

# Idejni projekt lokalne ceste

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Janjiš, Alenka

Undergraduate thesis / Završni rad

2021

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UNIVERSITY OF SPLIT



**SVEUČILIŠTE U SPLITU**  
**FAKULTET GRAĐEVINARSTVA, ARHITEKTURE I GEODEZIJE**

# **ZAVRŠNI RAD**

**ALENKA JANJIŠ**

**Split, 2021.**

**SVEUČILIŠTE U SPLITU**  
**FAKULTET GRAĐEVINARSTVA, ARHITEKTURE I GEODEZIJE**

# **IDEJNI PROJEKT LOKALNE CESTE**

**Završni rad**

**Split, 2021.**

**SVEUČILIŠTE U SPLITU**

**FAKULTET GRAĐEVINARSTVA, ARHITEKTURE I GEODEZIJE**

STUDIJ: **PREDDIPLOMSKI SVEUČILIŠNI STUDIJ GRAĐEVINARSTVA**

KANDIDAT: Alenka Janjiš

MATIČNI BROJ (JMBAG): 0083223296

KATEDRA: **Katedra za prometnice**

PREDMET: Ceste

### **ZADATAK ZA ZAVRŠNI RAD**

Tema: Idejni projekt lokalne ceste

Opis zadatka: Tema završnog rada je izrada projekta lokalne ceste. Zadatak se rješava polaganjem ceste na zadanoj geodetskoj podlozi od točke A prema točki B. Proračun elemenata ceste radi se na temelju danih podataka programskog zadatka iz kolegija Ceste. U programu koji se koristi pri projektiranju cesta AutoCad Civil 3D crtaju se svi nacrti kao i izračunavaju ostali potrebni podatci.

Zadatak treba sadržavati:

1. Kopiju programskog zadatka
2. Tehnički opis s prikazom korištenja programa Civil 3D
3. Građevinsku situaciju u mjerilu 1:1000
4. Uzdužni presjek u mjerilu 1:1000/100
5. Karakteristične poprečne presjeke u mjerilu 1:200
6. Obrada na računalu
7. Računaone ispise koordinatnih točaka osi
8. Proračun količina zemlojanih radova
9. Proračun količine radova po presjecima

U Splitu , srpanj 2021.

Voditelj završnog rada:

Prof. dr. sc. Dražen Cvitanić

## **Idejni projekt lokalne ceste**

Sažetak: Idejni projekt ceste izvodi se na zadanoj geodetskoj podlozi u mjerilu 1 : 1000 koja prikazuje teren na kojoj se cesta projektira. Cesta se formira od točke A koja se nalazi na 296 metara nadmorske visine prema točki B koja se nalazi 317 metara nadmorske visine. Vrsta terena na kojem se polaže trasa je brdoviti. Cesta se projektira za prosječni godišnji dnevni promet koji iznosi 950 vozila/dan (PGDP). Predviđena projektna brzina je 40 km/h. Trasa kontinuirane ceste ima dužinu 455.00 m. Idejno rješenje izrađeno je prema Pravilniku i osnovnim uvjetima za projektiranje ceste s elementima koji zadovoljavaju važeće propise, kao i sigurnosne i estetske kriterije.

Ključne riječi: lokalna cesta, teren, krivina, kolnik, stacionaža, uzdužni presjek, poprečni presjek

## **Conceptual project of local road**

Summary: The preliminary design of the road is performed on a given geodetic base at a scale of 1: 1000, which shows the terrain on which the road is designed. The road is formed from point A located at 296 meters above sea level towards point B, which is located at 317 meters above sea level. The type of terrain on which the route is laid is hilly. The road is designed for an average annual daily traffic of 950 vehicles / day (PGDP). Estimated design speed is 40km / h. The route of the continuous road has a length of 455.00 m. The conceptual design was made according to the Ordinance and the basic conditions for the design of roads with elements that meet the applicable regulations, as well as safety and aesthetic criteria.

Keywords: local road, terrain, curve, pavement, stationing, longitudinal section, cross section

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## **PROGRAMSKI ZADATAK**

Katedra za prometnice

Studij: Preddiplomski

Nastavni predmet: CESTE

Student/ica: ... Alenka Janjiš .....

## ZADATAK

Treba izraditi idejni projekt dionice ceste između točaka A i B naznačenih na priloženoj geodetskoj podlozi u mjerilu 1:1000.

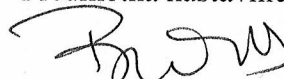
Zadano je:

- PGDP - prosječni godišnji dnevni promet: **950 voz/dan**
- vrsta terena: **brdoviti**.

Idejni projekt treba sadržavati:

1. Tehnički opis
2. Proračun horizontalne geometrije
3. Proračun proširenja kolnika u krivini
4. Proračun vertikalne geometrije i kota nivelete
5. Proračun vitoperenja kolnika
6. Građevinska situacija MJ. 1:1000
7. Uzdužni presjek MJ. 1:1000/100
8. Normalni poprečni presjek MJ. 1:50
9. Karakteristični poprečni presjeci MJ. 1:100
10. Predmjer radova
11. Aproksimativni troškovnik

Predmetna nastavnica:



izv.prof.dr.sc. Deana Breški, dipl.ing.grad.



## 2. TEHNIČKI OPIS

### 2.1 Općenito

Na priloženoj geodetskoj podlozi u mjerilu 1:1000 izrađen je idejni projekt ceste na dionici od točke A koja se nalazi na 296 metara nadmorske visine, do točke B koja se nalazi na 317 metara nadmorske visine. Idejni projekt je cesta 5. kategorije s prosječnim godišnjim dnevnim prometom od 950 vozila na dan. Teren na kojem se izvodi cesta je brdovit. Projektom je predviđena prosječna brzina od 40 km/h. Dužina ceste koja se izvodi je 455 metara.

### 2.2 Horizontalni elementi

Za odabranu projektnu brzinu od 40 km/h prema Pravilniku minimalni radijus horizontalne krivine iznosi 45 metara a minimalna prijelaznica 30 metara. U ovom projektu trasa sadržava tri pravca i dvije krivine. Prva krivina je radijusa 60 metara s prijelaznicom od 40 metara, zatim imamo međupravac duljine 19.22 metara pa drugu krivinu radijusa 45 metara sa prijelaznicom od 30 metara.

### 2.3 Vertikalni elementi

Prema pravilniku, a ovisno o kategoriji terena maksimalni dozvoljeni nagib nivelete iznosi 12% dok je minimalni radijus vertikalne krivine 300 metara. Nagib orvog pravca je  $S_1 = 3.75\%$  a drugog je  $S_2 = 6.04\%$ . Tangenta je dužine 112 metara, a radijus vertikalne krivine je  $R = 4900$  metara.

### 2.4 Poprečni presjek

Cesta sadrži dva kolnička traka širine 2.75 metara sa dodatnim rubnim trakovima sa svake strane širine 0.2 metara što daje ukupnu širinu od 2.95 metara. Poprečni nagib iznosi 2.5% no u nekim stacionašama varira i do 7%. Uz cestu je izgrađena bankina širine 1 metar, nagiba 4% koja se pruža u smjeru nasipa te berma poprečnog nagiba 5%. Trasa je dijelom u usjeku, a dijelom u nasipu pri čemu se izvode nagibi pokoso u omjeru 1:1 i 2:1. Na usjecima se izvode rigoli za odvodnju vode širine 0.65 m i drenaža koja je postavljena u glinenu posteljicu, a u nasipu se izvode potporni zidovi zbog konfiguracije terena.

### 2.5 Kolnička konstrukcija

Projektom je predviđena kolnička konstrukcija u navedenim slojevima:

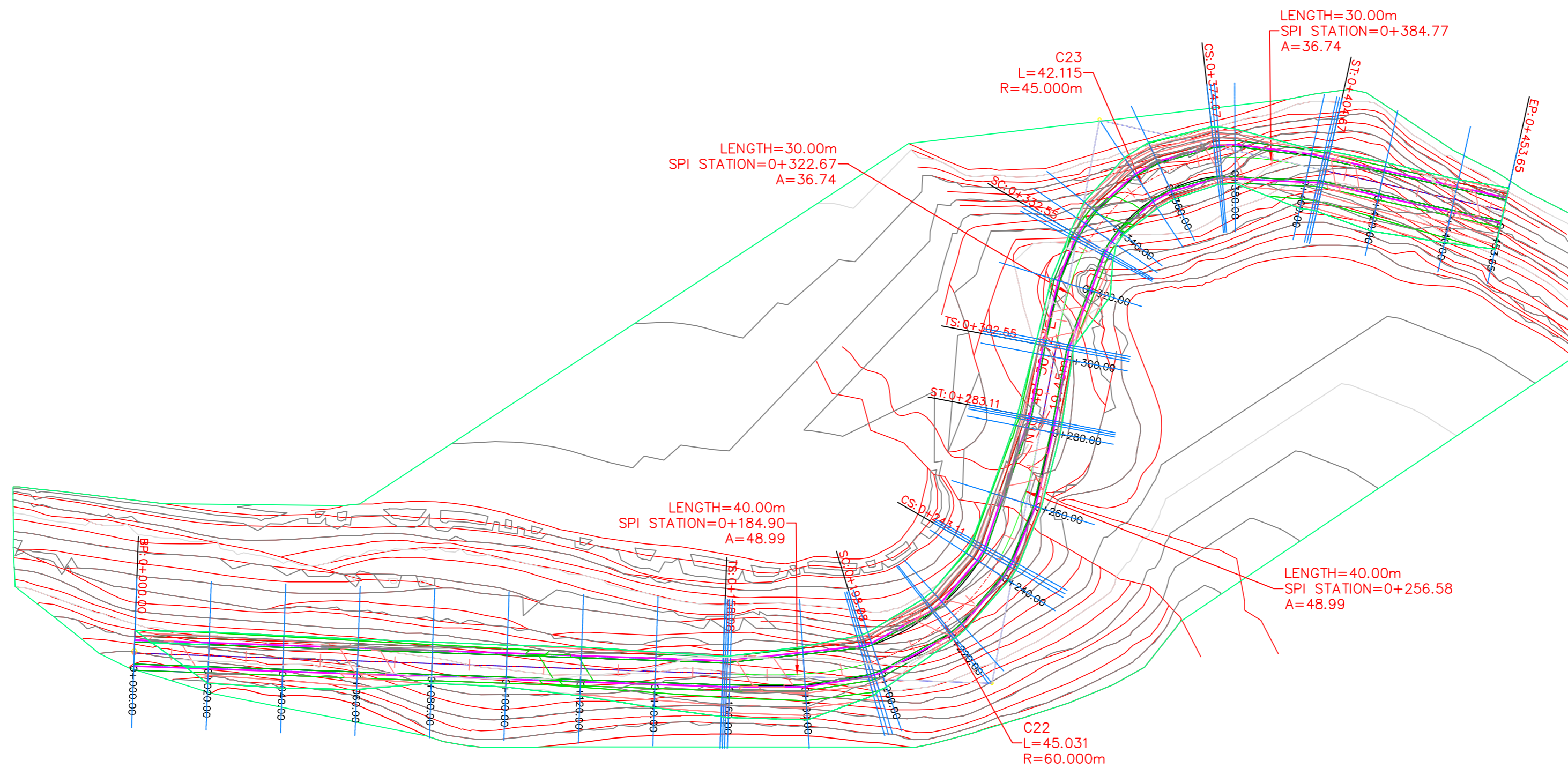
- habajući asfaltni sloj AB11- 4 cm
- bitumenizirani nosivi sloj- 6 cm
- mehanički nosivi zbijeni sloj- 25 cm

## 2.6 Odvodnja

Odvodnja kolnika predviđa se otvorenim sustavom odvodnje prihvaćanjem kolničkih i pribrežnih voda u zasjeku i usjeku u betonske rigole te kontroliranim ispuštanjem u teren direktno ili betonski cijevnim propustima kroz trup kolnika.

## **3. GRAFIČKI PRILOZI**

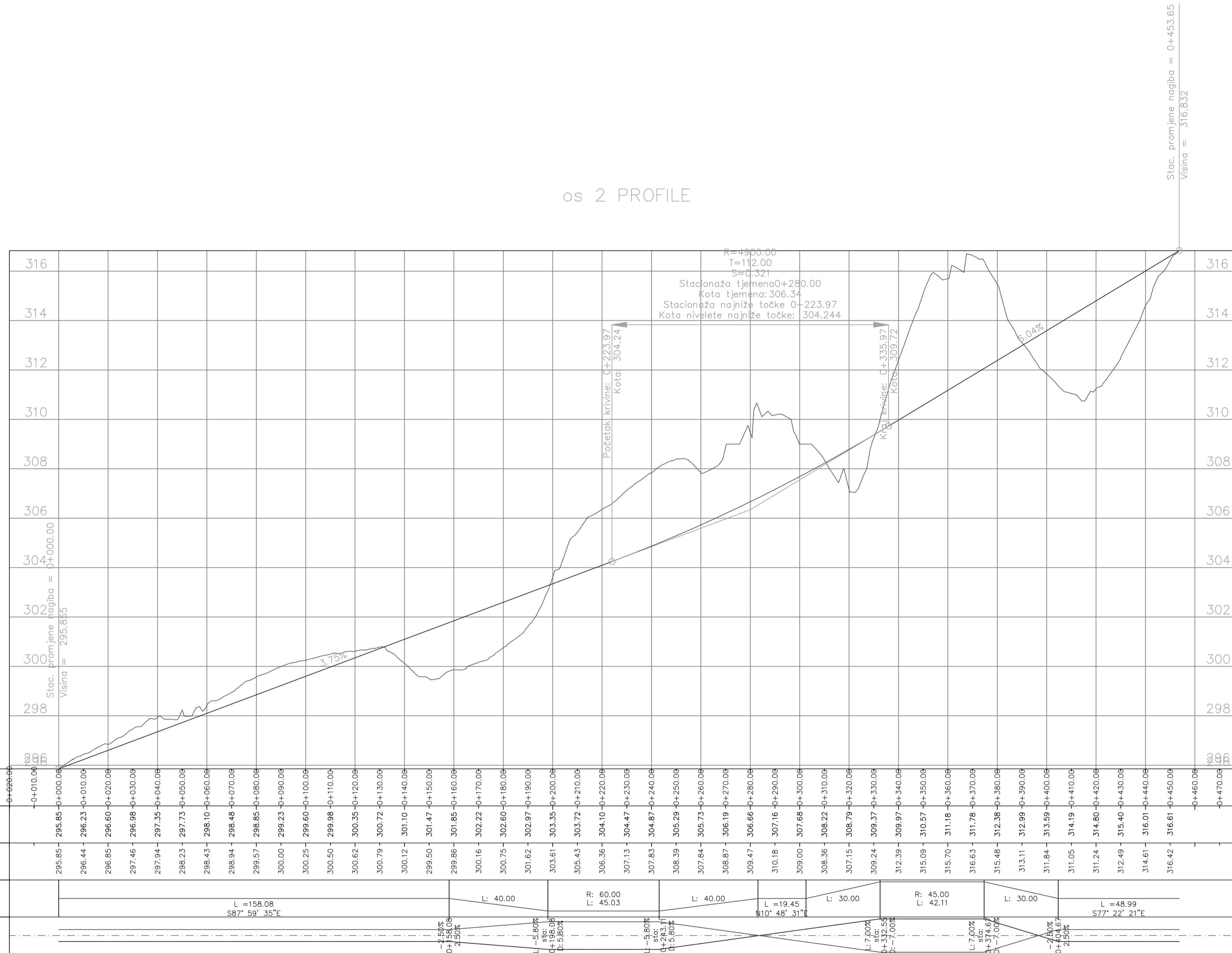
### 3.1 Situacija M 1:1000



|  |                                |  |
|--|--------------------------------|--|
|  <p>SVEUČILIŠTE U SPLITU,<br/>FAKULTET GRAĐEVINARSTVA<br/>ARHITEKTURE I GEODEZIJE<br/>21000 SPLIT,<br/>MATICE HRVATSKE 15</p> | <b>ZAVRŠNI RAD - CESTE</b>     |  |
|  | IDEJNI PROJEKT LOKALNE CESTE   |  |
|  | IZRADILA:<br>ALENKA JANJIŠ     | MENTOR:<br>Prof.dr.sc. Dražen Cvitanić |
|  | SADRŽAJ:<br>DATUM: 15.07.2021. | SITUACIJA<br>PRILOG: 1                 |
|  | MJERILO: M 1 : 1000            |  |

### 3.2 Uzdužni presjek M 1:1000/100

os 2 PROFILE



| Stacionaža            | 0+000.00 | 0+100.00                    | 0+200.00 | 0+300.00 | 0+400.00 | 0+466.66 |
|-----------------------|----------|-----------------------------|----------|----------|----------|----------|
| Kote nivelete         | 295.85   | 296.23                      | 296.60   | 296.98   | 300.00   | 316.65   |
| Kote terena           | 295.85   | 296.44                      | 296.60   | 297.46   | 300.00   | 316.65   |
| Horizontalni elementi |          | L = 158.08<br>S87° 59' 35"E |          |          |          |          |
| Vitoperenje           |          | -2.50%                      |          |          |          |          |



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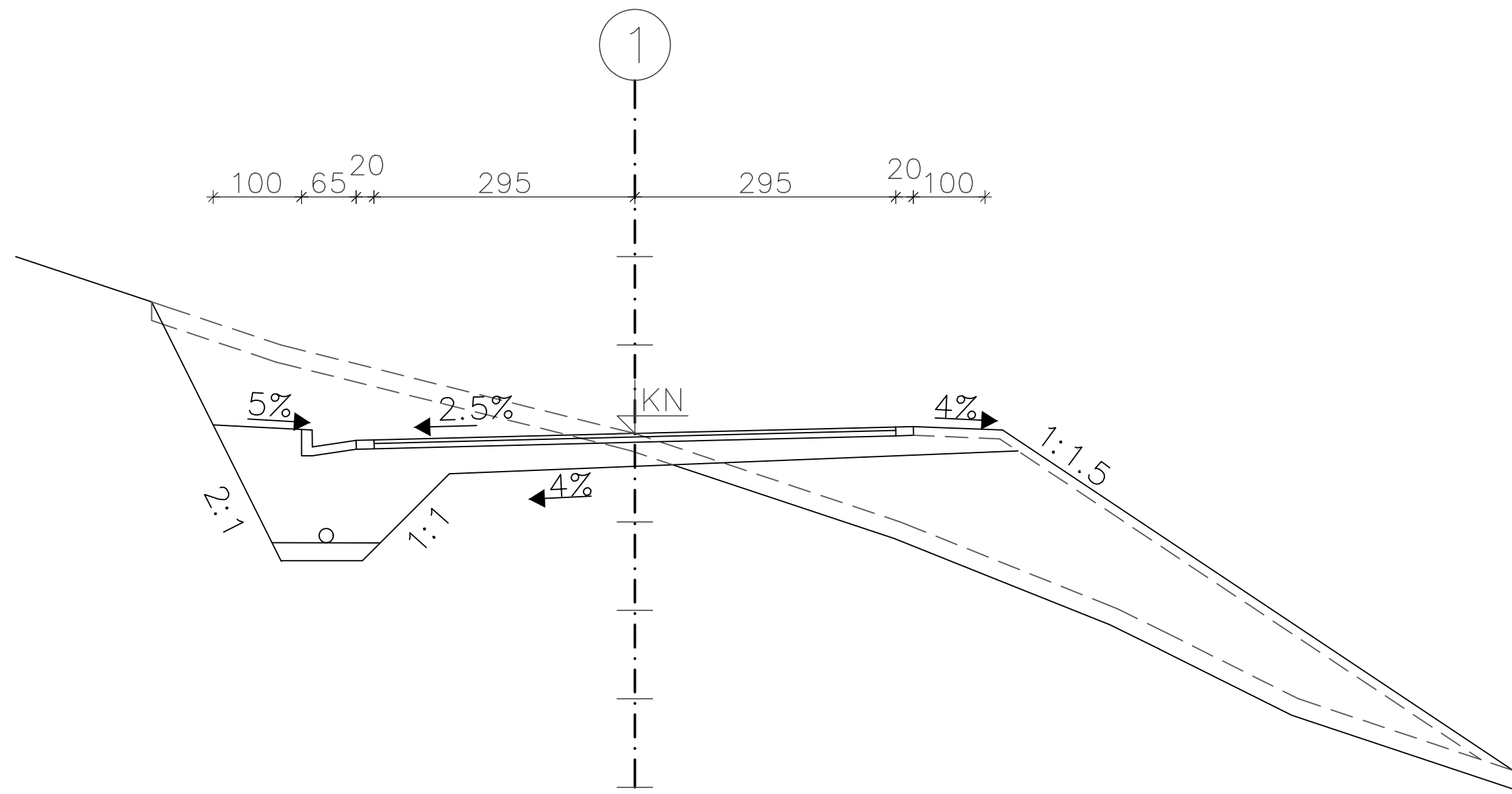
**ZAVRŠNI RAD - CESTE**


