

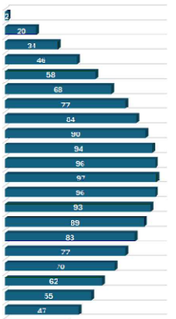

ALZADO EN DESARROLLO EJE ESTRUCTURA

ESCALA 1/100 (DIN A1)

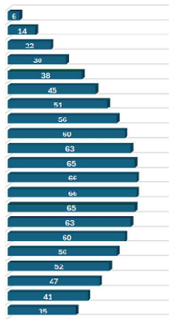
## REPLANTEO DE CONTRAFLECHAS DE TABLERO

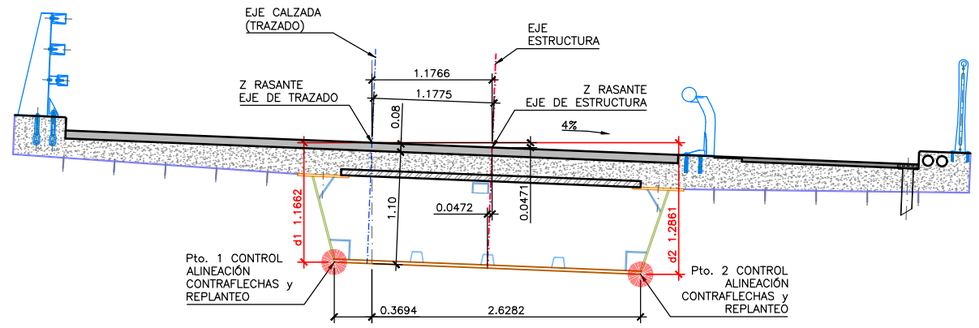
| | Punto | Dist. Origen | Pk | z Eje | Punto 1 (Exterior) x | y | z | Contraflecha [mm] | Punto 2 (Interior) x | y | z | Contraflecha [mm] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E-1 | 1 | 0.5000 | **0+154.0954** | 100.0709 | 526,449.4246 | 4,781,451.0001 | 98.9047 | 6 | 526446.82 | 4781449.5 | 98.7848 | 6 |
| | 2 | 1.4375 | 0+155.0599 | 100.1269 | 526,449.8958 | 4,781,450.1488 | 98.9598 | 20 | 526447.26 | 4781448.7 | 98.8399 | 14 |
| | 3 | 2.3750 | 0+156.0244 | 100.1795 | 526,450.3474 | 4,781,449.2870 | 99.0134 | 34 | 526447.68 | 4781447.9 | 98.8935 | 22 |
| | 4 | 3.3125 | 0+156.9890 | 100.2318 | 526,450.7790 | 4,781,448.4150 | 99.0656 | 46 | 526448.08 | 4781447.1 | 98.9457 | 30 |
| | 5 | 4.2500 | 0+157.9535 | 100.2835 | 526,451.1905 | 4,781,447.5383 | 99.1164 | 58 | 526448.46 | 4781446.3 | 98.9965 | 38 |
| | 6 | 5.1875 | 0+158.9180 | 100.3318 | 526,451.5817 | 4,781,446.6424 | 99.1656 | 68 | 526448.82 | 4781445.5 | 99.0457 | 45 |
| | 7 | 6.1250 | 0+159.8825 | 100.3797 | 526,451.9523 | 4,781,445.7427 | 99.2135 | 77 | 526449.17 | 4781444.6 | 99.0936 | 50 |
| | 8 | 7.0625 | 0+160.8470 | 100.4260 | 526,452.3021 | 4,781,444.8348 | 99.2596 | 84 | 526449.49 | 4781443.8 | 99.1399 | 56 |
| | 9 | 8.0000 | 0+161.8116 | 100.4709 | 526,452.6310 | 4,781,443.9191 | 99.3047 | 90 | 526449.8 | 4781442.9 | 99.1848 | 60 |
| | 10 | 8.9375 | 0+162.7761 | 100.5144 | 526,452.9388 | 4,781,442.9961 | 99.3482 | 94 | 526450.08 | 4781442.1 | 99.2283 | 63 |
| | 11 | 9.8750 | 0+163.7406 | 100.5564 | 526,453.2253 | 4,781,442.0663 | 99.3902 | 96 | 526450.35 | 4781441.2 | 99.2703 | 65 |
| | 12 | 10.8125 | 0+164.7051 | 100.5970 | 526,453.4903 | 4,781,441.1301 | 99.4308 | 97 | 526450.6 | 4781440.3 | 99.3109 | 66 |
| VANO 1 | 13 | 11.7500 | 0+165.6697 | 100.6361 | 526,453.7338 | 4,781,440.1881 | 99.4699 | 96 | 526450.82 | 4781439.5 | 99.3500 | 66 |
| | 14 | 12.6875 | 0+166.6342 | 100.6737 | 526,453.9556 | 4,781,439.2407 | 99.5075 | 93 | 526451.03 | 4781438.6 | 99.3876 | 65 |
| | 15 | 13.6250 | 0+167.5987 | 100.7099 | 526,454.1556 | 4,781,438.2885 | 99.5437 | 89 | 526451.22 | 4781437.7 | 99.4238 | 63 |
| | 16 | 14.5625 | 0+168.5632 | 100.7447 | 526,454.3337 | 4,781,437.3319 | 99.5785 | 83 | 526451.38 | 4781436.8 | 99.4586 | 60 |
| | 17 | 15.5000 | 0+169.5277 | 100.7779 | 526,454.4898 | 4,781,436.3716 | 99.6117 | 77 | 526451.53 | 4781435.9 | 99.4918 | 56 |
