Full Input Data And Results
Full Input Data And Results
User and Project Details

| Project: | Merseyside Police OCC |
| :--- | :--- |
| Title: |  |
| Location: | Speke, Liverpool |
| File name: | Speke Hall Avenue_Speke Blvd SSurvey.Isg3x |
| Author: | TL |
| Company: | Curtins Consulting Ltd |
| Address: |  |
| Notes: |  |

Network Layout Diagram


Full Input Data And Results
Phase Diagram


Full Input Data And Results

## Phase Input Data

| Phase Name | Phase Type | Assoc. Phase | Street Min | Cont Min |
| :---: | :---: | :---: | :---: | :---: |
| A | Traffic |  | 5 | 5 |
| B | Traffic |  | 5 | 5 |
| C | Traffic |  | 5 | 5 |
| D | Traffic |  | 5 | 5 |
| E | Traffic |  | 5 | 5 |
| F | Traffic |  | 5 | 5 |
| G | Traffic |  | 5 | 5 |
| H | Traffic |  | 5 | 5 |
| 1 | Traffic |  | 5 | 5 |
| J | Traffic |  | 5 | 5 |
| K | Pedestrian |  | 13 | 13 |
| L | Pedestrian |  | 6 | 6 |
| M | Pedestrian |  | 13 | 13 |
| N | Pedestrian |  | 11 | 11 |
| 0 | Pedestrian |  | 14 | 14 |
| P | Pedestrian |  | 7 | 7 |
| Q | Pedestrian |  | 13 | 13 |
| R | Pedestrian |  | 6 | 6 |
| S | Pedestrian |  | 9 | 9 |
| T | Pedestrian |  | 9 | 9 |
| U | Pedestrian |  | 6 | 6 |
| V | Pedestrian |  | 6 | 6 |

Phase Intergreens Matrix

|  | Starting Phase |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Terminating Phase |  | A | B | C | D | E | F | G | H | I | J | K | L |  | M | N | 0 | P | Q | R | S | T | U | V |
|  | A |  | - | - | - | - | 5 | 5 | - | 9 | 7 | 5 | - |  | - | - | - | - | - | - | - | 7 | - | - |
|  | B | - |  | - | - | - | 5 | 5 | - | - | - | - | 5 |  | - | - | - | - | - | - | - | - | - | - |
|  | C | - | - |  | 8 | 12 | - | 5 | - | - | 5 | 5 | - |  | - | - | - | - | - | - | - | - | 11 | - |
|  | D <br> E |  |  | $\begin{aligned} & 5 \\ & 5 \end{aligned}$ | - | - |  | $7$ | $9$ |  | 5 <br> 5 | - |  |  | - | 5 |  |  | - | - | $9$ | - |  |  |
|  | F | 8 | 11 | - | - | - |  | 5 | - | - | 5 | - | - |  | 5 | - | - | - | - | - | - | - | - | 11 |
|  | G | 8 | 9 | 6 | 5 | - | 6 |  | - | 11 | 9 | - | - |  | - | - | 5 | - | - | - | - | 12 | - | 10 |
|  | H | - | - | - | 5 | - | - | - |  | - | 5 | - | - |  | - | - | - | 5 | - | - | - | - | - | - |
|  | 1 | 5 | - | - | - | - | - | 5 | - |  | - | - | - |  | - | - | - | - | - | 5 | - | - | - | - |
|  | J | 5 | - | 6 | 8 | 9 | 6 | 9 | 11 | - |  | - | - |  | - | - | - | - | 5 | - | 11 | - | 10 | - |
|  | K | 13 | - | 13 | - | - | - | - | - | - | - |  | - |  | - | - | - | - | - | - | - | - | - | - |
|  | L | - | 6 | - | - | - | - | - | - | - | - | - |  |  | - | - | - | - | - | - | - | - | - | - |
|  | M | - | - | - | 13 | - | 13 | - | - | - | - | - | - |  |  | - | - | - | - | - | - | - | - | - |
|  | N | - | - | - | - | 11 | - | - | - | - | - | - | - |  | - |  | - | - | - | - | - | - | - | - |
|  | $\begin{aligned} & \mathrm{O} \\ & \mathrm{P} \end{aligned}$ |  |  |  |  |  |  | $14$ | 7 |  | - | - |  |  | - | - | - |  | - | - | - | - | - | - |
|  | Q | - | - | - | - | - | - | - | - | - | 13 | - | - |  | - | - | - | - |  | - | - | - | - | - |
|  | R | - | - | - | - | - | - | - | - | 6 | - | - | - |  | - | - | - | - | - |  | - | - | - | - |
|  | S | - | - | - | 9 | - | - | - | - | - | 9 | - | - |  | - | - | - | - | - | - |  | - | - | - |
|  | $\begin{aligned} & \mathrm{T} \\ & \mathrm{U} \end{aligned}$ | 9 |  | $6$ |  | - |  | 9 |  | - | - | - |  |  | - | - | - | 1- | - | - | - | - | - | - |
|  | V | - | - | - | - | - | 7 | 6 | - | - | - | - | - |  | - | - | - | $1-$ | - | - | - | - | - |  |

Phases in Stage

| Stage No. | Phases in Stage |
| :---: | :--- |
| 1 | D E F I O P Q T U |
| 2 | A B D E Q R U V |
| 3 | A B C H M N Q R S V |
| 4 | G H K L M N |
| 5 | I J KLO P |

## Stage Diagram



Full Input Data And Results

## Phase Delays

| Term. Stage | Start Stage | Phase | Type | Value | Cont value |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 1 | Losing | 4 | 4 |
| 1 | 2 | 0 | Losing | 10 | 10 |
| 1 | 2 | P | Losing | 10 | 10 |
| 2 | 4 | B | Losing | 2 | 2 |
| 2 | 4 | E | Losing | 4 | 4 |
| 2 | 4 | Q | Losing | 8 | 8 |
| 2 | 4 | R | Losing | 8 | 8 |
| 2 | 4 | U | Losing | 8 | 8 |
| 2 | 4 | V | Losing | 1 | 1 |
| 2 | 5 | A | Losing | 4 | 4 |
| 2 | 5 | B | Losing | 8 | 8 |
| 2 | 5 | D | Losing | 8 | 8 |
| 2 | 5 | E | Losing | 8 | 8 |
| 2 | 5 | R | Losing | 7 | 7 |
| 2 | 5 | U | Losing | 7 | 7 |
| 2 | 5 | V | Losing | 12 | 12 |
| 3 | 4 | A | Losing | 1 | 1 |
| 3 | 4 | B | Losing | 1 | 1 |
| 3 | 4 | C | Losing | 1 | 1 |
| 3 | 4 | Q | Losing | 5 | 5 |
| 3 | 4 | R | Losing | 5 | 5 |
| 3 | 4 | S | Losing | 5 | 5 |
| 3 | 5 | B | Losing | 8 | 8 |
| 3 | 5 | C | Losing | 8 | 8 |
| 3 | 5 | H | Losing | 8 | 8 |
| 3 | 5 | M | Losing | 12 | 12 |
| 3 | 5 | N | Losing | 12 | 12 |
| 3 | 5 | R | Losing | 3 | 3 |
| 3 | 5 | S | Losing | 4 | 4 |
| 3 | 5 | V | Losing | 12 | 12 |
| 4 | 1 | H | Losing | 8 | 8 |
| 4 | 1 | K | Losing | 12 | 12 |
| 4 | 1 | L | Losing | 12 | 12 |
| 4 | 2 | H | Losing | 8 | 8 |
| 4 | 5 | H | Losing | 4 | 4 |
| 4 | 5 | M | Losing | 10 | 10 |
| 4 | 5 | N | Losing | 10 | 10 |
| 5 | 1 | K | Losing | 9 | 9 |
| 5 | 1 | L | Losing | 9 | 9 |

Full Input Data And Results

| 5 | 2 | I | $\mid$ Losing | 8 | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 2 | J | Losing | 3 | 3 |
| 5 | 2 | O | Losing | 12 | 12 |
| 5 | 2 | P | Losing | 12 | 12 |

Prohibited Stage Change

|  | To Stage |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From <br> Stage |  | 1 | 2 | 3 | 4 | 5 |
|  | 1 |  | 11 | 11 | 14 | 13 |
|  | 2 | 9 |  | 9 | 9 | 13 |
|  | 3 | 13 | 13 |  | 6 | 13 |
|  | 4 | 13 | 13 | 13 |  | 11 |
|  | 5 | 10 | 13 | 13 | 14 |  |

## Full Input Data And Results

## Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

| Junction: Unnamed Junction |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane | Lane Type | Phases | Start Disp. | End Disp. | Physical Length (PCU) | Sat Flow Type | Def User Saturation Flow (PCU/Hr) | Lane Width (m) | Gradient | Nearside Lane | Turns | Turning Radius (m) |
| 1/1 (Speke Hall Rd (N)) | U | 1 | 2 | 3 | 9.2 | Geom | - | 3.04 | 0.00 | Y | Arm 4 Left | 34.20 |
| 1/2 <br> (Speke Hall <br> Rd (N)) | U | J | 2 | 3 | 60.0 | Geom | - | 3.30 | 0.00 | Y | Arm 6 Ahead | Inf |
| $1 / 3$ <br> (Speke Hall Rd (N)) |  | J |  | 3 |  | User |  |  | - | - | - | - |
| 1/4 (Speke Hall Rd (N)) | U | J | 2 | 3 | 10.1 | Geom | - | 3.30 | 0.00 | N | Arm 8 Right | 14.70 |
| $1 / 5$ <br> (Speke Hall Rd ( N )) | U | J | 2 | 3 | 6.0 | Geom | - | 3.30 | 0.00 | N | Arm 8 Right | 12.50 |
| 2/1 (Speke Hall Road (N)) | U |  | 2 | 3 | 5.7 | Geom | - | 3.40 | 0.00 | Y |  |  |
| 2/2 <br> (Speke Hall Road (N)) | U |  | 2 | 3 | 60.0 | Geom | - | 3.40 | 0.00 | Y |  |  |
| $\begin{gathered} 3 / 1 \\ \text { (A561 Speke } \\ \text { Blvd) } \end{gathered}$ | U | E | 2 | 3 | 9.0 | Geom | - | 4.95 | 0.00 | Y | Arm 6 Left | 42.00 |
| $\begin{gathered} 3 / 2 \\ \text { (A561 Speke } \\ \text { Blvd) } \end{gathered}$ | U | E | 2 | 3 | 15.8 | Geom | - | 5.00 | 0.00 | Y | Arm 6 Left | 48.20 |
| $\begin{gathered} 3 / 3 \\ \text { (A561 Speke } \\ \text { Blvd) } \end{gathered}$ | U | D | 2 | 3 | 60.0 | Geom | - | 3.30 | 0.00 | Y | Arm 8 <br> Ahead | Inf |
| $3 / 4$ (A561 Speke Blvd) | U | D | 2 | 3 | 5.0 | User | 1800 | - | - | - | - | - |
| $\begin{gathered} 3 / 5 \\ \text { (A561 Speke } \\ \text { Blvd) } \end{gathered}$ | U | D | 2 | 3 | 60.0 | User | 1600 | - | - | - | - | - |
| $\begin{gathered} 3 / 6 \\ \text { (A561 Speke } \\ \text { Blvd) } \end{gathered}$ | U | F | 2 | 3 | 13.0 | Geom | - | 3.35 | 0.00 | N | Arm 2 Right | 16.40 |
| $4 / 1$ (A561 Speke Blvd) | U |  | 2 | 3 | 14.6 | Geom | - | 3.60 | 0.00 | Y |  |  |
| $\begin{gathered} 4 / 2 \\ \text { (A561 Speke } \\ \text { Blvd) } \end{gathered}$ | U |  |  |  | 60.0 |  | - |  | 0.00 | Y |  |  |
| 4/3 (A561 Speke Blvd) | U |  | 2 | 3 | 60.0 | Geom | - | 3.40 | 0.00 | N |  |  |
| 5/1 (Speke Hall Ave) | U | G | 2 | 3 | 60.0 | Geom | - | 3.40 | 0.00 | Y | Arm 8 Left | Inf |

Full Input Data And Results

| $\begin{gathered} 5 / 2 \\ \text { (Speke Hall } \\ \text { Ave) } \end{gathered}$ | U | G | 2 | 3 | 60.0 | User | 1200 | - | - | - | - | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 5 / 3 \\ \text { (Speke Hall } \\ \text { Ave) } \end{gathered}$ | U | G | 2 | 3 | 5.0 | User | 1800 | - | - | - | - | - |
| 5/4 <br> (Speke Hall Ave) | U |  | 2 | 3 | 60.0 | Geom | - | 3.40 | 0.00 | N | Arm 4 Right | 19.20 |
| 5/5 (Speke Hall Ave) | U | G | 2 | 3 | 5.0 | Geom | - | 3.40 | 0.00 | N | Arm 4 Right | 17.75 |
| 6/1 <br> (Speke Hall Ave) | U |  | 2 | 3 | $60.0$ | Geom | - | $3.40$ | $0.00$ | Y |  |  |
| $\begin{gathered} \text { 6/2 } \\ \text { (Speke Hall } \\ \text { Ave) } \end{gathered}$ | U |  | 2 | 3 |  | Geom | - |  |  | N |  |  |
| 7/1 <br> (A561 Speke Blvd (W)) | U | B | 2 | 3 | 9.6 | Geom | - | 5.00 | 0.00 | Y | Arm 2 Left | 32.00 |
| $\begin{gathered} 7 / 2 \\ \text { (A561 Speke } \\ \text { Blvd (W)) } \end{gathered}$ | U | A | 2 | 3 | 14.3 | Geom | - | 3.40 | 0.00 | Y | Arm 4 Ahead | Inf |
| $\begin{gathered} 7 / 3 \\ \text { (A561 Speke } \\ \text { Blvd (W)) } \end{gathered}$ | U | A | 2 | 3 | 60.0 | User | 1600 | - | - | - | - | - |
| $\begin{gathered} \text { 7/4 } \\ \text { (A561 Speke } \\ \text { Blvd (W)) } \end{gathered}$ | U | A | 2 | 3 | 60.0 | Geom | - | 3.40 | 0.00 | N | Arm 4 Ahead | Inf |
| $\begin{gathered} \text { 7/5 } \\ \text { (A561 Speke } \\ \text { Blvd (W)) } \end{gathered}$ | U | C | 2 | 3 | 11.5 | Geom | - | 3.40 | 0.00 | N | Arm 6 Right | 16.60 |
| 8/1 <br> (A561 Speke Blvd (W)) | U |  | 2 | 3 | 60.0 | Geom | - | 3.40 | 0.00 | Y |  |  |
| $\begin{gathered} \text { 8/2 } \\ \text { (A561 Speke } \\ \text { Blvd (W)) } \end{gathered}$ | U |  | 2 | 3 | 60.0 | Geom | - | 3.40 | 0.00 | Y |  |  |
| $\begin{gathered} \text { 8/3 } \\ \text { (A561 Speke } \\ \text { Blvd (W)) } \end{gathered}$ | U |  | 2 | 3 | 11.5 | Geom | - | 3.40 | 0.00 | N |  |  |

Full Input Data And Results
Traffic Flow Groups

| Flow Group | Start Time | End Time | Duration | Formula |
| :---: | :---: | :---: | :---: | :---: |
| 1: 'Base AM 2017' | $08: 00$ | $09: 00$ | $01: 00$ |  |
| 2: 'Base PM 2017' | $16: 00$ | $17: 00$ | $01: 00$ |  |
| 3: 'Sat 2017' | $13: 15$ | $14: 15$ | $01: 00$ |  |
| 4: '2022 AM' | $08: 00$ | $09: 00$ | $01: 00$ |  |
| 5: '2022 PM' | $16: 00$ | $17: 00$ | $01: 00$ |  |
| 6: '2022 Sat' | $13: 15$ | $14: 15$ | $01: 00$ |  |
| 7: '2022 AM + Development + Response 40/30/30' | $08: 00$ | $09: 00$ | $01: 00$ |  |
| 8: '2022 PM + Development + Response 40/30/30' | $16: 00$ | $17: 00$ | $01: 00$ |  |
| 9: 'Sat 2022 + Dev + Response 40/30/30' | $13: 15$ | $14: 15$ | $01: 00$ |  |
| 10: '2022 AM + (Dev + Response 40/30/30 +50\%)' | $08: 00$ | $09: 00$ | $01: 00$ |  |
| 11: '2022 PM + (Dev + Response 40/30/30 +50\%)' | $16: 00$ | $17: 00$ | $01: 00$ |  |
| 12: 'Sat 2022 + (Dev + Response 40/30/30 +50\%)' | $13: 15$ | $14: 15$ | $01: 00$ |  |

Scenario 1: '2017 AM' (FG1: 'Base AM 2017', Plan 1: 'Network Control Plan 1') Traffic Flows, Desired
Desired Flow :

|  | Destination |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | A | B | C | D | Tot. |  |
|  | A | 0 | 372 | 278 | 309 | 959 |  |
|  | B | 390 | 0 | 383 | 1606 | 2379 |  |
|  | C | 156 | 137 | 0 | 54 | 347 |  |
|  | D | 226 | 1034 | 58 | 0 | 1318 |  |
|  | Tot. | 772 | 1543 | 719 | 1969 | 5003 |  |

Full Input Data And Results
Traffic Lane Flows

| Lane | $\begin{aligned} & \text { Scenario 1: } \\ & 2017 \text { AM } \end{aligned}$ |
| :---: | :---: |
| Junction: Unnamed Junction |  |
| $\begin{gathered} 1 / 1 \\ \text { (short) } \end{gathered}$ | 372 |
| $\begin{gathered} 1 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 511(\text { In }) \\ 139(\text { Out }) \end{gathered}$ |
| 1/3 | 139 |
| $\begin{gathered} 1 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 309(\mathrm{In}) \\ 155(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 1 / 5 \\ \text { (short) } \end{gathered}$ | 154 |
| 2/1 | 499 |
| 2/2 | 273 |
| $\begin{gathered} 3 / 1 \\ \text { (short) } \end{gathered}$ | 192 |
| $\begin{gathered} 3 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 383(\mathrm{In}) \\ \text { 191(Out) } \end{gathered}$ |
| $\begin{gathered} 3 / 3 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & 1071 \text { (In) } \\ & 535(\text { Out) } \end{aligned}$ |
| $\begin{gathered} 3 / 4 \\ \text { (short) } \end{gathered}$ | 536 |
| $\begin{gathered} 3 / 5 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 925(\text { In }) \\ 535(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 3 / 6 \\ \text { (short) } \end{gathered}$ | 390 |
| 4/1 | 564 |
|  | 565 |
| 4/3 | 414 |
| 5/1 | 54 |
| $\begin{gathered} 5 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & \text { 156(In) } \\ & 78 \text { (Out) } \end{aligned}$ |
| 5/3 <br> (short) | 78 |
| $\begin{gathered} 5 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & 137 \text { (In) } \\ & \text { 68(Out) } \end{aligned}$ |
| 5/5 <br> (short) | 69 |
| 6/1 | 331 |
| 6/2 | 388 |
| $\begin{gathered} 7 / 1 \\ \text { (short) } \end{gathered}$ | 226 |
| $\begin{gathered} 7 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 570(\text { In) } \\ 344(\text { Out }) \end{gathered}$ |
|  | 345 |
| 7/4 <br> (with short) | $\begin{aligned} & \text { 403(In) } \\ & 345(\text { Out }) \end{aligned}$ |
| 7/5 <br> (short) | 58 |
| 8/1 | 744 |
| 8/2 | 613 |

Full Input Data And Results
$\square$

Full Input Data And Results
Lane Saturation Flows

| Junction: Unnamed Junction |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| $\begin{gathered} 1 / 1 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.04 | 0.00 | Y | Arm 4 Left | 34.20 | 100.0 \% | 1838 | 1838 |
| $\begin{gathered} 1 / 2 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | Y | Arm 6 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $\begin{gathered} \text { 1/3 } \\ \text { (Speke Hall Rd (N) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 1 / 4 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 14.70 | 100.0 \% | 1892 | 1892 |
| $\begin{gathered} 1 / 5 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 12.50 | 100.0 \% | 1862 | 1862 |
| $\begin{gathered} 2 / 1 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 2 / 2 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $3 / 1$ (A561 Speke Blvd) | 4.95 | 0.00 | Y | Arm 6 Left | 42.00 | 100.0 \% | 2037 | 2037 |
| $\begin{gathered} 3 / 2 \\ \text { (A561 Speke Blvd) } \end{gathered}$ | 5.00 | 0.00 | Y | Arm 6 Left | 48.20 | 100.0 \% | 2051 | 2051 |
| (A561 Speke Blvd) | 3.30 | 0.00 | Y | Arm 8 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $3 / 4$ (A561 Speke Blva Lane 4) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $3 / 5$ (A561 Speke Blva Lane 5) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd) | 3.35 | 0.00 | N | Arm 2 Right | 16.40 | 100.0 \% | 1915 | 1915 |
| $\begin{gathered} \text { (A561 Speke Blvd) } \end{gathered}$ | 3.60 | 0.00 | Y |  |  |  | 1975 | 1975 |
| (A561 Speke Blvd) | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 4/3 (A561 Speke Blvd) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 5 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 8 Left | Inf | 100.0 \% | 1955 | 1955 |
| $5 / 2$ (Speke Hall Ave Lane 2) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1200 | 1200 |
| $5 / 3$ (Speke Hall Ave Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $\begin{gathered} 5 / 4 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 19.20 | 100.0 \% | 1943 | 1943 |
| $\begin{gathered} 5 / 5 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 17.75 | 100.0 \% | 1932 | 1932 |
| $\begin{gathered} 6 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 6 / 2 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Full Input Data And Results

| $7 / 1$ <br> (A561 Speke Blvd (W)) | 5.00 | 0.00 | Y | Arm 2 Left | 32.00 | 100.0 \% | 2020 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { 7/2 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 4 Ahead | Inf | 100.0 \% | 1955 | 1955 |
| 7/3 (A561 Speke Blvd (W) Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 7 / 4 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Ahead |  | 100.0 \% | 2095 | 2095 |
| $\begin{gathered} 7 / 5 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  |  | 1921 |
| $\begin{gathered} \text { 8/1 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} \text { 8/2 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 8 / 3 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Scenario 2: '2017 PM' (FG2: 'Base PM 2017', Plan 1: 'Network Control Plan 1') Traffic Flows, Desired Desired Flow :

|  | Destination |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin |  | A | B | C | D | Tot. |  |
|  | A | 0 | 352 | 246 | 361 | 959 |  |
|  | B | 250 | 0 | 263 | 1284 | 1797 |  |
|  | C | 213 | 504 | 0 | 175 | 892 |  |
|  | D | 386 | 1190 | 121 | 0 | 1697 |  |
|  | Tot. | 849 | 2046 | 630 | 1820 | 5345 |  |

