



LISA

**LSA:**

**Knotenpunkt:**

Variante:

Lageplan-Nr:

ZWD:

LSA-Typ:

Steuerungsverfahren:

**Winterbeker Weg / Rampe Südwest**

**LSA185**

**005**

Vergabe-Nr:

661 023 26

Steuergerät:

Geräte-Ausstattung:

Gerätetechn.Funktion der LSA:

Erfassungs-Einrichtungen:

Funkuhr:

nein

Gruppennummer:

Anwahl-Nr:

Verkehrsr.:

VSR-Kabel:

Kostenträger:

Projekt-Nr:

Sachanlagennummer:

LSA-Proj.-Nr. 185005

HEW-Straßenschlüssel:

Einschalt-Datum:

Bemerkungen:

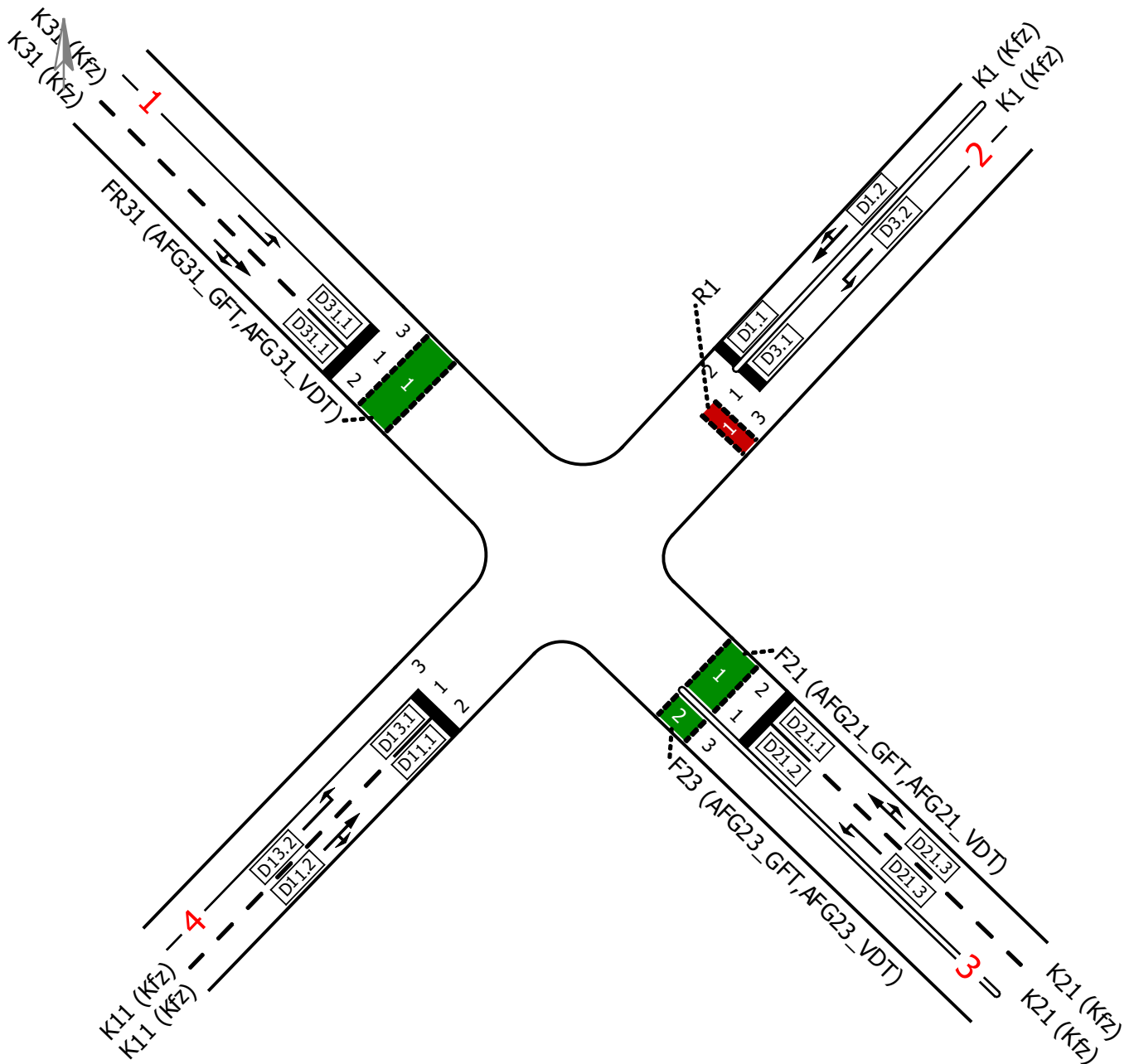
# Basisdaten

**LISA**



|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 2          |

## Winterbeker Weg / Rampe Südwest



|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 3          |

# Signalgruppen

LISA

|   | Name | Typ       | ID-Nr. | Signalisierte Ströme  | Progressiv | Teil-knoten | Symbol                                                                            | tf <sub>min</sub> | tf <sub>max</sub> | ts <sub>min</sub> | ts <sub>max</sub> | Anwurf     | Abwurf  | V <sub>max</sub><br>[km/h] | Dunkel/Aus =<br>Freigabe | Farbbild<br>Aus<br>Gelb-Blk | Verkehrsart | Bemerkung |
|---|------|-----------|--------|-----------------------|------------|-------------|-----------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|------------|---------|----------------------------|--------------------------|-----------------------------|-------------|-----------|
| 1 | K1   | K_RGbG    | 1      | Arm 2 -> 1,3,4        | -          | TK 1        |  | 6                 | -                 | -                 | -                 | RotGelb 1s | Gelb 3s | -                          | -                        | Dunkel                      | Kfz         |           |
| 2 | K11  | K_RGbG    | 2      | Arm 4 -> 1,2,3        | -          | TK 1        |  | 6                 | -                 | -                 | -                 | RotGelb 1s | Gelb 3s | -                          | -                        | Dunkel                      | Kfz         |           |
| 3 | K21  | K_RGbG    | 3      | Arm 3 -> 1,2,4        | -          | TK 1        |  | 6                 | -                 | -                 | -                 | RotGelb 1s | Gelb 3s | -                          | -                        | Dunkel                      | Kfz         |           |
| 4 | K31  | K_RGbG    | 4      | Arm 1 -> 2,3,4        | -          | TK 1        |  | 6                 | -                 | -                 | -                 | RotGelb 1s | Gelb 3s | -                          | -                        | Dunkel                      | Kfz         |           |
| 5 | F21  | F, FR_RRG | 5      | Arm 3 (quer.): Furt 1 | -          | TK 1        |  | 5                 | -                 | -                 | -                 | -          | -       | -                          | -                        | Dunkel                      | Fußg.       |           |
| 6 | F23  | F, FR_RRG | 6      | Arm 3 (quer.): Furt 2 | -          | TK 1        |  | 5                 | -                 | -                 | -                 | -          | -       | -                          | -                        | Dunkel                      | Fußg.       |           |
| 7 | FR31 | F, FR_RRG | 7      | Arm 1 (quer.): Furt 1 | -          | TK 1        |  | 5                 | -                 | -                 | -                 | -          | -       | -                          | -                        | Dunkel                      | Rad;Fußg.   |           |
| 8 | R1   | R_RGbG    | 8      | Arm 2 (quer.): Furt 1 | -          | TK 1        |  | 5                 | -                 | -                 | -                 | RotGelb 1s | Gelb 2s | -                          | -                        | Dunkel                      | Rad         |           |

|             |                                 |  |  |  |  |  |  |  |  |             |                   |  |  |  |  |       |            |
|-------------|---------------------------------|--|--|--|--|--|--|--|--|-------------|-------------------|--|--|--|--|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |  |  |  |  |  |  |  |  |             |                   |  |  |  |  |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |  |  |  |  |  |  |  |  |             |                   |  |  |  |  |       |            |
| Auftragsnr. | 661 023 26                      |  |  |  |  |  |  |  |  | Variante    | Gerätetausch 2026 |  |  |  |  | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         |  |  |  |  |  |  |  |  | Abzeichnung |                   |  |  |  |  | Blatt | 4          |



LISA

|   | SGR  | Kammer-<br>anzahl | Signalgeber     | Abschaltung bei Ausfall<br>von<br>(Regelfall: Rotlampe) |
|---|------|-------------------|-----------------|---------------------------------------------------------|
| 1 | K1   | 3                 | K1; K10; K101   | K1 oder (K10 und K101)                                  |
| 2 | K11  | 3                 | K11; K110; K111 | K11 oder (K110 und K111)                                |
| 3 | K21  | 3                 | K21; K210       | K21 oder K210                                           |
| 4 | K31  | 3                 | K31; K310       | K31 oder K310                                           |
| 5 | F21  | 3                 | F21; F22        | F21 oder F22                                            |
| 6 | F23  | 3                 | F23; F24        | F23 oder F24                                            |
| 7 | FR31 | 3                 | FR31; FR32      | FR31 oder FR32                                          |
| 8 | R1   | 3                 | R1; R4          | R1 oder R4                                              |

|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 5          |

# Maste



Landeshauptstadt Kiel  
Tiefbauamt 66.1.3.1

LISA

|   | Mast-Nr. | Typ | Bemerkung |
|---|----------|-----|-----------|
| 1 | 1        | GM  |           |
| 2 | 2        | AM  |           |
| 3 | 3        | GM  |           |
| 4 | 4        | GM  |           |
| 5 | 5        | GM  |           |
| 6 | 6        | AM  |           |
| 7 | 7        | GM  |           |

