



## LAMPIRAN

### Lampiran I Surat Izin Pelaksanaan Penelitian

|  |   |
|--|---|
|   | <b>UNIVERSITAS QUALITY</b><br><b>FAKULTAS SAINS DAN TEKNOLOGI</b><br>Jl. Ringroad - Ngumban Surbakti No. 18 Medan, Telp. (061) 80047003<br>web : <a href="http://www.universitasquality.ac.id">www.universitasquality.ac.id</a>   e-mail : <a href="mailto:info@universitasquality.ac.id">info@universitasquality.ac.id</a> |
|  | Medan, 16 October 2025  |
| NOMOR : 5690/SPT/SAINTEK/UQ/X/2025   |   |
| LAMP : -   |   |
| HAL : Izin Penelitian  |   |
| <b>Kepada Yth :</b><br><b>Kepala Balai Besar Pelaksana Jalan Nasional</b>  |   |
| Diberitahukan dengan hormat, bahwa mahasiswa kami :  |   |
| <b>Nama</b> : Faizal Bisri   |   |
| <b>NPM</b> : 2404020026  |   |
| <b>Program Studi</b> : TEKNIK SIPIL  |   |
| <b>Jenjang Pendidikan</b> : S.1  |   |
| Bermaksud sedang proses penyelesaian tugas akhir skripsi dengan Judul :<br><b>"Evaluasi Tingkat Keselamatan dan Rekomendasi Penanganan Perlintasan Sebidang di Jalan Raya Pelabuhan Medan Belawan"</b> |   |
| Sehubungan dengan hal tersebut, mohon kiranya agar mahasiswa yang bersangkutan dapat diberikan ijin melakukan penelitian di tempat yang Bapak / Ibu Pimpin dengan alokasi waktu yang ditentukan.       |   |
| Kami sangat mengharapkan bantuan Ibu agar sudi kiranya dapat memberikan data yang diperlukan berhubungan dengan judul Skripsi di atas.   |   |
| Demikian kami sampaikan, atas perhatian dan kerja sama yang baik sebelumnya kami ucapkan terima kasih.   |   |
|  | <b>Dekan,</b><br><br><b>Juliana Br Simbolon SP, M.Si</b><br><b>NIDN. 0118077802</b>   |
| <b>Tembusan :</b><br>1. Ka. Prodi TEKNIK SIPIL;<br>2. Dosen Pembimbing;  |   |

Lampiran II Hasil Survei Penghitungan Lalu Lintas Harian

Tanggal 12 Januari 2026

| Senin, 12 Januari 2026         |                           |                             |        |               |       |               |       |
|--------------------------------|---------------------------|-----------------------------|--------|---------------|-------|---------------|-------|
| Jenis Kendaraan                | Kelas                     | Jumlah Kendaraan (SMPK/Jam) |        |               |       |               |       |
|                                |                           | 06.30 - 08.30               |        | 10.30 - 12.30 |       | 16.30 - 18.30 |       |
|                                |                           | A - B                       | B - A  | A - B         | B - A | A - B         | B - A |
| Sepeda Motor                   | <i>Motorcycle (MC)</i>    | 854,4                       | 1380,4 | 307,2         | 305,6 | 512,4         | 250,8 |
| Mobil, Mikrobus, <i>Pickup</i> | <i>Light Vehicle (LV)</i> | 323,0                       | 385,0  | 261,0         | 279,0 | 306,0         | 397,0 |
| Bus, Truk                      | <i>Heavy Vehicle (HV)</i> | 161,2                       | 204,1  | 323,7         | 391,3 | 517,4         | 0,0   |
| Total                          |                           | 1338,6                      | 1969,5 | 891,9         | 975,9 | 1335,8        | 647,8 |
| Rata-Rata Total A - B          |                           | 594,4                       |        |               |       |               |       |
| Rata-Rata Total B - A          |                           | 598,9                       |        |               |       |               |       |
| Rata-Rata Total Keseluruhan    |                           | 1193,3                      |        |               |       |               |       |

