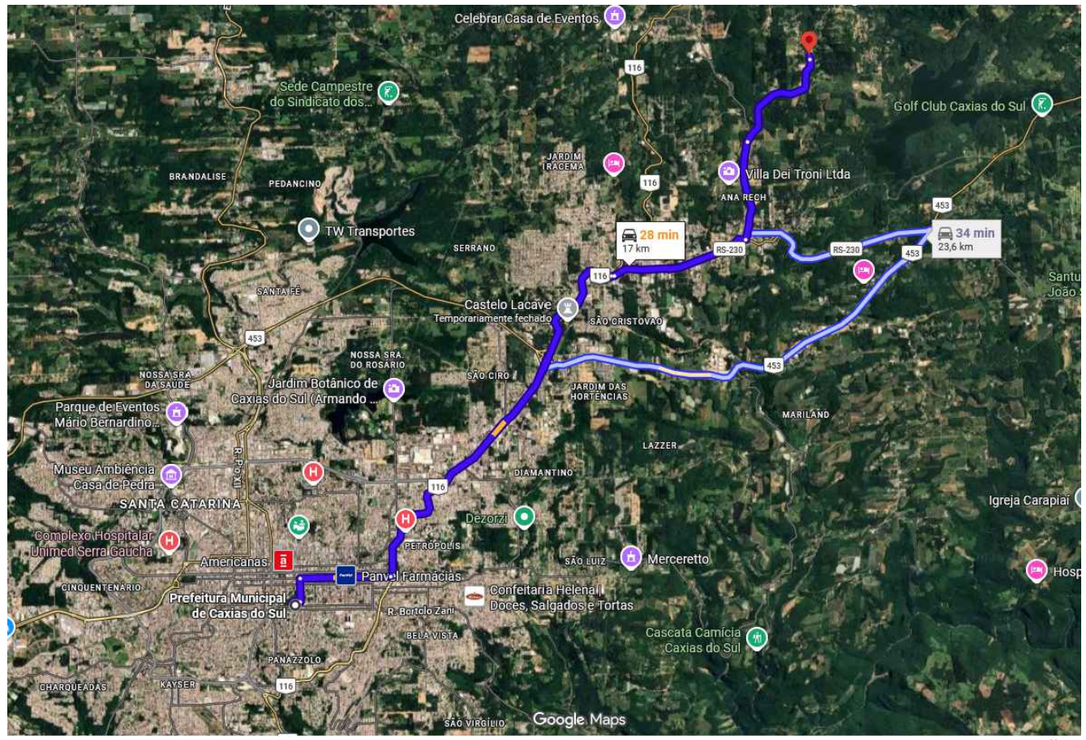
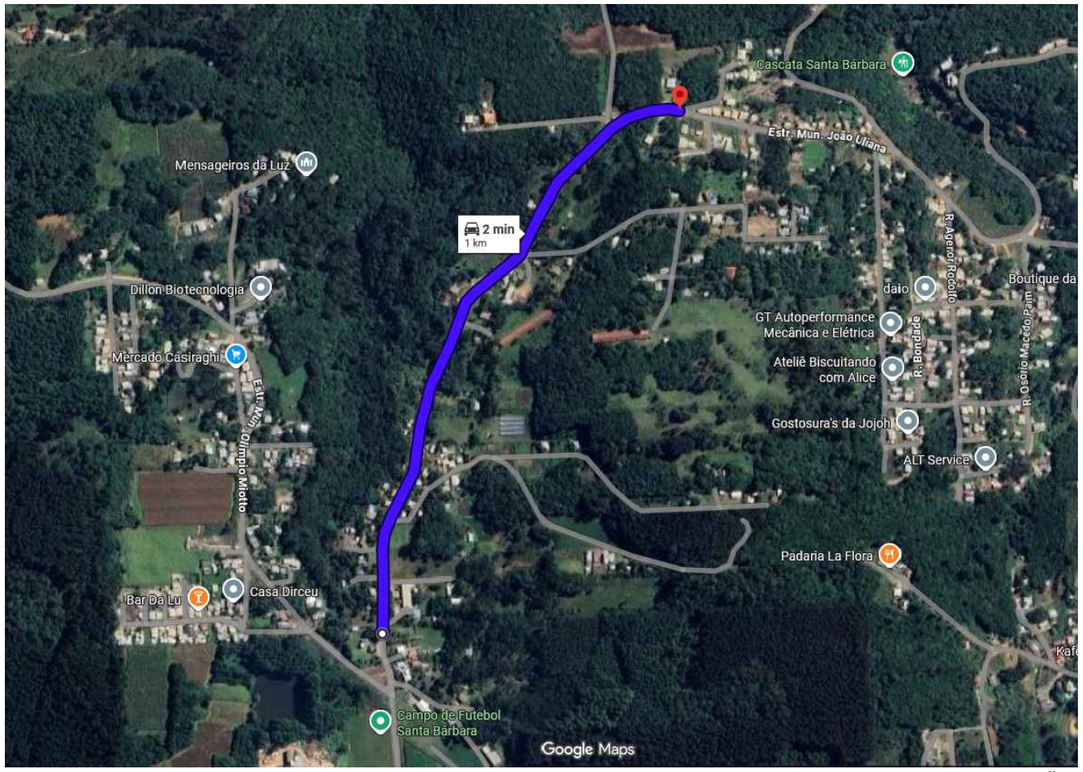



MAPA DE SITUAÇÃO
sem escala
*fonte: Google Maps*




Coordenadas início: 29°04'56.2"S 51°04'46.5"W
Coordenadas final: 29°04'29.0"S 51°04'28.4"W
Extensão: 840,00 metros

MAPA DE LOCALIZAÇÃO
sem escala
*fonte: Google Maps*

PREFEITURA MUNICIPAL DE CAXIAS DO SUL

**SEPLAN** SECRETARIA MUNICIPAL DE PLANEJAMENTO E PARCERIAS ESTRATÉGICAS

ASSUNTO:

PROJETO DE MELHORAMENTO DE VIA EXISTENTE

SITUAÇÃO E LOCALIZAÇÃO

Estrada Municipal João Uliana, bairro Ana Rech - Caxias do Sul / RS

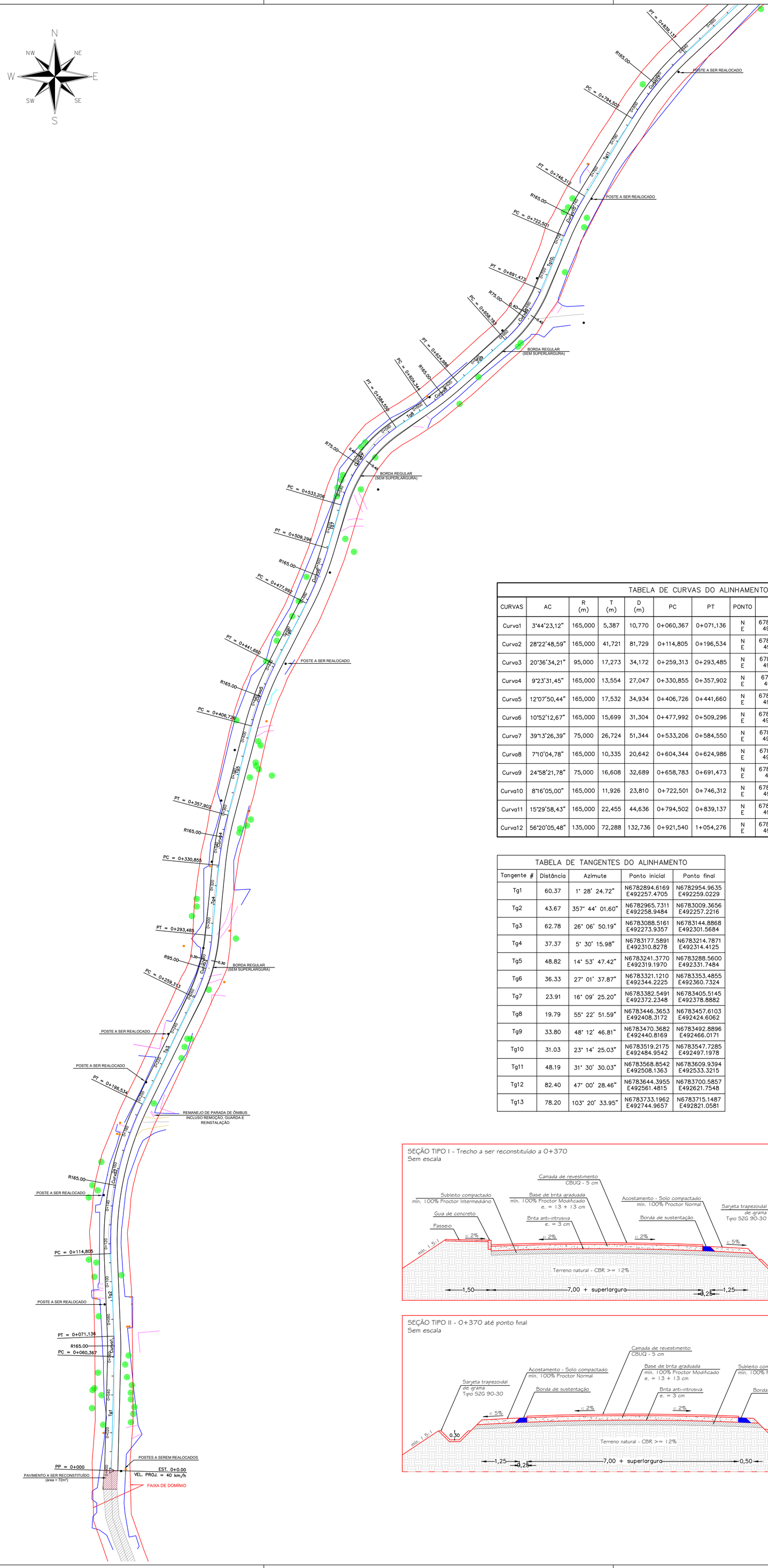
RESPONSÁVEL TÉCNICO:

ENG. CIVIL MATHIAS GRAZZIOTIN FAVERO
CREA/RS 223.457

DATA: FEV / 2026

ESCALA: Sem escala

PRANCHA: 01/11




| TABELA DE CURVAS DO ALINHAMENTO | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| CURVAS | AC | R (m) | T (m) | D (m) | PC | PT | PONTO | PC | PI | PT |
| Curva1 | 3°44'23,12" | 165,000 | 5,387 | 10,770 | 0+060,367 | 0+071,136 | N E | 6782954,9635 492259,0229 | 6782960,3485 492259,1614 | 6782965,7311 492258,9484 |
| Curva2 | 28°22'48,59" | 165,000 | 41,721 | 81,729 | 0+114,805 | 0+196,534 | N E | 6783009,3656 492257,2216 | 6783051,0540 492255,5718 | 6783088,5161 492273,9357 |
| Curva3 | 20°36'34,21" | 95,000 | 17,273 | 34,172 | 0+259,313 | 0+293,485 | N E | 6783144,8868 492301,5684 | 6783160,3962 492309,1710 | 6783177,5891 492310,8278 |
| Curva4 | 9°23'31,45" | 165,000 | 13,554 | 27,047 | 0+330,855 | 0+357,902 | N E | 6783214,7871 492314,4125 | 6783228,2786 492315,7127 | 6783241,3770 492319,1970 |
| Curva5 | 12°07'50,44" | 165,000 | 17,532 | 34,934 | 0+406,726 | 0+441,660 | N E | 6783288,5600 492331,7484 | 6783305,5032 492336,2555 | 6783321,1210 492344,2225 |
| Curva6 | 10°52'12,67" | 165,000 | 15,699 | 31,304 | 0+477,992 | 0+509,296 | N E | 6783353,4855 492360,7324 | 6783367,4701 492367,8662 | 6783382,5491 492372,2348 |
| Curva7 | 39°13'26,39" | 75,000 | 26,724 | 51,344 | 0+533,206 | 0+584,550 | N E | 6783405,5145 492378,8882 | 6783431,1830 492386,3247 | 6783446,3653 492408,3172 |
| Curva8 | 7°10'04,78" | 165,000 | 10,335 | 20,642 | 0+604,344 | 0+624,986 | N E | 6783457,6103 492424,6062 | 6783463,4816 492433,1111 | 6783470,3682 492440,8169 |
| Curva9 | 24°58'21,78" | 75,000 | 16,608 | 32,689 | 0+658,783 | 0+691,473 | N E | 6783492,8896 492466,0171 | 6783503,9568 492478,4008 | 6783519,2175 492484,9542 |
| Curva10 | 8°16'05,00" | 165,000 | 11,926 | 23,810 | 0+722,501 | 0+746,312 | N E | 6783547,7285 492497,1978 | 6783558,6867 492501,9036 | 6783568,8542 492508,1363 |
| Curva11 | 15°29'58,43" | 165,000 | 22,455 | 44,636 | 0+794,502 | 0+839,137 | N E | 6783609,9394 492533,3215 | 6783629,0836 492545,0570 | 6783644,3955 492561,4815 |
| Curva12 | 56°20'05,48" | 135,000 | 72,288 | 132,736 | 0+921,540 | 1+054,276 | N E | 6783700,5857 492621,7548 | 6783749,8784 492674,6294 | 6783733,1962 492744,9657 |