|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 6          |

# Signalgeber

LISA

|   | Signal-<br>geber | Angesteuert<br>durch | Kammer |      |                                                                                     |                  |       | Klemm-<br>nr | Kabel | Mast |     |            |       | Abge-<br>deckt | Nacht-<br>blinken | Kontrast-<br>blende | Leucht-<br>mittel | Leistung<br>in Watt | Rotlampen-<br>ausführung | Bemerkung |
|---|------------------|----------------------|--------|------|-------------------------------------------------------------------------------------|------------------|-------|--------------|-------|------|-----|------------|-------|----------------|-------------------|---------------------|-------------------|---------------------|--------------------------|-----------|
|   |                  |                      | Nr.    | Name | Maske                                                                               | Durch-<br>messer | Optik |              |       | Nr.  | Typ | Anbringung | Info  |                |                   |                     |                   |                     |                          |           |
|   |                  |                      |        |      |                                                                                     |                  |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 1 | K1               | K1                   | 1      | ROT  |    | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|   |                  |                      | 2      | GELB |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|   |                  |                      | 3      | GRÜN |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 2 | K10              | K1                   | 1      | ROT  |    | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|   |                  |                      | 2      | GELB |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|   |                  |                      | 3      | GRÜN |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 3 | K101             | K1                   | 1      | ROT  |    | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|   |                  |                      | 2      | GELB |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|   |                  |                      | 3      | GRÜN |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 4 | K11              | K11                  | 1      | ROT  |    | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|   |                  |                      | 2      | GELB |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|   |                  |                      | 3      | GRÜN |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 5 | K110             | K11                  | 1      | ROT  |    | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|   |                  |                      | 2      | GELB |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|   |                  |                      | 3      | GRÜN |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 6 | K111             | K11                  | 1      | ROT  |   | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|   |                  |                      | 2      | GELB |  | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|   |                  |                      | 3      | GRÜN |  | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 7 | K21              | K21                  | 1      | ROT  |  | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|   |                  |                      | 2      | GELB |  | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|   |                  |                      | 3      | GRÜN |  | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 8 | K210             | K21                  | 1      | ROT  |  | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|   |                  |                      | 2      | GELB |  | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|   |                  |                      | 3      | GRÜN |  | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |

|             |                                 |  |  |  |  |  |  |  |  |  |             |                   |  |  |  |  |       |            |  |
|-------------|---------------------------------|--|--|--|--|--|--|--|--|--|-------------|-------------------|--|--|--|--|-------|------------|--|
| Projekt     | LSA-Proj.-Nr. 185005            |  |  |  |  |  |  |  |  |  |             |                   |  |  |  |  |       |            |  |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |  |  |  |  |  |  |  |  |  |             |                   |  |  |  |  |       |            |  |
| Auftragsnr. | 661 023 26                      |  |  |  |  |  |  |  |  |  | Variante    | Gerätetausch 2026 |  |  |  |  | Datum | 18.08.2026 |  |
| Bearbeiter  | Thunert                         |  |  |  |  |  |  |  |  |  | Abzeichnung |                   |  |  |  |  | Blatt | 7          |  |

# Signalgeber

LISA

|    | Signal-<br>geber | Angesteuert<br>durch | Kammer |      |                                                                                     |                  |       | Klemm-<br>nr | Kabel | Mast |     |            |       | Abge-<br>deckt | Nacht-<br>blinken | Kontrast-<br>blende | Leucht-<br>mittel | Leistung<br>in Watt | Rotlampen-<br>ausführung | Bemerkung |
|----|------------------|----------------------|--------|------|-------------------------------------------------------------------------------------|------------------|-------|--------------|-------|------|-----|------------|-------|----------------|-------------------|---------------------|-------------------|---------------------|--------------------------|-----------|
|    |                  |                      | Nr.    | Name | Maske                                                                               | Durch-<br>messer | Optik |              |       | Nr.  | Typ | Anbringung | Info  |                |                   |                     |                   |                     |                          |           |
| 9  | K31              | K31                  | 1      | ROT  |    | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|    |                  |                      | 2      | GELB |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|    |                  |                      | 3      | GRÜN |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 10 | K310             | K31                  | 1      | ROT  |    | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|    |                  |                      | 2      | GELB |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|    |                  |                      | 3      | GRÜN |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 11 | F21              | F21                  | 1      | ROT  |    | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|    |                  |                      | 2      | ROT  |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|    |                  |                      | 3      | GRÜN |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 12 | F22              | F21                  | 1      | ROT  |    | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|    |                  |                      | 2      | ROT  |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|    |                  |                      | 3      | GRÜN |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 13 | F23              | F23                  | 1      | ROT  |    | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|    |                  |                      | 2      | ROT  |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|    |                  |                      | 3      | GRÜN |    | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 14 | F24              | F23                  | 1      | ROT  |   | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|    |                  |                      | 2      | ROT  |  | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|    |                  |                      | 3      | GRÜN |  | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 15 | FR31             | FR31                 | 1      | ROT  |  | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|    |                  |                      | 2      | ROT  |  | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|    |                  |                      | 3      | GRÜN |  | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 16 | FR32             | FR31                 | 1      | ROT  |  | 200              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|    |                  |                      | 2      | ROT  |  | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|    |                  |                      | 3      | GRÜN |  | 200              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |

|             |                                 |  |  |  |  |  |  |  |  |  |             |                   |  |  |  |  |       |            |  |
|-------------|---------------------------------|--|--|--|--|--|--|--|--|--|-------------|-------------------|--|--|--|--|-------|------------|--|
| Projekt     | LSA-Proj.-Nr. 185005            |  |  |  |  |  |  |  |  |  |             |                   |  |  |  |  |       |            |  |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |  |  |  |  |  |  |  |  |  |             |                   |  |  |  |  |       |            |  |
| Auftragsnr. | 661 023 26                      |  |  |  |  |  |  |  |  |  | Variante    | Gerätetausch 2026 |  |  |  |  | Datum | 18.08.2026 |  |
| Bearbeiter  | Thunert                         |  |  |  |  |  |  |  |  |  | Abzeichnung |                   |  |  |  |  | Blatt | 8          |  |

Signalgeber

LISA

|    | Signal-<br>geber | Angesteuert<br>durch | Kammer |      |                                                                                   |                  |       | Klemm-<br>nr | Kabel | Mast |     |            |       | Abge-<br>deckt | Nacht-<br>blinken | Kontrast-<br>blende | Leucht-<br>mittel | Leistung<br>in Watt | Rotlampen-<br>ausführung | Bemerkung |
|----|------------------|----------------------|--------|------|-----------------------------------------------------------------------------------|------------------|-------|--------------|-------|------|-----|------------|-------|----------------|-------------------|---------------------|-------------------|---------------------|--------------------------|-----------|
|    |                  |                      | Nr.    | Name | Maske                                                                             | Durch-<br>messer | Optik |              |       | Nr.  | Typ | Anbringung | Info  |                |                   |                     |                   |                     |                          |           |
|    |                  |                      |        |      |                                                                                   |                  |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 17 | R1               | R1                   | 1      | ROT  |  | 110              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|    |                  |                      | 2      | GELB |  | 110              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|    |                  |                      | 3      | GRÜN |  | 110              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
| 18 | R4               | R1                   | 1      | ROT  |  | 110              |       |              |       | -    | -   | Grundmast  | Stand | -              | -                 | -                   |                   |                     |                          |           |
|    |                  |                      | 2      | GELB |  | 110              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |
|    |                  |                      | 3      | GRÜN |  | 110              |       |              |       |      |     |            |       |                |                   |                     |                   |                     |                          |           |

|             |                                 |  |  |  |  |  |  |  |  |  |             |                   |  |  |  |  |       |            |  |
|-------------|---------------------------------|--|--|--|--|--|--|--|--|--|-------------|-------------------|--|--|--|--|-------|------------|--|
| Projekt     | LSA-Proj.-Nr. 185005            |  |  |  |  |  |  |  |  |  |             |                   |  |  |  |  |       |            |  |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |  |  |  |  |  |  |  |  |  |             |                   |  |  |  |  |       |            |  |
| Auftragsnr. | 661 023 26                      |  |  |  |  |  |  |  |  |  | Variante    | Gerätetausch 2026 |  |  |  |  | Datum | 18.08.2026 |  |
| Bearbeiter  | Thunert                         |  |  |  |  |  |  |  |  |  | Abzeichnung |                   |  |  |  |  | Blatt | 9          |  |

# Unverträglichkeitsmatrix



Landeshauptstadt Kiel  
Tiefbauamt 66.1.3.1

LISA

|         |      |                                                                                   | EINFAHREND                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|---------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|         |      |                                                                                   | K1                                                                                | K11                                                                               | K21                                                                               | K31                                                                               | F21                                                                               | F23                                                                               | FR31                                                                              | R1                                                                                |
| RÄUMEND | K1   |  |  | -                                                                                 | X                                                                                 | X                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 |
|         | K11  |  | -                                                                                 |  | X                                                                                 | X                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 |
|         | K21  |  | X                                                                                 | X                                                                                 |  | X                                                                                 | X                                                                                 | -                                                                                 | X                                                                                 | X                                                                                 |
|         | K31  |  | X                                                                                 | X                                                                                 | X                                                                                 |  | -                                                                                 | X                                                                                 | X                                                                                 | X                                                                                 |
|         | F21  |  | -                                                                                 | -                                                                                 | X                                                                                 | -                                                                                 |  | -                                                                                 | -                                                                                 | -                                                                                 |
|         | F23  |  | -                                                                                 | -                                                                                 | -                                                                                 | X                                                                                 | -                                                                                 |  | -                                                                                 | -                                                                                 |
|         | FR31 |  | -                                                                                 | -                                                                                 | X                                                                                 | X                                                                                 | -                                                                                 | -                                                                                 |  | -                                                                                 |
|         | R1   |  | -                                                                                 | -                                                                                 | X                                                                                 | X                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 |  |

|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
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| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 10         |

