

Trip Generation - Additional Flows for Housing-led development

Development Assumptions:

4,704 new dwellings - urban extension, mix of tenures and types 3000sqm B1 (Office) - SYSTRA assumption 2500sqm B2 light industrial / estate - SYSTRA assumption 2000sqm A1 Food store - SYSTRA assumption

It is further assumed that all other provided facilities, including other local retail, education, and community facilities will primarily serve the new development and as such will not generate any significant amount of external trips which would impact the wider transport networks.

Trip Rates for the trip rate calculations below have been taken from the supplied table of rates from the Crawley Transport Study.

Development Type	Inbound AM	Outbound AM	Inbound PM	Outbound PM	Trip Rate Units	Development Quantum (converted to Units)
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A1 Food	1.398	1.016	2.229	2.855	Per 100sqm GFA	20

	Trips In AM	Trips Out AM	Trips In PM	Trips Out PM
C3 Housing (Suburban)	499	1482	1543	706
B1a (Office)	31	3	3	30
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Total Dev Trips	568	1509	1601	807

Note that the above have been rounded to the nearest whole number (i.e. trip).

For the purposes of this exercise, the above will be assumed to be vehicle trips and applied as such to the network to be modelled.

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Please see separate sheet for calculation; however, data for zone 95 has been extracted from the supplied model input matrices and classified into one of three groups using a supplied model zone map as follows:

- 1. Traffic between Zone 95 and target zone would not be expected to pass through modelled junctions
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It is considered unlikely that any significant volumes of traffic to or from zone 95 would travel through the junctions in question on the main A23, as this would be significantly slower than use of the link road.

It is noted that the resolution of the supplied zone map does not allow all zones to be located / identified. Therefore assumptions have been made based on the observable layout of zones as to which category these unidentified zones should be placed into.

The total traffic to and from zone 95 has been calculated and divided into the three categories above, in order that the proportion of traffic from the matrices which falls into each category can be ascertained. The results of this calculation are shown below.

	Trips In AM	Trips Out AM	Trips In PM	Trips Out PM
Total Dev Trips	568	1509	1601	807
Trips that turn To/From				
North at A23 junction	116	366	208	90
Trips that turn To/From				
South at A23 junction	43	221	89	39

Propotion of traffic that is				
To/From North at A23				
Junction	0.20439409	0.242716994	0.129716485	0.110951999
Propotion of traffic that is				
To/From South at A23				
Junction	0.07517393	0.146605237	0.055579882	0.048926547

The figures in the table above have been applied to the development junction diagrams and matrices presented in the following spreadsheets.

2035 AM Peak SATURN Data (Hydehurst Lane) Arm not present in SATURN models Movement Prohibited Arm D - A23 London Road 762 Left 1484 148 Ahead Ahead Left Right 394 Right Arm C - New Link Road Arm A - Hydehurst Lane Link EB 1156 Link WB 216 Left Ahead Right Right 936 Ahead Left Arm B - A23 London Road To 936 From 68 394 762 1484 148 Arm D - A23 London Road 1008 691 Ahead 44 Left 118 Ahead 110 Right Arm C - Betts Way Arm A - Fleming Way Right 269 Uturn Left Ahead Right Ahead 160 Left 297 Arm B - A23 London Road То From 0 297 160 269 244 163 691 118 110 0 44 691 1008 Arm C - County Oak Way Arm D - A23 London Road 914 Ahead Ahead Left 24 Right Arm A - unnamed Access Road Right 85 Ahead Right 1012 Ahead 244

Left

Arm B - A23 London Road

		Α	В	С	D
	Α	0	163	2	85
From	В	0	0	244	1012
	С	0	24	0	0
	D	664	914	0	0

То

2035 PM Peak SATURN Data (Hydehurst Lane) Arm not present in SATURN models Movement Prohibited Arm D - A23 London Road 186 Left 486 1377 Ahead Ahead Left Right 82 Right Arm C - New Link Road Arm A - Hydehurst Lane Link EB 268 Link WB 908 Left Ahead Right Right 422 1408 Ahead Left Arm B - A23 London Road To 1408 422 From 186 82 1377 486 Arm D - A23 London Road 1162 Ahead 166 Left 144 Ahead 123 Right Arm C - Betts Way Arm A - Fleming Way Right 713 Uturn Left Ahead Right Ahead 32 Left 118 Arm B - A23 London Road То From 118 32 713 60 951 144 123 166 234 1162 Arm C - County Oak Way Arm D - A23 London Road 1239 Ahead Ahead Left 89 Right Arm A - unnamed Access Road Right 155 Ahead Right 892 Ahead 164