| | 18 | 16.4375 | 0+170.4923 | 100.8098 | 526,454.6238 | 4,781,435.4078 | 99.6436 | 70 | 526451.65 | 4781435 | 99.5237 | 52 |
| | 19 | 17.3750 | 0+171.4568 | 100.8402 | 526,454.7356 | 4,781,434.4413 | 99.6740 | 62 | 526451.75 | 4781434.1 | 99.5541 | 47 |
| | 20 | 18.3125 | 0+172.4213 | 100.8691 | 526,454.8252 | 4,781,433.4725 | 99.7029 | 55 | 526451.84 | 4781433.2 | 99.5830 | 41 |
| | 21 | 19.2500 | 0+173.3858 | 100.8966 | 526,454.8925 | 4,781,432.5018 | 99.7304 | 47 | 526451.9 | 4781432.3 | 99.6105 | 35 |
| | 22 | 20.1875 | 0+174.3503 | 100.9225 | 526,454.9375 | 4,781,431.5299 | 99.7564 | 39 | 526451.94 | 4781431.4 | 99.6365 | 29 |
| | 23 | 21.1250 | 0+175.3149 | 100.9472 | 526,454.9601 | 4,781,430.5571 | 99.7810 | 30 | 526451.96 | 4781430.5 | 99.6611 | 23 |
| | 24 | 22.0625 | 0+176.2794 | 100.9703 | 526,454.9605 | 4,781,429.5842 | 99.8041 | 22 | 526451.96 | 4781429.6 | 99.6842 | 17 |
| P-1 | 25 | 23.0000 | **0+177.2439** | 100.9919 | 526,454.9385 | 4,781,428.6114 | 99.8257 | 14 | 526451.94 | 4781428.7 | 99.7058 | 11 |
| | 26 | 24.0000 | 0+178.2727 | 101.0134 | 526,454.8904 | 4,781,427.5747 | 99.8472 | 8 | 526451.9 | 4781427.8 | 99.7273 | 7 |
| | 27 | 25.0000 | 0+179.3015 | 101.0333 | 526,454.8169 | 4,781,426.5394 | 99.8671 | 2 | 526451.83 | 4781426.8 | 99.7472 | 2 |
| | 28 | 26.0000 | 0+180.3304 | 101.0515 | 526,454.7181 | 4,781,425.5063 | 99.8853 | 10 | 526451.74 | 4781425.8 | 99.7654 | 8 |
| | 29 | 27.0000 | 0+181.3592 | 101.0680 | 526,454.5940 | 4,781,424.4759 | 99.9018 | 13 | 526451.62 | 4781424.9 | 99.7819 | 10 |
| | 30 | 28.0000 | 0+182.3880 | 101.0829 | 526,454.4448 | 4,781,423.4489 | 99.9167 | 17 | 526451.48 | 4781423.9 | 99.7968 | 12 |
| | 31 | 29.0000 | 0+183.4168 | 101.0961 | 526,454.2704 | 4,781,422.4258 | 99.9299 | 21 | 526451.32 | 4781423 | 99.8100 | 15 |
| | 32 | 30.0000 | 0+184.4457 | 101.1077 | 526,454.0710 | 4,781,421.4073 | 99.9415 | 25 | 526451.14 | 4781422 | 99.8216 | 17 |
| | 33 | 31.0000 | 0+185.4745 | 101.1176 | 526,453.8467 | 4,781,420.3940 | 99.9514 | 29 | 526450.93 | 4781421.1 | 99.8315 | 19 |
| | 34 | 32.0000 | 0+186.5033 | 101.1259 | 526,453.5977 | 4,781,419.3864 | 99.9597 | 33 | 526450.7 | 4781420.1 | 99.8398 | 22 |
| | 35 | 33.0000 | 0+187.5321 | 101.1325 | 526,453.3240 | 4,781,418.3853 | 99.9663 | 37 | 526450.44 | 4781419.2 | 99.8464 | 24 |
| | 36 | 34.0000 | 0+188.5609 | 101.1375 | 526,453.0259 | 4,781,417.3912 | 99.9713 | 39 | 526450.17 | 4781418.3 | 99.8514 | 25 |