IDEJNI PROJEKT LOKALNE CESTE

|                             |  |   |  |
|-----------------------------|--|---|--|
| IZRADILA:<br>ALENKA JANJŠ   |  | MENTOR:<br>Prof.dr.sc. Dražen Cvitančić |  |
| SADRŽAJ:<br>UZDUŽNI PRESJEK |  | MJEŠLOM 1 : 1000/100                    |  |
| DATUM:<br>15.07.2021.       |  | PRILOG:<br>2                            |  |

### 3.3 Normalni poprečni presjek M 1:50

POPREČNI PRESJEK  
M 1:100

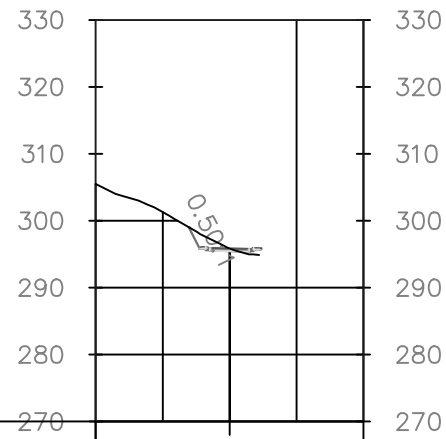


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|   | IDEJNI PROJEKT LOKALNE CESTE     |   |
|   | IZRADILA:<br>ALENKA JANJIŠ       | MENTOR:<br>Prof.dr.sc. Dražen Cvitančić |
|   | SADRŽAJ: GENERALNI PLAN POZICIJA | MJERILO: M 1 : 100                      |
| DATUM: 15.07.2021   | PRILOG: 3                        |   |



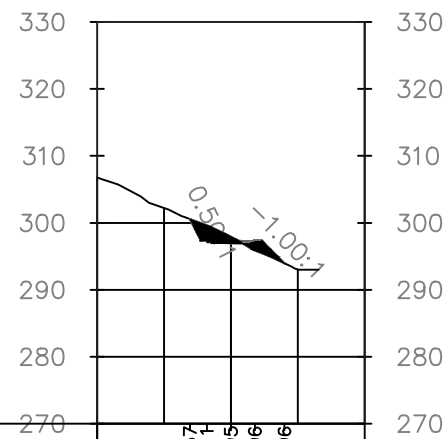
### 3.4 Karakteristični poprečni presjeci M 1:200

0+000.00



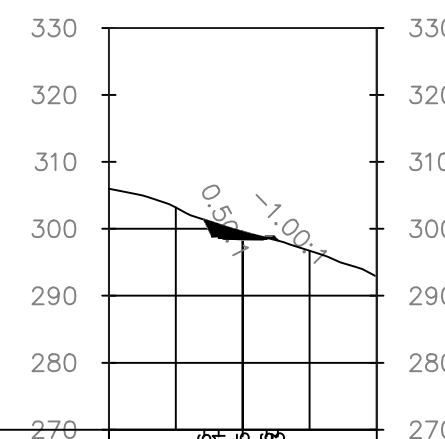
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|-------------------|---------|-------|--------|
| Kote projekta     |         |       |        |
| Udaljenost od osi | -20.000 | 0.000 | 20.000 |
| Kote terena       |         |       |        |

0+040.00



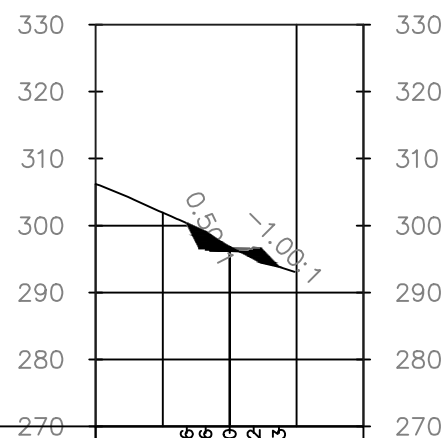
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| Kote projekta     |         |        |        |        |        |        |
| Udaljenost od osi | -20.000 | -6.12  | 0.000  | 3.59   | 8.01   | 20.000 |
| Kote terena       |         | 300.57 | 297.11 | 296.95 | 296.96 | 293.96 |

0+080.00



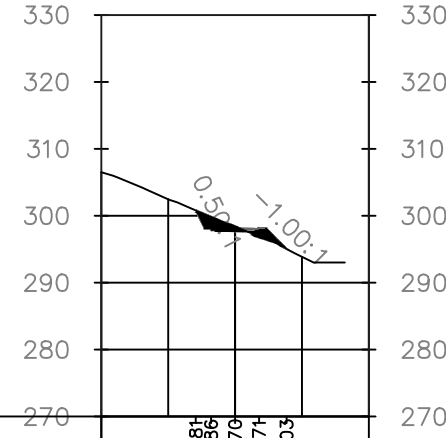
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| Kote projekta     |         |        |        |        |        |        |
| Udaljenost od osi | -20.000 | -5.76  | 0.000  | 3.59   | 8.01   | 20.000 |
| Kote terena       |         | 301.36 | 298.61 | 298.45 | 298.45 | 298.45 |

0+020.00



|                   |         |        |        |        |        |        |
|-------------------|---------|--------|--------|--------|--------|--------|
| Kote projekta     |         |        |        |        |        |        |
| Udaljenost od osi | -20.000 | -6.39  | 0.000  | 3.59   | 7.39   | 20.000 |
| Kote terena       |         | 300.36 | 296.20 | 296.22 | 293.83 |        |

0+060.00



|                   |         |        |        |        |        |        |
|-------------------|---------|--------|--------|--------|--------|--------|
| Kote projekta     |         |        |        |        |        |        |
| Udaljenost od osi | -20.000 | -5.86  | 0.000  | 3.59   | 7.68   | 20.000 |
| Kote terena       |         | 300.81 | 297.86 | 297.70 | 295.03 |        |



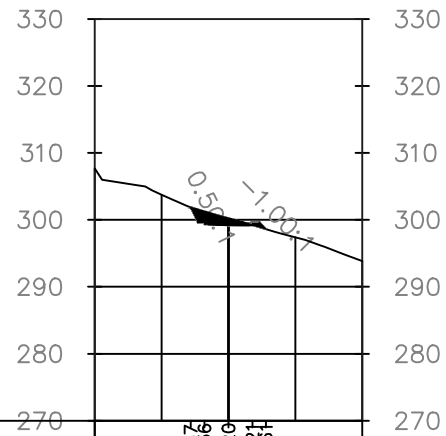
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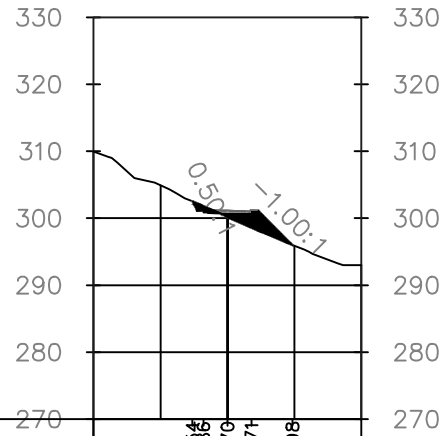
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| IZRADILA:<br>ALENKA JANJIŠ         | MENTOR:<br>Prof.dr.sc. Dražen Cvitanić |
| SADRŽAJ: KARAKT. POPREČNI PRESJECI | MJERILO: M 1 : 200                     |
| DATUM: 15.07.2021.                 | PRILOG: 4                              |

0+100.00



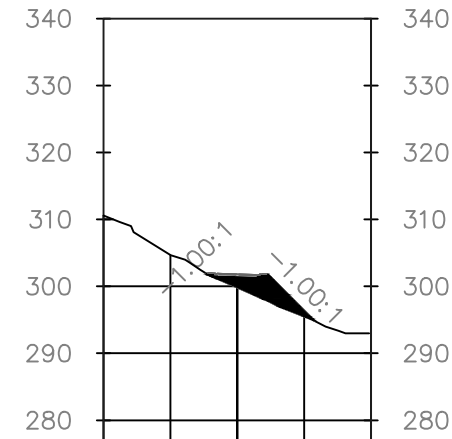
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| Kote projekta     | 26.000 | 301.87 | 299.36 | 299.20 | 298.21 | 298.61 | 26.000 |
| Udaljenost od osi |        | -5.64  | 0.00   | 3.59   | 5.61   |        |        |
| Kote terena       |        | 301.87 | 299.36 | 299.20 | 298.21 | 298.61 |        |

0+140.00



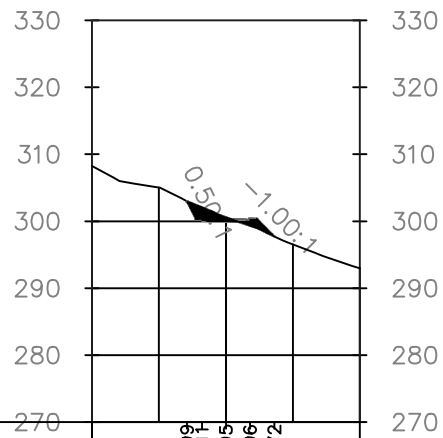
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| Kote projekta     | 26.000 | 302.86 | 300.70 | 300.71 | 295.98 | 26.000 |
| Udaljenost od osi |        | -5.23  | 0.00   | 3.59   | 9.73   |        |
| Kote terena       |        | 302.86 | 300.70 | 300.71 | 295.98 |        |

0+158.08



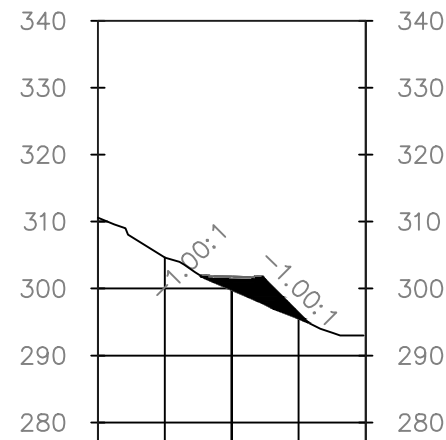
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| Kote projekta     | 26.000 | 301.93 | 301.38 | 301.39 | 294.82 | 26.000 |
| Udaljenost od osi |        | -4.53  | 0.00   | 3.59   | 11.58  |        |
| Kote terena       |        | 301.93 | 301.38 | 301.39 | 294.82 |        |

0+120.00

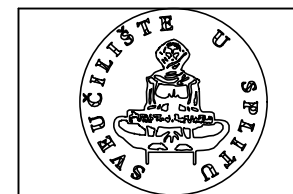


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|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta     | 26.000 | 302.99 | 300.11 | 299.95 | 299.96 | 297.72 | 26.000 |
| Udaljenost od osi |        | -5.83  | 0.00   | 3.59   | 7.24   |        |        |
| Kote terena       |        | 302.99 | 300.11 | 299.95 | 299.96 | 297.72 |        |

0+158.08



|                   |        |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|--------|
| Kote projekta     | 26.000 | 301.93 | 301.38 | 301.39 | 294.87 | 26.000 |
| Udaljenost od osi |        | -4.53  | 0.00   | 3.59   | 11.52  |        |
| Kote terena       |        | 301.93 | 301.38 | 301.39 | 294.87 |        |



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ZAVRŠNI RAD - CESTE

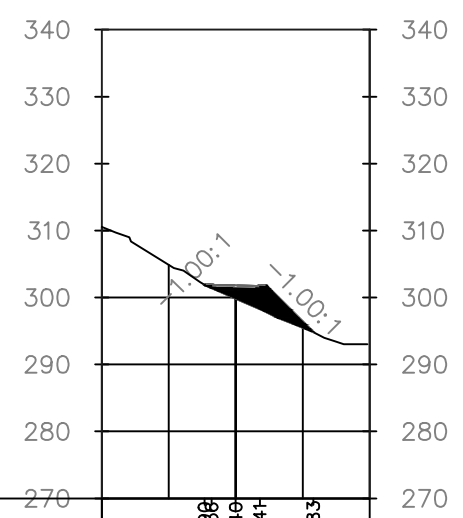
IDEJNI PROJEKT LOKALNE CESTE

IZRADILA: ALENKA JANJIŠ MENTOR: Prof.dr.sc. Dražen Cvitanić

SADRŽAJ: KARAKT. POPREČNI PRESJECI MJERILO: M 1 : 200

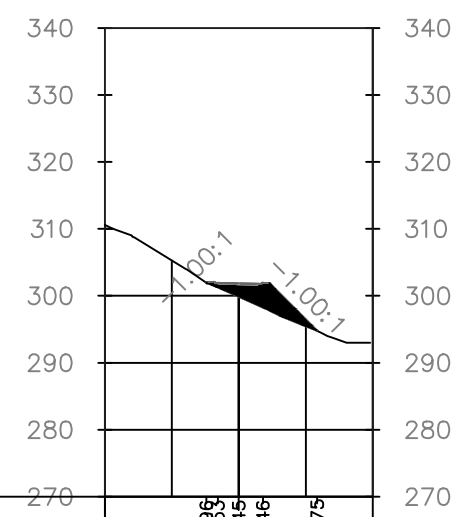
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0+158.65



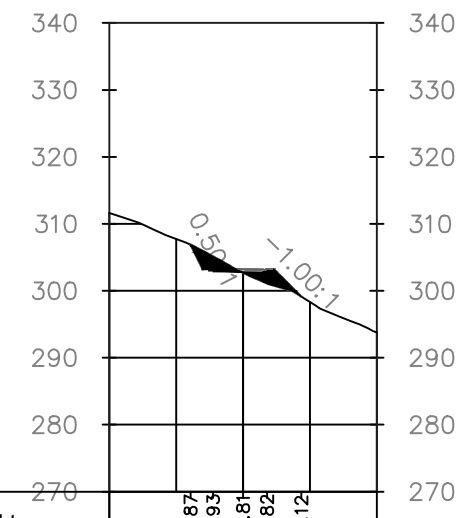
|                   |        |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|--------|
| Kote projekta     | 26.000 | 301.98 | 301.98 | 301.98 | 294.83 | 26.000 |
| Udaljenost od osi |        | -5.88  | 0.00   | 3.59   | 11.58  |        |
| Kote terena       |        | 301.98 | 301.40 | 301.41 | 294.83 |        |

0+160.00



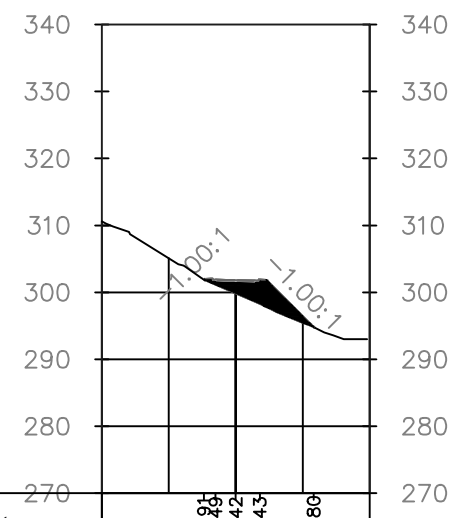
|                   |        |        |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta     | 26.000 | 301.95 | 301.95 | 301.45 | 301.46 | 294.75 | 26.000 |
| Udaljenost od osi |        | -4.85  | 0.00   | 3.59   | 11.71  |        |        |
| Kote terena       |        | 301.95 | 301.45 | 301.46 | 294.75 |        |        |

0+196.45



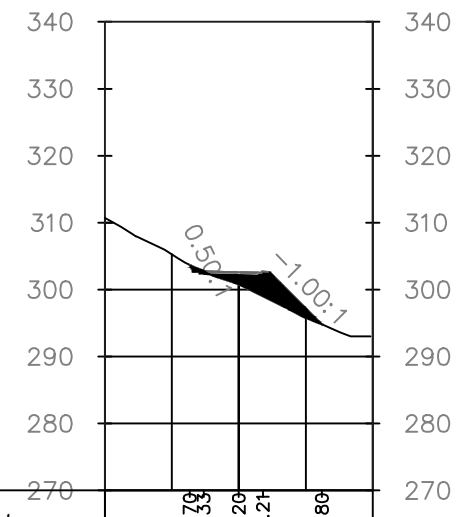
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|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta     | 26.000 | 306.87 | 302.93 | 302.81 | 302.82 | 299.12 | 26.000 |
| Udaljenost od osi |        | -7.84  | -4.47  | 0.00   | 3.59   | 8.70   |        |
| Kote terena       |        | 306.87 | 302.93 | 302.81 | 302.82 | 299.12 |        |

0+159.22



|                   |        |        |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta     | 26.000 | 301.28 | 301.28 | 301.42 | 301.43 | 294.80 | 26.000 |
| Udaljenost od osi |        | -4.75  | 0.00   | 3.59   | 11.64  |        |        |
| Kote terena       |        | 301.28 | 301.42 | 301.43 | 294.80 |        |        |

0+180.00

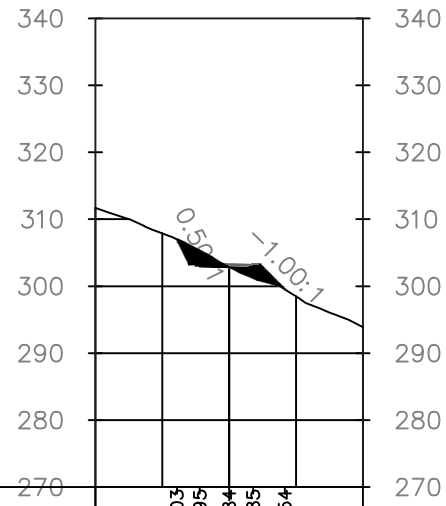


|                   |        |        |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta     | 26.000 | 303.70 | 302.39 | 302.20 | 302.21 | 294.80 | 26.000 |
| Udaljenost od osi |        | -7.33  | -5.25  | 0.00   | 3.59   | 12.41  |        |
| Kote terena       |        | 303.70 | 302.39 | 302.20 | 302.21 | 294.80 |        |



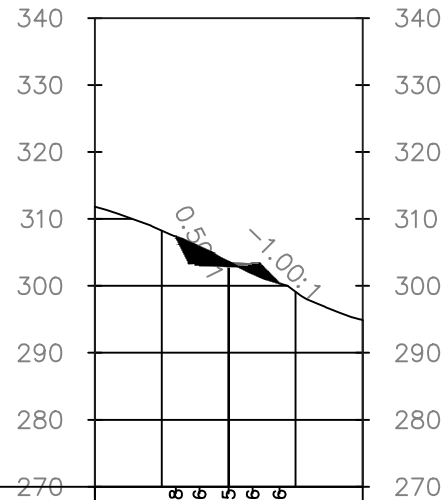
|                                    |  |
|------------------------------------|--|
| <b>ZAVRŠNI RAD - CESTE</b>         |  |
| IDEJNI PROJEKT LOKALNE CESTE       |  |
| IZRADILA:<br>ALENKA JANJIŠ         | MENTOR:<br>Prof.dr.sc. Dražen Cvitanić |
| SADRŽAJ: KARAKT. POPREČNI PRESJECI | MJERILO: M 1 : 200                     |
| DATUM: 15.07.2021.                 | PRILOG: 4                              |