| TABELA DE TANGENTES DO ALINHAMENTO | | | | |
|---|---|---|---|---|
| Tangente # | Distância | Azimute | Ponto inicial | Ponto final |
| Tg1 | 60.37 | 1° 28' 24.72" | N6782894.6169 E492257.4705 | N6782954.9635 E492259.0229 |
| Tg2 | 43.67 | 357° 44' 01.60" | N6782965.7311 E492258.9484 | N6783009.3656 E492257.2216 |
| Tg3 | 62.78 | 26° 06' 50.19" | N6783088.5161 E492273.9357 | N6783144.8868 E492301.5684 |
| Tg4 | 37.37 | 5° 30' 15.98" | N6783177.5891 E492310.8278 | N6783214.7871 E492314.4125 |
| Tg5 | 48.82 | 14° 53' 47.42" | N6783241.3770 E492319.1970 | N6783288.5600 E492331.7484 |
| Tg6 | 36.33 | 27° 01' 37.87" | N6783321.1210 E492344.2225 | N6783353.4855 E492360.7324 |
| Tg7 | 23.91 | 16° 09' 25.20" | N6783382.5491 E492372.2348 | N6783405.5145 E492378.8882 |
| Tg8 | 19.79 | 55° 22' 51.59" | N6783446.3653 E492408.3172 | N6783457.6103 E492424.6062 |
| Tg9 | 33.80 | 48° 12' 46.81" | N6783470.3682 E492440.8169 | N6783492.8896 E492466.0171 |
| Tg10 | 31.03 | 23° 14' 25.03" | N6783519.2175 E492484.9542 | N6783547.7285 E492497.1978 |
| Tg11 | 48.19 | 31° 30' 30.03" | N6783568.8542 E492508.1363 | N6783609.9394 E492533.3215 |
| Tg12 | 82.40 | 47° 00' 28.46" | N6783644.3955 E492561.4815 | N6783700.5857 E492621.7548 |
| Tg13 | 78.20 | 103° 20' 33.95" | N6783733.1962 E492744.9657 | N6783715.1487 E492821.0581 |

SEÇÃO TIPO I - Trecho a ser reconstituído a 0+370
Sem escala




SEÇÃO TIPO II - 0+370 até ponto final
Sem escala




**APROVADO**
**SEPLAN**

SECRETÁRIO MUNICIPAL DE PLANEJAMENTO
E PARCERIAS ESTRATÉGICAS
PREFEITURA DE CAXIAS DO SUL

PREFEITURA MUNICIPAL DE CAXIAS DO SUL

**SEPLAN** SECRETARIA MUNICIPAL DE PLANEJAMENTO E PARCERIAS ESTRATÉGICAS

ASSUNTO:

PROJETO DE MELHORAMENTO DE VIA EXISTENTE

PROJETO GEOMÉTRICO E DETALHAMENTO DE SEÇÃO TIPO

Estrada Municipal João Uliana, bairro Ana Rech - Caxias do Sul / RS

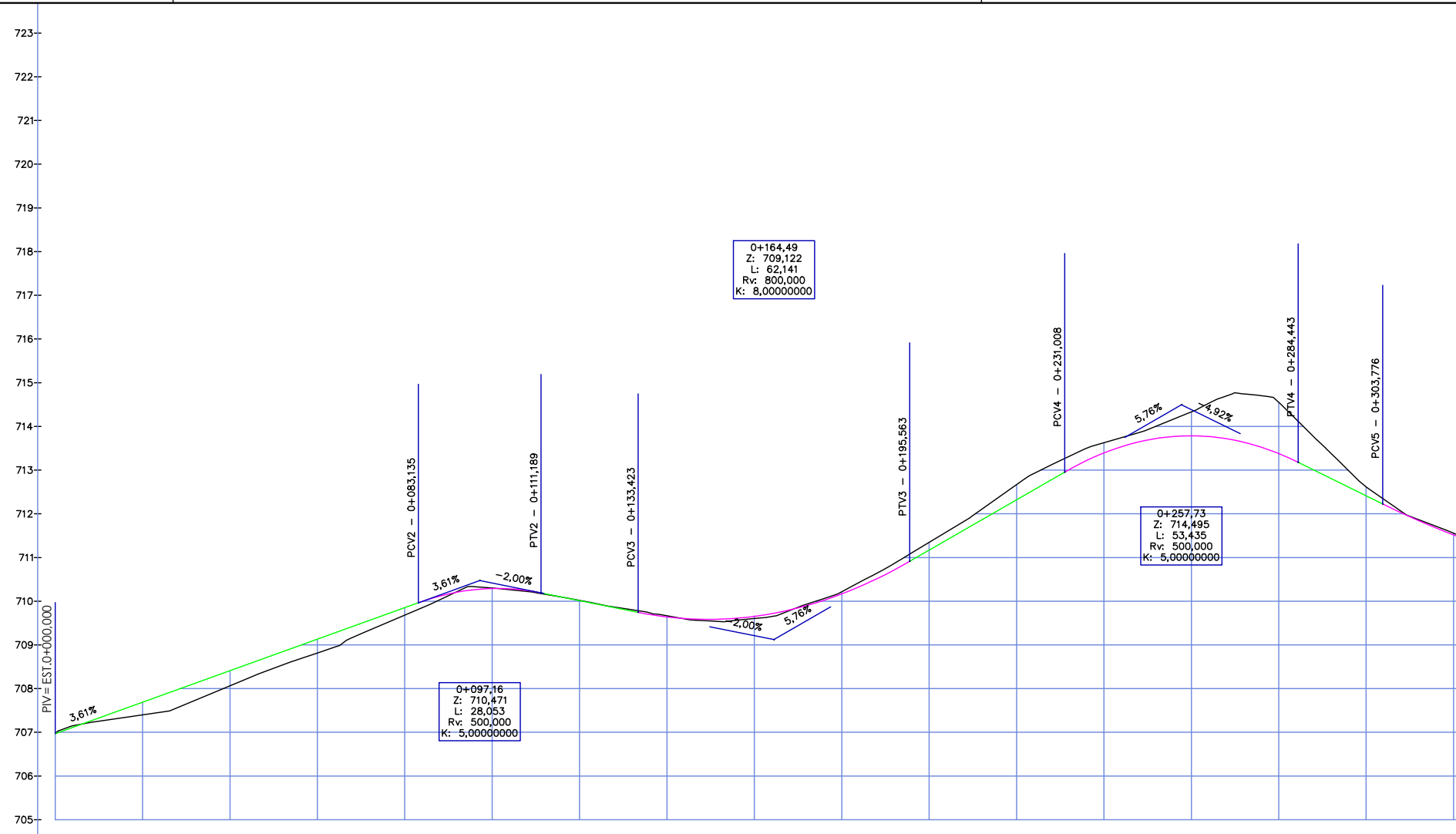
RESPONSÁVEL TÉCNICO:

ENG. CIVIL MATHIAS GRAZZIOTIN FAVERO
CREA/RS 223.457

DATA: FEV / 2026

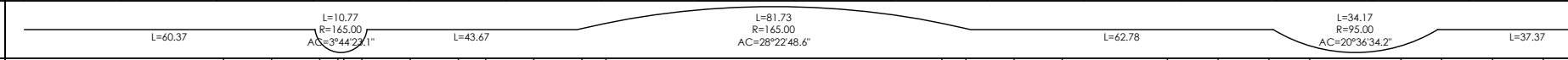
ESCALA: 1:1000

PRANCHA: 02/11



COTAS TERRENO (m)	706.968	707.399	708.065	708.815	709.680	710.301	710.019	709.668	709.605	710.214	711.345	712.668	713.626	714.331	714.550	712.614	711.557
PAVIMENTO (m)	706.968	707.689	708.410	709.131	709.853	710.289	710.014	709.640	709.653	710.167	711.168	712.321	713.392	713.785	713.378	712.413	711.516
CORTE E ATERRO (m)	0.00	0.29	0.35	0.32	0.17	−0.01	0.00	−0.03	0.05	−0.05	−0.18	−0.35	−0.23	−0.55	−1.17	−0.20	−0.04
ESTAQUEAMENTO	0+000,00	0+020,00	0+040,00	0+060,00	0+080,00	0+100,00	0+120,00	0+140,00	0+160,00	0+180,00	0+200,00	0+220,00	0+240,00	0+260,00	0+280,00	0+300,00	0+320,00

PLANIMETRIA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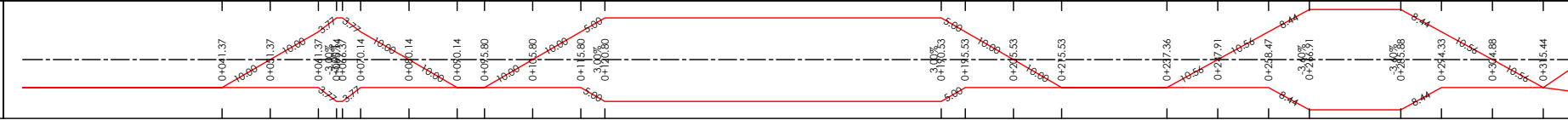
AC=3°44'23.1"
L=43.67
L=81.73
R=165.00
AC=28°22'48.6"
L=62.78
L=34.17
R=95.00
AC=20°36'34.2"
L=37.37