# Zwischenzeitenmatrix ZZM



Landeshauptstadt Kiel  
Tiefbauamt 66.1.3.1

LISA

|         |      |                                                                                   | EINFAHREND                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|---------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|         |      |                                                                                   | K1                                                                                | K11                                                                               | K21                                                                               | K31                                                                               | F21                                                                               | F23                                                                               | FR31                                                                              | R1                                                                                |
| RÄUMEND | K1   |  |  | -                                                                                 | 5                                                                                 | 6                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 |
|         | K11  |  | -                                                                                 |  | 6                                                                                 | 6                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 |
|         | K21  |  | 5                                                                                 | 5                                                                                 |  | 6                                                                                 | 5                                                                                 | -                                                                                 | 6                                                                                 | 5                                                                                 |
|         | K31  |  | 5                                                                                 | 5                                                                                 | 6                                                                                 |  | -                                                                                 | 6                                                                                 | 5                                                                                 | 5                                                                                 |
|         | F21  |  | -                                                                                 | -                                                                                 | 9                                                                                 | -                                                                                 |  | -                                                                                 | -                                                                                 | -                                                                                 |
|         | F23  |  | -                                                                                 | -                                                                                 | -                                                                                 | 5                                                                                 | -                                                                                 |  | -                                                                                 | -                                                                                 |
|         | FR31 |  | -                                                                                 | -                                                                                 | 14                                                                                | 16                                                                                | -                                                                                 | -                                                                                 |  | -                                                                                 |
|         | R1   |  | -                                                                                 | -                                                                                 | 7                                                                                 | 5                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 |  |

|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 11         |

# Zwischenzeitenberechnung

LISA

|   | Räumend |       |           | Einfahrend |       |           | Räumend              |                    |                      |                      |                                    |                    |                                    | Einfahrend         |                      |                      |                                    |                    | Zwischenzeit           |                           |                        |     | Info             |                    |        |           |  |
|---|---------|-------|-----------|------------|-------|-----------|----------------------|--------------------|----------------------|----------------------|------------------------------------|--------------------|------------------------------------|--------------------|----------------------|----------------------|------------------------------------|--------------------|------------------------|---------------------------|------------------------|-----|------------------|--------------------|--------|-----------|--|
|   | SGR     | Strom | Teilstrom | SGR        | Strom | Teilstrom | L <sub>Fzg</sub> [m] | s <sub>0</sub> [m] | v <sub>0</sub> [m/s] | v <sub>r</sub> [m/s] | a <sub>r</sub> [m/s <sup>2</sup> ] | t <sub>ü</sub> [s] | t <sub>ü</sub> +t <sub>r</sub> [s] | s <sub>e</sub> [m] | v <sub>0</sub> [m/s] | v <sub>e</sub> [m/s] | a <sub>e</sub> [m/s <sup>2</sup> ] | t <sub>e</sub> [s] | t <sub>z Ber</sub> [s] | t <sub>zuschlag</sub> [s] | t <sub>maßg.</sub> [s] | Rad | Rad<br>maßgebend | Schnittpunkt<br>ID | Schutz | Bemerkung |  |
| 1 | K1      | 2 (R) | FS 2, Kfz | K21        | 3 (G) | FS 2, Kfz | 6,0                  | 18,5               | -                    | 7,0                  | -                                  | 2,0                | 5,5                                | 23,9               | -                    | 11,1                 | -                                  | 2,2                | 3,3                    | -                         | 5                      | -   | -                | 595                | -      |           |  |
|   |         | 2 (L) | FS 1, Kfz |            | 3 (G) | FS 2, Kfz | 6,0                  | 17,0               | -                    | 7,0                  | -                                  | 2,0                | 5,3                                | 15,1               | -                    | 11,1                 | -                                  | 1,4                | 3,9                    | -                         |                        | -   | -                | 600                | -      |           |  |
|   |         | 2 (L) | FS 1, Kfz |            | 3 (L) | FS 1, Kfz | 6,0                  | 23,5               | -                    | 7,0                  | -                                  | 2,0                | 6,2                                | 13,7               | -                    | 11,1                 | -                                  | 1,2                | 5,0                    | -                         |                        | -   | -                | 631                | -      |           |  |
|   |         | 2 (G) | FS 2, Kfz |            | 3 (G) | FS 2, Kfz | 6,0                  | 17,5               | -                    | 10,0                 | -                                  | 3,0                | 5,4                                | 18,1               | -                    | 11,1                 | -                                  | 1,6                | 3,8                    | -                         |                        | -   | -                | 599                | -      |           |  |
|   |         | 2 (G) | FS 2, Kfz |            | 3 (L) | FS 1, Kfz | 6,0                  | 26,3               | -                    | 10,0                 | -                                  | 3,0                | 6,2                                | 18,7               | -                    | 11,1                 | -                                  | 1,7                | 4,5                    | -                         |                        | -   | -                | 628                | -      |           |  |
| 2 | K1      | 2 (L) | FS 1, Kfz | K31        | 1 (L) | FS 1, Kfz | 6,0                  | 18,5               | -                    | 7,0                  | -                                  | 2,0                | 5,5                                | 14,2               | -                    | 11,1                 | -                                  | 1,3                | 4,2                    | -                         | 6                      | -   | -                | 531                | -      |           |  |
|   |         | 2 (L) | FS 1, Kfz |            | 1 (G) | FS 2, Kfz | 6,0                  | 27,1               | -                    | 7,0                  | -                                  | 2,0                | 6,7                                | 16,7               | -                    | 11,1                 | -                                  | 1,5                | 5,2                    | -                         |                        | -   | -                | 516                | -      |           |  |
|   |         | 2 (G) | FS 2, Kfz |            | 1 (L) | FS 1, Kfz | 6,0                  | 21,4               | -                    | 10,0                 | -                                  | 3,0                | 5,7                                | 9,9                | -                    | 11,1                 | -                                  | 0,9                | 4,8                    | -                         |                        | -   | -                | 530                | -      |           |  |
|   |         | 2 (G) | FS 2, Kfz |            | 1 (G) | FS 2, Kfz | 6,0                  | 27,7               | -                    | 10,0                 | -                                  | 3,0                | 6,4                                | 9,4                | -                    | 11,1                 | -                                  | 0,8                | 5,6                    | -                         |                        | -   | -                | 415                | -      |           |  |
