



**METRO  
DE PANAMA**

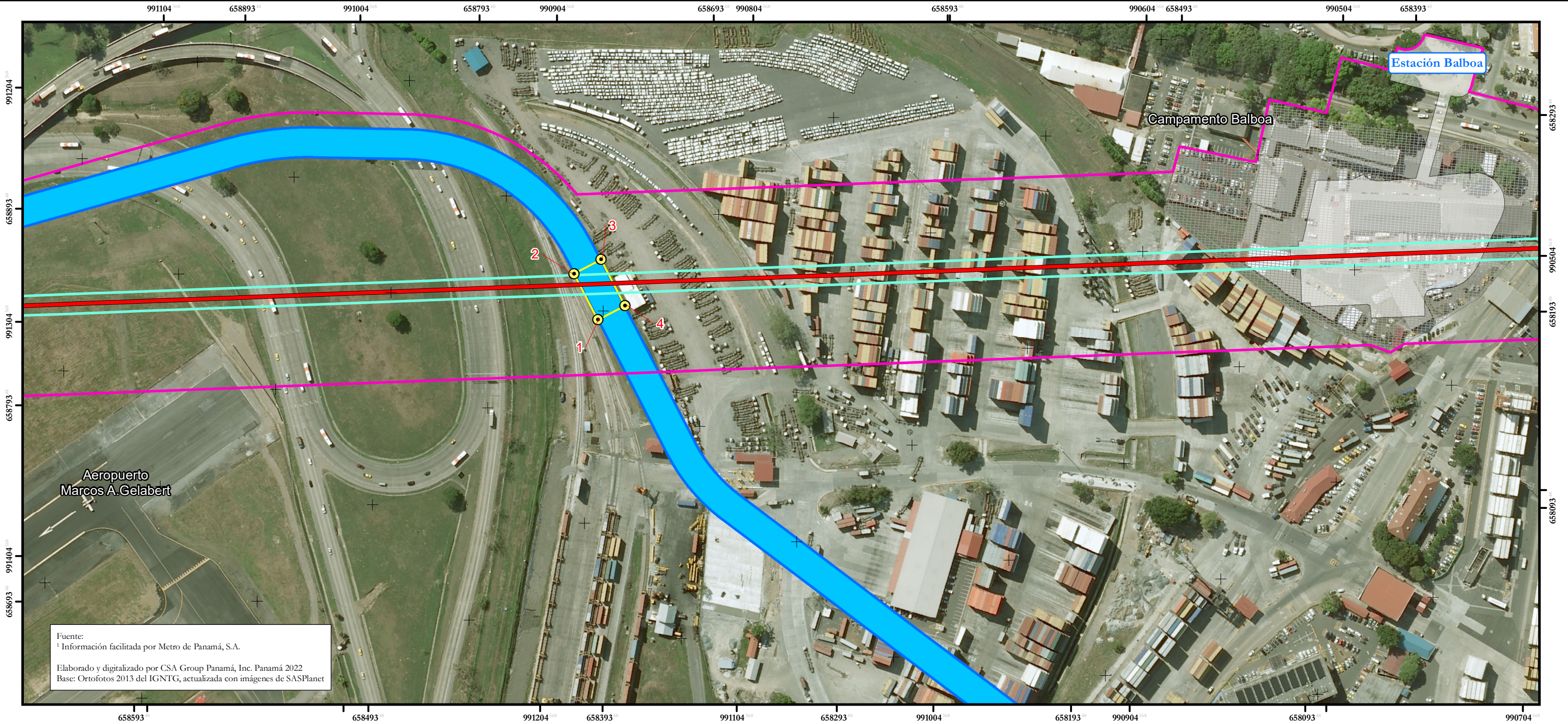
## **ANEXO 15:**

### **COORDENADA DE COMPONENTES**

- TRAMO CAJÓN RÍO CURUNDÚ, POSIBLEMENTE AFECTADO
- CAMINOS DE ACCESO A CAMPAMENTOS
- CAMINO DE ACCESO A CONSTRUIR EN EL SITIO DE DISPOSICIÓN DE FARFÁN
- RED DE HIDROCARBUROS POR SANEAR EN EL AID
- ZONA POR SANEAR CON MUNICIONES SIN DETONAR EN EL AID
- ZONA SANEADA CON MUNICIONES SIN DETONAR EN EL AID
- CUT AND COVER Y VOLADURAS
- VIADUCTO – TRAMO CORREDOR NORTE – TRAMO LA AMISTAD
- ALINEAMIENTO CENTRAL DEL DIQUE A CONSTRUIR
- ALINEAMIENTO DEL DIQUE EXISTENTE
- PARCELA Y ÁREA DE MANGLAR EN EL AII

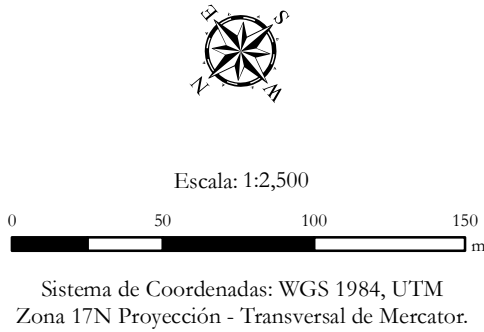






Fuente:  
¹ Información facilitada por Metro de Panamá, S.A.  
  
Elaborado y digitalizado por CSA Group Panamá, Inc. Panamá 2022  
Base: Ortofotos 2013 del IGNTG, actualizada con imágenes de SASPlanet

- Leyenda**
- Punto Coordenadas
  - Alineamiento del Proyecto ¹
  - Tramo Soterrado - Túnel ¹
  - Tramo Cajón Curundú posiblemente Afectado¹
  - Cajón del Río Curundú ¹
  - Estacion¹
  - Campamento¹



**COORDENADAS UTM DEL TRAMO DEL CAJÓN DEL RÍO CURUNDÚ POSIBLEMENTE AFECTADO**

Estudio de Impacto Ambiental Categoría III, Proyecto de Cruce de la Línea 3 por debajo del Canal de Panamá



TRAMO CAJÓN DEL RÍO CURUNDÚ POSIBLEMENTE AFECTADO

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 1  | 658591.4419 | 991011.0521 |
| 2  | 658625.1013 | 991003.4823 |
| 3  | 658620.5864 | 990983.6803 |
| 4  | 658586.9284 | 990991.2556 |



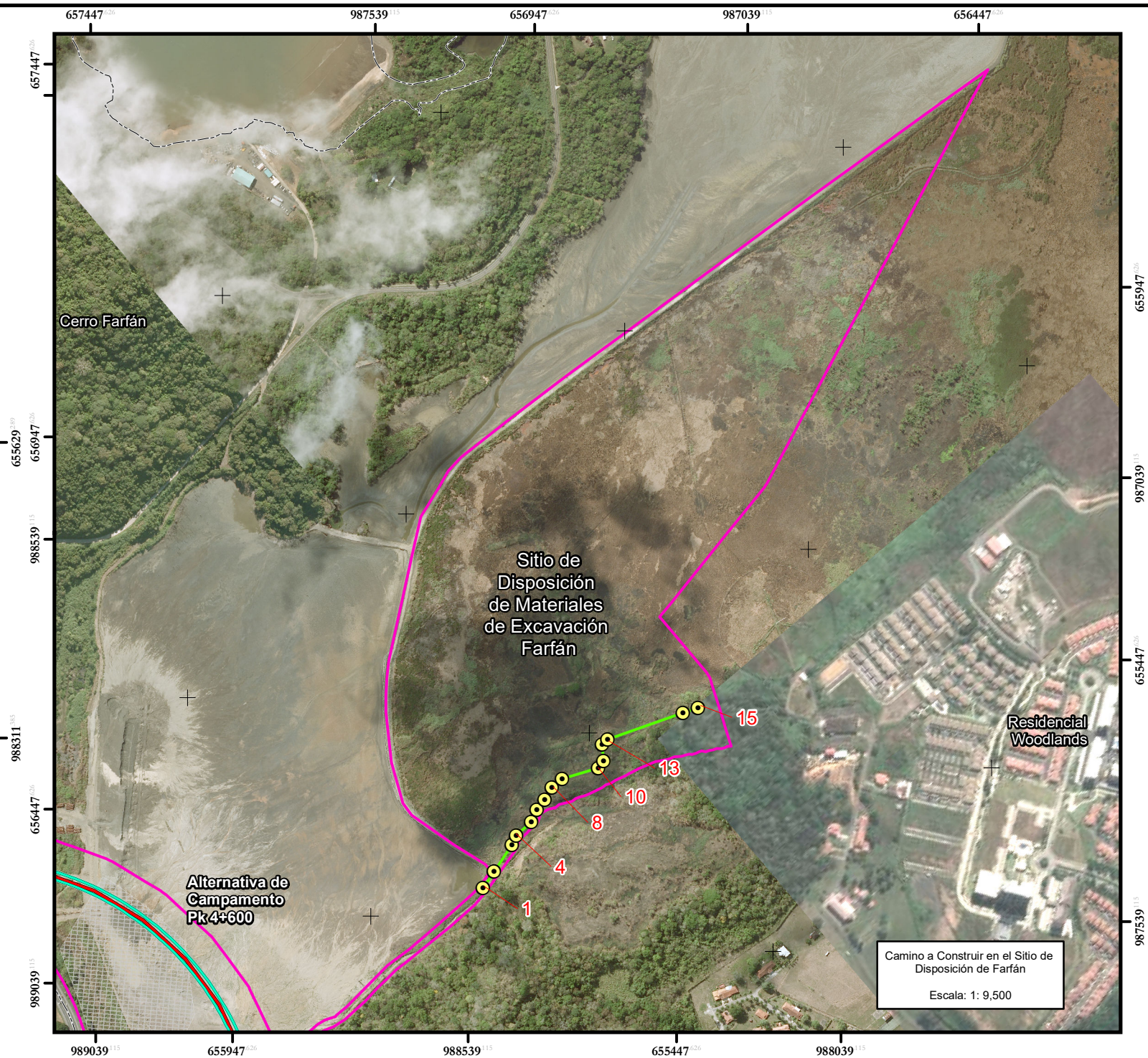
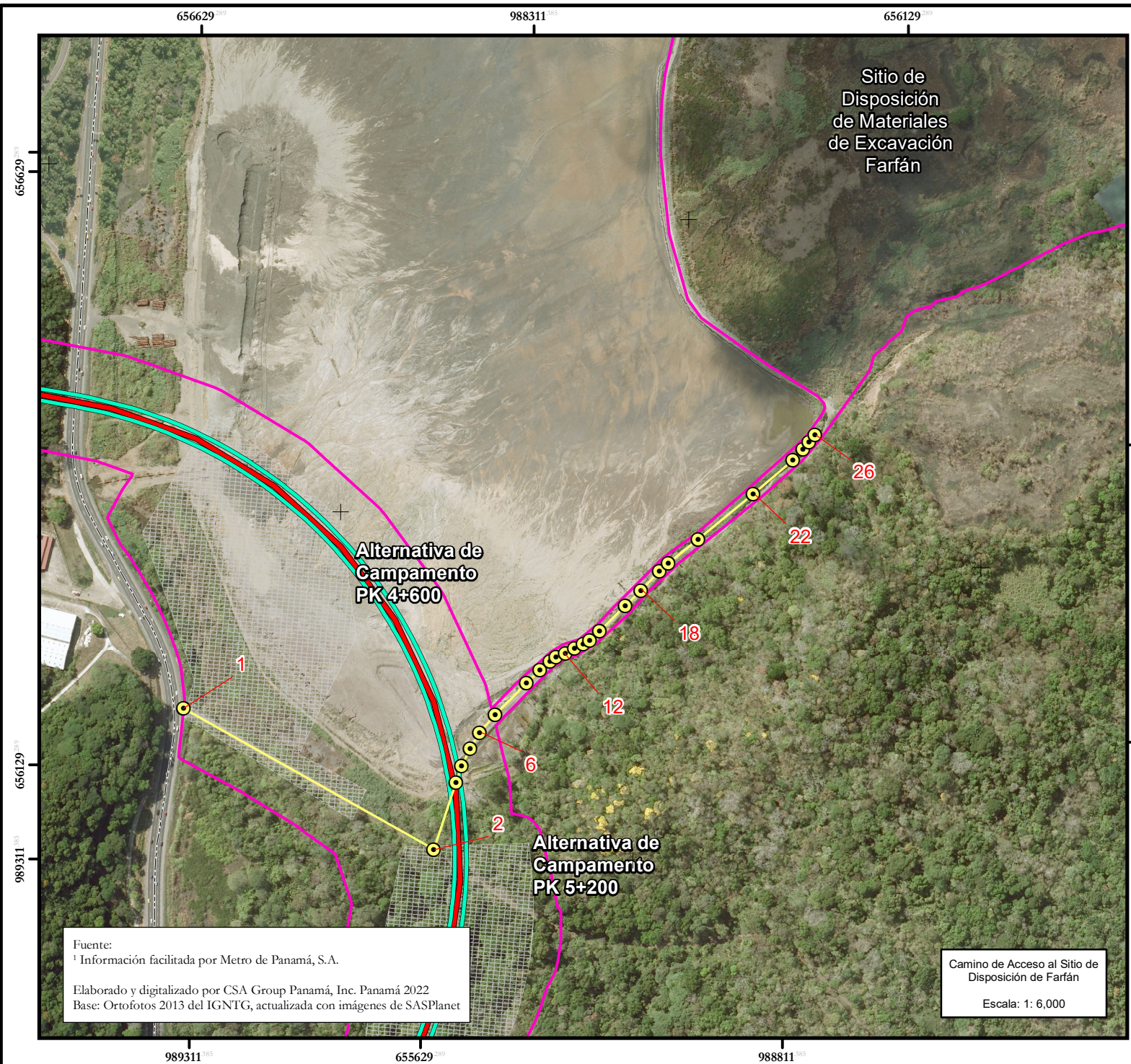




CAMINO DE ACCESO A LOS CAMPAMENTOS

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 1  | 655196.1227 | 989839.5023 |
| 2  | 655357.9598 | 989688.6895 |
| 3  | 655447.4774 | 989589.4706 |
| 4  | 655525.9706 | 989470.4078 |
| 5  | 655553.7519 | 989414.8452 |
| 6  | 655592.5575 | 989325.7687 |
| 7  | 655619.0159 | 989259.6227 |
| 8  | 655719.9987 | 989072.2091 |
| 9  | 655778.9097 | 988971.7140 |





### Leyenda

- Punto de Coordenadas
- Camino de Acceso al Sitio de Disposición de Farfán¹
- Camino a Construir en el Sitio de Disposición de Farfán¹
- Alineamiento del Proyecto¹
- Tramo Soterrado - Túnel¹
- - - Línea 3 del Metro¹
- Estación¹
- ▨ Campamento¹
- ▭ Límite de Corregimiento
- ▭ Área de Influencia Directa (AID)



Escala: 1:6,000



Sistema de Coordenadas: WGS 1984, UTM  
Zona 17N Proyección - Transversal de Mercator.