SUPERELEVAÇÃO


0+041.37
0+051.37
0+061.37
0+066.37
0+070.14
0+080.14
0+090.14
0+095.80
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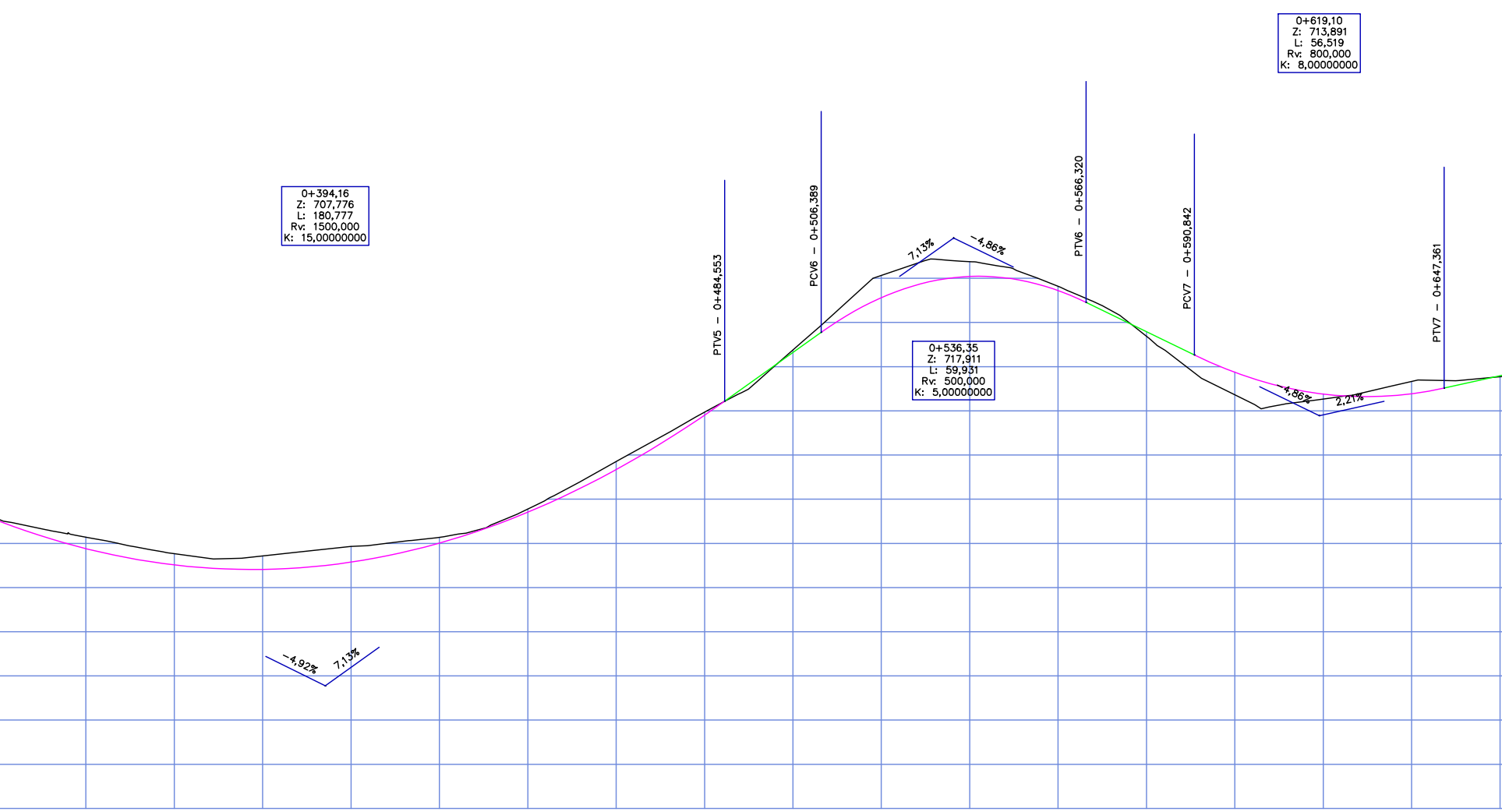
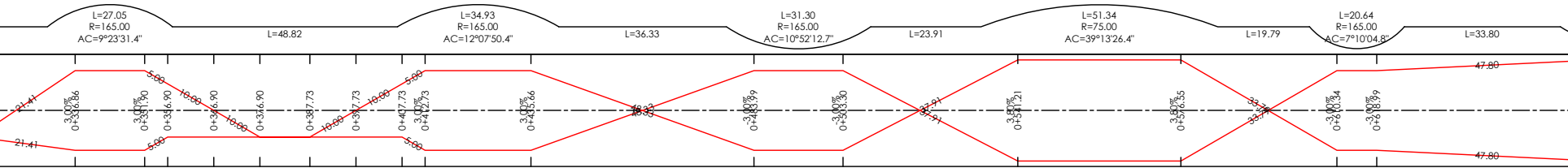
0+115.80
0+120.80
0+190.53
0+195.53
0+205.53
0+215.53
0+237.36
0+247.91
0+258.47
0+266.91
0+285.88
0+294.33
0+304.88
0+315.44
3.00%
3.00%
3.77
10.00
5.00
10.56
8.44


0+394,16
Z: 707,776
L: 180,777
Rv: 1500,000
K: 15,00000000
-4,92%
7,13%
PTV5 – 0+484,553
PCV6 – 0+506,389
7,13%
-4,86%
0+536,35
Z: 717,911
L: 59,931
Rv: 500,000
K: 5,00000000
PTV6 – 0+566,320
PCV7 – 0+590,842
-4,86%
2,21%
0+619,10
Z: 713,891
L: 56,519
Rv: 800,000
K: 8,00000000
PTV7 – 0+647,361

711.141	710.767	710.714	710.931	711.135	711.778	712.853	713.969	715.377	717.065	717.376	716.818	715.686	714.362	714.268	714.665	714.771
710.881	710.512	710.411	710.575	711.007	711.705	712.670	713.901	715.320	716.560	717.042	716.723	715.791	714.872	714.379	714.386	714.793
-0.26	-0.26	-0.30	-0.36	-0.13	-0.07	-0.18	-0.07	-0.06	-0.50	-0.33	-0.10	0.10	0.51	0.11	-0.28	0.02
0+340,00	0+360,00	0+380,00	0+400,00	0+420,00	0+440,00	0+460,00	0+480,00	0+500,00	0+520,00	0+540,00	0+560,00	0+580,00	0+600,00	0+620,00	0+640,00	0+660,00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L=36.33
L=31.30
R=165.00
AC=10°52'12.7"
L=23.91
L=51.34
R=75.00
AC=39°13'26.4"
L=19.79
L=20.64
R=165.00
AC=7°10'04.8"
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3.00%
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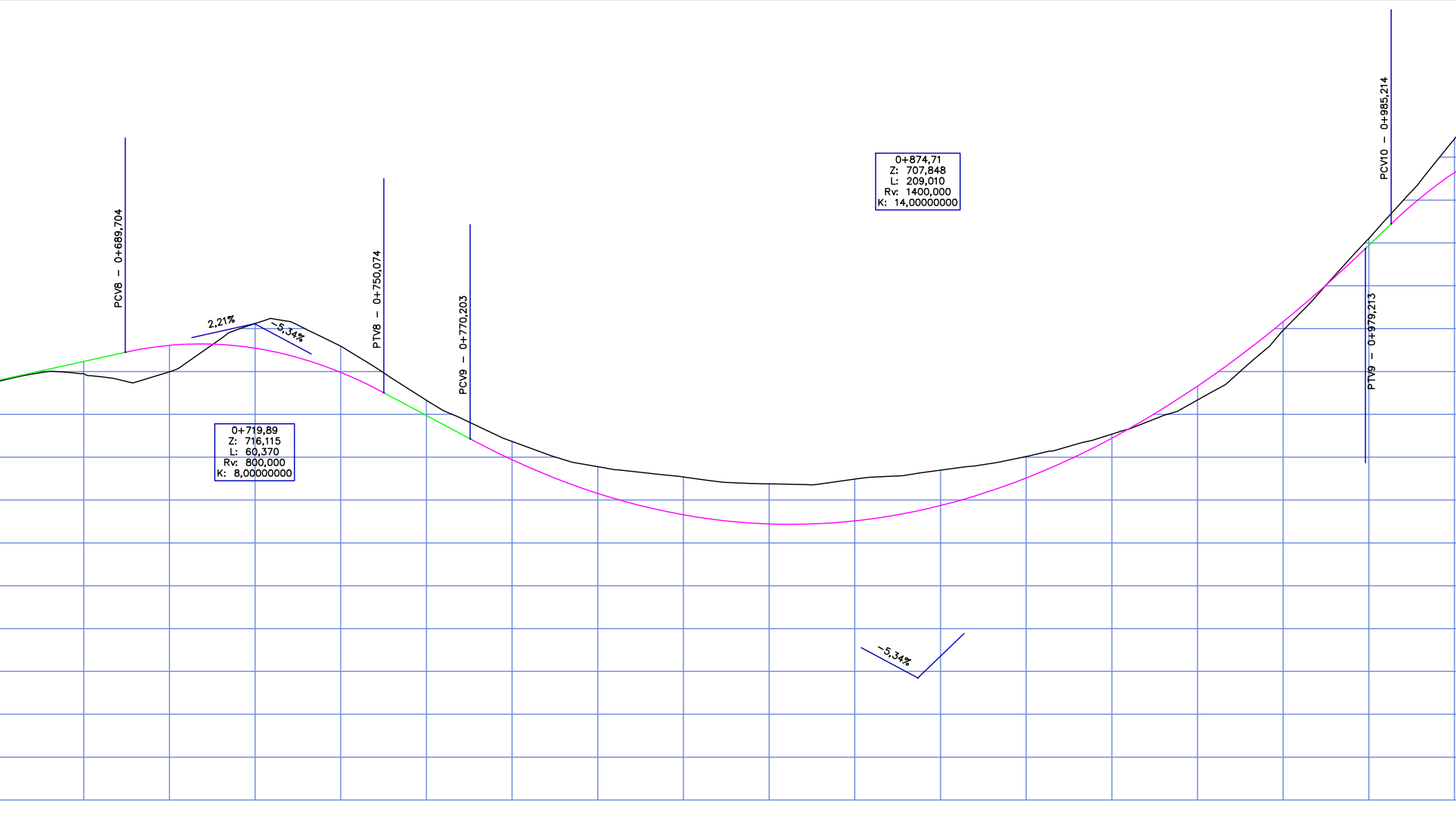
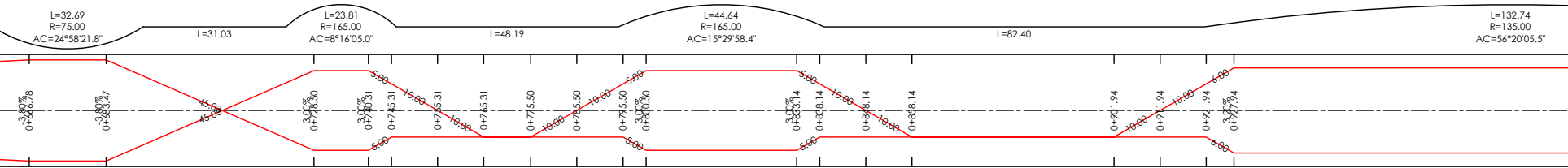
5.00
0+356.90
10.00
0+366.90
10.00
0+376.90
0+387.73
10.00
0+397.73
10.00
0+407.73
5.00
5.00
3.00%
0+412.73
3.00%
0+435.66
48.33
-3.00%
0+483.99
-3.00%
0+503.30
37.91
37.91
3.80%
0+541.21
3.80%
0+576.55
33.79
33.79
-3.00%
0+610.34
-3.00%
0+618.99
47.80
47.80


PCV8 – 0+689,704
2,21%
-5,34%
PTV8 – 0+750,074
PCV9 – 0+770,203
0+719,89
Z: 716,115
L: 60,370
Rv: 800,000
K: 8,00000000
0+874,71
Z: 707,848
L: 209,010
Rv: 1400,000
K: 14,00000000
-5,34%
PCV10 – 0+985,214
PTV9 – 0+979,213

714.948	714.993	716.118	715.589	714.328	713.368	712.777	712.538	712.376	712.490	712.697	713.016	713.536	714.336	715.962	718.106	720.428
715.235	715.610	715.544	714.977	713.973	712.939	712.154	711.655	711.441	711.513	711.871	712.514	713.443	714.658	716.158	717.944	719.644
0.29	0.62	-0.57	-0.61	-0.35	-0.43	-0.62	-0.88	-0.94	-0.98	-0.83	-0.50	-0.09	0.32	0.20	-0.16	-0.78
0+680,00	0+700,00	0+720,00	0+740,00	0+760,00	0+780,00	0+800,00	0+820,00	0+840,00	0+860,00	0+880,00	0+900,00	0+920,00	0+940,00	0+960,00	0+980,00	1+000,00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L=31.03
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R=165.00
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L=48.19
L=44.64
R=165.00
AC=15°29'58.4"
L=82.40
L=132.74
R=135.00
AC=56°20'05.5"
-3.80%
0+666.78
-3.80%
0+683.47
45.00
45.00
3.00%
0+728.50
3.00%
0+740.31
5.00
5.00
0+745.31
10.00
0+755.31
10.00
0+765.31
0+775.50
10.00
0+785.50
10.00
0+795.50
5.00
5.00
3.00%
0+800.50
5.00
5.00
3.00%
0+833.14
0+838.14
10.00
0+848.14
10.00
0+858.14
0+901.94
10.00
0+911.94
10.00
0+921.94
6.00
6.00
3.20%
0+927.94


