

Příloha č. 4: Originální zápisníky měření

Nivelační přístroj Leica LS15

| 2010A_Bi16_35 | | | 2016 11.02. | | |
|----------------|---|---------|-------------|--------|----------|
| Počátek pořadu | | | | | |
| 2010A | | | | | 0.00000 |
| 2010A | B | 0.84687 | 12.57 | | 0.00000 |
| 1 | F | 1.85062 | 12.64 | | |
| 1 | | | | 25.21 | -1.00375 |
| 1 | B | 1.68465 | 21.90 | | -1.00375 |
| 2 | F | 0.55069 | 22.23 | | |
| 2 | | | | 69.34 | 0.13021 |
| 2 | B | 2.54796 | 23.59 | | 0.13021 |
| 3 | F | 0.98351 | 23.70 | | |
| 3 | | | | 116.63 | 1.69466 |
| 3 | B | 1.65039 | 19.93 | | 1.69466 |
| 4 | F | 1.15057 | 19.91 | | |
| 4 | | | | 156.47 | 2.19448 |
| 4 | B | 1.43514 | 20.66 | | 2.19448 |
| 5 | F | 1.78674 | 20.63 | | |
| 5 | | | | 197.76 | 1.84288 |
| 5 | B | 1.66818 | 20.09 | | 1.84288 |
| Bi16_35 | F | 1.22483 | 19.76 | | |
| Bi16_35 | | | | 237.62 | 2.28623 |

| Bi16_35_2010A | | | 2016 11.03. | | |
|----------------|---|---------|-------------|--------|----------|
| Počátek pořadu | | | | | |
| Bi35 | | | | | 0.00000 |
| Bi35 | B | 1.23561 | 19.65 | | 0.00000 |
| 1 | F | 1.67737 | 20.22 | | |
| 1 | | | | 39.87 | -0.44177 |
| 1 | B | 1.80542 | 20.63 | | -0.44177 |
| 2 | F | 1.45574 | 20.67 | | |
| 2 | | | | 81.17 | -0.09208 |
| 2 | B | 1.17239 | 19.91 | | -0.09208 |
| 3 | F | 1.67310 | 19.91 | | |
| 3 | | | | 120.99 | -0.59279 |
| 3 | B | 1.04337 | 23.74 | | -0.59279 |
| 4 | F | 2.60480 | 23.55 | | |
| 4 | | | | 168.28 | -2.15422 |
| 4 | B | 0.53677 | 22.18 | | -2.15422 |
| 5 | F | 1.67380 | 21.98 | | |
| 5 | | | | 212.44 | -3.29125 |
| 5 | B | 1.84231 | 12.48 | | -3.29125 |
| 2010A | F | 0.83717 | 12.69 | | |
| 2010A | | | | 237.61 | -2.28612 |

| 2013_2010A | | | 2016 11.03. | | |
|----------------|---|---------|-------------|-------|---------|
| Počátek pořadu | | | | | |
| 2013 | | | | | 0.00000 |
| 2013 | B | 1.71929 | 29.00 | | 0.00000 |
| 1 | F | 0.79567 | 29.28 | | |
| 1 | | | | 58.28 | 0.92362 |
| 1 | B | 1.91728 | 19.86 | | 0.92362 |
| 2 | F | 1.02751 | 19.77 | | |
| 2 | | | | 97.91 | 1.81339 |
| 2 | B | 1.89082 | 19.67 | | 1.81339 |

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|----------------|---|---------|-------------|--------|----------|
| 3 | F | 1.07809 | 19.97 | | |
| 3 | | | | 137.55 | 2.62612 |
| 3 | B | 1.81109 | 11.88 | | 2.62612 |
| 2010A | F | 0.91744 | 12.07 | | |
| 2010A | | | | 161.49 | 3.51976 |
| 2010A_1858 | | | 2016 11.29. | | |
| Počátek pořadu | | | | | |
| 2010A | | | | | 0.00000 |
| 2010A | B | 2.01931 | 30.04 | | 0.00000 |
| 1 | F | 0.92212 | 30.03 | | |
| 1 | | | | 60.08 | 1.09719 |
| 1 | B | 2.40807 | 32.61 | | 1.09719 |
| 2 | F | 0.59456 | 32.37 | | |
| 2 | | | | 125.06 | 2.91070 |
| 2 | B | 1.83142 | 16.14 | | 2.91070 |
| 3 | F | 1.00510 | 16.33 | | |
| 3 | | | | 157.52 | 3.73702 |
| 3 | B | 1.93718 | 10.75 | | 3.73702 |
| 4 | F | 0.95470 | 10.80 | | |
| 4 | | | | 179.07 | 4.71950 |
| 4 | B | 1.95184 | 14.00 | | 4.71950 |
| 5 | F | 0.95468 | 13.80 | | |
| 5 | | | | 206.87 | 5.71666 |
| 5 | B | 1.96668 | 10.02 | | 5.71666 |
| 6 | F | 1.14983 | 9.96 | | |
| 6 | | | | 226.85 | 6.53352 |
| 6 | B | 2.01473 | 10.24 | | 6.53352 |
| 7 | F | 1.03869 | 10.19 | | |
| 7 | | | | 247.28 | 7.50956 |
| 7 | B | 1.52656 | 9.88 | | 7.50956 |
| 1858 | F | 1.06374 | 10.17 | | |
| 1858 | | | | 267.33 | 7.97238 |
| 1858_2013 | | | 2016 11.29. | | |
| Počátek pořadu | | | | | |
| 1858 | | | | | 0.00000 |
| 1858 | B | 1.06379 | 10.17 | | 0.00000 |
| 1 | F | 1.52766 | 9.88 | | |
| 1 | | | | 20.05 | -0.46387 |
| 1 | B | 1.01825 | 10.27 | | -0.46387 |
| 2 | F | 1.99264 | 10.19 | | |
| 2 | | | | 40.51 | -1.43826 |
| 2 | B | 1.14772 | 9.93 | | -1.43826 |
| 3 | F | 1.95723 | 9.92 | | |
| 3 | | | | 60.36 | -2.24777 |
| 3 | B | 0.91350 | 13.87 | | -2.24777 |
| 4 | F | 1.91977 | 14.03 | | |
| 4 | | | | 88.26 | -3.25404 |
| 4 | B | 0.96956 | 10.76 | | -3.25404 |
| 5 | F | 1.95307 | 10.80 | | |
| 5 | | | | 109.81 | -4.23755 |
| 5 | B | 1.01775 | 16.15 | | -4.23755 |
| 6 | F | 1.84409 | 16.30 | | |
| 6 | | | | 142.26 | -5.06389 |
| 6 | B | 0.58196 | 32.42 | | -5.06389 |
| 7 | F | 2.39440 | 32.56 | | |
| 7 | | | | 207.24 | -6.87633 |
| 7 | B | 0.93373 | 29.98 | | -6.87633 |
| 8 | F | 2.02979 | 30.05 | | |
| 8 | | | | 267.27 | -7.97239 |