0+197.26



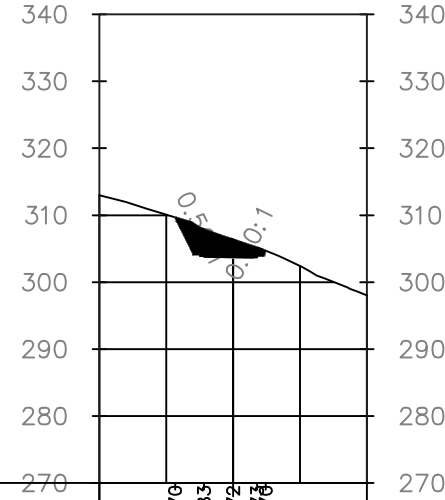
|                   |        |        |      |        |        |
|-------------------|--------|--------|------|--------|--------|
| Kote projekta     | 26.000 | 307.03 | 7.82 | 307.03 | 26.000 |
| Udaljenost od osi |        | 302.95 | 4.38 | 302.95 |        |
| Kote terena       |        | 302.84 | 0.00 | 302.84 |        |
|                   |        | 302.85 | 3.59 | 302.85 |        |
|                   |        | 299.54 | 8.32 | 299.54 |        |

0+200.00



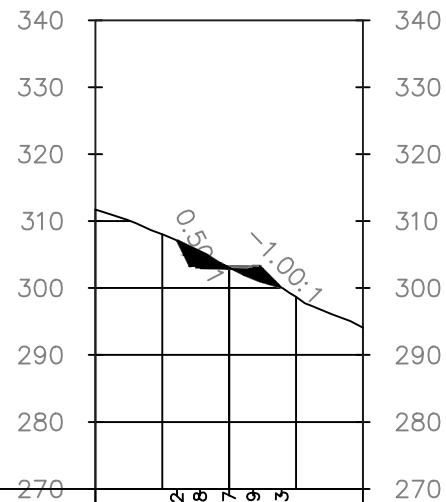
|                   |        |        |      |        |        |
|-------------------|--------|--------|------|--------|--------|
| Kote projekta     | 26.000 | 307.38 | 7.91 | 307.38 | 26.000 |
| Udaljenost od osi |        | 303.06 | 4.35 | 303.06 |        |
| Kote terena       |        | 302.95 | 0.00 | 302.95 |        |
|                   |        | 302.96 | 3.59 | 302.96 |        |
|                   |        | 300.36 | 7.60 | 300.36 |        |

0+220.59



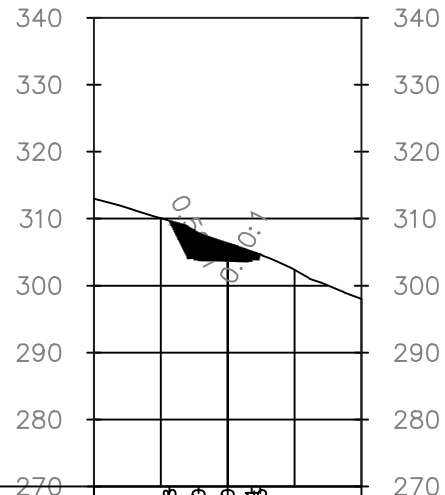
|                   |        |        |      |        |        |
|-------------------|--------|--------|------|--------|--------|
| Kote projekta     | 26.000 | 309.70 | 8.68 | 309.70 | 26.000 |
| Udaljenost od osi |        | 303.83 | 4.35 | 303.83 |        |
| Kote terena       |        | 303.72 | 0.00 | 303.72 |        |
|                   |        | 303.76 | 3.59 | 303.76 |        |

0+198.08

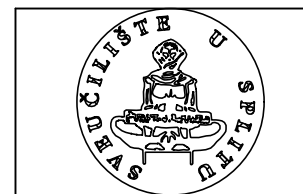


|                   |        |        |      |        |        |
|-------------------|--------|--------|------|--------|--------|
| Kote projekta     | 26.000 | 307.12 | 7.81 | 307.12 | 26.000 |
| Udaljenost od osi |        | 302.98 | 4.35 | 302.98 |        |
| Kote terena       |        | 302.87 | 0.00 | 302.87 |        |
|                   |        | 302.89 | 3.59 | 302.89 |        |
|                   |        | 300.03 | 7.86 | 300.03 |        |

0+220.00



|                   |        |        |      |        |        |
|-------------------|--------|--------|------|--------|--------|
| Kote projekta     | 26.000 | 309.68 | 8.68 | 309.68 | 26.000 |
| Udaljenost od osi |        | 303.80 | 4.35 | 303.80 |        |
| Kote terena       |        | 303.79 | 0.00 | 303.79 |        |
|                   |        | 303.83 | 3.58 | 303.83 |        |



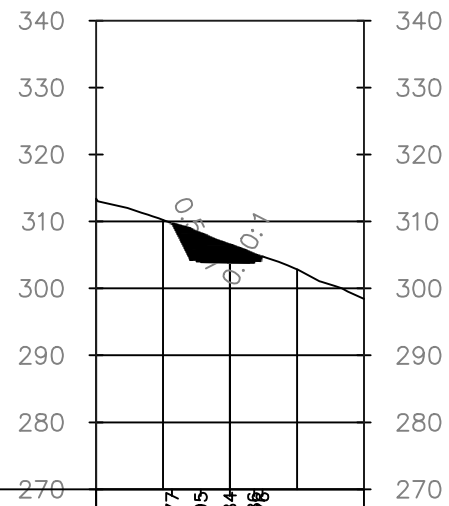
SVEUČILIŠTE U SPLITU  
 FAKULTET GRAĐEVINARSTVA  
 ARHITEKTURE I GEODEZIJE  
 21000 SPLIT,  
 MATICE HRVATSKE 15

ZAVRŠNI RAD - CESTE

IDEJNI PROJEKT LOKALNE CESTE

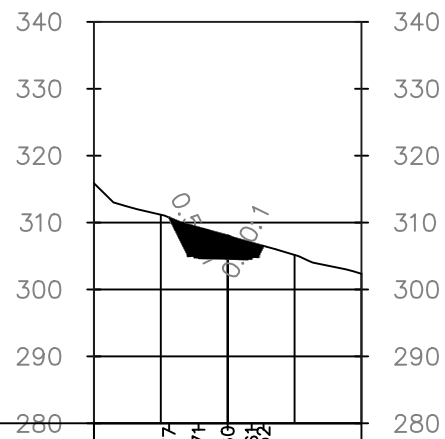
|           |                           |          |                             |
|-----------|---------------------------|----------|-----------------------------|
| IZRADILA: | ALENKA JANJIŠ             | MENTOR:  | Prof.dr.sc. Dražen Cvitanić |
| SADRŽAJ:  | KARAKT. POPREČNI PRESJECI | MJERILO: | M 1 : 200                   |
| DATUM:    | 15.07.2021.               | PRILOG:  | 4                           |

0+223.97



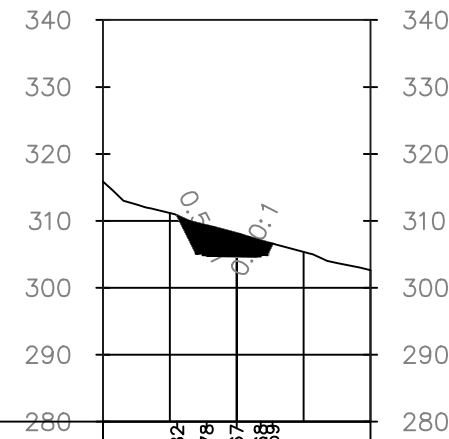
|                   |        |        |       |        |
|-------------------|--------|--------|-------|--------|
| Kote projekta     |        | 309.77 | -8.65 | 309.77 |
| Udaljenost od osi | 20.000 |        | -4.35 | 303.95 |
| Kote terena       |        | 303.84 | 0.00  | 303.84 |
|                   |        | 303.96 | 2.52  | 306.48 |
|                   | 26.000 |        |       |        |

0+243.11



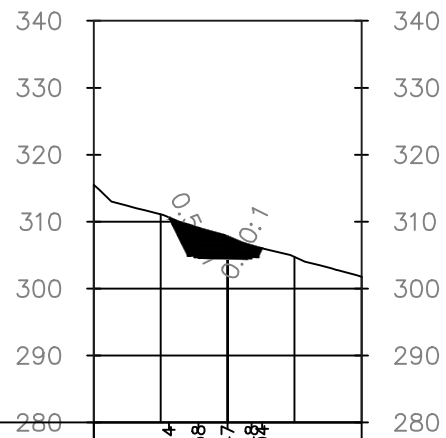
|                   |        |        |       |        |
|-------------------|--------|--------|-------|--------|
| Kote projekta     |        | 310.77 | -8.78 | 310.77 |
| Udaljenost od osi | 20.000 |        | -4.35 | 304.71 |
| Kote terena       |        | 304.60 | 0.00  | 304.60 |
|                   |        | 306.52 | 3.59  | 306.52 |
|                   | 26.000 |        |       |        |

0+244.74



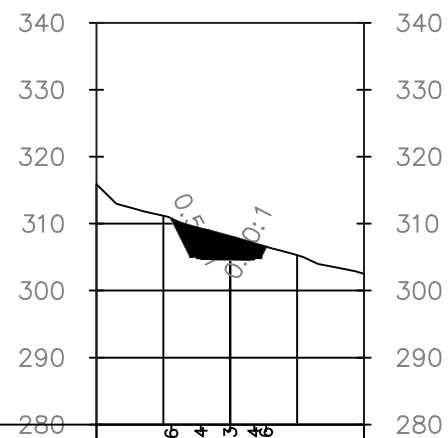
|                   |        |        |       |        |
|-------------------|--------|--------|-------|--------|
| Kote projekta     |        | 310.82 | -8.89 | 310.82 |
| Udaljenost od osi | 20.000 |        | -4.47 | 304.78 |
| Kote terena       |        | 304.67 | 0.00  | 304.67 |
|                   |        | 306.68 | 3.59  | 306.68 |
|                   | 26.000 |        |       |        |

0+240.00



|                   |        |        |       |        |
|-------------------|--------|--------|-------|--------|
| Kote projekta     |        | 310.64 | -8.77 | 310.64 |
| Udaljenost od osi | 20.000 |        | -4.35 | 304.58 |
| Kote terena       |        | 304.47 | 0.00  | 304.47 |
|                   |        | 306.48 | 3.59  | 306.48 |
|                   | 26.000 |        |       |        |

0+243.92



|                   |        |        |       |        |
|-------------------|--------|--------|-------|--------|
| Kote projekta     |        | 310.76 | -8.78 | 310.76 |
| Udaljenost od osi | 20.000 |        | -4.38 | 304.74 |
| Kote terena       |        | 304.63 | 0.00  | 304.63 |
|                   |        | 306.56 | 3.35  | 306.56 |
|                   | 26.000 |        |       |        |



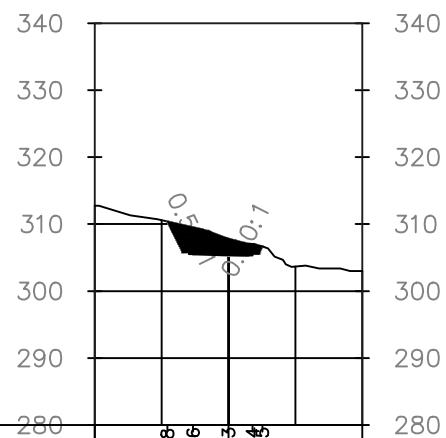
SVEUČILIŠTE U  
SPLITU  
FAKULTET GRAĐEVINARSTVA  
ARHITEKTURE I GEODEZIJE  
21000 SPLIT,  
MATICE HRVATSKE 15

### ZAVRŠNI RAD - CESTE

#### IDEJNI PROJEKT LOKALNE CESTE

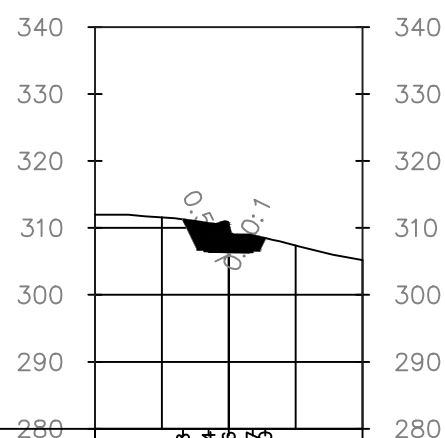
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|------------------------------------|--|
| IZRADILA:<br>ALENKA JANJIŠ         | MENTOR:<br>Prof.dr.sc. Dražen Cvitanić |
| SADRŽAJ: KARAKT. POPREČNI PRESJECI | MJERILO: M 1 : 200                     |
| DATUM: 15.07.2021.                 | PRILOG: 4                              |

0+260.00



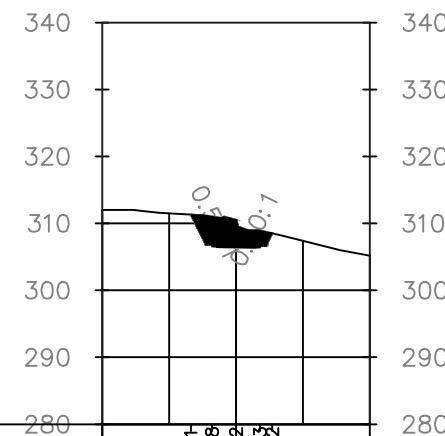
|                   |        |        |        |
|-------------------|--------|--------|--------|
| Kote projekta     |        | 310.38 | 310.38 |
| Udaljenost od osi | 20.000 | -9.15  | 20.000 |
| Kote terena       |        | 305.46 | 305.33 |
|                   |        | 305.33 | 305.33 |
|                   |        | 305.65 | 305.65 |

0+281.96



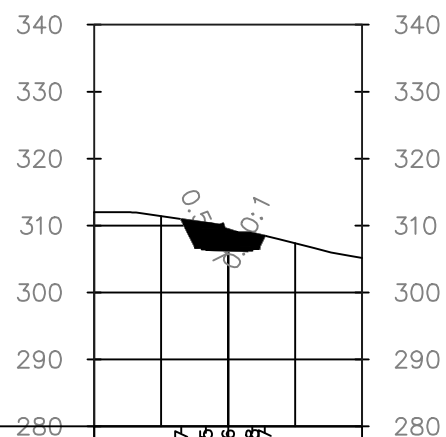
|                   |        |        |        |
|-------------------|--------|--------|--------|
| Kote projekta     |        | 311.28 | 311.28 |
| Udaljenost od osi | 20.000 | -6.85  | 20.000 |
| Kote terena       |        | 306.44 | 306.36 |
|                   |        | 306.36 | 306.36 |
|                   |        | 308.56 | 308.56 |

0+283.11



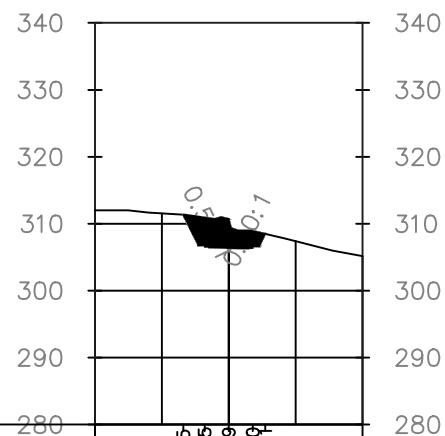
|                   |        |        |        |
|-------------------|--------|--------|--------|
| Kote projekta     |        | 311.31 | 311.31 |
| Udaljenost od osi | 20.000 | -6.75  | 20.000 |
| Kote terena       |        | 306.58 | 306.42 |
|                   |        | 306.42 | 306.42 |
|                   |        | 308.52 | 308.52 |

0+280.00



|                   |        |        |        |
|-------------------|--------|--------|--------|
| Kote projekta     |        | 310.97 | 310.97 |
| Udaljenost od osi | 20.000 | -7.02  | 20.000 |
| Kote terena       |        | 306.35 | 306.26 |
|                   |        | 306.26 | 306.26 |
|                   |        | 308.29 | 308.29 |

0+282.53



|                   |        |        |        |
|-------------------|--------|--------|--------|
| Kote projekta     |        | 311.35 | 311.35 |
| Udaljenost od osi | 20.000 | -6.81  | 20.000 |
| Kote terena       |        | 306.55 | 306.39 |
|                   |        | 306.39 | 306.39 |
|                   |        | 308.51 | 308.51 |



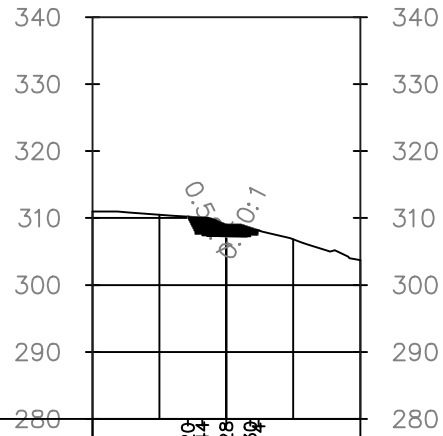
SVEUČILIŠTE U SPLITU,  
FAKULTET GRAĐEVINARSTVA  
ARHITEKTURE I GEODEZIJE  
21000 SPLIT,  
MATICE HRVATSKE 15

ZAVRŠNI RAD - CESTE

IDEJNI PROJEKT LOKALNE CESTE

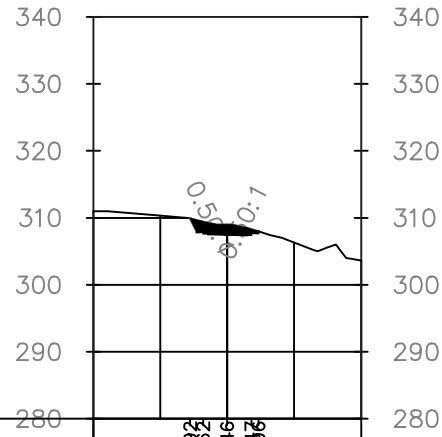
|                                    |   |
|------------------------------------|---|
| IZRADILA:<br>ALENKA JANJIŠ         | MENTOR:<br>Prof.dr.sc. Dražen Cvitančić |
| SADRŽAJ: KARAKT. POPREČNI PRESJECI | MJERILO: M 1 : 200                      |
| DATUM: 15.07.2021.                 | PRILOG: 4                               |

0+300.00



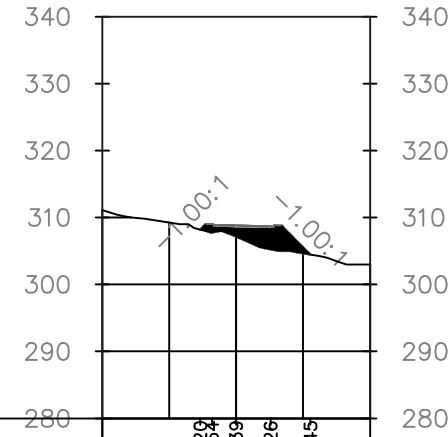
|                   |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|
| Kote projekta     | 20.000 | 319.20 | 319.76 | 319.70 | 20.000 |
| Udaljenost od osi |        | -5.76  | 0.00   | 307.28 |        |
| Kote terena       |        | 319.20 | 307.28 | 307.28 |        |

0+303.25



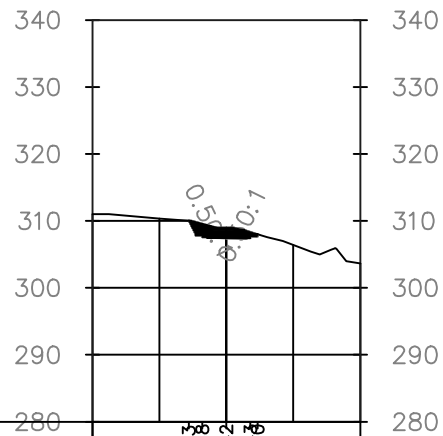
|                   |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|
| Kote projekta     | 20.000 | 309.82 | 309.82 | 307.46 | 20.000 |
| Udaljenost od osi |        | -5.54  | 0.00   | 307.46 |        |
| Kote terena       |        | 309.82 | 307.46 | 307.46 |        |