PTV10 – 1+055,462
-4,46%
1+020,34
Z: 721,813
L: 70,248
Rv: 500,000
K: 5,00000000
PIV= EST.1+132,479
-4,46%
L=78.20
6.00
10.00
3.20%
1+047.88
1+053.88
1+063.88
1+073.88
10.00
6.00

721.453	720.357	718.792	717.750	717.253	716.940	716.811
720.570	720.697	720.044	719.152	718.260	717.368	716.811
-0.88	0.34	1.25	1.40	1.01	0.43	0.00
1+020,00	1+040,00	1+060,00	1+080,00	1+100,00	1+120,00	1+132,48

PREFEITURA MUNICIPAL DE CAXIAS DO SUL

SEPLAN SECRETARIA MUNICIPAL DE PLANEJAMENTO E PARCERIAS ESTRATÉGICAS

ASSUNTO:

PROJETO DE MELHORAMENTO DE VIA EXISTENTE

PERFIL LONGITUDINAL

Estrada Municipal João Uliana, bairro Ana Rech - Caxias do Sul / RS

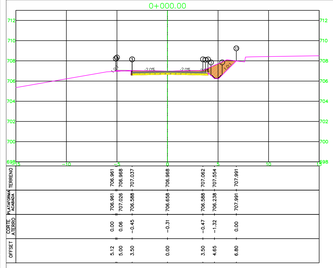
RESPONSÁVEL TÉCNICO:

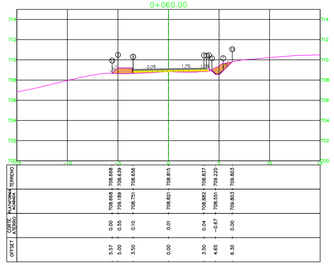
ENG. CIVIL MATHIAS GRAZZIOTIN FAVERO
CREA/RS 223.457

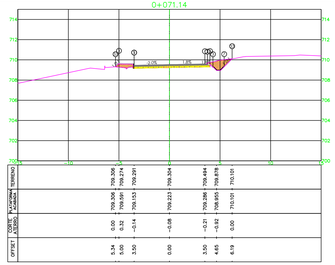
DATA:
FEV / 2026

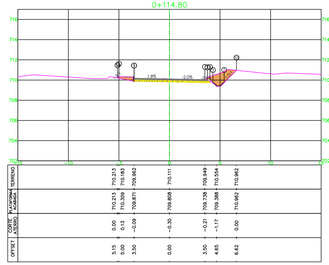
ESCALA:
1:1000

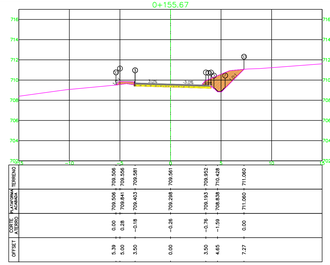
PRANCHA:
03/11

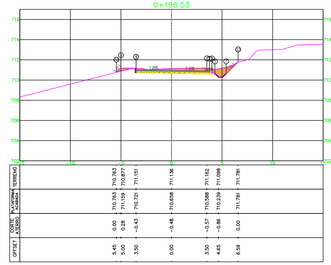


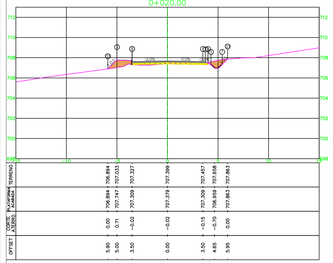



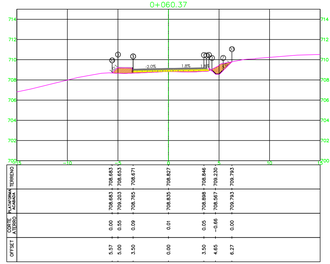



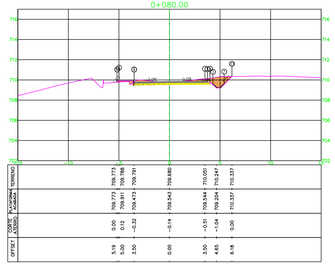



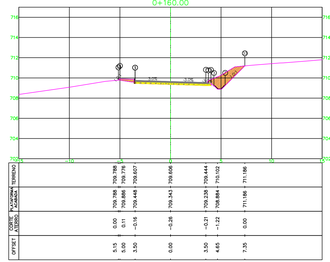



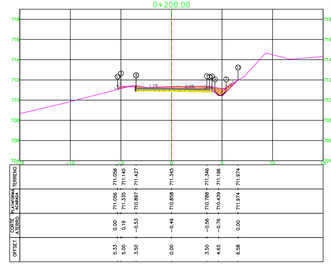



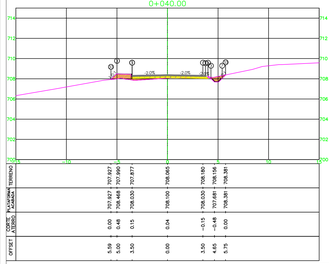



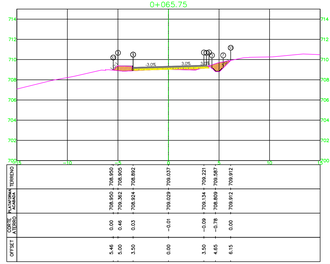


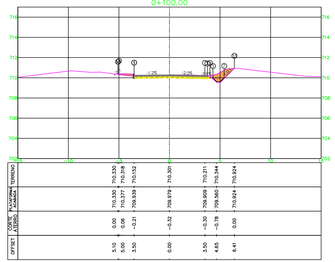


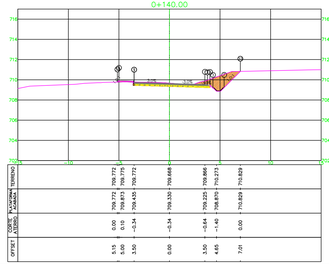


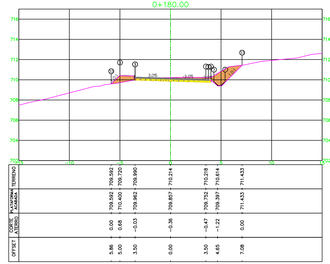



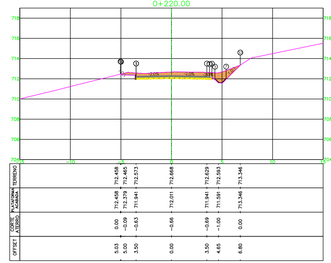

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SEÇÕES TRANSVERSAIS

Estrada Municipal João Uliana, bairro Ana Rech - Caxias do Sul / RS

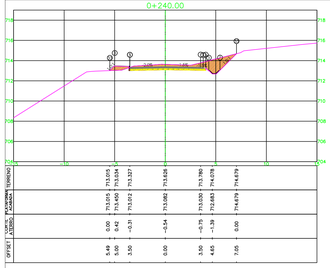
RESPONSÁVEL TÉCNICO:

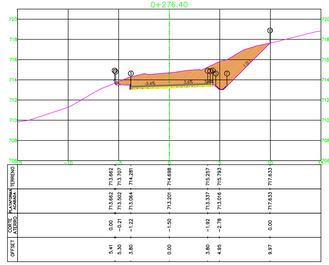
ENG. CIVIL MATHIAS GRAZZIOTIN FAVERO
CREA/RS 223.457

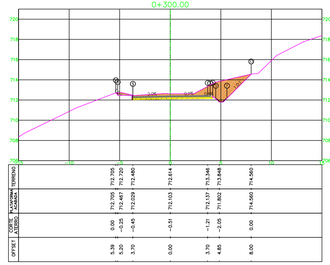
DATA: FEV / 2026

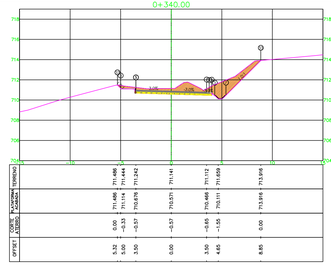
ESCALA: 1:200

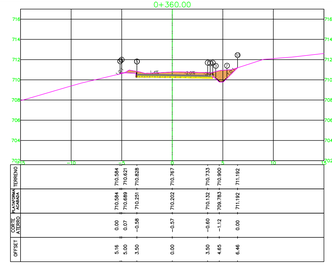
PRANCHA: 04/11

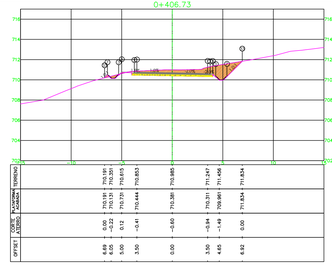


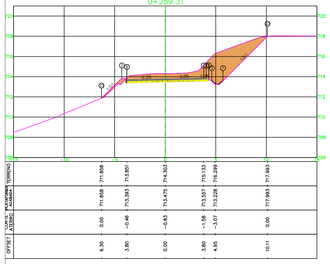



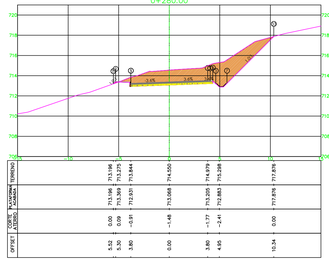



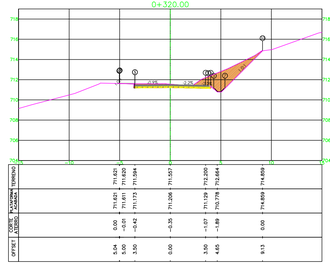



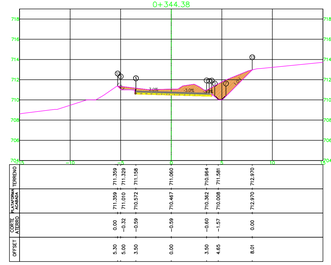



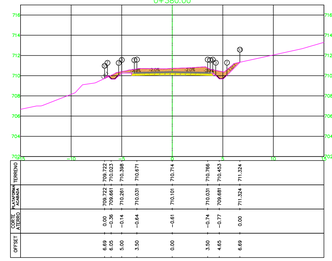



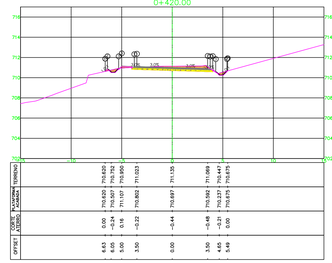



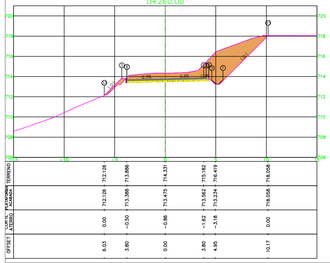



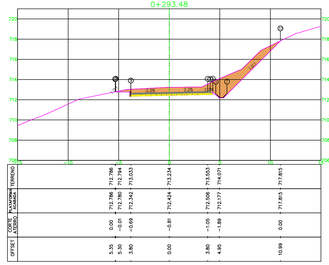



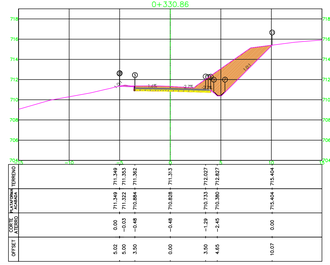



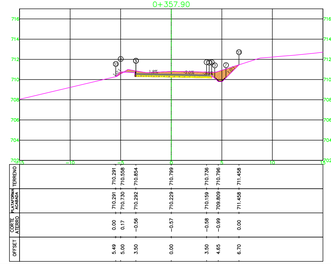



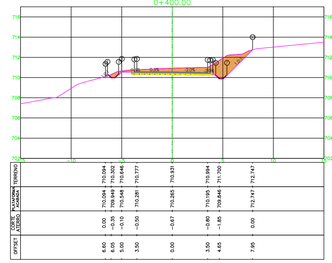



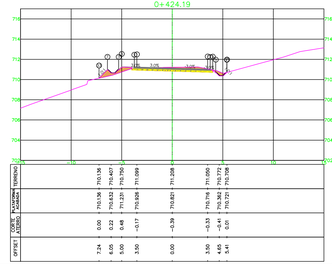

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DATA: FEV / 2026

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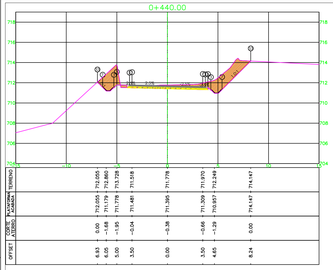
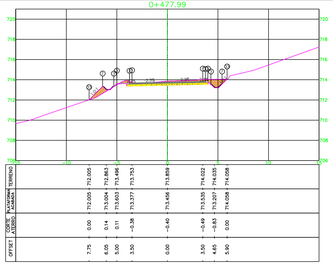
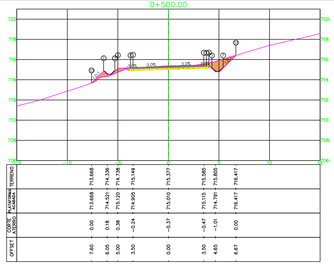
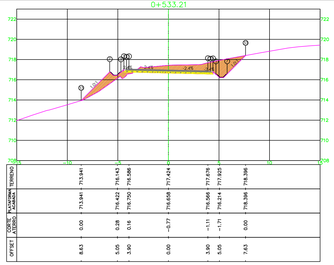
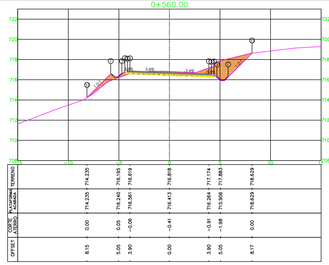
PRANCHA: 05/11