### LOCALIZACIÓN REGIONAL



### COORDENADAS UTM DE CAMINO DE ACCESO Y CAMINO A CONSTRUIR EN EL SITIO DE DISPOSICIÓN DE FARFÁN

Estudio de Impacto Ambiental Categoría III, Proyecto de Cruce de la Línea 3 por debajo del Canal de Panamá

Promotor:



Consultor:





CAMINO DE ACCESO AL SITIO DE DISPOSICIÓN DE FARFÁN

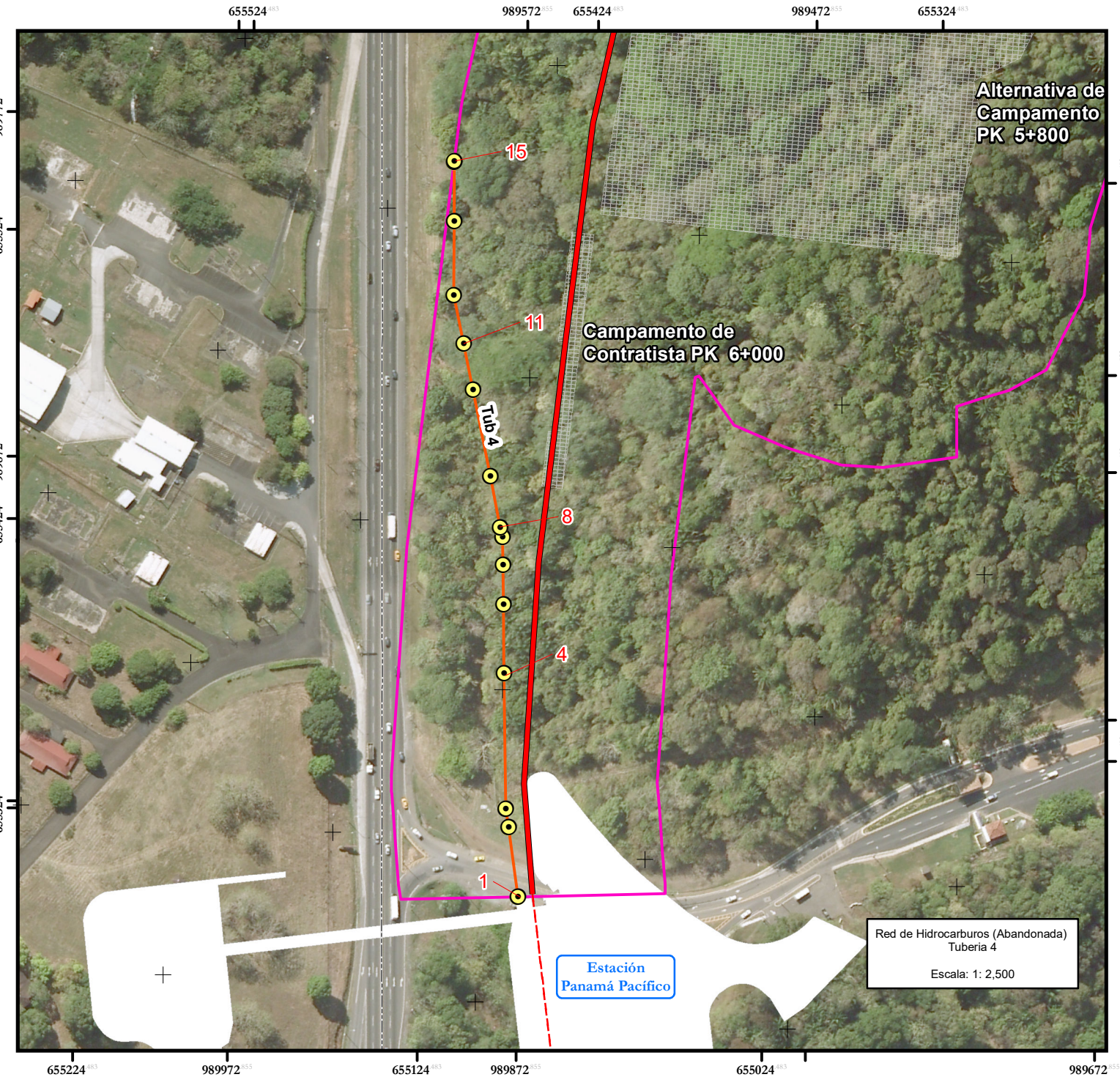
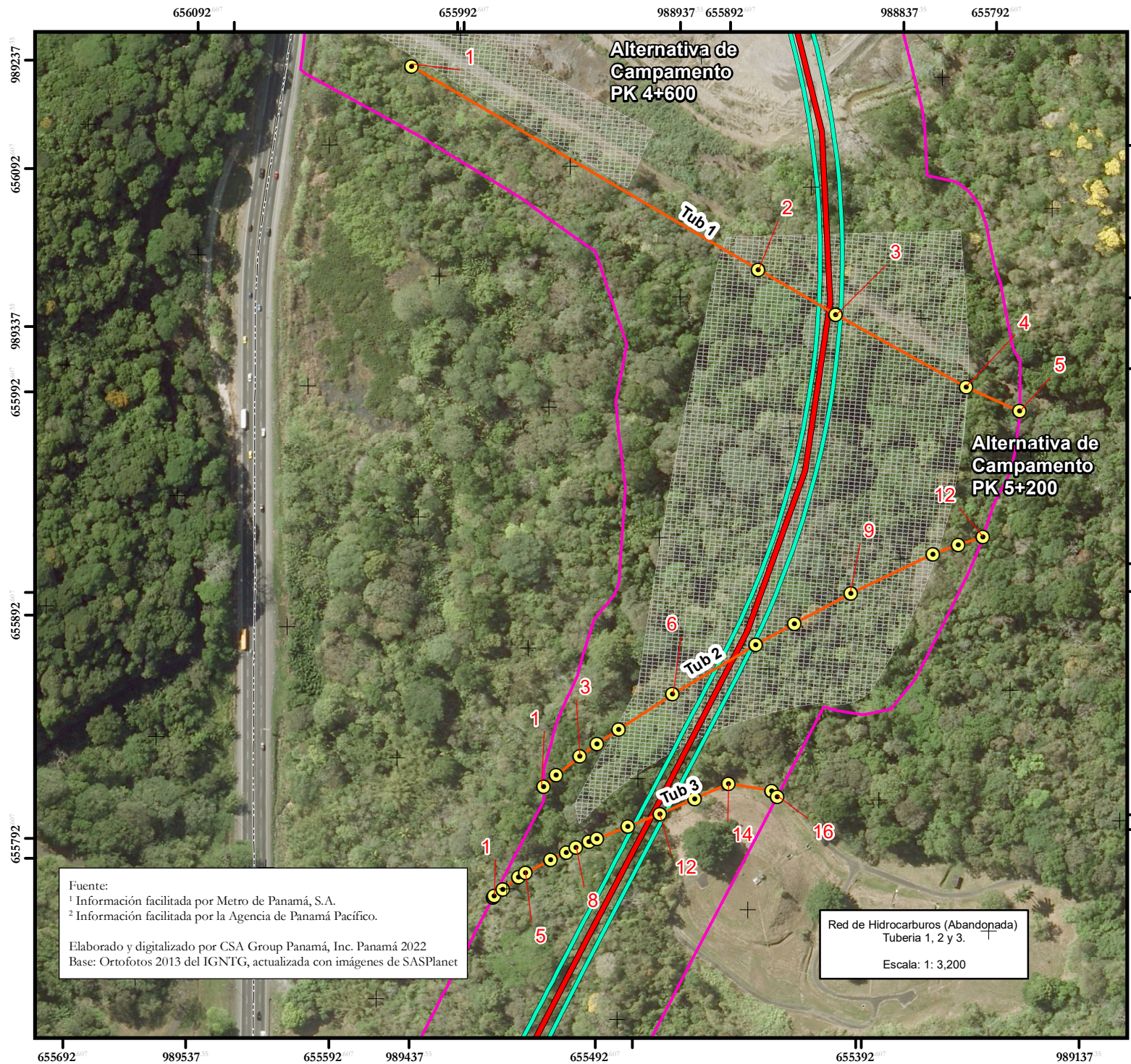
| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 1  | 656074.9353 | 989083.0100 |
| 2  | 655778.9097 | 988971.7140 |
| 3  | 655819.4735 | 988905.7330 |
| 4  | 655829.5872 | 988889.3037 |
| 5  | 655838.0538 | 988870.0773 |
| 6  | 655845.3059 | 988850.4211 |
| 7  | 655849.2365 | 988824.8627 |
| 8  | 655853.4551 | 988776.1259 |
| 9  | 655854.7251 | 988755.5942 |
| 10 | 655855.1689 | 988740.9209 |
| 11 | 655854.6763 | 988732.5887 |
| 12 | 655851.5067 | 988721.9407 |
| 13 | 655848.6929 | 988711.1522 |
| 14 | 655846.2617 | 988700.6170 |
| 15 | 655844.9559 | 988692.5110 |

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 16 | 655846.0467 | 988677.6851 |
| 17 | 655849.0064 | 988637.4570 |
| 18 | 655850.8585 | 988613.9091 |
| 19 | 655854.0335 | 988584.8048 |
| 20 | 655854.1986 | 988571.4334 |
| 21 | 655853.2397 | 988529.2422 |
| 22 | 655852.9752 | 988450.9254 |
| 23 | 655853.2397 | 988393.5107 |
| 24 | 655855.3939 | 988377.3966 |
| 25 | 655856.9483 | 988367.4513 |
| 26 | 655858.7745 | 988357.0123 |

CAMINO A CONSTRUIR EN EL SITIO DE DISPOSICIÓN DE FARFÁN

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 1  | 655858.7745 | 988357.0123 |
| 2  | 655868.3210 | 988323.1314 |
| 3  | 655885.2368 | 988268.8035 |
| 4  | 655892.6451 | 988252.9285 |
| 5  | 655893.7034 | 988217.4742 |
| 6  | 655903.7576 | 988196.3075 |
| 7  | 655908.5201 | 988174.0825 |
| 8  | 655915.9285 | 988150.7991 |
| 9  | 655916.4576 | 988127.5157 |
| 10 | 655890.5284 | 988066.6614 |
| 11 | 655893.7034 | 988051.8447 |
| 12 | 655917.5160 | 988035.4405 |
| 13 | 655918.5743 | 988022.2113 |
| 14 | 655869.5381 | 987891.1541 |
| 15 | 655859.2387 | 987864.8635 |





## Leyenda

- Punto de Coordenadas
- Red de Hidrocarburos Abandonada <sup>2</sup>
- Tramo Soterrado - Túnel <sup>1</sup>
- Alineamiento del Proyecto <sup>1</sup>
- - - Línea 3 del Metro <sup>1</sup>
- Estacion <sup>1</sup>
- Campamento <sup>1</sup>
- Límite de Corregimiento
- Área de Influencia Directa (AID)



Escala: 1:3,200



Sistema de Coordenadas: WGS 1984, UTM  
Zona 17N Proyección - Transversal de Mercator.

## LOCALIZACIÓN REGIONAL



## COORDENADAS UTM DE LA RED DE HIDROCARBUROS (Abandonada) EN EL ÁREA DE INFLUENCIA DIRECTA 1 HOJA DE 3

Estudio de Impacto Ambiental Categoría III, Proyecto de Cruce de la Línea 3 por debajo del Canal de Panamá

Promotor:

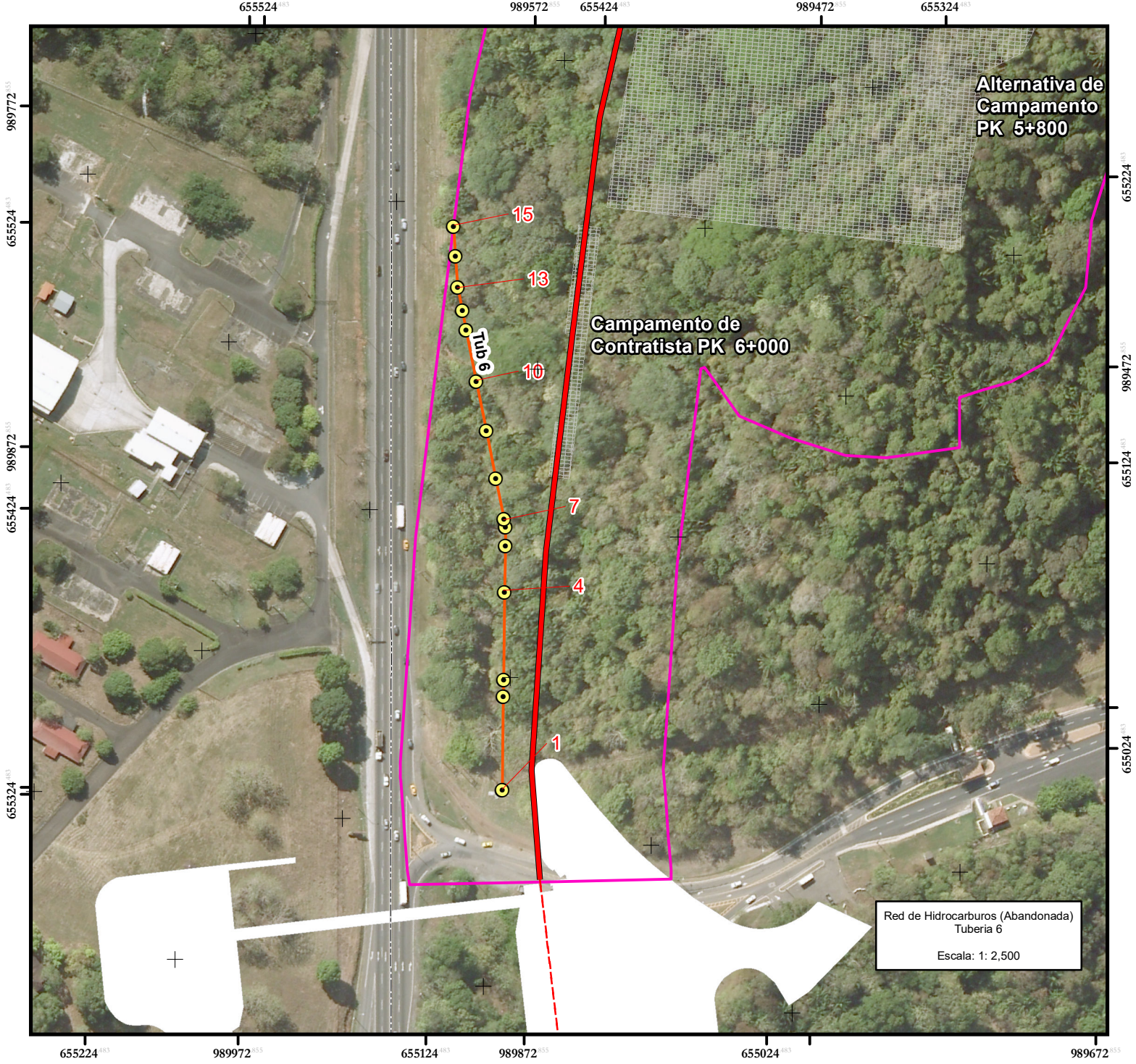
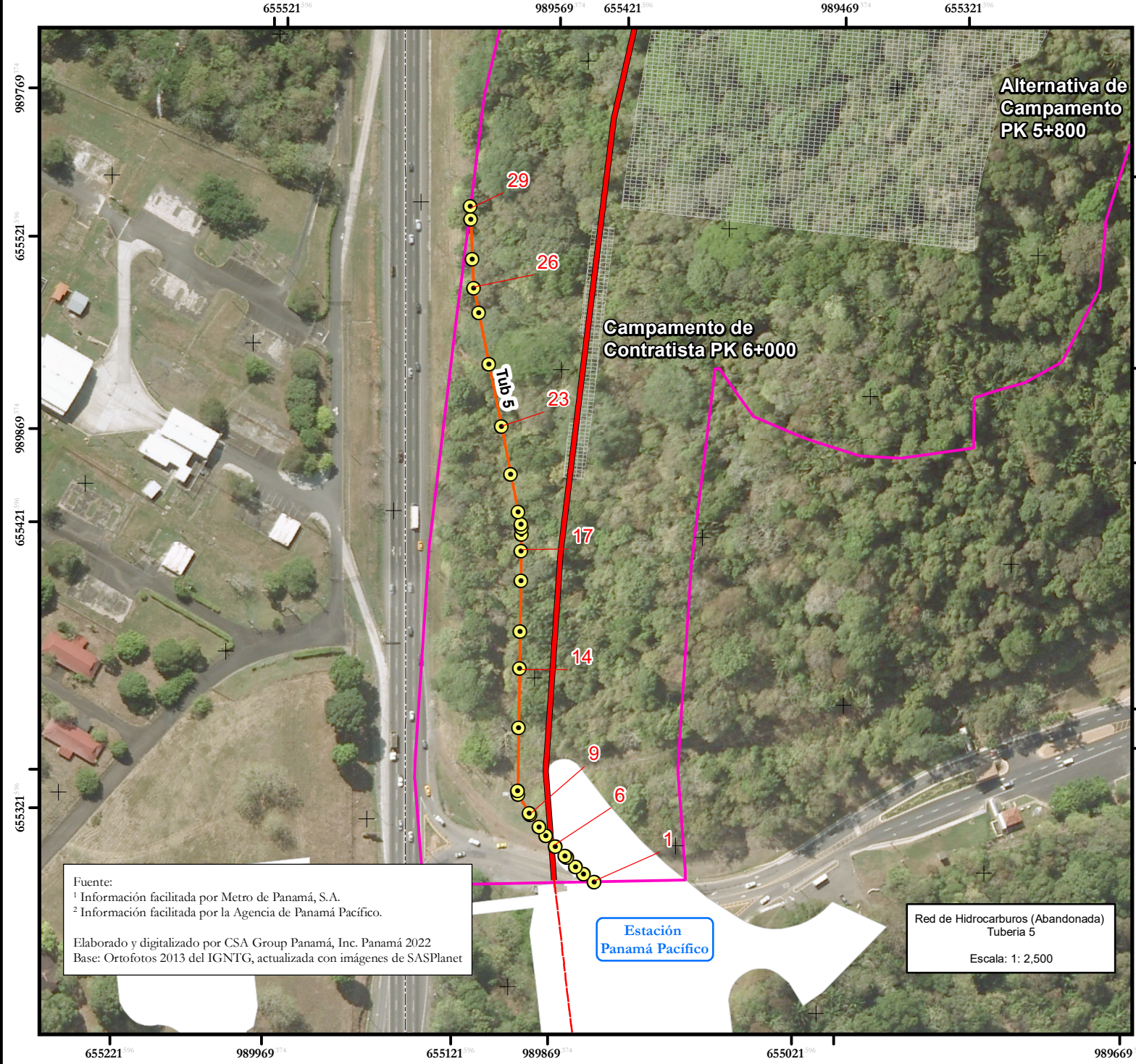


REPÚBLICA DE PANAMÁ  
GOBIERNO NACIONAL

Consultor:





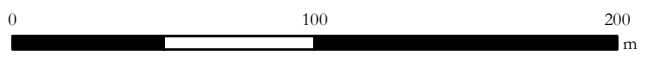


**Legenda**

- Punto de Coordenadas
- Red de Hidrocarburos Abandonada <sup>2</sup>
- Alineamiento del Proyecto <sup>1</sup>
- - - Línea 3 del Metro <sup>1</sup>
- Estacion <sup>1</sup>
- ▨ Campamento <sup>1</sup>
- Límite de Corregimiento
- Área de Influencia Directa (AID)



Escala: 1:2,500



Sistema de Coordenadas: WGS 1984, UTM  
Zona 17N Proyección - Transversal de Mercator.