|   |         | 2 (G) | FS 2, Kfz |            | 1 (R) | FS 2, Kfz | 6,0                  | 32,2               | -                    | 10,0                 | -                                  | 3,0                | 6,8                                | 9,2                | -                    | 11,1                 | -                                  | 0,8                | 6,0                    | -                         |                        | -   | -                | 463                | -      |           |  |
| 3 | K11     | 4 (L) | FS 1, Kfz | K21        | 3 (G) | FS 2, Kfz | 6,0                  | 25,2               | -                    | 7,0                  | -                                  | 2,0                | 6,5                                | 20,2               | -                    | 11,1                 | -                                  | 1,8                | 4,7                    | -                         | 6                      | -   | -                | 586                | -      |           |  |
|   |         | 4 (L) | FS 1, Kfz |            | 3 (L) | FS 1, Kfz | 6,0                  | 17,2               | -                    | 7,0                  | -                                  | 2,0                | 5,3                                | 17,6               | -                    | 11,1                 | -                                  | 1,6                | 3,7                    | -                         |                        | -   | -                | 626                | -      |           |  |
|   |         | 4 (G) | FS 2, Kfz |            | 3 (G) | FS 2, Kfz | 6,0                  | 26,8               | -                    | 10,0                 | -                                  | 3,0                | 6,3                                | 11,8               | -                    | 11,1                 | -                                  | 1,1                | 5,2                    | -                         |                        | -   | -                | 585                | -      |           |  |
|   |         | 4 (G) | FS 2, Kfz |            | 3 (R) | FS 2, Kfz | 6,0                  | 34,7               | -                    | 10,0                 | -                                  | 3,0                | 7,1                                | 12,5               | -                    | 11,1                 | -                                  | 1,1                | 6,0                    | -                         |                        | -   | -                | 611                | -      |           |  |
|   |         | 4 (G) | FS 2, Kfz |            | 3 (L) | FS 1, Kfz | 6,0                  | 20,8               | -                    | 10,0                 | -                                  | 3,0                | 5,7                                | 12,5               | -                    | 11,1                 | -                                  | 1,1                | 4,6                    | -                         |                        | -   | -                | 625                | -      |           |  |
| 4 | K11     | 4 (L) | FS 1, Kfz | K31        | 1 (L) | FS 1, Kfz | 6,0                  | 22,2               | -                    | 7,0                  | -                                  | 2,0                | 6,0                                | 9,7                | -                    | 11,1                 | -                                  | 0,9                | 5,1                    | -                         | 6                      | -   | -                | 529                | -      |           |  |
|   |         | 4 (L) | FS 1, Kfz |            | 1 (G) | FS 2, Kfz | 6,0                  | 15,5               | -                    | 7,0                  | -                                  | 2,0                | 5,1                                | 12,2               | -                    | 11,1                 | -                                  | 1,1                | 4,0                    | -                         |                        | -   | -                | 477                | -      |           |  |
|   |         | 4 (G) | FS 2, Kfz |            | 1 (L) | FS 1, Kfz | 6,0                  | 25,8               | -                    | 10,0                 | -                                  | 3,0                | 6,2                                | 16,2               | -                    | 11,1                 | -                                  | 1,5                | 4,7                    | -                         |                        | -   | -                | 527                | -      |           |  |
|   |         | 4 (G) | FS 2, Kfz |            | 1 (G) | FS 2, Kfz | 6,0                  | 15,7               | -                    | 10,0                 | -                                  | 3,0                | 5,2                                | 15,4               | -                    | 11,1                 | -                                  | 1,4                | 3,8                    | -                         |                        | -   | -                | 413                | -      |           |  |
|   |         | 4 (R) | FS 2, Kfz |            | 1 (G) | FS 2, Kfz | 6,0                  | 17,0               | -                    | 7,0                  | -                                  | 2,0                | 5,3                                | 22,1               | -                    | 11,1                 | -                                  | 2,0                | 3,3                    | -                         |                        | -   | -                | 497                | -      |           |  |
| 5 | K21     | 3 (G) | FS 2, Kfz | K1         | 2 (R) | FS 2, Kfz | 6,0                  | 23,9               | -                    | 10,0                 | -                                  | 3,0                | 6,0                                | 18,5               | -                    | 11,1                 | -                                  | 1,7                | 4,3                    | -                         | 5                      | -   | -                | 595                | -      |           |  |
|   |         | 3 (G) | FS 2, Kfz |            | 2 (L) | FS 1, Kfz | 6,0                  | 15,1               | -                    | 10,0                 | -                                  | 3,0                | 5,1                                | 17,0               | -                    | 11,1                 | -                                  | 1,5                | 3,6                    | -                         |                        | -   | -                | 600                | -      |           |  |
|   |         | 3 (L) | FS 1, Kfz |            | 2 (L) | FS 1, Kfz | 6,0                  | 13,7               | -                    | 7,0                  | -                                  | 2,0                | 5,0                                | 23,5               | -                    | 11,1                 | -                                  | 2,1                | 2,9                    | -                         |                        | -   | -                | 631                | -      |           |  |
|   |         | 3 (G) | FS 2, Kfz |            | 2 (G) | FS 2, Kfz | 6,0                  | 18,1               | -                    | 10,0                 | -                                  | 3,0                | 5,4                                | 17,5               | -                    | 11,1                 | -                                  | 1,6                | 3,8                    | -                         |                        | -   | -                | 599                | -      |           |  |
|   |         | 3 (L) | FS 1, Kfz |            | 2 (G) | FS 2, Kfz | 6,0                  | 18,7               | -                    | 7,0                  | -                                  | 2,0                | 5,5                                | 26,3               | -                    | 11,1                 | -                                  | 2,4                | 3,1                    | -                         |                        | -   | -                | 628                | -      |           |  |
| 6 | K21     | 3 (G) | FS 2, Kfz | K11        | 4 (L) | FS 1, Kfz | 6,0                  | 20,2               | -                    | 10,0                 | -                                  | 3,0                | 5,6                                | 25,2               | -                    | 11,1                 | -                                  | 2,3                | 3,3                    | -                         | 5                      | -   | -                | 586                | -      |           |  |
|   |         | 3 (L) | FS 1, Kfz |            | 4 (L) | FS 1, Kfz | 6,0                  | 17,6               | -                    | 7,0                  | -                                  | 2,0                | 5,4                                | 17,2               | -                    | 11,1                 | -                                  | 1,5                | 3,9                    | -                         |                        | -   | -                | 626                | -      |           |  |
|   |         | 3 (G) | FS 2, Kfz |            | 4 (G) | FS 2, Kfz | 6,0                  | 11,8               | -                    | 10,0                 | -                                  | 3,0                | 5,0                                | 26,8               | -                    | 11,1                 | -                                  | 2,4                | 2,6                    | -                         |                        | -   | -                | 585                | -      |           |  |
|   |         | 3 (R) | FS 2, Kfz |            | 4 (G) | FS 2, Kfz | 6,0                  | 12,5               | -                    | 7,0                  | -                                  | 2,0                | 5,0                                | 34,7               | -                    | 11,1                 | -                                  | 3,1                | 1,9                    | -                         |                        | -   | -                | 611                | -      |           |  |
|   |         | 3 (L) | FS 1, Kfz |            | 4 (G) | FS 2, Kfz | 6,0                  | 12,5               | -                    | 7,0                  | -                                  | 2,0                | 5,0                                | 20,8               | -                    | 11,1                 | -                                  | 1,9                | 3,1                    | -                         |                        | -   | -                | 625                | -      |           |  |