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|------|---|---------|-------|--------|-----------|
| 8 | B | 0.93368 | 12.12 | | -7.97239 |
| 9 | F | 1.83203 | 11.98 | | |
| 9 | | | | 291.37 | -8.87075 |
| 9 | B | 1.12509 | 20.00 | | -8.87075 |
| 10 | F | 1.93826 | 19.69 | | |
| 10 | | | | 331.05 | -9.68391 |
| 10 | B | 1.05686 | 19.65 | | -9.68391 |
| 11 | F | 1.94091 | 19.91 | | |
| 11 | | | | 370.61 | -10.56797 |
| 11 | B | 0.84198 | 29.18 | | -10.56797 |
| 2013 | F | 1.76607 | 29.11 | | |
| 2013 | | | | 428.90 | -11.49205 |

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|----------------|---|---------|-------------|--------|----------|
| 2010A_2013 | | | 2016 11.30. | | |
| Počátek pořadu | | | | | |
| 2010A | | | | | 0.00000 |
| 2010A | B | 0.89804 | 12.11 | | 0.00000 |
| 1 | F | 1.79255 | 11.84 | | |
| 1 | | | | 23.94 | -0.89452 |
| 1 | B | 1.08103 | 19.94 | | -0.89452 |
| 2 | F | 1.89514 | 19.62 | | |
| 2 | | | | 63.50 | -1.70863 |
| 2 | B | 1.03480 | 19.79 | | -1.70863 |
| 3 | F | 1.92202 | 19.87 | | |
| 3 | | | | 103.16 | -2.59586 |
| 3 | B | 0.82343 | 29.26 | | -2.59586 |
| 2013 | F | 1.74698 | 29.06 | | |
| 2013 | | | | 161.49 | -3.51941 |

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|----------------|---|---------|-------------|--------|----------|
| 2010A_Bi16_36 | | | 2016 11.30. | | |
| Počátek pořadu | | | | | |
| 2010A | | | | | 0.00000 |
| 2010A | B | 0.89499 | 11.99 | | 0.00000 |
| 1 | F | 1.79413 | 11.98 | | |
| 1 | | | | 23.97 | -0.89915 |
| 1 | B | 1.14862 | 34.64 | | -0.89915 |
| 2 | F | 1.63800 | 34.83 | | |
| 2 | | | | 93.44 | -1.38853 |
| 2 | B | 1.40515 | 22.00 | | -1.38853 |
| 3 | F | 1.51888 | 21.82 | | |
| 3 | | | | 137.27 | -1.50226 |
| 3 | B | 1.28893 | 15.89 | | -1.50226 |
| 4 | F | 1.40484 | 16.15 | | |
| 4 | | | | 169.32 | -1.61817 |
| 4 | B | 2.10344 | 34.92 | | -1.61817 |
| 5 | F | 0.69947 | 34.84 | | |
| 5 | | | | 239.08 | -0.21421 |
| 5 | B | 1.84543 | 15.95 | | -0.21421 |
| 6 | F | 1.08829 | 15.71 | | |
| 6 | | | | 270.74 | 0.54294 |
| 6 | B | 2.18086 | 26.72 | | 0.54294 |
| 7 | F | 1.10101 | 27.01 | | |
| 7 | | | | 324.47 | 1.62280 |
| 7 | B | 1.58665 | 20.82 | | 1.62280 |
| Bi16_36 | F | 0.79811 | 20.73 | | |
| Bi16_36 | | | | 366.01 | 2.41134 |

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|-----------------|---|---------|-------------|--|---------|
| Bi16_36_Bi16_35 | | | 2016 11.30. | | |
| Počátek pořadu | | | | | |
| Bi16_36 | | | | | 0.00000 |
| Bi16_36 | B | 0.94469 | 24.83 | | 0.00000 |