**LOCALIZACIÓN REGIONAL**



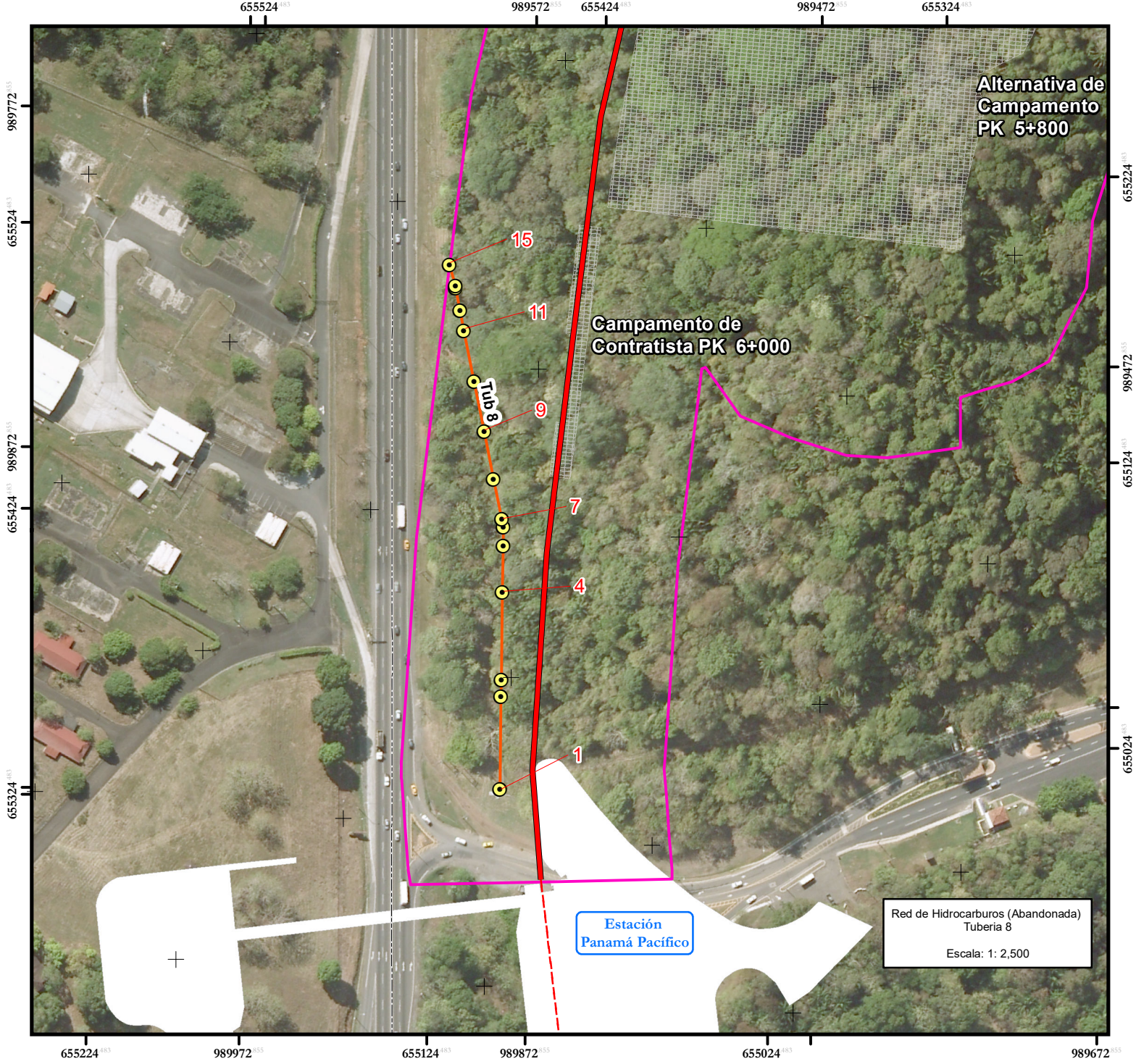
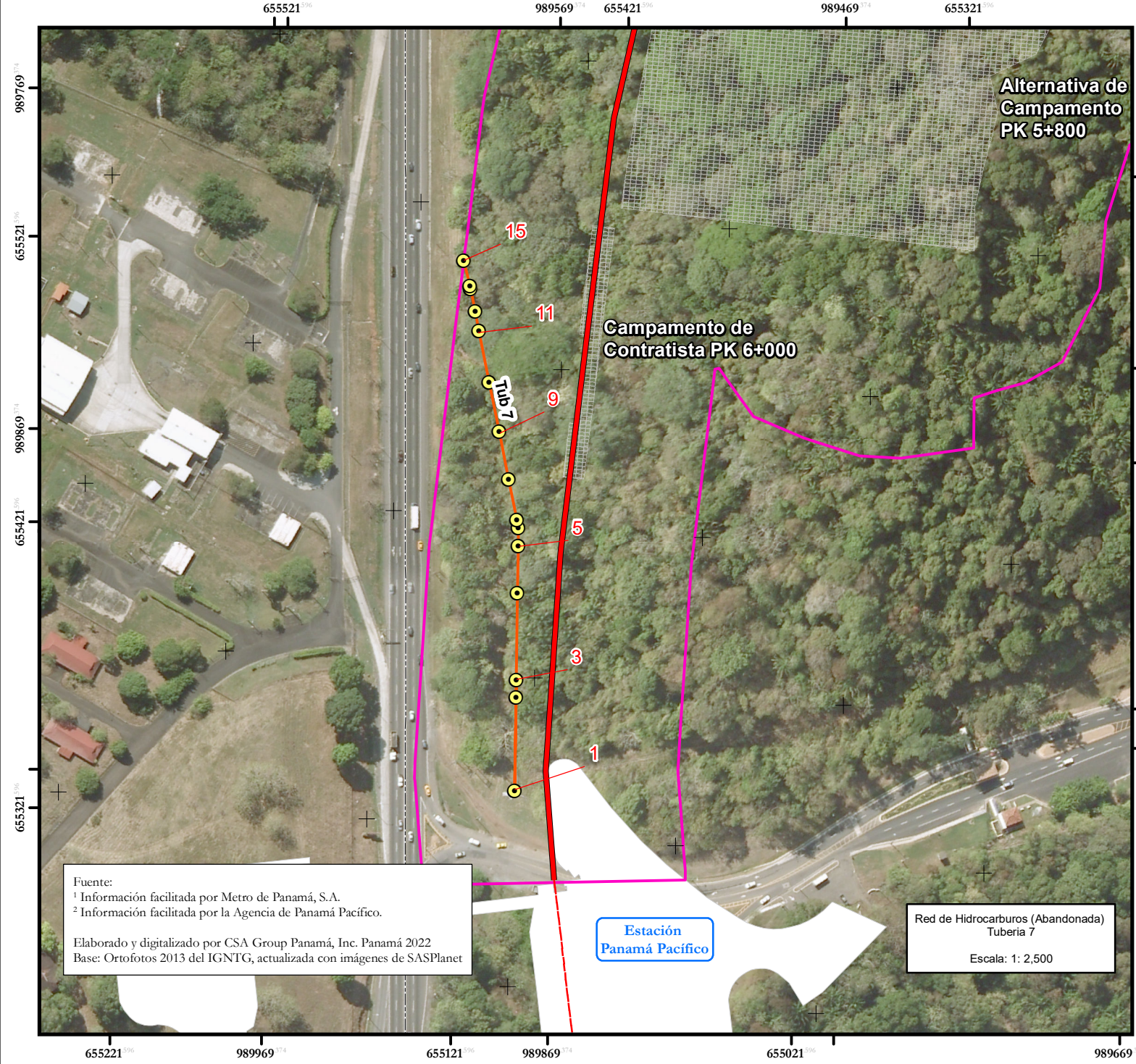
**COORDENADAS UTM DE LA RED DE HIDROCARBUROS (Abandonada) EN EL ÁREA DE INFLUENCIA DIRECTA 2 HOJA DE 3**

Estudio de Impacto Ambiental Categoría III, Proyecto de Cruce de la Línea 3 por debajo del Canal de Panamá

Promotor:  METRO DE PANAMÁ  REPÚBLICA DE PANAMÁ GOBIERNO NACIONAL

Consultor:  CSAGROUP EST. 1966



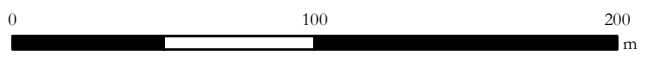


**Leyenda**

- Punto de Coordenadas
- Red de Hidrocarburos Abandonada <sup>2</sup>
- Alineamiento del Proyecto <sup>1</sup>
- - - Línea 3 del Metro <sup>1</sup>
- Estacion <sup>1</sup>
- Campamento <sup>1</sup>
- Límite de Corregimiento
- Área de Influencia Directa (AID)



Escala: 1:2,500



Sistema de Coordenadas: WGS 1984, UTM  
Zona 17N Proyección - Transversal de Mercator.

**LOCALIZACIÓN REGIONAL**



**COORDENADAS UTM DE LA RED DE HIDROCARBUROS (Abandonada) EN EL ÁREA DE INFLUENCIA DIRECTA 3 HOJA DE 3**

Estudio de Impacto Ambiental Categoría III, Proyecto de Cruce de la Línea 3 por debajo del Canal de Panamá

Promotor:  METRO DE PANAMÁ  REPÚBLICA DE PANAMÁ GOBIERNO NACIONAL

Consultor:  CSAGROUP EST. 1966



RED DE HIDROCARBUROS (Abandonada) POR SANEAR, DENTRO DEL ÁREA DE INFLUENCIA DIRECTA DEL PROYECTO

| TUBERIA 1 |             |             |
|-----------|-------------|-------------|
| ID        | ESTE        | NORTE       |
| 1         | 655997.1541 | 989070.6912 |
| 2         | 655775.5954 | 988991.8509 |
| 3         | 655726.4854 | 988974.2321 |
| 4         | 655644.6594 | 988942.9992 |
| 5         | 655613.7220 | 988928.1753 |

| TUBERIA 2 |             |             |
|-----------|-------------|-------------|
| ID        | ESTE        | NORTE       |
| 1         | 655624.3914 | 989282.6624 |
| 2         | 655624.8942 | 989272.7232 |
| 3         | 655624.5900 | 989254.9728 |
| 4         | 655623.6757 | 989242.7016 |
| 5         | 655621.8865 | 989227.3019 |
| 6         | 655617.4180 | 989190.1657 |
| 7         | 655608.3037 | 989133.9558 |
| 8         | 655603.4275 | 989108.7284 |
| 9         | 655595.7514 | 989072.1179 |
| 10        | 655582.4239 | 989020.6600 |
| 11        | 655577.0685 | 989005.8269 |
| 12        | 655571.5089 | 988991.7551 |

| TUBERIA 3 |             |             |
|-----------|-------------|-------------|
| ID        | ESTE        | NORTE       |
| 1         | 655594.0006 | 989346.7116 |
| 2         | 655593.9822 | 989346.0049 |
| 3         | 655593.8083 | 989339.3447 |
| 4         | 655593.5008 | 989327.5649 |
| 5         | 655592.5635 | 989322.9701 |
| 6         | 655589.2807 | 989306.8771 |
| 7         | 655586.6005 | 989296.8853 |
| 8         | 655585.0250 | 989291.0121 |
| 9         | 655582.8618 | 989282.9476 |
| 10        | 655581.2583 | 989278.1990 |
| 11        | 655575.0053 | 989259.6811 |
| 12        | 655568.6806 | 989240.6449 |
| 13        | 655562.5422 | 989219.3533 |
| 14        | 655556.3702 | 989198.6306 |
| 15        | 655537.0387 | 989181.9725 |
| 16        | 655532.2792 | 989181.7258 |

| TUBERIA 4 |             |             |
|-----------|-------------|-------------|
| ID        | ESTE        | NORTE       |
| 1         | 655148.4365 | 989827.6085 |
| 2         | 655175.1503 | 989810.8721 |
| 3         | 655182.4615 | 989806.2916 |
| 4         | 655229.7425 | 989767.6398 |
| 5         | 655253.6681 | 989748.0807 |
| 6         | 655267.6058 | 989736.6867 |
| 7         | 655277.3707 | 989728.7040 |
| 8         | 655281.4164 | 989726.4890 |
| 9         | 655302.1752 | 989715.1238 |
| 10        | 655336.8784 | 989696.1243 |
| 11        | 655355.4891 | 989685.9351 |
| 12        | 655375.2517 | 989675.1153 |
| 13        | 655400.5973 | 989653.7213 |
| 14        | 655421.0376 | 989636.4680 |
| 15        | 655421.4814 | 989636.0934 |