|             |                                 |  |  |  |             |                   |  |  |       |            |
|-------------|---------------------------------|--|--|--|-------------|-------------------|--|--|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |  |  |  |             |                   |  |  |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |  |  |  |             |                   |  |  |       |            |
| Auftragsnr. | 661 023 26                      |  |  |  | Variante    | Gerätetausch 2026 |  |  | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         |  |  |  | Abzeichnung |                   |  |  | Blatt | 12         |

# Zwischenzeitenberechnung

LISA

|    | Räumend |       |           | Einfahrend |       |           | Räumend              |                    |                      |                      |                       |                    |                                    | Einfahrend         |                      |                      |                       |                    | Zwischenzeit           |                          |                        |     | Info             |                    |        |           |  |
|----|---------|-------|-----------|------------|-------|-----------|----------------------|--------------------|----------------------|----------------------|-----------------------|--------------------|------------------------------------|--------------------|----------------------|----------------------|-----------------------|--------------------|------------------------|--------------------------|------------------------|-----|------------------|--------------------|--------|-----------|--|
|    | SGR     | Strom | Teilstrom | SGR        | Strom | Teilstrom | L <sub>Fzg</sub> [m] | s <sub>0</sub> [m] | v <sub>0</sub> [m/s] | v <sub>r</sub> [m/s] | a <sub>r</sub> [m/s²] | t <sub>u</sub> [s] | t <sub>u</sub> +t <sub>r</sub> [s] | s <sub>e</sub> [m] | v <sub>0</sub> [m/s] | v <sub>e</sub> [m/s] | a <sub>e</sub> [m/s²] | t <sub>e</sub> [s] | t <sub>z Ber</sub> [s] | t <sub>zschlag</sub> [s] | t <sub>maßg.</sub> [s] | Rad | Rad<br>maßgebend | Schnittpunkt<br>ID | Schutz | Bemerkung |  |
| 7  | K21     | 3 (G) | FS 2, Kfz | K31        | 1 (L) | FS 1, Kfz | 6,0                  | 13,7               | -                    | 10,0                 | -                     | 3,0                | 5,0                                | 16,5               | -                    | 11,1                 | -                     | 1,5                | 3,5                    | -                        | 6                      | -   | -                | 601                | -      |           |  |
|    |         | 3 (R) | FS 2, Kfz |            | 1 (L) | FS 1, Kfz | 6,0                  | 12,5               | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 25,1               | -                    | 11,1                 | -                     | 2,3                | 2,7                    | -                        |                        | -   | -                | 615                | -      |           |  |
|    |         | 3 (L) | FS 1, Kfz |            | 1 (G) | FS 2, Kfz | 6,0                  | 19,6               | -                    | 7,0                  | -                     | 2,0                | 5,7                                | 10,8               | -                    | 11,1                 | -                     | 1,0                | 4,7                    | -                        |                        | -   | -                | 632                | -      |           |  |
|    |         | 3 (L) | FS 1, Kfz |            | 1 (R) | FS 2, Kfz | 6,0                  | 24,6               | -                    | 7,0                  | -                     | 2,0                | 6,4                                | 9,3                | -                    | 11,1                 | -                     | 0,8                | 5,6                    | -                        |                        | -   | -                | 635                | -      |           |  |
| 8  | K21     | 3 (G) | FS 2, Kfz | F21        | 3 (Q) | Fußg.     | 6,0                  | 4,1                | -                    | 10,0                 | -                     | 3,0                | 5,0                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,0                    | -                        | 5                      | -   | -                | 603                | -      |           |  |
|    |         |       | FS 2, Kfz |            |       | Fußg.     | 6,0                  | 2,6                | -                    | 10,0                 | -                     | 3,0                | 5,0                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,0                    | -                        |                        | -   | -                | 602                |        |           |  |
|    |         | 3 (R) | FS 2, Kfz |            | 3 (Q) | Fußg.     | 6,0                  | 4,4                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,0                    | -                        |                        | -   | -                | 620                | -      |           |  |
|    |         |       | FS 2, Kfz |            |       | Fußg.     | 6,0                  | 2,7                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,0                    | -                        |                        | -   | -                | 619                |        |           |  |
|    |         | 3 (L) | FS 1, Kfz |            | 3 (Q) | Fußg.     | 6,0                  | 4,2                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,0                    | -                        |                        | -   | -                | 638                | -      |           |  |
|    |         |       | FS 1, Kfz |            |       | Fußg.     | 6,0                  | 2,6                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,0                    | -                        |                        | -   | -                | 551                |        |           |  |
| 9  | K21     | 3 (G) | FS 2, Kfz | FR31       | 1 (Q) | Fußg.     | 6,0                  | 24,2               | -                    | 10,0                 | -                     | 3,0                | 6,0                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 6,0                    | -                        | 6                      | -   | -                | 609                | -      |           |  |
|    |         |       | FS 2, Kfz |            |       | Fußg.     | 6,0                  | 22,8               | -                    | 10,0                 | -                     | 3,0                | 5,9                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,9                    | -                        |                        | 608 |                  |                    |        |           |  |
|    |         |       | FS 2, Kfz |            |       | Rad       | 6,0                  | 24,2               | -                    | 10,0                 | -                     | 3,0                | 6,0                                | 6,8                | -                    | 5,0                  | -                     | 1,4                | 4,6                    | -                        |                        | 609 |                  |                    |        |           |  |
|    |         |       | FS 2, Kfz |            |       | Rad       | 6,0                  | 22,8               | -                    | 10,0                 | -                     | 3,0                | 5,9                                | 7,8                | -                    | 5,0                  | -                     | 1,6                | 4,3                    | -                        |                        | 608 |                  |                    |        |           |  |
| 10 | K21     | 3 (G) | FS 2, Kfz | R1         | 2 (Q) | Rad       | 6,0                  | 7,5                | -                    | 10,0                 | -                     | 3,0                | 5,0                                | 10,0               | -                    | 5,0                  | -                     | 2,0                | 3,0                    | -                        | 5                      | -   | -                | 606                | -      |           |  |
|    |         | 3 (R) | FS 2, Kfz |            | 2 (Q) | Rad       | 6,0                  | 8,5                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 5,4                | -                    | 5,0                  | -                     | 1,1                | 3,9                    | -                        |                        | -   | -                | 623                | -      |           |  |
|    |         | 3 (L) | FS 1, Kfz |            | 2 (Q) | Rad       | 6,0                  | 7,7                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 14,4               | -                    | 5,0                  | -                     | 2,9                | 2,1                    | -                        |                        | -   | -                | 641                | -      |           |  |
| 11 | K31     | 1 (L) | FS 1, Kfz | K1         | 2 (L) | FS 1, Kfz | 6,0                  | 14,2               | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 18,5               | -                    | 11,1                 | -                     | 1,7                | 3,3                    | -                        | 5                      | -   | -                | 531                | -      |           |  |
|    |         | 1 (G) | FS 2, Kfz |            | 2 (L) | FS 1, Kfz | 6,0                  | 16,7               | -                    | 10,0                 | -                     | 3,0                | 5,3                                | 27,1               | -                    | 11,1                 | -                     | 2,4                | 2,9                    | -                        |                        | -   | -                | 516                | -      |           |  |
|    |         | 1 (L) | FS 1, Kfz |            | 2 (G) | FS 2, Kfz | 6,0                  | 9,9                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 21,4               | -                    | 11,1                 | -                     | 1,9                | 3,1                    | -                        |                        | -   | -                | 530                | -      |           |  |
|    |         | 1 (G) | FS 2, Kfz |            | 2 (G) | FS 2, Kfz | 6,0                  | 9,4                | -                    | 10,0                 | -                     | 3,0                | 5,0                                | 27,7               | -                    | 11,1                 | -                     | 2,5                | 2,5                    | -                        |                        | -   | -                | 415                | -      |           |  |
|    |         | 1 (R) | FS 2, Kfz |            | 2 (G) | FS 2, Kfz | 6,0                  | 9,2                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 32,2               | -                    | 11,1                 | -                     | 2,9                | 2,1                    | -                        |                        | -   | -                | 463                | -      |           |  |
| 12 | K31     | 1 (L) | FS 1, Kfz | K11        | 4 (L) | FS 1, Kfz | 6,0                  | 9,7                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 22,2               | -                    | 11,1                 | -                     | 2,0                | 3,0                    | -                        | 5                      | -   | -                | 529                | -      |           |  |
|    |         | 1 (G) | FS 2, Kfz |            | 4 (L) | FS 1, Kfz | 6,0                  | 12,2               | -                    | 10,0                 | -                     | 3,0                | 5,0                                | 15,5               | -                    | 11,1                 | -                     | 1,4                | 3,6                    | -                        |                        | -   | -                | 477                | -      |           |  |
|    |         | 1 (L) | FS 1, Kfz |            | 4 (G) | FS 2, Kfz | 6,0                  | 16,2               | -                    | 7,0                  | -                     | 2,0                | 5,2                                | 25,8               | -                    | 11,1                 | -                     | 2,3                | 2,9                    | -                        |                        | -   | -                | 527                | -      |           |  |
|    |         | 1 (G) | FS 2, Kfz |            | 4 (G) | FS 2, Kfz | 6,0                  | 15,4               | -                    | 10,0                 | -                     | 3,0                | 5,1                                | 15,7               | -                    | 11,1                 | -                     | 1,4                | 3,7                    | -                        |                        | -   | -                | 413                | -      |           |  |
|    |         | 1 (G) | FS 2, Kfz |            | 4 (R) | FS 2, Kfz | 6,0                  | 22,1               | -                    | 10,0                 | -                     | 3,0                | 5,8                                | 17,0               | -                    | 11,1                 | -                     | 1,5                | 4,3                    | -                        |                        | -   | -                | 497                | -      |           |  |
| 13 | K31     | 1 (L) | FS 1, Kfz | K21        | 3 (G) | FS 2, Kfz | 6,0                  | 16,5               | -                    | 7,0                  | -                     | 2,0                | 5,2                                | 13,7               | -                    | 11,1                 | -                     | 1,2                | 4,0                    | -                        | 6                      | -   | -                | 601                | -      |           |  |
|    |         | 1 (L) | FS 1, Kfz |            | 3 (R) | FS 2, Kfz | 6,0                  | 25,1               | -                    | 7,0                  | -                     | 2,0                | 6,4                                | 12,5               | -                    | 11,1                 | -                     | 1,1                | 5,3                    | -                        |                        | -   | -                | 615                | -      |           |  |
|    |         | 1 (G) | FS 2, Kfz |            | 3 (L) | FS 1, Kfz | 6,0                  | 10,8               | -                    | 10,0                 | -                     | 3,0                | 5,0                                | 19,6               | -                    | 11,1                 | -                     | 1,8                | 3,2                    | -                        |                        | -   | -                | 632                | -      |           |  |
|    |         | 1 (R) | FS 2, Kfz |            | 3 (L) | FS 1, Kfz | 6,0                  | 9,3                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 24,6               | -                    | 11,1                 | -                     | 2,2                | 2,8                    | -                        |                        | -   | -                | 635                | -      |           |  |
| 14 | K31     | 1 (G) | FS 2, Kfz | F23        | 3 (Q) | Fußg.     | 6,0                  | 23,0               | -                    | 10,0                 | -                     | 3,0                | 5,9                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,9                    | -                        | 6                      | -   | -                | 421                | -      |           |  |
|    |         |       | FS 2, Kfz |            |       | Fußg.     | 6,0                  | 21,3               | -                    | 10,0                 | -                     | 3,0                | 5,7                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,7                    | -                        |                        | 422 |                  |                    |        |           |  |