| | 37 | 35.0000 | 0+189.5898 | 101.1408 | 526,452.7036 | 4,781,416.4047 | 99.9746 | 41 | 526449.87 | 4781417.4 | 99.8547 | 26 |
| VANO 2 | 38 | 36.0000 | 0+190.6186 | 101.1424 | 526,452.3572 | 4,781,415.4264 | 99.9762 | 42 | 526449.54 | 4781416.5 | 99.8563 | 27 |
| | 39 | 37.0000 | 0+191.6474 | 101.1424 | 526,451.9870 | 4,781,414.4568 | 99.9762 | 42 | 526449.2 | 4781415.6 | 99.8563 | 27 |
| | 40 | 38.0000 | 0+192.6762 | 101.1408 | 526,451.5931 | 4,781,413.4966 | 99.9746 | 41 | 526448.83 | 4781414.7 | 99.8547 | 26 |
| | 41 | 39.0000 | 0+193.7051 | 101.1375 | 526,451.1758 | 4,781,412.5464 | 99.9713 | 40 | 526448.45 | 4781413.8 | 99.8514 | 25 |
| | 42 | 40.0000 | 0+194.7339 | 101.1325 | 526,450.7353 | 4,781,411.6066 | 99.9663 | 37 | 526448.04 | 4781412.9 | 99.8464 | 24 |
| | 43 | 41.0000 | 0+195.7627 | 101.1259 | 526,450.2720 | 4,781,410.6779 | 99.9597 | 33 | 526447.61 | 4781412 | 99.8398 | 22 |
| | 44 | 42.0000 | 0+196.7915 | 101.1176 | 526,449.7860 | 4,781,409.7609 | 99.9514 | 29 | 526447.15 | 4781411.2 | 99.8315 | 19 |
| | 45 | 43.0000 | 0+197.8203 | 101.1077 | 526,449.2778 | 4,781,408.8560 | 99.9415 | 25 | 526446.68 | 4781410.4 | 99.8216 | 17 |
| | 46 | 44.0000 | 0+198.8492 | 101.0961 | 526,448.7475 | 4,781,407.9639 | 99.9299 | 21 | 526446.19 | 4781409.5 | 99.8100 | 15 |
| | 47 | 45.0000 | 0+199.8780 | 101.0829 | 526,448.1956 | 4,781,407.0850 | 99.9167 | 17 | 526445.68 | 4781408.7 | 99.7968 | 12 |
| | 48 | 46.0000 | 0+200.9068 | 101.0680 | 526,447.6222 | 4,781,406.2198 | 99.9018 | 13 | 526445.14 | 4781407.9 | 99.7819 | 10 |
| | 49 | 47.0000 | 0+201.9356 | 101.0515 | 526,447.0279 | 4,781,405.3690 | 99.8853 | 10 | 526444.59 | 4781407.1 | 99.7654 | 8 |
| | 50 | 48.0000 | 0+202.9645 | 101.0333 | 526,446.4129 | 4,781,404.5330 | 99.8671 | 2 | 526444.02 | 4781406.3 | 99.7472 | 2 |
| | 51 | 49.0000 | 0+203.9933 | 101.0134 | 526,445.7776 | 4,781,403.7124 | 99.8472 | 8 | 526443.43 | 4781405.6 | 99.7273 | 7 |
| P-2 | 52 | 50.0000 | **0+205.0221** | 100.9919 | 526,445.1224 | 4,781,402.9074 | 99.8257 | 14 | 526442.82 | 4781404.8 | 99.7058 | 11 |
| | 53 | 50.9375 | 0+205.9866 | 100.9703 | 526,444.4904 | 4,781,402.1676 | 99.8041 | 22 | 526442.23 | 4781404.1 | 99.6842 | 17 |
| | 54 | 51.8750 | 0+206.9511 | 100.9472 | 526,443.8416 | 4,781,401.4426 | 99.7810 | 30 | 526441.63 | 4781403.5 | 99.6611 | 23 |
| | 55 | 52.8125 | 0+207.9157 | 100.9225 | 526,443.1763 | 4,781,400.7326 | 99.7564 | 39 | 526441.01 | 4781402.8 | 99.6365 | 29 |
| | 56 | 53.7500 | 0+208.8802 | 100.8966 | 526,442.4949 | 4,781,400.0380 | 99.7304 | 47 | 526440.38 | 4781402.2 | 99.6105 | 35 |