0+320.00



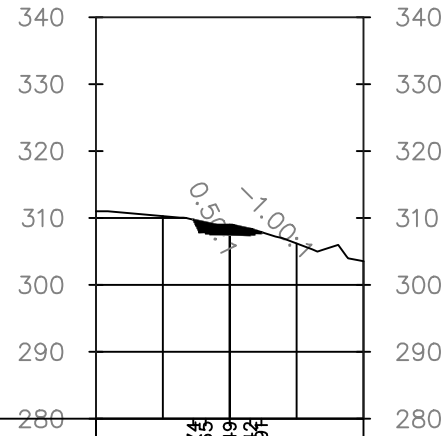
|                   |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|
| Kote projekta     | 20.000 | 308.54 | 308.54 | 308.39 | 20.000 |
| Udaljenost od osi |        | -5.35  | 0.00   | 308.39 |        |
| Kote terena       |        | 308.54 | 308.39 | 308.26 |        |

0+302.55



|                   |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|
| Kote projekta     | 20.000 | 309.38 | 309.38 | 307.42 | 20.000 |
| Udaljenost od osi |        | -5.61  | 0.00   | 307.42 |        |
| Kote terena       |        | 309.38 | 307.42 | 307.42 |        |

0+303.94



|                   |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|
| Kote projekta     | 20.000 | 309.75 | 309.75 | 307.49 | 20.000 |
| Udaljenost od osi |        | -5.53  | 0.00   | 307.49 |        |
| Kote terena       |        | 309.75 | 307.49 | 307.49 |        |



SVEUČILIŠTE U SPLITU,  
FAKULTET GRAĐEVINARSTVA  
ARHITEKTURE I GEODEZIJE  
21000 SPLIT,  
MATICE HRVATSKE 15

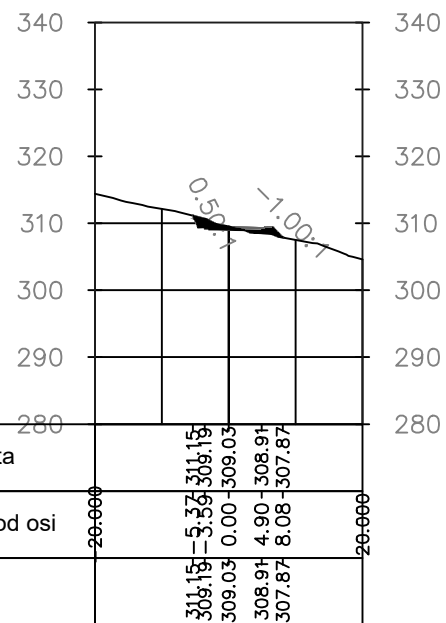
ZAVRŠNI RAD - CESTE

IDEJNI PROJEKT LOKALNE CESTE

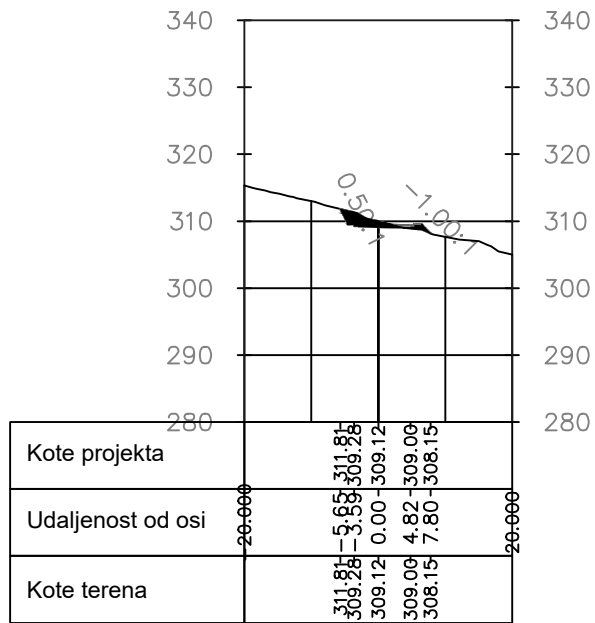
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|-----------|---------------------------|----------|------------------------------|
| IZRADILA: | ALENKA JANJIŠ             | MENTOR:  | Prof.dr.sc. Dražen Cvitančić |
| SADRŽAJ:  | KARAKT. POPREČNI PRESJECI | MJERILO: | M 1 : 200                    |
| DATUM:    | 15.07.2021.               | PRILOG:  | 4                            |



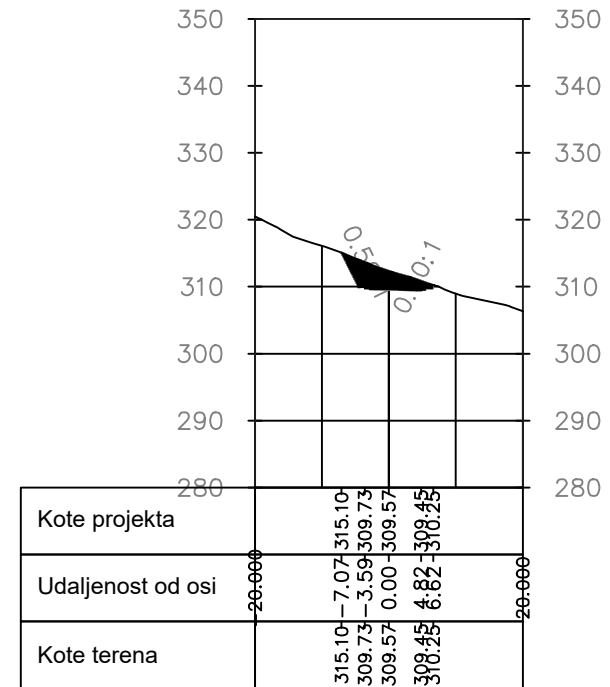
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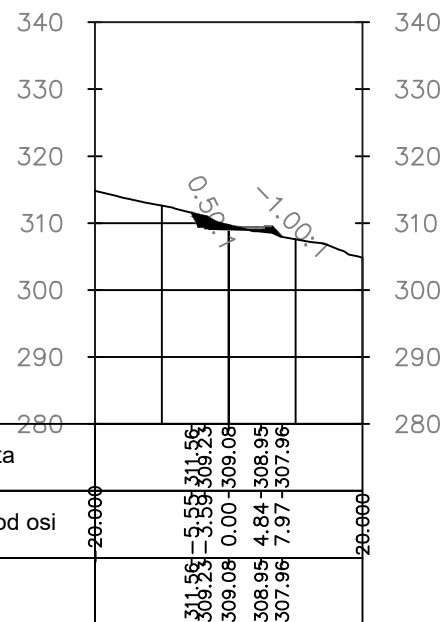
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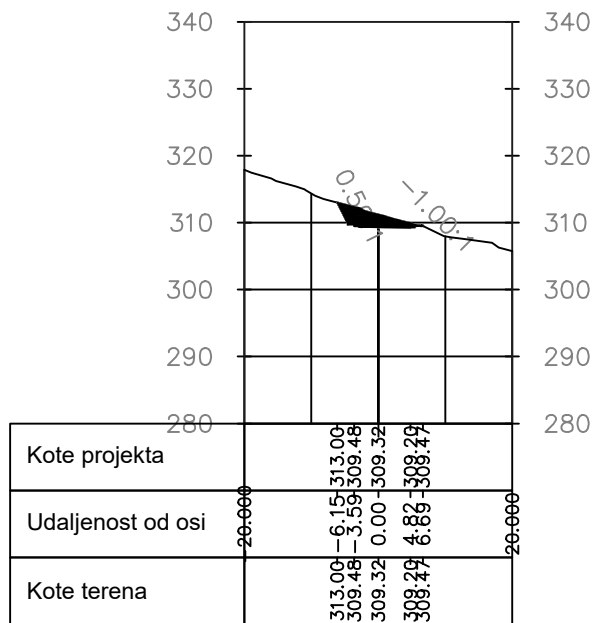
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0+331.84



0+335.97

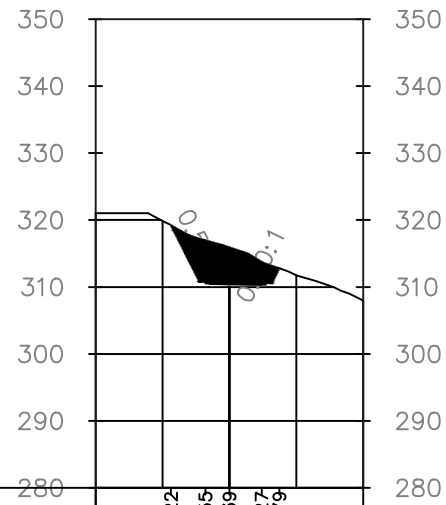


ZAVRŠNI RAD - CESTE

IDEJNI PROJEKT LOKALNE CESTE

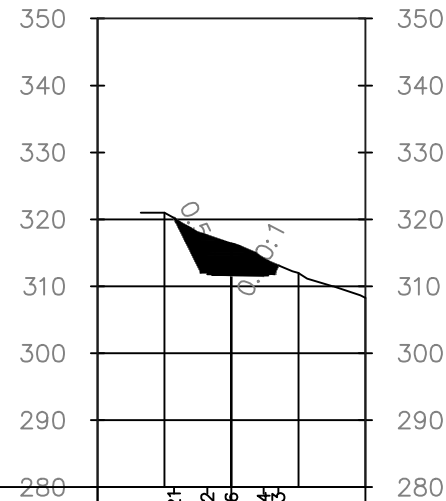
|                                    |   |
|------------------------------------|---|
| IZRADILA:<br>ALENKA JANJIŠ         | MENTOR:<br>Prof.dr.sc. Dražen Cvitančić |
| SADRŽAJ: KARAKT. POPREČNI PRESJECI | MJERILO: M 1 : 200                      |
| DATUM: 15.07.2021.                 | PRILOG: 4                               |

0+353.61



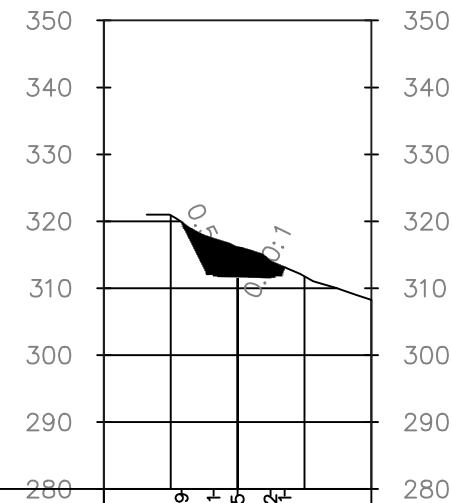
|                   |        |        |        |        |
|-------------------|--------|--------|--------|--------|
| Kote projekta     |        | 319.22 | -8.72  | 319.22 |
| Udaljenost od osi | 20.000 |        |        | 20.000 |
| Kote terena       |        | 319.22 | 310.59 | 310.27 |

0+374.67



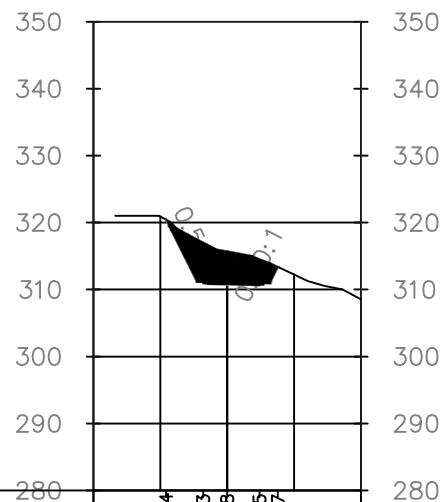
|                   |        |        |        |        |
|-------------------|--------|--------|--------|--------|
| Kote projekta     |        | 320.21 | -8.58  | 320.21 |
| Udaljenost od osi | 20.000 |        |        | 20.000 |
| Kote terena       |        | 320.21 | 311.82 | 313.13 |

0+376.09



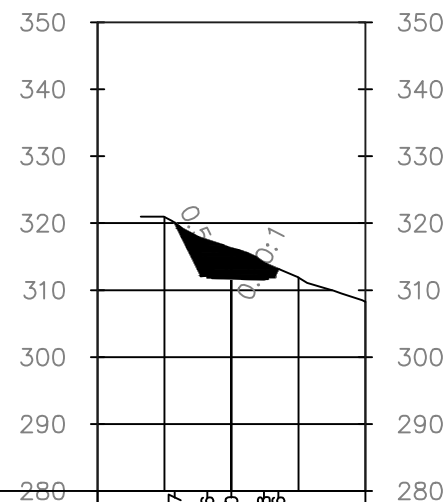
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|-------------------|--------|--------|--------|--------|
| Kote projekta     |        | 319.89 | -8.38  | 319.89 |
| Udaljenost od osi | 20.000 |        |        | 20.000 |
| Kote terena       |        | 319.89 | 311.75 | 313.14 |

0+360.00

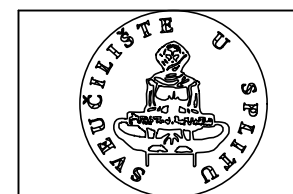


|                   |        |        |        |        |
|-------------------|--------|--------|--------|--------|
| Kote projekta     |        | 320.44 | -9.14  | 320.44 |
| Udaljenost od osi | 20.000 |        |        | 20.000 |
| Kote terena       |        | 320.44 | 310.78 | 313.37 |

0+375.38



|                   |        |        |        |        |
|-------------------|--------|--------|--------|--------|
| Kote projekta     |        | 320.07 | -8.49  | 320.07 |
| Udaljenost od osi | 20.000 |        |        | 20.000 |
| Kote terena       |        | 320.07 | 311.70 | 313.16 |



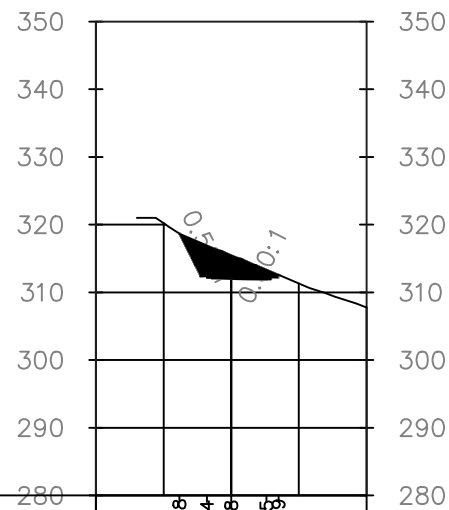
SVEUČILIŠTE U  
SPLITU  
FAKULTET GRAĐEVINARSTVA  
ARHITEKTURE I GEODEZIJE  
21000 SPLIT,  
MATICE HRVATSKE 15

ZAVRŠNI RAD - CESTE

IDEJNI PROJEKT LOKALNE CESTE

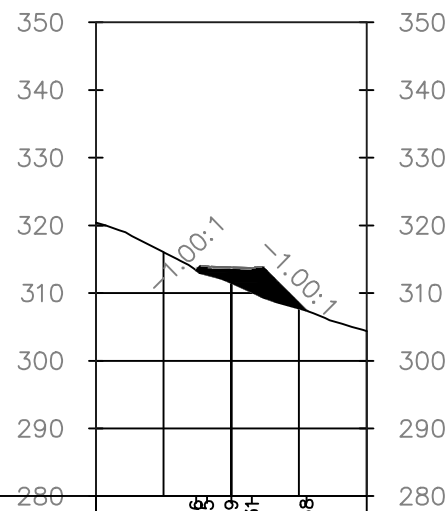
|                                    |                             |
|------------------------------------|-----------------------------|
| IZRADILA:                          | MENTOR:                     |
| ALENKA JANJIŠ                      | Prof.dr.sc. Dražen Cvitanić |
| SADRŽAJ: KARAKT. POPREČNI PRESJECI | MJERILO: M 1 : 200          |
| DATUM: 15.07.2021.                 | PRILOG: 4                   |

0+380.00



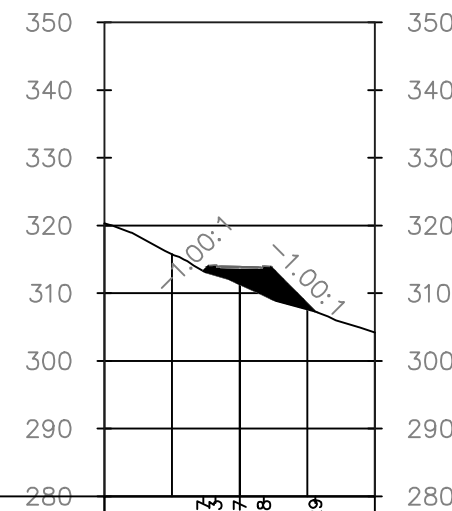
|                   |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|
| Kote projekta     |        |        |        |        |        |
| Udaljenost od osi | 20.000 | 7.65   | 318.68 | 312.14 | 311.98 |
| Kote terena       |        | 318.68 | 312.14 | 311.98 | 312.85 |

0+403.28



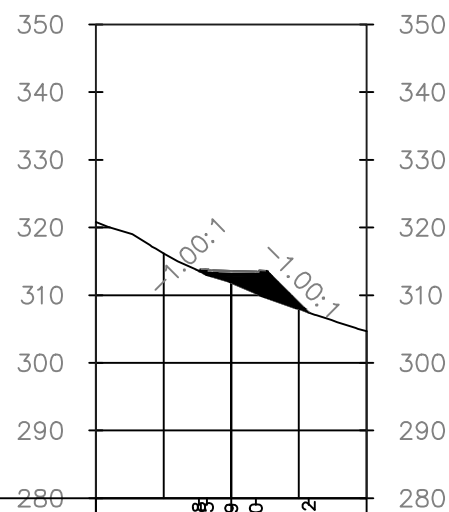
|                   |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|
| Kote projekta     |        |        |        |        |        |
| Udaljenost od osi | 20.000 | 5.19   | 313.36 | 313.39 | 313.34 |
| Kote terena       |        | 313.36 | 313.39 | 313.34 | 307.38 |

0+404.67



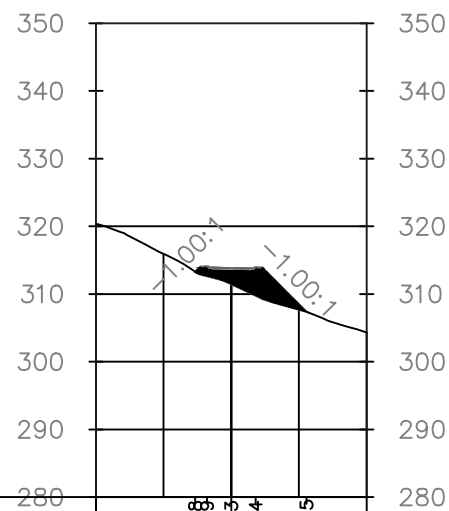
|                   |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|
| Kote projekta     |        |        |        |        |        |
| Udaljenost od osi | 20.000 | 5.36   | 313.23 | 313.47 | 313.48 |
| Kote terena       |        | 313.23 | 313.47 | 313.48 | 307.29 |

0+400.00



|                   |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|
| Kote projekta     |        |        |        |        |        |
| Udaljenost od osi | 20.000 | 5.36   | 313.58 | 313.19 | 313.10 |
| Kote terena       |        | 313.58 | 313.19 | 313.10 | 307.42 |

0+403.97



|                   |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|
| Kote projekta     |        |        |        |        |        |
| Udaljenost od osi | 20.000 | 5.36   | 313.68 | 313.43 | 313.44 |
| Kote terena       |        | 313.68 | 313.43 | 313.44 | 307.35 |