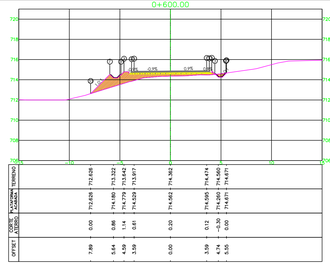


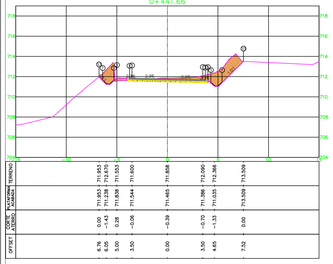



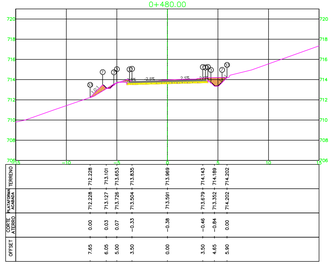



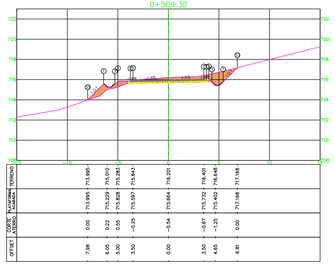



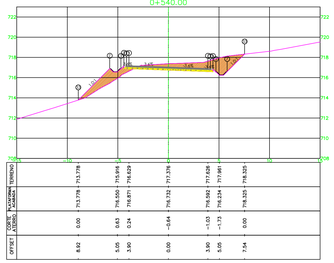



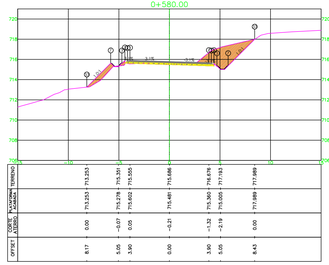



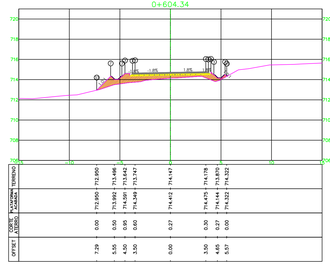



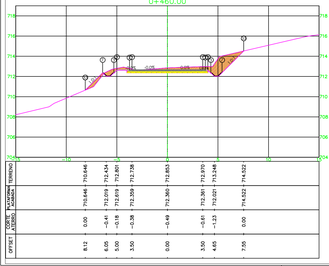



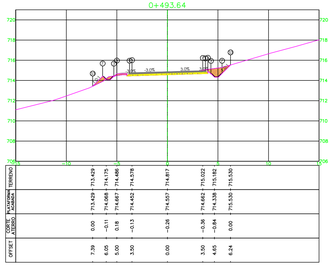



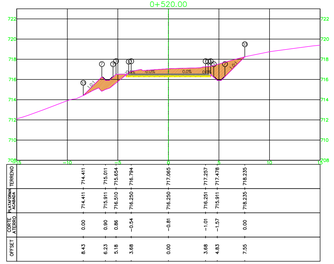



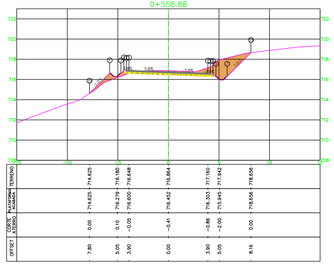



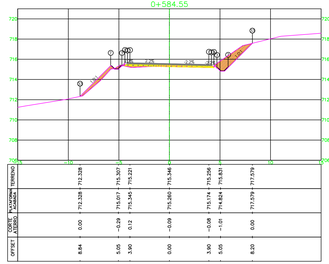



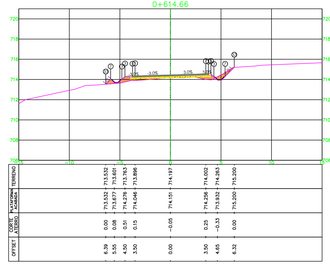

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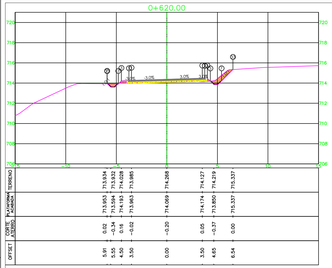
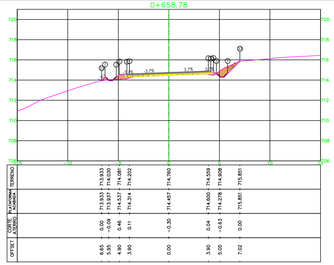
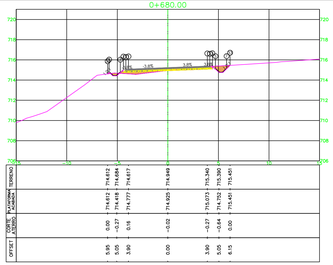
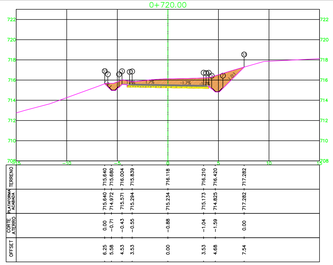
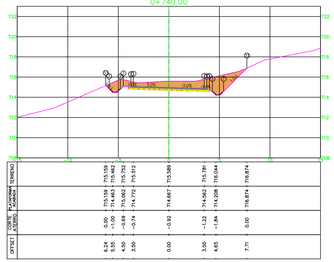
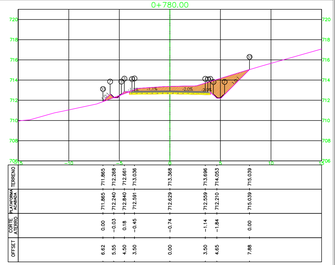


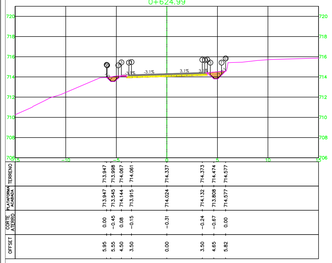



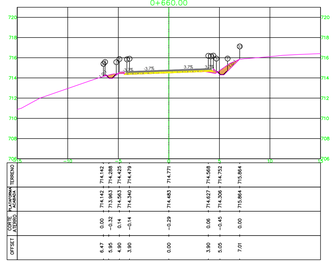



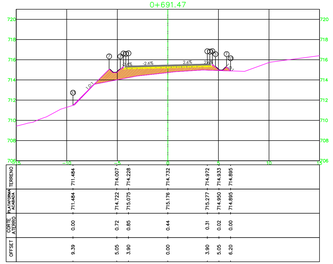



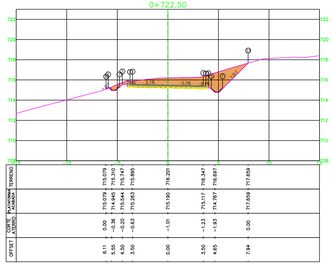



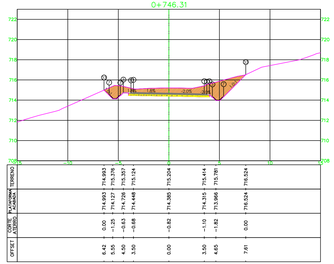



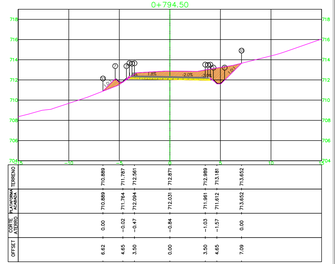



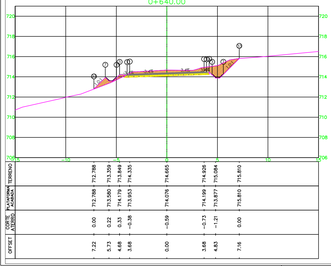



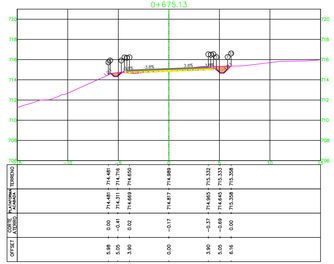



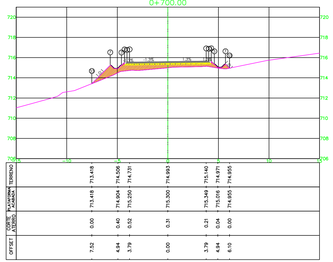



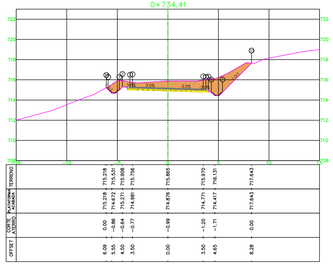



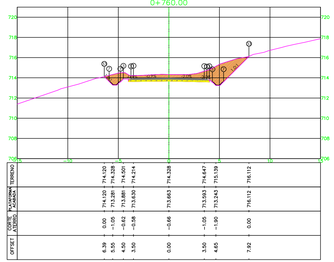



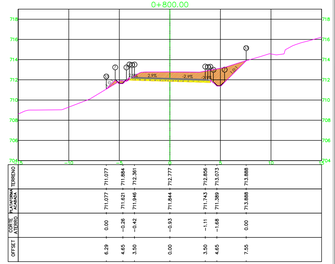




PREFEITURA MUNICIPAL DE CAXIAS DO SUL

**SEPLAN** SECRETARIA MUNICIPAL DE PLANEJAMENTO E PARCERIAS ESTRATÉGICAS

ASSUNTO:

PROJETO DE MELHORAMENTO DE VIA EXISTENTE

SEÇÕES TRANSVERSAIS

Estrada Municipal João Uliana, bairro Ana Rech - Caxias do Sul / RS

RESPONSÁVEL TÉCNICO:

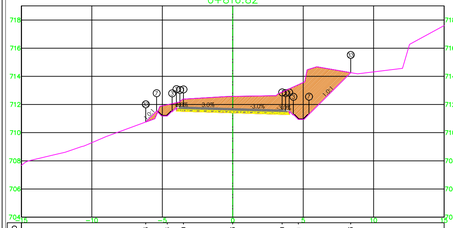
ENG. CIVIL MATHIAS GRAZZIOTIN FAVERO
CREA/RS 223.457

DATA: FEV / 2026

ESCALA: 1:200

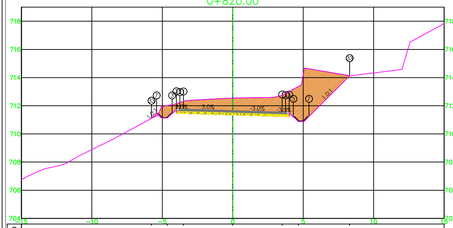
PRANCHA: 07/11

0+816.82



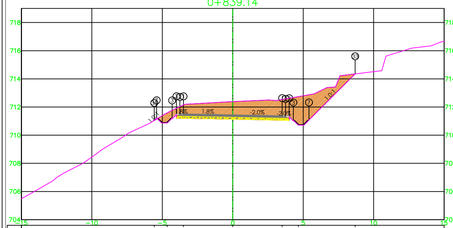
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OFFSET | 6.18 | 4.65 | 3.50 | 0.00 | 3.50 | 4.65 | 5.37 | | |
| CORTE / ATERRO | 0.00 | -0.79 | -0.87 | -1.17 | -1.58 | -2.46 | 0.00 | | |
| PLATAFORMA ACABADA | 710.756 | 711.185 | 711.310 | 711.405 | 711.300 | 710.945 | 714.363 | | |
| TERRENO | 710.756 | 711.978 | 712.380 | 712.573 | 712.880 | 713.401 | 714.363 | | |

0+820.00



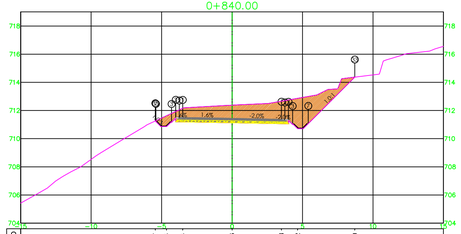
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OFFSET | 5.76 | 4.65 | 3.50 | 0.00 | 3.50 | 4.65 | 8.30 | | |
| CORTE / ATERRO | 0.00 | -0.88 | -0.86 | -1.19 | -1.49 | -2.47 | 0.00 | | |
| PLATAFORMA ACABADA | 711.108 | 711.125 | 711.450 | 711.345 | 711.240 | 710.885 | 714.133 | | |
| TERRENO | 711.108 | 712.005 | 712.305 | 712.538 | 712.733 | 713.339 | 714.133 | | |

0+839.14



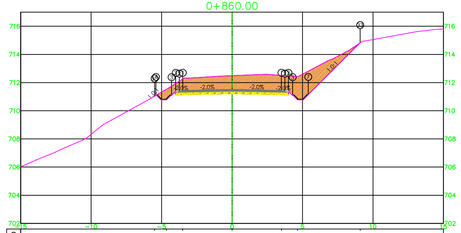
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OFFSET | 5.57 | 4.65 | 3.50 | 0.00 | 3.50 | 4.65 | 8.69 | | |
| CORTE / ATERRO | 0.00 | -0.72 | -0.95 | -1.24 | -1.47 | -2.02 | 0.00 | | |
| PLATAFORMA ACABADA | 711.040 | 710.867 | 711.197 | 711.134 | 711.064 | 710.715 | 714.353 | | |
| TERRENO | 711.040 | 711.586 | 712.149 | 712.378 | 712.530 | 712.735 | 714.353 | | |

0+840.00



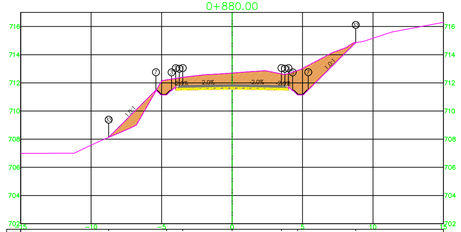
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OFFSET | 5.45 | 4.65 | 3.50 | 0.00 | 3.50 | 4.65 | 8.71 | | |
| CORTE / ATERRO | 0.00 | -0.77 | -0.97 | -1.25 | -1.60 | -2.15 | 0.00 | | |
| PLATAFORMA ACABADA | 711.257 | 710.856 | 711.188 | 711.131 | 711.061 | 710.711 | 714.370 | | |
| TERRENO | 711.257 | 711.626 | 712.156 | 712.376 | 712.658 | 712.862 | 714.370 | | |

0+860.00



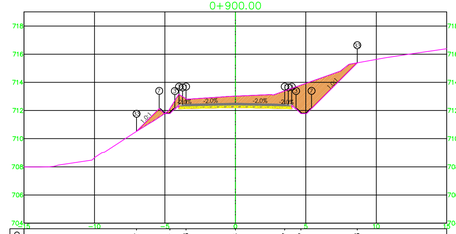
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OFFSET | 5.50 | 4.65 | 3.50 | 0.00 | 3.50 | 4.65 | 9.09 | | |
| CORTE / ATERRO | 0.00 | -0.75 | -1.12 | -1.29 | -1.38 | -1.65 | 0.00 | | |
| PLATAFORMA ACABADA | 711.033 | 710.783 | 711.133 | 711.203 | 711.133 | 710.783 | 714.827 | | |
| TERRENO | 711.033 | 711.528 | 712.249 | 712.490 | 712.514 | 712.436 | 714.827 | | |

0+880.00



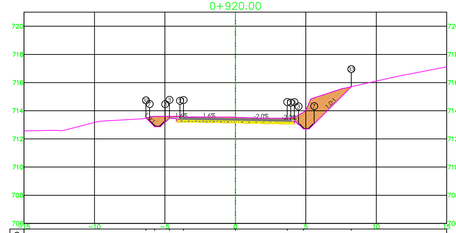
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OFFSET | 8.76 | 4.65 | 3.50 | 0.00 | 3.50 | 4.65 | 8.77 | | |
| CORTE / ATERRO | 0.00 | -1.07 | -0.90 | -1.14 | -1.14 | -1.74 | 0.00 | | |
| PLATAFORMA ACABADA | 708.132 | 711.141 | 711.491 | 711.561 | 711.491 | 711.141 | 714.864 | | |
| TERRENO | 708.132 | 712.208 | 712.395 | 712.697 | 712.634 | 712.880 | 714.864 | | |

0+900.00



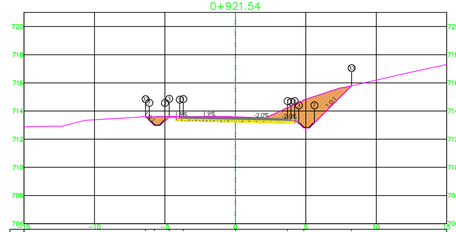
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OFFSET | 7.01 | 4.65 | 3.50 | 0.00 | 3.50 | 4.65 | 8.65 | | |
| CORTE / ATERRO | 0.00 | -0.33 | -0.70 | -0.81 | -1.25 | -2.01 | 0.00 | | |
| PLATAFORMA ACABADA | 710.917 | 711.784 | 712.134 | 712.204 | 712.134 | 711.784 | 715.383 | | |
| TERRENO | 710.917 | 712.119 | 712.833 | 713.016 | 713.387 | 713.797 | 715.383 | | |

0+920.00



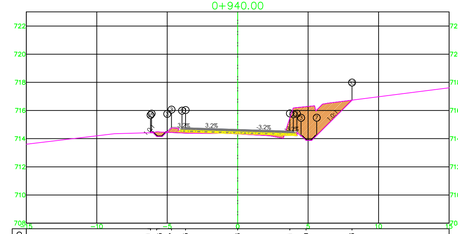
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OFFSET | 6.34 | 5.73 | 4.68 | 3.68 | 0.00 | 3.68 | 4.83 | 8.22 | |
| CORTE / ATERRO | 0.00 | -0.73 | -0.13 | -0.37 | -0.40 | -0.40 | -1.18 | 0.00 | |
| PLATAFORMA ACABADA | 713.484 | 712.869 | 713.468 | 713.192 | 713.133 | 713.059 | 712.710 | 715.705 | |
| TERRENO | 713.484 | 713.597 | 713.601 | 713.560 | 713.536 | 713.464 | 713.888 | 715.705 | |

0+921.54



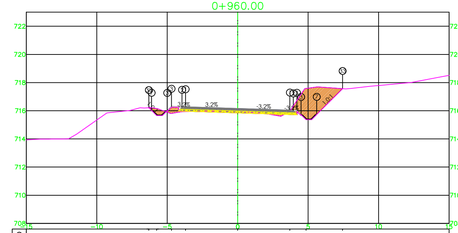
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OFFSET | 6.37 | 5.75 | 4.70 | 3.70 | 0.00 | 3.70 | 4.85 | 8.25 | |
| CORTE / ATERRO | 0.00 | -0.62 | -0.04 | -0.32 | -0.37 | -1.10 | -2.00 | 0.00 | |
| PLATAFORMA ACABADA | 713.588 | 712.967 | 713.567 | 713.287 | 713.216 | 713.142 | 712.793 | 715.794 | |
| TERRENO | 713.588 | 713.589 | 713.607 | 713.610 | 713.585 | 714.241 | 714.788 | 715.794 | |

0+940.00



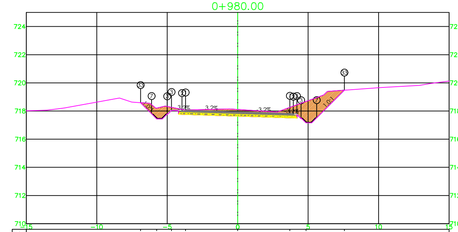
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OFFSET | 6.19 | 5.75 | 4.70 | 3.70 | 0.00 | 3.70 | 4.85 | 8.11 | |
| CORTE / ATERRO | 0.00 | -0.33 | 0.32 | 0.07 | 0.01 | -1.22 | -2.40 | 0.00 | |
| PLATAFORMA ACABADA | 714.421 | 714.159 | 714.758 | 714.466 | 714.348 | 714.229 | 713.874 | 716.733 | |
| TERRENO | 714.421 | 714.685 | 714.437 | 714.395 | 714.338 | 715.451 | 716.270 | 716.733 | |

0+960.00



| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OFFSET | 6.30 | 5.75 | 4.70 | 3.70 | 0.00 | 3.70 | 4.85 | 7.44 | |
| CORTE / ATERRO | 0.00 | -0.49 | 0.44 | 0.02 | -0.11 | -0.24 | -2.20 | 0.00 | |
| PLATAFORMA ACABADA | 716.215 | 715.659 | 716.259 | 715.967 | 715.848 | 715.730 | 715.375 | 717.570 | |
| TERRENO | 716.215 | 716.154 | 715.815 | 715.945 | 715.962 | 715.972 | 717.577 | 717.570 | |

0+980.00



| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OFFSET | 6.89 | 5.75 | 4.70 | 3.70 | 0.00 | 3.70 | 4.85 | 7.57 | |
| CORTE / ATERRO | 0.00 | -0.76 | -0.21 | -0.32 | -0.47 | -0.74 | -1.51 | 0.00 | |
| PLATAFORMA ACABADA | 718.590 | 717.445 | 718.045 | 717.753 | 717.634 | 717.516 | 717.161 | 718.479 | |
| TERRENO | 718.590 | 718.201 | 718.259 | 718.069 | 718.106 | 718.256 | 718.675 | 718.479 | |

PREFEITURA MUNICIPAL DE CAXIAS DO SUL

**SEPLAN** SECRETARIA MUNICIPAL DE PLANEJAMENTO E PARCERIAS ESTRATÉGICAS

ASSUNTO:

PROJETO DE MELHORAMENTO DE VIA EXISTENTE

SEÇÕES TRANSVERSAIS

Estrada Municipal João Uliana, bairro Ana Rech - Caxias do Sul / RS

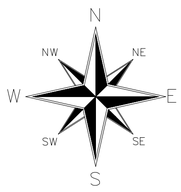
RESPONSÁVEL TÉCNICO:

ENG. CIVIL MATHIAS GRAZZIOTIN FAVERO
CREA/RS 223.457

DATA: FEV / 2026

ESCALA: 1:200

PRANCHA: 08/11






## VOLUME TOTAL

| Estaca | Área de Corte (m²) | Área de Aterro (m²) | Volume de Corte (m3) | Volume de Aterro (m3) | Volum. Corte Acum. (m3) | Volum Aterro Acum. (m3) | Volume Líquido (m3) |
|---|---|---|---|---|---|---|---|
| 0+000,00 | 5,76 | 0,03 | 0.00 | 0,00 | 0,00 | 0,00 | 0,00 |
| 0+020,00 | 1,28 | 1,22 | 70.36 | 12,46 | 70,36 | 12,46 | 57,89 |
| 0+040,00 | 0,84 | 1,26 | 21.20 | 24,82 | 91,56 | 37,28 | 54,27 |
| 0+060,00 | 1,08 | 1,36 | 19.21 | 26,26 | 110,77 | 63,54 | 47,23 |
| 0+060,37 | 1,06 | 1,37 | 0.39 | 0,50 | 111,16 | 64,04 | 47,12 |
| 0+065,75 | 1,18 | 1,04 | 6.20 | 6,38 | 117,36 | 70,42 | 46,94 |
| 0+071,14 | 2,54 | 0,53 | 10.21 | 4,16 | 127,57 | 74,58 | 52,99 |
| 0+080,00 | 4,25 | 0,19 | 30.07 | 3,21 | 157,64 | 77,80 | 79,84 |
| 0+100,00 | 3,69 | 0,18 | 79.38 | 3,72 | 237,02 | 81,52 | 155,50 |
| 0+114,80 | 4,02 | 0,36 | 57.08 | 4,01 | 294,10 | 85,52 | 208,58 |
| 0+120,00 | 4,87 | 0,29 | 22.65 | 1,74 | 316,75 | 87,27 | 229,49 |
| 0+140,00 | 5,75 | 0,12 | 104.23 | 4,24 | 420,98 | 91,51 | 329,47 |
| 0+155,67 | 5,74 | 0,38 | 88.27 | 4,03 | 509,25 | 95,54 | 413,71 |
| 0+160,00 | 4,84 | 0,29 | 22.41 | 1,49 | 531,67 | 97,03 | 434,64 |
| 0+180,00 | 5,27 | 1,07 | 98.97 | 13,96 | 630,64 | 110,99 | 519,65 |
| 0+196,53 | 4,95 | 0,22 | 83.18 | 10,95 | 713,82 | 121,94 | 591,87 |
| 0+200,00 | 4,88 | 0,11 | 17.03 | 0,57 | 730,85 | 122,51 | 608,34 |
| 0+220,00 | 7,07 | 0,00 | 119.47 | 1,09 | 850,32 | 123,60 | 726,72 |
| 0+240,00 | 6,79 | 0,57 | 138.60 | 5,66 | 988,92 | 129,26 | 859,66 |
| 0+259,31 | 18,35 | 0,51 | 242.80 | 10,41 | 1231,72 | 139,66 | 1092,05 |
| 0+260,00 | 19,31 | 0,53 | 12.93 | 0,36 | 1244,65 | 140,02 | 1104,63 |
| 0+276,40 | 23,52 | 0,00 | 363.91 | 4,11 | 1608,57 | 144,13 | 1464,44 |
| 0+280,00 | 21,65 | 0,03 | 83.90 | 0,05 | 1692,46 | 144,18 | 1548,29 |
| 0+293,48 | 14,23 | 0,00 | 250.47 | 0,18 | 1942,94 | 144,36 | 1798,58 |
| 0+300,00 | 10,00 | 0,00 | 78.93 | 0,00 | 2021,87 | 144,36 | 1877,50 |
| 0+320,00 | 9,26 | 0,00 | 192.61 | 0,01 | 2214,47 | 144,37 | 2070,10 |
| 0+330,86 | 15,58 | 0,00 | 134.81 | 0,01 | 2349,28 | 144,38 | 2204,90 |
| 0+340,00 | 10,36 | 0,00 | 115.74 | 0,00 | 2465,02 | 144,38 | 2320,64 |
| 0+344,38 | 9,84 | 0,00 | 43.49 | 0,00 | 2508,51 | 144,38 | 2364,13 |
| 0+357,90 | 6,03 | 0,08 | 105.86 | 0,58 | 2614,37 | 144,96 | 2469,41 |
| 0+360,00 | 6,00 | 0,02 | 12.61 | 0,11 | 2626,98 | 145,07 | 2481,91 |
| 0+380,00 | 7,38 | 0,03 | 133.75 | 0,48 | 2760,73 | 145,54 | 2615,19 |
| 0+400,00 | 10,68 | 0,02 | 180.58 | 0,54 | 2941,31 | 146,08 | 2795,23 |
| 0+406,73 | 7,96 | 0,08 | 62.69 | 0,36 | 3004,00 | 146,44 | 2857,56 |
| 0+420,00 | 3,63 | 0,18 | 76.26 | 1,80 | 3080,26 | 148,25 | 2932,02 |
| 0+424,19 | 3,06 | 0,98 | 13.98 | 2,52 | 3094,24 | 150,77 | 2943,47 |
| 0+440,00 | 10,87 | 0,15 | 109.26 | 9,24 | 3203,50 | 160,00 | 3043,50 |
| 0+441,66 | 9,17 | 0,26 | 16.64 | 0,34 | 3220,14 | 160,35 | 3059,79 |
| 0+460,00 | 7,95 | 0,52 | 157.02 | 7,21 | 3377,16 | 167,55 | 3209,61 |
| 0+477,99 | 4,26 | 0,72 | 109.90 | 11,19 | 3487,06 | 178,74 | 3308,31 |
| 0+480,00 | 4,09 | 0,53 | 8.38 | 1,25 | 3495,44 | 180,00 | 3315,44 |
| 0+493,64 | 3,21 | 0,48 | 50.25 | 6,61 | 3545,68 | 186,60 | 3359,08 |
| 0+500,00 | 4,50 | 0,83 | 24.81 | 4,02 | 3570,49 | 190,62 | 3379,87 |
| 0+509,30 | 6,23 | 1,66 | 50.52 | 11,17 | 3621,01 | 201,79 | 3419,23 |
| 0+520,00 | 9,92 | 2,65 | 86.40 | 23,08 | 3707,41 | 224,87 | 3482,54 |
| 0+533,21 | 9,42 | 2,87 | 127.69 | 36,49 | 3835,10 | 261,36 | 3573,74 |
| 0+540,00 | 8,68 | 3,81 | 59.11 | 24,58 | 3894,22 | 285,94 | 3608,28 |
| 0+558,88 | 8,29 | 1,08 | 152.94 | 49,95 | 4047,16 | 335,89 | 3711,27 |
| 0+560,00 | 8,27 | 1,12 | 9.28 | 1,23 | 4056,44 | 337,12 | 3719,32 |
| 0+580,00 | 8,16 | 1,40 | 154.95 | 27,33 | 4211,39 | 364,45 | 3846,94 |
| 0+584,55 | 3,44 | 1,30 | 24.68 | 6,67 | 4236,08 | 371,13 | 3864,95 |
| 0+600,00 | 0,24 | 5,26 | 28.44 | 50,64 | 4264,52 | 421,77 | 3842,75 |
| 0+604,34 | 0,00 | 5,24 | 0.53 | 22,79 | 4265,05 | 444,56 | 3820,49 |
| 0+614,66 | 0,62 | 1,34 | 3.30 | 33,55 | 4268,35 | 478,11 | 3790,24 |
| 0+620,00 | 1,88 | 0,17 | 6.78 | 3,99 | 4275,13 | 482,10 | 3793,03 |
| 0+624,99 | 3,08 | 0,05 | 12.44 | 0,54 | 4287,57 | 482,64 | 3804,93 |
| 0+640,00 | 7,06 | 0,85 | 76.09 | 6,75 | 4363,66 | 489,39 | 3874,27 |
| 0+658,78 | 2,82 | 0,63 | 92.83 | 13,93 | 4456,50 | 503,32 | 3953,18 |
| 0+660,00 | 2,87 | 0,25 | 3.47 | 0,54 | 4459,96 | 503,86 | 3956,11 |
| 0+675,13 | 2,59 | 0,08 | 42.22 | 2,49 | 4502,19 | 506,35 | 3995,83 |
| 0+680,00 | 1,67 | 0,63 | 10.72 | 1,66 | 4512,91 | 508,01 | 4004,89 |
| 0+691,47 | 0,00 | 7,01 | 9.95 | 42,51 | 4522,86 | 550,53 | 3972,33 |
| 0+700,00 | 0,00 | 5,32 | 0.00 | 52,57 | 4522,86 | 603,10 | 3919,76 |
| 0+720,00 | 11,50 | 0,00 | 115.02 | 53,17 | 4637,87 | 656,27 | 3981,61 |
| 0+722,50 | 13,16 | 0,02 | 30.84 | 0,03 | 4668,71 | 656,30 | 4012,42 |
| 0+734,41 | 14,13 | 0,00 | 160.62 | 0,14 | 4829,33 | 656,43 | 4172,90 |
| 0+740,00 | 13,16 | 0,00 | 75.66 | 0,00 | 4904,99 | 656,43 | 4248,56 |
| 0+746,31 | 12,83 | 0,00 | 81.45 | 0,00 | 4986,44 | 656,43 | 4330,01 |
| 0+760,00 | 12,35 | 0,00 | 172.35 | 0,00 | 5158,79 | 656,43 | 4502,36 |
| 0+780,00 | 10,59 | 0,31 | 229.46 | 3,09 | 5388,25 | 659,53 | 4728,73 |
| 0+794,50 | 9,35 | 0,72 | 144.65 | 7,45 | 5532,90 | 666,97 | 4865,93 |
| 0+800,00 | 10,93 | 0,24 | 55.10 | 2,72 | 5588,00 | 669,70 | 4918,30 |
| 0+816,82 | 18,48 | 0,18 | 243.72 | 3,68 | 5831,72 | 673,37 | 5158,34 |
| 0+820,00 | 18,86 | 0,05 | 58.43 | 0,37 | 5890,15 | 673,75 | 5216,40 |
| 0+839,14 | 16,05 | 0,01 | 329.38 | 0,53 | 6219,54 | 674,28 | 5545,26 |
| 0+840,00 | 16,59 | 0,00 | 14.08 | 0,00 | 6233,62 | 674,28 | 5559,33 |
| 0+860,00 | 16,13 | 0,00 | 327.22 | 0,03 | 6560,84 | 674,31 | 5886,53 |
| 0+880,00 | 15,37 | 1,90 | 314.95 | 19,07 | 6875,79 | 693,38 | 6182,41 |
| 0+900,00 | 13,09 | 0,60 | 284.51 | 25,07 | 7160,30 | 718,45 | 6441,84 |
| 0+920,00 | 8,38 | 0,00 | 214.62 | 6,03 | 7374,92 | 724,48 | 6650,44 |
| 0+921,54 | 9,76 | 0,00 | 13.96 | 0,00 | 7388,88 | 724,48 | 6664,40 |
| 0+940,00 | 7,08 | 0,60 | 150.94 | 5,62 | 7539,82 | 730,10 | 6809,73 |
| 0+960,00 | 5,53 | 0,39 | 121.72 | 10,04 | 7661,54 | 740,14 | 6921,40 |
| 0+980,00 | 8,63 | 0,00 | 138.81 | 3,96 | 7800,36 | 744,10 | 7056,26 |
| 0+987,91 | 9,99 | 0,00 | 72.88 | 0,00 | 7873,24 | 744,10 | 7129,14 |
| 1+000,00 | 19,87 | 0,00 | 178.98 | 0,00 | 8052,22 | 744,10 | 7308,13 |
| 1+020,00 | 17,44 | 0,00 | 370.71 | 0,00 | 8422,93 | 744,10 | 7678,84 |
| 1+040,00 | 1,40 | 0,27 | 187.67 | 2,73 | 8610,61 | 746,82 | 7863,78 |
| 1+054,28 | 0,04 | 9,88 | 10.19 | 73,16 | 8620,80 | 819,99 | 7800,81 |
| 1+060,00 | 0,00 | 11,61 | 0.11 | 61,51 | 8620,92 | 881,50 | 7739,42 |
| 1+080,00 | 0,00 | 13,02 | 0.00 | 246,26 | 8620,92 | 1127,76 | 7493,16 |
| 1+100,00 | 0,00 | 8,22 | 0.00 | 212,33 | 8620,92 | 1340,09 | 7280,83 |
| 1+120,00 | 1,47 | 1,08 | 14.66 | 93,00 | 8635,57 | 1433,09 | 7202,49 |
| 1+132,48 | 5,04 | 0,00 | 40.59 | 6,75 | 8676,16 | 1439,84 | 7236,32 |