RED DE HIDROCARBUROS (Abandonada) POR SANEAR, DENTRO DEL ÁREA DE INFLUENCIA DIRECTA DEL PROYECTO

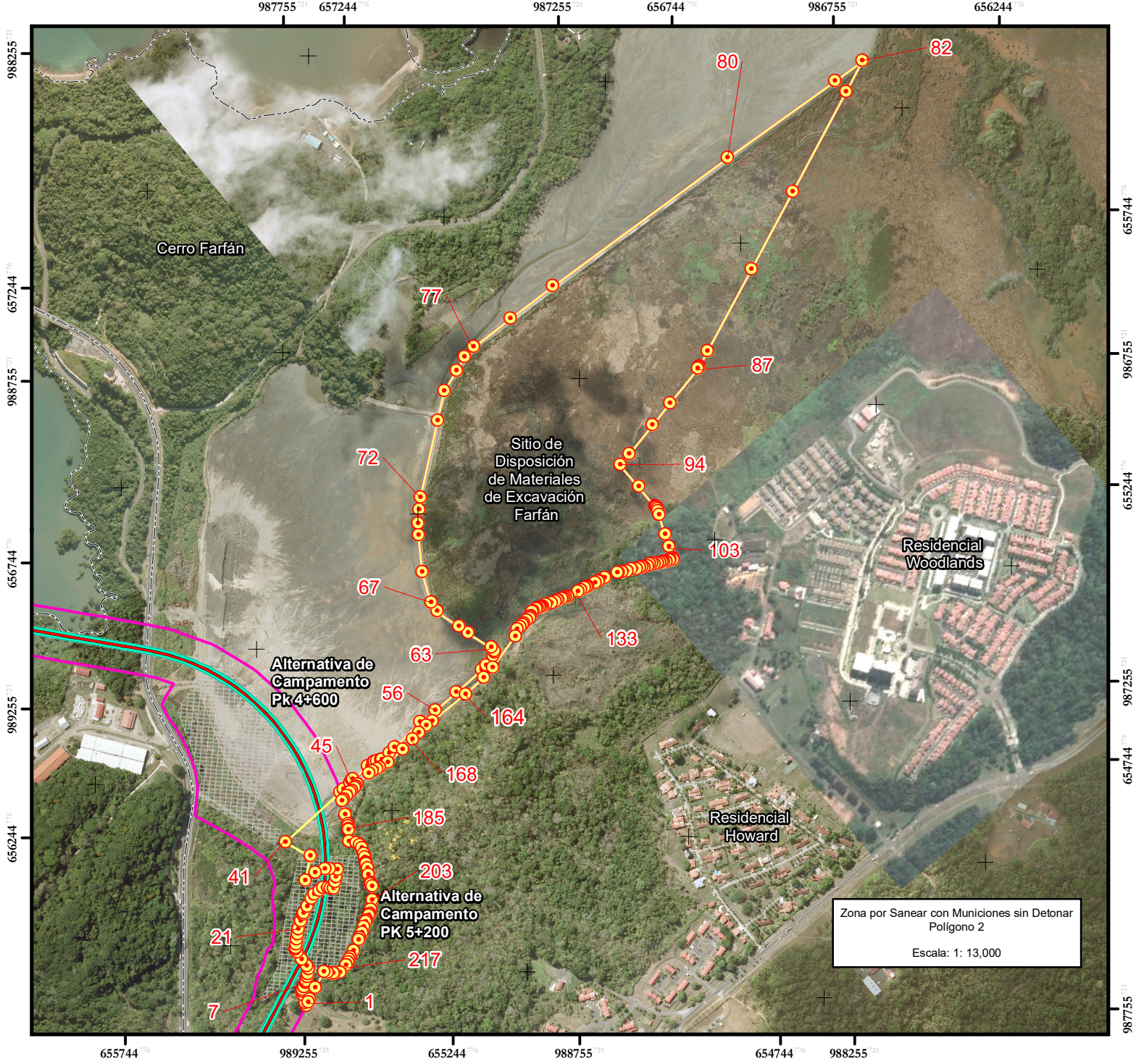
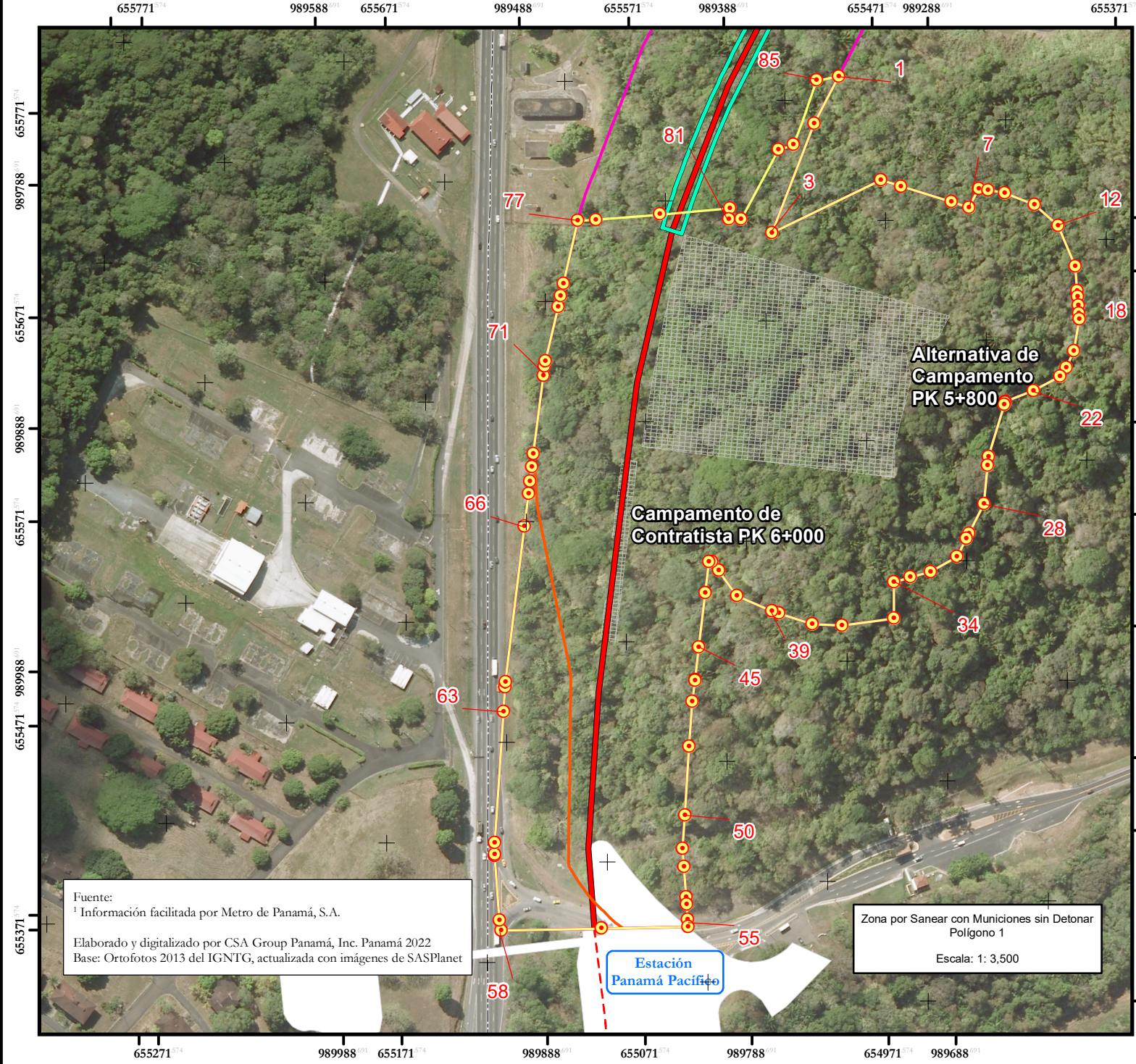
| TUBERIA 5 |             |             |
|-----------|-------------|-------------|
| ID        | ESTE        | NORTE       |
| 1         | 655132.7921 | 989808.1816 |
| 2         | 655138.6404 | 989809.7126 |
| 3         | 655143.4426 | 989810.3873 |
| 4         | 655149.1973 | 989810.7841 |
| 5         | 655150.5070 | 989810.9429 |
| 6         | 655156.8173 | 989811.4192 |
| 7         | 655163.1277 | 989811.5779 |
| 8         | 655168.2077 | 989811.3398 |
| 9         | 655175.1503 | 989810.8721 |
| 10        | 655175.8674 | 989810.8238 |
| 11        | 655185.5512 | 989809.2760 |
| 12        | 655187.1875 | 989808.1296 |
| 13        | 655208.8874 | 989789.4132 |
| 14        | 655229.3659 | 989771.7501 |
| 15        | 655242.2220 | 989760.6615 |
| 16        | 655259.7335 | 989745.5576 |
| 17        | 655270.1093 | 989736.6083 |
| 18        | 655275.7258 | 989731.7639 |
| 19        | 655278.0940 | 989729.7214 |
| 20        | 655279.5710 | 989728.9127 |
| 21        | 655284.5533 | 989726.1850 |
| 22        | 655299.7937 | 989717.8410 |
| 23        | 655319.4377 | 989707.0862 |
| 24        | 655344.8647 | 989693.1652 |
| 25        | 655365.8163 | 989681.6944 |
| 26        | 655375.9709 | 989676.1349 |
| 27        | 655386.3760 | 989668.1045 |
| 28        | 655400.9249 | 989656.8760 |
| 29        | 655405.4014 | 989653.4211 |

| TUBERIA 6 |             |             |
|-----------|-------------|-------------|
| ID        | ESTE        | NORTE       |
| 1         | 655187.6488 | 989808.7222 |
| 2         | 655219.9133 | 989780.8936 |
| 3         | 655225.7322 | 989775.8747 |
| 4         | 655255.8847 | 989749.8677 |
| 5         | 655272.0317 | 989735.9406 |
| 6         | 655278.5237 | 989730.3411 |
| 7         | 655281.8512 | 989728.5194 |
| 8         | 655298.3682 | 989719.4765 |
| 9         | 655317.8392 | 989708.8164 |
| 10        | 655338.1899 | 989697.6746 |
| 11        | 655358.9949 | 989686.2841 |
| 12        | 655367.1577 | 989681.8151 |
| 13        | 655376.3971 | 989676.7566 |
| 14        | 655388.0646 | 989668.2764 |
| 15        | 655398.9742 | 989660.3470 |

| TUBERIA 7 |             |             |
|-----------|-------------|-------------|
| ID        | ESTE        | NORTE       |
| 1         | 655188.1386 | 989809.2902 |
| 2         | 655220.4031 | 989781.4615 |
| 3         | 655226.2220 | 989776.4426 |
| 4         | 655256.3745 | 989750.4356 |
| 5         | 655272.5216 | 989736.5085 |
| 6         | 655278.9535 | 989730.9609 |
| 7         | 655282.2114 | 989729.1773 |
| 8         | 655298.7284 | 989720.1344 |
| 9         | 655318.1994 | 989709.4742 |
| 10        | 655338.5501 | 989698.3325 |
| 11        | 655359.3551 | 989686.9420 |
| 12        | 655367.5179 | 989682.4729 |
| 13        | 655376.7993 | 989677.3914 |
| 14        | 655377.6430 | 989676.7783 |
| 15        | 655388.5969 | 989671.6381 |

| TUBERIA 8 |             |             |
|-----------|-------------|-------------|
| ID        | ESTE        | NORTE       |
| 1         | 655188.6285 | 989809.8581 |
| 2         | 655220.8930 | 989782.0294 |
| 3         | 655226.7119 | 989777.0106 |
| 4         | 655256.8644 | 989751.0036 |
| 5         | 655273.0114 | 989737.0765 |
| 6         | 655279.3833 | 989731.5807 |
| 7         | 655282.5715 | 989729.8351 |
| 8         | 655299.0885 | 989720.7922 |
| 9         | 655318.5596 | 989710.1321 |
| 10        | 655338.9102 | 989698.9903 |
| 11        | 655359.7152 | 989687.5998 |
| 12        | 655367.8781 | 989683.1308 |
| 13        | 655377.2015 | 989678.0263 |
| 14        | 655378.0839 | 989677.3850 |
| 15        | 655386.9390 | 989673.3823 |





## Leyenda

- Punto de Coordenadas
- Alineamiento del Proyecto<sup>1</sup>
- Tramo Soterrado - Túnel<sup>1</sup>
- - - Línea 3 del Metro<sup>1</sup>
- Zona por Sanear de Municiones Sin Detonar dentro del AID
- Estacion<sup>1</sup>
- ▨ Campamento<sup>1</sup>
- Límite de Corregimiento
- Área de Influencia Directa (AID)



Escala: 1:3,500



Sistema de Coordenadas: WGS 1984, UTM  
Zona 17N Proyección - Transversal de Mercator.

## LOCALIZACIÓN REGIONAL



## ZONA POR SANEAR DE MUNICIONES SIN DETONAR DENTRO DEL ÁREA DE INFLUENCIA DIRECTA DEL PROYECTO (AID)

Estudio de Impacto Ambiental Categoría III, Proyecto de Cruce de la Línea 3 por debajo del Canal de Panamá

Promotor:



Consultor:





ZONA POR SANEAR DE MUNCIONES SIN DETONAR DENTRO DEL ÁREA DE INFLUENCIA DIRECTA DEL PROYECTO (AID)

POLÍGONO 1

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 1  | 655461.5363 | 989352.4021 |
| 2  | 655448.3993 | 989383.7947 |
| 3  | 655412.2354 | 989449.5416 |
| 4  | 655393.1663 | 989374.4701 |
| 5  | 655382.1287 | 989367.3140 |
| 6  | 655353.6255 | 989348.8341 |
| 7  | 655343.6653 | 989342.3765 |
| 8  | 655349.0467 | 989329.9304 |
| 9  | 655344.3764 | 989326.0197 |
| 10 | 655336.1641 | 989319.1433 |
| 11 | 655318.1773 | 989309.2344 |
| 12 | 655298.2799 | 989306.3627 |
| 13 | 655271.0084 | 989314.7122 |
| 14 | 655258.6154 | 989323.6436 |
| 15 | 655255.3182 | 989326.0197 |
| 16 | 655250.9423 | 989329.1734 |
| 17 | 655246.8413 | 989332.1289 |
| 18 | 655243.9204 | 989334.2340 |
| 19 | 655230.2497 | 989350.1832 |
| 20 | 655225.2072 | 989360.5754 |
| 21 | 655223.5003 | 989367.5610 |
| 22 | 655227.5154 | 989386.1276 |
| 23 | 655233.5068 | 989404.6045 |
| 24 | 655233.2387 | 989405.0232 |
| 25 | 655232.3960 | 989406.3391 |
| 26 | 655213.7536 | 989435.4520 |
| 27 | 655209.6957 | 989439.5330 |
| 28 | 655192.1620 | 989457.1666 |
| 29 | 655184.0967 | 989476.3738 |
| 30 | 655182.5483 | 989479.9711 |
| 31 | 655177.4054 | 989491.9199 |
| 32 | 655181.0186 | 989510.9709 |
| 33 | 655186.5885 | 989523.3621 |
| 34 | 655190.7326 | 989533.4696 |
| 35 | 655173.2186 | 989548.2092 |

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 36 | 655191.0262 | 989576.6384 |
| 37 | 655203.9737 | 989590.4853 |
| 38 | 655222.8334 | 989602.3994 |
| 39 | 655226.7765 | 989604.8903 |
| 40 | 655248.9471 | 989616.0124 |
| 41 | 655268.4424 | 989614.4933 |
| 42 | 655275.9861 | 989613.9054 |
| 43 | 655276.7574 | 989615.5828 |
| 44 | 655263.1424 | 989630.1270 |
| 45 | 655239.3015 | 989655.5949 |
| 46 | 655224.8134 | 989671.0718 |
| 47 | 655224.6576 | 989671.2382 |
| 48 | 655215.1674 | 989681.3761 |
| 49 | 655194.4053 | 989701.3017 |
| 50 | 655162.7130 | 989731.7171 |
| 51 | 655147.3486 | 989746.4624 |
| 52 | 655137.7142 | 989753.3769 |
| 53 | 655121.8958 | 989764.7295 |
| 54 | 655118.2771 | 989767.3266 |
| 55 | 655110.2186 | 989773.1100 |
| 56 | 655106.7997 | 989775.9046 |
| 57 | 655141.5324 | 989819.0349 |
| 58 | 655181.6815 | 989868.8912 |
| 59 | 655187.2828 | 989865.5081 |
| 60 | 655220.7916 | 989841.4594 |
| 61 | 655221.6372 | 989840.8413 |
| 62 | 655227.1677 | 989836.1798 |
| 63 | 655287.8661 | 989777.9282 |
| 64 | 655299.4173 | 989766.8427 |
| 65 | 655301.6744 | 989764.5573 |
| 66 | 655370.1036 | 989691.4577 |
| 67 | 655384.3489 | 989676.1071 |
| 68 | 655389.8924 | 989670.2752 |
| 69 | 655396.0259 | 989663.5241 |
| 70 | 655401.8977 | 989657.1966 |

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 71 | 655436.3150 | 989620.1088 |
| 72 | 655440.1942 | 989615.8187 |
| 73 | 655442.1509 | 989613.3587 |
| 74 | 655463.7753 | 989584.6600 |
| 75 | 655467.8634 | 989579.0745 |
| 76 | 655472.8125 | 989572.6664 |
| 77 | 655497.6614 | 989539.6885 |
| 78 | 655490.9308 | 989530.2991 |
| 79 | 655467.0998 | 989497.0543 |
| 80 | 655441.4279 | 989460.0068 |
| 81 | 655436.3675 | 989465.3252 |
| 82 | 655431.2935 | 989459.3464 |
| 83 | 655450.0591 | 989412.3252 |
| 84 | 655446.2921 | 989402.8706 |
| 85 | 655468.4425 | 989365.2498 |



ZONA POR SANEAR DE MUNCIONES SIN DETONAR DENTRO DEL ÁREA DE INFLUENCIA DIRECTA DEL PROYECTO (AID)