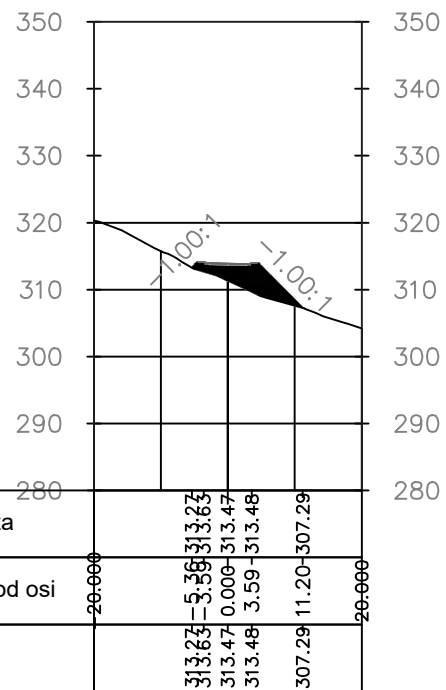
SVEUČILIŠTE U SPLITU,  
FAKULTET GRAĐEVINARSTVA  
ARHITEKTURE I GEODEZIJE  
21000 SPLIT,  
MATICE HRVATSKE 15

ZAVRŠNI RAD - CESTE

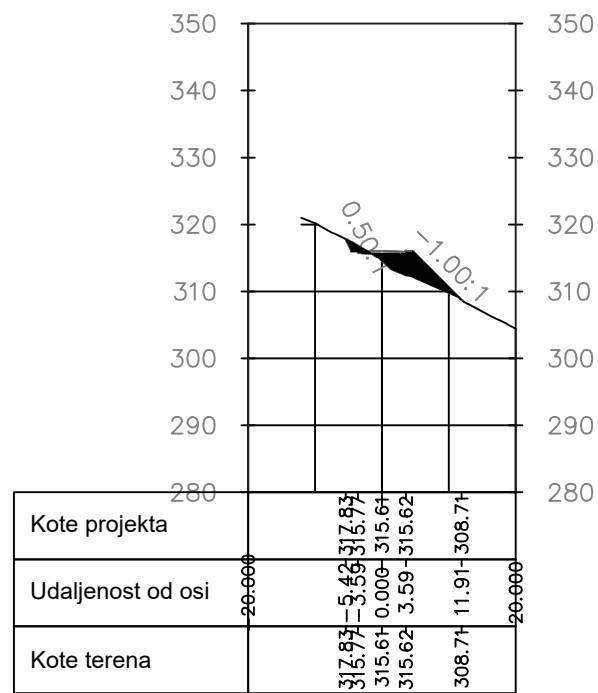
IDEJNI PROJEKT LOKALNE CESTE

|           |                           |          |                             |
|-----------|---------------------------|----------|-----------------------------|
| IZRADILA: | ALENKA JANJIŠ             | MENTOR:  | Prof.dr.sc. Dražen Cvitanić |
| SADRŽAJ:  | KARAKT. POPREČNI PRESJECI | MJERILO: | M 1 : 200                   |
| DATUM:    | 15.07.2021.               | PRILOG:  | 4                           |

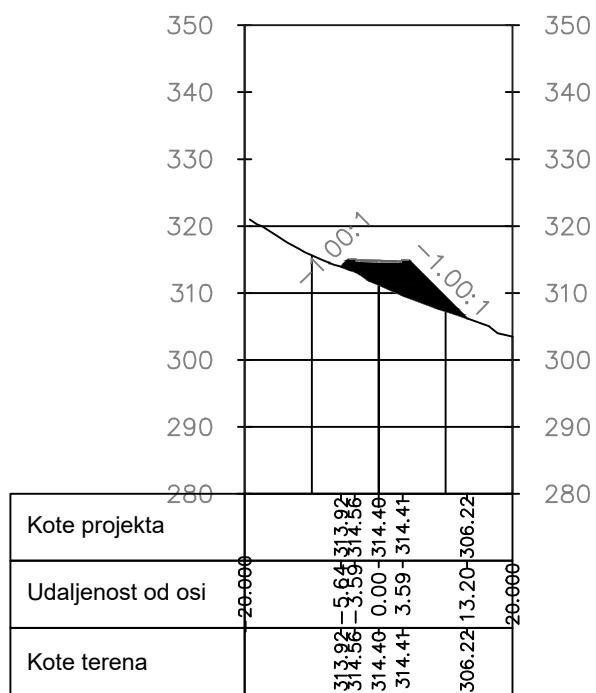
0+404.67



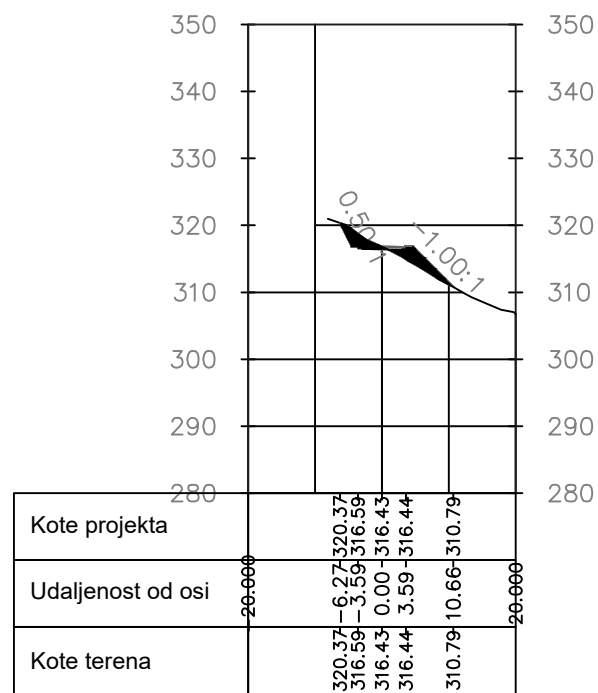
0+440.00



0+420.00



0+453.65



SVEUČILIŠTE U SPLITU  
 FAKULTET GRAĐEVINARSTVA  
 ARHITEKTURE I GEODEZIJE  
 21000 SPLIT,  
 MATICE HRVATSKE 15

**ZAVRŠNI RAD - CESTE**

IDEJNI PROJEKT LOKALNE CESTE

|                                    |  |
|------------------------------------|--|
| IZRADILA:<br>ALENKA JANJIŠ         | MENTOR:<br>Prof.dr.sc. Dražen Cvitanić |
| SADRŽAJ: KARAKT. POPREČNI PRESJECI | MJERILO: M 1 : 200                     |
| DATUM: 15.07.2021.                 | PRILOG: 4                              |

#### **4. TABLICA UKUPNOG VOLUMENA ZEMLJANIH RADOVA**

| <b>Stacionaža</b> | <b>Površina usjeka</b> | <b>Volumen usjeka</b> | <b>Površina nasipa</b> | <b>Volumen nasipa</b> | <b>Kumulativni volumen usjeka</b> | <b>Kumulativni volumen nasipa</b> | <b>Kumulativni volumen</b> |
|-------------------|------------------------|-----------------------|------------------------|-----------------------|-----------------------------------|-----------------------------------|----------------------------|
| 0+000.000         | 0.00                   | 0.00                  | 0.00                   | 0.00                  | 0.00                              | 0.00                              | 0.00                       |
| 0+020.000         | 11.69                  | 116.93                | 5.81                   | 58.06                 | 116.93                            | 58.06                             | 58.87                      |
| 0+040.000         | 11.86                  | 235.52                | 5.75                   | 115.54                | 352.44                            | 173.59                            | 178.85                     |
| 0+060.000         | 8.81                   | 206.73                | 4.56                   | 103.08                | 559.17                            | 276.67                            | 282.50                     |
| 0+080.000         | 11.17                  | 199.85                | 0.34                   | 48.95                 | 759.02                            | 325.63                            | 433.39                     |
| 0+100.000         | 10.10                  | 212.75                | 0.74                   | 10.80                 | 971.76                            | 336.42                            | 635.34                     |
| 0+120.000         | 8.61                   | 187.09                | 3.38                   | 41.29                 | 1158.85                           | 377.71                            | 781.14                     |
| 0+140.000         | 2.64                   | 112.45                | 15.57                  | 189.54                | 1271.30                           | 567.25                            | 704.05                     |
| 0+158.075         | 0.01                   | 23.98                 | 29.41                  | 406.56                | 1295.28                           | 973.81                            | 321.47                     |
| 0+158.080         | 0.01                   | 0.00                  | 29.42                  | 0.13                  | 1295.28                           | 973.94                            | 321.33                     |
| 0+158.649         | 0.00                   | 0.00                  | 29.57                  | 16.78                 | 1295.28                           | 990.72                            | 304.56                     |
| 0+159.220         | 0.00                   | 0.00                  | 29.77                  | 16.94                 | 1295.29                           | 1007.66                           | 287.62                     |
| 0+160.000         | 0.01                   | 0.00                  | 30.24                  | 23.41                 | 1295.29                           | 1031.07                           | 264.22                     |
| 0+180.000         | 1.36                   | 13.27                 | 31.73                  | 633.64                | 1308.57                           | 1664.72                           | -356.15                    |
| 0+196.446         | 10.87                  | 94.40                 | 9.90                   | 362.00                | 1402.97                           | 2026.71                           | -623.75                    |
| 0+197.258         | 11.87                  | 9.23                  | 8.97                   | 7.66                  | 1412.20                           | 2034.37                           | -622.18                    |
| 0+198.075         | 12.95                  | 10.15                 | 8.15                   | 7.00                  | 1422.34                           | 2041.37                           | -619.03                    |

|           |       |        |       |        |         |         |         |
|-----------|-------|--------|-------|--------|---------|---------|---------|
| 0+200.000 | 15.89 | 25.80  | 6.03  | 14.66  | 1448.15 | 2056.03 | -607.88 |
| 0+220.000 | 36.25 | 494.57 | 0.00  | 64.94  | 1942.72 | 2120.97 | -178.26 |
| 0+220.591 | 36.42 | 21.47  | 0.00  | 0.00   | 1964.18 | 2120.97 | -156.79 |
| 0+223.970 | 37.19 | 118.89 | 0.00  | 0.00   | 2083.08 | 2120.97 | -37.90  |
| 0+240.000 | 42.46 | 612.34 | 0.00  | 0.00   | 2695.42 | 2120.97 | 574.44  |
| 0+243.106 | 44.40 | 130.03 | 0.00  | 0.00   | 2825.45 | 2120.97 | 704.47  |
| 0+243.924 | 44.70 | 36.42  | 0.00  | 0.00   | 2861.87 | 2120.97 | 740.90  |
| 0+244.736 | 45.06 | 36.43  | 0.00  | 0.00   | 2898.30 | 2120.97 | 777.33  |
| 0+260.000 | 37.78 | 612.68 | 0.00  | 0.00   | 3510.98 | 2120.97 | 1390.01 |
| 0+280.000 | 36.65 | 736.39 | 0.00  | 0.00   | 4247.37 | 2120.97 | 2126.39 |
| 0+281.962 | 37.48 | 72.72  | 0.00  | 0.00   | 4320.09 | 2120.97 | 2199.11 |
| 0+282.533 | 37.58 | 21.43  | 0.00  | 0.00   | 4341.52 | 2120.97 | 2220.54 |
| 0+283.106 | 37.59 | 21.55  | 0.00  | 0.00   | 4363.07 | 2120.97 | 2242.10 |
| 0+300.000 | 18.94 | 477.51 | 0.00  | 0.00   | 4840.58 | 2120.97 | 2719.61 |
| 0+302.553 | 14.55 | 42.74  | 0.00  | 0.00   | 4883.32 | 2120.97 | 2762.35 |
| 0+303.247 | 13.40 | 9.71   | 0.00  | 0.00   | 4893.03 | 2120.97 | 2772.06 |
| 0+303.938 | 12.51 | 8.94   | 0.00  | 0.00   | 4901.98 | 2120.97 | 2781.00 |
| 0+320.000 | 0.00  | 101.06 | 29.08 | 226.71 | 5003.04 | 2347.68 | 2655.35 |
| 0+331.130 | 5.80  | 33.69  | 2.75  | 164.09 | 5036.72 | 2511.77 | 2524.95 |

|           |       |        |       |        |         |         |         |
|-----------|-------|--------|-------|--------|---------|---------|---------|
| 0+331.839 | 7.69  | 4.78   | 1.87  | 1.64   | 5041.51 | 2513.41 | 2528.10 |
| 0+332.553 | 9.56  | 6.15   | 1.19  | 1.09   | 5047.66 | 2514.50 | 2533.16 |
| 0+335.967 | 20.06 | 52.26  | 0.01  | 1.78   | 5099.92 | 2516.28 | 2583.64 |
| 0+340.000 | 32.76 | 109.14 | 0.00  | 0.02   | 5209.07 | 2516.30 | 2692.76 |
| 0+353.610 | 68.93 | 705.52 | 0.00  | 0.00   | 5914.58 | 2516.30 | 3398.28 |
| 0+360.000 | 67.79 | 444.44 | 0.00  | 0.00   | 6359.02 | 2516.30 | 3842.72 |
| 0+374.667 | 57.80 | 939.78 | 0.00  | 0.00   | 7298.81 | 2516.30 | 4782.50 |
| 0+375.380 | 56.15 | 40.65  | 0.00  | 0.00   | 7339.45 | 2516.30 | 4823.15 |
| 0+376.090 | 54.35 | 39.19  | 0.00  | 0.00   | 7378.64 | 2516.30 | 4862.34 |
| 0+380.000 | 41.61 | 191.59 | 0.00  | 0.00   | 7570.24 | 2516.30 | 5053.93 |
| 0+400.000 | 0.00  | 421.55 | 28.90 | 275.35 | 7991.79 | 2791.66 | 5200.14 |
| 0+403.282 | 0.00  | 0.00   | 34.44 | 103.94 | 7991.79 | 2895.59 | 5096.20 |
| 0+403.972 | 0.00  | 0.00   | 35.75 | 24.24  | 7991.79 | 2919.83 | 5071.96 |
| 0+404.667 | 0.00  | 0.00   | 37.07 | 25.29  | 7991.79 | 2945.12 | 5046.67 |
| 0+404.670 | 0.00  | 0.00   | 37.07 | 0.11   | 7991.79 | 2945.23 | 5046.56 |
| 0+420.000 | 0.00  | 0.00   | 53.96 | 697.78 | 7991.79 | 3643.01 | 4348.78 |
| 0+440.000 | 2.77  | 27.72  | 25.75 | 797.13 | 8019.51 | 4440.14 | 3579.38 |
| 0+453.654 | 9.11  | 81.15  | 11.79 | 256.31 | 8100.67 | 4696.45 | 3404.22 |



## 5. OBRADA NA RAČUNALU

Izrada projekta lokalne ceste vrši se u programu Autocad Civil 3D, koji značajno ubrzava i pojednostavnjuje izradu s obzirom na ručnu izradu. Danas se koristi za projektiranje različitih objekata međuostalom i prometnica.

Zadatak se rješava tako da se dana geodetska podloga skenira i korištenjem poligonalnih linija iscrtava dana podloga u programu. Svaku slojnicu potrebno je definirati na svojoj visini kako bi se kasnije mogao prikazati 3D model terena. Nakon toga ucrtavamo položaj tangenti i uz pomoć njih definiramo kružne lukove i prijelazne krivine iz čega kao rezultat dobijamo horizontalni tok trase sa stacionažama na svakih 20 metara, te u nekim karakterističnim točkama ( početak prijelazne krivine, početak kružne krivine, kraj prijelazne krivine, kraj kružne krivine).

Nakon toga krećemo sa izradom uzdužnog presjeka ceste koji se temelji na definiranju nivelete. Položaj nivelete mora zadovoljavati dane sigurnosne i geomtrijske zahtjeve kao i pravilnu odvodnju dužinom ceste. Između tangenti se ubacuje kružna krivina prethodno izračunatog radijusa.

Sljedeći korak je definiranje poprečnog profila ceste. Tu se definiraju vrijednosti poprečnog nagiba, širine prometnih i rubnih trakova, rigol, kao i pokosi usjeka i nasipa.

Nakon definiranih vertikalnih i horizontalnih elemenata ceste možemo izraditi koridor. Koridor omogućuje prikazivanje karakterističnih poprečnih presjeka u svakoj iscrtanoj stacionaži. Time je definirana dionica lokalne ceste zadana projektom.

Na kraju samog zadatka uz pomoć navedenog programa moguće je izvući podatke o količini zemljanih radova, koordinate točaka osi kao i kordinate pojedinačnog poprečnog presjeka.

## **6. IZLAZNI PODATCI IZ PROGRAMA**

### 6.1 Koordinatni račun glavnih točaka

1.1.1 Alignment: os\_2

1.1.2 Description:

---

Tangent Data

| Description | PT Station | Northing | Easting  |
|-------------|------------|----------|----------|
| Start:      | 0+00.000   | -51.016  | 1401.012 |
| End:        | 1+58.075   | -56.552  | 1558.991 |

Tangent Data

| Parameter | Value   | Parameter | Value                |
|-----------|---------|-----------|----------------------|
| Length:   | 158.075 | Course:   | S 87° 59' 34.7057" E |

---

Spiral Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| TS:         | 1+58.075 | -56.552  | 1558.991 |
| SPI:        |          | -57.492  | 1585.798 |
| SC:         | 1+98.075 | -53.531  | 1598.679 |

Spiral Curve Data: clothoid

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Length:   | 40.000           | L Tan:    | 26.824               |
| Radius:   | 60.000           | S Tan:    | 13.476               |
| Theta:    | 19° 05' 54.9354" | P:        | 1.107                |
| X:        | 39.558           | K:        | 19.926               |
| Y:        | 4.409            | A:        | 48.990               |
| Chord:    | 39.803           | Course:   | N 85° 38' 48.5982" E |

---

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| SC:         | 1+98.075 | -53.531  | 1598.679 |
| RP:         |          | 3.819    | 1581.045 |
| CS:         | 2+43.106 | -26.097  | 1633.055 |

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 43° 00' 04.6985" | Type:     | LEFT                 |
| Radius:   | 60.000           |           |                      |
| Length:   | 45.031           | Tangent:  | 23.635               |
| Mid-Ord:  | 4.175            | External: | 4.487                |
| Chord:    | 43.981           | Course:   | N 51° 24' 28.0096" E |

---

Spiral Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| CS:         | 2+43.106 | -26.097  | 1633.055 |
| SPI:        |          | -14.415  | 1639.774 |
| ST:         | 2+83.106 | 11.932   | 1644.804 |

Spiral Curve Data: clothoid

| Parameter | Value            | Parameter | Value  |
|-----------|------------------|-----------|--------|
| Length:   | 40.000           | L Tan:    | 26.824 |
| Radius:   | 60.000           | S Tan:    | 13.476 |
| Theta:    | 19° 05' 54.9354" | P:        | 1.107  |
| X:        | 39.558           | K:        | 19.926 |
| Y:        | 4.409            | A:        | 48.990 |

Chord: 39.803 Course: N 17° 10' 07.4210" E

Tangent Data

| Description | PT Station | Northing | Easting  |
|-------------|------------|----------|----------|
| Start:      | 2+83.106   | 11.932   | 1644.804 |
| End:        | 3+02.553   | 31.034   | 1648.451 |

Tangent Data

| Parameter | Value  | Parameter | Value                |
|-----------|--------|-----------|----------------------|
| Length:   | 19.446 | Course:   | N 10° 48' 30.7249" E |

Spiral Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| TS:         | 3+02.553 | 31.034   | 1648.451 |
| SPI:        |          | 50.794   | 1652.223 |
| SC:         | 3+32.553 | 59.556   | 1657.263 |

Spiral Curve Data: clothoid

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Length:   | 30.000           | L Tan:    | 20.118               |
| Radius:   | 45.000           | S Tan:    | 10.107               |
| Theta:    | 19° 05' 54.9354" | P:        | 0.830                |
| X:        | 29.668           | K:        | 14.945               |
| Y:        | 3.307            | A:        | 36.742               |
| Chord:    | 29.852           | Course:   | N 17° 10' 07.4210" E |

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| SC:         | 3+32.553 | 59.556   | 1657.263 |
| RP:         |          | 37.119   | 1696.270 |
| CS:         | 3+74.667 | 81.832   | 1691.199 |