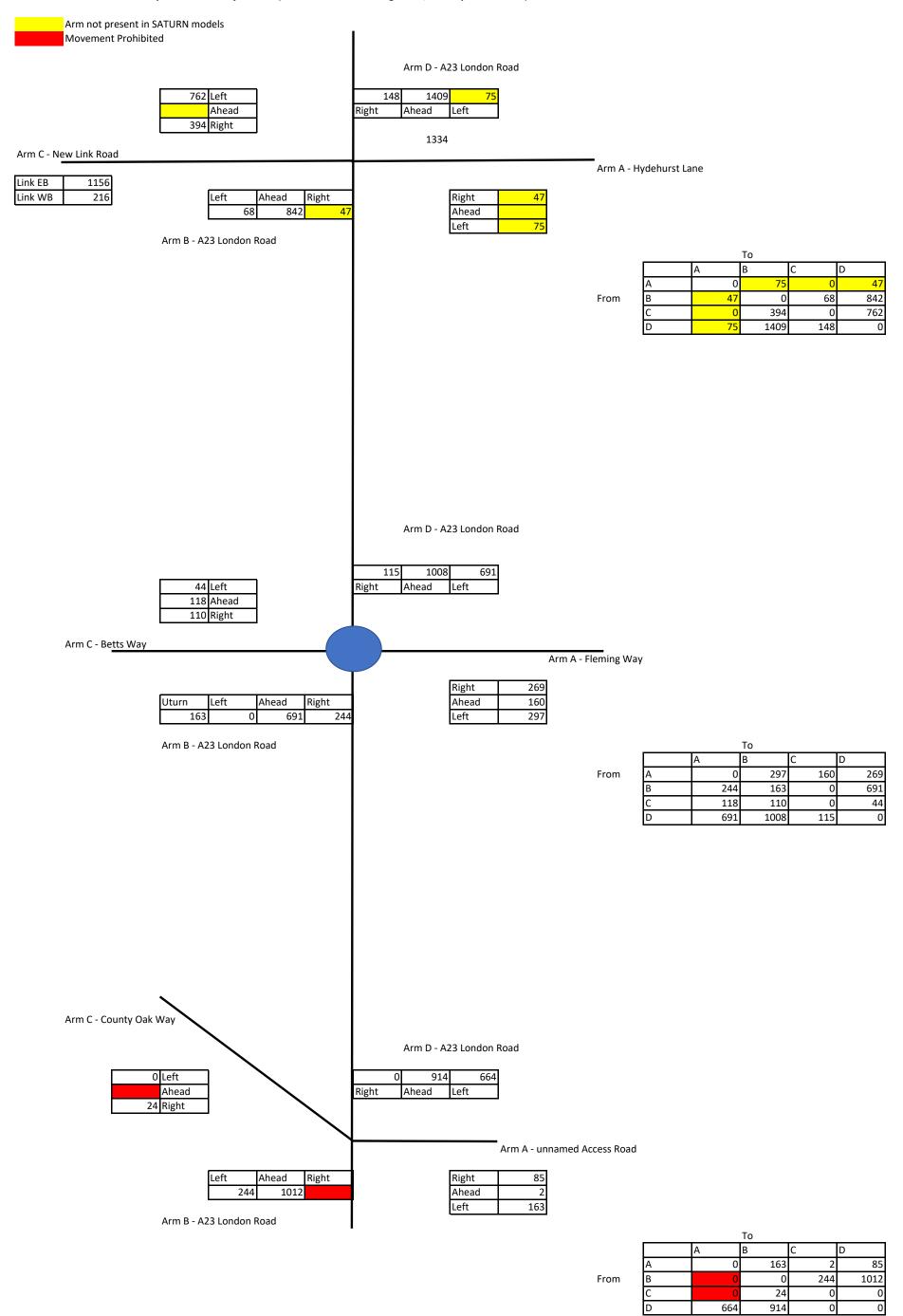
Left

Arm B - A23 London Road

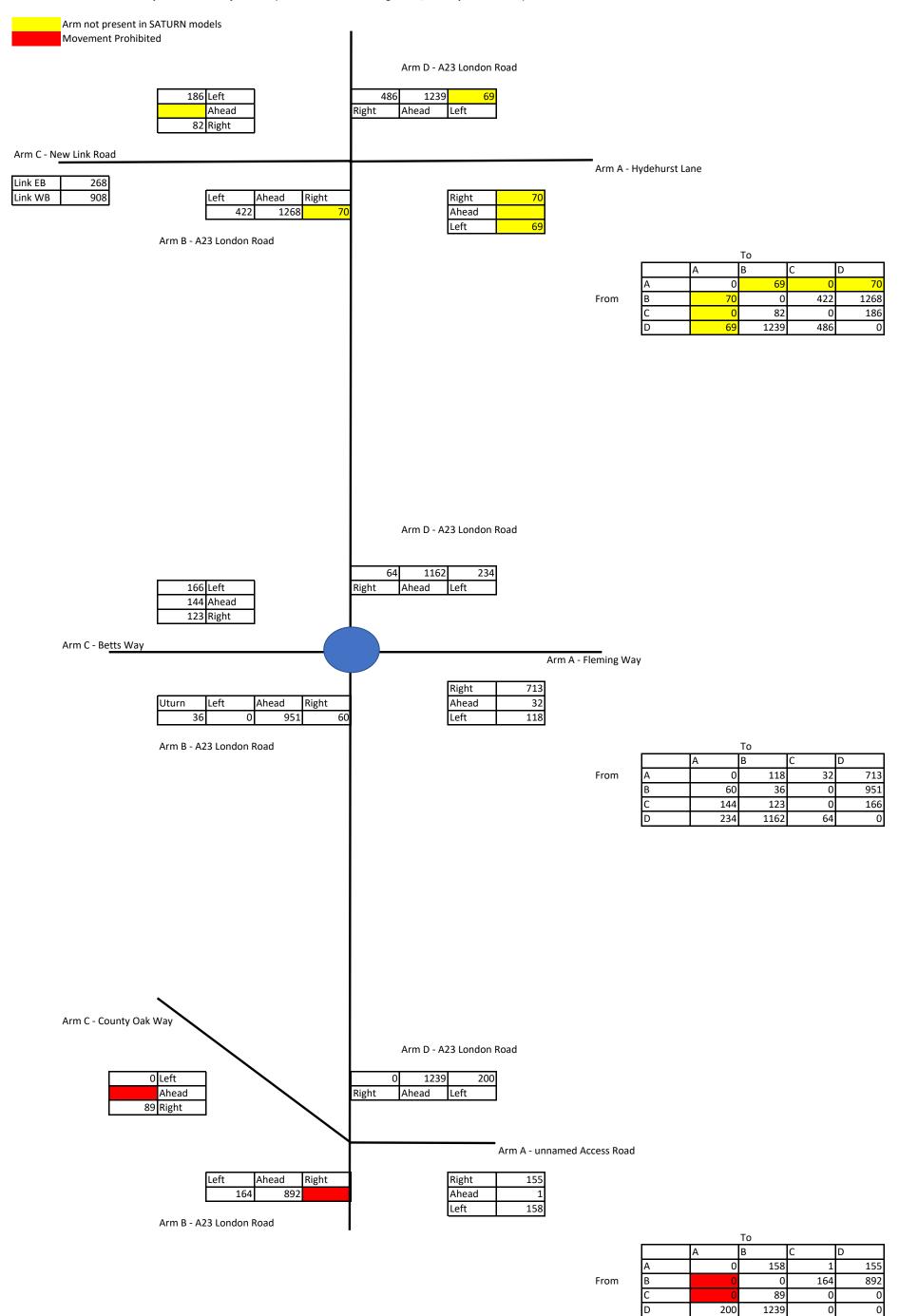
		Α	В	С	D
	Α	0	158	1	155
From	В	0	0	164	892
	С	0	89	0	0
	D	200	1239	0	0

To

2035 AM Peak SATURN with Hydehurst Lane adjustment (5% of A23 traffic re-assigned to/from Hydehurst Lane)



2035 PM Peak SATURN with Hydehurst Lane adjustment (5% of A23 traffic re-assigned to/from Hydehurst Lane)



AM Development Flows (see Trip Generation sheet for explanation of calculation and distribution) - Version 1 (Link Road connects at new junction) Arm not present in SATURN models Movement Prohibited Arm D - A23 London Road 366 Left 116 Ahead Left Right Ahead 221 Right Arm C - New Link Road Arm A - Hydehurst Lane Link EB 587 Link WB 159 Left Ahead Right Right 43 Ahead Left Arm B - A23 London Road To From 366 221 116 Arm D - A23 London Road Left Ahead Ahead Right Arm C - Betts Way Arm A - Fleming Way Right Uturn Left Ahead Right Ahead Left Arm B - A23 London Road То From 0 43 0 0 Arm C - County Oak Way Arm D - A23 London Road 221 Ahead Ahead Right Arm A - unnamed Access Road Left Ahead Right Right 43 Ahead Left Arm B - A23 London Road То