Tanggal 14 Januari 2026

| Rabu, 14 Januari 2026          |                           |                             |        |               |        |               |       |
|--------------------------------|---------------------------|-----------------------------|--------|---------------|--------|---------------|-------|
| Jenis Kendaraan                | Kelas                     | Jumlah Kendaraan (SMPK/Jam) |        |               |        |               |       |
|                                |                           | 06.30 - 08.30               |        | 10.30 - 12.30 |        | 16.30 - 18.30 |       |
|                                |                           | A - B                       | B - A  | A - B         | B - A  | A - B         | B - A |
| Sepeda Motor                   | <i>Motorcycle (MC)</i>    | 740,8                       | 1570,8 | 368,0         | 365,2  | 698,4         | 295,6 |
| Mobil, Mikrobus, <i>Pickup</i> | <i>Light Vehicle (LV)</i> | 536,0                       | 581,0  | 619,0         | 578,0  | 403,0         | 382,0 |
| Bus, Truk                      | <i>Heavy Vehicle (HV)</i> | 187,2                       | 248,3  | 115,7         | 139,1  | 495,3         | 282,1 |
| Total                          |                           | 1464,0                      | 2400,1 | 1102,7        | 1082,3 | 1596,7        | 959,7 |
| Rata-Rata Total A - B          |                           | 693,9                       |        |               |        |               |       |
| Rata-Rata Total B - A          |                           | 740,4                       |        |               |        |               |       |
| Rata-Rata Total Keseluruhan    |                           | 1434,3                      |        |               |        |               |       |

Tanggal 16 Januari 2026

| Jumat, 16 Januari 2026      |                           |                             |        |               |       |               |       |
|-----------------------------|---------------------------|-----------------------------|--------|---------------|-------|---------------|-------|
| Jenis Kendaraan             | Kelas                     | Jumlah Kendaraan (SMPK/Jam) |        |               |       |               |       |
|                             |                           | 07.00 - 09.00               |        | 10.30 - 12.30 |       | 16.30 - 18.30 |       |
|                             |                           | A - B                       | B - A  | A - B         | B - A | A - B         | B - A |
| Sepeda Motor                | <i>Motorcycle (MC)</i>    | 644,8                       | 1082,8 | 277,6         | 260,4 | 485,2         | 354,4 |
| Mobil, Mikrobus, Pickup     | <i>Light Vehicle (LV)</i> | 182,0                       | 204,0  | 247,0         | 213,0 | 294,0         | 307,0 |
| Bus, Truk                   | <i>Heavy Vehicle (HV)</i> | 192,4                       | 228,8  | 243,1         | 248,3 | 453,7         | 305,5 |
| Total                       |                           | 1019,2                      | 1515,6 | 767,7         | 721,7 | 1232,9        | 966,9 |
| Rata-Rata Total A - B       |                           | 503,3                       |        |               |       |               |       |
| Rata-Rata Total B - A       |                           | 534,0                       |        |               |       |               |       |
| Rata-Rata Total Keseluruhan |                           | 1037,3                      |        |               |       |               |       |

Tanggal 18 Januari 2026

| Minggu, 18 Januari 2026     |                           |                             |        |               |       |               |       |
|-----------------------------|---------------------------|-----------------------------|--------|---------------|-------|---------------|-------|
| Jenis Kendaraan             | Kelas                     | Jumlah Kendaraan (SMPK/Jam) |        |               |       |               |       |
|                             |                           | 07.00 - 09.00               |        | 10.30 - 12.30 |       | 16.30 - 18.30 |       |
|                             |                           | A - B                       | B - A  | A - B         | B - A | A - B         | B - A |
| Sepeda Motor                | <i>Motorcycle (MC)</i>    | 483,2                       | 785,2  | 182,0         | 168,4 | 338,4         | 319,2 |
| Mobil, Mikrobus, Pickup     | <i>Light Vehicle (LV)</i> | 139,0                       | 124,0  | 193,0         | 252,0 | 295,0         | 279,0 |
| Bus, Truk                   | <i>Heavy Vehicle (HV)</i> | 189,8                       | 223,6  | 204,1         | 169,0 | 369,2         | 262,6 |
| Total                       |                           | 812,0                       | 1132,8 | 579,1         | 589,4 | 1002,6        | 860,8 |
| Rata-Rata Total A - B       |                           | 399,0                       |        |               |       |               |       |
| Rata-Rata Total B - A       |                           | 430,5                       |        |               |       |               |       |
| Rata-Rata Total Keseluruhan |                           | 829,5                       |        |               |       |               |       |