|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 13         |

# Zwischenzeitenberechnung

LISA

|    | Räumend |       |           | Einfahrend |       |           | Räumend              |                    |                      |                      |                       |                    |                                    |                    | Einfahrend           |                      |                       |                    |                        | Zwischenzeit             |                        |     |               | Info            |        |           |  |  |
|----|---------|-------|-----------|------------|-------|-----------|----------------------|--------------------|----------------------|----------------------|-----------------------|--------------------|------------------------------------|--------------------|----------------------|----------------------|-----------------------|--------------------|------------------------|--------------------------|------------------------|-----|---------------|-----------------|--------|-----------|--|--|
|    | SGR     | Strom | Teilstrom | SGR        | Strom | Teilstrom | L <sub>Fzg</sub> [m] | s <sub>0</sub> [m] | v <sub>0</sub> [m/s] | v <sub>r</sub> [m/s] | a <sub>r</sub> [m/s²] | t <sub>ü</sub> [s] | t <sub>ü</sub> +t <sub>r</sub> [s] | s <sub>e</sub> [m] | v <sub>0</sub> [m/s] | v <sub>e</sub> [m/s] | a <sub>e</sub> [m/s²] | t <sub>e</sub> [s] | t <sub>z Ber</sub> [s] | t <sub>zschlag</sub> [s] | t <sub>maßg.</sub> [s] | Rad | Rad maßgebend | Schnittpunkt ID | Schutz | Bemerkung |  |  |
| 15 | K31     | 1 (L) | FS 1, Kfz | FR31       | 1 (Q) | Fußg.     | 6,0                  | 3,2                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,0                    | -                        | 5                      | -   | -             | 533             | -      |           |  |  |
|    |         |       | FS 1, Kfz |            |       | Fußg.     | 6,0                  | 1,7                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,0                    | -                        |                        |     |               | 532             |        |           |  |  |
|    |         |       | FS 1, Kfz |            |       | Rad       | 6,0                  | 3,2                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 6,5                | -                    | 5,0                  | -                     | 1,3                | 3,7                    | -                        |                        |     |               | 533             |        |           |  |  |
|    |         |       | FS 1, Kfz |            |       | Rad       | 6,0                  | 1,7                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 5,6                | -                    | 5,0                  | -                     | 1,1                | 3,9                    | -                        |                        |     |               | 532             |        |           |  |  |
|    |         | 1 (G) | FS 2, Kfz |            | 1 (Q) | Fußg.     | 6,0                  | 3,2                | -                    | 10,0                 | -                     | 3,0                | 5,0                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,0                    | -                        |                        | -   | -             | 428             | -      |           |  |  |
|    |         |       | FS 2, Kfz |            |       | Fußg.     | 6,0                  | 1,7                | -                    | 10,0                 | -                     | 3,0                | 5,0                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,0                    | -                        |                        |     |               | 427             |        |           |  |  |
|    |         |       | FS 2, Kfz |            |       | Rad       | 6,0                  | 3,2                | -                    | 10,0                 | -                     | 3,0                | 5,0                                | 0,0                | -                    | 5,0                  | -                     | 0,0                | 5,0                    | -                        |                        |     |               | 428             |        |           |  |  |
|    |         |       | FS 2, Kfz |            |       | Rad       | 6,0                  | 1,7                | -                    | 10,0                 | -                     | 3,0                | 5,0                                | 0,0                | -                    | 5,0                  | -                     | 0,0                | 5,0                    | -                        |                        |     |               | 427             |        |           |  |  |
|    |         | 1 (R) | FS 2, Kfz |            | 1 (Q) | Fußg.     | 6,0                  | 3,3                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,0                    | -                        |                        | -   | -             | 469             | -      |           |  |  |
|    |         |       | FS 2, Kfz |            |       | Fußg.     | 6,0                  | 1,7                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 0,0                | -                    | 1,5                  | -                     | 0,0                | 5,0                    | -                        |                        |     |               | 468             |        |           |  |  |
|    |         |       | FS 2, Kfz |            |       | Rad       | 6,0                  | 3,3                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 0,0                | -                    | 5,0                  | -                     | 0,0                | 5,0                    | -                        |                        |     |               | 469             |        |           |  |  |
|    |         |       | FS 2, Kfz |            |       | Rad       | 6,0                  | 1,7                | -                    | 7,0                  | -                     | 2,0                | 5,0                                | 0,0                | -                    | 5,0                  | -                     | 0,0                | 5,0                    | -                        |                        |     |               | 468             |        |           |  |  |
| 16 | K31     | 1 (G) | FS 2, Kfz | R1         | 2 (Q) | Rad       | 6,0                  | 19,6               | -                    | 10,0                 | -                     | 3,0                | 5,6                                | 7,5                | -                    | 5,0                  | -                     | 1,5                | 4,1                    | -                        | 5                      | -   | -             | 424             | -      |           |  |  |
| 17 | F21     | 3 (Q) | Fußg.     | K21        | 3 (G) | FS 2, Kfz | -                    | 10,6               | -                    | 1,2                  | -                     | -                  | 8,8                                | 0,0                | -                    | 11,1                 | -                     | 0,0                | 8,8                    | -                        | 9                      | -   | -             | 603             | -      |           |  |  |
|    |         |       | Fußg.     |            |       | FS 2, Kfz | -                    | 10,6               | -                    | 1,2                  | -                     | -                  | 8,8                                | 0,0                | -                    | 11,1                 | -                     | 0,0                | 8,8                    | -                        |                        |     |               | 602             |        |           |  |  |
|    |         | 3 (Q) | Fußg.     |            | 3 (R) | FS 2, Kfz | -                    | 10,6               | -                    | 1,2                  | -                     | -                  | 8,8                                | 0,0                | -                    | 11,1                 | -                     | 0,0                | 8,8                    | -                        |                        | -   | -             | 620             | -      |           |  |  |
|    |         |       | Fußg.     |            |       | FS 2, Kfz | -                    | 10,6               | -                    | 1,2                  | -                     | -                  | 8,8                                | 0,0                | -                    | 11,1                 | -                     | 0,0                | 8,8                    | -                        |                        |     |               | 619             |        |           |  |  |
|    |         | 3 (Q) | Fußg.     |            | 3 (L) | FS 1, Kfz | -                    | 10,6               | -                    | 1,2                  | -                     | -                  | 8,8                                | 0,0                | -                    | 11,1                 | -                     | 0,0                | 8,8                    | -                        |                        | -   | -             | 638             | -      |           |  |  |
|    |         |       | Fußg.     |            |       | FS 1, Kfz | -                    | 10,6               | -                    | 1,2                  | -                     | -                  | 8,8                                | 0,0                | -                    | 11,1                 | -                     | 0,0                | 8,8                    | -                        |                        |     |               | 551             |        |           |  |  |
| 18 | F23     | 3 (Q) | Fußg.     | K31        | 1 (G) | FS 2, Kfz | -                    | 7,9                | -                    | 1,2                  | -                     | -                  | 6,6                                | 23,0               | -                    | 11,1                 | -                     | 2,1                | 4,5                    | -                        | 5                      | -   | -             | 421             | -      |           |  |  |
|    |         |       | Fußg.     |            |       | FS 2, Kfz | -                    | 7,9                | -                    | 1,2                  | -                     | -                  | 6,6                                | 21,3               | -                    | 11,1                 | -                     | 1,9                | 4,7                    | -                        |                        |     |               | 422             |        |           |  |  |
| 19 | FR31    | 1 (Q) | Fußg.     | K21        | 3 (G) | FS 2, Kfz | -                    | 19,2               | -                    | 1,2                  | -                     | -                  | 16,0                               | 24,2               | -                    | 11,1                 | -                     | 2,2                | 13,8                   | -                        | 14                     | X   | -             | 609             | -      |           |  |  |
|    |         |       | Fußg.     |            |       | FS 2, Kfz | -                    | 19,2               | -                    | 1,2                  | -                     | -                  | 16,0                               | 22,8               | -                    | 11,1                 | -                     | 2,1                | 13,9                   | -                        |                        |     |               | 608             |        |           |  |  |
|    |         |       | Rad       |            |       | FS 2, Kfz | -                    | 12,4               | -                    | 4,0                  | -                     | 1,0                | 4,1                                | 24,2               | -                    | 11,1                 | -                     | 2,2                | 1,9                    | -                        |                        |     |               | 609             |        |           |  |  |
|    |         |       | Rad       |            |       | FS 2, Kfz | -                    | 13,7               | -                    | 4,0                  | -                     | 1,0                | 4,4                                | 22,8               | -                    | 11,1                 | -                     | 2,1                | 2,3                    | -                        |                        |     |               | 608             |        |           |  |  |
| 20 | FR31    | 1 (Q) | Fußg.     | K31        | 1 (L) | FS 1, Kfz | -                    | 19,2               | -                    | 1,2                  | -                     | -                  | 16,0                               | 0,0                | -                    | 11,1                 | -                     | 0,0                | 16,0                   | -                        | 16                     | X   | -             | 533             | -      |           |  |  |
|    |         |       | Fußg.     |            |       | FS 1, Kfz | -                    | 19,2               | -                    | 1,2                  | -                     | -                  | 16,0                               | 0,0                | -                    | 11,1                 | -                     | 0,0                | 16,0                   | -                        |                        |     |               | 532             |        |           |  |  |
|    |         |       | Rad       |            |       | FS 1, Kfz | -                    | 12,7               | -                    | 4,0                  | -                     | 1,0                | 4,2                                | 0,0                | -                    | 11,1                 | -                     | 0,0                | 4,2                    | -                        |                        |     |               | 533             |        |           |  |  |
|    |         |       | Rad       |            |       | FS 1, Kfz | -                    | 12,3               | -                    | 4,0                  | -                     | 1,0                | 4,1                                | 0,0                | -                    | 11,1                 | -                     | 0,0                | 4,1                    | -                        |                        |     |               | 532             |        |           |  |  |
|    |         | 1 (Q) | Fußg.     |            | 1 (G) | FS 2, Kfz | -                    | 19,2               | -                    | 1,2                  | -                     | -                  | 16,0                               | 0,0                | -                    | 11,1                 | -                     | 0,0                | 16,0                   | -                        |                        | X   | -             | 428             | -      |           |  |  |
|    |         |       | Fußg.     |            |       | FS 2, Kfz | -                    | 19,2               | -                    | 1,2                  | -                     | -                  | 16,0                               | 0,0                | -                    | 11,1                 | -                     | 0,0                | 16,0                   | -                        |                        |     |               | 427             |        |           |  |  |
|    |         |       | Rad       |            |       | FS 2, Kfz | -                    | 16,5               | -                    | 4,0                  | -                     | 1,0                | 5,1                                | 0,0                | -                    | 11,1                 | -                     | 0,0                | 5,1                    | -                        |                        |     |               | 428             |        |           |  |  |
|    |         |       | Rad       |            |       | FS 2, Kfz | -                    | 15,9               | -                    | 4,0                  | -                     | 1,0                | 5,0                                | 0,0                | -                    | 11,1                 | -                     | 0,0                | 5,0                    | -                        |                        |     |               | 427             |        |           |  |  |

|             |                                 |  |  |  |  |  |  |  |  |  |             |  |                   |  |  |  |  |  |       |            |  |  |  |  |
|-------------|---------------------------------|--|--|--|--|--|--|--|--|--|-------------|--|-------------------|--|--|--|--|--|-------|------------|--|--|--|--|
| Projekt     | LSA-Proj.-Nr. 185005            |  |  |  |  |  |  |  |  |  |             |  |                   |  |  |  |  |  |       |            |  |  |  |  |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |  |  |  |  |  |  |  |  |  |             |  |                   |  |  |  |  |  |       |            |  |  |  |  |
| Auftragsnr. | 661 023 26                      |  |  |  |  |  |  |  |  |  | Variante    |  | Gerätetausch 2026 |  |  |  |  |  | Datum | 18.08.2026 |  |  |  |  |
| Bearbeiter  | Thunert                         |  |  |  |  |  |  |  |  |  | Abzeichnung |  |                   |  |  |  |  |  | Blatt | 14         |  |  |  |  |