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|---------|---|---------|-------|--------|----------|
| 1 | F | 1.64339 | 25.06 | | |
| 1 | | | | 49.89 | -0.69870 |
| 1 | B | 1.47433 | 20.26 | | -0.69870 |
| 2 | F | 1.48863 | 20.59 | | |
| 2 | | | | 90.74 | -0.71300 |
| 2 | B | 1.48473 | 19.92 | | -0.71300 |
| 3 | F | 1.33881 | 19.96 | | |
| 3 | | | | 130.62 | -0.56708 |
| 3 | B | 1.62870 | 20.02 | | -0.56708 |
| Bi16_35 | F | 1.18693 | 19.74 | | |
| Bi16_35 | | | | 170.39 | -0.12531 |

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|----------------|---|---------|-------|--------|----------|
| Bi16_35_2013 | | | 2016 | 11.30. | |
| Počátek pořadu | | | | | |
| Bi16_35 | | | | | 0.00000 |
| Bi16_35 | B | 1.18021 | 19.81 | | 0.00000 |
| 1 | F | 1.62512 | 20.02 | | |
| 1 | | | | 39.83 | -0.44490 |
| 1 | B | 1.80080 | 20.68 | | -0.44490 |
| 2 | F | 1.45107 | 20.69 | | |
| 2 | | | | 81.20 | -0.09517 |
| 2 | B | 1.15437 | 19.86 | | -0.09517 |
| 3 | F | 1.64834 | 19.98 | | |
| 3 | | | | 121.04 | -0.58914 |
| 3 | B | 0.94814 | 23.75 | | -0.58914 |
| 4 | F | 2.51667 | 23.52 | | |
| 4 | | | | 168.31 | -2.15766 |
| 4 | B | 0.56349 | 22.15 | | -2.15766 |
| 5 | F | 1.69138 | 21.99 | | |
| 5 | | | | 212.44 | -3.28555 |
| 5 | B | 1.26532 | 22.77 | | -3.28555 |
| 6 | F | 1.97295 | 22.58 | | |
| 6 | | | | 257.80 | -3.99319 |
| 6 | B | 1.05114 | 19.69 | | -3.99319 |
| 7 | F | 1.93916 | 19.81 | | |
| 7 | | | | 297.29 | -4.88121 |
| 7 | B | 0.81676 | 29.26 | | -4.88121 |
| 2013 | F | 1.74174 | 29.16 | | |
| 2013 | | | | 355.71 | -5.80618 |

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|----------------|---|---------|-------|--------|---------|
| 2013_1858 | | | 2016 | 11.30. | |
| Počátek pořadu | | | | | |
| 2013 | | | | | 0.00000 |
| 2013 | B | 1.74963 | 29.19 | | 0.00000 |
| 1 | F | 0.82225 | 29.25 | | |
| 1 | | | | 58.44 | 0.92738 |
| 1 | B | 1.92684 | 19.72 | | 0.92738 |
| 2 | F | 1.04429 | 19.77 | | |
| 2 | | | | 97.94 | 1.80993 |
| 2 | B | 1.95670 | 19.72 | | 1.80993 |
| 3 | F | 1.14324 | 20.01 | | |
| 3 | | | | 137.67 | 2.62338 |
| 3 | B | 1.81525 | 11.91 | | 2.62338 |
| 4 | F | 0.91909 | 12.05 | | |
| 4 | | | | 161.64 | 3.51954 |
| 4 | B | 2.04604 | 30.02 | | 3.51954 |
| 5 | F | 0.95028 | 29.99 | | |
| 5 | | | | 221.66 | 4.61530 |
| 5 | B | 2.39456 | 32.54 | | 4.61530 |
| 6 | F | 0.56938 | 32.53 | | |
| 6 | | | | 286.72 | 6.44048 |

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|------|---|---------|-------|--------|----------|
| 6 | B | 1.85368 | 16.12 | | 6.44048 |
| 7 | F | 1.03730 | 16.34 | | |
| 7 | | | | 319.19 | 7.25686 |
| 7 | B | 1.95718 | 10.96 | | 7.25686 |
| 8 | F | 0.97445 | 10.53 | | |
| 8 | | | | 340.68 | 8.23959 |
| 8 | B | 1.93027 | 13.96 | | 8.23959 |
| 9 | F | 0.93649 | 13.82 | | |
| 9 | | | | 368.45 | 9.23337 |
| 9 | B | 1.94959 | 10.02 | | 9.23337 |
| 10 | F | 1.13647 | 9.96 | | |
| 10 | | | | 388.43 | 10.04649 |
| 10 | B | 2.00803 | 10.12 | | 10.04649 |
| 11 | F | 1.02488 | 10.29 | | |
| 11 | | | | 408.84 | 11.02964 |
| 11 | B | 1.45635 | 9.84 | | 11.02964 |
| 1858 | F | 0.99386 | 10.17 | | |
| 1858 | | | | 428.85 | 11.49213 |

Bi16_36_2010A 2016 11.30.

Počátek pořadu

| | | | | | |
|---------|---|---------|-------|--------|----------|
| Bi16_36 | | | | | 0.00000 |
| Bi16_36 | B | 0.80045 | 20.79 | | 0.00000 |
| 1 | F | 1.58254 | 20.71 | | |
| 1 | | | | 41.50 | -0.78209 |
| 1 | B | 1.07388 | 26.98 | | -0.78209 |
| 2 | F | 2.15038 | 26.76 | | |
| 2 | | | | 95.24 | -1.85859 |
| 2 | B | 1.05973 | 15.79 | | -1.85859 |
| 3 | F | 1.83087 | 15.91 | | |
| 3 | | | | 126.94 | -2.62973 |
| 3 | B | 0.69514 | 34.84 | | -2.62973 |
| 4 | F | 2.08946 | 34.86 | | |
| 4 | | | | 196.64 | -4.02405 |
| 4 | B | 1.37806 | 16.06 | | -4.02405 |
| 5 | F | 1.26729 | 15.97 | | |
| 5 | | | | 228.67 | -3.91328 |
| 5 | B | 1.50124 | 21.79 | | -3.91328 |
| 6 | F | 1.38831 | 22.02 | | |
| 6 | | | | 272.48 | -3.80035 |
| 6 | B | 1.64431 | 34.81 | | -3.80035 |
| 7 | F | 1.14921 | 34.75 | | |
| 7 | | | | 342.04 | -3.30525 |
| 7 | B | 1.76754 | 11.84 | | -3.30525 |
| 2010A | F | 0.87383 | 12.04 | | |
| 2010A | | | | 365.92 | -2.41154 |

2013_Bi16_35 2016 12.03.