Full Input Data And Results
Traffic Lane Flows

| Lane | $\begin{aligned} & \text { Scenario 2: } \\ & 2017 \text { PM } \end{aligned}$ |
| :---: | :---: |
| Junction: Unnamed Junction |  |
| $\begin{gathered} 1 / 1 \\ \text { (short) } \end{gathered}$ | 352 |
| $\begin{gathered} 1 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 475(\mathrm{ln}) \\ 123(\mathrm{Out}) \end{gathered}$ |
| 1/3 | 123 |
| $\begin{gathered} 1 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 361(\mathrm{In}) \\ 181 \text { (Out) } \end{gathered}$ |
| $\begin{gathered} 1 / 5 \\ \text { (short) } \end{gathered}$ | 180 |
| 2/1 | 617 |
| 2/2 | 232 |
| $\begin{gathered} 3 / 1 \\ \text { (short) } \end{gathered}$ | 132 |
| $\begin{gathered} 3 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 263(\mathrm{In}) \\ 131 \text { (Out) } \end{gathered}$ |
| $\begin{gathered} 3 / 3 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 856(\text { In }) \\ 428(\text { Out) } \end{gathered}$ |
| $\begin{gathered} 3 / 4 \\ \text { (short) } \end{gathered}$ | 428 |
| $\begin{gathered} 3 / 5 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 678(\mathrm{In}) \\ 428(\text { Out }) \end{gathered}$ |
| $\begin{aligned} & 3 / 6 \\ & \text { (short) } \end{aligned}$ | 250 |
| 4/1 | 698 |
|  | 699 |
| 4/3 | 649 |
| 5/1 | 175 |
| $\begin{gathered} 5 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 213(\mathrm{In}) \\ 106(\text { Out }) \end{gathered}$ |
| 5/3 (short) | 107 |
| $\begin{gathered} 5 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} \text { 504(In) } \\ \text { 252(Out) } \end{gathered}$ |
| 5/5 <br> (short) | 252 |
| 6/1 | 255 |
| 6/2 | 375 |
| $\begin{gathered} 7 / 1 \\ \text { (short) } \end{gathered}$ | 386 |
| $\begin{gathered} 7 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} \text { 782(In) } \\ \text { 396(Out) } \end{gathered}$ |
|  | 397 |
| 7/4 <br> (with short) | $\begin{gathered} 518(\text { In) } \\ 397 \text { (Out) } \end{gathered}$ |
| 7/5 <br> (short) | 121 |
| 8/1 | 784 |
| 8/2 | 518 |

Full Input Data And Results

| $8 / 3$ | 518 |
| :---: | :---: |

Full Input Data And Results
Lane Saturation Flows

| Junction: Unnamed Junction |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| $\begin{gathered} 1 / 1 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.04 | 0.00 | Y | Arm 4 Left | 34.20 | 100.0 \% | 1838 | 1838 |
| $\begin{gathered} 1 / 2 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | Y | Arm 6 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $\begin{gathered} \text { 1/3 } \\ \text { (Speke Hall Rd (N) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 1 / 4 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 14.70 | 100.0 \% | 1892 | 1892 |
| $\begin{gathered} 1 / 5 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 12.50 | 100.0 \% | 1862 | 1862 |
| $\begin{gathered} 2 / 1 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 2 / 2 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $3 / 1$ (A561 Speke Blvd) | 4.95 | 0.00 | Y | Arm 6 Left | 42.00 | 100.0 \% | 2037 | 2037 |
| $\begin{gathered} 3 / 2 \\ \text { (A561 Speke Blvd) } \end{gathered}$ | 5.00 | 0.00 | Y | Arm 6 Left | 48.20 | 100.0 \% | 2051 | 2051 |
| (A561 Speke Blvd) | 3.30 | 0.00 | Y | Arm 8 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $3 / 4$ (A561 Speke Blva Lane 4) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $3 / 5$ (A561 Speke Blva Lane 5) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd) | 3.35 | 0.00 | N | Arm 2 Right | 16.40 | 100.0 \% | 1915 | 1915 |
| $\begin{gathered} \text { (A561 Speke Blvd) } \end{gathered}$ | 3.60 | 0.00 | Y |  |  |  | 1975 | 1975 |
| (A561 Speke Blvd) | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 4/3 (A561 Speke Blvd) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 5 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 8 Left | Inf | 100.0 \% | 1955 | 1955 |
| $5 / 2$ (Speke Hall Ave Lane 2) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1200 | 1200 |
| $5 / 3$ (Speke Hall Ave Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $\begin{gathered} 5 / 4 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 19.20 | 100.0 \% | 1943 | 1943 |
| $\begin{gathered} 5 / 5 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 17.75 | 100.0 \% | 1932 | 1932 |
| $\begin{gathered} 6 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 6 / 2 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Full Input Data And Results

| 7/1 <br> (A561 Speke Blvd (W)) | 5.00 | 0.00 | Y | Arm 2 Left | 32.00 | 100.0 \% | 2020 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $7 / 2$ <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | Y | Arm 4 Ahead | Inf | 100.0 \% | 1955 | 1955 |
| $\begin{gathered} \text { 7/3 } \\ \text { (A561 Speke Blvd (W) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 7 / 4 \\ (\text { A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 7 / 5 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 6 Right |  | 100.0 \% | 1921 | 1921 |
| (A561 Speke Blvd (W)) | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} \text { 8/2 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 8/3 (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Scenario 3: 'Sat 2017' (FG3: 'Sat 2017', Plan 1: 'Network Control Plan 1') Traffic Flows, Desired Desired Flow :

|  | Destination |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin |  | A | B | C | D | Tot. |  |
|  | A | 0 | 231 | 213 | 475 | 919 |  |
|  | B | 186 | 0 | 276 | 999 | 1461 |  |
|  | C | 187 | 234 | 0 | 137 | 558 |  |
|  | D | 511 | 955 | 141 | 0 | 1607 |  |
|  | Tot. | 884 | 1420 | 630 | 1611 | 4545 |  |

Full Input Data And Results
Traffic Lane Flows

| Lane | Scenario 3: Sat 2017 |
| :---: | :---: |
| Junction: Unnamed Junction |  |
| $\begin{gathered} 1 / 1 \\ \text { (short) } \end{gathered}$ | 231 |
| $\begin{gathered} 1 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 338(\text { In }) \\ 107(\text { Out }) \end{gathered}$ |
| 1/3 | 106 |
| $\begin{gathered} 1 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 475(\text { (In) } \\ 237 \text { (Out) } \end{gathered}$ |
| $\begin{gathered} 1 / 5 \\ \text { (short) } \end{gathered}$ | 238 |
| 2/1 | 697 |
| 2/2 | 187 |
| $\begin{gathered} 3 / 1 \\ \text { (short) } \end{gathered}$ | 138 |
| $\begin{gathered} 3 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 276(\mathrm{In}) \\ 138(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 3 / 3 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} \text { 666(In) } \\ 333(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 3 / 4 \\ \text { (short) } \end{gathered}$ | 333 |
| $\begin{gathered} 3 / 5 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 519(\mathrm{In}) \\ 333 \text { (Out) } \end{gathered}$ |
| $\begin{gathered} 3 / 6 \\ \text { (short) } \end{gathered}$ | 186 |
| 4/1 | 491 |
| 4/2 | 493 |
| 4/3 | 436 |
| 5/1 | 137 |
| $\begin{gathered} 5 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & \text { 187(In) } \\ & \text { 93(Out) } \end{aligned}$ |
| 5/3 <br> (short) | 94 |
| $\begin{gathered} 5 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 234(\mathrm{In}) \\ 116(\text { Out }) \end{gathered}$ |
| 5/5 <br> (short) | 118 |
| 6/1 | 245 |
| 6/2 | 385 |
| $\begin{gathered} 7 / 1 \\ \text { (short) } \end{gathered}$ | 511 |
| $\begin{gathered} 7 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 829(\text { In) } \\ 318(\text { Out }) \end{gathered}$ |
|  | 319 |
| 7/4 <br> (with short) | $\begin{gathered} 459(\mathrm{In}) \\ 318(\text { Out }) \end{gathered}$ |
| 7/5 <br> (short) | 141 |
| 8/1 | 707 |
| 8/2 | 452 |

Full Input Data And Results
$\square$

Full Input Data And Results
Lane Saturation Flows

| Junction: Unnamed Junction |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| $\begin{gathered} 1 / 1 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.04 | 0.00 | Y | Arm 4 Left | 34.20 | 100.0 \% | 1838 | 1838 |
| $\begin{gathered} 1 / 2 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | Y | Arm 6 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $\begin{gathered} \text { 1/3 } \\ \text { (Speke Hall Rd (N) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 1 / 4 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 14.70 | 100.0 \% | 1892 | 1892 |
| $\begin{gathered} 1 / 5 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 12.50 | 100.0 \% | 1862 | 1862 |
| $\begin{gathered} 2 / 1 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 2 / 2 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $3 / 1$ (A561 Speke Blvd) | 4.95 | 0.00 | Y | Arm 6 Left | 42.00 | 100.0 \% | 2037 | 2037 |
| $\begin{gathered} 3 / 2 \\ \text { (A561 Speke Blvd) } \end{gathered}$ | 5.00 | 0.00 | Y | Arm 6 Left | 48.20 | 100.0 \% | 2051 | 2051 |
| (A561 Speke Blvd) | 3.30 | 0.00 | Y | Arm 8 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $3 / 4$ (A561 Speke Blva Lane 4) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $3 / 5$ (A561 Speke Blva Lane 5) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd) | 3.35 | 0.00 | N | Arm 2 Right | 16.40 | 100.0 \% | 1915 | 1915 |
| $\begin{gathered} \text { (A561 Speke Blvd) } \end{gathered}$ | 3.60 | 0.00 | Y |  |  |  | 1975 | 1975 |
| (A561 Speke Blvd) | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 4/3 (A561 Speke Blvd) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 5 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 8 Left | Inf | 100.0 \% | 1955 | 1955 |
| $5 / 2$ (Speke Hall Ave Lane 2) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1200 | 1200 |
| $5 / 3$ (Speke Hall Ave Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $\begin{gathered} 5 / 4 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 19.20 | 100.0 \% | 1943 | 1943 |
| $\begin{gathered} 5 / 5 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 17.75 | 100.0 \% | 1932 | 1932 |
| $\begin{gathered} 6 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 6 / 2 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Full Input Data And Results

| (A561 Speke Blvd (W)) | 5.00 | 0.00 | Y | Arm 2 Left | 32.00 | 100.0 \% | 2020 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 7 / 2 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 4 Ahead | Inf | 100.0 \% | 1955 | 1955 |
| $\begin{gathered} \text { (A561 Speke Blvd (W) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd (W)) | 3.40 | 0.00 | N | Arm 4 Ahead |  | 100.0 \% | 2095 | 2095 |
| (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  |  | 1921 | 1921 |
| $\begin{gathered} 8 / 1 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 8 / 2 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} \text { 8/3 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Scenario 4: '2022 AM' (FG4: '2022 AM', Plan 1: 'Network Control Plan 1') Traffic Flows, Desired Desired Flow :

|  | Destination |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin |  | A | B | C | D | Tot. |  |
|  | A | 0 | 318 | 287 | 384 | 989 |  |
|  | B | 402 | 0 | 394 | 1656 | 2452 |  |
|  | C | 161 | 141 | 0 | 56 | 358 |  |
|  | D | 233 | 1066 | 60 | 0 | 1359 |  |
|  | Tot. | 796 | 1525 | 741 | 2096 | 5158 |  |

Full Input Data And Results
Traffic Lane Flows

| Lane | $\begin{aligned} & \text { Scenario 4: } \\ & 2022 \text { AM } \end{aligned}$ |
| :---: | :---: |
| Junction: Unnamed Junction |  |
| $\begin{gathered} 1 / 1 \\ \text { (short) } \end{gathered}$ | 318 |
| $\begin{gathered} 1 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 462(\text { In }) \\ 144(\text { Out }) \end{gathered}$ |
| 1/3 | 143 |
| $\begin{gathered} 1 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 384(\mathrm{In}) \\ \text { 192(Out) } \end{gathered}$ |
| $\begin{gathered} 1 / 5 \\ \text { (short) } \end{gathered}$ | 192 |
| 2/1 | 515 |
| 2/2 | 281 |
| $\begin{gathered} 3 / 1 \\ \text { (short) } \end{gathered}$ | 197 |
| $\begin{gathered} 3 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 394(\mathrm{In}) \\ \text { 197(Out) } \end{gathered}$ |
| $\begin{gathered} 3 / 3 \\ \text { (with short) } \\ 3 / 4 \\ \text { (short) } \end{gathered}$ | $\begin{gathered} \text { 1104(In) } \\ 552 \text { (Out) } \\ \\ 552 \end{gathered}$ |
| $\begin{gathered} 3 / 5 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & \text { 954(In) } \\ & \text { 552(Out) } \end{aligned}$ |
| $\begin{gathered} 3 / 6 \\ \text { (short) } \end{gathered}$ | 402 |
| $\begin{aligned} & 4 / 1 \\ & 4 / 2 \end{aligned}$ | $\begin{aligned} & 549 \\ & 550 \end{aligned}$ |
| $\begin{aligned} & \hline 4 / 3 \\ & 5 / 1 \end{aligned}$ | $\begin{gathered} 426 \\ 56 \end{gathered}$ |
| $5 / 2$ (with short) $5 / 3$ (short) | $\begin{gathered} 161 \text { (In) } \\ 81 \text { (Out) } \\ 80 \end{gathered}$ |
| $\begin{gathered} 5 / 4 \\ \text { (with short) } \\ 5 / 5 \\ \text { (short) } \end{gathered}$ | 141(In) <br> 70(Out) <br> 71 |
| 6/1 | 341 |
| 6/2 | 400 |
| $\begin{gathered} 7 / 1 \\ \text { (short) } \end{gathered}$ | 233 |
| $\begin{gathered} 7 / 2 \\ \text { (with short) } \\ 7 / 3 \end{gathered}$ | $\begin{gathered} 588(\mathrm{In}) \\ 355(\mathrm{Out}) \\ 356 \end{gathered}$ |
| $7 / 4$ (with short) $7 / 5$ (short) | $\begin{gathered} \text { 415(In) } \\ \text { 355(Out) } \\ 60 \end{gathered}$ |
| 8/1 | 800 |
| 8/2 | 648 |

Full Input Data And Results
$\square$

Full Input Data And Results
Lane Saturation Flows

| Junction: Unnamed Junction |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| $\begin{gathered} 1 / 1 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.04 | 0.00 | Y | Arm 4 Left | 34.20 | 100.0 \% | 1838 | 1838 |
| $\begin{gathered} 1 / 2 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | Y | Arm 6 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $\begin{gathered} \text { 1/3 } \\ \text { (Speke Hall Rd (N) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 1 / 4 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 14.70 | 100.0 \% | 1892 | 1892 |
| $\begin{gathered} 1 / 5 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 12.50 | 100.0 \% | 1862 | 1862 |
| $\begin{gathered} 2 / 1 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 2 / 2 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $3 / 1$ (A561 Speke Blvd) | 4.95 | 0.00 | Y | Arm 6 Left | 42.00 | 100.0 \% | 2037 | 2037 |
| $\begin{gathered} 3 / 2 \\ \text { (A561 Speke Blvd) } \end{gathered}$ | 5.00 | 0.00 | Y | Arm 6 Left | 48.20 | 100.0 \% | 2051 | 2051 |
| (A561 Speke Blvd) | 3.30 | 0.00 | Y | Arm 8 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $3 / 4$ (A561 Speke Blva Lane 4) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $3 / 5$ (A561 Speke Blva Lane 5) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd) | 3.35 | 0.00 | N | Arm 2 Right | 16.40 | 100.0 \% | 1915 | 1915 |
| $\begin{gathered} \text { (A561 Speke Blvd) } \end{gathered}$ | 3.60 | 0.00 | Y |  |  |  | 1975 | 1975 |
| (A561 Speke Blvd) | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 4/3 (A561 Speke Blvd) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 5 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 8 Left | Inf | 100.0 \% | 1955 | 1955 |
| $5 / 2$ (Speke Hall Ave Lane 2) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1200 | 1200 |
| $5 / 3$ (Speke Hall Ave Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $\begin{gathered} 5 / 4 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 19.20 | 100.0 \% | 1943 | 1943 |
| $\begin{gathered} 5 / 5 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 17.75 | 100.0 \% | 1932 | 1932 |
| $\begin{gathered} 6 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 6 / 2 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Full Input Data And Results

| (A561 Speke Blvd (W)) | 5.00 | 0.00 | Y | Arm 2 Left | 32.00 | 100.0 \% | 2020 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 7 / 2 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 4 Ahead | Inf | 100.0 \% | 1955 | 1955 |
| $\begin{gathered} \text { (A561 Speke Blvd (W) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd (W)) | 3.40 | 0.00 | N | Arm 4 Ahead |  | 100.0 \% | 2095 | 2095 |
| (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  |  | 1921 | 1921 |
| $\begin{gathered} 8 / 1 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 8 / 2 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} \text { 8/3 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Scenario 5: '2022 PM' (FG5: '2022 PM', Plan 1: 'Network Control Plan 1') Traffic Flows, Desired Desired Flow :

|  | Destination |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin |  | A | B | C | D | Tot. |  |
|  | A | 0 | 357 | 249 | 366 | 972 |  |
|  | B | 254 | 0 | 267 | 1303 | 1824 |  |
|  | C | 216 | 511 | 0 | 177 | 904 |  |
|  | D | 391 | 1208 | 122 | 0 | 1721 |  |
|  | Tot. | 861 | 2076 | 638 | 1846 | 5421 |  |

Full Input Data And Results
Traffic Lane Flows

| Lane | $\begin{aligned} & \text { Scenario 5: } \\ & 2022 \text { PM } \end{aligned}$ |
| :---: | :---: |
| Junction: Unnamed Junction |  |
| $\begin{gathered} 1 / 1 \\ \text { (short) } \end{gathered}$ | 357 |
| $\begin{gathered} 1 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & 481(\mathrm{In}) \\ & 124(\text { Out }) \end{aligned}$ |
| 1/3 | 125 |
| $\begin{gathered} 1 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 366(\text { In }) \\ \text { 182(Out) } \end{gathered}$ |
| $\begin{gathered} 1 / 5 \\ \text { (short) } \end{gathered}$ | 184 |
| 2/1 | 626 |
| 2/2 | 235 |
| $\begin{gathered} 3 / 1 \\ \text { (short) } \end{gathered}$ | 134 |
| $\begin{gathered} 3 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 267(\mathrm{In}) \\ 133 \text { (Out) } \end{gathered}$ |
| $\begin{gathered} 3 / 3 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 869(\mathrm{In}) \\ 434(\text { Out) } \end{gathered}$ |
| $\begin{gathered} 3 / 4 \\ \text { (short) } \end{gathered}$ | 435 |
| $\begin{gathered} 3 / 5 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 688(\text { In }) \\ 434(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 3 / 6 \\ \text { (short) } \end{gathered}$ | 254 |
| 4/1 | 709 |
|  | 709 |
| 4/3 | 658 |
| 5/1 | 177 |
| $\begin{gathered} 5 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 216(\mathrm{In}) \\ 108(\text { Out }) \end{gathered}$ |
| 5/3 <br> (short) |  |
| $\begin{gathered} 5 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 511(\mathrm{In}) \\ 256(\text { Out }) \end{gathered}$ |
| 5/5 <br> (short) | 255 |
| 6/1 | 258 |
| 6/2 | 380 |
| $\begin{gathered} 7 / 1 \\ \text { (short) } \end{gathered}$ | 391 |
| $\begin{gathered} 7 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & \text { 793(In) } \\ & 402(\text { Out }) \end{aligned}$ |
|  | 403 |
| 7/4 <br> (with short) | $\begin{aligned} & 525(\mathrm{In}) \\ & 403 \text { (Out) } \end{aligned}$ |
| 7/5 <br> (short) | 122 |
| 8/1 | 793 |
| 8/2 | 527 |

Full Input Data And Results
$\square$

Full Input Data And Results
Lane Saturation Flows

| Junction: Unnamed Junction |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| $\begin{gathered} 1 / 1 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.04 | 0.00 | Y | Arm 4 Left | 34.20 | 100.0 \% | 1838 | 1838 |
| $\begin{gathered} 1 / 2 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | Y | Arm 6 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $\begin{gathered} \text { 1/3 } \\ \text { (Speke Hall Rd (N) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 1 / 4 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 14.70 | 100.0 \% | 1892 | 1892 |
| $\begin{gathered} 1 / 5 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 12.50 | 100.0 \% | 1862 | 1862 |
| $\begin{gathered} 2 / 1 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 2 / 2 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $3 / 1$ (A561 Speke Blvd) | 4.95 | 0.00 | Y | Arm 6 Left | 42.00 | 100.0 \% | 2037 | 2037 |
| $\begin{gathered} 3 / 2 \\ \text { (A561 Speke Blvd) } \end{gathered}$ | 5.00 | 0.00 | Y | Arm 6 Left | 48.20 | 100.0 \% | 2051 | 2051 |
| (A561 Speke Blvd) | 3.30 | 0.00 | Y | Arm 8 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $3 / 4$ (A561 Speke Blva Lane 4) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $3 / 5$ (A561 Speke Blva Lane 5) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd) | 3.35 | 0.00 | N | Arm 2 Right | 16.40 | 100.0 \% | 1915 | 1915 |
| $\begin{gathered} \text { (A561 Speke Blvd) } \end{gathered}$ | 3.60 | 0.00 | Y |  |  |  | 1975 | 1975 |
| (A561 Speke Blvd) | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 4/3 (A561 Speke Blvd) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 5 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 8 Left | Inf | 100.0 \% | 1955 | 1955 |
| $5 / 2$ (Speke Hall Ave Lane 2) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1200 | 1200 |
| $5 / 3$ (Speke Hall Ave Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $\begin{gathered} 5 / 4 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 19.20 | 100.0 \% | 1943 | 1943 |
| $\begin{gathered} 5 / 5 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 17.75 | 100.0 \% | 1932 | 1932 |
| $\begin{gathered} 6 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 6 / 2 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Full Input Data And Results

| (A561 Speke Blvd (W)) | 5.00 | 0.00 | Y | Arm 2 Left | 32.00 | 100.0 \% | 2020 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 7 / 2 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 4 Ahead | Inf | 100.0 \% | 1955 | 1955 |
| $\begin{gathered} \text { (A561 Speke Blvd (W) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 7 / 4 \\ (\text { A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Ahead |  | 100.0 \% | 2095 | 2095 |
| $7 / 5$ <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  |  | 1921 | 1921 |
| $\begin{gathered} 8 / 1 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 8 / 2 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 8 / 3 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Scenario 6: 'Sat 2022' (FG6: '2022 Sat', Plan 1: 'Network Control Plan 1') Traffic Flows, Desired Desired Flow :

|  | Destination |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin |  | A | B | C | D | Tot. |  |
|  | A | 0 | 236 | 217 | 485 | 938 |  |
|  | B | 190 | 0 | 281 | 1020 | 1491 |  |
|  | C | 191 | 239 | 0 | 140 | 570 |  |
|  | D | 521 | 976 | 144 | 0 | 1641 |  |
|  | Tot. | 902 | 1451 | 642 | 1645 | 4640 |  |