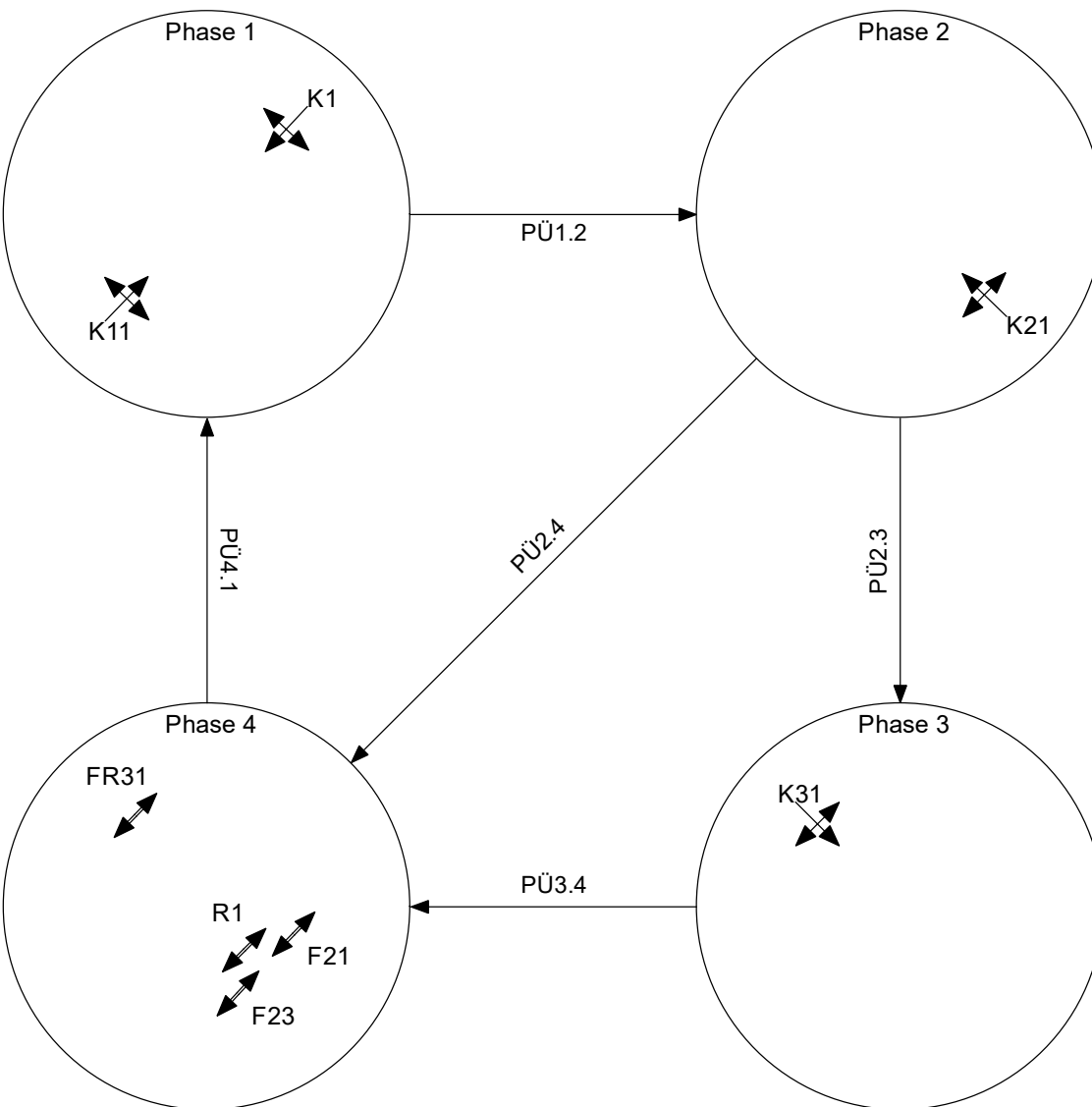
# Zwischenzeitenberechnung

LISA

|    | Räumend |       |           | Einfahrend |       |           | Räumend              |                    |                      |                      |                                    |                    |                                    | Einfahrend         |                      |                      |                                    |                    | Zwischenzeit           |                           |                        | Info |                  |                    |        |           |
|----|---------|-------|-----------|------------|-------|-----------|----------------------|--------------------|----------------------|----------------------|------------------------------------|--------------------|------------------------------------|--------------------|----------------------|----------------------|------------------------------------|--------------------|------------------------|---------------------------|------------------------|------|------------------|--------------------|--------|-----------|
|    | SGR     | Strom | Teilstrom | SGR        | Strom | Teilstrom | L <sub>Fzg</sub> [m] | s <sub>0</sub> [m] | v <sub>0</sub> [m/s] | v <sub>r</sub> [m/s] | a <sub>r</sub> [m/s <sup>2</sup> ] | t <sub>ü</sub> [s] | t <sub>ü</sub> +t <sub>r</sub> [s] | s <sub>e</sub> [m] | v <sub>0</sub> [m/s] | v <sub>e</sub> [m/s] | a <sub>e</sub> [m/s <sup>2</sup> ] | t <sub>e</sub> [s] | t <sub>z.Ber</sub> [s] | t <sub>zuschlag</sub> [s] | t <sub>maßg.</sub> [s] | Rad  | Rad<br>maßgebend | Schnittpunkt<br>ID | Schutz | Bemerkung |
|    |         | 1 (Q) | Fußg.     |            | 1 (R) | FS 2, Kfz | -                    | 19,2               | -                    | 1,2                  | -                                  | -                  | 16,0                               | 0,0                | -                    | 11,1                 | -                                  | 0,0                | 16,0                   | -                         |                        | X    | -                | 469                | -      |           |
|    |         |       | Fußg.     |            |       | FS 2, Kfz | -                    | 19,2               | -                    | 1,2                  | -                                  | -                  | 16,0                               | 0,0                | -                    | 11,1                 | -                                  | 0,0                | 16,0                   | -                         |                        |      |                  | 468                |        |           |
|    |         |       | Rad       |            |       | FS 2, Kfz | -                    | 17,5               | -                    | 4,0                  | -                                  | 1,0                | 5,4                                | 0,0                | -                    | 11,1                 | -                                  | 0,0                | 5,4                    | -                         |                        |      |                  | 469                |        |           |
|    |         |       | Rad       |            |       | FS 2, Kfz | -                    | 16,3               | -                    | 4,0                  | -                                  | 1,0                | 5,1                                | 0,0                | -                    | 11,1                 | -                                  | 0,0                | 5,1                    | -                         |                        |      |                  | 468                |        |           |
| 21 | R1      | 2 (Q) | Rad       | K21        | 3 (G) | FS 2, Kfz | -                    | 19,0               | -                    | 4,0                  | -                                  | 1,0                | 5,8                                | 7,5                | -                    | 11,1                 | -                                  | 0,7                | 5,1                    | -                         | 7                      | X    | X                | 606                | -      |           |
|    |         | 2 (Q) | Rad       |            | 3 (R) | FS 2, Kfz | -                    | 23,6               | -                    | 4,0                  | -                                  | 1,0                | 6,9                                | 8,5                | -                    | 11,1                 | -                                  | 0,8                | 6,1                    | -                         |                        | X    | X                | 623                | -      |           |
|    |         | 2 (Q) | Rad       |            | 3 (L) | FS 1, Kfz | -                    | 14,6               | -                    | 4,0                  | -                                  | 1,0                | 4,7                                | 7,7                | -                    | 11,1                 | -                                  | 0,7                | 4,0                    | -                         |                        | X    | X                | 641                | -      |           |
| 22 | R1      | 2 (Q) | Rad       | K31        | 1 (G) | FS 2, Kfz | -                    | 21,5               | -                    | 4,0                  | -                                  | 1,0                | 6,4                                | 19,6               | -                    | 11,1                 | -                                  | 1,8                | 4,6                    | -                         | 5                      | X    | X                | 424                | -      |           |

Richtlinie: RiLSA2015

|             |                                 |  |  |  |  |  |             |                   |  |  |  |  |       |            |
|-------------|---------------------------------|--|--|--|--|--|-------------|-------------------|--|--|--|--|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |  |  |  |  |  |             |                   |  |  |  |  |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |  |  |  |  |  |             |                   |  |  |  |  |       |            |
| Auftragsnr. | 661 023 26                      |  |  |  |  |  | Variante    | Gerätetausch 2026 |  |  |  |  | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         |  |  |  |  |  | Abzeichnung |                   |  |  |  |  | Blatt | 15         |