| | 57 | 54.6875 | 0+209.8447 | 100.8691 | 526,441.7977 | 4,781,399.3593 | 99.7029 | 55 | 526439.73 | 4781401.5 | 99.5830 | 41 |
| | 58 | 55.6250 | 0+210.8092 | 100.8402 | 526,441.0851 | 4,781,398.6968 | 99.6740 | 62 | 526439.07 | 4781400.9 | 99.5541 | 47 |
| | 59 | 56.5625 | 0+211.7737 | 100.8098 | 526,440.3575 | 4,781,398.0509 | 99.6436 | 70 | 526438.39 | 4781400.3 | 99.5237 | 52 |
| | 60 | 57.5000 | 0+212.7383 | 100.7780 | 526,439.6153 | 4,781,397.4218 | 99.6118 | 77 | 526437.7 | 4781399.7 | 99.4919 | 56 |
| | 61 | 58.4375 | 0+213.7028 | 100.7447 | 526,438.8588 | 4,781,396.8099 | 99.5785 | 83 | 526437 | 4781399.2 | 99.4586 | 60 |
| | 62 | 59.3750 | 0+214.6673 | 100.7099 | 526,438.0884 | 4,781,396.2155 | 99.5437 | 89 | 526436.28 | 4781398.6 | 99.4238 | 63 |
| | 63 | 60.3125 | 0+215.6318 | 100.6737 | 526,437.3046 | 4,781,395.6390 | 99.5075 | 93 | 526435.56 | 4781398.1 | 99.3876 | 65 |
| VANO 3 | 64 | 61.2500 | 0+216.5964 | 100.6361 | 526,436.5078 | 4,781,395.0807 | 99.4699 | 96 | 526434.82 | 4781397.6 | 99.3500 | 66 |
| | 65 | 62.1875 | 0+217.5609 | 100.5970 | 526,435.6984 | 4,781,394.5408 | 99.4308 | 97 | 526434.06 | 4781397.1 | 99.3109 | 66 |
| | 66 | 63.1250 | 0+218.5254 | 100.5564 | 526,434.8767 | 4,781,394.0196 | 99.3902 | 96 | 526433.3 | 4781396.6 | 99.2703 | 65 |
| | 67 | 64.0625 | 0+219.4899 | 100.5144 | 526,434.0434 | 4,781,393.5174 | 99.3482 | 94 | 526432.53 | 4781396.1 | 99.2283 | 63 |
| | 68 | 65.0000 | 0+220.4544 | 100.4710 | 526,433.1987 | 4,781,393.0345 | 99.3048 | 90 | 526431.74 | 4781395.7 | 99.1849 | 60 |
| | 69 | 65.9375 | 0+221.4190 | 100.4261 | 526,432.3431 | 4,781,392.5711 | 99.2599 | 84 | 526430.95 | 4781395.2 | 99.1400 | 56 |
| | 70 | 66.8750 | 0+222.3835 | 100.3797 | 526,431.4772 | 4,781,392.1275 | 99.2135 | 77 | 526430.14 | 4781394.8 | 99.0936 | 51 |
| | 71 | 67.8125 | 0+223.3480 | 100.3319 | 526,430.6012 | 4,781,391.7039 | 99.1657 | 68 | 526429.33 | 4781394.4 | 99.0458 | 45 |
| | 72 | 68.7500 | 0+224.3125 | 100.2826 | 526,429.7158 | 4,781,391.3005 | 99.1164 | 58 | 526428.5 | 4781394 | 98.9965 | 38 |
| | 73 | 69.6875 | 0+225.2770 | 100.2319 | 526,428.8214 | 4,781,390.9175 | 99.0657 | 46 | 526427.67 | 4781393.7 | 98.9458 | 30 |
| | 74 | 70.6250 | 0+226.2416 | 100.1797 | 526,427.9184 | 4,781,390.5552 | 99.0135 | 34 | 526426.83 | 4781393.3 | 98.8936 | 22 |
| | 75 | 71.5625 | 0+227.2061 | 100.1260 | 526,427.0073 | 4,781,390.2137 | 98.9598 | 20 | 526425.99 | 4781393 | 98.8399 | 14 |
| E-2 | 76 | 72.5000 | **0+228.1706** | 100.0709 | 526,426.0886 | 4,781,389.8933 | 98.9047 | 2 | 526425.13 | 4781392.7 | 98.7848 | 6 |