POLÍGONO 2

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 1  | 655520.4777 | 989210.1612 |
| 2  | 655526.6258 | 989207.6105 |
| 3  | 655545.0911 | 989199.9586 |
| 4  | 655553.8152 | 989196.4604 |
| 5  | 655555.1308 | 989193.1647 |
| 6  | 655557.7540 | 989186.5936 |
| 7  | 655562.3118 | 989176.0093 |
| 8  | 655565.2389 | 989172.4897 |
| 9  | 655565.2389 | 989172.4897 |
| 10 | 655571.4801 | 989164.9851 |
| 11 | 655575.7095 | 989159.2345 |
| 12 | 655583.5088 | 989149.5907 |
| 13 | 655591.1655 | 989149.0441 |
| 14 | 655611.4836 | 989147.5937 |
| 15 | 655631.6432 | 989145.8372 |
| 16 | 655639.5511 | 989145.0006 |
| 17 | 655641.5665 | 989141.2611 |
| 18 | 655646.8450 | 989135.7676 |
| 19 | 655655.2251 | 989127.0461 |
| 20 | 655664.0516 | 989117.4054 |
| 21 | 655671.9774 | 989107.8878 |
| 22 | 655682.6022 | 989092.0946 |
| 23 | 655691.5989 | 989077.9385 |
| 24 | 655692.6168 | 989075.0304 |
| 25 | 655698.7472 | 989057.5156 |
| 26 | 655706.7114 | 989037.4759 |
| 27 | 655711.2174 | 989026.1378 |
| 28 | 655709.9903 | 989010.9287 |
| 29 | 655708.5763 | 989000.0914 |
| 30 | 655701.2460 | 988990.3235 |
| 31 | 655697.3615 | 988987.3759 |
| 32 | 655690.9550 | 988982.5144 |
| 33 | 655701.2638 | 988970.1100 |
| 34 | 655709.4926 | 988960.2085 |
| 35 | 655720.0400 | 988946.0200 |

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 36 | 655733.2499 | 988959.2536 |
| 37 | 655739.8365 | 988967.9682 |
| 38 | 655748.6576 | 988991.1195 |
| 39 | 655748.3892 | 989021.7898 |
| 40 | 655785.2611 | 988974.9994 |
| 41 | 655849.6352 | 988998.2077 |
| 42 | 655856.6100 | 988823.7284 |
| 43 | 655857.8116 | 988812.0046 |
| 44 | 655859.9664 | 988790.9800 |
| 45 | 655860.7060 | 988783.7637 |
| 46 | 655861.0057 | 988780.8398 |
| 47 | 655862.6052 | 988733.0751 |
| 48 | 655860.2296 | 988718.7807 |
| 49 | 655859.1381 | 988715.0179 |
| 50 | 655857.0355 | 988709.7825 |
| 51 | 655853.1426 | 988700.0890 |
| 52 | 655853.1426 | 988697.1012 |
| 53 | 655853.2751 | 988674.1972 |
| 54 | 655855.3918 | 988656.2055 |
| 55 | 655862.4521 | 988571.7884 |
| 56 | 655859.6252 | 988525.6774 |
| 57 | 655860.3307 | 988460.4134 |
| 58 | 655862.8443 | 988379.2303 |
| 59 | 655864.3877 | 988363.7962 |
| 60 | 655871.0023 | 988337.3378 |
| 61 | 655874.5383 | 988329.9600 |
| 62 | 655879.1686 | 988327.2807 |
| 63 | 655889.2277 | 988327.5151 |
| 64 | 655950.9639 | 988347.3589 |
| 65 | 655976.9813 | 988354.4145 |
| 66 | 656037.7930 | 988370.5872 |
| 67 | 656062.9711 | 988368.9666 |
| 68 | 656130.8809 | 988338.0985 |
| 69 | 656204.5234 | 988289.1505 |
| 70 | 656226.8310 | 988270.6174 |

| ID  | ESTE        | NORTE       |
|-----|-------------|-------------|
| 71  | 656249.4103 | 988249.3606 |
| 72  | 656269.3465 | 988228.2962 |
| 73  | 656383.9995 | 988079.6882 |
| 74  | 656427.4337 | 988022.4654 |
| 75  | 656445.8239 | 987968.5630 |
| 76  | 656458.5240 | 987933.2852 |
| 77  | 656462.0517 | 987900.8296 |
| 78  | 656458.7118 | 987791.1366 |
| 79  | 656452.1739 | 987665.1735 |
| 80  | 656419.0128 | 987150.8225 |
| 81  | 656395.7294 | 986838.2608 |
| 82  | 656389.6582 | 986757.6935 |
| 83  | 656358.8219 | 986834.2664 |
| 84  | 656258.2399 | 987084.0317 |
| 85  | 656180.3483 | 987277.4521 |
| 86  | 656097.9846 | 987481.9776 |
| 87  | 656082.6769 | 987519.9897 |
| 88  | 656081.6982 | 987522.7476 |
| 89  | 656081.1112 | 987525.0825 |
| 90  | 656080.5980 | 987527.3469 |
| 91  | 656060.4710 | 987630.1391 |
| 92  | 656047.5071 | 987696.3481 |
| 93  | 656030.6424 | 987782.4790 |
| 94  | 656024.4152 | 987814.2823 |
| 95  | 655956.5878 | 987814.2823 |
| 96  | 655896.0405 | 987814.2892 |
| 97  | 655893.8974 | 987814.4307 |
| 98  | 655891.5441 | 987814.5861 |
| 99  | 655887.0221 | 987815.4924 |
| 100 | 655882.6585 | 987816.9854 |
| 101 | 655874.3109 | 987820.4715 |
| 102 | 655828.1728 | 987839.7393 |
| 103 | 655799.8603 | 987851.5629 |
| 104 | 655774.4981 | 987862.1545 |
| 105 | 655769.8351 | 987864.5255 |

| ID  | ESTE        | NORTE       |
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| 106 | 655774.5062 | 987869.8691 |
| 107 | 655774.7194 | 987871.7489 |
| 108 | 655777.5195 | 987879.0841 |
| 109 | 655781.7676 | 987885.0092 |
| 110 | 655783.5450 | 987886.7866 |
| 111 | 655785.8028 | 987892.7133 |
| 112 | 655788.9072 | 987897.7933 |
| 113 | 655791.5178 | 987904.4255 |
| 114 | 655796.9076 | 987908.3220 |
| 115 | 655798.8479 | 987913.7900 |
| 116 | 655800.0826 | 987918.5526 |
| 117 | 655803.4113 | 987925.9388 |
| 118 | 655806.9618 | 987929.1359 |
| 119 | 655809.6077 | 987934.9568 |
| 120 | 655812.7827 | 987942.3651 |
| 121 | 655819.6619 | 987952.2429 |
| 122 | 655823.1824 | 987962.3885 |
| 123 | 655828.6656 | 987973.4285 |
| 124 | 655833.4046 | 987980.9306 |
| 125 | 655834.7002 | 987982.5818 |
| 126 | 655844.3939 | 988013.6609 |
| 127 | 655847.6779 | 988029.0335 |
| 128 | 655848.2138 | 988030.0846 |
| 129 | 655849.8891 | 988038.9764 |
| 130 | 655854.3848 | 988057.5302 |
| 131 | 655855.1808 | 988060.6723 |
| 132 | 655855.9745 | 988066.4050 |
| 133 | 655859.0496 | 988075.6713 |
| 134 | 655859.7551 | 988084.1380 |
| 135 | 655866.4873 | 988109.2343 |
| 136 | 655868.0836 | 988115.1854 |
| 137 | 655870.0239 | 988119.1542 |
| 138 | 655871.8760 | 988123.2111 |
| 139 | 655875.0510 | 988132.3834 |
| 140 | 655874.8986 | 988133.4402 |



ZONA POR SANEAR DE MUNCIONES SIN DETONAR DENTRO DEL ÁREA DE INFLUENCIA DIRECTA DEL PROYECTO (AID)

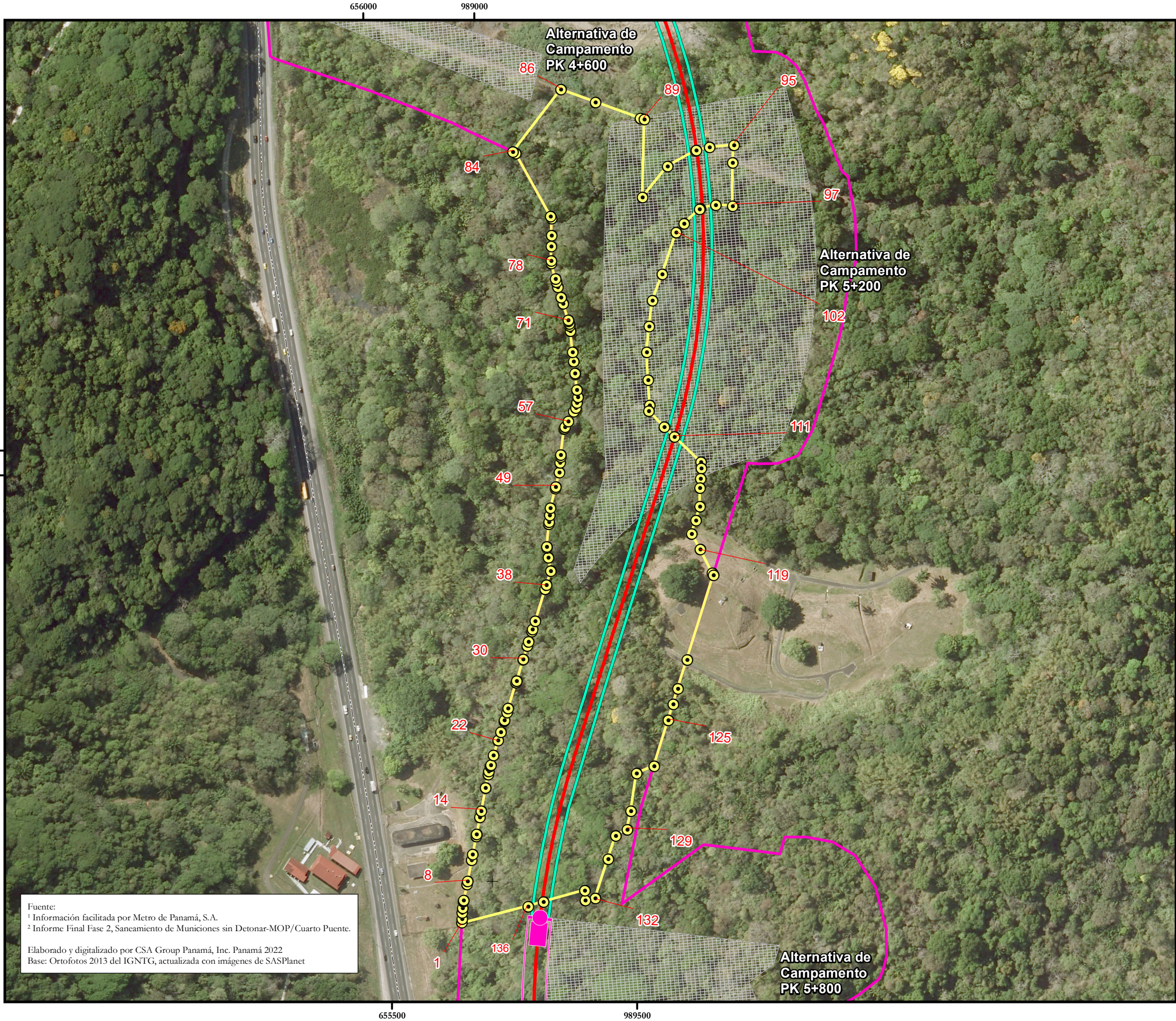
POLÍGONO 2

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| 143 | 655885.5080 | 988160.6909 |
| 144 | 655885.3698 | 988170.9950 |
| 145 | 655887.0631 | 988171.6300 |
| 146 | 655888.0156 | 988173.8525 |
| 147 | 655888.3860 | 988175.4400 |
| 148 | 655889.4444 | 988177.2921 |
| 149 | 655891.8080 | 988182.3632 |
| 150 | 655892.7007 | 988185.6807 |
| 151 | 655893.8078 | 988194.7196 |
| 152 | 655893.2162 | 988197.4239 |
| 153 | 655887.4394 | 988206.6756 |
| 154 | 655886.1588 | 988209.0397 |
| 155 | 655884.6877 | 988211.7556 |
| 156 | 655885.4198 | 988220.8837 |
| 157 | 655885.0670 | 988229.7032 |
| 158 | 655883.8323 | 988236.0532 |
| 159 | 655883.8323 | 988243.4615 |
| 160 | 655883.6559 | 988251.5754 |
| 161 | 655874.5192 | 988265.6888 |
| 162 | 655851.4684 | 988354.7575 |
| 163 | 655845.9365 | 988386.3348 |
| 164 | 655844.3807 | 988443.5793 |
| 165 | 655846.4974 | 988545.5322 |
| 166 | 655847.2029 | 988564.5823 |
| 167 | 655845.6154 | 988587.6893 |
| 168 | 655844.0279 | 988609.9143 |
| 169 | 655839.7859 | 988643.0938 |
| 170 | 655838.0625 | 988690.2332 |
| 171 | 655841.2557 | 988713.4235 |
| 172 | 655843.9936 | 988720.2409 |
| 173 | 655847.3195 | 988731.7063 |
| 174 | 655848.2597 | 988741.2477 |
| 175 | 655845.0738 | 988779.3576 |

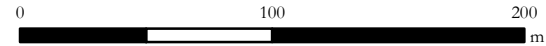
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| 176 | 655844.4225 | 988785.7119 |
| 177 | 655844.0123 | 988789.7145 |
| 178 | 655843.1476 | 988798.1514 |
| 179 | 655842.4689 | 988804.7730 |
| 180 | 655841.3448 | 988815.7408 |
| 181 | 655840.1654 | 988827.2487 |
| 182 | 655839.6793 | 988831.9910 |
| 183 | 655808.8696 | 988847.0270 |
| 184 | 655787.2954 | 988857.5557 |
| 185 | 655783.6105 | 988859.5156 |
| 186 | 655777.7810 | 988863.3497 |
| 187 | 655777.2945 | 988863.7157 |
| 188 | 655776.3920 | 988864.4019 |
| 189 | 655754.5247 | 988881.0290 |
| 190 | 655740.2581 | 988870.2580 |
| 191 | 655731.9396 | 988868.2124 |
| 192 | 655721.6175 | 988868.4466 |
| 193 | 655709.0890 | 988873.2979 |
| 194 | 655700.7887 | 988878.0883 |
| 195 | 655690.5243 | 988883.6936 |
| 196 | 655688.4016 | 988884.8528 |
| 197 | 655687.3862 | 988885.2385 |
| 198 | 655677.9812 | 988888.8109 |
| 199 | 655663.4834 | 988897.0883 |
| 200 | 655647.6358 | 988905.8539 |
| 201 | 655642.7571 | 988908.2956 |
| 202 | 655636.7805 | 988908.5655 |
| 203 | 655611.8259 | 988929.7879 |
| 204 | 655597.5253 | 988945.5329 |
| 205 | 655590.1968 | 988954.9434 |
| 206 | 655588.7455 | 988958.4859 |
| 207 | 655583.8805 | 988970.3609 |
| 208 | 655582.1805 | 988974.5105 |
| 209 | 655575.5890 | 988985.1619 |
| 210 | 655567.6646 | 988997.9674 |

| ID  | ESTE        | NORTE       |
|-----|-------------|-------------|
| 211 | 655561.8209 | 989009.6997 |
| 212 | 655559.2103 | 989015.5416 |
| 213 | 655547.8972 | 989040.8582 |
| 214 | 655541.7420 | 989055.3970 |
| 215 | 655538.7640 | 989062.4312 |
| 216 | 655536.3043 | 989068.2324 |
| 217 | 655532.8986 | 989076.2649 |
| 218 | 655528.8505 | 989097.8929 |
| 219 | 655535.9589 | 989110.8182 |
| 220 | 655537.0118 | 989112.7327 |
| 221 | 655548.6858 | 989122.6048 |
| 222 | 655554.9973 | 989127.1627 |
| 223 | 655538.2485 | 989167.3892 |
| 224 | 655527.0862 | 989194.1981 |
| 225 | 655523.7368 | 989202.2424 |





Escala: 1:3,000



Sistema de Coordenadas: WGS 1984, UTM  
Zona 17N Proyección - Transversal de Mercator.