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 53° 37' 18.8517" | Type:     | RIGHT                |
| Radius:   | 45.000           |           |                      |
| Length:   | 42.115           | Tangent:  | 22.742               |
| Mid-Ord:  | 4.838            | External: | 5.420                |
| Chord:    | 40.594           | Course:   | N 56° 43' 05.0862" E |

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Spiral Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| CS:         | 3+74.667 | 81.832   | 1691.199 |
| SPI:        |          | 82.971   | 1701.241 |
| ST:         | 4+04.667 | 78.573   | 1720.872 |

Spiral Curve Data: clothoid

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Length:   | 30.000           | L Tan:    | 20.118               |
| Radius:   | 45.000           | S Tan:    | 10.107               |
| Theta:    | 19° 05' 54.9354" | P:        | 0.830                |
| X:        | 29.668           | K:        | 14.945               |
| Y:        | 3.307            | A:        | 36.742               |
| Chord:    | 29.852           | Course:   | S 83° 43' 57.2486" E |

---

Tangent Data

| Description | PT Station | Northing | Easting  |
|-------------|------------|----------|----------|
| Start:      | 4+04.667   | 78.573   | 1720.872 |
| End:        | 4+53.654   | 67.864   | 1768.674 |

Tangent Data

| Parameter | Value  | Parameter | Value                |
|-----------|--------|-----------|----------------------|
| Length:   | 48.987 | Course:   | S 77° 22' 20.5525" E |

1.1.3 Alignment: os 2-Left-2.950

1.1.4 Description:

---

Tangent Data

| Description | PT Station | Northing | Easting  |
|-------------|------------|----------|----------|
| Start:      | 0+00.000   | -48.068  | 1401.116 |
| End:        | 1+58.075   | -53.604  | 1559.094 |

Tangent Data

| Parameter | Value   | Parameter | Value                |
|-----------|---------|-----------|----------------------|
| Length:   | 158.075 | Course:   | S 87° 59' 34.7057" E |

---

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| PC:         | 1+58.075 | -53.604  | 1559.094 |
| RP:         |          | -45.609  | 1559.374 |
| PT:         | 1+59.223 | -53.562  | 1560.240 |

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 08° 13' 05.0754" | Type:     | LEFT                 |
| Radius:   | 8.000            |           |                      |
| Length:   | 1.147            | Tangent:  | 0.575                |
| Mid-Ord:  | 0.021            | External: | 0.021                |
| Chord:    | 1.146            | Course:   | N 87° 53' 52.7566" E |

---



Tangent Data

| Description | PT Station | Northing | Easting  |
|-------------|------------|----------|----------|
| Start:      | 1+59.223   | -53.562  | 1560.240 |
| End:        | 1+95.108   | -49.680  | 1595.915 |

Tangent Data

| Parameter | Value  | Parameter | Value                |
|-----------|--------|-----------|----------------------|
| Length:   | 35.885 | Course:   | N 83° 47' 20.2189" E |

---

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| PC:         | 1+95.108 | -49.680  | 1595.915 |
| RP:         |          | -41.727  | 1595.049 |
| PCC:        | 1+96.628 | -49.373  | 1597.400 |

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 10° 52' 49.8600" | Type:     | LEFT                 |
| Radius:   | 8.000            |           |                      |
| Length:   | 1.519            | Tangent:  | 0.762                |
| Mid-Ord:  | 0.036            | External: | 0.036                |
| Chord:    | 1.517            | Course:   | N 78° 20' 55.2889" E |

---

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| PCC:        | 1+96.628 | -49.373  | 1597.400 |
| RP:         |          | 3.819    | 1581.045 |

PCC: 2+38.394 -23.928 1629.284

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 43° 00' 04.6985" | Type:     | LEFT                 |
| Radius:   | 55.650           |           |                      |
| Length:   | 41.766           | Tangent:  | 21.922               |
| Mid-Ord:  | 3.872            | External: | 4.162                |
| Chord:    | 40.793           | Course:   | N 51° 24' 28.0096" E |

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| PCC:        | 2+38.394 | -23.928  | 1629.284 |
| RP:         |          | -19.939  | 1622.349 |
| PT:         | 2+39.913 | -22.547  | 1629.912 |

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 10° 52' 49.8600" | Type:     | LEFT                 |
| Radius:   | 8.000            |           |                      |
| Length:   | 1.519            | Tangent:  | 0.762                |
| Mid-Ord:  | 0.036            | External: | 0.036                |
| Chord:    | 1.517            | Course:   | N 24° 28' 00.7303" E |

Tangent Data

| Description | PT Station | Northing | Easting  |
|-------------|------------|----------|----------|
| Start:      | 2+39.913   | -22.547  | 1629.912 |
| End:        | 2+75.798   | 11.378   | 1641.611 |

Tangent Data

| Parameter | Value  | Parameter | Value                |
|-----------|--------|-----------|----------------------|
| Length:   | 35.885 | Course:   | N 19° 01' 35.8003" E |

---

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| PC:         | 2+75.798 | 11.378   | 1641.611 |
| RP:         |          | 13.986   | 1634.048 |
| PT:         | 2+76.946 | 12.486   | 1641.906 |

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 08° 13' 05.0754" | Type:     | LEFT                 |
| Radius:   | 8.000            |           |                      |
| Length:   | 1.147            | Tangent:  | 0.575                |
| Mid-Ord:  | 0.021            | External: | 0.021                |
| Chord:    | 1.146            | Course:   | N 14° 55' 03.2626" E |

---

Tangent Data

| Description | PT Station | Northing | Easting  |
|-------------|------------|----------|----------|
| Start:      | 2+76.946   | 12.486   | 1641.906 |
| End:        | 2+96.392   | 31.587   | 1645.553 |

Tangent Data

| Parameter | Value  | Parameter | Value                |
|-----------|--------|-----------|----------------------|
| Length:   | 19.446 | Course:   | N 10° 48' 30.7249" E |

---

Spiral Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| TS:         | 2+96.392 | 31.587   | 1645.553 |
| SPI:        |          | 51.835   | 1649.419 |
| SC:         | 3+27.375 | 61.026   | 1654.705 |

Spiral Curve Data: clothoid

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Length:   | 30.983           | L Tan:    | 20.770               |
| Radius:   | 47.950           | S Tan:    | 10.432               |
| Theta:    | 18° 30' 39.9504" | P:        | 0.831                |
| X:        | 30.661           | K:        | 15.438               |
| Y:        | 3.312            | A:        | 38.544               |
| Chord:    | 30.829           | Course:   | N 17° 16' 11.7299" E |

---

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| SC:         | 3+27.375 | 61.026   | 1654.705 |
| RP:         |          | 37.119   | 1696.270 |
| CS:         | 3+72.251 | 84.763   | 1690.866 |

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 53° 37' 18.8517" | Type:     | RIGHT                |
| Radius:   | 47.950           |           |                      |
| Length:   | 44.875           | Tangent:  | 24.233               |
| Mid-Ord:  | 5.155            | External: | 5.776                |
| Chord:    | 43.256           | Course:   | N 56° 43' 05.0862" E |

---

Spiral Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| CS:         | 3+72.251 | 84.763   | 1690.866 |
| SPI:        |          | 85.958   | 1701.402 |
| ST:         | 4+03.234 | 81.452   | 1721.517 |

Spiral Curve Data: clothoid

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Length:   | 30.983           | L Tan:    | 20.770               |
| Radius:   | 47.950           | S Tan:    | 10.432               |
| Theta:    | 18° 30' 39.9504" | P:        | 0.831                |
| X:        | 30.661           | K:        | 15.438               |
| Y:        | 3.312            | A:        | 38.544               |
| Chord:    | 30.829           | Course:   | S 83° 50' 01.5575" E |

---

Tangent Data

| Description | PT Station | Northing | Easting  |
|-------------|------------|----------|----------|
| Start:      | 4+03.234   | 81.452   | 1721.517 |

End: 4+52.221 70.743 1769.319

Tangent Data

| Parameter | Value  | Parameter | Value                |
|-----------|--------|-----------|----------------------|
| Length:   | 48.987 | Course:   | S 77° 22' 20.5525" E |

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1.1.5 Alignment: os 2-Right-2.950

1.1.6 Description:

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Tangent Data

| Description | PT Station | Northing | Easting  |
|-------------|------------|----------|----------|
| Start:      | 0+00.000   | -53.964  | 1400.909 |
| End:        | 1+58.075   | -59.501  | 1558.887 |

Tangent Data

| Parameter | Value   | Parameter | Value                |
|-----------|---------|-----------|----------------------|
| Length:   | 158.075 | Course:   | S 87° 59' 34.7057" E |

---

Spiral Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| TS:         | 1+58.075 | -59.501  | 1558.887 |
| SPI:        |          | -60.457  | 1586.190 |
| SC:         | 1+99.059 | -56.351  | 1599.546 |

Spiral Curve Data: clothoid

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Length:   | 40.983           | L Tan:    | 27.475               |
| Radius:   | 62.950           | S Tan:    | 13.800               |
| Theta:    | 18° 39' 03.9183" | P:        | 1.108                |
| X:        | 40.551           | K:        | 20.419               |
| Y:        | 4.413            | A:        | 50.793               |
| Chord:    | 40.780           | Course:   | N 85° 34' 13.1838" E |

---

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| SC:         | 1+99.059 | -56.351  | 1599.546 |
| RP:         |          | 3.819    | 1581.045 |
| CS:         | 2+46.304 | -27.568  | 1635.612 |

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 43° 00' 04.6985" | Type:     | LEFT                 |
| Radius:   | 62.950           |           |                      |
| Length:   | 47.245           | Tangent:  | 24.797               |
| Mid-Ord:  | 4.380            | External: | 4.708                |
| Chord:    | 46.144           | Course:   | N 51° 24' 28.0096" E |

---

Spiral Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| CS:         | 2+46.304 | -27.568  | 1635.612 |
| SPI:        |          | -15.456  | 1642.578 |
| ST:         | 2+87.287 | 11.379   | 1647.702 |

Spiral Curve Data: clothoid

| Parameter | Value            | Parameter | Value  |
|-----------|------------------|-----------|--------|
| Length:   | 40.983           | L Tan:    | 27.475 |
| Radius:   | 62.950           | S Tan:    | 13.800 |
| Theta:    | 18° 39' 03.9183" | P:        | 1.108  |
| X:        | 40.551           | K:        | 20.419 |
| Y:        | 4.413            | A:        | 50.793 |



Chord: 40.780 Course: N 17° 14' 42.8354" E

---

Tangent Data

| Description | PT Station | Northing | Easting  |
|-------------|------------|----------|----------|
| Start:      | 2+87.287   | 11.379   | 1647.702 |
| End:        | 3+06.733   | 30.480   | 1651.348 |

Tangent Data

| Parameter | Value  | Parameter | Value                |
|-----------|--------|-----------|----------------------|
| Length:   | 19.446 | Course:   | N 10° 48' 30.7249" E |

---

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| PC:         | 3+06.733 | 30.480   | 1651.348 |
| RP:         |          | 28.980   | 1659.206 |
| PT:         | 3+08.123 | 31.816   | 1651.726 |

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 09° 57' 19.8703" | Type:     | RIGHT                |
| Radius:   | 8.000            |           |                      |
| Length:   | 1.390            | Tangent:  | 0.697                |
| Mid-Ord:  | 0.030            | External: | 0.030                |
| Chord:    | 1.388            | Course:   | N 15° 47' 10.6601" E |

---

Tangent Data

| Description | PT Station | Northing | Easting  |
|-------------|------------|----------|----------|
| Start:      | 3+08.123   | 31.816   | 1651.726 |
| End:        | 3+33.986   | 56.000   | 1660.895 |

Tangent Data

| Parameter | Value  | Parameter | Value                |
|-----------|--------|-----------|----------------------|
| Length:   | 25.863 | Course:   | N 20° 45' 50.5952" E |

---

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| PC:         | 3+33.986 | 56.000   | 1660.895 |
| RP:         |          | 53.164   | 1668.375 |
| PCC:        | 3+35.263 | 57.152   | 1661.441 |

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 09° 08' 35.0651" | Type:     | RIGHT                |
| Radius:   | 8.000            |           |                      |
| Length:   | 1.277            | Tangent:  | 0.640                |
| Mid-Ord:  | 0.025            | External: | 0.026                |
| Chord:    | 1.275            | Course:   | N 25° 20' 08.1278" E |

---

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| PCC:        | 3+35.263 | 57.152   | 1661.441 |
| RP:         |          | 37.119   | 1696.270 |
| PCC:        | 3+72.867 | 77.043   | 1691.742 |

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 53° 37' 18.8517" | Type:     | RIGHT                |
| Radius:   | 40.180           |           |                      |
| Length:   | 37.604           | Tangent:  | 20.306               |
| Mid-Ord:  | 4.319            | External: | 4.840                |
| Chord:    | 36.246           | Course:   | N 56° 43' 05.0862" E |

---

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| PCC:        | 3+72.867 | 77.043   | 1691.742 |
| RP:         |          | 69.094   | 1692.644 |
| PT:         | 3+74.143 | 77.085   | 1693.016 |

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 09° 08' 35.0651" | Type:     | RIGHT                |
| Radius:   | 8.000            |           |                      |
| Length:   | 1.277            | Tangent:  | 0.640                |
| Mid-Ord:  | 0.025            | External: | 0.026                |
| Chord:    | 1.275            | Course:   | N 88° 06' 02.0447" E |

---

Tangent Data

| Description | PT Station | Northing | Easting  |
|-------------|------------|----------|----------|
| Start:      | 3+74.143   | 77.085   | 1693.016 |
| End:        | 4+00.006   | 75.879   | 1718.852 |

Tangent Data

| Parameter | Value  | Parameter | Value                |
|-----------|--------|-----------|----------------------|
| Length:   | 25.863 | Course:   | S 87° 19' 40.4228" E |

---

Curve Point Data

| Description | Station  | Northing | Easting  |
|-------------|----------|----------|----------|
| PC:         | 4+00.006 | 75.879   | 1718.852 |
| RP:         |          | 67.888   | 1718.479 |
| PT:         | 4+01.396 | 75.694   | 1720.228 |

Circular Curve Data

| Parameter | Value            | Parameter | Value                |
|-----------|------------------|-----------|----------------------|
| Delta:    | 09° 57' 19.8703" | Type:     | RIGHT                |
| Radius:   | 8.000            |           |                      |
| Length:   | 1.390            | Tangent:  | 0.697                |
| Mid-Ord:  | 0.030            | External: | 0.030                |
| Chord:    | 1.388            | Course:   | S 82° 21' 00.4876" E |

---

Tangent Data

| Description | PT Station | Northing | Easting  |
|-------------|------------|----------|----------|
| Start:      | 4+01.396   | 75.694   | 1720.228 |
| End:        | 4+50.383   | 64.985   | 1768.029 |

Tangent Data

| Parameter | Value  | Parameter | Value                |
|-----------|--------|-----------|----------------------|
| Length:   | 48.987 | Course:   | S 77° 22' 20.5525" E |

---

## 6.2 Kordinatni račun detaljnih točaka osi

Alignment

Name: os 2

Description:

Station Range: Start: 0+000.00, End: 45+365.00

Station Increment: 20.00

| <b>Station</b> | <b>Northing</b> | <b>Easting</b> | <b>Tangential Direction</b> |
|----------------|-----------------|----------------|-----------------------------|
| 0+000.00       | -51.0162m       | 1,401.0122m    | S87° 59' 35"E               |
| 0+020.00       | -51.7167m       | 1,420.9999m    | S87° 59' 35"E               |
| 0+040.00       | -52.4171m       | 1,440.9876m    | S87° 59' 35"E               |
| 0+060.00       | -53.1176m       | 1,460.9754m    | S87° 59' 35"E               |
| 0+080.00       | -53.8180m       | 1,480.9631m    | S87° 59' 35"E               |
| 0+100.00       | -54.5184m       | 1,500.9508m    | S87° 59' 35"E               |
| 0+120.00       | -55.2189m       | 1,520.9386m    | S87° 59' 35"E               |
| 0+140.00       | -55.9193m       | 1,540.9263m    | S87° 59' 35"E               |
| 0+160.00       | -56.6193m       | 1,560.9141m    | S88° 02' 14"E               |
| 0+180.00       | -56.5885m       | 1,580.9054m    | N86° 16' 09"E               |
| 0+200.00       | -52.9361m       | 1,600.5088m    | N71° 04' 14"E               |
| 0+220.00       | -43.4436m       | 1,618.0074m    | N51° 58' 19"E               |
| 0+240.00       | -28.7481m       | 1,631.4370m    | N32° 52' 24"E               |
| 0+260.00       | -10.5753m       | 1,639.6355m    | N17° 10' 53"E               |
| 0+280.00       | 8.8817m         | 1,644.2194m    | N10° 55' 25"E               |
| 0+300.00       | 28.5265m        | 1,647.9720m    | N10° 48' 31"E               |
| 0+320.00       | 48.0270m        | 1,652.3619m    | N17° 16' 06"E               |
| 0+340.00       | 65.6753m        | 1,661.4920m    | N39° 23' 22"E               |
| 0+360.00       | 77.8541m        | 1,677.1488m    | N64° 51' 16"E               |
| 0+380.00       | 82.1368m        | 1,696.5204m    | N89° 42' 56"E               |
| 0+400.00       | 79.5812m        | 1,716.3155m    | S77° 50' 05"E               |
| 0+420.00       | 75.2211m        | 1,735.8345m    | S77° 22' 21"E               |
| 0+440.00       | 70.8489m        | 1,755.3507m    | S77° 22' 21"E               |

### 6.3 Račun kota kolnika



Corridor Name: koridor0

Description:

Base Alignment Name: os 2

Station Range: Start: 0+000.00, End: 0+453.65

CHAINAGE 0+000.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,401.2255 | -44.9294 | 299.0211 | -6.091m       | Daylight          |
| 2            | 1,401.1730 | -46.4274 | 296.0233 | -4.592m       | Ditch_Out         |
| 3            | 1,401.1730 | -46.4284 | 295.8233 | -4.591m       | EPS_Sub           |
| 4            | 1,401.1380 | -47.4267 | 296.0633 | -3.592m       | Back_Curb         |
| 5            | 1,401.1327 | -47.5767 | 296.0633 | -3.442m       | Top_Curb          |
| 6            | 1,401.1313 | -47.6183 | 295.8383 | -3.400m       | Flowline_Gutter   |
| 7            | 1,401.1155 | -48.0680 | 295.5283 | -2.950m       | ETW_SubBase       |
| 8            | 1,401.1155 | -48.0680 | 295.9283 | -2.950m       | Flange            |
| 9            | 1,400.9089 | -53.9644 | 295.7808 | 2.950m        | Flange            |
| 10           | 1,400.9089 | -53.9644 | 295.3808 | 2.950m        | ETW_SubBase       |
| 11           | 1,400.8931 | -54.4142 | 295.6908 | 3.400m        | Flowline_Gutter   |
| 12           | 1,400.8917 | -54.4558 | 295.9158 | 3.442m        | Top_Curb          |
| 13           | 1,400.8864 | -54.6057 | 295.9158 | 3.592m        | Back_Curb         |
| 14           | 1,400.8514 | -55.6041 | 295.6758 | 4.591m        | EPS_Sub           |
| 15           | 1,400.8514 | -55.6051 | 295.8758 | 4.592m        | EPS               |