Počátek pořadu

| | | | | | |
|------|---|---------|-------|--------|---------|
| 2013 | | | | | 0.00000 |
| 2013 | B | 1.73100 | 29.12 | | 0.00000 |
| 1 | F | 0.80911 | 29.30 | | |
| 1 | | | | 58.41 | 0.92189 |
| 1 | B | 1.96412 | 19.83 | | 0.92189 |
| 2 | F | 1.07595 | 19.74 | | |
| 2 | | | | 97.98 | 1.81006 |
| 2 | B | 2.00310 | 22.60 | | 1.81006 |
| 3 | F | 1.29646 | 22.72 | | |
| 3 | | | | 143.30 | 2.51670 |
| 3 | B | 1.72488 | 22.02 | | 2.51670 |
| 4 | F | 0.59187 | 22.13 | | |

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|---------|---|---------|-------|--------|---------|
| 4 | | | | 187.44 | 3.64971 |
| 4 | B | 2.59638 | 23.60 | | 3.64971 |
| 5 | F | 1.03216 | 23.69 | | |
| 5 | | | | 234.73 | 5.21394 |
| 5 | B | 1.71031 | 19.97 | | 5.21394 |
| 6 | F | 1.21026 | 19.87 | | |
| 6 | | | | 274.57 | 5.71399 |
| 6 | B | 1.48037 | 20.68 | | 5.71399 |
| 7 | F | 1.82982 | 20.70 | | |
| 7 | | | | 315.95 | 5.36454 |
| 7 | B | 1.70188 | 19.94 | | 5.36454 |
| Bi16_35 | F | 1.26015 | 19.85 | | |
| Bi16_35 | | | | 355.74 | 5.80627 |

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|-----------------|---|---------|-------|--------|----------|
| Bi16_35_Bi16_36 | | | 2016 | 12.03. | |
| Počátek pořadu | | | | | |
| Bi16_35 | | | | | 0.00000 |
| Bi16_35 | B | 1.26026 | 19.86 | | 0.00000 |
| 1 | F | 1.70208 | 19.95 | | |
| 1 | | | | 39.81 | -0.44182 |
| 1 | B | 1.36175 | 20.00 | | -0.44182 |
| 2 | F | 1.50502 | 19.91 | | |
| 2 | | | | 79.71 | -0.58509 |
| 2 | B | 1.51648 | 20.63 | | -0.58509 |
| 3 | F | 1.50888 | 20.25 | | |
| 3 | | | | 120.59 | -0.57748 |
| 3 | B | 1.64846 | 24.88 | | -0.57748 |
| Bi16_36 | F | 0.94569 | 24.94 | | |
| Bi16_36 | | | | 170.41 | 0.12528 |

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|----------------|---|---------|-------|--------|----------|
| 1858_2010A | | | 2016 | 12.03. | |
| Počátek pořadu | | | | | |
| 1858 | | | | | 0.00000 |
| 1858 | B | 1.01267 | 10.07 | | 0.00000 |
| 1 | F | 1.47740 | 9.94 | | |
| 1 | | | | 20.01 | -0.46473 |
| 1 | B | 1.02265 | 10.16 | | -0.46473 |
| 2 | F | 1.99631 | 10.23 | | |
| 2 | | | | 40.40 | -1.43839 |
| 2 | B | 1.12197 | 9.99 | | -1.43839 |
| 3 | F | 1.93833 | 9.92 | | |
| 3 | | | | 60.31 | -2.25475 |
| 3 | B | 0.94457 | 13.85 | | -2.25475 |
| 4 | F | 1.94659 | 13.99 | | |
| 4 | | | | 88.15 | -3.25678 |
| 4 | B | 0.98098 | 10.78 | | -3.25678 |
| 5 | F | 1.95968 | 10.75 | | |
| 5 | | | | 109.68 | -4.23548 |
| 5 | B | 1.03476 | 16.28 | | -4.23548 |
| 6 | F | 1.85316 | 16.18 | | |
| 6 | | | | 142.14 | -5.05388 |
| 6 | B | 0.61294 | 32.47 | | -5.05388 |
| 7 | F | 2.43546 | 32.53 | | |
| 7 | | | | 207.14 | -6.87640 |
| 7 | B | 1.03388 | 29.93 | | -6.87640 |
| 2010A | F | 2.12987 | 30.14 | | |
| 2010A | | | | 267.21 | -7.97239 |

Nivelační přístroj Leica DNA03

 Leica Geosystems AG --- Digital Level Measurement Report

Job name : MK29.11

Operator : -----
 DNA03 : Instr.Nr.: 337893
 Remarks : ----- / -----
 Date/Time : 29.11.2016 /