Lampiran III Dokumentasi Survei Penghitungan Lalu Lintas Harian







## Dokumentasi Survei Penghitungan Lalu Lintas Harian









Tanggal 12 Januari 2026





| Save and Next   |   |   | Reset   |   |   |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| 3451  | 149   | 8   | 7   | 117   | 2136  |







  

|   |  |  |
|---|--|--|
|  | <br>car factor:<br>1<br> |  |
| 75 %<br>385   |  | 323<br>12-01-2026 08.30.02   |





| Save and Next   |   |   | Reset   |   |   | x |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |   |
| 764   | 298   | 3   | 2   | 247   | 768   |   |

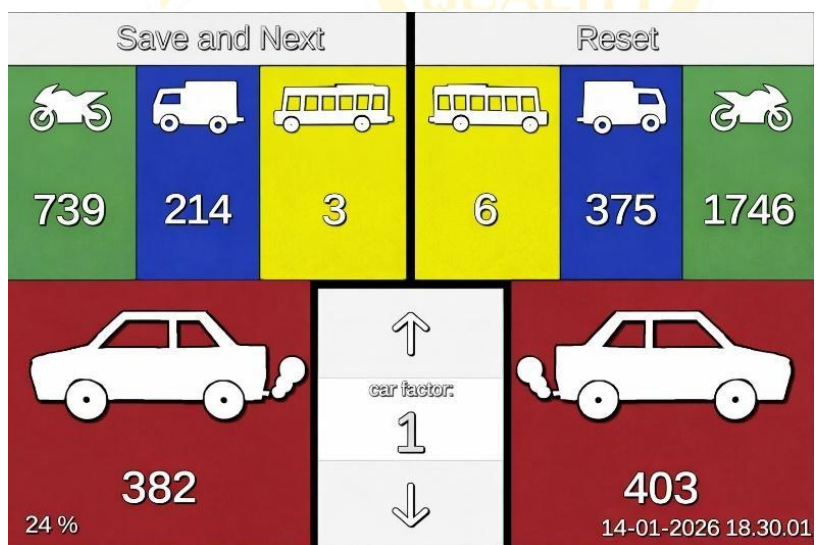
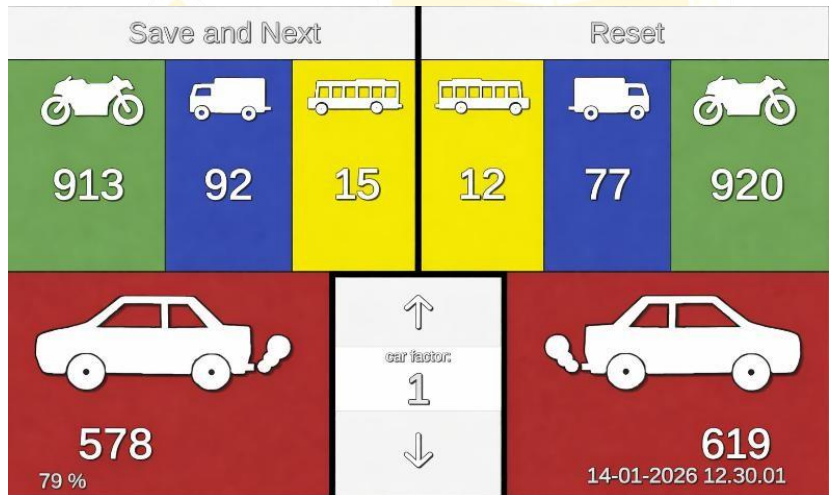
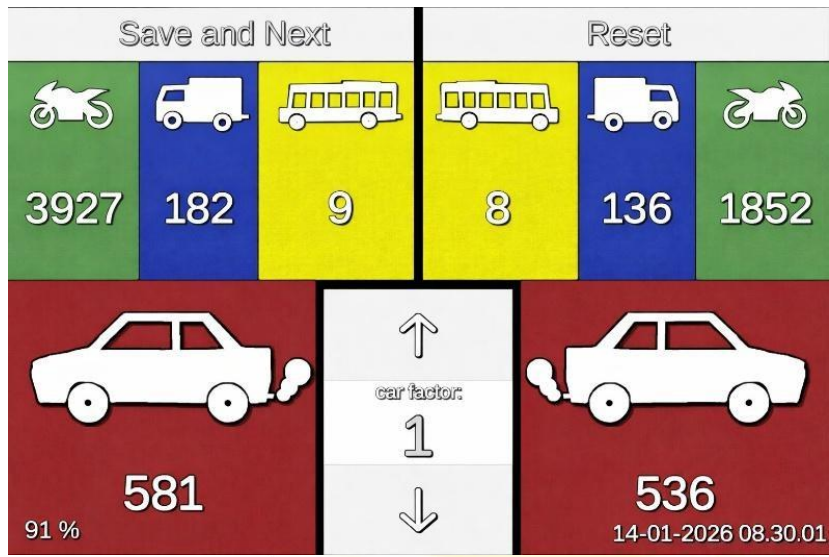
|   |  |  |
|---|--|--|
|  | <br>car factor:<br>1<br> |  |
| 27%<br>279  |  | 261<br>12-01-2026 12.30.03   |