Full Input Data And Results
Traffic Lane Flows

| Lane | Scenario 6: Sat 2022 |
| :---: | :---: |
| Junction: Unnamed Junction |  |
| $\begin{gathered} 1 / 1 \\ \text { (short) } \end{gathered}$ | 236 |
| $\begin{gathered} 1 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 344(\mathrm{In}) \\ 108(\text { Out }) \end{gathered}$ |
| 1/3 | 109 |
| $\begin{gathered} 1 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 485(\text { In }) \\ 243(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 1 / 5 \\ \text { (short) } \end{gathered}$ | 242 |
| 2/1 | 711 |
| 2/2 | 191 |
| $\begin{gathered} 3 / 1 \\ \text { (short) } \end{gathered}$ | 141 |
| $\begin{gathered} 3 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 281(\mathrm{In}) \\ 140(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 3 / 3 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 680(\mathrm{ln}) \\ 340(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 3 / 4 \\ \text { (short) } \end{gathered}$ | 340 |
| $\begin{gathered} 3 / 5 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 530(\mathrm{In}) \\ 340 \text { (Out) } \end{gathered}$ |
| $\begin{gathered} 3 / 6 \\ \text { (short) } \end{gathered}$ | 190 |
| 4/1 | 503 |
|  | 504 |
| 4/3 | 444 |
| 5/1 | 140 |
| $\begin{gathered} 5 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & \text { 191(In) } \\ & \text { 95(Out) } \end{aligned}$ |
| 5/3 <br> (short) | 96 |
| $\begin{gathered} 5 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 239(\text { In }) \\ 120(\text { Out }) \end{gathered}$ |
| 5/5 <br> (short) | 119 |
| 6/1 | 249 |
| 6/2 | 393 |
| $\begin{gathered} 7 / 1 \\ \text { (short) } \end{gathered}$ | 521 |
| $\begin{gathered} 7 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 846(\text { In) } \\ 325(\text { Out }) \end{gathered}$ |
|  | 326 |
| 7/4 <br> (with short) | $\begin{gathered} 469(\mathrm{In}) \\ 325(\text { Out }) \end{gathered}$ |
| 7/5 <br> (short) | 144 |
| 8/1 | 723 |
| 8/2 | 461 |

Full Input Data And Results

| $8 / 3$ | 461 |
| :--- | :--- |

Full Input Data And Results
Lane Saturation Flows

| Junction: Unnamed Junction |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| $\begin{gathered} 1 / 1 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.04 | 0.00 | Y | Arm 4 Left | 34.20 | 100.0 \% | 1838 | 1838 |
| $\begin{gathered} 1 / 2 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | Y | Arm 6 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $\begin{gathered} \text { 1/3 } \\ \text { (Speke Hall Rd (N) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 1 / 4 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 14.70 | 100.0 \% | 1892 | 1892 |
| $\begin{gathered} 1 / 5 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 12.50 | 100.0 \% | 1862 | 1862 |
| $\begin{gathered} 2 / 1 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 2 / 2 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $3 / 1$ (A561 Speke Blvd) | 4.95 | 0.00 | Y | Arm 6 Left | 42.00 | 100.0 \% | 2037 | 2037 |
| $\begin{gathered} 3 / 2 \\ \text { (A561 Speke Blvd) } \end{gathered}$ | 5.00 | 0.00 | Y | Arm 6 Left | 48.20 | 100.0 \% | 2051 | 2051 |
| (A561 Speke Blvd) | 3.30 | 0.00 | Y | Arm 8 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $3 / 4$ (A561 Speke Blva Lane 4) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $3 / 5$ (A561 Speke Blva Lane 5) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd) | 3.35 | 0.00 | N | Arm 2 Right | 16.40 | 100.0 \% | 1915 | 1915 |
| $\begin{gathered} \text { (A561 Speke Blvd) } \end{gathered}$ | 3.60 | 0.00 | Y |  |  |  | 1975 | 1975 |
| (A561 Speke Blvd) | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 4/3 (A561 Speke Blvd) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 5 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 8 Left | Inf | 100.0 \% | 1955 | 1955 |
| $5 / 2$ (Speke Hall Ave Lane 2) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1200 | 1200 |
| $5 / 3$ (Speke Hall Ave Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $\begin{gathered} 5 / 4 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 19.20 | 100.0 \% | 1943 | 1943 |
| $\begin{gathered} 5 / 5 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 17.75 | 100.0 \% | 1932 | 1932 |
| $\begin{gathered} 6 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 6 / 2 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Full Input Data And Results

| 7/1 <br> (A561 Speke Blvd (W)) | 5.00 | 0.00 | Y | Arm 2 Left | 32.00 | 100.0 \% | 2020 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { 7/2 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 4 Ahead | Inf | 100.0 \% | 1955 | 1955 |
| $\begin{gathered} \text { 7/3 (W561 Speke Blvd (W) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| 7/4 <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | N | Arm 4 Ahead |  | 100.0 \% | 2095 | 2095 |
| $7 / 5$ <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  | 100.0 \% | 1921 | 1921 |
| $\begin{gathered} 8 / 1 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 8 / 2 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Scenario 7: '2022 Dev AM 40C/30HT/30W' (FG7: '2022 AM + Development + Response 40/30/30', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

|  | Destination |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin |  | A | B | C | D | Tot. |  |
|  | A | 0 | 320 | 296 | 388 | 1004 |  |
|  | B | 405 | 0 | 434 | 1669 | 2508 |  |
|  | C | 177 | 157 | 0 | 56 | 390 |  |
|  | D | 236 | 1077 | 60 | 0 | 1373 |  |
|  | Tot. | 818 | 1554 | 790 | 2113 | 5275 |  |

Full Input Data And Results
Traffic Lane Flows

| Lane | Scenario 7: 2022 Dev AM 40C/30HT/30W |
| :---: | :---: |
| Junction: Unnamed Junction |  |
| $\begin{gathered} 1 / 1 \\ \text { (short) } \end{gathered}$ | 320 |
| $\begin{gathered} 1 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 468(\mathrm{In}) \\ 148(\text { Out }) \end{gathered}$ |
| 1/3 | 148 |
| $\begin{gathered} 1 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 388(\mathrm{In}) \\ \text { 194(Out) } \end{gathered}$ |
| $\begin{gathered} 1 / 5 \\ \text { (short) } \end{gathered}$ | 194 |
| 2/1 | 527 |
| 2/2 | 291 |
| $\begin{gathered} 3 / 1 \\ \text { (short) } \end{gathered}$ | 217 |
| $\begin{gathered} 3 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 434(\mathrm{In}) \\ 217 \text { (Out) } \end{gathered}$ |
| $\begin{gathered} 3 / 3 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & 1113(\text { In) } \\ & 556(\text { Out }) \end{aligned}$ |
| $\begin{gathered} 3 / 4 \\ \text { (short) } \end{gathered}$ | 557 |
| $\begin{gathered} 3 / 5 \\ \text { (with short) } \\ 3 / 6 \\ \text { (short) } \end{gathered}$ | $\begin{gathered} \text { 961(In) } \\ 556(\text { Out }) \\ 405 \end{gathered}$ |
| 4/1 | 558 |
| 4/2 | 558 |
| $\begin{gathered} 4 / 3 \\ 5 / 1 \\ 5 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 438 \\ 56 \\ \text { 177(In) } \\ \text { 88(Out) } \end{gathered}$ |
| $\begin{gathered} \text { 5hort) } \\ \text { (shor } \end{gathered}$ | 89 |
| $\begin{gathered} 5 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & \text { 157(In) } \\ & 78 \text { (Out) } \end{aligned}$ |
| $\begin{gathered} \text { 5hort) } \\ \text { (shor } \end{gathered}$ | 79 |
| 6/1 | 365 |
| $\begin{gathered} 6 / 2 \\ 7 / 1 \\ \text { (short) } \end{gathered}$ | $\begin{aligned} & 425 \\ & 236 \end{aligned}$ |
| $\begin{gathered} 7 / 2 \\ \text { (with short) } \\ 7 / 3 \end{gathered}$ | $\begin{gathered} 595(\mathrm{In}) \\ 359(\mathrm{Out}) \\ 359 \end{gathered}$ |
| $\begin{gathered} 7 / 4 \\ \text { (with short) } \\ 7 / 5 \\ \text { (short) } \end{gathered}$ | $\begin{gathered} 419(\text { In) } \\ 359(\text { Out }) \\ \\ 60 \end{gathered}$ |
| 8/1 | 806 |
| 8/2 | 654 |

Full Input Data And Results
8/3 653

Full Input Data And Results
Lane Saturation Flows

| Junction: Unnamed Junction |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| $\begin{gathered} 1 / 1 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.04 | 0.00 | Y | Arm 4 Left | 34.20 | 100.0 \% | 1838 | 1838 |
| $\begin{gathered} 1 / 2 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | Y | Arm 6 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $\begin{gathered} \text { 1/3 } \\ \text { (Speke Hall Rd (N) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 1 / 4 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 14.70 | 100.0 \% | 1892 | 1892 |
| $\begin{gathered} 1 / 5 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 12.50 | 100.0 \% | 1862 | 1862 |
| $\begin{gathered} 2 / 1 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 2 / 2 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $3 / 1$ (A561 Speke Blvd) | 4.95 | 0.00 | Y | Arm 6 Left | 42.00 | 100.0 \% | 2037 | 2037 |
| $\begin{gathered} 3 / 2 \\ \text { (A561 Speke Blvd) } \end{gathered}$ | 5.00 | 0.00 | Y | Arm 6 Left | 48.20 | 100.0 \% | 2051 | 2051 |
| (A561 Speke Blvd) | 3.30 | 0.00 | Y | Arm 8 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $3 / 4$ (A561 Speke Blva Lane 4) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $3 / 5$ (A561 Speke Blva Lane 5) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd) | 3.35 | 0.00 | N | Arm 2 Right | 16.40 | 100.0 \% | 1915 | 1915 |
| $\begin{gathered} \text { (A561 Speke Blvd) } \end{gathered}$ | 3.60 | 0.00 | Y |  |  |  | 1975 | 1975 |
| (A561 Speke Blvd) | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 4/3 (A561 Speke Blvd) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 5 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 8 Left | Inf | 100.0 \% | 1955 | 1955 |
| $5 / 2$ (Speke Hall Ave Lane 2) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1200 | 1200 |
| $5 / 3$ (Speke Hall Ave Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $\begin{gathered} 5 / 4 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 19.20 | 100.0 \% | 1943 | 1943 |
| $\begin{gathered} 5 / 5 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 17.75 | 100.0 \% | 1932 | 1932 |
| $\begin{gathered} 6 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 6 / 2 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Full Input Data And Results

| 7/1 <br> (A561 Speke Blvd (W)) | 5.00 | 0.00 | Y | Arm 2 Left | 32.00 | 100.0 \% | 2020 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { 7/2 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 4 Ahead | Inf | 100.0 \% | 1955 | 1955 |
| $\begin{gathered} \text { 7/3 (W561 Speke Blvd (W) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| 7/4 <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | N | Arm 4 Ahead |  | 100.0 \% | 2095 | 2095 |
| $7 / 5$ <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  | 100.0 \% | 1921 | 1921 |
| $\begin{gathered} 8 / 1 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 8 / 2 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Scenario 8: '2022 Dev Pm 40C/30HT/30W' (FG8: '2022 PM + Development + Response 40/30/30', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

|  | Destination |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin |  | A | B | C | D | Tot. |  |
|  | A | 0 | 371 | 262 | 384 | 1017 |  |
|  | B | 262 | 0 | 267 | 1315 | 1844 |  |
|  | C | 237 | 573 | 0 | 179 | 989 |  |
|  | D | 400 | 1218 | 123 | 0 | 1741 |  |
|  | Tot. | 899 | 2162 | 652 | 1878 | 5591 |  |

Full Input Data And Results
Traffic Lane Flows

| Lane | Scenario 8: <br> 2022 Dev Pm <br> 40C/30HT/30W |
| :---: | :---: |
| Junction: Unnamed Junction |  |$|$| $1 / 1$ |
| :---: | :---: |
| (short) |$\quad 371$.

Full Input Data And Results
8/3 534

Full Input Data And Results
Lane Saturation Flows

| Junction: Unnamed Junction |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| $\begin{gathered} 1 / 1 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.04 | 0.00 | Y | Arm 4 Left | 34.20 | 100.0 \% | 1838 | 1838 |
| $\begin{gathered} 1 / 2 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | Y | Arm 6 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $\begin{gathered} \text { 1/3 } \\ \text { (Speke Hall Rd (N) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 1 / 4 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 14.70 | 100.0 \% | 1892 | 1892 |
| $\begin{gathered} 1 / 5 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 12.50 | 100.0 \% | 1862 | 1862 |
| $\begin{gathered} 2 / 1 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 2 / 2 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $3 / 1$ (A561 Speke Blvd) | 4.95 | 0.00 | Y | Arm 6 Left | 42.00 | 100.0 \% | 2037 | 2037 |
| $\begin{gathered} 3 / 2 \\ \text { (A561 Speke Blvd) } \end{gathered}$ | 5.00 | 0.00 | Y | Arm 6 Left | 48.20 | 100.0 \% | 2051 | 2051 |
| (A561 Speke Blvd) | 3.30 | 0.00 | Y | Arm 8 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $3 / 4$ (A561 Speke Blva Lane 4) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $3 / 5$ (A561 Speke Blva Lane 5) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd) | 3.35 | 0.00 | N | Arm 2 Right | 16.40 | 100.0 \% | 1915 | 1915 |
| $\begin{gathered} \text { (A561 Speke Blvd) } \end{gathered}$ | 3.60 | 0.00 | Y |  |  |  | 1975 | 1975 |
| (A561 Speke Blvd) | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 4/3 (A561 Speke Blvd) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 5 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 8 Left | Inf | 100.0 \% | 1955 | 1955 |
| $5 / 2$ (Speke Hall Ave Lane 2) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1200 | 1200 |
| $5 / 3$ (Speke Hall Ave Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $\begin{gathered} 5 / 4 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 19.20 | 100.0 \% | 1943 | 1943 |
| $\begin{gathered} 5 / 5 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 17.75 | 100.0 \% | 1932 | 1932 |
| $\begin{gathered} 6 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 6 / 2 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Full Input Data And Results

| 7/1 <br> (A561 Speke Blvd (W)) | 5.00 | 0.00 | Y | Arm 2 Left | 32.00 | 100.0 \% | 2020 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { 7/2 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 4 Ahead | Inf | 100.0 \% | 1955 | 1955 |
| $\begin{gathered} \text { 7/3 (W561 Speke Blvd (W) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| 7/4 <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | N | Arm 4 Ahead |  | 100.0 \% | 2095 | 2095 |
| $7 / 5$ <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  | 100.0 \% | 1921 | 1921 |
| $\begin{gathered} 8 / 1 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 8 / 2 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Scenario 9: '2022 Dev Sat 40C/30HT/30W' (FG9: 'Sat 2022 + Dev + Response 40/30/30', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

|  | Destination |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin |  | A | B | C | D | Tot. |  |
|  | A | 0 | 253 | 235 | 524 | 1012 |  |
|  | C | 202 | 0 | 295 | 1031 | 1528 |  |
|  | D | 543 | 984 | 145 | 0 | 1672 |  |
|  | Tot. | 963 | 1491 | 675 | 1696 | 4825 |  |

Full Input Data And Results
Traffic Lane Flows

| Lane | Scenario 9: 2022 Dev Sat 40C/30HT/30W |
| :---: | :---: |
| Junction: Unnamed Junction |  |
| $\begin{gathered} 1 / 1 \\ \text { (short) } \end{gathered}$ | 253 |
| $\begin{gathered} 1 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 370(\mathrm{In}) \\ 117(\text { Out }) \end{gathered}$ |
| 1/3 | 118 |
| $\begin{gathered} 1 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 524(\mathrm{In}) \\ 262 \text { (Out) } \end{gathered}$ |
| $\begin{aligned} & 1 / 5 \\ & \text { (short) } \end{aligned}$ | 262 |
| 2/1 | 753 |
| 2/2 | 210 |
| $\begin{gathered} 3 / 1 \\ \text { (short) } \end{gathered}$ | 148 |
| $\begin{gathered} 3 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 295(\mathrm{In}) \\ 147(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 3 / 3 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 688(\text { In }) \\ 344(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 3 / 4 \\ \text { (short) } \end{gathered}$ | 344 |
| 3/5 <br> (with short) | $\begin{gathered} 545(\mathrm{In}) \\ 343(\text { Out }) \end{gathered}$ |
| 3/6 (short) | 202 |
| 4/1 | 519 |
| 4/2 | 518 |
| 4/3 | 454 |
| 5/1 | 141 |
| $\begin{gathered} 5 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 218(\mathrm{In}) \\ 109(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 5 / 3 \\ \text { (short) } \end{gathered}$ | 109 |
| 5/4 <br> (with short) | $\begin{gathered} 254(\mathrm{In}) \\ 128(\mathrm{Out}) \end{gathered}$ |
| $\begin{gathered} 5 / 5 \\ \text { (short) } \end{gathered}$ | 126 |
| 6/1 | 265 |
| 6/2 | 410 |
| $\begin{gathered} 7 / 1 \\ \text { (short) } \end{gathered}$ | 543 |
| $\begin{gathered} 7 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 871(\mathrm{In}) \\ 328(\text { Out }) \end{gathered}$ |
| 7/3 | 328 |
| 7/4 <br> (with short) | $\begin{gathered} 473(\text { In }) \\ 328(\text { Out }) \end{gathered}$ |
| 7/5 <br> (short) | 145 |
| 8/1 | 747 |
| 8/2 | 475 |

Full Input Data And Results
8/3 474

Full Input Data And Results
Lane Saturation Flows

| Junction: Unnamed Junction |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| $\begin{gathered} 1 / 1 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.04 | 0.00 | Y | Arm 4 Left | 34.20 | 100.0 \% | 1838 | 1838 |
| $\begin{gathered} 1 / 2 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | Y | Arm 6 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $\begin{gathered} \text { 1/3 } \\ \text { (Speke Hall Rd (N) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 1 / 4 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 14.70 | 100.0 \% | 1892 | 1892 |
| $\begin{gathered} 1 / 5 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 12.50 | 100.0 \% | 1862 | 1862 |
| $\begin{gathered} 2 / 1 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 2 / 2 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $3 / 1$ (A561 Speke Blvd) | 4.95 | 0.00 | Y | Arm 6 Left | 42.00 | 100.0 \% | 2037 | 2037 |
| $\begin{gathered} 3 / 2 \\ \text { (A561 Speke Blvd) } \end{gathered}$ | 5.00 | 0.00 | Y | Arm 6 Left | 48.20 | 100.0 \% | 2051 | 2051 |
| (A561 Speke Blvd) | 3.30 | 0.00 | Y | Arm 8 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $3 / 4$ (A561 Speke Blva Lane 4) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $3 / 5$ (A561 Speke Blva Lane 5) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd) | 3.35 | 0.00 | N | Arm 2 Right | 16.40 | 100.0 \% | 1915 | 1915 |
| $\begin{gathered} \text { (A561 Speke Blvd) } \end{gathered}$ | 3.60 | 0.00 | Y |  |  |  | 1975 | 1975 |
| (A561 Speke Blvd) | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 4/3 (A561 Speke Blvd) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 5 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 8 Left | Inf | 100.0 \% | 1955 | 1955 |
| $5 / 2$ (Speke Hall Ave Lane 2) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1200 | 1200 |
| $5 / 3$ (Speke Hall Ave Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $\begin{gathered} 5 / 4 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 19.20 | 100.0 \% | 1943 | 1943 |
| $\begin{gathered} 5 / 5 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 17.75 | 100.0 \% | 1932 | 1932 |
| $\begin{gathered} 6 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 6 / 2 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Full Input Data And Results

| 7/1 <br> (A561 Speke Blvd (W)) | 5.00 | 0.00 | Y | Arm 2 Left | 32.00 | 100.0 \% | 2020 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { 7/2 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 4 Ahead | Inf | 100.0 \% | 1955 | 1955 |
| $\begin{gathered} \text { 7/3 (W561 Speke Blvd (W) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| 7/4 <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | N | Arm 4 Ahead |  | 100.0 \% | 2095 | 2095 |
| $7 / 5$ <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  | 100.0 \% | 1921 | 1921 |
| $\begin{gathered} 8 / 1 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 8 / 2 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Scenario 10: '2022 Dev AM 30C/40HT/30W' (FG10: '2022 AM + (Dev + Response 40/30/30 +50\%)', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

|  | Destination |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin |  | A | B | C | D | Tot. |  |
|  | A | 0 | 320 | 299 | 388 | 1007 |  |
|  | B | 405 | 0 | 453 | 1669 | 2527 |  |
|  | C | 185 | 165 | 0 | 56 | 406 |  |
|  | D | 236 | 1077 | 60 | 0 | 1373 |  |
|  | Tot. | 826 | 1562 | 812 | 2113 | 5313 |  |

Full Input Data And Results
Traffic Lane Flows

| Lane | $\begin{gathered} \text { Scenario 10: } \\ \text { 2022 Dev AM } \\ \text { 30C/40HT/30W } \end{gathered}$ |
| :---: | :---: |
| Junction: Unnamed Junction |  |
| $\begin{gathered} 1 / 1 \\ \text { (short) } \end{gathered}$ | 320 |
| $\begin{gathered} 1 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 469(\text { In }) \\ 149(\text { Out }) \end{gathered}$ |
| 1/3 | 150 |
| $\begin{gathered} 1 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 388(\mathrm{In}) \\ \text { 194(Out) } \end{gathered}$ |
| $\begin{gathered} 1 / 5 \\ \text { (short) } \end{gathered}$ | 194 |
| 2/1 | 531 |
| 2/2 | 295 |
| $\begin{gathered} 3 / 1 \\ \text { (short) } \end{gathered}$ | 227 |
| $\begin{gathered} 3 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 453(\text { In }) \\ 226(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 3 / 3 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & 1113(\text { In }) \\ & 556(O u t) \end{aligned}$ |
| $\begin{gathered} 3 / 4 \\ \text { (short) } \end{gathered}$ | 557 |
| $\begin{gathered} 3 / 5 \\ \text { (with short) } \\ 3 / 6 \\ \text { (short) } \end{gathered}$ | $\begin{gathered} 961 \text { (In) } \\ 556 \text { (Out) } \\ 405 \end{gathered}$ |
| 4/1 | 560 |
| 4/2 | 560 |
| $\begin{gathered} 4 / 3 \\ 5 / 1 \\ 5 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 442 \\ 56 \\ \text { 185(In) } \\ \text { 92(Out) } \end{gathered}$ |
| $\begin{gathered} 5 / 3 \\ \text { (short) } \end{gathered}$ | 93 |
| $\begin{gathered} 5 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & 165 \text { (In) } \\ & \text { 82(Out) } \end{aligned}$ |
| $\begin{gathered} \text { 5hort) } \\ \text { (shor } \end{gathered}$ | 83 |
| 6/1 | 376 |
| $\begin{gathered} 6 / 2 \\ 7 / 1 \\ \text { (short) } \end{gathered}$ | $\begin{aligned} & 436 \\ & 236 \end{aligned}$ |
| $\begin{gathered} 7 / 2 \\ \text { (with short) } \\ 7 / 3 \end{gathered}$ | $\begin{gathered} 595(\text { In) } \\ 359(\text { Out }) \\ 359 \end{gathered}$ |
| $\begin{gathered} 7 / 4 \\ \text { (with short) } \\ 7 / 5 \\ \text { (short) } \end{gathered}$ | $\begin{gathered} 419(\text { In) } \\ 359(\text { Out }) \\ 60 \end{gathered}$ |
| 8/1 | 806 |
| 8/2 | 654 |