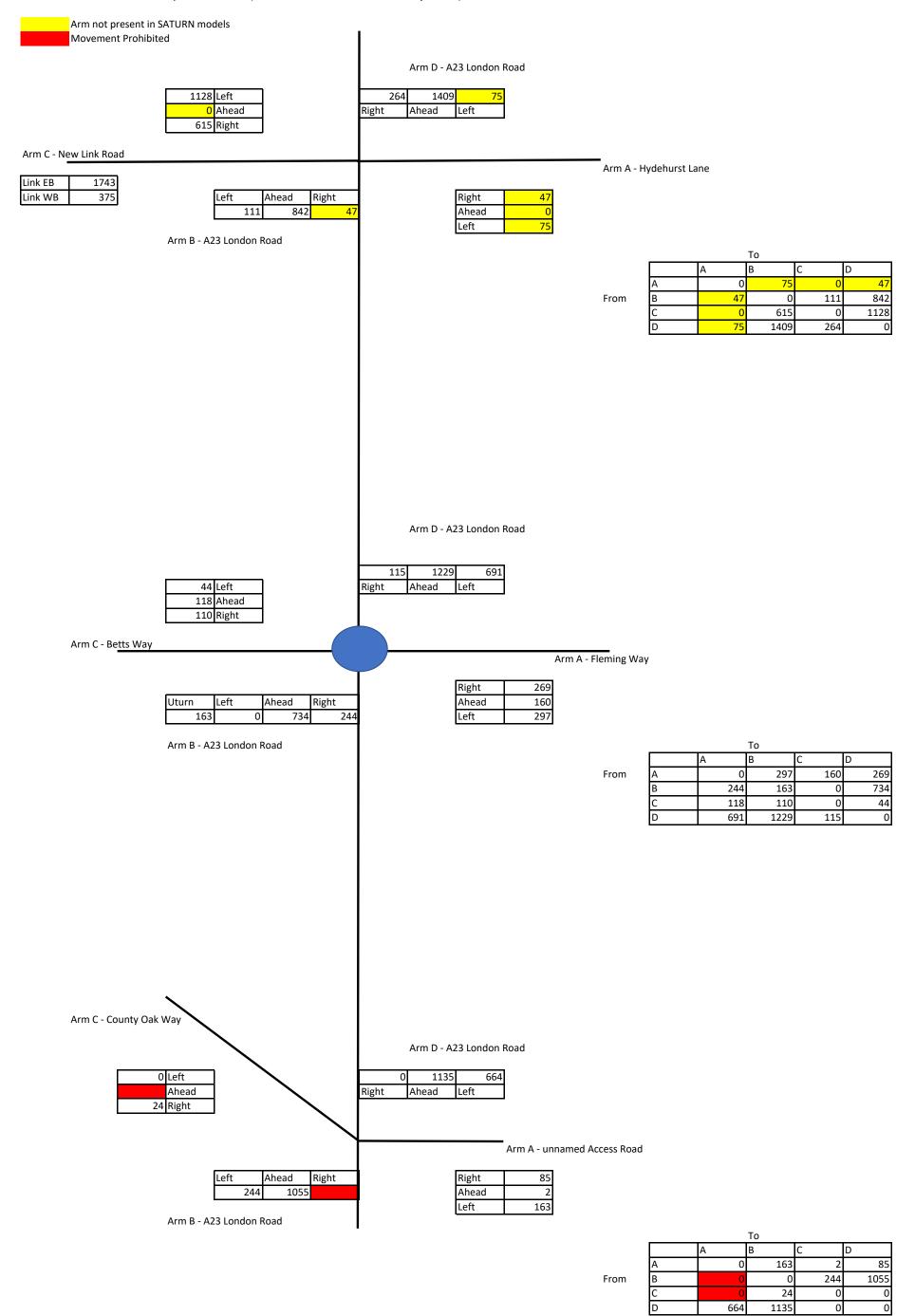
		Α	В	C	D
	Α	0	0	0	(
From	В	0	0	0	43
	С	0	0	0	(
	D	0	221	0	(