| Save and Next   |   |   | Reset   |   |   |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| 627   | 212   | 6   | 4   | 394   | 1281  |

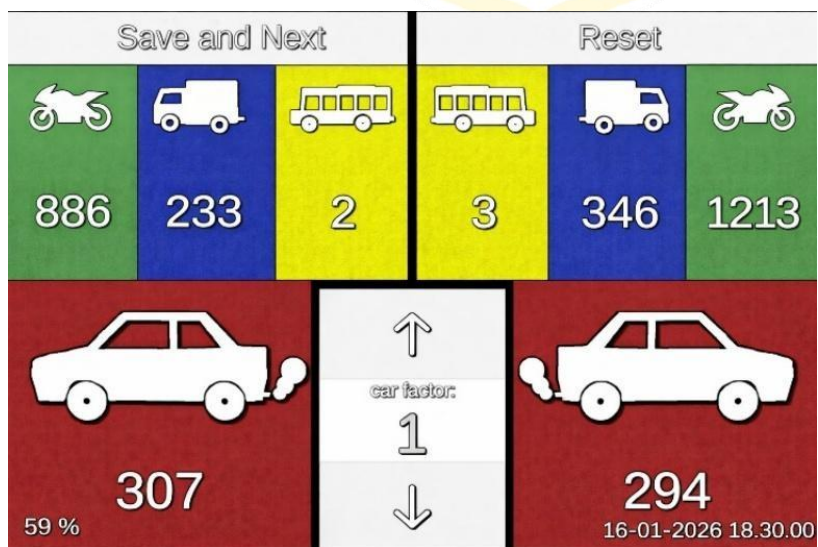
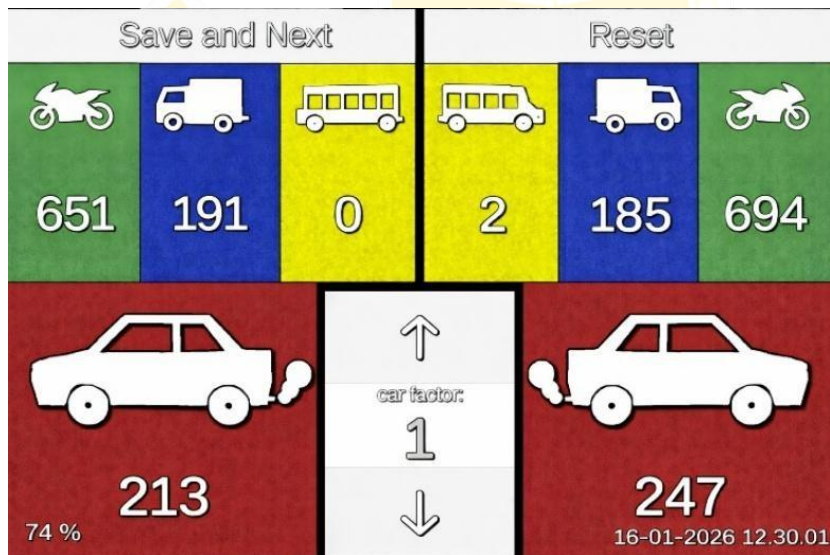
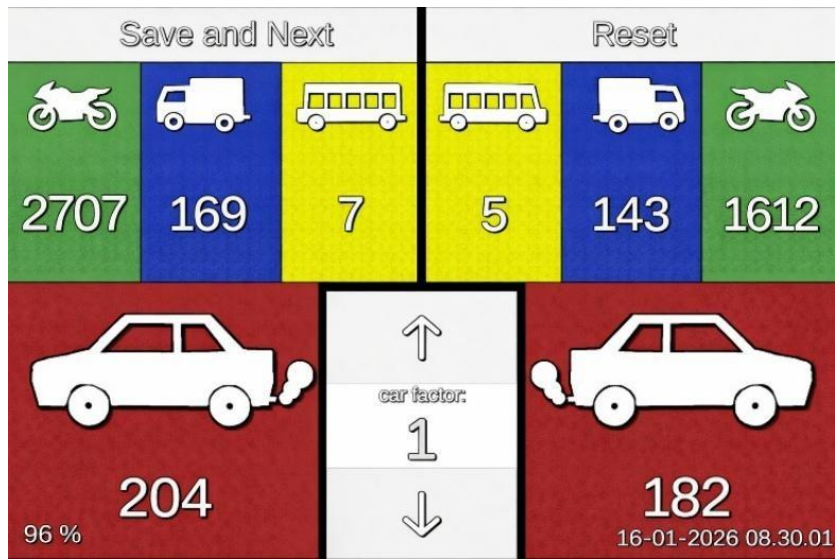
  