Full Input Data And Results
8/3 653

Full Input Data And Results
Lane Saturation Flows

| Junction: Unnamed Junction |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| $\begin{gathered} 1 / 1 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.04 | 0.00 | Y | Arm 4 Left | 34.20 | 100.0 \% | 1838 | 1838 |
| $\begin{gathered} 1 / 2 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | Y | Arm 6 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $\begin{gathered} \text { 1/3 } \\ \text { (Speke Hall Rd (N) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 1 / 4 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 14.70 | 100.0 \% | 1892 | 1892 |
| $\begin{gathered} 1 / 5 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 12.50 | 100.0 \% | 1862 | 1862 |
| $\begin{gathered} 2 / 1 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 2 / 2 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $3 / 1$ (A561 Speke Blvd) | 4.95 | 0.00 | Y | Arm 6 Left | 42.00 | 100.0 \% | 2037 | 2037 |
| $\begin{gathered} 3 / 2 \\ \text { (A561 Speke Blvd) } \end{gathered}$ | 5.00 | 0.00 | Y | Arm 6 Left | 48.20 | 100.0 \% | 2051 | 2051 |
| (A561 Speke Blvd) | 3.30 | 0.00 | Y | Arm 8 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $3 / 4$ (A561 Speke Blva Lane 4) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $3 / 5$ (A561 Speke Blva Lane 5) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd) | 3.35 | 0.00 | N | Arm 2 Right | 16.40 | 100.0 \% | 1915 | 1915 |
| $\begin{gathered} \text { (A561 Speke Blvd) } \end{gathered}$ | 3.60 | 0.00 | Y |  |  |  | 1975 | 1975 |
| (A561 Speke Blvd) | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 4/3 (A561 Speke Blvd) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 5 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 8 Left | Inf | 100.0 \% | 1955 | 1955 |
| $5 / 2$ (Speke Hall Ave Lane 2) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1200 | 1200 |
| $5 / 3$ (Speke Hall Ave Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $\begin{gathered} 5 / 4 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 19.20 | 100.0 \% | 1943 | 1943 |
| $\begin{gathered} 5 / 5 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 17.75 | 100.0 \% | 1932 | 1932 |
| $\begin{gathered} 6 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 6 / 2 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Full Input Data And Results

| 7/1 <br> (A561 Speke Blvd (W)) | 5.00 | 0.00 | Y | Arm 2 Left | 32.00 | 100.0 \% | 2020 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { 7/2 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 4 Ahead | Inf | 100.0 \% | 1955 | 1955 |
| $\begin{gathered} \text { 7/3 (W561 Speke Blvd (W) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| 7/4 <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | N | Arm 4 Ahead |  | 100.0 \% | 2095 | 2095 |
| $7 / 5$ <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  | 100.0 \% | 1921 | 1921 |
| $\begin{gathered} 8 / 1 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 8 / 2 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Scenario 11: '2022 Dev Pm 30C/40HT/30W' (FG11: '2022 PM + (Dev + Response 40/30/30 +50\%)', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

|  | Destination |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin |  | A | B | C | D | Tot. |  |
|  | A | 0 | 371 | 259 | 384 | 1014 |  |
|  | B | 262 | 0 | 267 | 1315 | 1844 |  |
|  | C | 245 | 605 | 0 | 179 | 1029 |  |
|  | D | 400 | 1218 | 123 | 0 | 1741 |  |
|  | Tot. | 907 | 2194 | 649 | 1878 | 5628 |  |

Full Input Data And Results
Traffic Lane Flows

| Lane | $\begin{gathered} \text { Scenario 11: } \\ \text { 2022 Dev Pm } \\ \text { 30C/40HT/30W } \end{gathered}$ |
| :---: | :---: |
| Junction: Unnamed Junction |  |
| $\begin{gathered} 1 / 1 \\ \text { (short) } \end{gathered}$ | 371 |
| $\begin{gathered} 1 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 501(\mathrm{In}) \\ 130(\text { Out }) \end{gathered}$ |
| 1/3 | 129 |
| $\begin{gathered} 1 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 384(\mathrm{In}) \\ \text { 192(Out) } \end{gathered}$ |
| $\begin{gathered} 1 / 5 \\ \text { (short) } \end{gathered}$ | 192 |
| 2/1 | 654 |
| 2/2 | 253 |
| $\begin{gathered} 3 / 1 \\ \text { (short) } \end{gathered}$ | 133 |
| $\begin{gathered} 3 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 267(\text { In }) \\ 134(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 3 / 3 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & 877(\text { In }) \\ & 438(\text { Out }) \end{aligned}$ |
| $\begin{gathered} 3 / 4 \\ \text { (short) } \end{gathered}$ | 439 |
| $\begin{gathered} 3 / 5 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 700(\mathrm{In}) \\ 438(\mathrm{Out}) \end{gathered}$ |
| 3/6 <br> (short) |  |
| 4/1 | 743 |
| 4/2 | 742 |
| 4/3 | 709 |
| 5/1 | 179 |
| $\begin{gathered} 5 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 245(\mathrm{In}) \\ 123(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 5 / 3 \\ \text { (short) } \end{gathered}$ | 122 |
| $\begin{gathered} 5 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 605 \text { (In) } \\ 302 \text { (Out) } \end{gathered}$ |
| $\begin{gathered} 5 / 5 \\ \text { (short) } \end{gathered}$ | 303 |
| 6/1 | 263 |
| 6/2 | 386 |
| $\begin{gathered} 7 / 1 \\ \text { (short) } \end{gathered}$ | 400 |
| 7/2 <br> (with short) | $\begin{aligned} & 806(\text { In }) \\ & 406(\text { Out }) \end{aligned}$ |
| 7/3 | 406 |
| 7/4 <br> (with short) | $\begin{aligned} & 529(\mathrm{ln}) \\ & 406(\text { Out }) \end{aligned}$ |
| $\begin{gathered} 7 / 5 \\ \text { (short) } \end{gathered}$ | 123 |
| 8/1 | 809 |
| 8/2 | 535 |

Full Input Data And Results
8/3 534

Full Input Data And Results
Lane Saturation Flows

| Junction: Unnamed Junction |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| $\begin{gathered} 1 / 1 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.04 | 0.00 | Y | Arm 4 Left | 34.20 | 100.0 \% | 1838 | 1838 |
| $\begin{gathered} 1 / 2 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | Y | Arm 6 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $\begin{gathered} \text { 1/3 } \\ \text { (Speke Hall Rd (N) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 1 / 4 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 14.70 | 100.0 \% | 1892 | 1892 |
| $\begin{gathered} 1 / 5 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 12.50 | 100.0 \% | 1862 | 1862 |
| $\begin{gathered} 2 / 1 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 2 / 2 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $3 / 1$ (A561 Speke Blvd) | 4.95 | 0.00 | Y | Arm 6 Left | 42.00 | 100.0 \% | 2037 | 2037 |
| $\begin{gathered} 3 / 2 \\ \text { (A561 Speke Blvd) } \end{gathered}$ | 5.00 | 0.00 | Y | Arm 6 Left | 48.20 | 100.0 \% | 2051 | 2051 |
| (A561 Speke Blvd) | 3.30 | 0.00 | Y | Arm 8 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $3 / 4$ (A561 Speke Blva Lane 4) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $3 / 5$ (A561 Speke Blva Lane 5) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd) | 3.35 | 0.00 | N | Arm 2 Right | 16.40 | 100.0 \% | 1915 | 1915 |
| $\begin{gathered} \text { (A561 Speke Blvd) } \end{gathered}$ | 3.60 | 0.00 | Y |  |  |  | 1975 | 1975 |
| (A561 Speke Blvd) | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 4/3 (A561 Speke Blvd) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 5 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 8 Left | Inf | 100.0 \% | 1955 | 1955 |
| $5 / 2$ (Speke Hall Ave Lane 2) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1200 | 1200 |
| $5 / 3$ (Speke Hall Ave Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $\begin{gathered} 5 / 4 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 19.20 | 100.0 \% | 1943 | 1943 |
| $\begin{gathered} 5 / 5 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 17.75 | 100.0 \% | 1932 | 1932 |
| $\begin{gathered} 6 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 6 / 2 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Full Input Data And Results

| 7/1 <br> (A561 Speke Blvd (W)) | 5.00 | 0.00 | Y | Arm 2 Left | 32.00 | 100.0 \% | 2020 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 7 / 2 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 4 Ahead | Inf | 100.0 \% | 1955 | 1955 |
| $\begin{gathered} \text { (A561 Speke Blvd (W) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 7 / 4 \\ (\text { A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Ahead |  | 100.0 \% | 2095 | 2095 |
| $7 / 5$ <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  |  | 1921 | 1921 |
| $\begin{gathered} \text { 8/1 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 8 / 2 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} \text { 8/3 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Scenario 12: '2022 Dev Sat 30C/40HT/30W' (FG12: 'Sat 2022 + (Dev + Response 40/30/30 +50\%)', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

|  | Destination |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin |  | A | B | C | D | Tot. |  |
|  | A | 0 | 253 | 236 | 524 | 1013 |  |
|  | B | 202 | 0 | 302 | 1031 | 1535 |  |
|  | C | 226 | 262 | 0 | 141 | 629 |  |
|  | D | 543 | 984 | 145 | 0 | 1672 |  |
|  | Tot. | 971 | 1499 | 683 | 1696 | 4849 |  |

Full Input Data And Results
Traffic Lane Flows

| Lane | $\begin{gathered} \text { Scenario 12: } \\ \text { 2022 Dev Sat } \\ \text { 30C/40HT/30W } \end{gathered}$ |
| :---: | :---: |
| Junction: Unnamed Junction |  |
| $\begin{gathered} 1 / 1 \\ \text { (short) } \end{gathered}$ | 253 |
| $\begin{gathered} 1 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 371(\text { In }) \\ 118(\text { Out }) \end{gathered}$ |
| 1/3 | 118 |
| $\begin{gathered} 1 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 524(\mathrm{In}) \\ 262 \text { (Out) } \end{gathered}$ |
| $\begin{gathered} 1 / 5 \\ \text { (short) } \end{gathered}$ | 262 |
| 2/1 | 757 |
| 2/2 | 214 |
| $\begin{gathered} 3 / 1 \\ \text { (short) } \end{gathered}$ | 151 |
| $\begin{gathered} 3 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 302(\text { In }) \\ 151 \text { (Out) } \end{gathered}$ |
| $\begin{gathered} 3 / 3 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 687(\mathrm{In}) \\ 344(\text { Out }) \end{gathered}$ |
| $\begin{gathered} 3 / 4 \\ \text { (short) } \end{gathered}$ | 343 |
| $\begin{gathered} 3 / 5 \\ \text { (with short) } \\ 3 / 6 \\ \text { (short) } \end{gathered}$ | $\begin{gathered} 546(\text { In }) \\ 344(\text { Out }) \\ 202 \end{gathered}$ |
| 4/1 | 521 |
| 4/2 | 520 |
| $\begin{gathered} 4 / 3 \\ 5 / 1 \\ 5 / 2 \\ \text { (with short) } \end{gathered}$ | $\begin{gathered} 458 \\ 141 \\ 226(\text { In }) \\ 113(\text { Out) } \end{gathered}$ |
| $\begin{gathered} 5 / 3 \\ \text { (short) } \end{gathered}$ | 113 |
| $\begin{gathered} 5 / 4 \\ \text { (with short) } \end{gathered}$ | $\begin{aligned} & 262(\text { In }) \\ & \text { 132(Out) } \end{aligned}$ |
| $\begin{gathered} \text { 5hort) } \\ \text { (shor } \end{gathered}$ | 130 |
| 6/1 | 269 |
| $\begin{gathered} 6 / 2 \\ 7 / 1 \\ \text { (short) } \end{gathered}$ | $\begin{aligned} & 414 \\ & 543 \end{aligned}$ |
| $\begin{gathered} 7 / 2 \\ \text { (with short) } \\ 7 / 3 \end{gathered}$ | $\begin{gathered} 871(\mathrm{In}) \\ 328(\mathrm{Out}) \\ 328 \end{gathered}$ |
| $\begin{gathered} 7 / 4 \\ \text { (with short) } \\ 7 / 5 \\ \text { (short) } \end{gathered}$ | $\begin{gathered} 473(\text { In) } \\ 328(\text { Out }) \\ \\ 145 \end{gathered}$ |
| 8/1 | 747 |
| 8/2 | 474 |

Full Input Data And Results
8/3 475

Full Input Data And Results
Lane Saturation Flows

| Junction: Unnamed Junction |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| $\begin{gathered} 1 / 1 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.04 | 0.00 | Y | Arm 4 Left | 34.20 | 100.0 \% | 1838 | 1838 |
| $\begin{gathered} 1 / 2 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | Y | Arm 6 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $\begin{gathered} \text { 1/3 } \\ \text { (Speke Hall Rd (N) Lane 3) } \end{gathered}$ | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 1 / 4 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 14.70 | 100.0 \% | 1892 | 1892 |
| $\begin{gathered} 1 / 5 \\ (\text { Speke Hall Rd (N)) } \end{gathered}$ | 3.30 | 0.00 | N | Arm 8 Right | 12.50 | 100.0 \% | 1862 | 1862 |
| $\begin{gathered} 2 / 1 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 2 / 2 \\ (\text { Speke Hall Road (N)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $3 / 1$ (A561 Speke Blvd) | 4.95 | 0.00 | Y | Arm 6 Left | 42.00 | 100.0 \% | 2037 | 2037 |
| $\begin{gathered} 3 / 2 \\ \text { (A561 Speke Blvd) } \end{gathered}$ | 5.00 | 0.00 | Y | Arm 6 Left | 48.20 | 100.0 \% | 2051 | 2051 |
| (A561 Speke Blvd) | 3.30 | 0.00 | Y | Arm 8 Ahead | Inf | 100.0 \% | 1945 | 1945 |
| $3 / 4$ (A561 Speke Blva Lane 4) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $3 / 5$ (A561 Speke Blva Lane 5) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| (A561 Speke Blvd) | 3.35 | 0.00 | N | Arm 2 Right | 16.40 | 100.0 \% | 1915 | 1915 |
| $\begin{gathered} \text { (A561 Speke Blvd) } \end{gathered}$ | 3.60 | 0.00 | Y |  |  |  | 1975 | 1975 |
| (A561 Speke Blvd) | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 4/3 (A561 Speke Blvd) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 5 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y | Arm 8 Left | Inf | 100.0 \% | 1955 | 1955 |
| $5 / 2$ (Speke Hall Ave Lane 2) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1200 | 1200 |
| $5 / 3$ (Speke Hall Ave Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1800 | 1800 |
| $\begin{gathered} 5 / 4 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 19.20 | 100.0 \% | 1943 | 1943 |
| $\begin{gathered} 5 / 5 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 4 Right | 17.75 | 100.0 \% | 1932 | 1932 |
| $\begin{gathered} 6 / 1 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} 6 / 2 \\ \text { (Speke Hall Ave) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Full Input Data And Results

| 7/1 <br> (A561 Speke Blvd (W)) | 5.00 | 0.00 | Y | Arm 2 Left | 32.00 | 100.0 \% | 2020 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $7 / 2$ <br> (A561 Speke Blvd (W)) | 3.40 | 0.00 | Y | Arm 4 Ahead | Inf | 100.0 \% | 1955 | 1955 |
| 7/3 (A561 Speke Blvd (W) Lane 3) | This lane uses a directly entered Saturation Flow |  |  |  |  |  | 1600 | 1600 |
| $\begin{gathered} 7 / 4 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |
| $\begin{gathered} 7 / 5 \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | N | Arm 6 Right |  | 100.0 \% | 1921 | 1921 |
| $\begin{gathered} \text { 8/1 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| $\begin{gathered} \text { 8/2 } \\ \text { (A561 Speke Blvd (W)) } \end{gathered}$ | 3.40 | 0.00 | Y |  |  |  | 1955 | 1955 |
| 8/3 (A561 Speke Blvd (W)) | 3.40 | 0.00 | N |  |  |  | 2095 | 2095 |

Scenario 1: '2017 AM' (FG1: 'Base AM 2017', Plan 1: 'Network Control Plan 1') Stage Sequence Diagram


## Stage Timings

| Stage | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | 23 | 17 | 9 | 7 | 7 |
| Change Point | 0 | 33 | 61 | 79 | 92 |

Full Input Data And Results
Signal Timings Diagram


Full Input Data And Results
Network Layout Diagram


## Full Input Data And Results

## Network Results

| Item | Lane Description | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat <br> (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | N/A | - | - |  | - | - | - | - | - | - | 99.6\% |
| Unnamed Junction | - | - | N/A | - | - |  | - | - | - | - | - | - | 99.6\% |
| 1/2+1/1 | Speke Hall Rd <br> ( N ) Left Ahead | U | N/A | N/A | J |  | 1 | 9:44 | - | 511 | 1945:1838 | 177+621 | $\begin{aligned} & 78.6: \\ & 59.9 \% \end{aligned}$ |
| 1/3 | Speke Hall Rd <br> (N) Ahead | U | N/A | N/A | J |  | 1 | 9 | - | 139 | 1600 | 145 | 95.6\% |
| 1/4+1/5 | Speke Hall Rd (N) Right | U | N/A | N/A | J |  | 1 | 9 | - | 309 | 1892:1862 | 172+169 | $\begin{aligned} & 90.1: \\ & 91.0 \% \end{aligned}$ |
| 2/1 | Speke Hall Road <br> (N) | U | N/A | N/A | - |  | - | - | - | 499 | 1955 | 1955 | 25.5\% |
| 2/2 | Speke Hall Road (N) | U | N/A | N/A | - |  | - | - | - | 273 | 1955 | 1955 | 14.0\% |
| 3/2+3/1 | A561 Speke Blvd Left | U | N/A | N/A | E |  | 1 | 52 | - | 383 | 2051:2037 | 636+639 | $\begin{aligned} & 30.0: \\ & 30.0 \% \end{aligned}$ |
| 3/3+3/4 | A561 Speke Blvd Ahead | U | N/A | N/A | D |  | 1 | 53 | - | 1071 | 1945:1800 | 537+538 | $\begin{aligned} & 99.6: \\ & 99.6 \% \end{aligned}$ |
| 3/5+3/6 | A561 Speke Blvd Right Ahead | U | N/A | N/A | D F |  | 1 | 53:27 | - | 925 | 1600:1915 | 620+452 | $\begin{aligned} & 86.3: \\ & 86.3 \% \end{aligned}$ |
| 4/1 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 564 | 1975 | 1975 | 28.6\% |
| 4/2 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 565 | 1955 | 1955 | 28.9\% |
| 4/3 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 414 | 2095 | 2095 | 19.8\% |
| 5/1 | Speke Hall Ave Left | U | N/A | N/A | G |  | 1 | 7 | - | 54 | 1955 | 142 | 38.0\% |
| 5/2+5/3 | Speke Hall Ave Ahead | U | N/A | N/A | G |  | 1 | 7 | - | 156 | 1200:1800 | 87+87 | $\begin{aligned} & \text { 89.4: } \\ & 89.4 \% \end{aligned}$ |
| 5/4+5/5 | Speke Hall Ave Right | U | N/A | N/A | - G |  | - | - | - | 137 | 1943:1932 | 138+141 | $\begin{aligned} & 49.1: \\ & 49.1 \% \end{aligned}$ |
| 6/1 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 331 | 1955 | 1955 | 16.9\% |
| 6/2 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 388 | 2095 | 2095 | 18.5\% |

Full Input Data And Results

| 7/2+7/1 | A561 Speke Blvd (W) Left Ahead | U | N/A | N/A | A B | 1 | 38:36 | - | 570 | 1955:2020 | 548+360 | $\begin{aligned} & 62.8: \\ & 62.8 \% \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/3 | A561 Speke Blvd (W) Ahead | U | N/A | N/A | A | 1 | 38 | - | 345 | 1600 | 567 | 60.8\% |
| 7/4+7/5 | A561 Speke Blvd (W) Ahead Right | U | N/A | N/A | A C | 1 | 38:13 | - | 403 | 2095:1921 | 691+116 | $\begin{aligned} & 49.9: \\ & 49.9 \% \end{aligned}$ |
| 8/1 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 744 | 1955 | 1955 | 38.1\% |
| 8/2 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 613 | 1955 | 1955 | 31.4\% |
| 8/3 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 612 | 2095 | 2095 | 29.2\% |
| Ped Link: <br> P1 | Unnamed Ped Link | - | N/A | - | K | 1 | 34 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P2 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | L | 1 | 34 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P3 | Unnamed Ped Link | - | N/A | - | S | 1 | 14 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P4 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | P | 1 | 52 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P5 | Unnamed Ped Link | - | N/A | - | O | 1 | 56 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P6 | Unnamed Ped Link | - | N/A | - | U | 1 | 51 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P7 | Unnamed Ped Link | - | N/A | - | N | 1 | 36 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P8 | Unnamed Ped Link | - | N/A | - | M | 1 | 36 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P9 | Unnamed Ped Link | - | N/A | - | T | 1 | 33 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P10 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | R | 1 | 42 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P11 | Unnamed Ped Link | - | N/A | - | Q | 1 | 79 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P12 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | V | 1 | 35 | - | 0 | - | 0 | 0.0\% |

Full Input Data And Results

| Item | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | 0 | 0 | 0 | 41.2 | 35.7 | 0.0 | 76.9 | - | - | - | - |
| Unnamed Junction | - | - | 0 | 0 | 0 | 41.2 | 35.7 | 0.0 | 76.9 | - | - | - | - |
| 1/2+1/1 | 511 | 511 | - | - | - | 4.4 | 0.9 | - | 5.3 | 37.1 | 8.4 | 0.9 | 9.3 |
| 1/3 | 139 | 139 | - | - | - | 1.9 | 4.5 | - | 6.4 | 166.3 | 4.2 | 4.5 | 8.7 |
| 1/4+1/5 | 309 | 309 | - | - | - | 4.3 | 3.9 | - | 8.1 | 94.5 | 4.7 | 3.9 | 8.5 |
| 2/1 | 499 | 499 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 1.7 | 0.2 | 1.8 |
| 2/2 | 273 | 273 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 3/2+3/1 | 383 | 383 | - | - | - | 1.7 | 0.2 | - | 1.9 | 18.3 | 3.3 | 0.2 | 3.5 |
| 3/3+3/4 | 1071 | 1071 | - | - | - | 7.3 | 15.4 | - | 22.7 | 76.4 | 27.4 | 15.4 | 42.9 |
| 3/5+3/6 | 925 | 925 | - | - | - | 7.3 | 3.0 | - | 10.4 | 40.4 | 12.5 | 3.0 | 15.5 |
| 4/1 | 564 | 564 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 3.3 | 0.2 | 3.5 |
| 4/2 | 565 | 565 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 0.0 | 0.2 | 0.2 |
| 4/3 | 414 | 414 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 5/1 | 54 | 54 | - | - | - | 0.7 | 0.3 | - | 1.0 | 68.9 | 1.6 | 0.3 | 1.9 |
| 5/2+5/3 | 156 | 156 | - | - | - | 2.2 | 3.1 | - | 5.3 | 122.5 | 2.4 | 3.1 | 5.5 |
| 5/4+5/5 | 137 | 137 | - | - | - | 0.9 | 0.5 | - | 1.4 | 37.3 | 2.0 | 0.5 | 2.5 |
| 6/1 | 331 | 331 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 6/2 | 388 | 388 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 7/2+7/1 | 570 | 570 | - | - | - | 4.4 | 0.8 | - | 5.2 | 32.9 | 8.2 | 0.8 | 9.1 |
| 7/3 | 345 | 345 | - | - | - | 2.8 | 0.8 | - | 3.6 | 37.3 | 8.6 | 0.8 | 9.4 |
| 7/4+7/5 | 403 | 403 | - | - | - | 3.3 | 0.5 | - | 3.8 | 34.1 | 8.0 | 0.5 | 8.5 |
| 8/1 | 744 | 744 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 8/2 | 613 | 613 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 0.0 | 0.2 | 0.2 |
| 8/3 | 612 | 612 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| Ped Link: <br> P1 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |


| Full Input Data And Results |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ped Link: <br> P2 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| Ped Link: <br> P3 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| Ped Link: <br> P4 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| Ped Link: <br> P5 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| Ped Link: <br> P6 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| Ped Link: P7 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| Ped Link: P8 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| Ped Link: P9 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| Ped Link: P10 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| Ped Link: P11 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |
| Ped Link: P12 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Full Input Data And Results
Network Summary
Total Network Delay: 76.94 pcuHr
Worst PRC: -10.72 \% (On Lane 3/3)