 Check & Adjust

Line : Chek&Adj Method: A x Bx

Date : 29.11.2016
 Staff1: ----- Staff2: -----

| PointID (Station Result) | Backsight (B1-B2) | Foresight (F1-F2) | (St Diff) | (delta H) | Distance (D Bal) | Remarks (Pt Hgt) |
|-----------------------------|----------------------|----------------------|-----------|-----------|---------------------|---------------------|
| A1 | 1.09930 | | | | 19.93 | ----- |
| B1 | | 1.91119 | | | 19.61 | ----- |
| B2 | | 1.41011 | | | 2.82 | ----- |
| A2 | 0.59860 | | | | 42.45 | ----- |

 Line Levelling

Line : Bi16_35_2010A Method: BF

Date : 29.11.2016
 Staff1: ----- Staff2: -----

| PointID | Backsight | Intmtd | Foresight | delta H | Distance | Pt Height |
|------------|-----------|--------|-----------|----------|----------|-----------|
| Start PtID | | | | | | |
| Bi16_35 | | | | | | 0.0000 |
| Bi16_35 | 1.23223 | | | | 19.73 | |
| 1 | | | 1.67682 | -0.44458 | 20.01 | -0.4446 |
| 1 | 1.80017 | | | | 20.73 | |
| 2 | | | 1.44901 | +0.35115 | 20.64 | -0.0934 |
| 2 | 1.20715 | | | | 19.81 | |
| 3 | | | 1.70641 | -0.49926 | 19.94 | -0.5927 |
| 3 | 0.96797 | | | | 23.69 | |
| 4 | | | 2.53347 | -1.56551 | 23.59 | -2.1582 |
| 4 | 0.57208 | | | | 22.10 | |
| 5 | | | 1.70452 | -1.13244 | 21.94 | -3.2906 |
| 5 | 1.83791 | | | | 12.60 | |
| 2010A | | | 0.83368 | +1.00423 | 12.54 | -2.2864 |

Line : 2013_2010A Method: BF

Date : 29.11.2016
 Staff1: ----- Staff2: -----

| PointID | Backsight | Intmtd | Foresight | delta H | Distance | Pt Height |
|------------|-----------|--------|-----------|---------|----------|-----------|
| Start PtID | | | | | | |
| 2013 | | | | | | 0.0000 |

| | | | | | | |
|-------|---------|--|---------|----------|-------|--------|
| 2013 | 1.72542 | | | | 29.13 | |
| 1 | | | 0.80141 | +0.92401 | 29.19 | 0.9240 |
| 1 | 1.89887 | | | | 19.80 | |
| 2 | | | 1.01010 | +0.88877 | 19.71 | 1.8128 |
| 2 | 1.90871 | | | | 19.64 | |
| 3 | | | 1.09875 | +0.80996 | 19.99 | 2.6227 |
| 3 | 1.82796 | | | | 11.87 | |
| 2010A | | | 0.93125 | +0.89671 | 12.04 | 3.5194 |

Line : 2010A_1858 Method: BF

Date : 29.11.2016

Staff1: ----- Staff2: -----

| PointID | Backsight | Intmdt | Foresight | delta H | Distance | Pt Height |
|------------|-----------|--------|-----------|----------|----------|-----------|
| Start PtID | | | | | | |
| 2010A | | | | | | 0.0000 |
| 2010A | 2.14165 | | | | 29.99 | |
| 1 | | | 1.04433 | +1.09733 | 30.03 | 1.0973 |
| 1 | 2.56542 | | | | 32.53 | |
| 2 | | | 0.75192 | +1.81350 | 32.40 | 2.9108 |
| 2 | 1.97589 | | | | 16.10 | |
| 3 | | | 1.14966 | +0.82623 | 16.32 | 3.7371 |
| 3 | 2.05481 | | | | 10.91 | |
| 4 | | | 1.07232 | +0.98249 | 10.54 | 4.7195 |
| 4 | 2.07244 | | | | 13.95 | |
| 5 | | | 1.07506 | +0.99738 | 13.77 | 5.7169 |
| 5 | 2.08282 | | | | 10.07 | |
| 6 | | | 1.26593 | +0.81689 | 9.84 | 6.5338 |
| 6 | 2.11750 | | | | 10.19 | |
| 7 | | | 1.14147 | +0.97603 | 10.15 | 7.5098 |
| 7 | 1.62450 | | | | 9.79 | |
| 1858 | | | 1.16171 | +0.46279 | 10.19 | 7.9726 |

Line : 1858_2013 Method: BF

Date : 29.11.2016

Staff1: ----- Staff2: -----

| PointID | Backsight | Intmdt | Foresight | delta H | Distance | Pt Height |
|------------|-----------|--------|-----------|----------|----------|-----------|
| Start PtID | | | | | | |
| 1858 | | | | | | 0.0000 |
| 1858 | 1.16167 | | | | 10.20 | |
| 1 | | | 1.62558 | -0.46390 | 9.79 | -0.4639 |
| 1 | 1.14396 | | | | 10.21 | |
| 2 | | | 2.11829 | -0.97433 | 10.15 | -1.4382 |
| 2 | 1.19696 | | | | 9.92 | |
| 3 | | | 2.00649 | -0.80953 | 9.87 | -2.2478 |
| 3 | 1.08162 | | | | 13.95 | |
| 4 | | | 2.08788 | -1.00625 | 13.89 | -3.2540 |
| 4 | 1.12160 | | | | 10.56 | |
| 5 | | | 2.10511 | -0.98351 | 10.92 | -4.2375 |
| 5 | 1.11647 | | | | 16.22 | |
| 6 | | | 1.94280 | -0.82633 | 16.17 | -5.0639 |
| 6 | 0.68985 | | | | 32.42 | |
| 7 | | | 2.50202 | -1.81217 | 32.52 | -6.8760 |
| 7 | 1.06652 | | | | 29.98 | |
| 8 | | | 2.16253 | -1.09601 | 30.01 | -7.9720 |
| 8 | 1.06300 | | | | 12.09 | |
| 9 | | | 1.96131 | -0.89831 | 11.89 | -8.8703 |
| 9 | 1.28201 | | | | 20.00 | |
| 10 | | | 2.09521 | -0.81320 | 19.65 | -9.6835 |
| 10 | 1.18745 | | | | 19.71 | |
| 11 | | | 2.07158 | -0.88413 | 19.81 | -10.5677 |
| 11 | 0.98999 | | | | 29.17 | |
| 2013 | | | 1.91412 | -0.92413 | 29.17 | -11.4918 |