|   |  |  |
|---|--|--|
|  | <br>car factor:<br>1<br> |  |
| 86 %<br>397   |  | 306<br>12-01-2026 18.30.00   |

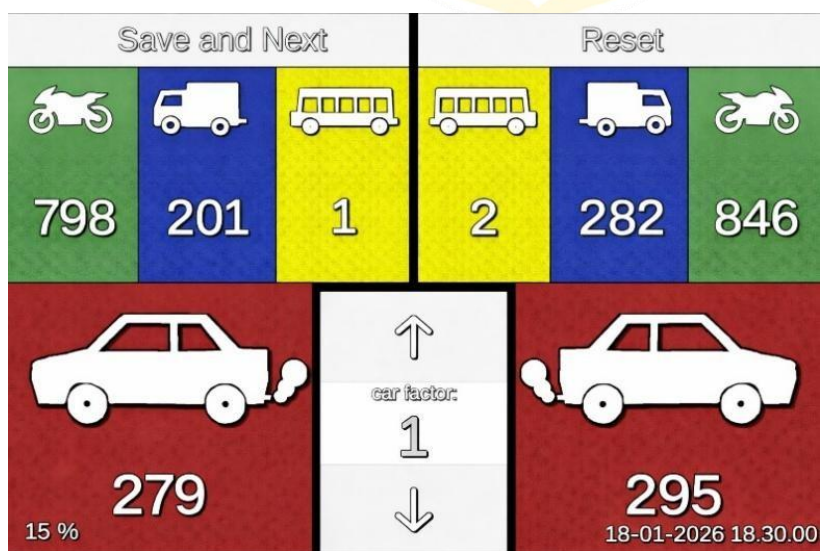
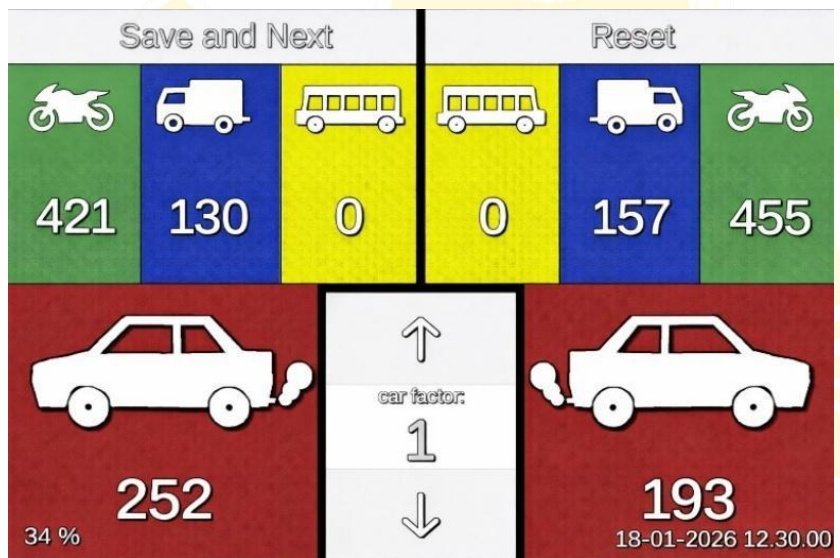
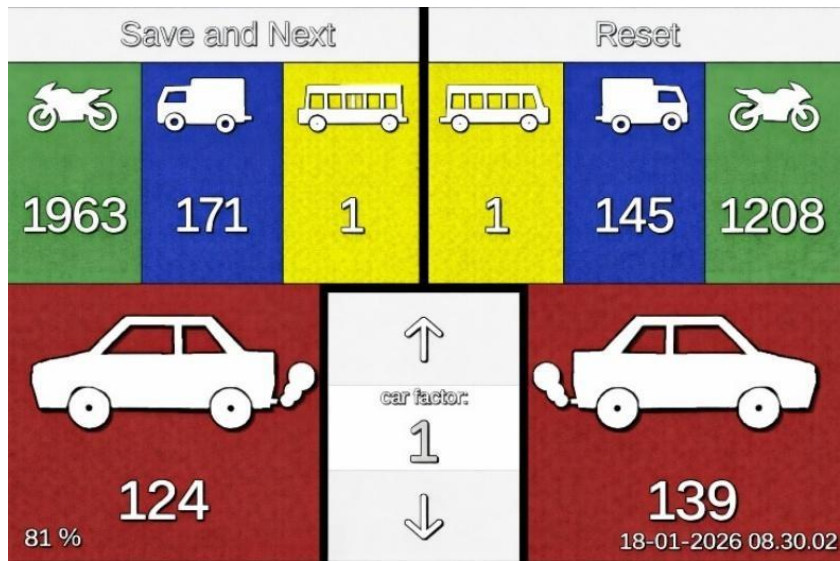
Tanggal 14 Januari 2026