Scenario 2: '2017 PM' (FG2: 'Base PM 2017', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram


Stage Timings

| Stage | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | 11 | 17 | 9 | 18 | 8 |
| Change Point | 0 | 21 | 49 | 67 | 91 |

Full Input Data And Results
Signal Timings Diagram


Full Input Data And Results
Network Layout Diagram


## Full Input Data And Results

## Network Results

| Item | Lane Description | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat <br> (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | N/A | - | - |  | - | - | - | - | - | - | 100.1\% |
| Unnamed Junction | - | - | N/A | - | - |  | - | - | - | - | - | - | 100.1\% |
| 1/2+1/1 | Speke Hall Rd <br> ( N ) Left Ahead | U | N/A | N/A | JI |  | 1 | 10:33 | - | 475 | 1945:1838 | $175+500$ | $\begin{gathered} 70.4: \\ 70.4 \% \end{gathered}$ |
| 1/3 | Speke Hall Rd <br> (N) Ahead | U | N/A | N/A | J |  | 1 | 10 | - | 123 | 1600 | 160 | 76.9\% |
| 1/4+1/5 | Speke Hall Rd (N) Right | U | N/A | N/A | J |  | 1 | 10 | - | 361 | 1892:1862 | 189+186 | $\begin{aligned} & 95.7: \\ & 96.7 \% \end{aligned}$ |
| 2/1 | Speke Hall Road <br> (N) | U | N/A | N/A | - |  | - | - | - | 617 | 1955 | 1955 | 31.6\% |
| 2/2 | Speke Hall Road (N) | U | N/A | N/A | - |  | - | - | - | 232 | 1955 | 1955 | 11.9\% |
| 3/2+3/1 | A561 Speke Blvd Left | U | N/A | N/A | E |  | 1 | 40 | - | 263 | 2051:2037 | 524+528 | $\begin{aligned} & 25.0: \\ & 25.0 \% \end{aligned}$ |
| 3/3+3/4 | A561 Speke Blvd Ahead | U | N/A | N/A | D |  | 1 | 41 | - | 856 | 1945:1800 | 436+436 | $\begin{aligned} & 98.3: \\ & 98.3 \% \end{aligned}$ |
| 3/5+3/6 | A561 Speke Blvd Right Ahead | U | N/A | N/A | D F |  | 1 | 41:15 | - | 678 | 1600:1915 | 553+279 | $\begin{aligned} & 77.5: \\ & 89.8 \% \end{aligned}$ |
| 4/1 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 698 | 1975 | 1975 | 35.3\% |
| 4/2 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 699 | 1955 | 1955 | 35.8\% |
| 4/3 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 649 | 2095 | 2095 | 31.0\% |
| 5/1 | Speke Hall Ave Left | U | N/A | N/A | G |  | 1 | 18 | - | 175 | 1955 | 338 | 51.8\% |
| 5/2+5/3 | Speke Hall Ave Ahead | U | N/A | N/A | G |  | 1 | 18 | - | 213 | 1200:1800 | 190+192 | $\begin{aligned} & 55.9: \\ & 55.9 \% \end{aligned}$ |
| 5/4+5/5 | Speke Hall Ave Right | U | N/A | N/A | - G |  | - | - | - | 504 | 1943:1932 | 252+252 | $\begin{aligned} & \text { 100.1: } \\ & 100.1 \% \end{aligned}$ |
| 6/1 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 255 | 1955 | 1955 | 13.0\% |
| 6/2 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 375 | 2095 | 2095 | 17.9\% |

Full Input Data And Results

| 7/2+7/1 | A561 Speke Blvd (W) Left Ahead | U | N/A | N/A | A B | 1 | 38:36 | - | 782 | 1955:2020 | $508+496$ | $\begin{gathered} 77.9: \\ 77.9 \% \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/3 | A561 Speke Blvd (W) Ahead | U | N/A | N/A | A | 1 | 38 | - | 397 | 1600 | 567 | 70.0\% |
| 7/4+7/5 | A561 Speke Blvd (W) Ahead Right | U | N/A | N/A | A C | 1 | 38:13 |  | 518 | 2095:1921 | 656+200 | $\begin{aligned} & 60.5: \\ & 60.5 \% \end{aligned}$ |
| 8/1 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 784 | 1955 | 1955 | 40.1\% |
| 8/2 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 518 | 1955 | 1955 | 26.5\% |
| 8/3 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 518 | 2095 | 2095 | 24.7\% |
| Ped Link: <br> P1 | Unnamed Ped Link | - | N/A | - | K | 1 | 46 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P2 | Unnamed Ped Link | - | N/A | - | L | 1 | 46 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P3 | Unnamed Ped Link | - | N/A | - | S | 1 | 14 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P4 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | P | 1 | 41 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P5 | Unnamed Ped Link | - | N/A | - | 0 | 1 | 45 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P6 | Unnamed Ped Link | - | N/A | - | U | 1 | 39 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P7 | Unnamed Ped Link | - | N/A | - | N | 1 | 47 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P8 | Unnamed Ped Link | - | N/A | - | M | 1 | 47 |  | 0 | - | 0 | 0.0\% |
| Ped Link: P9 | Unnamed Ped Link | - | N/A | - | T | 1 | 21 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P10 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | R | 1 | 42 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P11 | Unnamed Ped Link | - | N/A | - | Q | 1 | 67 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P12 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | V | 1 | 35 | - | 0 | - | 0 | 0.0\% |

Full Input Data And Results

| Item | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | 0 | 0 | 0 | 49.2 | 41.0 | 0.0 | 90.2 | - | - | - | - |
| Unnamed Junction | - | - | 0 | 0 | 0 | 49.2 | 41.0 | 0.0 | 90.2 | - | - | - | - |
| 1/2+1/1 | 475 | 475 | - | - | - | 4.8 | 1.2 | - | 6.0 | 45.3 | 9.2 | 1.2 | 10.4 |
| 1/3 | 123 | 123 | - | - | - | 1.6 | 1.5 | - | 3.2 | 93.2 | 3.7 | 1.5 | 5.2 |
| 1/4+1/5 | 361 | 361 | - | - | - | 4.9 | 6.6 | - | 11.5 | 114.7 | 5.5 | 6.6 | 12.0 |
| 2/1 | 617 | 617 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.4 | 6.6 | 0.2 | 6.8 |
| 2/2 | 232 | 232 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.0 | 0.0 | 0.1 | 0.1 |
| 3/2+3/1 | 263 | 263 | - | - | - | 1.7 | 0.2 | - | 1.9 | 25.4 | 2.7 | 0.2 | 2.8 |
| $3 / 3+3 / 4$ | 856 | 856 | - | - | - | 7.2 | 11.3 | - | 18.6 | 78.1 | 20.7 | 11.3 | 32.0 |
| 3/5+3/6 | 678 | 678 | - | - | - | 6.6 | 2.2 | - | 8.8 | 46.6 | 10.9 | 2.2 | 13.1 |
| 4/1 | 698 | 698 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 7.9 | 0.3 | 8.1 |
| 4/2 | 699 | 699 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.4 | 0.0 | 0.3 | 0.3 |
| 4/3 | 649 | 649 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| 5/1 | 175 | 175 | - | - | - | 2.0 | 0.5 | - | 2.5 | 52.3 | 4.8 | 0.5 | 5.3 |
| 5/2+5/3 | 213 | 213 | - | - | - | 2.4 | 0.6 | - | 3.0 | 51.3 | 2.9 | 0.6 | 3.5 |
| 5/4+5/5 | 504 | 504 | - | - | - | 3.4 | 11.4 | - | 14.8 | 105.8 | 10.5 | 11.4 | 21.8 |
| 6/1 | 255 | 255 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 6/2 | 375 | 375 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.0 | 0.0 | 0.1 | 0.1 |
| 7/2+7/1 | 782 | 782 | - | - | - | 6.4 | 1.7 | - | 8.1 | 37.3 | 10.3 | 1.7 | 12.0 |
| 7/3 | 397 | 397 | - | - | - | 3.4 | 1.2 | - | 4.5 | 40.9 | 10.4 | 1.2 | 11.5 |
| 7/4+7/5 | 518 | 518 | - | - | - | 4.6 | 0.8 | - | 5.4 | 37.4 | 9.6 | 0.8 | 10.4 |
| 8/1 | 784 | 784 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 8/2 | 518 | 518 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 0.0 | 0.2 | 0.2 |
| 8/3 | 518 | 518 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.1 | 0.0 | 0.2 | 0.2 |
| Ped Link: P1 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |

Full Input Data And Results


Full Input Data And Results
Network Summary
Total Network Delay: 90.22 pcuHr
Worst PRC: -11.24 \% (On Lane 5/4)

Scenario 3: 'Sat 2017' (FG3: 'Sat 2017', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram


Stage Timings

| Stage | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | 7 | 20 | 9 | 9 | 18 |
| Change Point | 0 | 17 | 48 | 66 | 81 |

Full Input Data And Results
Signal Timings Diagram


Full Input Data And Results
Network Layout Diagram


## Full Input Data And Results

## Network Results

| Item | Lane Description | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green <br> (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat <br> (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | N/A | - | - |  | - | - | - | - | - | - | 89.0\% |
| Unnamed Junction | - | - | N/A | - | - |  | - | - | - | - | - | - | 89.0\% |
| 1/2+1/1 | Speke Hall Rd ( N ) Left Ahead | U | N/A | N/A | JI |  | 1 | 20:39 | - | 338 | 1945:1838 | 257+555 | $\begin{aligned} & 41.6: \\ & 41.6 \% \end{aligned}$ |
| 1/3 | Speke Hall Rd <br> (N) Ahead | U | N/A | N/A | J |  | 1 | 20 | - | 106 | 1600 | 305 | 34.7\% |
| 1/4+1/5 | Speke Hall Rd <br> (N) Right | U | N/A | N/A | J |  | 1 | 20 | - | 475 | 1892:1862 | 272+273 | $\begin{aligned} & 87.1: \\ & 87.1 \% \end{aligned}$ |
| 2/1 | Speke Hall Road ( N ) | U | N/A | N/A | - |  | - | - | - | 697 | 1955 | 1955 | 35.7\% |
| 2/2 | Speke Hall Road ( N ) | U | N/A | N/A | - |  | - | - | - | 187 | 1955 | 1955 | 9.6\% |
| 3/2+3/1 | A561 Speke Blvd Left | U | N/A | N/A | E |  | 1 | 39 | - | 276 | 2051:2037 | 518+518 | $\begin{aligned} & \hline 26.7: \\ & 26.7 \% \end{aligned}$ |
| 3/3+3/4 | A561 Speke Blvd Ahead | U | N/A | N/A | D |  | 1 | 40 | - | 666 | 1945:1800 | 427+427 | $\begin{aligned} & 78.0: \\ & 78.0 \% \end{aligned}$ |
| 3/5+3/6 | A561 Speke Blvd Right Ahead | U | N/A | N/A | D F |  | 1 | 40:11 | - | 519 | 1600:1915 | 482+209 | $\begin{aligned} & 69.1: \\ & 89.0 \% \end{aligned}$ |
| 4/1 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 491 | 1975 | 1975 | 24.9\% |
| 4/2 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 493 | 1955 | 1955 | 25.2\% |
| 4/3 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 436 | 2095 | 2095 | 20.8\% |
| 5/1 | Speke Hall Ave Left | U | N/A | N/A | G |  | 1 | 9 | - | 137 | 1955 | 178 | 77.1\% |
| 5/2+5/3 | Speke Hall Ave Ahead | U | N/A | N/A | G |  | 1 | 9 | - | 187 | 1200:1800 | 109+110 | $\begin{aligned} & 85.3: \\ & 85.3 \% \end{aligned}$ |
| 5/4+5/5 | Speke Hall Ave Right | U | N/A | N/A | - G |  | - | - | - | 234 | 1943:1932 | 170+173 | 68.4 : 68.4\% |
| 6/1 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 245 | 1955 | 1955 | 12.5\% |
| 6/2 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 385 | 2095 | 2095 | 18.4\% |

Full Input Data And Results

| 7/2+7/1 | A561 Speke Blvd (W) Left Ahead | U | N/A | N/A | A B | 1 | 41:39 | - | 829 | 1955:2020 | 359+577 | $\begin{aligned} & 88.5: \\ & 88.5 \% \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/3 | A561 Speke Blvd (W) Ahead | U | N/A | N/A | A | 1 | 41 | - | 319 | 1600 | 611 | 52.2\% |
| 7/4+7/5 | A561 Speke Blvd (W) Ahead Right | U | N/A | N/A | A C | 1 | 41:13 | - | 459 | 2095:1921 | 619+244 | $\begin{aligned} & 51.4 \text { : } \\ & 57.7 \% \end{aligned}$ |
| 8/1 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 707 | 1955 | 1955 | 36.2\% |
| 8/2 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 452 | 1955 | 1955 | 23.1\% |
| 8/3 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 452 | 2095 | 2095 | 21.6\% |
| Ped Link: <br> P1 | Unnamed Ped Link | - | N/A | - | K | 1 | 47 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P2 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | L | 1 | 47 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P3 | Unnamed Ped Link | - | N/A | - | S | 1 | 14 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P4 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | P | 1 | 47 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P5 | Unnamed Ped Link | - | N/A | - | O | 1 | 51 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P6 | Unnamed Ped Link | - | N/A | - | U | 1 | 38 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P7 | Unnamed Ped Link | - | N/A | - | N | 1 | 38 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P8 | Unnamed Ped Link | - | N/A | - | M | 1 | 38 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P9 | Unnamed Ped Link | - | N/A | - | T | 1 | 17 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P10 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | R | 1 | 45 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P11 | Unnamed Ped Link | - | N/A | - | Q | 1 | 66 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P12 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | V | 1 | 38 | - | 0 | - | 0 | 0.0\% |

Full Input Data And Results

| Item | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay <br> Per PCU <br> (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean <br> Max Queue (pcu) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | 0 | 0 | 0 | 40.2 | 18.5 | 0.0 | 58.8 | - | - | - | - |
| Unnamed Junction | - | - | 0 | 0 | 0 | 40.2 | 18.5 | 0.0 | 58.8 | - | - | - | - |
| 1/2+1/1 | 338 | 338 | - | - | - | 2.8 | 0.4 | - | 3.1 | 33.3 | 5.1 | 0.4 | 5.5 |
| 1/3 | 106 | 106 | - | - | - | 1.1 | 0.3 | - | 1.4 | 47.6 | 2.8 | 0.3 | 3.1 |
| 1/4+1/5 | 475 | 475 | - | - | - | 5.5 | 3.1 | - | 8.6 | 64.8 | 7.7 | 3.1 | 10.8 |
| 2/1 | 697 | 697 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 7.2 | 0.3 | 7.5 |
| 2/2 | 187 | 187 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.0 | 0.0 | 0.1 | 0.1 |
| $3 / 2+3 / 1$ | 276 | 276 | - | - | - | 1.8 | 0.2 | - | 2.0 | 26.3 | 2.9 | 0.2 | 3.1 |
| 3/3+3/4 | 666 | 666 | - | - | - | 5.0 | 1.7 | - | 6.8 | 36.7 | 12.0 | 1.7 | 13.8 |
| 3/5+3/6 | 519 | 519 | - | - | - | 5.0 | 1.5 | - | 6.5 | 45.2 | 8.0 | 1.5 | 9.5 |
| 4/1 | 491 | 491 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 2.2 | 0.2 | 2.4 |
| 4/2 | 493 | 493 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| 4/3 | 436 | 436 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 5/1 | 137 | 137 | - | - | - | 1.9 | 1.6 | - | 3.4 | 89.9 | 4.1 | 1.6 | 5.6 |
| 5/2+5/3 | 187 | 187 | - | - | - | 2.5 | 2.5 | - | 5.0 | 96.8 | 2.8 | 2.5 | 5.3 |
| 5/4+5/5 | 234 | 234 | - | - | - | 1.6 | 1.1 | - | 2.6 | 40.8 | 3.5 | 1.1 | 4.5 |
| 6/1 | 245 | 245 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 6/2 | 385 | 385 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 7/2+7/1 | 829 | 829 | - | - | - | 6.7 | 3.6 | - | 10.3 | 44.8 | 16.8 | 3.6 | 20.4 |
| 7/3 | 319 | 319 | - | - | - | 2.3 | 0.5 | - | 2.9 | 32.4 | 7.4 | 0.5 | 8.0 |
| 7/4+7/5 | 459 | 459 | - | - | - | 4.0 | 0.6 | - | 4.5 | 35.5 | 7.1 | 0.6 | 7.6 |
| 8/1 | 707 | 707 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.4 | 0.0 | 0.3 | 0.3 |
| 8/2 | 452 | 452 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| 8/3 | 452 | 452 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| Ped Link: P1 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |



Full Input Data And Results
Network Summary
Total Network Delay: 58.77 pcuHr
Worst PRC: 1.09 \% (On Lane 3/5)

Scenario 4: '2022 AM' (FG4: '2022 AM', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram


Stage Timings

| Stage | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | 24 | 15 | 9 | 7 | 8 |
| Change Point | 0 | 34 | 60 | 78 | 91 |

Full Input Data And Results
Signal Timings Diagram


Full Input Data And Results
Network Layout Diagram


## Full Input Data And Results

## Network Results

| Item | Lane Description | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green <br> (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat <br> (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | N/A | - | - |  | - | - | - | - | - | - | 104.3\% |
| Unnamed Junction | - | - | N/A | - | - |  | - | - | - | - | - | - | 104.3\% |
| 1/2+1/1 | Speke Hall Rd <br> ( N ) Left Ahead | U | N/A | N/A | JI |  | 1 | 10:46 | - | 462 | 1945:1838 | 195+430 | $\begin{aligned} & 74.0: \\ & 74.0 \% \end{aligned}$ |
| 1/3 | Speke Hall Rd <br> (N) Ahead | U | N/A | N/A | J |  | 1 | 10 | - | 143 | 1600 | 160 | 89.4\% |
| 1/4+1/5 | Speke Hall Rd <br> (N) Right | U | N/A | N/A | J |  | 1 | 10 | - | 384 | 1892:1862 | 189+186 | $\begin{aligned} & \text { 101.5: } \\ & 103.1 \% \end{aligned}$ |
| 2/1 | Speke Hall Road <br> (N) | U | N/A | N/A | - |  | - | - | - | 515 | 1955 | 1955 | 26.3\% |
| 2/2 | Speke Hall Road (N) | U | N/A | N/A | - |  | - | - | - | 281 | 1955 | 1955 | 14.4\% |
| 3/2+3/1 | A561 Speke Blvd Left | U | N/A | N/A | E |  | 1 | 51 | - | 394 | 2051:2037 | 629+629 | $\begin{aligned} & 31.3: \\ & 31.3 \% \end{aligned}$ |
| 3/3+3/4 | A561 Speke Blvd Ahead | U | N/A | N/A | D |  | 1 | 52 | - | 1104 | 1945:1800 | 529+529 | $\begin{gathered} 104.3: \\ 104.3 \% \end{gathered}$ |
| 3/5+3/6 | A561 Speke Blvd Right Ahead | U | N/A | N/A | D F |  | 1 | 52:28 | - | 954 | 1600:1915 | 629+458 | $\begin{aligned} & 87.7: \\ & 87.7 \% \end{aligned}$ |
| 4/1 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 549 | 1975 | 1975 | 27.8\% |
| 4/2 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 550 | 1955 | 1955 | 28.1\% |
| 4/3 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 426 | 2095 | 2095 | 20.3\% |
| 5/1 | Speke Hall Ave Left | U | N/A | N/A | G |  | 1 | 7 | - | 56 | 1955 | 142 | 39.4\% |
| 5/2+5/3 | Speke Hall Ave Ahead | U | N/A | N/A | G |  | 1 | 7 | - | 161 | 1200:1800 | 87+86 | $\begin{aligned} & 92.8: \\ & 92.8 \% \end{aligned}$ |
| 5/4+5/5 | Speke Hall Ave Right | U | N/A | N/A | - G |  | - | - | - | 141 | 1943:1932 | 139+141 | $\begin{aligned} & 50.5: \\ & 50.5 \% \end{aligned}$ |
| 6/1 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 341 | 1955 | 1955 | 17.4\% |
| 6/2 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 400 | 2095 | 2095 | 19.1\% |

Full Input Data And Results

| 7/2+7/1 | A561 Speke Blvd (W) Left Ahead | U | N/A | N/A | A B | 1 | 36:34 | - | 588 | 1955:2020 | $526+345$ | $\begin{gathered} 67.4: \\ 67.4 \% \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/3 | A561 Speke Blvd (W) Ahead | U | N/A | N/A | A | 1 | 36 | - | 356 | 1600 | 538 | 66.1\% |
| 7/4+7/5 | A561 Speke Blvd (W) Ahead Right | U | N/A | N/A | A C | 1 | 36:13 |  | 415 | 2095:1921 | $658+111$ | $\begin{gathered} 53.9: \\ 53.9 \% \end{gathered}$ |
| 8/1 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 800 | 1955 | 1955 | 39.6\% |
| 8/2 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 648 | 1955 | 1955 | 31.8\% |
| 8/3 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 648 | 2095 | 2095 | 30.8\% |
| Ped Link: P1 | Unnamed Ped Link | - | N/A | - | K | 1 | 35 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P2 | Unnamed Ped Link | - | N/A | - | L | 1 | 35 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P3 | Unnamed Ped Link | - | N/A | - | S | 1 | 14 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P4 | Unnamed Ped Link | - | N/A | - | P | 1 | 54 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P5 | Unnamed Ped Link | - | N/A | - | 0 | 1 | 58 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P6 | Unnamed Ped Link | - | N/A | - | U | 1 | 50 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P7 | Unnamed Ped Link | - | N/A | - | N | 1 | 36 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P8 | Unnamed Ped Link | - | N/A | - | M | 1 | 36 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P9 | Unnamed Ped Link | - | N/A | - | T | 1 | 34 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P10 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | R | 1 | 40 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P11 | Unnamed Ped Link | - | N/A | - | Q | 1 | 78 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P12 | Unnamed Ped Link | - | N/A | - | V | 1 | 33 | - | 0 | - | 0 | 0.0\% |