PUNTO 1 (EXTERIOR)



PUNTO 2 (INTERIOR)






SECCIÓN TRANSVERSAL TIPO

ESCALA 1/30 (DIN A1)

| REV. | CLASE DE MODIFICACIÓN | FECHA | NOMBRE | COMP. | OBRA |
|---|---|---|---|---|---|
| A | MODIFICADO 1 | JUN 24 | fc | ETS | SI |

BERRIKUSPENAK / REVISIONES

AHOLKULARIA / CONSULTOR: ferrovial construcción

INGENIARI EGILEA / INGENIERO AUTOR: JUAN JOSÉ SÁNCHEZ, I.C.C y P COLEGIADO Nº 22045

AHOLKULARIAREN ERREFERENTZIA / REFERENCIA CONSULTOR:

ERREFERENTZIA / REFERENCIA: 1-SPNB-24-024-A

EUSKO JAURLARITZA GOBIERNO VASCO
MUGIKORTASUN JASANGARRIAREN SAILA
DEPARTAMENTO DE MOVILIDAD SOSTENIBLE

euskal trenbide sarea
PROIEKTUAREN IKUSKAPENA ETA ZUZENDARITZA
INSPECCION Y DIRECCION DEL PROYECTO

ESKALA ORIGINALA / ESCALA ORIGINAL: ADIERAZI / INDICADAS: DIN A1

ESKALA GRAFIKOA / ESCALA GRÁFICA:

PROIEKTUAREN IZENBURUA / TITULO DEL PROYECTO: BERNABEITIAKO TRENBIDE PASAGUNEAREN KENTZEKO ERAIKUNTZA PROIEKTUA
PROYECTO DE CONSTRUCCIÓN PARA LA SUPRESIÓN DEL PASO A NIVEL DE BERNABEITIA

PLANOAREN IZENBURUA / TITULO DEL PLANO: ZUTABEAK. ARMATUA
TABLERO. CONTRAFLECHAS

PLANO ZK. / Nº. PLANO: 8

ORRIA / HOJA: 6 Sigue 7