### Leyenda

- Punto de Coordenadas
- Alineamiento del Proyecto <sup>1</sup>
- Tramo Soterrado <sup>1</sup>
- Zona Saneada de Municiones sin Detonar dentro del AID<sup>2</sup>
- Trinchera/Pozo de Ataque Oeste<sup>1</sup>
- Campamento<sup>1</sup>
- Límite de Corregimiento
- Área de Influencia Directa (AID)

Promotor:  METRO DE PANAMÁ  REPÚBLICA DE PANAMÁ  
GOBIERNO NACIONAL

Consultor:  CSAGROUP  
EST. 1956

### LOCALIZACIÓN REGIONAL



COORDENADAS UTM DE LA ZONA SANEADA DE  
MUNICIONES SIN DETONAR DENTRO DEL ÁREA DE  
INFLUENCIA DIRECTA DEL PROYECTO

Estudio de Impacto Ambiental Categoría III, Proyecto de Cruce de  
la Línea 3 por debajo del Canal de Panamá



ZONA SANEADA DE MUNICIONES SIN DETONAR DENTRO DEL ÁREA DE INFLUENCIA DIRECTA DEL PROYECTO (AID)

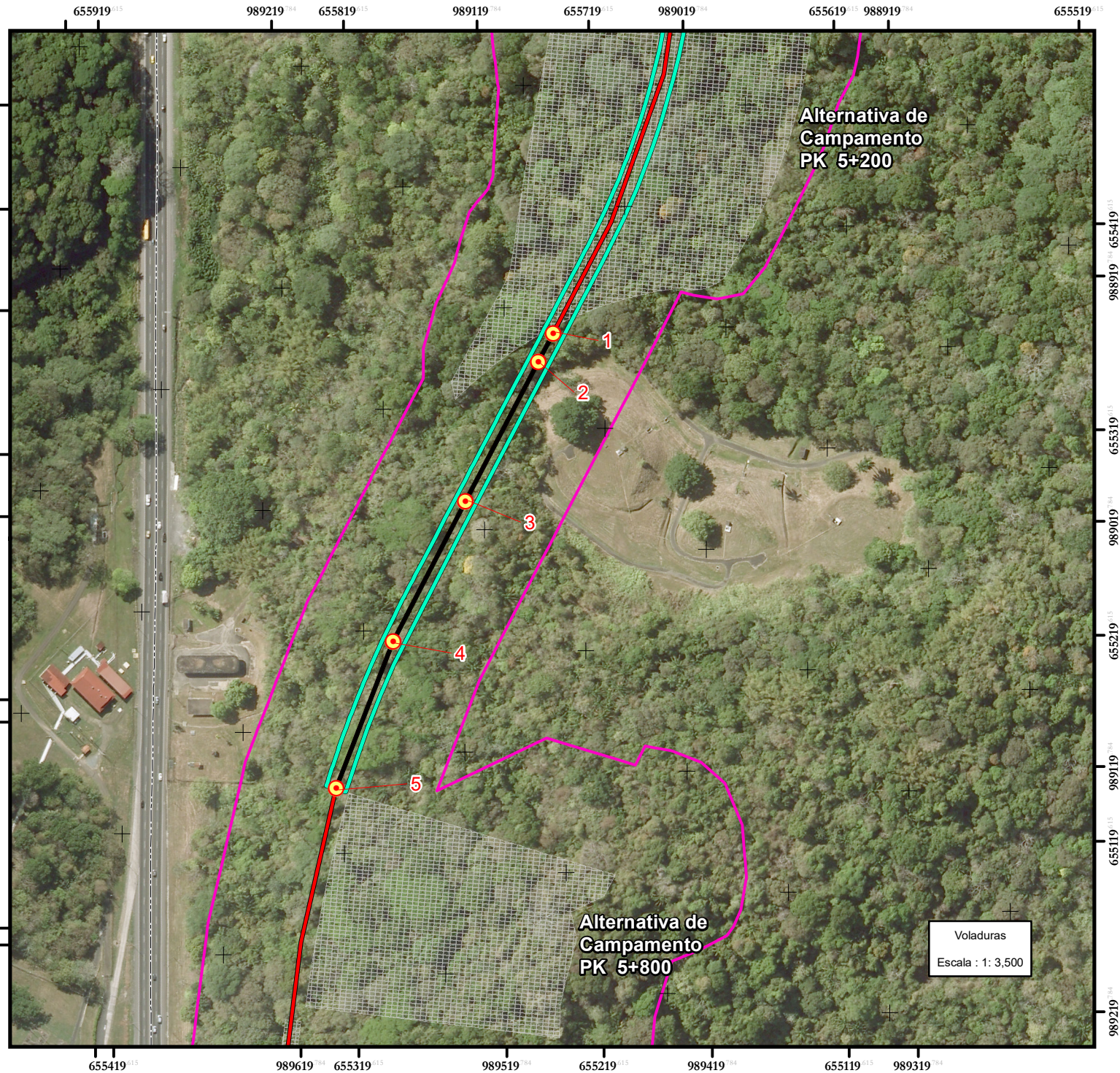
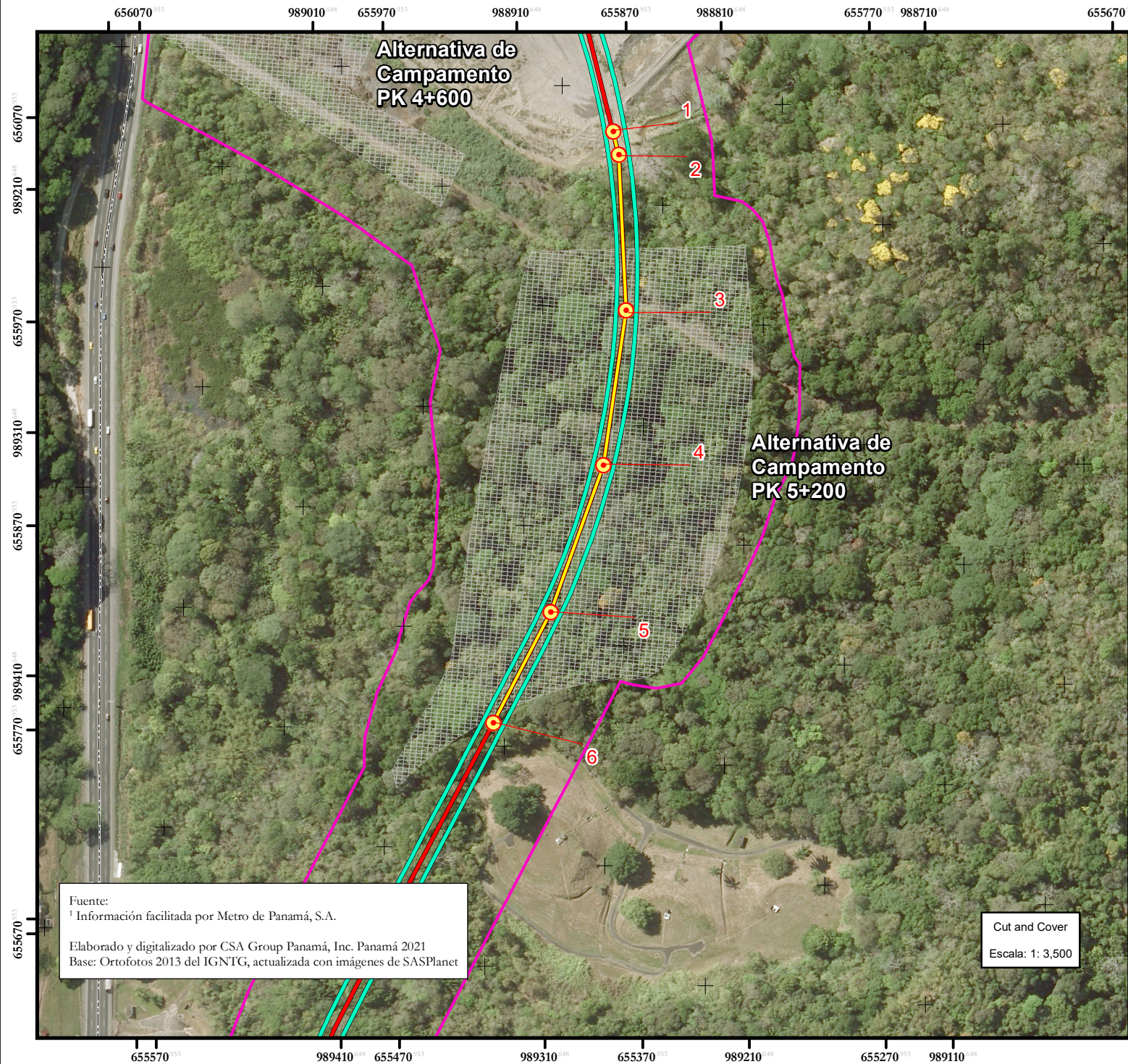
| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 1  | 655497.6614 | 989539.6885 |
| 2  | 655499.5324 | 989537.2054 |
| 3  | 655502.2785 | 989533.5610 |
| 4  | 655504.4884 | 989530.4243 |
| 5  | 655506.9310 | 989526.3708 |
| 6  | 655507.4685 | 989525.3935 |
| 7  | 655513.4621 | 989514.4970 |
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| 9  | 655522.5103 | 989498.0473 |
| 10 | 655524.7543 | 989493.9676 |
| 11 | 655531.7108 | 989481.3204 |
| 12 | 655532.3900 | 989480.0858 |
| 13 | 655538.9351 | 989468.1866 |
| 14 | 655541.2355 | 989464.0043 |
| 15 | 655549.7687 | 989448.4908 |
| 16 | 655549.8956 | 989448.2601 |
| 17 | 655555.0851 | 989438.8255 |
| 18 | 655556.1312 | 989436.8363 |
| 19 | 655557.8623 | 989433.0705 |
| 20 | 655558.2551 | 989432.1317 |
| 21 | 655561.2112 | 989425.0677 |
| 22 | 655565.8997 | 989413.8637 |
| 23 | 655568.5362 | 989407.5634 |
| 24 | 655571.7801 | 989399.8115 |
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| 26 | 655574.5894 | 989393.0983 |
| 27 | 655575.7933 | 989390.2212 |
| 28 | 655583.9096 | 989370.8260 |
| 29 | 655584.3128 | 989369.8624 |
| 30 | 655590.8352 | 989354.2759 |
| 31 | 655591.0565 | 989353.7472 |
| 32 | 655595.2360 | 989343.7596 |
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| 34 | 655599.6229 | 989333.1528 |
| 35 | 655600.2295 | 989331.6788 |

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 36 | 655602.7678 | 989325.5117 |
| 37 | 655612.7641 | 989301.2242 |
| 38 | 655613.9299 | 989298.3917 |
| 39 | 655618.2297 | 989287.9445 |
| 40 | 655618.2630 | 989287.9160 |
| 41 | 655626.2319 | 989281.0847 |
| 42 | 655632.0235 | 989276.1199 |
| 43 | 655632.6938 | 989275.5452 |
| 44 | 655642.5290 | 989261.1908 |
| 45 | 655643.5100 | 989259.7590 |
| 46 | 655646.4302 | 989255.4970 |
| 47 | 655649.4780 | 989251.0488 |
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| 49 | 655656.8266 | 989235.7772 |
| 50 | 655661.8027 | 989225.4359 |
| 51 | 655666.2504 | 989219.1335 |
| 52 | 655668.7320 | 989215.6171 |
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| 54 | 655680.4225 | 989197.4039 |
| 55 | 655680.5030 | 989197.0212 |
| 56 | 655680.7068 | 989196.0518 |
| 57 | 655681.8064 | 989190.8238 |
| 58 | 655683.2061 | 989182.4982 |
| 59 | 655683.7422 | 989179.3092 |
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| 61 | 655688.0478 | 989171.6674 |
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| ID  | ESTE        | NORTE       |
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| 85  | 655847.2124 | 989058.8172 |
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| 102 | 655711.2174 | 989026.1378 |
| 103 | 655698.7472 | 989057.5156 |
| 104 | 655691.5989 | 989077.9385 |
| 105 | 655680.8660 | 989094.8266 |

| ID  | ESTE        | NORTE       |
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| 108 | 655641.5665 | 989141.2611 |
| 109 | 655639.5511 | 989145.0006 |
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| 121 | 655520.4777 | 989210.1612 |
| 122 | 655494.6165 | 989272.9954 |
| 123 | 655485.6971 | 989294.6666 |
| 124 | 655480.8949 | 989306.1422 |
| 125 | 655475.8680 | 989318.1545 |
| 126 | 655461.5363 | 989352.4021 |
| 127 | 655468.4425 | 989365.2498 |
| 128 | 655453.3211 | 989390.0587 |
| 129 | 655446.2921 | 989402.8706 |
| 130 | 655450.0591 | 989412.3252 |
| 131 | 655443.2100 | 989429.6788 |
| 132 | 655431.2935 | 989459.3464 |
| 133 | 655436.3675 | 989465.3252 |
| 134 | 655441.4279 | 989460.0068 |
| 135 | 655460.1196 | 989486.9810 |
| 136 | 655467.0998 | 989497.0543 |





### Leyenda

- Punto de Coordenadas<sup>1</sup>
- Tramo Cut and Cover<sup>1</sup>
- Tramo Voladura<sup>1</sup>
- Tramo Soterrado - Túnel<sup>1</sup>
- Alineamiento del Proyecto<sup>1</sup>
- Campamento<sup>1</sup>
- Límite de Corregimiento
- Área de Influencia Directa (AID)



Escala: 1:3,500



Sistema de Coordenadas: WGS 1984, UTM  
Zona 17N Proyección - Transversal de Mercator.

### LOCALIZACIÓN REGIONAL



### COORDENADAS UTM DE CUT AND COVER Y VOLADURAS

Estudio de Impacto Ambiental Categoría III, Proyecto de Cruce de la Línea 3 por debajo del Canal de Panamá

Promotor:



REPÚBLICA DE PANAMÁ  
GOBIERNO NACIONAL

Consultor:





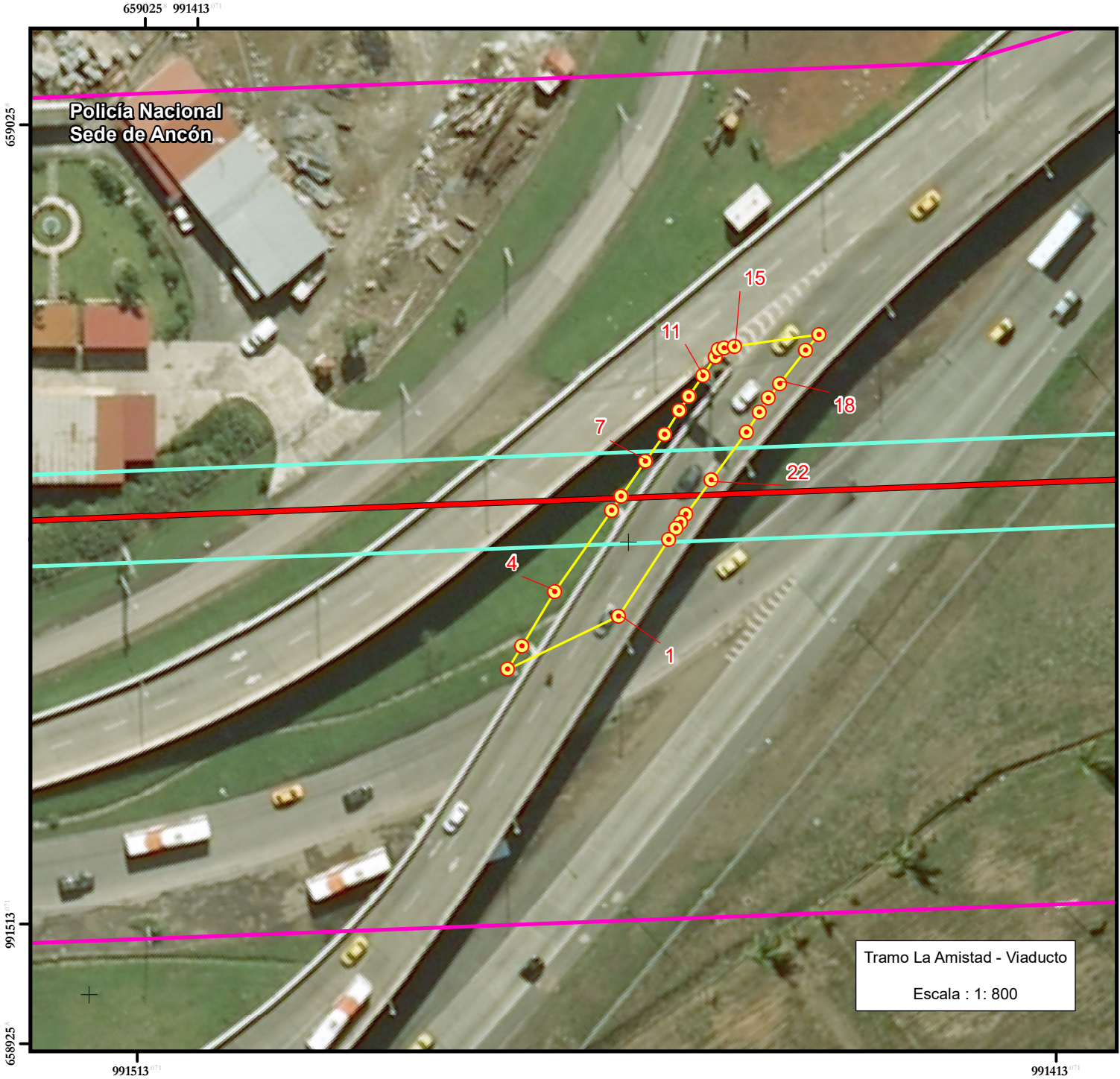
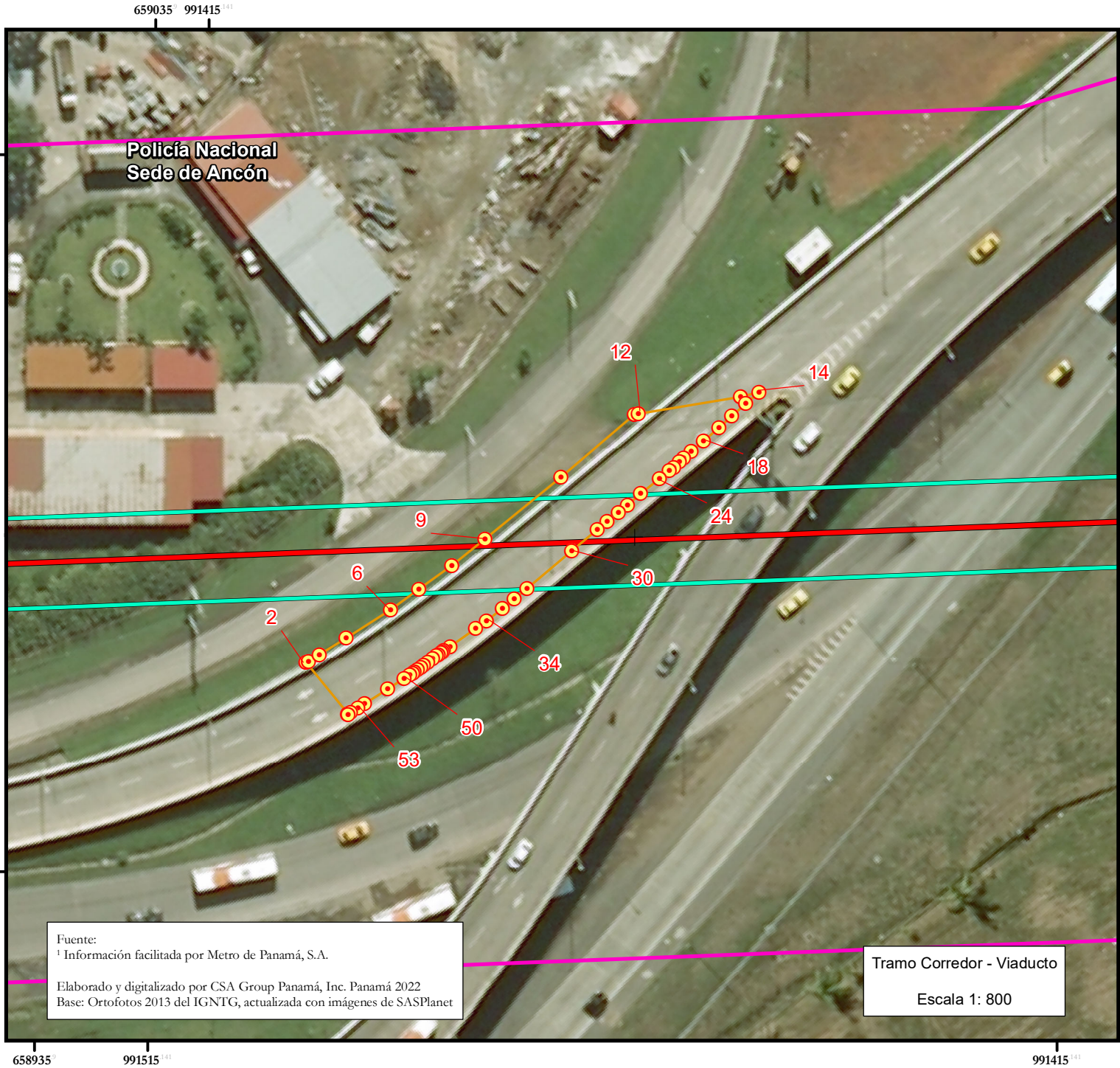
CUT AN COVER

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 1  | 655827.2662 | 988904.8128 |
| 2  | 655813.6105 | 988911.4772 |
| 3  | 655734.1356 | 988971.9069 |
| 4  | 655667.9569 | 989046.6624 |
| 5  | 655617.6105 | 989132.8786 |
| 6  | 655586.8622 | 989206.7274 |

VOLADURA

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 1  | 655586.8622 | 989206.7274 |
| 2  | 655579.1741 | 989225.1922 |
| 3  | 655541.1141 | 989317.6662 |
| 4  | 655502.5132 | 989409.9082 |
| 5  | 655454.3588 | 989497.4541 |





### Leyenda

- Punto de Coordenadas
- Alineamiento del Proyecto<sup>1</sup>
- Tramo Soterrado - Túnel <sup>1</sup>
- Tramo Corredor - Viaducto<sup>1</sup>
- Tramo La Amistad - Viaducto<sup>1</sup>
- Área de Influencia Directa (AID)



Escala: 1:800



Sistema de Coordenadas: WGS 1984, UTM  
Zona 17N Proyección - Transversal de Mercator.

### LOCALIZACIÓN REGIONAL



### COORDENADAS UTM DEL TRAMO CORREDOR Y TRAMO LA AMISTAD - VIADUCTO

Estudio de Impacto Ambiental Categoría III, Proyecto de Cruce de  
la Línea 3 por debajo del Canal de Panamá

Promotor:



Consultor:





TRAMO CORREDOR - VIADUCTO

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 1  | 658942.9581 | 991462.9945 |
| 2  | 658952.4191 | 991462.8184 |
| 3  | 658952.3368 | 991462.4291 |
| 4  | 658952.0762 | 991460.6319 |
| 5  | 658951.4313 | 991456.1857 |
| 6  | 658950.4373 | 991448.7131 |
| 7  | 658950.0729 | 991443.6517 |
| 8  | 658949.6523 | 991437.8099 |
| 9  | 658949.5413 | 991431.7678 |
| 10 | 658949.3143 | 991417.6905 |
| 11 | 658949.4237 | 991403.8047 |
| 12 | 658949.1116 | 991403.3557 |
| 13 | 658941.4934 | 991390.5447 |
| 14 | 658940.3233 | 991388.0865 |
| 15 | 658940.2872 | 991390.5872 |

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 16 | 658940.2278 | 991393.3436 |
| 17 | 658940.1757 | 991395.7578 |
| 18 | 658940.1120 | 991398.7132 |
| 19 | 658940.0613 | 991401.0621 |
| 20 | 658940.0157 | 991402.4803 |
| 21 | 658939.9882 | 991403.2883 |
| 22 | 658939.9889 | 991404.4175 |
| 23 | 658939.9725 | 991405.1809 |
| 24 | 658940.0015 | 991406.9806 |
| 25 | 658940.1129 | 991410.4952 |
| 26 | 658940.0978 | 991412.9587 |
| 27 | 658940.1249 | 991414.6391 |
| 28 | 658940.1582 | 991416.7061 |
| 29 | 658940.1726 | 991418.5126 |
| 30 | 658940.1902 | 991423.2724 |

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 31 | 658940.2090 | 991431.7078 |
| 32 | 658940.2440 | 991434.0965 |
| 33 | 658940.2759 | 991436.2713 |
| 34 | 658940.3187 | 991439.1958 |
| 35 | 658940.4922 | 991441.1016 |
| 36 | 658940.8927 | 991445.5033 |
| 37 | 658940.9954 | 991446.6508 |
| 38 | 658941.0093 | 991446.8256 |
| 39 | 658941.0324 | 991447.1147 |
| 40 | 658941.0742 | 991447.6383 |
| 41 | 658941.0963 | 991447.9158 |
| 42 | 658941.1501 | 991448.5904 |
| 43 | 658941.2187 | 991449.4501 |
| 44 | 658941.2760 | 991450.1683 |
| 45 | 658941.3137 | 991450.6412 |

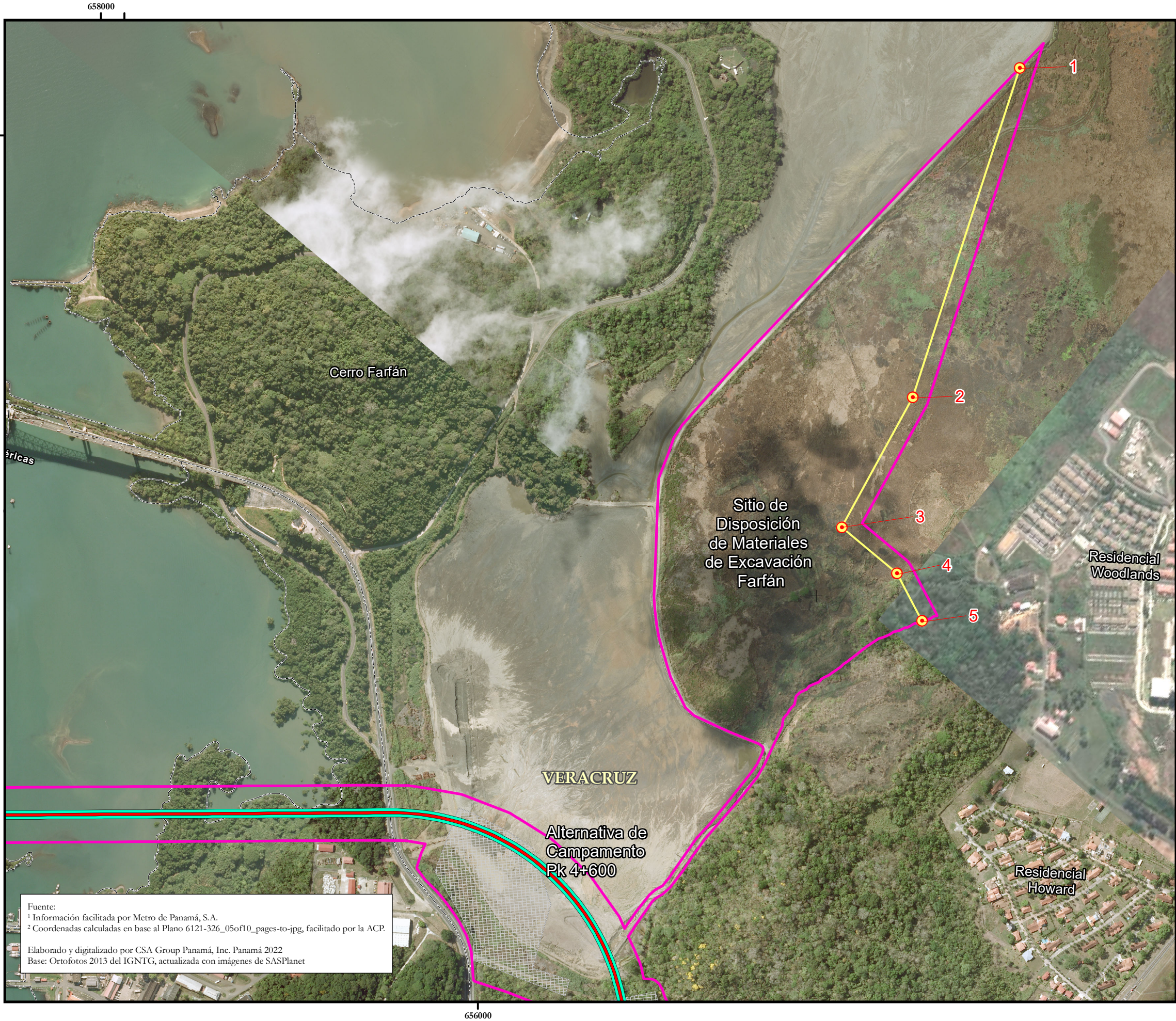
| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 46 | 658941.3613 | 991451.2373 |
| 47 | 658941.4070 | 991451.8104 |
| 48 | 658941.4349 | 991452.0586 |
| 49 | 658941.5042 | 991452.5673 |
| 50 | 658941.6518 | 991453.4525 |
| 51 | 658942.0060 | 991456.3040 |
| 52 | 658942.4865 | 991460.1725 |
| 53 | 658942.6255 | 991461.2916 |
| 54 | 658942.7882 | 991462.6013 |
| 55 | 658942.8646 | 991463.0119 |
| 56 |             |             |

TRAMO LA AMISTAD - VIADUCTO

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 1  | 658918.6020 | 991420.8919 |
| 2  | 658922.9759 | 991437.8696 |
| 3  | 658924.2330 | 991434.1639 |
| 4  | 658927.1480 | 991425.5706 |
| 5  | 658930.7503 | 991412.0767 |
| 6  | 658931.4294 | 991409.6970 |
| 7  | 658933.1036 | 991403.8310 |
| 8  | 658934.2574 | 991399.3246 |
| 9  | 658935.4715 | 991395.5343 |
| 10 | 658936.1357 | 991393.2071 |
| 11 | 658937.1270 | 991389.7338 |
| 12 | 658938.0003 | 991386.6742 |
| 13 | 658938.5644 | 991385.7079 |
| 14 | 658938.1684 | 991384.9329 |
| 15 | 658937.4700 | 991383.6423 |

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 16 | 658931.0052 | 991373.4054 |
| 17 | 658930.5258 | 991376.2792 |
| 18 | 658929.2523 | 991382.0998 |
| 19 | 658928.6852 | 991384.6647 |
| 20 | 658927.9835 | 991386.9240 |
| 21 | 658926.9684 | 991390.1926 |
| 22 | 658924.9591 | 991398.4367 |
| 23 | 658923.5273 | 991404.3115 |
| 24 | 658923.2231 | 991405.5596 |
| 25 | 658922.9498 | 991406.6808 |
| 26 | 658922.4181 | 991408.4462 |





Escala: 1:8,500

0 150 300 450 m

Sistema de Coordenadas: WGS 1984, UTM  
Zona 17N Proyección - Transversal de Mercator.

