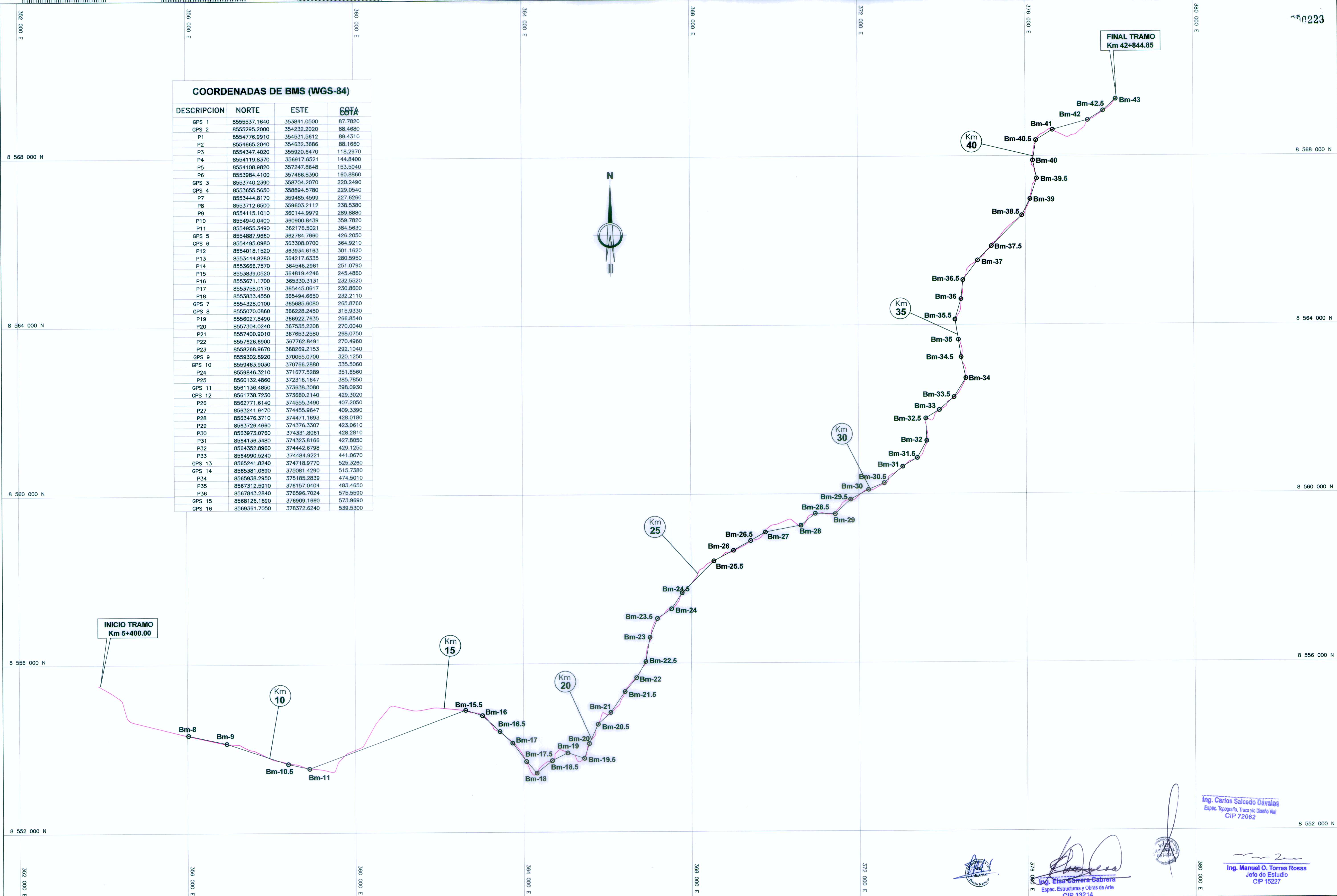


| COORDENADAS DE BMS (WGS-84) |              |             |          |
|-----------------------------|--------------|-------------|----------|
| DESCRIPCION                 | NORTE        | ESTE        | COTA     |
| GPS 1                       | 855537.1640  | 353841.0500 | 87.7820  |
| GPS 2                       | 8555295.2000 | 354232.2020 | 88.4680  |
| P1                          | 8554776.9910 | 354531.5612 | 89.4310  |
| P2                          | 8554665.2040 | 354632.3686 | 88.1660  |
| P3                          | 8554347.4020 | 355920.6470 | 118.2970 |
| P4                          | 8554119.8370 | 356917.6521 | 144.8400 |
| P5                          | 8554108.9820 | 357247.8648 | 153.5040 |
| P6                          | 8553984.4100 | 357466.8390 | 160.8860 |
| GPS 3                       | 8553740.2390 | 358704.2070 | 220.2490 |
| GPS 4                       | 8553655.5650 | 358894.5780 | 229.0540 |
| P7                          | 8553444.8170 | 359485.4599 | 227.6260 |
| P8                          | 8553712.6500 | 359603.2112 | 238.5380 |
| P9                          | 8554115.1010 | 360144.9979 | 289.8880 |
| P10                         | 8554940.0400 | 360900.8439 | 359.7820 |
| P11                         | 8554955.3490 | 362176.5021 | 384.5630 |
| GPS 5                       | 8554887.9660 | 362784.7660 | 426.2050 |
| GPS 6                       | 8554495.0980 | 363308.0700 | 364.9210 |
| P12                         | 8554018.1520 | 363934.6163 | 301.1620 |
| P13                         | 8553444.8280 | 364217.6335 | 280.5950 |
| P14                         | 8553666.7570 | 364546.2961 | 251.0790 |
| P15                         | 8553839.0520 | 364819.4246 | 245.4860 |
| P16                         | 8553671.1700 | 365330.3131 | 232.5520 |
| P17                         | 8553758.0170 | 365445.0617 | 230.8600 |
| P18                         | 8553833.4550 | 365494.6650 | 232.2110 |
| GPS 7                       | 8554328.0100 | 365685.6080 | 265.8760 |
| GPS 8                       | 8555070.0860 | 366228.2450 | 315.9330 |
| P19                         | 8556027.8490 | 366922.7635 | 266.8540 |
| P20                         | 8557304.0240 | 367535.2208 | 270.0040 |
| P21                         | 8557400.9010 | 367653.2580 | 268.0750 |
| P22                         | 8557626.6900 | 367762.8491 | 270.4960 |
| P23                         | 8558268.9670 | 368269.2153 | 292.1040 |
| GPS 9                       | 8559302.8920 | 370055.0700 | 320.1250 |