 Leica Geosystems AG --- Digital Level Measurement Report

Job name : MK312

Operator : -----
 DNA03 : Instr.Nr.: 337893
 Remarks : ----- / -----
 Date/Time : 03.12.2016 / -----

 Check & Adjust

Line : Chek&Adj Method: A x Bx
 =====

Date : 03.12.2016
 Staff1: ----- Staff2: -----
 =====

| PointID (Station Result) | Backsight (B1-B2) | Foresight (F1-F2) | (St Diff) | (delta H) | Distance (D Bal) | Remarks (Pt Hgt) |
|-----------------------------|----------------------|----------------------|-----------|-----------|---------------------|---------------------|
| A1 | 1.15811 | | | | 19.88 | ----- |
| B1 | | 1.96744 | | | 19.64 | ----- |
| B2 | | 1.48075 | | | 2.53 | ----- |
| A2 | 0.67177 | | | | 42.12 | ----- |

 Line Levelling

Line : 2013_Bil6_35 Method: BF
 =====

Date : 03.12.2016
 Staff1: ----- Staff2: -----
 =====

| PointID | Backsight | Intmtd | Foresight | delta H | Distance | Pt Height |
|--------------------|-----------|--------|-----------|----------|----------|-----------|
| Start PtID 2013 | | | | | | 0.0000 |
| 2013 | 1.83477 | | | | 29.05 | |
| 1 | | | 0.91311 | +0.92166 | 29.16 | 0.9217 |
| 1 | 2.04385 | | | | 19.74 | |
| 2 | | | 1.15557 | +0.88828 | 19.77 | 1.8099 |
| 2 | 2.10110 | | | | 22.52 | |
| 3 | | | 1.39452 | +0.70658 | 22.71 | 2.5165 |
| 3 | 1.82159 | | | | 21.86 | |
| 4 | | | 0.68860 | +1.13299 | 22.23 | 3.6495 |
| 4 | 2.58072 | | | | 23.48 | |
| 5 | | | 1.01644 | +1.56428 | 23.76 | 5.2138 |
| 5 | 1.77332 | | | | 19.99 | |
| 6 | | | 1.27327 | +0.50005 | 19.79 | 5.7138 |
| 6 | 1.57200 | | | | 20.64 | |
| 7 | | | 1.92160 | -0.34960 | 20.64 | 5.3642 |
| 7 | 1.79388 | | | | 20.01 | |
| Bil6_35 | | | 1.35202 | +0.44186 | 19.73 | 5.8061 |

Line : Bil6_35_Bil6_36 Method: BF
 =====

Date : 03.12.2016
 Staff1: ----- Staff2: -----
 =====

| PointID | Backsight | Intmtd | Foresight | delta H | Distance | Pt Height |
|-----------------------|-----------|--------|-----------|---------|----------|-----------|
| Start PtID Bil6_35 | | | | | | 0.0000 |

| | | | | | | |
|---------|---------|---------|----------|--|-------|---------|
| Bi16_35 | 1.35198 | | | | 19.74 | |
| 1 | | 1.79383 | -0.44185 | | 20.02 | -0.4418 |
| 1 | 1.48271 | | | | 20.01 | |
| 2 | | 1.62595 | -0.14324 | | 19.85 | -0.5851 |
| 2 | 1.63282 | | | | 20.56 | |
| 3 | | 1.62528 | +0.00754 | | 20.28 | -0.5775 |
| 3 | 1.74468 | | | | 24.95 | |
| Bi16_36 | | 1.04171 | +0.70298 | | 24.82 | 0.1254 |

Line : 1858_2010A Method: BF

Date : 03.12.2016

Staff1: ----- Staff2: -----

| PointID | Backsight | Intmtd | Foresight | delta H | Distance | Pt Height |
|------------|-----------|---------|-----------|---------|----------|-----------|
| Start PtID | | | | | | |
| 1858 | | | | | | 0.0000 |
| 1858 | 1.14228 | | | | 9.96 | |
| 1 | | 1.60703 | -0.46475 | | 9.98 | -0.4647 |
| 1 | 1.09068 | | | | 10.12 | |
| 2 | | 2.06447 | -0.97379 | | 10.21 | -1.4385 |
| 2 | 1.20455 | | | | 9.88 | |
| 3 | | 2.02086 | -0.81631 | | 9.95 | -2.2548 |
| 3 | 1.05780 | | | | 13.73 | |
| 4 | | 2.05943 | -1.00163 | | 14.06 | -3.2565 |
| 4 | 1.06646 | | | | 10.67 | |
| 5 | | 2.04516 | -0.97871 | | 10.78 | -4.2352 |
| 5 | 1.14421 | | | | 16.35 | |
| 6 | | 1.96255 | -0.81834 | | 16.05 | -5.0535 |
| 6 | 0.66209 | | | | 32.40 | |
| 7 | | 2.48497 | -1.82288 | | 32.56 | -6.8764 |
| 7 | 1.03256 | | | | 29.91 | |
| 2010A | | 2.12848 | -1.09592 | | 30.12 | -7.9723 |