**Leyenda**

- Punto de Coordenadas<sup>2</sup>
- Alineamiento Central del Dique a Construir
- Alineamiento del Proyecto <sup>1</sup>
- Tramo Soterrado - Túnel<sup>1</sup>
- Campamento<sup>1</sup>
- Límite de Corregimiento
- Área de Influencia Directa (AID)

Promotor:  METRO DE PANAMÁ  REPÚBLICA DE PANAMÁ  
GOBIERNO NACIONAL

Consultor:  CSAGROUP EST. 1956

**LOCALIZACIÓN REGIONAL**



**COORDENADAS UTM DEL ALINEAMIENTO CENTRAL DEL DIQUE A CONSTRUIR DENTRO DEL SITIO DE DISPOSICIÓN DE FARFÁN**

Estudio de Impacto Ambiental Categoría III, Proyecto de Cruce de la Línea 3 por debajo del Canal de Panamá

Fuente:  
<sup>1</sup> Información facilitada por Metro de Panamá, S.A.  
<sup>2</sup> Coordenadas calculadas en base al Plano 6121-326\_05of10\_pages-to-jpg, facilitado por la ACP.  
Elaborado y digitalizado por CSA Group Panamá, Inc. Panamá 2022  
Base: Ortofotos 2013 del IGNITG, actualizada con imágenes de SASPlanet



ALINEAMIENTO CENTRAL DEL DIQUE A CONSTRUIR

| ID | ESTE       | NORTE      |
|----|------------|------------|
| 1  | 656389.658 | 986757.693 |
| 2  | 656094.935 | 987325.892 |
| 3  | 656033.019 | 987642.109 |
| 4  | 655875.939 | 987642.109 |
| 5  | 655767.779 | 987687.278 |



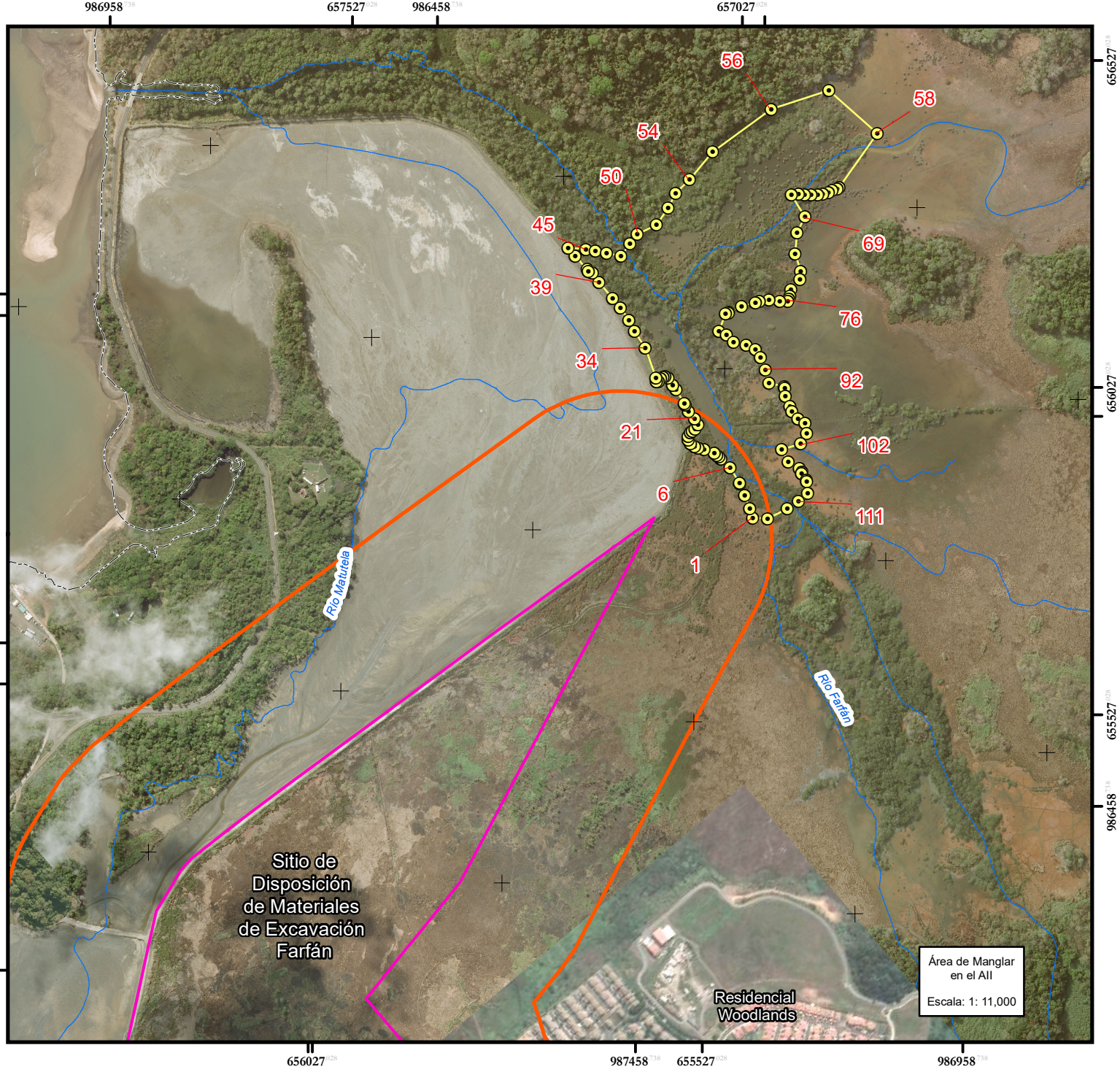
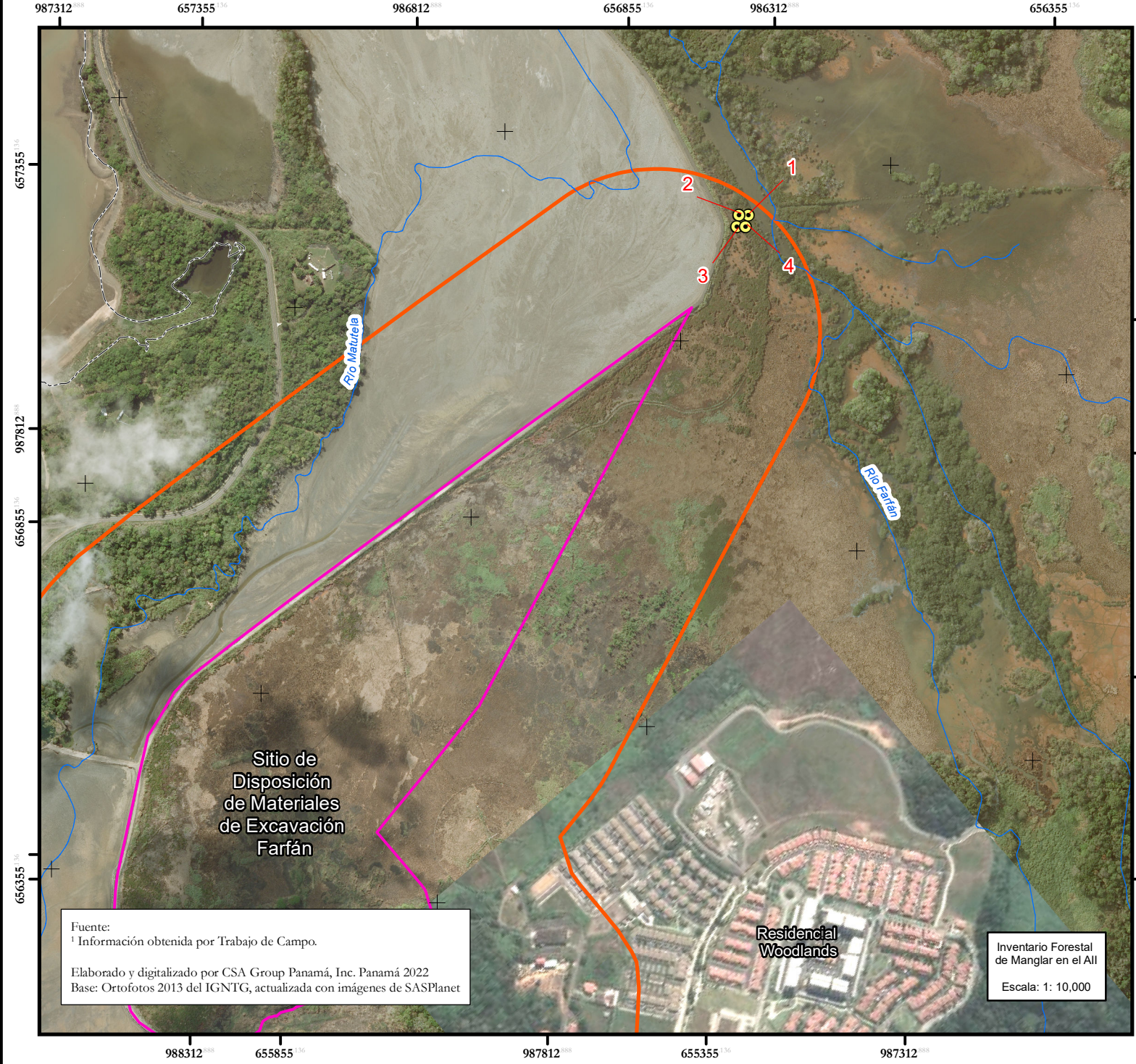




ALINEAMIENTO DEL DIQUE EXISTENTE EN EL SITIO DE DISPOSICIÓN DE FARFÁN

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 1  | 656387.5879 | 988068.8807 |
| 2  | 656403.5511 | 988046.2146 |
| 3  | 656418.8970 | 988019.7563 |
| 4  | 656438.0352 | 987965.3402 |
| 5  | 656446.7665 | 987938.8818 |
| 6  | 656452.3228 | 987912.1588 |
| 7  | 656455.2332 | 987870.3546 |
| 8  | 656450.5520 | 987784.5324 |
| 9  | 656446.5019 | 987710.2813 |
| 10 | 656434.5957 | 987518.7226 |
| 11 | 656421.1019 | 987309.9659 |
| 12 | 656406.2411 | 987067.9599 |
| 13 | 656394.3348 | 986891.5707 |
| 14 | 656392.3320 | 986838.7540 |





**Leyenda**

- Punto de Coordenadas
- Inventario Forestal de Manglar<sup>1</sup>
- Área de Manglar<sup>1</sup>
- Límite de Corregimiento
- Área de Influencia Directa (AID)
- Área de Influencia Indirecta (AII)



Escala: 1:10,000

0 500 m

Sistema de Coordenadas: WGS 1984, UTM  
Zona 17N Proyección - Transversal de Mercator.

**LOCALIZACIÓN REGIONAL**



**COORDENADAS UTM DEL INVENTARIO FORESTAL Y ÁREA DE MANGLAR UBICADO EN EL ÁREA DE INFLUENCIA INDIRECTA DEL SITIO DE DISPOSICIÓN DE EXCAVACIÓN FARFÁN**

Estudio de Impacto Ambiental Categoría III, Proyecto de Cruce de la Línea 3 por debajo del Canal de Panamá

Promotor:  **METRO DE PANAMÁ**  **REPÚBLICA DE PANAMÁ**  
GOBIERNO NACIONAL

Consultor:  **CSAGROUP**  
EST. 1956



PARCELA DE MANGLAR EN EL ÁREA DE INFLUENCIA INDIRECTA (AII)

| ID | ESTE   | NORTE  |
|----|--------|--------|
| 1  | 656453 | 986570 |
| 2  | 656463 | 986583 |
| 3  | 656450 | 986600 |
| 4  | 656440 | 986587 |

ÁREA DE MANGLAR EN EL ÁREA DE INFLUENCIA INDIRECTA (AII)

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 1  | 656264.0803 | 986607.4050 |
| 2  | 656281.4476 | 986599.9360 |
| 3  | 656307.4925 | 986591.4216 |
| 4  | 656332.4455 | 986582.9075 |
| 5  | 656333.5290 | 986582.9117 |
| 6  | 656368.2219 | 986577.6646 |
| 7  | 656394.2191 | 986579.9178 |
| 8  | 656400.4068 | 986579.9418 |
| 9  | 656404.9958 | 986582.1891 |
| 10 | 656410.9049 | 986583.6002 |
| 11 | 656430.3959 | 986594.1835 |
| 12 | 656440.5383 | 986600.7099 |
| 13 | 656446.4473 | 986605.2079 |
| 14 | 656456.2369 | 986607.4127 |
| 15 | 656465.0564 | 986606.0016 |
| 16 | 656470.6126 | 986601.7683 |
| 17 | 656473.0821 | 986593.7426 |
| 18 | 656472.4647 | 986588.3627 |
| 19 | 656472.5529 | 986581.4835 |
| 20 | 656476.1689 | 986570.6356 |
| 21 | 656488.6925 | 986569.0481 |
| 22 | 656507.2134 | 986569.0481 |
| 23 | 656522.9120 | 986565.3439 |
| 24 | 656524.8523 | 986565.5203 |
| 25 | 656557.3079 | 986559.6995 |

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 26 | 656568.7732 | 986558.9939 |
| 27 | 656585.1774 | 986557.9356 |
| 28 | 656592.0566 | 986560.4050 |
| 29 | 656593.1150 | 986564.2856 |
| 30 | 656593.1150 | 986570.2828 |
| 31 | 656592.2330 | 986576.8092 |
| 32 | 656595.2316 | 986579.8078 |
| 33 | 656601.6223 | 986574.7626 |
| 34 | 656661.1819 | 986553.0252 |
| 35 | 656699.7654 | 986549.3431 |
| 36 | 656724.4736 | 986543.3080 |
| 37 | 656753.8008 | 986539.5893 |
| 38 | 656778.4817 | 986540.4513 |
| 39 | 656820.1391 | 986539.8465 |
| 40 | 656843.2893 | 986537.6372 |
| 41 | 656855.5888 | 986540.5951 |
| 42 | 656851.4193 | 986542.6460 |
| 43 | 656891.6087 | 986542.9089 |
| 44 | 656912.3890 | 986543.0449 |
| 45 | 656887.4497 | 986518.0815 |
| 46 | 656872.7040 | 986505.5911 |
| 47 | 656855.7834 | 986490.9890 |
| 48 | 656831.9118 | 986473.5323 |
| 49 | 656839.5340 | 986443.7250 |
| 50 | 656844.6280 | 986420.1240 |

| ID | ESTE        | NORTE       |
|----|-------------|-------------|
| 51 | 656834.7836 | 986379.0588 |
| 52 | 656844.9517 | 986339.3159 |
| 53 | 656858.5622 | 986309.1095 |
| 54 | 656860.7946 | 986269.8454 |
| 55 | 656873.5480 | 986199.6169 |
| 56 | 656863.7497 | 986054.9147 |
| 57 | 656818.3393 | 985943.0906 |
| 58 | 656691.4831 | 985923.9899 |
| 59 | 656657.7005 | 986052.0174 |
| 60 | 656657.6847 | 986056.1514 |
| 61 | 656661.8066 | 986066.5027 |
| 62 | 656663.8557 | 986074.7789 |
| 63 | 656667.9777 | 986085.1302 |
| 64 | 656674.1880 | 986093.4223 |
| 65 | 656682.4714 | 986103.7898 |
| 66 | 656690.7547 | 986114.1567 |
| 67 | 656699.0466 | 986122.4574 |
| 68 | 656706.7851 | 986134.7266 |
| 69 | 656655.7666 | 986141.8397 |
| 70 | 656643.0386 | 986173.9892 |
| 71 | 656612.3129 | 986204.2802 |
| 72 | 656578.7427 | 986217.8575 |
| 73 | 656567.8611 | 986229.6566 |
| 74 | 656563.4270 | 986255.4759 |
| 75 | 656554.7167 | 986266.2065 |

| ID  | ESTE        | NORTE       |
|-----|-------------|-------------|
| 76  | 656551.4453 | 986271.5764 |
| 77  | 656549.2615 | 986275.8737 |
| 78  | 656558.9634 | 986288.8289 |
| 79  | 656575.1626 | 986302.8870 |
| 80  | 656585.9314 | 986320.1525 |
| 81  | 656589.1571 | 986326.6239 |
| 82  | 656600.9718 | 986353.5826 |
| 83  | 656608.4523 | 986380.5230 |
| 84  | 656608.4482 | 986381.5995 |
| 85  | 656609.5109 | 986386.9860 |
| 86  | 656592.0491 | 986419.2127 |
| 87  | 656576.9046 | 986412.6952 |
| 88  | 656556.3215 | 986411.5388 |
| 89  | 656535.7920 | 986396.3886 |
| 90  | 656517.4089 | 986386.6288 |
| 91  | 656497.8931 | 986389.7829 |
| 92  | 656472.9376 | 986398.2979 |
| 93  | 656447.9701 | 986410.0427 |
| 94  | 656423.1229 | 986390.5694 |
| 95  | 656419.8639 | 986392.7097 |
| 96  | 656407.9113 | 986401.2754 |
| 97  | 656385.1322 | 986407.6461 |
| 98  | 656375.3672 | 986410.8380 |
| 99  | 656356.9465 | 986410.7667 |
| 100 | 656340.7098 | 986406.3972 |



ÁREA DE MANGLAR EN EL ÁREA DE INFLUENCIA INDIRECTA (AII)

| ID  | ESTE        | NORTE       |
|-----|-------------|-------------|
| 101 | 656323.3344 | 986416.0182 |
| 102 | 656314.5757 | 986439.6670 |
| 103 | 656330.6913 | 986475.2541 |
| 104 | 656303.5771 | 986481.6079 |
| 105 | 656278.6876 | 986472.9000 |
| 106 | 656270.0192 | 986472.8664 |
| 107 | 656267.8397 | 986476.0874 |
| 108 | 656252.6663 | 986477.1051 |
| 109 | 656249.4117 | 986478.1688 |
| 110 | 656230.9427 | 986491.0148 |
| 111 | 656230.8470 | 986515.7739 |
| 112 | 656232.9101 | 986542.6937 |
| 113 | 656243.5803 | 986585.7938 |