Full Input Data And Results

| Item | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | 0 | 0 | 0 | 46.3 | 61.1 | 0.0 | 107.4 | - | - | - | - |
| Unnamed Junction | - | - | 0 | 0 | 0 | 46.3 | 61.1 | 0.0 | 107.4 | - | - | - | - |
| 1/2+1/1 | 462 | 462 | - | - | - | 3.9 | 1.4 | - | 5.3 | 40.9 | 6.7 | 1.4 | 8.1 |
| 1/3 | 143 | 143 | - | - | - | 1.9 | 3.1 | - | 5.0 | 126.6 | 4.3 | 3.1 | 7.4 |
| 1/4+1/5 | 384 | 375 | - | - | - | 5.6 | 12.2 | - | 17.7 | 166.4 | 5.9 | 12.2 | 18.1 |
| 2/1 | 515 | 515 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 1.7 | 0.2 | 1.8 |
| 2/2 | 281 | 281 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 3/2+3/1 | 394 | 394 | - | - | - | 1.9 | 0.2 | - | 2.1 | 19.0 | 3.5 | 0.2 | 3.7 |
| 3/3+3/4 | 1104 | 1058 | - | - | - | 10.0 | 31.6 | - | 41.7 | 135.9 | 31.7 | 31.6 | 63.3 |
| 3/5+3/6 | 954 | 954 | - | - | - | 7.7 | 3.4 | - | 11.1 | 41.8 | 13.8 | 3.4 | 17.2 |
| 4/1 | 549 | 549 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 3.9 | 0.2 | 4.1 |
| 4/2 | 550 | 550 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 0.0 | 0.2 | 0.2 |
| 4/3 | 426 | 426 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 5/1 | 56 | 56 | - | - | - | 0.8 | 0.3 | - | 1.1 | 69.4 | 1.6 | 0.3 | 2.0 |
| 5/2+5/3 | 161 | 161 | - | - | - | 2.2 | 4.0 | - | 6.2 | 138.5 | 2.5 | 4.0 | 6.4 |
| 5/4+5/5 | 141 | 141 | - | - | - | 1.0 | 0.5 | - | 1.5 | 37.7 | 2.1 | 0.5 | 2.6 |
| 6/1 | 341 | 341 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.5 | 0.1 | 0.6 |
| 6/2 | 400 | 400 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 7/2+7/1 | 588 | 588 | - | - | - | 4.8 | 1.0 | - | 5.8 | 35.6 | 8.8 | 1.0 | 9.8 |
| 7/3 | 356 | 356 | - | - | - | 3.1 | 1.0 | - | 4.0 | 40.9 | 9.2 | 1.0 | 10.2 |
| 7/4+7/5 | 415 | 415 | - | - | - | 3.6 | 0.6 | - | 4.2 | 36.3 | 8.6 | 0.6 | 9.2 |
| 8/1 | 774 | 774 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 8/2 | 622 | 622 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.4 | 0.0 | 0.2 | 0.2 |
| 8/3 | 645 | 645 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| Ped Link: P1 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |

Full Input Data And Results


Full Input Data And Results
Network Summary
Total Network Delay: 107.43 pcuHr
Worst PRC: -15.93 \% (On Lane 3/3)

Scenario 5: '2022 PM' (FG5: '2022 PM', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram


Stage Timings

| Stage | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | 11 | 17 | 9 | 18 | 8 |
| Change Point | 0 | 21 | 49 | 67 | 91 |

Full Input Data And Results
Signal Timings Diagram


Full Input Data And Results
Network Layout Diagram


## Full Input Data And Results

## Network Results

| Item | Lane Description | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green <br> (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat <br> (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | N/A | - | - |  | - | - | - | - | - | - | 101.4\% |
| Unnamed Junction | - | - | N/A | - | - |  | - | - | - | - | - | - | 101.4\% |
| 1/2+1/1 | Speke Hall Rd <br> ( N ) Left Ahead | U | N/A | N/A | JI |  | 1 | 10:33 | - | 481 | 1945:1838 | $174+500$ | $\begin{aligned} & 71.3: \\ & 71.3 \% \end{aligned}$ |
| 1/3 | Speke Hall Rd <br> (N) Ahead | U | N/A | N/A | J |  | 1 | 10 | - | 125 | 1600 | 160 | 78.1\% |
| 1/4+1/5 | Speke Hall Rd <br> (N) Right | U | N/A | N/A | J |  | 1 | 10 | - | 366 | 1892:1862 | 189+186 | $\begin{aligned} & 96.2: \\ & 98.8 \% \end{aligned}$ |
| 2/1 | Speke Hall Road <br> (N) | U | N/A | N/A | - |  | - | - | - | 626 | 1955 | 1955 | 32.0\% |
| 2/2 | Speke Hall Road (N) | U | N/A | N/A | - |  | - | - | - | 235 | 1955 | 1955 | 12.0\% |
| 3/2+3/1 | A561 Speke Blvd Left | U | N/A | N/A | E |  | 1 | 40 | - | 267 | 2051:2037 | 524+528 | $\begin{aligned} & 25.4: \\ & 25.4 \% \end{aligned}$ |
| 3/3+3/4 | A561 Speke Blvd Ahead | U | N/A | N/A | D |  | 1 | 41 | - | 869 | 1945:1800 | $435+436$ | $\begin{aligned} & 99.8: \\ & 99.8 \% \end{aligned}$ |
| 3/5+3/6 | A561 Speke Blvd Right Ahead | U | N/A | N/A | D F |  | 1 | 41:15 | - | 688 | 1600:1915 | $552+279$ | $\begin{gathered} 78.6: \\ 91.2 \% \end{gathered}$ |
| 4/1 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 709 | 1975 | 1975 | 35.9\% |
| 4/2 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 709 | 1955 | 1955 | 36.3\% |
| 4/3 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 658 | 2095 | 2095 | 31.2\% |
| 5/1 | Speke Hall Ave Left | U | N/A | N/A | G |  | 1 | 18 | - | 177 | 1955 | 338 | 52.4\% |
| 5/2+5/3 | Speke Hall Ave Ahead | U | N/A | N/A | G |  | 1 | 18 | - | 216 | 1200:1800 | 190+190 | $\begin{aligned} & 56.9: \\ & 56.9 \% \end{aligned}$ |
| 5/4+5/5 | Speke Hall Ave Right | U | N/A | N/A | - G |  | - | - | - | 511 | 1943:1932 | 253+252 | $\begin{aligned} & 101.4: \\ & 101.4 \% \end{aligned}$ |
| 6/1 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 258 | 1955 | 1955 | 13.2\% |
| 6/2 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 380 | 2095 | 2095 | 18.1\% |

Full Input Data And Results

| 7/2+7/1 | A561 Speke Blvd (W) Left Ahead | U | N/A | N/A | A B | 1 | 38:36 | - | 793 | 1955:2020 | 509+495 | $\begin{gathered} 79.0: \\ 79.0 \% \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/3 | A561 Speke Blvd (W) Ahead | U | N/A | N/A | A | 1 | 38 | - | 403 | 1600 | 567 | 71.0\% |
| 7/4+7/5 | A561 Speke Blvd (W) Ahead Right | U | N/A | N/A | A C | 1 | 38:13 |  | 525 | 2095:1921 | 657+199 | $\begin{gathered} 61.4: \\ 61.4 \% \end{gathered}$ |
| 8/1 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 793 | 1955 | 1955 | 40.6\% |
| 8/2 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 527 | 1955 | 1955 | 27.0\% |
| 8/3 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 526 | 2095 | 2095 | 25.1\% |
| Ped Link: <br> P1 | Unnamed Ped Link | - | N/A | - | K | 1 | 46 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P2 | Unnamed Ped Link | - | N/A | - | L | 1 | 46 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P3 | Unnamed Ped Link | - | N/A | - | S | 1 | 14 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P4 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | P | 1 | 41 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P5 | Unnamed Ped Link | - | N/A | - | 0 | 1 | 45 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P6 | Unnamed Ped Link | - | N/A | - | U | 1 | 39 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P7 | Unnamed Ped Link | - | N/A | - | N | 1 | 47 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P8 | Unnamed Ped Link | - | N/A | - | M | 1 | 47 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P9 | Unnamed Ped Link | - | N/A | - | T | 1 | 21 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P10 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | R | 1 | 42 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P11 | Unnamed Ped Link | - | N/A | - | Q | 1 | 67 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P12 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | V | 1 | 35 | - | 0 | - | 0 | 0.0\% |

Full Input Data And Results

| Item | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | 0 | 0 | 0 | 50.3 | 47.4 | 0.0 | 97.6 | - | - | - | - |
| Unnamed Junction | - | - | 0 | 0 | 0 | 50.3 | 47.4 | 0.0 | 97.6 | - | - | - | - |
| 1/2+1/1 | 481 | 481 | - | - | - | 4.9 | 1.2 | - | 6.1 | 45.7 | 9.5 | 1.2 | 10.7 |
| 1/3 | 125 | 125 | - | - | - | 1.7 | 1.6 | - | 3.3 | 95.4 | 3.7 | 1.6 | 5.3 |
| 1/4+1/5 | 366 | 366 | - | - | - | 5.0 | 7.5 | - | 12.5 | 123.1 | 5.6 | 7.5 | 13.1 |
| 2/1 | 626 | 626 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.4 | 6.6 | 0.2 | 6.8 |
| 2/2 | 235 | 235 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.0 | 0.0 | 0.1 | 0.1 |
| 3/2+3/1 | 267 | 267 | - | - | - | 1.7 | 0.2 | - | 1.9 | 25.5 | 2.7 | 0.2 | 2.9 |
| $3 / 3+3 / 4$ | 869 | 869 | - | - | - | 7.4 | 14.3 | - | 21.7 | 90.1 | 21.3 | 14.3 | 35.6 |
| 3/5+3/6 | 688 | 688 | - | - | - | 6.7 | 2.3 | - | 9.1 | 47.5 | 11.2 | 2.3 | 13.5 |
| 4/1 | 709 | 709 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 8.2 | 0.3 | 8.5 |
| 4/2 | 709 | 709 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.4 | 0.0 | 0.3 | 0.3 |
| 4/3 | 655 | 655 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| 5/1 | 177 | 177 | - | - | - | 2.0 | 0.5 | - | 2.6 | 52.5 | 4.9 | 0.5 | 5.5 |
| 5/2+5/3 | 216 | 216 | - | - | - | 2.4 | 0.7 | - | 3.1 | 51.6 | 3.0 | 0.7 | 3.7 |
| 5/4+5/5 | 511 | 508 | - | - | - | 3.7 | 13.2 | - | 16.8 | 118.6 | 11.1 | 13.2 | 24.3 |
| 6/1 | 258 | 258 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 6/2 | 380 | 380 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.0 | 0.0 | 0.1 | 0.1 |
| 7/2+7/1 | 793 | 793 | - | - | - | 6.5 | 1.8 | - | 8.3 | 37.8 | 10.9 | 1.8 | 12.8 |
| 7/3 | 403 | 403 | - | - | - | 3.4 | 1.2 | - | 4.6 | 41.4 | 10.5 | 1.2 | 11.7 |
| 7/4+7/5 | 525 | 525 | - | - | - | 4.7 | 0.8 | - | 5.5 | 37.6 | 9.7 | 0.8 | 10.5 |
| 8/1 | 793 | 793 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 8/2 | 527 | 527 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 0.0 | 0.2 | 0.2 |
| 8/3 | 526 | 526 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.1 | 0.0 | 0.2 | 0.2 |
| Ped Link: P1 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |

Full Input Data And Results


Full Input Data And Results
Network Summary
Total Network Delay: 97.61 pcuHr
Worst PRC: -12.64 \% (On Lane 5/4)

Scenario 6: 'Sat 2022' (FG6: '2022 Sat', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram


Stage Timings

| Stage | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | 7 | 20 | 9 | 9 | 18 |
| Change Point | 0 | 17 | 48 | 66 | 81 |

Full Input Data And Results
Signal Timings Diagram


Full Input Data And Results
Network Layout Diagram


## Full Input Data And Results

## Network Results

| Item | Lane Description | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat <br> (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | N/A | - | - |  | - | - | - | - | - | - | 90.9\% |
| Unnamed Junction | - | - | N/A | - | - |  | - | - | - | - | - | - | 90.9\% |
| 1/2+1/1 | Speke Hall Rd <br> ( N ) Left Ahead | U | N/A | N/A | J |  | 1 | 20:39 | - | 344 | 1945:1838 | 254+556 | $\begin{aligned} & 42.4: \\ & 42.4 \% \end{aligned}$ |
| 1/3 | Speke Hall Rd <br> (N) Ahead | U | N/A | N/A | J |  | 1 | 20 | - | 109 | 1600 | 305 | 35.7\% |
| 1/4+1/5 | Speke Hall Rd (N) Right | U | N/A | N/A | J |  | 1 | 20 | - | 485 | 1892:1862 | $274+273$ | $\begin{aligned} & 88.6: \\ & 88.6 \% \end{aligned}$ |
| 2/1 | Speke Hall Road <br> (N) | U | N/A | N/A | - |  | - | - | - | 711 | 1955 | 1955 | 36.4\% |
| 2/2 | Speke Hall Road (N) | U | N/A | N/A | - |  | - | - | - | 191 | 1955 | 1955 | 9.8\% |
| 3/2+3/1 | A561 Speke Blvd Left | U | N/A | N/A | E |  | 1 | 39 | - | 281 | 2051:2037 | 515+518 | $\begin{aligned} & 27.2: \\ & 27.2 \% \end{aligned}$ |
| 3/3+3/4 | A561 Speke Blvd Ahead | U | N/A | N/A | D |  | 1 | 40 | - | 680 | 1945:1800 | $427+427$ | $\begin{aligned} & 79.6: \\ & 79.6 \% \end{aligned}$ |
| 3/5+3/6 | A561 Speke Blvd Right Ahead | U | N/A | N/A | D F |  | 1 | 40:11 | - | 530 | 1600:1915 | 482+209 | $\begin{aligned} & 70.6: \\ & 90.9 \% \end{aligned}$ |
| 4/1 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 503 | 1975 | 1975 | 25.5\% |
| 4/2 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 504 | 1955 | 1955 | 25.8\% |
| 4/3 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 444 | 2095 | 2095 | 21.2\% |
| 5/1 | Speke Hall Ave Left | U | N/A | N/A | G |  | 1 | 9 | - | 140 | 1955 | 178 | 78.8\% |
| 5/2+5/3 | Speke Hall Ave Ahead | U | N/A | N/A | G |  | 1 | 9 | - | 191 | 1200:1800 | 109+110 | $\begin{aligned} & 87.1 \text { : } \\ & 87.1 \% \end{aligned}$ |
| 5/4+5/5 | Speke Hall Ave Right | U | N/A | N/A | - G |  | - | - | - | 239 | 1943:1932 | 174+172 | $\begin{aligned} & 69.0: \\ & 69.0 \% \end{aligned}$ |
| 6/1 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 249 | 1955 | 1955 | 12.7\% |
| 6/2 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 393 | 2095 | 2095 | 18.8\% |

Full Input Data And Results

| 7/2+7/1 | A561 Speke Blvd (W) Left Ahead | U | N/A | N/A | A B | 1 | 41:39 | - | 846 | 1955:2020 | 360+577 | $\begin{aligned} & 90.3: \\ & 90.3 \% \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/3 | A561 Speke Blvd (W) Ahead | U | N/A | N/A | A | 1 | 41 | - | 326 | 1600 | 611 | 53.4\% |
| 7/4+7/5 | A561 Speke Blvd (W) Ahead Right | U | N/A | N/A | A C | 1 | 41:13 | - | 469 | 2095:1921 | 620+244 | $\begin{gathered} 52.4 \text { : } \\ 58.9 \% \end{gathered}$ |
| 8/1 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 723 | 1955 | 1955 | 37.0\% |
| 8/2 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 461 | 1955 | 1955 | 23.6\% |
| 8/3 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 461 | 2095 | 2095 | 22.0\% |
| Ped Link: <br> P1 | Unnamed Ped Link | - | N/A | - | K | 1 | 47 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P2 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | L | 1 | 47 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P3 | Unnamed Ped Link | - | N/A | - | S | 1 | 14 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P4 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | P | 1 | 47 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P5 | Unnamed Ped Link | - | N/A | - | O | 1 | 51 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P6 | Unnamed Ped Link | - | N/A | - | U | 1 | 38 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P7 | Unnamed Ped Link | - | N/A | - | N | 1 | 38 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P8 | Unnamed Ped Link | - | N/A | - | M | 1 | 38 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P9 | Unnamed Ped Link | - | N/A | - | T | 1 | 17 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P10 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | R | 1 | 45 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P11 | Unnamed Ped Link | - | N/A | - | Q | 1 | 66 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P12 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | V | 1 | 38 | - | 0 | - | 0 | 0.0\% |

Full Input Data And Results

| Item | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay <br> Per PCU <br> (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean <br> Max Queue (pcu) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | 0 | 0 | 0 | 41.3 | 20.5 | 0.0 | 61.8 | - | - | - | - |
| Unnamed Junction | - | - | 0 | 0 | 0 | 41.3 | 20.5 | 0.0 | 61.8 | - | - | - | - |
| 1/2+1/1 | 344 | 344 | - | - | - | 2.8 | 0.4 | - | 3.2 | 33.4 | 5.2 | 0.4 | 5.6 |
| 1/3 | 109 | 109 | - | - | - | 1.2 | 0.3 | - | 1.4 | 47.8 | 2.9 | 0.3 | 3.2 |
| 1/4+1/5 | 485 | 485 | - | - | - | 5.6 | 3.5 | - | 9.1 | 67.5 | 8.1 | 3.5 | 11.6 |
| 2/1 | 711 | 711 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 7.2 | 0.3 | 7.5 |
| 2/2 | 191 | 191 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.0 | 0.0 | 0.1 | 0.1 |
| $3 / 2+3 / 1$ | 281 | 281 | - | - | - | 1.9 | 0.2 | - | 2.1 | 26.3 | 2.9 | 0.2 | 3.1 |
| 3/3+3/4 | 680 | 680 | - | - | - | 5.2 | 1.9 | - | 7.1 | 37.6 | 12.6 | 1.9 | 14.5 |
| 3/5+3/6 | 530 | 530 | - | - | - | 5.2 | 1.6 | - | 6.8 | 46.0 | 8.2 | 1.6 | 9.8 |
| 4/1 | 503 | 503 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 2.2 | 0.2 | 2.4 |
| 4/2 | 504 | 504 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| 4/3 | 444 | 444 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 5/1 | 140 | 140 | - | - | - | 1.9 | 1.7 | - | 3.6 | 92.7 | 4.2 | 1.7 | 5.9 |
| 5/2+5/3 | 191 | 191 | - | - | - | 2.6 | 2.8 | - | 5.4 | 101.7 | 2.9 | 2.8 | 5.7 |
| 5/4+5/5 | 239 | 239 | - | - | - | 1.6 | 1.1 | - | 2.7 | 40.6 | 3.5 | 1.1 | 4.6 |
| 6/1 | 249 | 249 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 6/2 | 393 | 393 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 7/2+7/1 | 846 | 846 | - | - | - | 6.9 | 4.3 | - | 11.2 | 47.6 | 17.7 | 4.3 | 22.0 |
| 7/3 | 326 | 326 | - | - | - | 2.4 | 0.6 | - | 3.0 | 32.7 | 7.7 | 0.6 | 8.3 |
| 7/4+7/5 | 469 | 469 | - | - | - | 4.1 | 0.6 | - | 4.6 | 35.7 | 7.2 | 0.6 | 7.8 |
| 8/1 | 723 | 723 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 8/2 | 461 | 461 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| 8/3 | 461 | 461 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| Ped Link: P1 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |



Full Input Data And Results
Network Summary
Total Network Delay: 61.77 pcuHr
Worst PRC: -1.05 \% (On Lane 3/5)

Scenario 7: '2022 Dev AM 40C/30HT/30W' (FG7: '2022 AM + Development + Response 40/30/30', Plan 1: 'Network Control Plan 1')

## Stage Sequence Diagram



## Stage Timings

| Stage | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | 25 | 14 | 9 | 7 | 8 |
| Change Point | 0 | 35 | 60 | 78 | 91 |

Full Input Data And Results
Signal Timings Diagram


Full Input Data And Results
Network Layout Diagram


## Full Input Data And Results

## Network Results

| Item | Lane Description | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green <br> (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat <br> (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | N/A | - | - |  | - | - | - | - | - | - | 105.2\% |
| Unnamed Junction | - | - | N/A | - | - |  | - | - | - | - | - | - | 105.2\% |
| 1/2+1/1 | Speke Hall Rd <br> ( N ) Left Ahead | U | N/A | N/A | JI |  | 1 | 10:47 | - | 468 | 1945:1838 | 195+421 | $\begin{gathered} 76.1: \\ 76.1 \% \end{gathered}$ |
| 1/3 | Speke Hall Rd <br> (N) Ahead | U | N/A | N/A | J |  | 1 | 10 | - | 148 | 1600 | 160 | 92.5\% |
| 1/4+1/5 | Speke Hall Rd <br> (N) Right | U | N/A | N/A | J |  | 1 | 10 | - | 388 | 1892:1862 | 189+186 | $\begin{aligned} & 102.5: \\ & 104.2 \% \end{aligned}$ |
| 2/1 | Speke Hall Road <br> (N) | U | N/A | N/A | - |  | - | - | - | 527 | 1955 | 1955 | 26.9\% |
| 2/2 | Speke Hall Road (N) | U | N/A | N/A | - |  | - | - | - | 291 | 1955 | 1955 | 14.9\% |
| 3/2+3/1 | A561 Speke Blvd Left | U | N/A | N/A | E |  | 1 | 51 | - | 434 | 2051:2037 | 629+629 | $\begin{aligned} & \hline 34.5: \\ & 34.5 \% \end{aligned}$ |
| 3/3+3/4 | A561 Speke Blvd Ahead | U | N/A | N/A | D |  | 1 | 52 | - | 1113 | 1945:1800 | 528+529 | $\begin{aligned} & \text { 105.2: } \\ & 105.2 \% \end{aligned}$ |
| 3/5+3/6 | A561 Speke Blvd Right Ahead | U | N/A | N/A | D F |  | 1 | 52:29 | - | 961 | 1600:1915 | $638+465$ | $\begin{gathered} 87.1: \\ 87.1 \% \end{gathered}$ |
| 4/1 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 558 | 1975 | 1975 | 28.3\% |
| 4/2 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 558 | 1955 | 1955 | 28.5\% |
| 4/3 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 438 | 2095 | 2095 | 20.9\% |
| 5/1 | Speke Hall Ave Left | U | N/A | N/A | G |  | 1 | 7 | - | 56 | 1955 | 142 | 39.4\% |
| 5/2+5/3 | Speke Hall Ave Ahead | U | N/A | N/A | G |  | 1 | 7 | - | 177 | 1200:1800 | 87+88 | $\begin{aligned} & \text { 100.8: } \\ & 100.8 \% \end{aligned}$ |
| 5/4+5/5 | Speke Hall Ave Right | U | N/A | N/A | - G |  | - | - | - | 157 | 1943:1932 | 139+141 | $\begin{aligned} & 56.2: \\ & 56.2 \% \end{aligned}$ |
| 6/1 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 365 | 1955 | 1955 | 18.7\% |
| 6/2 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 425 | 2095 | 2095 | 20.3\% |

Full Input Data And Results

| 7/2+7/1 | A561 Speke Blvd (W) Left Ahead | U | N/A | N/A | A B | 1 | 35:33 | - | 595 | 1955:2020 | 515+339 | $\begin{gathered} 69.7: \\ 69.7 \% \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/3 | A561 Speke Blvd (W) Ahead | U | N/A | N/A | A | 1 | 35 | - | 359 | 1600 | 524 | 68.6\% |
| 7/4+7/5 | A561 Speke Blvd (W) Ahead Right | U | N/A | N/A | A C | 1 | 35:13 |  | 419 | 2095:1921 | $643+107$ | $\begin{gathered} 55.8: \\ 55.8 \% \end{gathered}$ |
| 8/1 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 806 | 1955 | 1955 | 39.6\% |
| 8/2 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 654 | 1955 | 1955 | 31.8\% |
| 8/3 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 653 | 2095 | 2095 | 31.0\% |
| Ped Link: <br> P1 | Unnamed Ped Link | - | N/A | - | K | 1 | 35 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P2 | Unnamed Ped Link | - | N/A | - | L | 1 | 35 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P3 | Unnamed Ped Link | - | N/A | - | S | 1 | 14 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P4 | Unnamed Ped Link | - | N/A | - | P | 1 | 55 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P5 | Unnamed Ped Link | - | N/A | - | 0 | 1 | 59 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P6 | Unnamed Ped Link | - | N/A | - | U | 1 | 50 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P7 | Unnamed Ped Link | - | N/A | - | N | 1 | 36 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P8 | Unnamed Ped Link | - | N/A | - | M | 1 | 36 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P9 | Unnamed Ped Link | - | N/A | - | T | 1 | 35 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P10 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | R | 1 | 39 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P11 | Unnamed Ped Link | - | N/A | - | Q | 1 | 78 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P12 | Unnamed Ped Link | - | N/A | - | V | 1 | 32 | - | 0 | - | 0 | 0.0\% |