Line : 2010A_Bi16_35 Method: BF

Date : 03.12.2016

Staff1: ----- Staff2: -----

| PointID | Backsight | Intmtd | Foresight | delta H | Distance | Pt Height |
|------------|-----------|---------|-----------|---------|----------|-----------|
| Start PtID | | | | | | |
| 2010A | | | | | | 0.0000 |
| 2010A | 0.86589 | | | | 12.56 | |
| 1 | | 1.86667 | -1.00079 | | 12.59 | -1.0008 |
| 1 | 1.72085 | | | | 22.02 | |
| 2 | | 0.59246 | +1.12840 | | 22.07 | 0.1276 |
| 2 | 2.57511 | | | | 23.49 | |
| 3 | | 1.00521 | +1.56989 | | 23.76 | 1.6975 |
| 3 | 1.67594 | | | | 19.96 | |
| 4 | | 1.18493 | +0.49101 | | 19.69 | 2.1885 |
| 4 | 1.50235 | | | | 20.70 | |
| 5 | | 1.84543 | -0.34308 | | 20.71 | 1.8454 |
| 5 | 1.69228 | | | | 19.99 | |
| Bi16_35 | | 1.25120 | +0.44108 | | 19.79 | 2.2865 |

Line : 2010A_2013 Method: BF

Date : 03.12.2016

Staff1: ----- Staff2: -----

| PointID | Backsight | Intmtd | Foresight | delta H | Distance | Pt Height |
|------------|-----------|---------|-----------|---------|----------|-----------|
| Start PtID | | | | | | |
| 2010A | | | | | | 0.0000 |
| 2010A | 0.93332 | | | | 12.06 | |
| 1 | | 1.83008 | -0.89676 | | 11.82 | -0.8968 |

| | | | | | |
|------|---------|---------|----------|-------|---------|
| 1 | 1.12794 | | | 19.94 | |
| 2 | | 1.93757 | -0.80964 | 19.66 | -1.7064 |
| 2 | 1.05715 | | | 19.82 | |
| 3 | | 1.94775 | -0.89060 | 19.71 | -2.5970 |
| 3 | 0.84219 | | | 28.98 | |
| 2013 | | 1.76444 | -0.92225 | 29.37 | -3.5192 |

Line : Bi16_36_Bi16_35 Method: BF

Date : 03.12.2016

Staff1: ----- Staff2: -----

| PointID | Backsight | Intmdt | Foresight | delta H | Distance | Pt Height |
|------------|-----------|---------|-----------|---------|----------|-----------|
| Start PtID | | | | | | |
| Bi16_36 | | | | | | 0.0000 |
| Bi16_36 | 0.92890 | | | | 24.84 | |
| 1 | | 1.62813 | -0.69923 | 24.92 | -0.6992 | |
| 1 | 1.50246 | | | 20.32 | | |
| 2 | | 1.51637 | -0.01391 | 20.56 | -0.7131 | |
| 2 | 1.49782 | | | 20.05 | | |
| 3 | | 1.35054 | +0.14727 | 19.78 | -0.5659 | |
| 3 | 1.67890 | | | 20.04 | | |
| Bi16_35 | | 1.23845 | +0.44046 | 19.74 | -0.1254 | |

Line : Bi16_35_2013 Method: BF

Date : 03.12.2016

Staff1: ----- Staff2: -----

| PointID | Backsight | Intmdt | Foresight | delta H | Distance | Pt Height |
|------------|-----------|---------|-----------|---------|----------|-----------|
| Start PtID | | | | | | |
| Bi16_35 | | | | | | 0.0000 |
| Bi16_35 | 1.23840 | | | 19.74 | | |
| 1 | | 1.67894 | -0.44053 | 20.04 | -0.4405 | |
| 1 | 1.82960 | | | 20.69 | | |
| 2 | | 1.48296 | +0.34663 | 20.62 | -0.0939 | |
| 2 | 1.20548 | | | 19.88 | | |
| 3 | | 1.70227 | -0.49679 | 19.91 | -0.5907 | |
| 3 | 1.05905 | | | 23.68 | | |
| 4 | | 2.62709 | -1.56804 | 23.55 | -2.1587 | |
| 4 | 0.58188 | | | 22.12 | | |
| 5 | | 1.71128 | -1.12939 | 21.97 | -3.2881 | |
| 5 | 1.26726 | | | 22.66 | | |
| 6 | | 1.97317 | -0.70592 | 22.61 | -3.9940 | |
| 6 | 1.04416 | | | 19.74 | | |
| 7 | | 1.93197 | -0.88781 | 19.80 | -4.8818 | |
| 7 | 0.80797 | | | 29.15 | | |
| 2013 | | 1.73246 | -0.92449 | 29.17 | -5.8063 | |

Leica Geosystems AG --- Digital Level Measurement Report

Job name : MK512

Operator : -----
DNA03 : Instr.Nr.: 337893
Remarks : ----- / -----
Date/Time : 05.12.2016 /