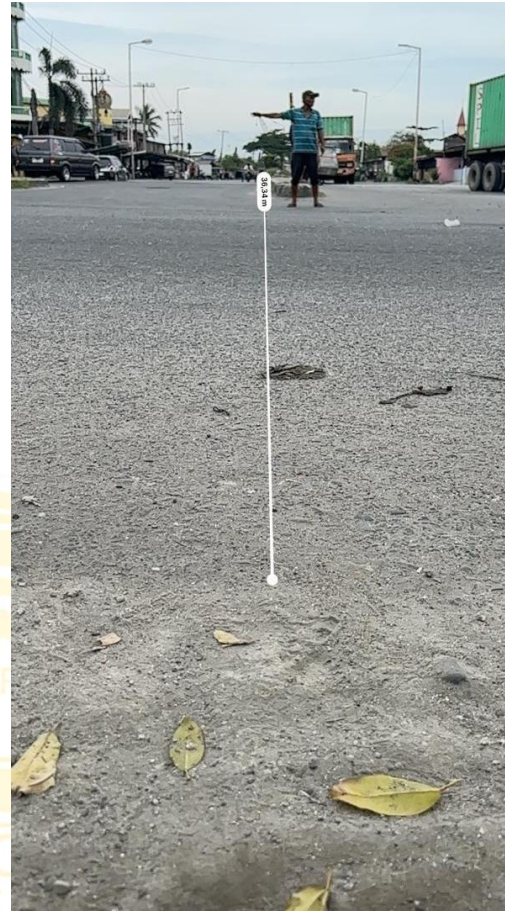
Tanggal 16 Januari 2026



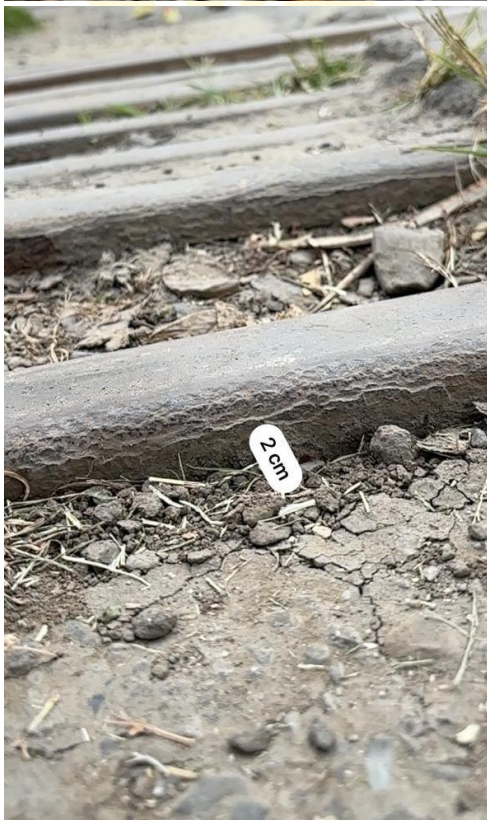
Tanggal 18 Januari 2026



# Lampiran IV Dokumentasi Survei Pengukuran Lebar Jalan



Lampiran V Dokumentasi Pengukuran Beda Tinggi Perlintasan Dengan Jalan



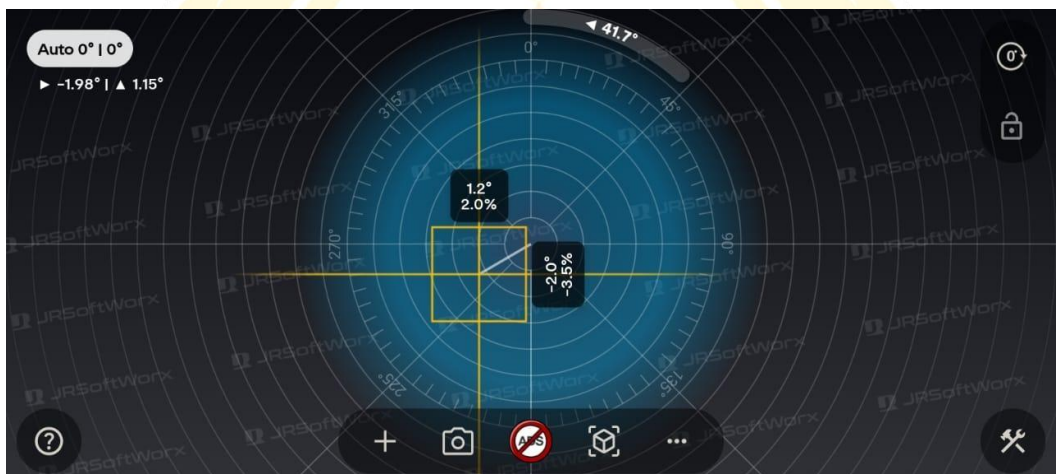
## Lampiran V Dokumentasi Pengukuran Gradien Perlintasan



Dokumentasi Pengukuran Gradien Perlintasan



## Lampiran VI Hasil Pengukuran Gradien



## Hasil Pengukuran Gradien



# Hasil Pengukuran Gradien