PREFEITURA MUNICIPAL DE CAXIAS DO SUL

**SEPLAN** SECRETARIA MUNICIPAL DE PLANEJAMENTO E PARCERIAS ESTRATÉGICAS

ASSUNTO:

PROJETO DE MELHORAMENTO DE VIA EXISTENTE

PROJETO DE TERRAPLENAGEM E VOLUMETRIA DE SOLO

Estrada Municipal João Uliana, bairro Ana Rech - Caxias do Sul / RS

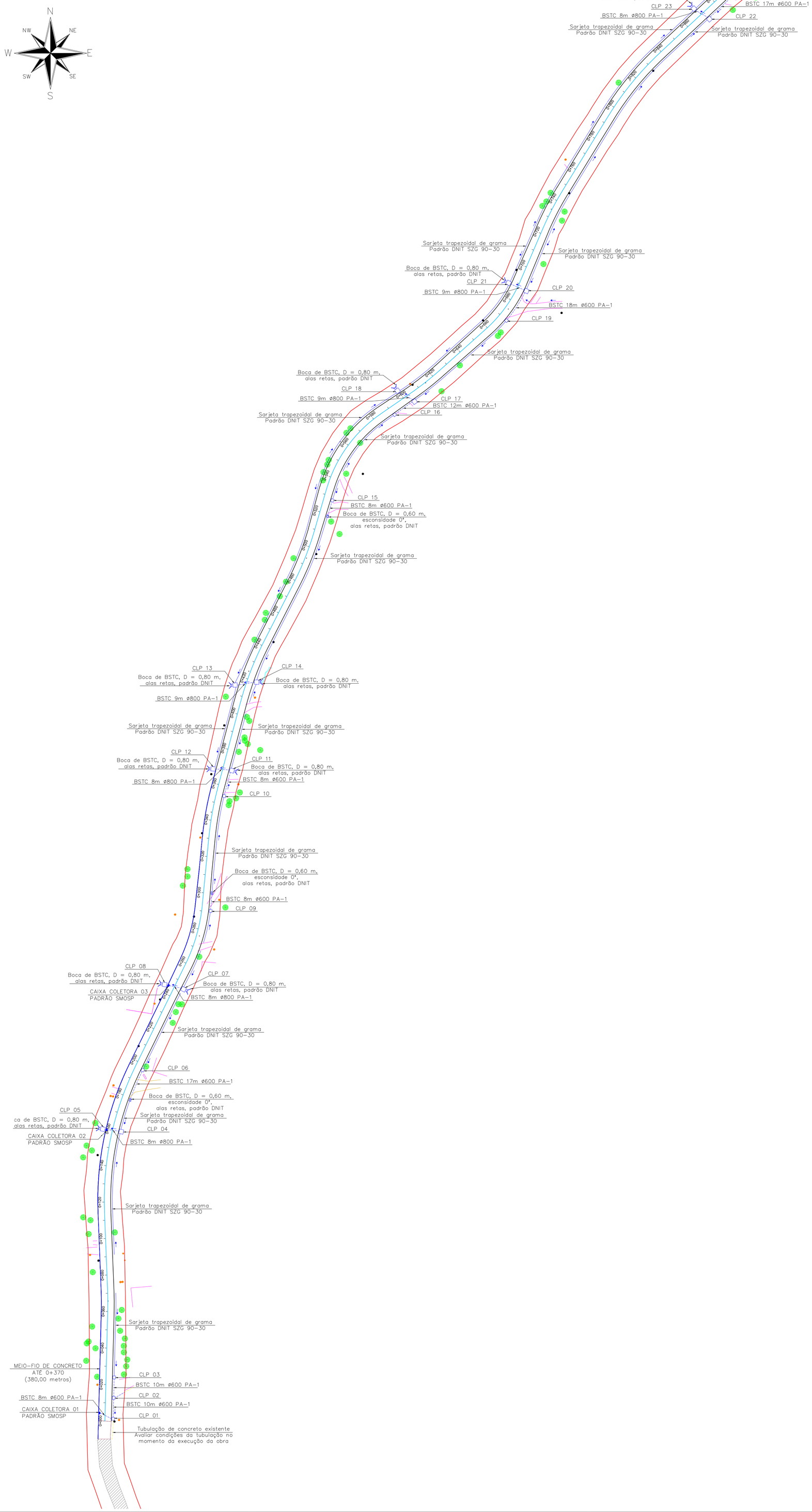
RESPONSÁVEL TÉCNICO:

ENG. CIVIL MATHIAS GRAZZIOTIN FAVERO
CREA/RS 223.457

DATA: FEV / 2026

ESCALA: 1:1000

PRANCHA: 09/11




PREFEITURA MUNICIPAL DE CAXIAS DO SUL

**SEPLAN** SECRETARIA MUNICIPAL DE PLANEJAMENTO E PARCERIAS ESTRATÉGICAS

ASSUNTO:

PROJETO DE MELHORAMENTO DE VIA EXISTENTE

PROJETO DE DRENAGEM PLUVIAL

Estrada Municipal João Uliana, bairro Ana Rech - Caxias do Sul / RS

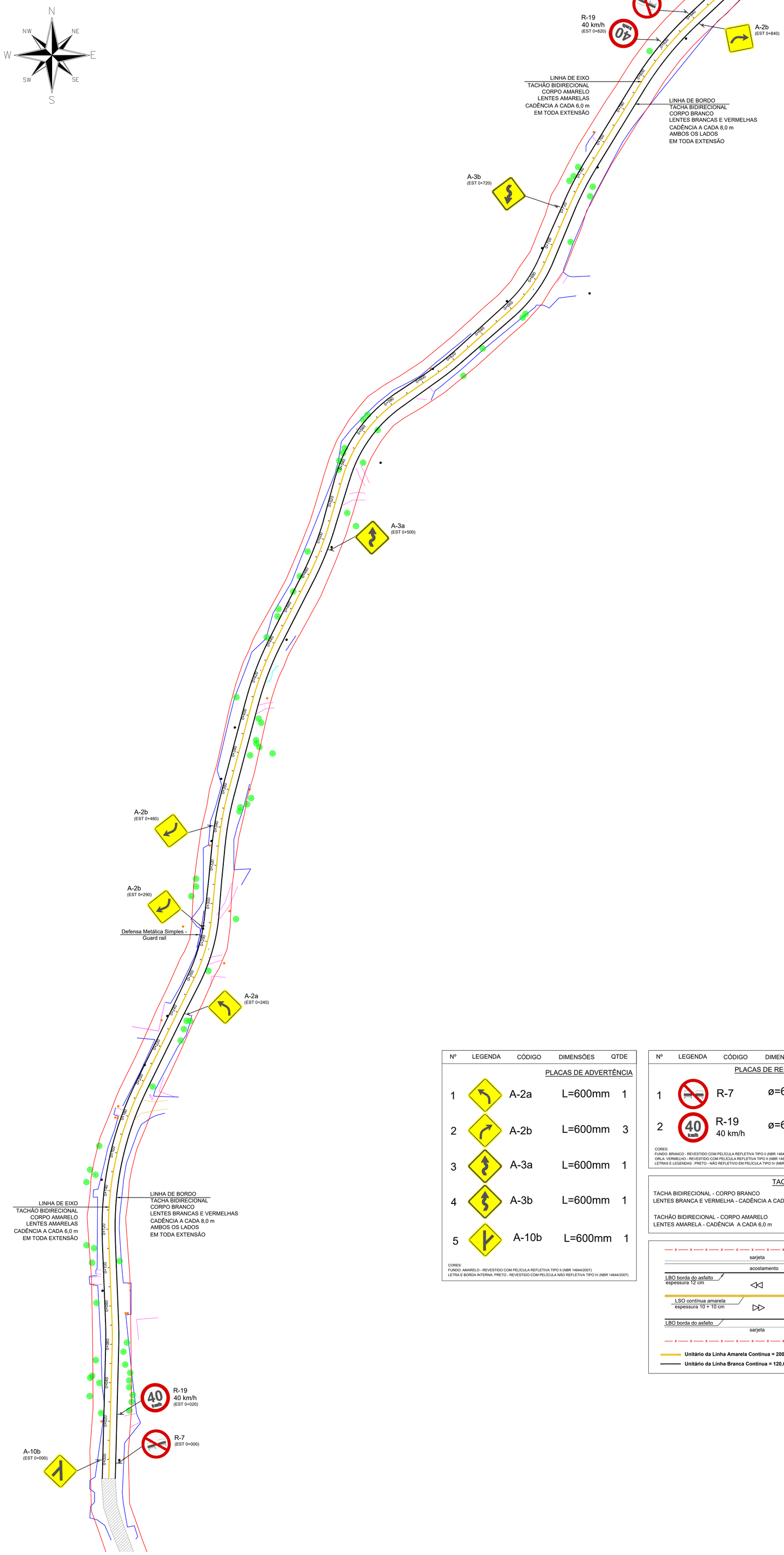
RESPONSÁVEL TÉCNICO:

ENG. CIVIL MATHIAS GRAZZIOTIN FAVERO
CREA/RS 223.457

DATA: FEV / 2026

ESCALA: 1:1000

PRANCHA: 10/11




| Nº | LEGENDA | CÓDIGO | DIMENSÕES | QTDE |
|---|---|---|---|---|
| | | PLACAS DE ADVERTÊNCIA | | |
| 1 | | A-2a | L=600mm | 1 |
| 2 | | A-2b | L=600mm | 3 |
| 3 | | A-3a | L=600mm | 1 |
| 4 | | A-3b | L=600mm | 1 |
| 5 | | A-10b | L=600mm | 1 |

CORES:
FUNDO: AMARELO - REVESTIDO COM PELÍCULA REFLETIVA TIPO II (NBR 14644/2007)
LETRA E BORDA INTERNA: PRETO - REVESTIDO COM PELÍCULA NÃO REFLETIVA TIPO IV (NBR 14644/2007)

| Nº | LEGENDA | CÓDIGO | DIMENSÕES | QTDE |
|---|---|---|---|---|
| | | PLACAS DE REGULAMENTAÇÃO | | |
| 1 | | R-7 | ø=600mm | 2 |
| 2 | | R-19<br>40 km/h | ø=600mm | 2 |

CORES:
FUNDO: BRANCO - REVESTIDO COM PELÍCULA REFLETIVA TIPO II (NBR 14644/2007)
ORLA: VERMELHO - REVESTIDO COM PELÍCULA REFLETIVA TIPO II (NBR 14644/2007)
LETRAS E LEGENDAS : PRETO - NÃO REFLETIVO EM PELÍCULA TIPO IV (NBR 14644/2007)

| TACHÕES E TACHAS | |
|---|---|
| TACHA BIDIRECIONAL - CORPO BRANCO<br>LENTES BRANCA E VERMELHA - CADÊNCIA A CADA 8,0 m | 210 UNID. |
| TACHÃO BIDIRECIONAL - CORPO AMARELO<br>LENTES AMARELA - CADÊNCIA A CADA 6,0 m | 140 UNID. |




PREFEITURA MUNICIPAL DE CAXIAS DO SUL

**SEPLAN** SECRETARIA MUNICIPAL DE PLANEJAMENTO E PARCERIAS ESTRATÉGICAS

ASSUNTO:

PROJETO DE MELHORAMENTO DE VIA EXISTENTE

PROJETO DE SINALIZAÇÃO VIÁRIA

Estrada Municipal João Uliana, bairro Ana Rech - Caxias do Sul / RS

RESPONSÁVEL TÉCNICO:

ENG. CIVIL MATHIAS GRAZZIOTIN FAVERO
CREA/RS 223.457

DATA: FEV / 2026

ESCALA: 1:1000

PRANCHA: 11/11