Check & Adjust

Line : Chek&Adj Method: A x Bx

Date : 05.12.2016

Staff1: ----- Staff2: -----

| PointID (Station Result) | Backsight (B1-B2) | Foresight (F1-F2) | (St Diff) | (delta H) | Distance (D Bal) | Remarks (Pt Hgt) |
|-----------------------------|----------------------|----------------------|-----------|-----------|---------------------|---------------------|
| A1 | 1.11015 | | | | 19.88 | ----- |
| B1 | | 1.91709 | | | 19.64 | ----- |
| B2 | | 1.47339 | | | 3.26 | ----- |
| A2 | 0.66591 | | | | 42.88 | ----- |

Line Levelling

Line : 2010A_Bil6_36 Method: BF

Date : 05.12.2016

Staff1: ----- Staff2: -----

| PointID | Backsight | Intmtd | Foresight | delta H | Distance | Pt Height |
|---------------------|-----------|--------|-----------|----------|----------|-----------|
| Start PtID 2010A | | | | | | 0.0000 |
| 2010A | 0.93590 | | | | 12.01 | |
| 1 | | | 1.83424 | -0.89834 | 11.89 | -0.8983 |
| 1 | 1.17917 | | | | 34.59 | |
| 2 | | | 1.66594 | -0.48676 | 34.87 | -1.3851 |
| 2 | 1.43388 | | | | 21.87 | |
| 3 | | | 1.54922 | -0.11533 | 21.86 | -1.5004 |
| 3 | 1.30092 | | | | 15.97 | |
| 4 | | | 1.40354 | -0.10263 | 16.01 | -1.6031 |
| 4 | 2.16122 | | | | 34.95 | |
| 5 | | | 0.76384 | +1.39738 | 34.82 | -0.2057 |
| 5 | 1.86331 | | | | 15.81 | |
| 6 | | | 1.08949 | +0.77382 | 15.80 | 0.5681 |
| 6 | 2.20861 | | | | 26.34 | |
| 7 | | | 1.17617 | +1.03245 | 26.06 | 1.6006 |
| 7 | 1.63454 | | | | 21.58 | |
| Bil6_36 | | | 0.82258 | +0.81196 | 21.16 | 2.4125 |

Line : Bil6_36_2010A Method: BF

Date : 05.12.2016

Staff1: ----- Staff2: -----

| PointID | Backsight | Intmtd | Foresight | delta H | Distance | Pt Height |
|-----------------------|-----------|--------|-----------|----------|----------|-----------|
| Start PtID Bil6_36 | | | | | | 0.0000 |
| Bil6_36 | 0.80089 | | | | 21.17 | |
| 1 | | | 1.61052 | -0.80963 | 21.50 | -0.8096 |
| 1 | 1.17547 | | | | 26.19 | |
| 2 | | | 2.21165 | -1.03619 | 26.35 | -1.8458 |
| 2 | 1.10912 | | | | 15.82 | |
| 3 | | | 1.87583 | -0.76671 | 15.71 | -2.6125 |
| 3 | 0.76935 | | | | 34.89 | |
| 4 | | | 2.17040 | -1.40105 | 34.94 | -4.0136 |
| 4 | 1.44306 | | | | 16.18 | |
| 5 | | | 1.34218 | +0.10088 | 15.81 | -3.9127 |
| 5 | 1.59336 | | | | 21.84 | |
| 6 | | | 1.47822 | +0.11514 | 21.92 | -3.7976 |
| 6 | 1.69876 | | | | 34.94 | |
| 7 | | | 1.20961 | +0.48914 | 34.56 | -3.3084 |
| 7 | 1.84449 | | | | 11.81 | |
| 2010A | | | 0.94829 | +0.89620 | 12.07 | -2.4122 |

Line : 2013_1858 Method: BF

Date : 05.12.2016

Staff1: ----- Staff2: -----

| PointID | Backsight | Intmdt | Foresight | delta H | Distance | Pt Height |
|------------|-----------|--------|-----------|----------|----------|-----------|
| Start PtID | | | | | | |
| 2013 | | | | | | 0.0000 |
| 2013 | 1.79448 | | | | 29.15 | |
| 1 | | | 0.87073 | +0.92376 | 29.19 | 0.9238 |
| 1 | 1.96540 | | | | 19.90 | |
| 2 | | | 1.07761 | +0.88779 | 19.67 | 1.8115 |
| 2 | 1.97245 | | | | 19.51 | |
| 3 | | | 1.15903 | +0.81342 | 20.07 | 2.6250 |
| 3 | 1.81680 | | | | 12.05 | |
| 4 | | | 0.92265 | +0.89415 | 11.84 | 3.5191 |
| 4 | 2.08668 | | | | 30.00 | |
| 5 | | | 0.98814 | +1.09854 | 29.99 | 4.6177 |
| 5 | 2.45800 | | | | 32.58 | |
| 6 | | | 0.63795 | +1.82005 | 32.49 | 6.4377 |
| 6 | 1.87009 | | | | 16.02 | |
| 7 | | | 1.05083 | +0.81927 | 16.36 | 7.2570 |
| 7 | 1.98167 | | | | 10.75 | |
| 8 | | | 1.00061 | +0.98106 | 10.66 | 8.2380 |
| 8 | 1.98822 | | | | 13.91 | |
| 9 | | | 0.98610 | +1.00212 | 13.91 | 9.2402 |
| 9 | 1.97078 | | | | 9.84 | |
| 10 | | | 1.16185 | +0.80893 | 10.01 | 10.0491 |
| 10 | 2.06167 | | | | 10.24 | |
| 11 | | | 1.08266 | +0.97901 | 10.13 | 11.0281 |
| 11 | 1.52755 | | | | 10.11 | |
| 1858 | | | 1.06347 | +0.46408 | 9.87 | 11.4922 |