Full Input Data And Results

| Item | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | 0 | 0 | 0 | 48.3 | 70.4 | 0.0 | 118.7 | - | - | - | - |
| Unnamed Junction | - | - | 0 | 0 | 0 | 48.3 | 70.4 | 0.0 | 118.7 | - | - | - | - |
| 1/2+1/1 | 468 | 468 | - | - | - | 3.9 | 1.6 | - | 5.4 | 41.7 | 6.7 | 1.6 | 8.2 |
| 1/3 | 148 | 148 | - | - | - | 2.0 | 3.8 | - | 5.8 | 141.1 | 4.5 | 3.8 | 8.3 |
| 1/4+1/5 | 388 | 375 | - | - | - | 5.8 | 13.5 | - | 19.3 | 179.4 | 6.3 | 13.5 | 19.8 |
| 2/1 | 526 | 526 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 2.2 | 0.2 | 2.4 |
| 2/2 | 291 | 291 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 3/2+3/1 | 434 | 434 | - | - | - | 2.1 | 0.3 | - | 2.3 | 19.3 | 3.9 | 0.3 | 4.1 |
| 3/3+3/4 | 1113 | 1058 | - | - | - | 10.6 | 35.4 | - | 46.0 | 148.8 | 32.2 | 35.4 | 67.7 |
| 3/5+3/6 | 961 | 961 | - | - | - | 7.7 | 3.2 | - | 10.9 | 40.8 | 14.3 | 3.2 | 17.6 |
| 4/1 | 558 | 558 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 4.4 | 0.2 | 4.6 |
| 4/2 | 558 | 558 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 0.0 | 0.2 | 0.2 |
| 4/3 | 438 | 438 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 5/1 | 56 | 56 | - | - | - | 0.8 | 0.3 | - | 1.1 | 69.4 | 1.6 | 0.3 | 2.0 |
| 5/2+5/3 | 177 | 176 | - | - | - | 2.5 | 7.0 | - | 9.5 | 193.9 | 2.7 | 7.0 | 9.7 |
| 5/4+5/5 | 157 | 157 | - | - | - | 1.1 | 0.6 | - | 1.7 | 39.4 | 2.3 | 0.6 | 3.0 |
| 6/1 | 365 | 365 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.5 | 0.1 | 0.7 |
| 6/2 | 425 | 425 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 7/2+7/1 | 595 | 595 | - | - | - | 5.0 | 1.1 | - | 6.1 | 37.1 | 9.0 | 1.1 | 10.1 |
| 7/3 | 359 | 359 | - | - | - | 3.2 | 1.1 | - | 4.3 | 42.9 | 9.5 | 1.1 | 10.5 |
| 7/4+7/5 | 419 | 419 | - | - | - | 3.7 | 0.6 | - | 4.3 | 37.3 | 8.9 | 0.6 | 9.5 |
| 8/1 | 774 | 774 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 8/2 | 622 | 622 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.4 | 0.0 | 0.2 | 0.2 |
| 8/3 | 649 | 649 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| Ped Link: P1 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |

Full Input Data And Results


Full Input Data And Results
Network Summary
Total Network Delay: 118.68 pcuHr
Worst PRC: -16.91 \% (On Lane 3/3)

Scenario 8: '2022 Dev Pm 40C/30HT/30W' (FG8: '2022 PM + Development + Response 40/30/30', Plan 1: 'Network Control Plan 1')

## Stage Sequence Diagram



## Stage Timings

| Stage | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | 11 | 15 | 9 | 20 | 8 |
| Change Point | 0 | 21 | 47 | 65 | 91 |

Full Input Data And Results
Signal Timings Diagram


Full Input Data And Results
Network Layout Diagram


## Full Input Data And Results

## Network Results

| Item | Lane Description | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green <br> (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat <br> (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | N/A | - | - |  | - | - | - | - | - | - | 106.5\% |
| Unnamed Junction | - | - | N/A | - | - |  | - | - | - | - | - | - | 106.5\% |
| 1/2+1/1 | Speke Hall Rd <br> ( N ) Left Ahead | U | N/A | N/A | JI |  | 1 | 10:33 | - | 502 | 1945:1838 | 176+500 | $\begin{aligned} & 74.3: \\ & 74.3 \% \end{aligned}$ |
| 1/3 | Speke Hall Rd <br> (N) Ahead | U | N/A | N/A | J |  | 1 | 10 | - | 131 | 1600 | 160 | 81.9\% |
| 1/4+1/5 | Speke Hall Rd <br> (N) Right | U | N/A | N/A | J |  | 1 | 10 | - | 384 | 1892:1862 | 189+186 | $\begin{aligned} & \text { 101.5: } \\ & 103.1 \% \end{aligned}$ |
| 2/1 | Speke Hall Road <br> (N) | U | N/A | N/A | - |  | - | - | - | 650 | 1955 | 1955 | 33.2\% |
| 2/2 | Speke Hall Road (N) | U | N/A | N/A | - |  | - | - | - | 249 | 1955 | 1955 | 12.7\% |
| 3/2+3/1 | A561 Speke Blvd Left | U | N/A | N/A | E |  | 1 | 38 | - | 267 | 2051:2037 | 509+505 | $\begin{aligned} & 26.3 \text { : } \\ & 26.3 \% \end{aligned}$ |
| 3/3+3/4 | A561 Speke Blvd Ahead | U | N/A | N/A | D |  | 1 | 39 | - | 877 | 1945:1800 | $418+419$ | $\begin{aligned} & \text { 104.8: } \\ & 104.8 \% \end{aligned}$ |
| 3/5+3/6 | A561 Speke Blvd Right Ahead | U | N/A | N/A | D F |  | 1 | 39:15 | - | 700 | 1600:1915 | 532+279 | $\begin{aligned} & 82.3: \\ & 94.1 \% \end{aligned}$ |
| 4/1 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 735 | 1975 | 1975 | 37.2\% |
| 4/2 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 734 | 1955 | 1955 | 37.5\% |
| 4/3 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 693 | 2095 | 2095 | 32.2\% |
| 5/1 | Speke Hall Ave Left | U | N/A | N/A | G |  | 1 | 20 | - | 179 | 1955 | 373 | 48.0\% |
| 5/2+5/3 | Speke Hall Ave Ahead | U | N/A | N/A | G |  | 1 | 20 | - | 237 | 1200:1800 | 203+201 | $\begin{aligned} & 58.6: \\ & 58.6 \% \end{aligned}$ |
| 5/4+5/5 | Speke Hall Ave Right | U | N/A | N/A | - G |  | - | - | - | 573 | 1943:1932 | 269+270 | $\begin{aligned} & \text { 106.5: } \\ & 106.5 \% \end{aligned}$ |
| 6/1 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 264 | 1955 | 1955 | 13.5\% |
| 6/2 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 388 | 2095 | 2095 | 18.5\% |

Full Input Data And Results

| 7/2+7/1 | A561 Speke Blvd (W) Left Ahead | U | N/A | N/A | A B | 1 | 36:34 | - | 806 | 1955:2020 | $487+480$ | $\begin{gathered} 83.4: \\ 83.4 \% \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/3 | A561 Speke Blvd (W) Ahead | U | N/A | N/A | A | 1 | 36 | - | 406 | 1600 | 538 | 75.4\% |
| 7/4+7/5 | A561 Speke Blvd (W) Ahead Right | U | N/A | N/A | A C | 1 | 36:13 |  | 529 | 2095:1921 | 628+190 | $\begin{gathered} 64.7: \\ 64.7 \% \end{gathered}$ |
| 8/1 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 809 | 1955 | 1955 | 40.2\% |
| 8/2 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 535 | 1955 | 1955 | 26.2\% |
| 8/3 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 534 | 2095 | 2095 | 25.4\% |
| Ped Link: <br> P1 | Unnamed Ped Link | - | N/A | - | K | 1 | 48 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P2 | Unnamed Ped Link | - | N/A | - | L | 1 | 48 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P3 | Unnamed Ped Link | - | N/A | - | S | 1 | 14 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P4 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | P | 1 | 41 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P5 | Unnamed Ped Link | - | N/A | - | 0 | 1 | 45 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P6 | Unnamed Ped Link | - | N/A | - | U | 1 | 37 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P7 | Unnamed Ped Link | - | N/A | - | N | 1 | 49 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P8 | Unnamed Ped Link | - | N/A | - | M | 1 | 49 |  | 0 | - | 0 | 0.0\% |
| Ped Link: P9 | Unnamed Ped Link | - | N/A | - | T | 1 | 21 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P10 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | R | 1 | 40 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P11 | Unnamed Ped Link | - | N/A | - | Q | 1 | 65 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P12 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | V | 1 | 33 | - | 0 | - | 0 | 0.0\% |

Full Input Data And Results

| Item | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | 0 | 0 | 0 | 56.4 | 78.3 | 0.0 | 134.7 | - | - | - | - |
| Unnamed Junction | - | - | 0 | 0 | 0 | 56.4 | 78.3 | 0.0 | 134.7 | - | - | - | - |
| 1/2+1/1 | 502 | 502 | - | - | - | 5.1 | 1.4 | - | 6.5 | 47.0 | 10.0 | 1.4 | 11.5 |
| 1/3 | 131 | 131 | - | - | - | 1.8 | 2.0 | - | 3.8 | 103.1 | 3.9 | 2.0 | 5.9 |
| 1/4+1/5 | 384 | 375 | - | - | - | 5.6 | 12.2 | - | 17.7 | 166.4 | 5.9 | 12.2 | 18.1 |
| 2/1 | 650 | 650 | - | - | - | 0.0 | 0.2 | - | 0.3 | 1.4 | 7.1 | 0.2 | 7.4 |
| 2/2 | 249 | 249 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 3/2+3/1 | 267 | 267 | - | - | - | 1.8 | 0.2 | - | 2.0 | 26.9 | 2.8 | 0.2 | 3.0 |
| 3/3+3/4 | 877 | 837 | - | - | - | 9.8 | 27.9 | - | 37.8 | 155.1 | 24.3 | 27.9 | 52.2 |
| 3/5+3/6 | 700 | 700 | - | - | - | 7.1 | 3.0 | - | 10.1 | 52.0 | 11.7 | 3.0 | 14.7 |
| 4/1 | 735 | 735 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 7.2 | 0.3 | 7.5 |
| 4/2 | 734 | 734 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 4/3 | 676 | 676 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 0.0 | 0.2 | 0.2 |
| 5/1 | 179 | 179 | - | - | - | 2.0 | 0.5 | - | 2.4 | 48.9 | 4.8 | 0.5 | 5.3 |
| 5/2+5/3 | 237 | 237 | - | - | - | 2.6 | 0.7 | - | 3.3 | 49.9 | 3.2 | 0.7 | 3.9 |
| 5/4+5/5 | 573 | 556 | - | - | - | 5.0 | 23.6 | - | 28.5 | 179.3 | 14.5 | 23.6 | 38.1 |
| 6/1 | 264 | 264 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 6/2 | 388 | 388 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 7/2+7/1 | 806 | 806 | - | - | - | 7.0 | 2.4 | - | 9.4 | 42.2 | 12.1 | 2.4 | 14.5 |
| 7/3 | 406 | 406 | - | - | - | 3.7 | 1.5 | - | 5.2 | 45.8 | 10.9 | 1.5 | 12.4 |
| 7/4+7/5 | 529 | 529 | - | - | - | 4.9 | 0.9 | - | 5.8 | 39.7 | 10.2 | 0.9 | 11.1 |
| 8/1 | 786 | 786 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 8/2 | 512 | 512 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| 8/3 | 531 | 531 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| Ped Link: P1 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |

Full Input Data And Results


Full Input Data And Results
Network Summary
Total Network Delay: 134.69 pcuHr
Worst PRC: -18.33 \% (On Lane 5/4)

Scenario 9: '2022 Dev Sat 40C/30HT/30W' (FG9: 'Sat 2022 + Dev + Response 40/30/30', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram


## Stage Timings

| Stage | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | 7 | 19 | 9 | 10 | 18 |
| Change Point | 0 | 17 | 47 | 65 | 81 |

Full Input Data And Results
Signal Timings Diagram


Full Input Data And Results
Network Layout Diagram


## Full Input Data And Results

## Network Results

| Item | Lane Description | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat <br> (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | N/A | - | - |  | - | - | - | - | - | - | 96.7\% |
| Unnamed Junction | - | - | N/A | - | - |  | - | - | - | - | - | - | 96.7\% |
| 1/2+1/1 | Speke Hall Rd <br> ( N ) Left Ahead | U | N/A | N/A | J |  | 1 | 20:39 | - | 370 | 1945:1838 | 257+555 | $\begin{aligned} & 45.6: \\ & 45.6 \% \end{aligned}$ |
| 1/3 | Speke Hall Rd <br> (N) Ahead | U | N/A | N/A | J |  | 1 | 20 | - | 118 | 1600 | 305 | 38.6\% |
| 1/4+1/5 | Speke Hall Rd (N) Right | U | N/A | N/A | J |  | 1 | 20 | - | 524 | 1892:1862 | 273+273 | $\begin{aligned} & 95.9: \\ & 95.9 \% \end{aligned}$ |
| 2/1 | Speke Hall Road <br> (N) | U | N/A | N/A | - |  | - | - | - | 753 | 1955 | 1955 | 38.5\% |
| 2/2 | Speke Hall Road (N) | U | N/A | N/A | - |  | - | - | - | 210 | 1955 | 1955 | 10.7\% |
| 3/2+3/1 | A561 Speke Blvd Left | U | N/A | N/A | E |  | 1 | 38 | - | 295 | 2051:2037 | 506+509 | $\begin{aligned} & \hline 29.1: \\ & 29.1 \% \end{aligned}$ |
| 3/3+3/4 | A561 Speke Blvd Ahead | U | N/A | N/A | D |  | 1 | 39 | - | 688 | 1945:1800 | 419+419 | $\begin{aligned} & 82.2: \\ & 82.2 \% \end{aligned}$ |
| 3/5+3/6 | A561 Speke Blvd Right Ahead | U | N/A | N/A | D F |  | 1 | 39:11 | - | 545 | 1600:1915 | 437+209 | $\begin{aligned} & 78.4 \text { : } \\ & 06 \end{aligned}$ |
| 4/1 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 519 | 1975 | 1975 | 26.3\% |
| 4/2 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 518 | 1955 | 1955 | 26.5\% |
| 4/3 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 454 | 2095 | 2095 | 21.7\% |
| 5/1 | Speke Hall Ave Left | U | N/A | N/A | G |  | 1 | 10 | - | 141 | 1955 | 196 | 72.1\% |
| 5/2+5/3 | Speke Hall Ave Ahead | U | N/A | N/A | G |  | 1 | 10 | - | 218 | 1200:1800 | 120+120 | $\begin{aligned} & 90.8: \\ & 90.8 \% \end{aligned}$ |
| 5/4+5/5 | Speke Hall Ave Right | U | N/A | N/A | - G |  | - | - | - | 254 | 1943:1932 | 184+181 | $\begin{aligned} & \text { 69.6: } \\ & 69.6 \% \end{aligned}$ |
| 6/1 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 265 | 1955 | 1955 | 13.6\% |
| 6/2 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 410 | 2095 | 2095 | 19.6\% |

Full Input Data And Results

| 7/2+7/1 | A561 Speke Blvd (W) Left Ahead | U | N/A | N/A | A B | 1 | 40:38 | - | 871 | 1955:2020 | 344+569 | $\begin{aligned} & 95.5: \\ & 95.5 \% \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/3 | A561 Speke Blvd (W) Ahead | U | N/A | N/A | A | 1 | 40 | - | 328 | 1600 | 596 | 55.0\% |
| 7/4+7/5 | A561 Speke Blvd (W) Ahead Right | U | N/A | N/A | A C | 1 | 40:13 | - | 473 | 2095:1921 | 645+244 | $\begin{aligned} & 50.8: \\ & 59.3 \% \end{aligned}$ |
| 8/1 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 747 | 1955 | 1955 | 38.2\% |
| 8/2 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 475 | 1955 | 1955 | 24.3\% |
| 8/3 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 474 | 2095 | 2095 | 22.6\% |
| Ped Link: <br> P1 | Unnamed Ped Link | - | N/A | - | K | 1 | 48 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P2 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | L | 1 | 48 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P3 | Unnamed Ped Link | - | N/A | - | S | 1 | 14 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P4 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | P | 1 | 47 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P5 | Unnamed Ped Link | - | N/A | - | O | 1 | 51 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P6 | Unnamed Ped Link | - | N/A | - | U | 1 | 37 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P7 | Unnamed Ped Link | - | N/A | - | N | 1 | 39 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P8 | Unnamed Ped Link | - | N/A | - | M | 1 | 39 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P9 | Unnamed Ped Link | - | N/A | - | T | 1 | 17 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P10 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | R | 1 | 44 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P11 | Unnamed Ped Link | - | N/A | - | Q | 1 | 65 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P12 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | V | 1 | 37 | - | 0 | - | 0 | 0.0\% |

Full Input Data And Results

| Item | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | 0 | 0 | 0 | 44.1 | 29.5 | 0.0 | 73.5 | - | - | - | - |
| Unnamed Junction | - | - | 0 | 0 | 0 | 44.1 | 29.5 | 0.0 | 73.5 | - | - | - | - |
| 1/2+1/1 | 370 | 370 | - | - | - | 3.1 | 0.4 | - | 3.5 | 33.8 | 5.7 | 0.4 | 6.1 |
| 1/3 | 118 | 118 | - | - | - | 1.3 | 0.3 | - | 1.6 | 48.4 | 3.1 | 0.3 | 3.5 |
| 1/4+1/5 | 524 | 524 | - | - | - | 6.1 | 7.2 | - | 13.3 | 91.4 | 9.7 | 7.2 | 16.9 |
| 2/1 | 753 | 753 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 7.6 | 0.3 | 7.9 |
| 2/2 | 210 | 210 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.0 | 0.0 | 0.1 | 0.1 |
| 3/2+3/1 | 295 | 295 | - | - | - | 2.0 | 0.2 | - | 2.2 | 27.2 | 3.1 | 0.2 | 3.3 |
| 3/3+3/4 | 688 | 688 | - | - | - | 5.5 | 2.2 | - | 7.7 | 40.2 | 13.3 | 2.2 | 15.6 |
| 3/5+3/6 | 545 | 545 | - | - | - | 5.4 | 2.6 | - | 8.0 | 52.9 | 8.5 | 2.6 | 11.0 |
| 4/1 | 519 | 519 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 1.7 | 0.2 | 1.8 |
| 4/2 | 518 | 518 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 0.0 | 0.2 | 0.2 |
| 4/3 | 454 | 454 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 5/1 | 141 | 141 | - | - | - | 1.9 | 1.2 | - | 3.1 | 79.6 | 4.2 | 1.2 | 5.4 |
| 5/2+5/3 | 218 | 218 | - | - | - | 2.9 | 3.7 | - | 6.6 | 109.4 | 3.3 | 3.7 | 7.0 |
| 5/4+5/5 | 254 | 254 | - | - | - | 1.7 | 1.1 | - | 2.8 | 39.5 | 3.7 | 1.1 | 4.8 |
| 6/1 | 265 | 265 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 6/2 | 410 | 410 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 7/2+7/1 | 871 | 871 | - | - | - | 7.5 | 7.7 | - | 15.2 | 62.8 | 19.6 | 7.7 | 27.3 |
| 7/3 | 328 | 328 | - | - | - | 2.5 | 0.6 | - | 3.1 | 33.9 | 7.8 | 0.6 | 8.4 |
| 7/4+7/5 | 473 | 473 | - | - | - | 4.2 | 0.6 | - | 4.7 | 36.0 | 7.4 | 0.6 | 7.9 |
| 8/1 | 747 | 747 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 8/2 | 475 | 475 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| 8/3 | 474 | 474 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| Ped Link: <br> P1 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |



Full Input Data And Results
Network Summary
Total Network Delay: 73.55 pcuHr
Worst PRC: -7.44 \% (On Lane 3/5)

Scenario 10: '2022 Dev AM 30C/40HT/30W' (FG10: '2022 AM + (Dev + Response 40/30/30 +50\%)', Plan 1: 'Network Control Plan 1')

## Stage Sequence Diagram



## Stage Timings

| Stage | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | 25 | 14 | 9 | 7 | 8 |
| Change Point | 0 | 35 | 60 | 78 | 91 |

Full Input Data And Results
Signal Timings Diagram


Full Input Data And Results
Network Layout Diagram


## Full Input Data And Results

## Network Results

| Item | Lane Description | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green <br> (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat <br> (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | N/A | - | - |  | - | - | - | - | - | - | 105.4\% |
| Unnamed Junction | - | - | N/A | - | - |  | - | - | - | - | - | - | 105.4\% |
| 1/2+1/1 | Speke Hall Rd <br> ( N ) Left Ahead | U | N/A | N/A | JI |  | 1 | 10:47 | - | 469 | 1945:1838 | 195+418 | $\begin{aligned} & 76.6: \\ & 76.6 \% \end{aligned}$ |
| 1/3 | Speke Hall Rd <br> (N) Ahead | U | N/A | N/A | J |  | 1 | 10 | - | 150 | 1600 | 160 | 93.8\% |
| 1/4+1/5 | Speke Hall Rd <br> (N) Right | U | N/A | N/A | J |  | 1 | 10 | - | 388 | 1892:1862 | 189+186 | $\begin{aligned} & 102.5: \\ & 104.2 \% \end{aligned}$ |
| 2/1 | Speke Hall Road <br> (N) | U | N/A | N/A | - |  | - | - | - | 531 | 1955 | 1955 | 26.9\% |
| 2/2 | Speke Hall Road (N) | U | N/A | N/A | - |  | - | - | - | 295 | 1955 | 1955 | 15.1\% |
| 3/2+3/1 | A561 Speke Blvd Left | U | N/A | N/A | E |  | 1 | 51 | - | 453 | 2051:2037 | 627+630 | $\begin{aligned} & 36.0: \\ & 36.0 \% \end{aligned}$ |
| 3/3+3/4 | A561 Speke Blvd Ahead | U | N/A | N/A | D |  | 1 | 52 | - | 1113 | 1945:1800 | 528+529 | $\begin{aligned} & \text { 105.2: } \\ & 105.2 \% \end{aligned}$ |
| 3/5+3/6 | A561 Speke Blvd Right Ahead | U | N/A | N/A | D F |  | 1 | 52:29 | - | 961 | 1600:1915 | $638+465$ | $\begin{gathered} 87.1: \\ 87.1 \% \end{gathered}$ |
| 4/1 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 560 | 1975 | 1975 | 28.4\% |
| 4/2 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 560 | 1955 | 1955 | 28.6\% |
| 4/3 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 442 | 2095 | 2095 | 21.1\% |
| 5/1 | Speke Hall Ave Left | U | N/A | N/A | G |  | 1 | 7 | - | 56 | 1955 | 142 | 39.4\% |
| 5/2+5/3 | Speke Hall Ave Ahead | U | N/A | N/A | G |  | 1 | 7 | - | 185 | 1200:1800 | 87+88 | $\begin{aligned} & 105.4: \\ & 105.4 \% \end{aligned}$ |
| 5/4+5/5 | Speke Hall Ave Right | U | N/A | N/A | - G |  | - | - | - | 165 | 1943:1932 | 139+141 | $\begin{aligned} & 59.1: \\ & 59.1 \% \end{aligned}$ |
| 6/1 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 376 | 1955 | 1955 | 19.2\% |
| 6/2 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 436 | 2095 | 2095 | 20.8\% |