CHAINAGE 0+020.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,421.2235 | -45.3355 | 300.3594 | -6.385m       | Daylight          |
| 2            | 1,421.1607 | -47.1278 | 296.7725 | -4.592m       | Ditch_Out         |
| 3            | 1,421.1607 | -47.1288 | 296.5725 | -4.591m       | EPS_Sub           |
| 4            | 1,421.1257 | -48.1272 | 296.8125 | -3.592m       | Back_Curb         |
| 5            | 1,421.1205 | -48.2771 | 296.8125 | -3.442m       | Top_Curb          |
| 6            | 1,421.1190 | -48.3188 | 296.5875 | -3.400m       | Flowline_Gutter   |
| 7            | 1,421.1032 | -48.7685 | 296.2775 | -2.950m       | ETW_SubBase       |
| 8            | 1,421.1032 | -48.7685 | 296.6775 | -2.950m       | Flange            |
| 9            | 1,420.8966 | -54.6649 | 296.5300 | 2.950m        | Flange            |
| 10           | 1,420.8966 | -54.6649 | 296.1300 | 2.950m        | ETW_SubBase       |
| 11           | 1,420.8808 | -55.1146 | 296.4400 | 3.400m        | Flowline_Gutter   |
| 12           | 1,420.8794 | -55.1563 | 296.6650 | 3.442m        | Top_Curb          |
| 13           | 1,420.8741 | -55.3062 | 296.6650 | 3.592m        | Back_Curb         |
| 14           | 1,420.8391 | -56.3046 | 296.4250 | 4.591m        | EPS_Sub           |

|    |            |          |          |        |          |
|----|------------|----------|----------|--------|----------|
| 15 | 1,420.8391 | -56.3056 | 296.6250 | 4.592m | Hinge    |
| 16 | 1,420.7411 | -59.1010 | 293.8279 | 7.389m | Daylight |

CHAINAGE 0+040.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,441.2019 | -46.3037 | 300.5726 | -6.117m       | Daylight          |
| 2            | 1,441.1485 | -47.8282 | 297.5217 | -4.592m       | Ditch_Out         |
| 3            | 1,441.1484 | -47.8292 | 297.3217 | -4.591m       | EPS_Sub           |
| 4            | 1,441.1134 | -48.8276 | 297.5617 | -3.592m       | Back_Curb         |
| 5            | 1,441.1082 | -48.9775 | 297.5617 | -3.442m       | Top_Curb          |
| 6            | 1,441.1067 | -49.0192 | 297.3367 | -3.400m       | Flowline_Gutter   |
| 7            | 1,441.0910 | -49.4689 | 297.0267 | -2.950m       | ETW_SubBase       |
| 8            | 1,441.0910 | -49.4689 | 297.4267 | -2.950m       | Flange            |
| 9            | 1,440.8843 | -55.3653 | 297.2792 | 2.950m        | Flange            |
| 10           | 1,440.8843 | -55.3653 | 296.8792 | 2.950m        | ETW_SubBase       |
| 11           | 1,440.8686 | -55.8150 | 297.1892 | 3.400m        | Flowline_Gutter   |
| 12           | 1,440.8671 | -55.8567 | 297.4142 | 3.442m        | Top_Curb          |
| 13           | 1,440.8619 | -56.0066 | 297.4142 | 3.592m        | Back_Curb         |
| 14           | 1,440.8269 | -57.0050 | 297.1742 | 4.591m        | EPS_Sub           |
| 15           | 1,440.8268 | -57.0060 | 297.3742 | 4.592m        | Hinge             |
| 16           | 1,440.7072 | -60.4200 | 293.9581 | 8.008m        | Daylight          |

CHAINAGE 0+060.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,461.1806 | -47.2614 | 300.8071 | -5.860m       | Daylight          |
| 2            | 1,461.1362 | -48.5287 | 298.2709 | -4.592m       | Ditch_Out         |
| 3            | 1,461.1362 | -48.5297 | 298.0709 | -4.591m       | EPS_Sub           |
| 4            | 1,461.1012 | -49.5281 | 298.3109 | -3.592m       | Back_Curb         |
| 5            | 1,461.0959 | -49.6780 | 298.3109 | -3.442m       | Top_Curb          |
| 6            | 1,461.0945 | -49.7196 | 298.0859 | -3.400m       | Flowline_Gutter   |
| 7            | 1,461.0787 | -50.1694 | 297.7759 | -2.950m       | ETW_SubBase       |
| 8            | 1,461.0787 | -50.1694 | 298.1759 | -2.950m       | Flange            |
| 9            | 1,460.8721 | -56.0658 | 298.0284 | 2.950m        | Flange            |
| 10           | 1,460.8721 | -56.0658 | 297.6284 | 2.950m        | ETW_SubBase       |
| 11           | 1,460.8563 | -56.5155 | 297.9384 | 3.400m        | Flowline_Gutter   |
| 12           | 1,460.8548 | -56.5572 | 298.1634 | 3.442m        | Top_Curb          |
| 13           | 1,460.8496 | -56.7071 | 298.1634 | 3.592m        | Back_Curb         |
| 14           | 1,460.8146 | -57.7054 | 297.9234 | 4.591m        | EPS_Sub           |
| 15           | 1,460.8146 | -57.7064 | 298.1234 | 4.592m        | Hinge             |

|    |            |          |          |        |          |
|----|------------|----------|----------|--------|----------|
| 16 | 1,460.7064 | -60.7945 | 295.0334 | 7.682m | Daylight |
|----|------------|----------|----------|--------|----------|

CHAINAGE 0+080.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,481.1649 | -48.0599 | 301.3599 | -5.762m       | Daylight          |
| 2            | 1,481.1239 | -49.2291 | 299.0201 | -4.592m       | Ditch_Out         |
| 3            | 1,481.1239 | -49.2301 | 298.8201 | -4.591m       | EPS_Sub           |
| 4            | 1,481.0889 | -50.2285 | 299.0601 | -3.592m       | Back_Curb         |
| 5            | 1,481.0836 | -50.3784 | 299.0601 | -3.442m       | Top_Curb          |
| 6            | 1,481.0822 | -50.4201 | 298.8351 | -3.400m       | Flowline_Gutter   |
| 7            | 1,481.0664 | -50.8698 | 298.5251 | -2.950m       | ETW_SubBase       |
| 8            | 1,481.0664 | -50.8698 | 298.9251 | -2.950m       | Flange            |
| 9            | 1,480.8598 | -56.7662 | 298.7776 | 2.950m        | Flange            |
| 10           | 1,480.8598 | -56.7662 | 298.3776 | 2.950m        | ETW_SubBase       |
| 11           | 1,480.8440 | -57.2159 | 298.6876 | 3.400m        | Flowline_Gutter   |
| 12           | 1,480.8426 | -57.2576 | 298.9126 | 3.442m        | Top_Curb          |
| 13           | 1,480.8373 | -57.4075 | 298.9126 | 3.592m        | Back_Curb         |
| 14           | 1,480.8023 | -58.4059 | 298.6726 | 4.591m        | EPS_Sub           |
| 15           | 1,480.8023 | -58.4069 | 298.8726 | 4.592m        | Hinge             |
| 16           | 1,480.7797 | -59.0532 | 298.2259 | 5.238m        | Daylight          |

CHAINAGE 0+100.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,501.1484 | -48.8816 | 301.8665 | -5.640m       | Daylight          |
| 2            | 1,501.1117 | -49.9296 | 299.7692 | -4.592m       | Ditch_Out         |
| 3            | 1,501.1116 | -49.9306 | 299.5692 | -4.591m       | EPS_Sub           |
| 4            | 1,501.0766 | -50.9289 | 299.8092 | -3.592m       | Back_Curb         |
| 5            | 1,501.0714 | -51.0789 | 299.8092 | -3.442m       | Top_Curb          |
| 6            | 1,501.0699 | -51.1205 | 299.5842 | -3.400m       | Flowline_Gutter   |
| 7            | 1,501.0542 | -51.5703 | 299.2742 | -2.950m       | ETW_SubBase       |
| 8            | 1,501.0542 | -51.5703 | 299.6742 | -2.950m       | Flange            |
| 9            | 1,500.8475 | -57.4666 | 299.5267 | 2.950m        | Flange            |
| 10           | 1,500.8475 | -57.4666 | 299.1267 | 2.950m        | ETW_SubBase       |
| 11           | 1,500.8318 | -57.9164 | 299.4367 | 3.400m        | Flowline_Gutter   |
| 12           | 1,500.8303 | -57.9580 | 299.6617 | 3.442m        | Top_Curb          |
| 13           | 1,500.8251 | -58.1079 | 299.6617 | 3.592m        | Back_Curb         |
| 14           | 1,500.7901 | -59.1063 | 299.4217 | 4.591m        | EPS_Sub           |
| 15           | 1,500.7900 | -59.1073 | 299.6217 | 4.592m        | Hinge             |
| 16           | 1,500.7545 | -60.1210 | 298.6074 | 5.606m        | Daylight          |

CHAINAGE 0+120.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,521.1426 | -49.3969 | 302.9861 | -5.826m       | Daylight          |
| 2            | 1,521.0994 | -50.6300 | 300.5184 | -4.592m       | Ditch_Out         |
| 3            | 1,521.0993 | -50.6310 | 300.3184 | -4.591m       | EPS_Sub           |
| 4            | 1,521.0644 | -51.6294 | 300.5584 | -3.592m       | Back_Curb         |
| 5            | 1,521.0591 | -51.7793 | 300.5584 | -3.442m       | Top_Curb          |
| 6            | 1,521.0576 | -51.8210 | 300.3334 | -3.400m       | Flowline_Gutter   |
| 7            | 1,521.0419 | -52.2707 | 300.0234 | -2.950m       | ETW_SubBase       |
| 8            | 1,521.0419 | -52.2707 | 300.4234 | -2.950m       | Flange            |
| 9            | 1,520.8353 | -58.1671 | 300.2759 | 2.950m        | Flange            |
| 10           | 1,520.8353 | -58.1671 | 299.8759 | 2.950m        | ETW_SubBase       |
| 11           | 1,520.8195 | -58.6168 | 300.1859 | 3.400m        | Flowline_Gutter   |
| 12           | 1,520.8180 | -58.6585 | 300.4109 | 3.442m        | Top_Curb          |
| 13           | 1,520.8128 | -58.8084 | 300.4109 | 3.592m        | Back_Curb         |
| 14           | 1,520.7778 | -59.8068 | 300.1709 | 4.591m        | EPS_Sub           |
| 15           | 1,520.7778 | -59.8078 | 300.3709 | 4.592m        | Hinge             |
| 16           | 1,520.6850 | -62.4552 | 297.7218 | 7.241m        | Daylight          |

CHAINAGE 0+140.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,541.1093 | -50.6967 | 302.5358 | -5.226m       | Daylight          |
| 2            | 1,541.0871 | -51.3304 | 301.2676 | -4.592m       | Ditch_Out         |
| 3            | 1,541.0871 | -51.3314 | 301.0676 | -4.591m       | EPS_Sub           |
| 4            | 1,541.0521 | -52.3298 | 301.3076 | -3.592m       | Back_Curb         |
| 5            | 1,541.0468 | -52.4797 | 301.3076 | -3.442m       | Top_Curb          |
| 6            | 1,541.0454 | -52.5214 | 301.0826 | -3.400m       | Flowline_Gutter   |
| 7            | 1,541.0296 | -52.9711 | 300.7726 | -2.950m       | ETW_SubBase       |
| 8            | 1,541.0296 | -52.9711 | 301.1726 | -2.950m       | Flange            |
| 9            | 1,540.8230 | -58.8675 | 301.0251 | 2.950m        | Flange            |
| 10           | 1,540.8230 | -58.8675 | 300.6251 | 2.950m        | ETW_SubBase       |
| 11           | 1,540.8072 | -59.3172 | 300.9351 | 3.400m        | Flowline_Gutter   |
| 12           | 1,540.8058 | -59.3589 | 301.1601 | 3.442m        | Top_Curb          |
| 13           | 1,540.8005 | -59.5088 | 301.1601 | 3.592m        | Back_Curb         |
| 14           | 1,540.7655 | -60.5072 | 300.9201 | 4.591m        | EPS_Sub           |
| 15           | 1,540.7655 | -60.5082 | 301.1201 | 4.592m        | Hinge             |
| 16           | 1,540.5854 | -65.6473 | 295.9779 | 9.734m        | Daylight          |

CHAINAGE 0+160.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,561.0802 | -51.7723 | 301.9577 | -4.850m       | Daylight          |
| 2            | 1,561.0780 | -51.8363 | 302.0216 | -4.786m       | Hinge             |
| 3            | 1,561.0779 | -51.8373 | 301.8216 | -4.785m       | EPS_Sub           |
| 4            | 1,561.0437 | -52.8357 | 302.0616 | -3.786m       | Back_Curb         |
| 5            | 1,561.0386 | -52.9856 | 302.0616 | -3.636m       | Top_Curb          |
| 6            | 1,561.0372 | -53.0273 | 301.8366 | -3.594m       | Flowline_Gutter   |
| 7            | 1,561.0217 | -53.4770 | 301.5266 | -3.144m       | ETW_SubBase       |
| 8            | 1,561.0217 | -53.4770 | 301.9266 | -3.144m       | Flange            |
| 9            | 1,560.8130 | -59.5665 | 301.7743 | 2.949m        | Flange            |
| 10           | 1,560.8130 | -59.5665 | 301.3743 | 2.949m        | ETW_SubBase       |
| 11           | 1,560.7976 | -60.0162 | 301.6843 | 3.399m        | Flowline_Gutter   |
| 12           | 1,560.7962 | -60.0579 | 301.9093 | 3.441m        | Top_Curb          |
| 13           | 1,560.7911 | -60.2078 | 301.9093 | 3.591m        | Back_Curb         |
| 14           | 1,560.7569 | -61.2062 | 301.6693 | 4.590m        | EPS_Sub           |
| 15           | 1,560.7568 | -61.2072 | 301.8693 | 4.591m        | EPS               |
| 16           | 1,560.5128 | -68.3272 | 294.7452 | 11.715m       | Daylight          |

CHAINAGE 0+180.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,580.4285 | -49.2752 | 303.6989 | -7.329m       | Daylight          |
| 2            | 1,580.4570 | -49.7120 | 302.8235 | -6.891m       | Ditch_Out         |
| 3            | 1,580.4571 | -49.7130 | 302.6235 | -6.890m       | EPS_Sub           |
| 4            | 1,580.5221 | -50.7099 | 302.8635 | -5.891m       | Back_Curb         |
| 5            | 1,580.5319 | -50.8596 | 302.8635 | -5.741m       | Top_Curb          |
| 6            | 1,580.5346 | -50.9012 | 302.6385 | -5.699m       | Flowline_Gutter   |
| 7            | 1,580.5638 | -51.3502 | 302.3285 | -5.249m       | ETW_SubBase       |
| 8            | 1,580.5638 | -51.3502 | 302.7285 | -5.249m       | Flange            |
| 9            | 1,581.0974 | -59.5327 | 302.5235 | 2.950m        | Flange            |
| 10           | 1,581.0974 | -59.5327 | 302.1235 | 2.950m        | ETW_SubBase       |
| 11           | 1,581.1267 | -59.9817 | 302.4335 | 3.400m        | Flowline_Gutter   |
| 12           | 1,581.1294 | -60.0234 | 302.6585 | 3.442m        | Top_Curb          |
| 13           | 1,581.1391 | -60.1730 | 302.6585 | 3.592m        | Back_Curb         |
| 14           | 1,581.2041 | -61.1699 | 302.4185 | 4.591m        | EPS_Sub           |
| 15           | 1,581.2042 | -61.1709 | 302.6185 | 4.592m        | Hinge             |
| 16           | 1,581.7126 | -68.9681 | 294.8047 | 12.406m       | Daylight          |

CHAINAGE 0+200.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,597.9433 | -45.4552 | 307.3839 | -7.909m       | Daylight          |
| 2            | 1,598.5651 | -47.2685 | 303.5501 | -5.992m       | Ditch_Out         |
| 3            | 1,598.5654 | -47.2694 | 303.3501 | -5.991m       | EPS_Sub           |
| 4            | 1,598.8895 | -48.2144 | 303.5901 | -4.992m       | Back_Curb         |
| 5            | 1,598.9382 | -48.3563 | 303.5901 | -4.842m       | Top_Curb          |
| 6            | 1,598.9517 | -48.3957 | 303.3651 | -4.800m       | Flowline_Gutter   |
| 7            | 1,599.0977 | -48.8214 | 303.0551 | -4.350m       | ETW_SubBase       |
| 8            | 1,599.0977 | -48.8214 | 303.4551 | -4.350m       | Flange            |
| 9            | 1,601.4658 | -55.7266 | 303.2726 | 2.950m        | Flange            |
| 10           | 1,601.4658 | -55.7266 | 302.8726 | 2.950m        | ETW_SubBase       |
| 11           | 1,601.6118 | -56.1523 | 303.1826 | 3.400m        | Flowline_Gutter   |
| 12           | 1,601.6253 | -56.1917 | 303.4076 | 3.442m        | Top_Curb          |
| 13           | 1,601.6740 | -56.3336 | 303.4076 | 3.592m        | Back_Curb         |
| 14           | 1,601.9981 | -57.2786 | 303.1676 | 4.591m        | EPS_Sub           |
| 15           | 1,601.9984 | -57.2795 | 303.3676 | 4.592m        | Hinge             |
| 16           | 1,602.9733 | -60.1223 | 300.3623 | 7.597m        | Daylight          |

CHAINAGE 0+220.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,612.6590 | -36.6048 | 309.6796 | -8.682m       | Daylight          |
| 2            | 1,614.3163 | -38.7239 | 304.2993 | -5.992m       | EPS               |
| 3            | 1,614.3169 | -38.7247 | 304.0993 | -5.991m       | EPS_Sub           |
| 4            | 1,614.9323 | -39.5116 | 304.3393 | -4.992m       | Back_Curb         |
| 5            | 1,615.0247 | -39.6297 | 304.3393 | -4.842m       | Top_Curb          |
| 6            | 1,615.0504 | -39.6626 | 304.1143 | -4.800m       | Flowline_Gutter   |
| 7            | 1,615.3276 | -40.0171 | 304.2043 | -4.350m       | ETW               |
| 8            | 1,615.3276 | -40.0171 | 303.8043 | -4.350m       | ETW_SubBase       |
| 9            | 1,619.8248 | -45.7673 | 303.6218 | 2.950m        | ETW_SubBase       |
| 10           | 1,619.8248 | -45.7673 | 304.0218 | 2.950m        | ETW               |
| 11           | 1,620.1020 | -46.1218 | 303.9318 | 3.400m        | Flowline_Gutter   |
| 12           | 1,620.1277 | -46.1547 | 304.1568 | 3.442m        | Top_Curb          |
| 13           | 1,620.2201 | -46.2728 | 304.1568 | 3.592m        | Back_Curb         |
| 14           | 1,620.8355 | -47.0597 | 303.9168 | 4.591m        | EPS_Sub           |
| 15           | 1,620.8361 | -47.0605 | 304.1168 | 4.592m        | Hinge_Cut         |
| 16           | 1,620.9999 | -47.2699 | 304.6486 | 4.858m        | Daylight          |

CHAINAGE 0+240.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,624.0677 | -23.9856 | 310.6399 | -8.774m       | Daylight          |
| 2            | 1,626.4047 | -25.4959 | 305.0748 | -5.992m       | EPS               |
| 3            | 1,626.4055 | -25.4964 | 304.8748 | -5.991m       | EPS_Sub           |
| 4            | 1,627.2446 | -26.0387 | 305.1148 | -4.992m       | Back_Curb         |
| 5            | 1,627.3706 | -26.1201 | 305.1148 | -4.842m       | Top_Curb          |
| 6            | 1,627.4056 | -26.1427 | 304.8898 | -4.800m       | Flowline_Gutter   |
| 7            | 1,627.7835 | -26.3870 | 304.9798 | -4.350m       | ETW               |
| 8            | 1,627.7835 | -26.3870 | 304.5798 | -4.350m       | ETW_SubBase       |
| 9            | 1,633.9146 | -30.3493 | 304.3973 | 2.950m        | ETW_SubBase       |
| 10           | 1,633.9146 | -30.3493 | 304.7973 | 2.950m        | ETW               |
| 11           | 1,634.2925 | -30.5936 | 304.7073 | 3.400m        | Flowline_Gutter   |
| 12           | 1,634.3276 | -30.6162 | 304.9323 | 3.442m        | Top_Curb          |
| 13           | 1,634.4535 | -30.6976 | 304.9323 | 3.592m        | Back_Curb         |
| 14           | 1,635.2926 | -31.2399 | 304.6923 | 4.591m        | EPS_Sub           |
| 15           | 1,635.2934 | -31.2404 | 304.8923 | 4.592m        | Hinge_Cut         |
| 16           | 1,635.7756 | -31.5520 | 306.0406 | 5.166m        | Daylight          |

