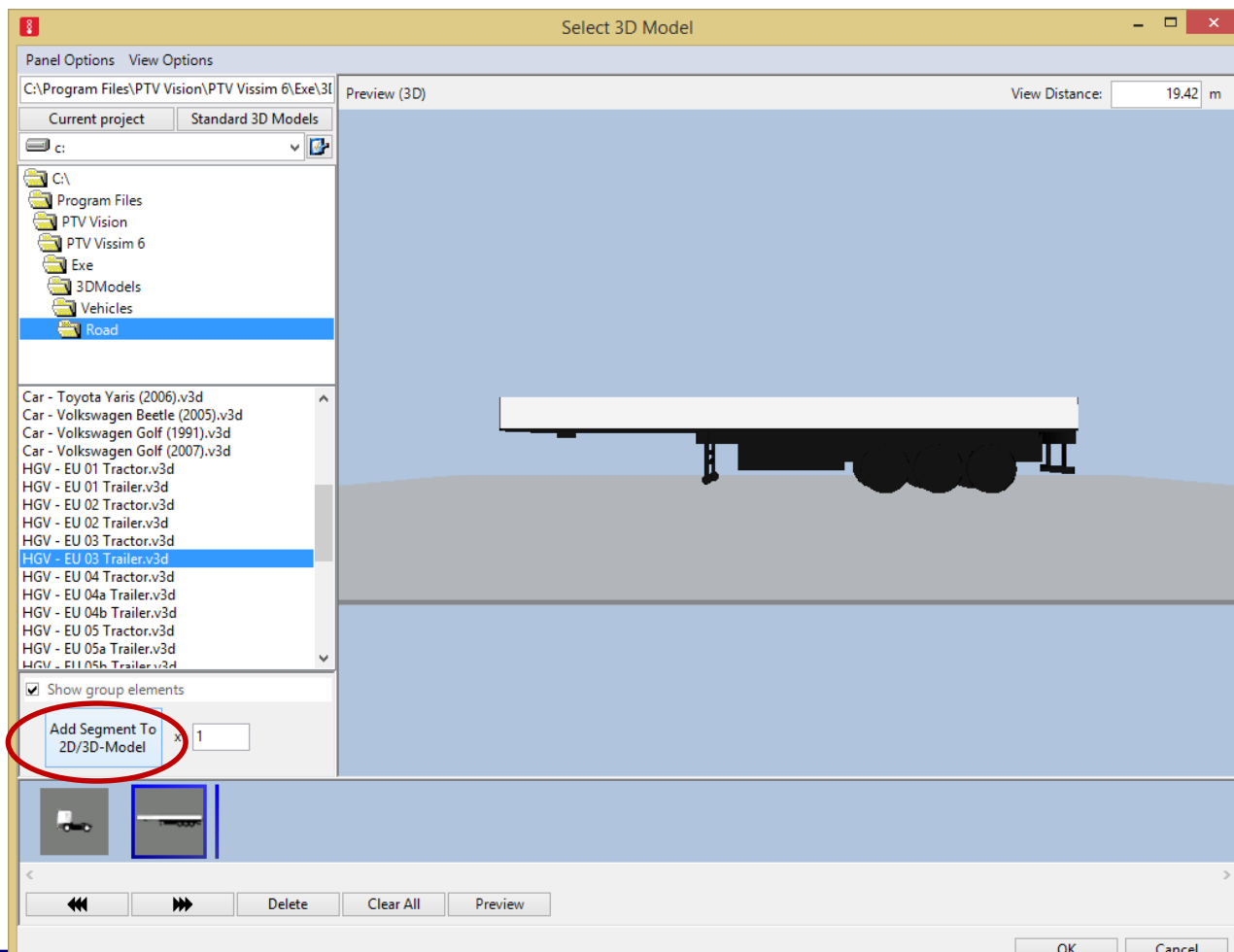


Count: 19	No	Name	Length
1	1	Car - Volkswagen Golf	4.211
2	2	Car - Audi A4	4.610
3	3	Car - Mercedes CLK	4.644
4	4	Car - Peugeot 607	4.760
5	5	Car - Volkswagen Beetle	4.012
6	6	Car - Porsche Cay	
7	7	Car - Toyota Yaris	
8	21	HGV - EU 04	
9	31	Bus - EU Standard	
10	41	Tram - GT8-2S	
11	61	Bike - Cycle Man	
12	101	Ped - Man 01	
13	102	Ped - Man 02	
14	103	Ped - Man 03	
15	104	Ped - Man 04	
16	201	Ped - Woman 01	
17	202	Ped - Woman 02	
18	203	Ped - Woman 03	0.397
19	204	Ped - Woman 04	0.310



Unošenje prometnog opterećenja

Biramo tipove teretnih vozila i dodajemo ih u model



Unošenje prometnog opterećenja

Odabranom teškom teretnom vozilu koje dodajemo prometnm toku dajemo ime

Select layout...  2D/3D model segn 

Coun	No	Name	Length
9	31	Bus - EU Standard	11,541
10	41	Tram - GT8-2S	37,650
11	61	Bike - Cycle Man 01	1,775
12	101	Ped - Man 01	0,456
13	102	Ped - Man 02	0,409
14	103	Ped - Man 03	0,442
15	104	Ped - Man 04	0,435
16	201	Ped - Woman 01	0,360
17	202	Ped - Woman 02	0,342
18	203	Ped - Woman 03	0,397
19	204	Ped - Woman 04	0,310
20	205	HGV - tegljac	15,965



Count: 2	Index	File3D	Length	Width	ShaftLen	JointFront	AxleFront	AxleRear	JointRear
1	1	HGV - EU 01 Tractor.v3d	5,563	2,496	0,000	0,000	1,578	4,691	4,145
2	2	HGV - EU 01 Trailer.v3d	13,000	2,450	0,000	1,180	1,180	9,768	12,622

Unošenje prometnog opterećenja

Određujemo koliko % od teretnih vozila će biti teška teretna vozila

2D/3D Model Distributions / Elements (2)

Select layout...  2D/3D model distr 

Coun	No	Name
1	10	Car
2	20	HGV
3	30	Bus
4	40	Tram
5	60	Bike
6	100	Man
7	200	Woman

Count: 2 Share Model2D3D

1	0,800	21: HGV - EU 04
2	0,100	31: Bus - EU Standard

41: Tram - GT8-2S
61: Bike - Cycle Man 01
101: Ped - Man 01
102: Ped - Man 02
103: Ped - Man 03
104: Ped - Man 04
201: Ped - Woman 01
202: Ped - Woman 02
203: Ped - Woman 03
204: Ped - Woman 04
205: HGV - tegljac

U istoj tablici dodajemo raspodjelu teretnih i teških teretnih vozila u okviru prometnog opterećenja teretnih vozila

Count: 2 Share Model2D3D

1	0,800	21: HGV - EU 04
2	0,200	205: HGV - tegljac