PM Development Flows (see Trip Generation sheet for explanation of calculation and distribution) - Version 1 (Link Road connects at new junction) Arm not present in SATURN models Movement Prohibited Arm D - A23 London Road 90 Left 208 Ahead Left Right Ahead 39 Right Arm C - New Link Road Arm A - Hydehurst Lane Link EB 129 Link WB 297 Left Ahead Right Right 89 Ahead Left Arm B - A23 London Road To From 89 90 39 Arm D - A23 London Road Left Ahead Ahead Right Arm C - Betts Way Arm A - Fleming Way Right Uturn Left Ahead Right Ahead Left Arm B - A23 London Road То From 0 89 0 0 Arm C - County Oak Way Arm D - A23 London Road Ahead Ahead Right Arm A - unnamed Access Road Left Ahead Right Right 89 Ahead Left Arm B - A23 London Road То

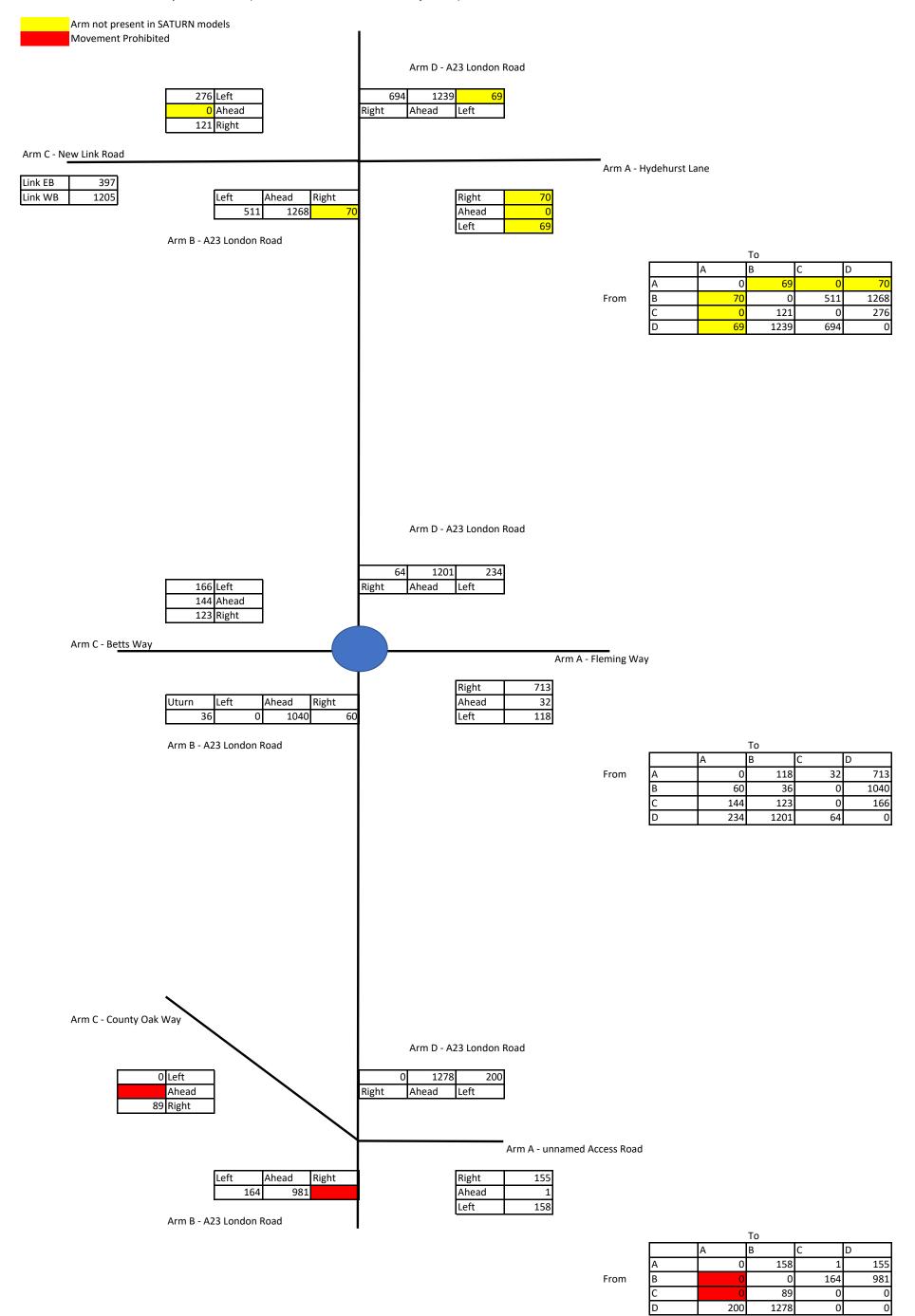
		Α	В	С	D
	Α	0	0	0	C
rom	В	0	0	0	89
	С	0	0	0	C
	D	0	39	0	C