CHAINAGE 0+260.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,630.8976 | -7.8736  | 310.3791 | -9.146m       | Daylight          |
| 2            | 1,633.0114 | -8.5272  | 305.9540 | -6.934m       | EPS               |
| 3            | 1,633.0123 | -8.5274  | 305.7540 | -6.933m       | EPS_Sub           |
| 4            | 1,633.9667 | -8.8226  | 305.9940 | -5.934m       | Back_Curb         |
| 5            | 1,634.1100 | -8.8669  | 305.9940 | -5.784m       | Top_Curb          |
| 6            | 1,634.1499 | -8.8792  | 305.7690 | -5.742m       | Flowline_Gutter   |
| 7            | 1,634.5798 | -9.0121  | 305.8590 | -5.292m       | ETW               |
| 8            | 1,634.5798 | -9.0121  | 305.4590 | -5.292m       | ETW_SubBase       |
| 9            | 1,642.4540 | -11.4468 | 305.2530 | 2.950m        | ETW_SubBase       |
| 10           | 1,642.4540 | -11.4468 | 305.6530 | 2.950m        | ETW               |
| 11           | 1,642.8839 | -11.5797 | 305.5630 | 3.400m        | Flowline_Gutter   |
| 12           | 1,642.9238 | -11.5921 | 305.7880 | 3.442m        | Top_Curb          |
| 13           | 1,643.0671 | -11.6364 | 305.7880 | 3.592m        | Back_Curb         |
| 14           | 1,644.0215 | -11.9315 | 305.5480 | 4.591m        | EPS_Sub           |
| 15           | 1,644.0225 | -11.9318 | 305.7480 | 4.592m        | Hinge_Cut         |
| 16           | 1,644.4544 | -12.0653 | 306.6521 | 5.044m        | Daylight          |

CHAINAGE 0+280.00

| POINT | X          | Y       | Z        | OFFSET  | STRING CUT      |
|-------|------------|---------|----------|---------|-----------------|
| 1     | 1,637.3274 | 10.2118 | 310.9720 | -7.019m | Daylight        |
| 2     | 1,639.3549 | 9.8205  | 306.8421 | -4.954m | EPS             |
| 3     | 1,639.3559 | 9.8203  | 306.6421 | -4.953m | EPS_Sub         |
| 4     | 1,640.3368 | 9.6310  | 306.8821 | -3.954m | Back_Curb       |
| 5     | 1,640.4841 | 9.6026  | 306.8821 | -3.804m | Top_Curb        |
| 6     | 1,640.5250 | 9.5947  | 306.6571 | -3.763m | Flowline_Gutter |
| 7     | 1,640.9669 | 9.5094  | 306.7471 | -3.313m | ETW             |
| 8     | 1,640.9669 | 9.5094  | 306.3471 | -3.313m | ETW_SubBase     |
| 9     | 1,647.1141 | 8.3230  | 306.1906 | 2.948m  | ETW_SubBase     |
| 10    | 1,647.1141 | 8.3230  | 306.5906 | 2.948m  | ETW             |
| 11    | 1,647.5559 | 8.2377  | 306.5006 | 3.398m  | Flowline_Gutter |
| 12    | 1,647.5969 | 8.2298  | 306.7256 | 3.440m  | Top_Curb        |
| 13    | 1,647.7442 | 8.2014  | 306.7256 | 3.590m  | Back_Curb       |
| 14    | 1,648.7251 | 8.0121  | 306.4856 | 4.589m  | EPS_Sub         |
| 15    | 1,648.7260 | 8.0119  | 306.6856 | 4.590m  | Hinge_Cut       |
| 16    | 1,649.6011 | 7.8430  | 308.4681 | 5.481m  | Daylight        |

CHAINAGE 0+300.00

| POINT | X          | Y       | Z        | OFFSET  | STRING CUT      |
|-------|------------|---------|----------|---------|-----------------|
| 1     | 1,642.3110 | 29.6072 | 310.1957 | -5.763m | Daylight        |
| 2     | 1,643.4618 | 29.3875 | 307.8525 | -4.592m | EPS             |
| 3     | 1,643.4628 | 29.3873 | 307.6525 | -4.591m | EPS_Sub         |
| 4     | 1,644.4441 | 29.2000 | 307.8925 | -3.592m | Back_Curb       |
| 5     | 1,644.5914 | 29.1719 | 307.8925 | -3.442m | Top_Curb        |
| 6     | 1,644.6324 | 29.1641 | 307.6675 | -3.400m | Flowline_Gutter |
| 7     | 1,645.0744 | 29.0797 | 307.7575 | -2.950m | ETW             |
| 8     | 1,645.0744 | 29.0797 | 307.3575 | -2.950m | ETW_SubBase     |
| 9     | 1,650.8697 | 27.9733 | 307.2100 | 2.950m  | ETW_SubBase     |
| 10    | 1,650.8697 | 27.9733 | 307.6100 | 2.950m  | ETW             |
| 11    | 1,651.3117 | 27.8889 | 307.5200 | 3.400m  | Flowline_Gutter |
| 12    | 1,651.3527 | 27.8810 | 307.7450 | 3.442m  | Top_Curb        |
| 13    | 1,651.5000 | 27.8529 | 307.7450 | 3.592m  | Back_Curb       |
| 14    | 1,652.4813 | 27.6656 | 307.5050 | 4.591m  | EPS_Sub         |
| 15    | 1,652.4823 | 27.6654 | 307.7050 | 4.592m  | Hinge_Cut       |
| 16    | 1,652.6941 | 27.6249 | 308.1363 | 4.807m  | Daylight        |



CHAINAGE 0+320.00

| POINT | X          | Y       | Z        | OFFSET  | STRING CUT      |
|-------|------------|---------|----------|---------|-----------------|
| 1     | 1,647.2533 | 49.6151 | 308.1960 | -5.350m | Daylight        |
| 2     | 1,647.9771 | 49.3901 | 308.9540 | -4.592m | Hinge           |
| 3     | 1,647.9781 | 49.3898 | 308.7540 | -4.591m | EPS_Sub         |
| 4     | 1,648.9321 | 49.0932 | 308.9940 | -3.592m | Back_Curb       |
| 5     | 1,649.0753 | 49.0487 | 308.9940 | -3.442m | Top_Curb        |
| 6     | 1,649.1151 | 49.0363 | 308.7690 | -3.400m | Flowline_Gutter |
| 7     | 1,649.5448 | 48.9027 | 308.4590 | -2.950m | ETW_SubBase     |
| 8     | 1,649.5448 | 48.9027 | 308.8590 | -2.950m | Flange          |
| 9     | 1,657.2913 | 46.4947 | 308.6562 | 5.162m  | Flange          |
| 10    | 1,657.2913 | 46.4947 | 308.2562 | 5.162m  | ETW_SubBase     |
| 11    | 1,657.7210 | 46.3611 | 308.5662 | 5.612m  | Flowline_Gutter |
| 12    | 1,657.7608 | 46.3487 | 308.7912 | 5.654m  | Top_Curb        |
| 13    | 1,657.9040 | 46.3042 | 308.7912 | 5.804m  | Back_Curb       |
| 14    | 1,658.8580 | 46.0076 | 308.5512 | 6.803m  | EPS_Sub         |
| 15    | 1,658.8590 | 46.0073 | 308.7512 | 6.804m  | EPS             |
| 16    | 1,662.9644 | 44.7311 | 304.4520 | 11.103m | Daylight        |

CHAINAGE 0+340.00

| POINT | X          | Y       | Z        | OFFSET  | STRING CUT      |
|-------|------------|---------|----------|---------|-----------------|
| 1     | 1,656.0266 | 70.1630 | 315.0959 | -7.072m | Daylight        |
| 2     | 1,657.9433 | 68.5892 | 310.1358 | -4.592m | EPS             |
| 3     | 1,657.9441 | 68.5885 | 309.9358 | -4.591m | EPS_Sub         |
| 4     | 1,658.7162 | 67.9546 | 310.1758 | -3.592m | Back_Curb       |
| 5     | 1,658.8321 | 67.8594 | 310.1758 | -3.442m | Top_Curb        |
| 6     | 1,658.8643 | 67.8329 | 309.9508 | -3.400m | Flowline_Gutter |
| 7     | 1,659.2121 | 67.5474 | 310.0408 | -2.950m | ETW             |
| 8     | 1,659.2121 | 67.5474 | 309.6408 | -2.950m | ETW_SubBase     |
| 9     | 1,665.2171 | 62.6166 | 309.4466 | 4.820m  | ETW_SubBase     |
| 10    | 1,665.2171 | 62.6166 | 309.8466 | 4.820m  | ETW             |
| 11    | 1,665.5649 | 62.3310 | 309.7566 | 5.270m  | Flowline_Gutter |
| 12    | 1,665.5971 | 62.3046 | 309.9816 | 5.312m  | Top_Curb        |
| 13    | 1,665.7131 | 62.2094 | 309.9816 | 5.462m  | Back_Curb       |
| 14    | 1,666.4852 | 61.5754 | 309.7416 | 6.461m  | EPS_Sub         |
| 15    | 1,666.4859 | 61.5748 | 309.9416 | 6.462m  | Hinge_Cut       |
| 16    | 1,666.6065 | 61.4757 | 310.2537 | 6.618m  | Daylight        |

CHAINAGE 0+360.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,673.2647 | 86.1286  | 320.4419 | -9.141m       | Daylight          |
| 2            | 1,675.1977 | 82.0107  | 311.3438 | -4.592m       | EPS               |
| 3            | 1,675.1981 | 82.0098  | 311.1438 | -4.591m       | EPS_Sub           |
| 4            | 1,675.6226 | 81.1055  | 311.3838 | -3.592m       | Back_Curb         |
| 5            | 1,675.6863 | 80.9697  | 311.3838 | -3.442m       | Top_Curb          |
| 6            | 1,675.7041 | 80.9319  | 311.1588 | -3.400m       | Flowline_Gutter   |
| 7            | 1,675.8953 | 80.5246  | 311.2488 | -2.950m       | ETW               |
| 8            | 1,675.8953 | 80.5246  | 310.8488 | -2.950m       | ETW_SubBase       |
| 9            | 1,679.1969 | 73.4909  | 310.6545 | 4.820m        | ETW_SubBase       |
| 10           | 1,679.1969 | 73.4909  | 311.0545 | 4.820m        | ETW               |
| 11           | 1,679.3881 | 73.0836  | 310.9645 | 5.270m        | Flowline_Gutter   |
| 12           | 1,679.4058 | 73.0458  | 311.1895 | 5.312m        | Top_Curb          |
| 13           | 1,679.4696 | 72.9100  | 311.1895 | 5.462m        | Back_Curb         |
| 14           | 1,679.8941 | 72.0057  | 310.9495 | 6.461m        | EPS_Sub           |
| 15           | 1,679.8945 | 72.0048  | 311.1495 | 6.462m        | Hinge_Cut         |
| 16           | 1,680.3659 | 71.0006  | 313.3683 | 7.571m        | Daylight          |

CHAINAGE 0+380.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,696.4824 | 89.7911  | 318.6775 | -7.654m       | Daylight          |
| 2            | 1,696.4976 | 86.7283  | 312.5518 | -4.592m       | EPS               |
| 3            | 1,696.4976 | 86.7273  | 312.3518 | -4.591m       | EPS_Sub           |
| 4            | 1,696.5025 | 85.7283  | 312.5918 | -3.592m       | Back_Curb         |
| 5            | 1,696.5033 | 85.5783  | 312.5918 | -3.442m       | Top_Curb          |
| 6            | 1,696.5035 | 85.5366  | 312.3668 | -3.400m       | Flowline_Gutter   |
| 7            | 1,696.5057 | 85.0866  | 312.4568 | -2.950m       | ETW               |
| 8            | 1,696.5057 | 85.0866  | 312.0568 | -2.950m       | ETW_SubBase       |
| 9            | 1,696.5463 | 76.9203  | 311.8526 | 5.217m        | ETW_SubBase       |
| 10           | 1,696.5463 | 76.9203  | 312.2526 | 5.217m        | ETW               |
| 11           | 1,696.5485 | 76.4703  | 312.1626 | 5.667m        | Flowline_Gutter   |
| 12           | 1,696.5487 | 76.4286  | 312.3876 | 5.708m        | Top_Curb          |
| 13           | 1,696.5494 | 76.2786  | 312.3876 | 5.858m        | Back_Curb         |
| 14           | 1,696.5544 | 75.2796  | 312.1476 | 6.857m        | EPS_Sub           |
| 15           | 1,696.5544 | 75.2786  | 312.3476 | 6.858m        | Hinge_Cut         |
| 16           | 1,696.5550 | 75.1599  | 312.5852 | 6.977m        | Daylight          |

CHAINAGE 0+400.00

| POINT | X          | Y       | Z        | OFFSET  | STRING CUT      |
|-------|------------|---------|----------|---------|-----------------|
| 1     | 1,717.3212 | 84.2461 | 313.5790 | -4.772m | Daylight        |
| 2     | 1,717.2831 | 84.0695 | 313.7597 | -4.591m | Hinge           |
| 3     | 1,717.2829 | 84.0685 | 313.5597 | -4.590m | EPS_Sub         |
| 4     | 1,717.0724 | 83.0919 | 313.7997 | -3.591m | Back_Curb       |
| 5     | 1,717.0408 | 82.9453 | 313.7997 | -3.441m | Top_Curb        |
| 6     | 1,717.0320 | 82.9045 | 313.5747 | -3.400m | Flowline_Gutter |
| 7     | 1,716.9371 | 82.4646 | 313.2647 | -2.950m | ETW_SubBase     |
| 8     | 1,716.9371 | 82.4646 | 313.6647 | -2.950m | Flange          |
| 9     | 1,715.5507 | 76.0334 | 313.5003 | 3.629m  | Flange          |
| 10    | 1,715.5507 | 76.0334 | 313.1003 | 3.629m  | ETW_SubBase     |
| 11    | 1,715.4559 | 75.5935 | 313.4103 | 4.079m  | Flowline_Gutter |
| 12    | 1,715.4471 | 75.5527 | 313.6353 | 4.121m  | Top_Curb        |
| 13    | 1,715.4155 | 75.4061 | 313.6353 | 4.271m  | Back_Curb       |
| 14    | 1,715.2050 | 74.4295 | 313.3953 | 5.270m  | EPS_Sub         |
| 15    | 1,715.2048 | 74.4285 | 313.5953 | 5.271m  | EPS             |
| 16    | 1,713.9029 | 68.3897 | 307.4177 | 11.449m | Daylight        |

CHAINAGE 0+420.00

| POINT | X          | Y       | Z        | OFFSET  | STRING CUT      |
|-------|------------|---------|----------|---------|-----------------|
| 1     | 1,737.0667 | 80.7212 | 313.9230 | -5.636m | Daylight        |
| 2     | 1,736.8383 | 79.7018 | 314.9677 | -4.592m | Hinge           |
| 3     | 1,736.8381 | 79.7008 | 314.7677 | -4.591m | EPS_Sub         |
| 4     | 1,736.6197 | 78.7260 | 315.0077 | -3.592m | Back_Curb       |
| 5     | 1,736.5869 | 78.5796 | 315.0077 | -3.442m | Top_Curb        |
| 6     | 1,736.5778 | 78.5389 | 314.7827 | -3.400m | Flowline_Gutter |
| 7     | 1,736.4794 | 78.0998 | 314.4727 | -2.950m | ETW_SubBase     |
| 8     | 1,736.4794 | 78.0998 | 314.8727 | -2.950m | Flange          |
| 9     | 1,735.1896 | 72.3425 | 314.7252 | 2.950m  | Flange          |
| 10    | 1,735.1896 | 72.3425 | 314.3252 | 2.950m  | ETW_SubBase     |
| 11    | 1,735.0912 | 71.9034 | 314.6352 | 3.400m  | Flowline_Gutter |
| 12    | 1,735.0821 | 71.8627 | 314.8602 | 3.442m  | Top_Curb        |
| 13    | 1,735.0493 | 71.7163 | 314.8602 | 3.592m  | Back_Curb       |
| 14    | 1,734.8309 | 70.7415 | 314.6202 | 4.591m  | EPS_Sub         |
| 15    | 1,734.8307 | 70.7405 | 314.8202 | 4.592m  | EPS             |
| 16    | 1,732.9495 | 62.3438 | 306.2153 | 13.197m | Daylight        |

CHAINAGE 0+440.00

| <b>POINT</b> | <b>X</b>   | <b>Y</b> | <b>Z</b> | <b>OFFSET</b> | <b>STRING CUT</b> |
|--------------|------------|----------|----------|---------------|-------------------|
| 1            | 1,756.5359 | 76.1390  | 317.8348 | -5.421m       | Daylight          |
| 2            | 1,756.3545 | 75.3295  | 316.1757 | -4.592m       | Ditch_Out         |
| 3            | 1,756.3543 | 75.3285  | 315.9757 | -4.591m       | EPS_Sub           |
| 4            | 1,756.1359 | 74.3537  | 316.2157 | -3.592m       | Back_Curb         |
| 5            | 1,756.1031 | 74.2073  | 316.2157 | -3.442m       | Top_Curb          |
| 6            | 1,756.0940 | 74.1666  | 315.9907 | -3.400m       | Flowline_Gutter   |
| 7            | 1,755.9956 | 73.7275  | 315.6807 | -2.950m       | ETW_SubBase       |
| 8            | 1,755.9956 | 73.7275  | 316.0807 | -2.950m       | Flange            |
| 9            | 1,754.7058 | 67.9702  | 315.9332 | 2.950m        | Flange            |
| 10           | 1,754.7058 | 67.9702  | 315.5332 | 2.950m        | ETW_SubBase       |
| 11           | 1,754.6074 | 67.5311  | 315.8432 | 3.400m        | Flowline_Gutter   |
| 12           | 1,754.5983 | 67.4904  | 316.0682 | 3.442m        | Top_Curb          |
| 13           | 1,754.5655 | 67.3441  | 316.0682 | 3.592m        | Back_Curb         |
| 14           | 1,754.3471 | 66.3692  | 315.8282 | 4.591m        | EPS_Sub           |
| 15           | 1,754.3469 | 66.3682  | 316.0282 | 4.592m        | Hinge             |
| 16           | 1,752.7466 | 59.2250  | 308.7079 | 11.912m       | Daylight          |

## 6.4 Vertikalni tok trase

Vertical Alignment: niveleta

Description:

Station Range: Start: 0+000.00, End: 45+365.00

| PVI   | Station  | Grade Out | Curve Length |
|---|----------|-----------|--------------|
| 0.00  | 0+000.00 | 3.75%     |              |
| 1.00  | 0+280.00 | 6.04%     | 111.997m     |
| Vertical Curve Information:(sag curve)-----<br>PVC Station:       0+223.97   Elevation: 304.244m<br>PVI Station:       0+280.00   Elevation: 306.343m<br>PVT Station:       0+335.97   Elevation: 309.723m<br>Low Point:         0+223.97   Elevation: 304.244m<br>Grade in:           3.75%   Grade out:   6.04%<br>Change:            2.29%   K:<br>Curve Length:     111.997m<br>Headlight Distance: |          |           |              |
| 2.00  | 0+453.65 |           |              |

## 7. LITERATURA

1. Ministarstvo pomorstva, prometa i veza, "Pravilnik o osnovnim uvjetima kojima javne ceste izvan naselja i njihovi elementi moraju udovoljavati sa stajališta sigurnosti prometa", Narodne novine, Zagreb, 30. studenoga 2001.
2. Projektiranje i gradnja cesta, Željko Korlaet, Vesna Dragčević, Građevinski fakultet Zagreb, 2018.
3. Zakon o cestama NN 84/11, 22/13, 54/13, 148/13, 92/14
4. Hrvatske ceste – Hrvatske autoceste, „Opći tehnički uvjeti za radove na cestama“, Institut građevinarstva Hrvatske, Zagreb, prosinac 2001
5. Zakon o gradnji 153/13