| GPS 10                      | 8559463.9030 | 370766.2880 | 335.5060 |
| P24                         | 8559846.3210 | 371677.5289 | 351.6560 |
| P25                         | 8560132.4860 | 372316.1647 | 385.7850 |
| GPS 11                      | 8561136.4850 | 373638.3080 | 398.0930 |
| GPS 12                      | 8561738.7230 | 373660.2140 | 429.3020 |
| P26                         | 8562771.6140 | 374555.3490 | 407.2050 |
| P27                         | 8563241.9470 | 374455.9647 | 409.3390 |
| P28                         | 8563476.3710 | 374471.1693 | 428.0180 |
| P29                         | 8563726.4660 | 374376.3307 | 423.0610 |
| P30                         | 8563973.0760 | 374331.8061 | 428.2810 |
| P31                         | 8564136.3480 | 374323.8166 | 427.8050 |
| P32                         | 8564352.8960 | 374442.6798 | 429.1250 |
| P33                         | 8564990.5240 | 374484.9221 | 441.0670 |
| GPS 13                      | 8565241.8240 | 374718.9770 | 525.3260 |
| GPS 14                      | 8565381.0690 | 375081.4290 | 515.7380 |
| P34                         | 8565938.2950 | 375185.2839 | 474.5010 |
| P35                         | 8567312.5910 | 376157.0404 | 483.4650 |
| P36                         | 8567843.2840 | 376596.7024 | 575.5590 |
| GPS 15                      | 8568126.1690 | 376909.1660 | 573.9690 |
| GPS 16                      | 8569361.7050 | 378372.6240 | 539.5300 |



Ing. Carlos Salcedo Dávalos  
Espec. Topografía, Trazo y/o Diseño Vial  
CIP 72062

Ing. Elsa Carrera Cabrera  
Espec. Estructuras y Obras de Arte  
CIP 13214

Ing. Manuel O. Torres Rosas  
Jefe de Estudio  
CIP 15227

**PERU** Ministerio de Transportes y Comunicaciones  
 Viceministerio de Transportes  
**Provias Nacional**

PROYECTISTA:  
**CESEL INGENIEROS**  
 CERTIFICADO EN: ISO 9001, ISO 14001, OHSAS 18001

Diseñó: ING. C. SALCEDO D. CIP 72062  
 Dibujó: A. C. M.  
 Verificó: ING. O. TORRES R. CIP 15227  
 Presentó: ING. O. TORRES R. CIP 15227

Aprobó:

| REVISIONES |          |                           |
|------------|----------|---------------------------|
| Nº         | FECHA    | DESCRIPCION               |
| 0          | 19/04/11 | EMITIDO PARA CONSTRUCCION |

**ESTUDIO DEFINITIVO DE REHABILITACIÓN Y MEJORAMIENTO DE LA CARRETERA CAÑETE - LUNAHUANA**  
 CONTRATO N° 051 - 2010 - MTC/20

PLANO: **RED DE BMS**  
 UBICACION: **Km 5+400 42+844.85**  
 ESCALA: **1:40,000**  
 FECHA: **ABRIL 2011**  
 PLANO N°: **051-10-BM-001** REV. 0