Full Input Data And Results

| 7/2+7/1 | A561 Speke Blvd (W) Left Ahead | U | N/A | N/A | A B | 1 | 35:33 | - | 595 | 1955:2020 | 515+339 | $\begin{gathered} 69.7: \\ 69.7 \% \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/3 | A561 Speke Blvd (W) Ahead | U | N/A | N/A | A | 1 | 35 | - | 359 | 1600 | 524 | 68.6\% |
| 7/4+7/5 | A561 Speke Blvd (W) Ahead Right | U | N/A | N/A | A C | 1 | 35:13 |  | 419 | 2095:1921 | $643+107$ | $\begin{gathered} 55.8: \\ 55.8 \% \end{gathered}$ |
| 8/1 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 806 | 1955 | 1955 | 39.6\% |
| 8/2 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 654 | 1955 | 1955 | 31.8\% |
| 8/3 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 653 | 2095 | 2095 | 31.0\% |
| Ped Link: <br> P1 | Unnamed Ped Link | - | N/A | - | K | 1 | 35 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P2 | Unnamed Ped Link | - | N/A | - | L | 1 | 35 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P3 | Unnamed Ped Link | - | N/A | - | S | 1 | 14 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P4 | Unnamed Ped Link | - | N/A | - | P | 1 | 55 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P5 | Unnamed Ped Link | - | N/A | - | 0 | 1 | 59 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P6 | Unnamed Ped Link | - | N/A | - | U | 1 | 50 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P7 | Unnamed Ped Link | - | N/A | - | N | 1 | 36 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P8 | Unnamed Ped Link | - | N/A | - | M | 1 | 36 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P9 | Unnamed Ped Link | - | N/A | - | T | 1 | 35 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P10 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | R | 1 | 39 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P11 | Unnamed Ped Link | - | N/A | - | Q | 1 | 78 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P12 | Unnamed Ped Link | - | N/A | - | V | 1 | 32 | - | 0 | - | 0 | 0.0\% |

Full Input Data And Results

| Item | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | 0 | 0 | 0 | 48.7 | 73.5 | 0.0 | 122.2 | - | - | - | - |
| Unnamed Junction | - | - | 0 | 0 | 0 | 48.7 | 73.5 | 0.0 | 122.2 | - | - | - | - |
| 1/2+1/1 | 469 | 469 | - | - | - | 3.9 | 1.6 | - | 5.5 | 42.1 | 6.7 | 1.6 | 8.3 |
| 1/3 | 150 | 150 | - | - | - | 2.0 | 4.1 | - | 6.2 | 147.9 | 4.5 | 4.1 | 8.7 |
| 1/4+1/5 | 388 | 375 | - | - | - | 5.8 | 13.5 | - | 19.3 | 179.4 | 6.3 | 13.5 | 19.8 |
| 2/1 | 526 | 526 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 2.2 | 0.2 | 2.4 |
| 2/2 | 295 | 295 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 3/2+3/1 | 453 | 453 | - | - | - | 2.2 | 0.3 | - | 2.4 | 19.4 | 4.1 | 0.3 | 4.4 |
| 3/3+3/4 | 1113 | 1058 | - | - | - | 10.6 | 35.4 | - | 46.0 | 148.8 | 32.2 | 35.4 | 67.7 |
| 3/5+3/6 | 961 | 961 | - | - | - | 7.7 | 3.2 | - | 10.9 | 40.8 | 14.3 | 3.2 | 17.6 |
| 4/1 | 560 | 560 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 4.4 | 0.2 | 4.6 |
| 4/2 | 560 | 560 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 0.0 | 0.2 | 0.2 |
| 4/3 | 442 | 442 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 5/1 | 56 | 56 | - | - | - | 0.8 | 0.3 | - | 1.1 | 69.4 | 1.6 | 0.3 | 2.0 |
| 5/2+5/3 | 185 | 180 | - | - | - | 2.8 | 9.6 | - | 12.3 | 240.2 | 3.0 | 9.6 | 12.5 |
| 5/4+5/5 | 165 | 165 | - | - | - | 1.1 | 0.7 | - | 1.9 | 40.4 | 2.4 | 0.7 | 3.2 |
| 6/1 | 376 | 376 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 1.1 | 0.1 | 1.2 |
| 6/2 | 436 | 436 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 7/2+7/1 | 595 | 595 | - | - | - | 5.0 | 1.1 | - | 6.1 | 37.1 | 9.0 | 1.1 | 10.1 |
| 7/3 | 359 | 359 | - | - | - | 3.2 | 1.1 | - | 4.3 | 42.9 | 9.5 | 1.1 | 10.5 |
| 7/4+7/5 | 419 | 419 | - | - | - | 3.7 | 0.6 | - | 4.3 | 37.3 | 8.9 | 0.6 | 9.5 |
| 8/1 | 774 | 774 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 8/2 | 622 | 622 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.4 | 0.0 | 0.2 | 0.2 |
| 8/3 | 649 | 649 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| Ped Link: P1 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |

Full Input Data And Results


Full Input Data And Results
Network Summary
Total Network Delay: 122.19 pcuHr
Worst PRC: -17.13 \% (On Lane 5/2)

Scenario 11: '2022 Dev Pm 30C/40HT/30W' (FG11: '2022 PM + (Dev + Response 40/30/30 +50\%)', Plan 1: 'Network Control Plan 1')

## Stage Sequence Diagram



## Stage Timings

| Stage | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | 11 | 14 | 9 | 21 | 8 |
| Change Point | 0 | 21 | 46 | 64 | 91 |

Full Input Data And Results
Signal Timings Diagram


Full Input Data And Results
Network Layout Diagram


## Full Input Data And Results

## Network Results

| Item | Lane Description | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | $\begin{aligned} & \text { Deg Sat } \\ & \text { (\%) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | N/A | - | - |  | - | - | - | - | - | - | 108.9\% |
| Unnamed Junction | - | - | N/A | - | - |  | - | - | - | - | - | - | 108.9\% |
| 1/2+1/1 | Speke Hall Rd <br> ( N ) Left Ahead | U | N/A | N/A | JI |  | 1 | 10:33 | - | 501 | 1945:1838 | 175+500 | $\begin{aligned} & 74.2: \\ & 74.2 \% \end{aligned}$ |
| 1/3 | Speke Hall Rd <br> (N) Ahead | U | N/A | N/A | J |  | 1 | 10 | - | 129 | 1600 | 160 | 80.6\% |
| 1/4+1/5 | Speke Hall Rd (N) Right | U | N/A | N/A | J |  | 1 | 10 | - | 384 | 1892:1862 | 189+186 | $\begin{aligned} & \text { 101.5: } \\ & 103.1 \% \end{aligned}$ |
| 2/1 | Speke Hall Road ( N ) | U | N/A | N/A | - |  | - | - | - | 654 | 1955 | 1955 | 33.5\% |
| 2/2 | Speke Hall Road <br> ( N ) | U | N/A | N/A | - |  | - | - | - | 253 | 1955 | 1955 | 12.9\% |
| 3/2+3/1 | A561 Speke Blvd Left | U | N/A | N/A | E |  | 1 | 37 | - | 267 | 2051:2037 | 500+496 | $\begin{aligned} & 26.8: \\ & 26.8 \% \end{aligned}$ |
| 3/3+3/4 | A561 Speke Blvd Ahead | U | N/A | N/A | D |  | 1 | 38 | - | 877 | 1945:1800 | 409+410 | $\begin{aligned} & \text { 107.0 } \\ & \text { 107.0\% } \end{aligned}$ |
| 3/5+3/6 | A561 Speke Blvd Right Ahead | U | N/A | N/A | D F |  | 1 | 38:15 | - | 700 | 1600:1915 | $522+279$ | $\begin{aligned} & 83.8: \\ & 94.1 \% \end{aligned}$ |
| 4/1 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 743 | 1975 | 1975 | 37.6\% |
| 4/2 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 742 | 1955 | 1955 | 38.0\% |
| 4/3 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 709 | 2095 | 2095 | 32.7\% |
| 5/1 | Speke Hall Ave Left | U | N/A | N/A | G |  | 1 | 21 | - | 179 | 1955 | 391 | 45.8\% |
| 5/2+5/3 | Speke Hall Ave Ahead | U | N/A | N/A | G |  | 1 | 21 | - | 245 | 1200:1800 | 210+208 | $\begin{aligned} & 58.7: \\ & 58.7 \% \end{aligned}$ |
| 5/4+5/5 | Speke Hall Ave Right | U | N/A | N/A | - G |  | - | - | - | 605 | 1943:1932 | 277+278 | $\begin{aligned} & \text { 108.9: } \\ & \text { 108.9\% } \end{aligned}$ |
| 6/1 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 263 | 1955 | 1955 | 13.5\% |
| 6/2 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 386 | 2095 | 2095 | 18.4\% |

Full Input Data And Results

| 7/2+7/1 | A561 Speke Blvd (W) Left Ahead | U | N/A | N/A | A B | 1 | 35:33 |  | 806 | 1955:2020 | $478+471$ | $\begin{aligned} & 85.0: \\ & 85.0 \% \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/3 | A561 Speke Blvd (W) Ahead | U | N/A | N/A | A | 1 | 35 | - | 406 | 1600 | 524 | 77.5\% |
| 7/4+7/5 | A561 Speke Blvd (W) Ahead Right | U | N/A | N/A | A C | 1 | 35:13 | - | 529 | 2095:1921 | 614+186 | $\begin{gathered} 66.2: \\ 66.2 \% \end{gathered}$ |
| 8/1 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 809 | 1955 | 1955 | 39.8\% |
| 8/2 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 535 | 1955 | 1955 | 25.8\% |
| 8/3 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - |  | 534 | 2095 | 2095 | 25.4\% |
| Ped Link: P1 | Unnamed Ped Link | - | N/A | - | K | 1 | 49 |  | 0 | - | 0 | 0.0\% |
| Ped Link: P2 | Unnamed Ped Link | - | N/A | - | L | 1 | 49 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P3 | Unnamed Ped Link | - | N/A | - | S | 1 | 14 |  | 0 | - | 0 | 0.0\% |
| Ped Link: P4 | Unnamed Ped Link | - | N/A | - | P | 1 | 41 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P5 | Unnamed Ped Link | - | N/A | - | 0 | 1 | 45 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P6 | Unnamed Ped Link | - | N/A | - | U | 1 | 36 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P7 | Unnamed Ped Link | - | N/A | - | N | 1 | 50 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P8 | Unnamed Ped Link | - | N/A | - | M | 1 | 50 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P9 | Unnamed Ped Link | - | N/A | - | T | 1 | 21 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P10 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | R | 1 | 39 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P11 | Unnamed Ped Link | - | N/A | - | Q | 1 | 64 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P12 | Unnamed Ped Link | - | N/A | - | V | 1 | 32 | - | 0 | - | 0 | 0.0\% |

Full Input Data And Results

| Item | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | 0 | 0 | 0 | 58.6 | 92.1 | 0.0 | 150.7 | - | - | - | - |
| Unnamed Junction | - | - | 0 | 0 | 0 | 58.6 | 92.1 | 0.0 | 150.7 | - | - | - | - |
| 1/2+1/1 | 501 | 501 | - | - | - | 5.1 | 1.4 | - | 6.5 | 46.9 | 10.0 | 1.4 | 11.5 |
| 1/3 | 129 | 129 | - | - | - | 1.7 | 1.9 | - | 3.6 | 100.3 | 3.8 | 1.9 | 5.7 |
| 1/4+1/5 | 384 | 375 | - | - | - | 5.6 | 12.2 | - | 17.7 | 166.4 | 5.9 | 12.2 | 18.1 |
| 2/1 | 654 | 654 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.4 | 7.1 | 0.3 | 7.4 |
| 2/2 | 253 | 253 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 3/2+3/1 | 267 | 267 | - | - | - | 1.9 | 0.2 | - | 2.1 | 27.7 | 2.9 | 0.2 | 3.0 |
| $3 / 3+3 / 4$ | 877 | 820 | - | - | - | 10.9 | 34.9 | - | 45.8 | 187.9 | 24.8 | 34.9 | 59.7 |
| 3/5+3/6 | 700 | 700 | - | - | - | 7.2 | 3.3 | - | 10.5 | 53.9 | 11.8 | 3.3 | 15.1 |
| 4/1 | 743 | 743 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 4/2 | 742 | 742 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 4/3 | 684 | 684 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 0.0 | 0.2 | 0.2 |
| 5/1 | 179 | 179 | - | - | - | 1.9 | 0.4 | - | 2.3 | 47.2 | 4.8 | 0.4 | 5.2 |
| 5/2+5/3 | 245 | 245 | - | - | - | 2.6 | 0.7 | - | 3.3 | 48.9 | 3.3 | 0.7 | 4.1 |
| 5/4+5/5 | 605 | 580 | - | - | - | 5.7 | 29.7 | - | 35.4 | 210.9 | 16.4 | 29.7 | 46.2 |
| 6/1 | 263 | 263 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 6/2 | 386 | 386 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 7/2+7/1 | 806 | 806 | - | - | - | 7.2 | 2.7 | - | 9.9 | 44.3 | 12.5 | 2.7 | 15.2 |
| 7/3 | 406 | 406 | - | - | - | 3.8 | 1.7 | - | 5.4 | 48.2 | 11.2 | 1.7 | 12.8 |
| 7/4+7/5 | 529 | 529 | - | - | - | 5.0 | 1.0 | - | 6.0 | 40.7 | 10.3 | 1.0 | 11.2 |
| 8/1 | 778 | 778 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 8/2 | 503 | 503 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| 8/3 | 531 | 531 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| Ped Link: P1 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |

Full Input Data And Results


Full Input Data And Results
Network Summary
Total Network Delay: 150.70 pcuHr
Worst PRC: -20.97 \% (On Lane 5/4)

Scenario 12: '2022 Dev Sat 30C/40HT/30W' (FG12: 'Sat 2022 + (Dev + Response 40/30/30 +50\%)', Plan 1: 'Network Control Plan 1')

## Stage Sequence Diagram



## Stage Timings

| Stage | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Duration | 7 | 19 | 9 | 10 | 18 |
| Change Point | 0 | 17 | 47 | 65 | 81 |

Full Input Data And Results
Signal Timings Diagram


Full Input Data And Results
Network Layout Diagram


## Full Input Data And Results

## Network Results

| Item | Lane Description | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat <br> (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | N/A | - | - |  | - | - | - | - | - | - | 96.7\% |
| Unnamed Junction | - | - | N/A | - | - |  | - | - | - | - | - | - | 96.7\% |
| 1/2+1/1 | Speke Hall Rd <br> ( N ) Left Ahead | U | N/A | N/A | J |  | 1 | 20:39 | - | 371 | 1945:1838 | 259+555 | $\begin{aligned} & 45.6: \\ & 45.6 \% \end{aligned}$ |
| 1/3 | Speke Hall Rd <br> (N) Ahead | U | N/A | N/A | J |  | 1 | 20 | - | 118 | 1600 | 305 | 38.6\% |
| 1/4+1/5 | Speke Hall Rd (N) Right | U | N/A | N/A | J |  | 1 | 20 | - | 524 | 1892:1862 | 273+273 | $\begin{aligned} & 95.9: \\ & 95.9 \% \end{aligned}$ |
| 2/1 | Speke Hall Road <br> (N) | U | N/A | N/A | - |  | - | - | - | 757 | 1955 | 1955 | 38.7\% |
| 2/2 | Speke Hall Road (N) | U | N/A | N/A | - |  | - | - | - | 214 | 1955 | 1955 | 10.9\% |
| 3/2+3/1 | A561 Speke Blvd Left | U | N/A | N/A | E |  | 1 | 38 | - | 302 | 2051:2037 | 508+508 | $\begin{aligned} & \text { 29.7: } \\ & 29.7 \% \end{aligned}$ |
| 3/3+3/4 | A561 Speke Blvd Ahead | U | N/A | N/A | D |  | 1 | 39 | - | 687 | 1945:1800 | 419+418 | $\begin{aligned} & 82.0: \\ & 82.0 \% \end{aligned}$ |
| 3/5+3/6 | A561 Speke Blvd Right Ahead | U | N/A | N/A | D F |  | 1 | 39:11 | - | 546 | 1600:1915 | 440+209 | $\begin{aligned} & 78.2: \\ & 96.7 \% \end{aligned}$ |
| 4/1 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 521 | 1975 | 1975 | 26.4\% |
| 4/2 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 520 | 1955 | 1955 | 26.6\% |
| 4/3 | A561 Speke Blvd | U | N/A | N/A | - |  | - | - | - | 458 | 2095 | 2095 | 21.9\% |
| 5/1 | Speke Hall Ave Left | U | N/A | N/A | G |  | 1 | 10 | - | 141 | 1955 | 196 | 72.1\% |
| 5/2+5/3 | Speke Hall Ave Ahead | U | N/A | N/A | G |  | 1 | 10 | - | 226 | 1200:1800 | 120+120 | $\begin{aligned} & 94.2: \\ & 94.2 \% \end{aligned}$ |
| 5/4+5/5 | Speke Hall Ave Right | U | N/A | N/A | - G |  | - | - | - | 262 | 1943:1932 | 184+181 | $\begin{aligned} & 71.8: \\ & 71.8 \% \end{aligned}$ |
| 6/1 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 269 | 1955 | 1955 | 13.8\% |
| 6/2 | Speke Hall Ave | U | N/A | N/A | - |  | - | - | - | 414 | 2095 | 2095 | 19.8\% |

Full Input Data And Results

| 7/2+7/1 | A561 Speke Blvd (W) Left Ahead | U | N/A | N/A | A B | 1 | 40:38 | - | 871 | 1955:2020 | 344+569 | $\begin{aligned} & 95.5: \\ & 95.5 \% \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/3 | A561 Speke Blvd (W) Ahead | U | N/A | N/A | A | 1 | 40 | - | 328 | 1600 | 596 | 55.0\% |
| 7/4+7/5 | A561 Speke Blvd (W) Ahead Right | U | N/A | N/A | A C | 1 | 40:13 | - | 473 | 2095:1921 | 645+244 | $\begin{aligned} & 50.8: \\ & 59.3 \% \end{aligned}$ |
| 8/1 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 747 | 1955 | 1955 | 38.2\% |
| 8/2 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 474 | 1955 | 1955 | 24.2\% |
| 8/3 | A561 Speke Blvd (W) | U | N/A | N/A | - | - | - | - | 475 | 2095 | 2095 | 22.7\% |
| Ped Link: <br> P1 | Unnamed Ped Link | - | N/A | - | K | 1 | 48 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P2 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | L | 1 | 48 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P3 | Unnamed Ped Link | - | N/A | - | S | 1 | 14 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P4 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | P | 1 | 47 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P5 | Unnamed Ped Link | - | N/A | - | O | 1 | 51 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P6 | Unnamed Ped Link | - | N/A | - | U | 1 | 37 | - | 0 | - | 0 | 0.0\% |
| Ped Link: P7 | Unnamed Ped Link | - | N/A | - | N | 1 | 39 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P8 | Unnamed Ped Link | - | N/A | - | M | 1 | 39 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P9 | Unnamed Ped Link | - | N/A | - | T | 1 | 17 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P10 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | R | 1 | 44 | - | 0 | - | 0 | 0.0\% |
| Ped Link: <br> P11 | Unnamed Ped Link | - | N/A | - | Q | 1 | 65 | - | 0 | - | 0 | 0.0\% |
| $\begin{aligned} & \text { Ped Link: } \\ & \text { P12 } \end{aligned}$ | Unnamed Ped Link | - | N/A | - | V | 1 | 37 | - | 0 | - | 0 | 0.0\% |

Full Input Data And Results

| Item | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay <br> Per PCU <br> (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean <br> Max Queue (pcu) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Network | - | - | 0 | 0 | 0 | 44.3 | 30.7 | 0.0 | 74.9 | - | - | - | - |
| Unnamed Junction | - | - | 0 | 0 | 0 | 44.3 | 30.7 | 0.0 | 74.9 | - | - | - | - |
| 1/2+1/1 | 371 | 371 | - | - | - | 3.1 | 0.4 | - | 3.5 | 33.9 | 5.7 | 0.4 | 6.1 |
| 1/3 | 118 | 118 | - | - | - | 1.3 | 0.3 | - | 1.6 | 48.4 | 3.1 | 0.3 | 3.5 |
| 1/4+1/5 | 524 | 524 | - | - | - | 6.1 | 7.2 | - | 13.3 | 91.4 | 9.7 | 7.2 | 16.9 |
| 2/1 | 757 | 757 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.6 | 7.6 | 0.3 | 7.9 |
| 2/2 | 214 | 214 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.0 | 0.0 | 0.1 | 0.1 |
| $3 / 2+3 / 1$ | 302 | 302 | - | - | - | 2.1 | 0.2 | - | 2.3 | 27.3 | 3.2 | 0.2 | 3.4 |
| 3/3+3/4 | 687 | 687 | - | - | - | 5.4 | 2.2 | - | 7.7 | 40.1 | 13.1 | 2.2 | 15.3 |
| 3/5+3/6 | 546 | 546 | - | - | - | 5.5 | 2.5 | - | 8.0 | 52.6 | 8.5 | 2.5 | 11.0 |
| 4/1 | 521 | 521 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 2.7 | 0.2 | 2.9 |
| 4/2 | 520 | 520 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.3 | 0.0 | 0.2 | 0.2 |
| 4/3 | 458 | 458 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 5/1 | 141 | 141 | - | - | - | 1.9 | 1.2 | - | 3.1 | 79.6 | 4.2 | 1.2 | 5.4 |
| 5/2+5/3 | 226 | 226 | - | - | - | 3.0 | 4.8 | - | 7.8 | 124.7 | 3.4 | 4.8 | 8.2 |
| 5/4+5/5 | 262 | 262 | - | - | - | 1.7 | 1.2 | - | 3.0 | 40.8 | 3.8 | 1.2 | 5.1 |
| 6/1 | 269 | 269 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 6/2 | 414 | 414 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| 7/2+7/1 | 871 | 871 | - | - | - | 7.5 | 7.7 | - | 15.2 | 62.8 | 19.6 | 7.7 | 27.3 |
| 7/3 | 328 | 328 | - | - | - | 2.5 | 0.6 | - | 3.1 | 33.9 | 7.8 | 0.6 | 8.4 |
| 7/4+7/5 | 473 | 473 | - | - | - | 4.2 | 0.6 | - | 4.7 | 36.0 | 7.4 | 0.6 | 7.9 |
| 8/1 | 747 | 747 | - | - | - | 0.0 | 0.3 | - | 0.3 | 1.5 | 0.0 | 0.3 | 0.3 |
| 8/2 | 474 | 474 | - | - | - | 0.0 | 0.2 | - | 0.2 | 1.2 | 0.0 | 0.2 | 0.2 |
| 8/3 | 475 | 475 | - | - | - | 0.0 | 0.1 | - | 0.1 | 1.1 | 0.0 | 0.1 | 0.1 |
| Ped Link: P1 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - |



Full Input Data And Results
Network Summary
Total Network Delay: 74.94 pcuHr
Worst PRC: -7.44 \% (On Lane 3/5)