|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 16         |

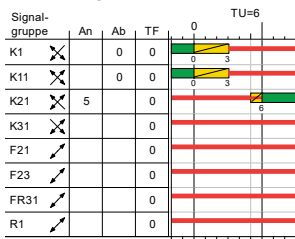
# Phasenübergang PÜ12



Landeshauptstadt Kiel  
Tiefbauamt 66.1.3.1

LISA

## PÜ12



Gelb  
 Grün  
 Rot  
 RotGelb

|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 17         |

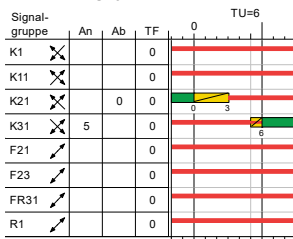
# Phasenübergang PÜ23



Landeshauptstadt Kiel  
Tiefbauamt 66.1.3.1

LISA

## PÜ23



|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 18         |

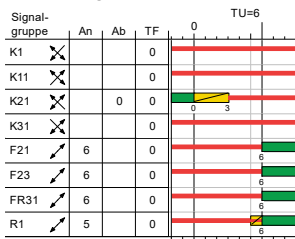
# Phasenübergang PÜ24



Landeshauptstadt Kiel  
Tiefbauamt 66.1.3.1

LISA

## PÜ24



Gelb  
 Grün  
 Rot  
 RotGelb

|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 19         |

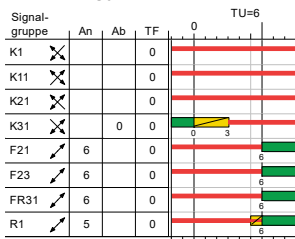
# Phasenübergang PÜ34



Landeshauptstadt Kiel  
Tiefbauamt 66.1.3.1

LISA

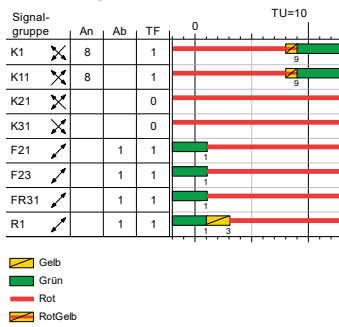
## PÜ34



|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 20         |



**PÜ41**

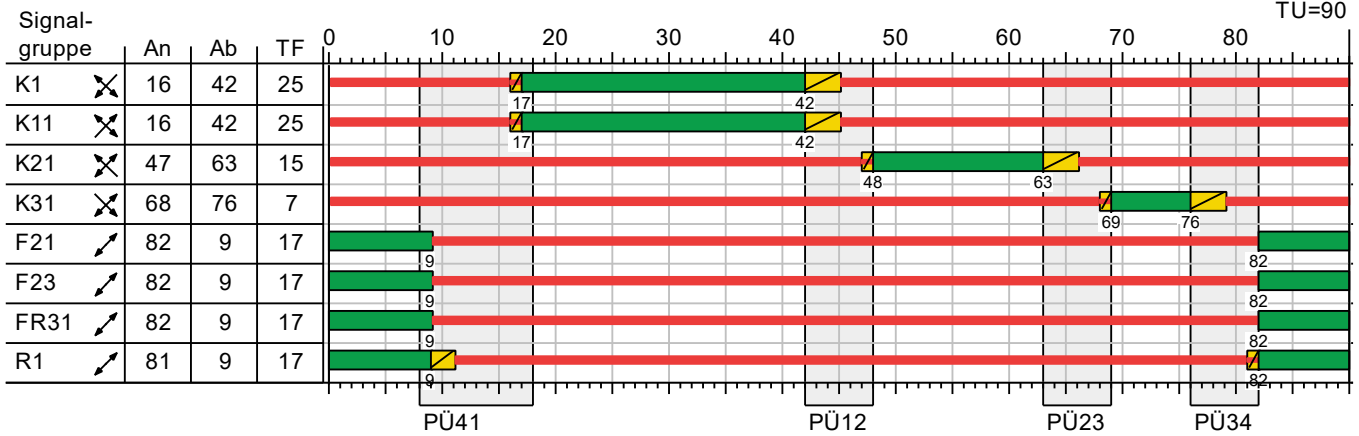


|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 21         |

# Signalzeitenplan P1



Landeshauptstadt Kiel  
Tiefbauamt 66.1.3.1



|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 22         |

# Detektoren

LISA

|    | Name      | Typ      | ID-Nr. | Langbezeichnung | Fahrstreifen            | Abstand zur Haltlinie [m] | GIS Koordinate                                             | Mast | SGR1 | SGR2 | Funktion    | Bemerkung |
|----|-----------|----------|--------|-----------------|-------------------------|---------------------------|------------------------------------------------------------|------|------|------|-------------|-----------|
| 1  | D1.1      | Schleife | 1      |                 | Arm 2: Fahrstreifen 2   | 2,0                       | 32U 572283,610574521 6018337,96894394 - ETRS89 (GRS80/UTM) | -    | K1   | -    | Anforderung |           |
| 2  | D1.2      | Schleife | 2      |                 | Arm 2: Fahrstreifen 2   | 30,0                      | 32U 572302,987407351 6018358,29343243 - ETRS89 (GRS80/UTM) | -    | K1   | -    | Anforderung |           |
| 3  | D3.1      | Schleife | 3      |                 | Arm 2: Fahrstreifen 1   | 2,0                       | 32U 572285,824295719 6018336,04625328 - ETRS89 (GRS80/UTM) | -    | K1   | -    | Anforderung |           |
| 4  | D3.2      | Schleife | 4      |                 | Arm 2: Fahrstreifen 1   | 30,0                      | 32U 572305,155546695 6018356,41408697 - ETRS89 (GRS80/UTM) | -    | K1   | -    | Anforderung |           |
| 5  | D11.1     | Schleife | 5      |                 | Arm 4: Fahrstreifen 2   | 2,0                       | 32U 572255,870824356 6018299,43585168 - ETRS89 (GRS80/UTM) | -    | K11  | -    | Anforderung |           |
| 6  | D11.2     | Schleife | 6      |                 | Arm 4: Fahrstreifen 2   | 35,0                      | 32U 572232,973964788 6018275,53782579 - ETRS89 (GRS80/UTM) | -    | K11  | -    | Anforderung |           |
| 7  | D13.1     | Schleife | 7      |                 | Arm 4: Fahrstreifen 1   | 2,0                       | 32U 572253,735745493 6018301,44710269 - ETRS89 (GRS80/UTM) | -    | K11  | -    | Anforderung |           |
| 8  | D13.2     | Schleife | 8      |                 | Arm 4: Fahrstreifen 1   | 35,0                      | 32U 572230,893742892 6018277,49685722 - ETRS89 (GRS80/UTM) | -    | K11  | -    | Anforderung |           |
| 9  | D21.1     | Schleife | 9      |                 | Arm 3: Fahrstreifen 2   | 2,0                       | 32U 572286,720776259 6018311,89772477 - ETRS89 (GRS80/UTM) | -    | K21  | -    | Anforderung |           |
| 10 | D21.2     | Schleife | 10     |                 | Arm 3: Fahrstreifen 1   | 2,0                       | 32U 572283,760531656 6018308,63407656 - ETRS89 (GRS80/UTM) | -    | K21  | -    | Anforderung |           |
| 11 | D21.3     | Schleife | 11     |                 | Arm 3: Fahrstreifen 1 2 | 43,341                    | 32U 572320,071797766 6018325,08680677 - ETRS89 (GRS80/UTM) | -    | K21  | -    | Anforderung |           |
| 12 | D31.1     | Schleife | 12     |                 | Arm 1: Fahrstreifen 1 2 | 2,0                       | 32U 572255,017492878 6018323,76062633 - ETRS89 (GRS80/UTM) | -    | K31  | -    | Anforderung |           |
| 13 | AFG21_GFT | Taster   | 13     |                 | Arm 3: Furt 1 (3)       | 0,0                       |                                                            | -    | F21  | -    | Anforderung |           |
| 14 | AFG21_VDT | Taster   | 14     |                 | Arm 3: Furt 1 (3)       | 0,0                       |                                                            | -    | -    | -    | Anforderung |           |
| 15 | AFG23_GFT | Taster   | 15     |                 | Arm 3: Furt 2 (3)       | 0,0                       |                                                            | -    | F23  | -    | Anforderung |           |
| 16 | AFG23_VDT | Taster   | 16     |                 | Arm 3: Furt 2 (3)       | 0,0                       |                                                            | -    | F23  | -    | Anforderung |           |
| 17 | AFG31_GFT | Taster   | 17     |                 | Arm 1: Furt 1 (1)       | 0,0                       |                                                            | -    | FR31 | -    | Anforderung |           |
| 18 | AFG31_VDT | Taster   | 18     |                 | Arm 1: Furt 1 (1)       | 0,0                       |                                                            | -    | -    | -    | Anforderung |           |

|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 23         |

## Meldepunkte

|   | Name | MP-Nr. | Erfassung  | Linien-Kennungen | Bemerkung |
|---|------|--------|------------|------------------|-----------|
| 1 | MP_V | 1852   | √-Telegram | -                |           |
| 2 | MP_H | 1850   | √-Telegram | -                |           |
| 3 | Ab   | 1851   | √-Telegram | -                |           |

## Linien-Kennungen

|   | Name | Typ | Linie | Route | Kurs | Hand | Von Arm | Nach Arm | Bemerkung |
|---|------|-----|-------|-------|------|------|---------|----------|-----------|
| 1 | An1  | Bus | 0     | 24    | 0    | 0    | 2       | 4        |           |
| 2 | An11 | Bus | 0     | 42    | 0    | 0    | 4       | 2        |           |

## Meldestrecken

|   | Name  | ID-Nr. | Linien-Kennungen | SGR | Meldepunkt | Funktion       | Abstand [m] | Max. ÖV-Fz. | Überholen erlaubt | Bemerkung |
|---|-------|--------|------------------|-----|------------|----------------|-------------|-------------|-------------------|-----------|
| 1 | MS_1  | 1      | An1              | -   | MP_V       | Voranmeldung   | -           | 1           | -                 |           |
|   |       |        |                  |     | MP_H       | Hauptanmeldung | -           |             |                   |           |
|   |       |        |                  |     | Ab         | Abmeldung      | -           |             |                   |           |
| 2 | MS_11 | 2      | An11             | -   | MP_V       | Voranmeldung   | -           | 1           | -                 |           |
|   |       |        |                  |     | MP_H       | Hauptanmeldung | -           |             |                   |           |
|   |       |        |                  |     | Ab         | Abmeldung      | -           |             |                   |           |

## ÖV-Zeitparameter P1

|   | Name  | Meldepunkt | Fahrzeit [s] | Zwangs-löschzeit [s] | Verzögerung [s] |
|---|-------|------------|--------------|----------------------|-----------------|
| 1 | MS_1  | MP_V       | 0            | 0                    | 0               |
|   |       | MP_H       | 0            | 0                    | 0               |
|   |       | Ab         | 0            | 0                    | 0               |
| 2 | MS_11 | MP_V       | 0            | 0                    | 0               |
|   |       | MP_H       | 0            | 0                    | 0               |
|   |       | Ab         | 0            | 0                    | 0               |

## Fahrplan

| ÖV-Fahrzeug-Kennung | Toleranz [s] | Zeiten [min] | Bemerkung |
|---------------------|--------------|--------------|-----------|
| Bus                 | An1          | 0            |           |
| Bus                 | An11         | 0            |           |

|             |                                 |             |                   |       |            |
|-------------|---------------------------------|-------------|-------------------|-------|------------|
| Projekt     | LSA-Proj.-Nr. 185005            |             |                   |       |            |
| Knotenpunkt | Winterbeker Weg / Rampe Südwest |             |                   |       |            |
| Auftragsnr. | 661 023 26                      | Variante    | Gerätetausch 2026 | Datum | 18.08.2026 |
| Bearbeiter  | Thunert                         | Abzeichnung |                   | Blatt | 24         |