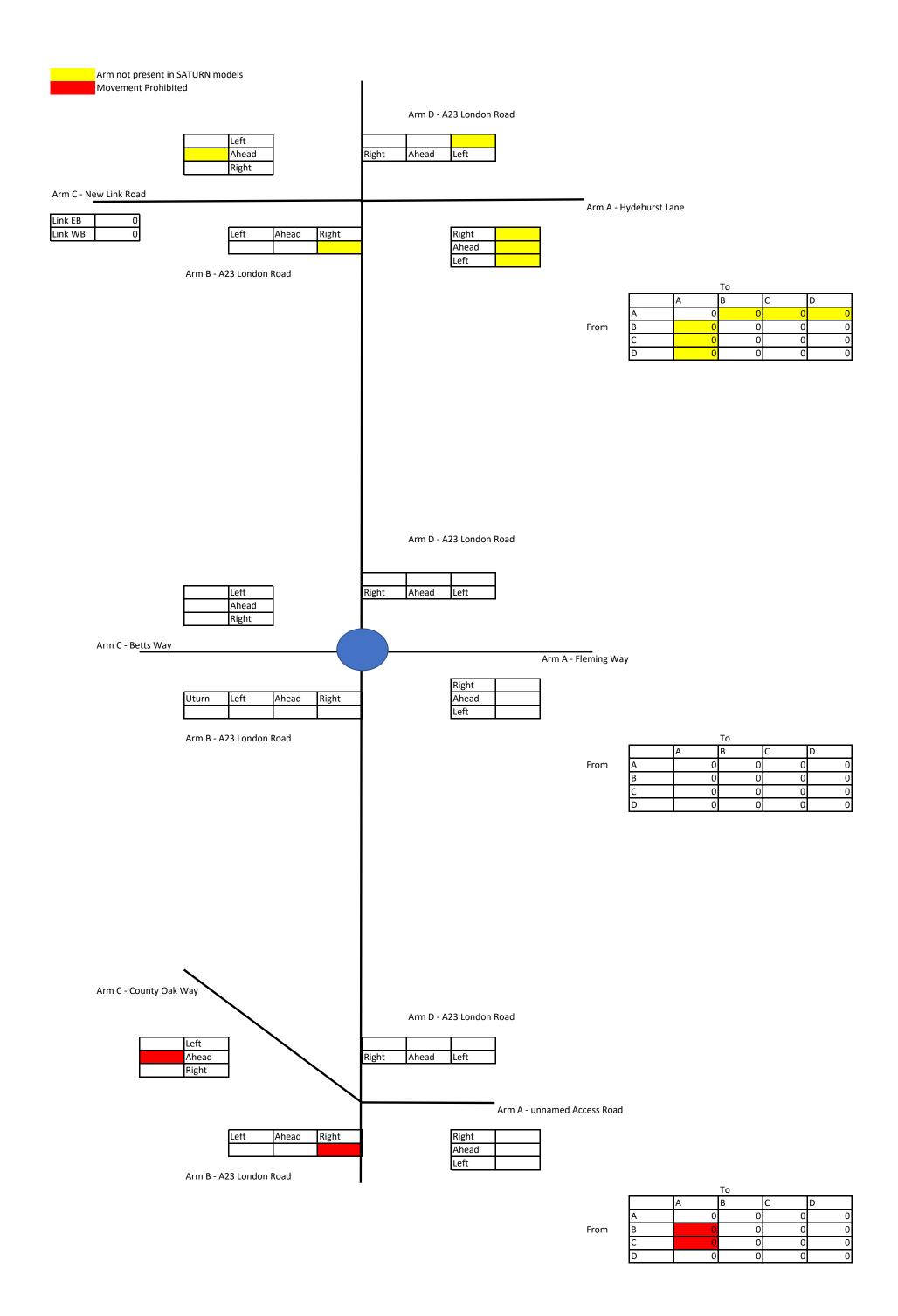
Fro

2035 AM Total flows with development version 1 (Link Road connects at new northern junction)



2035 PM Total flows with development version 1 (Link Road connects at new northern junction)





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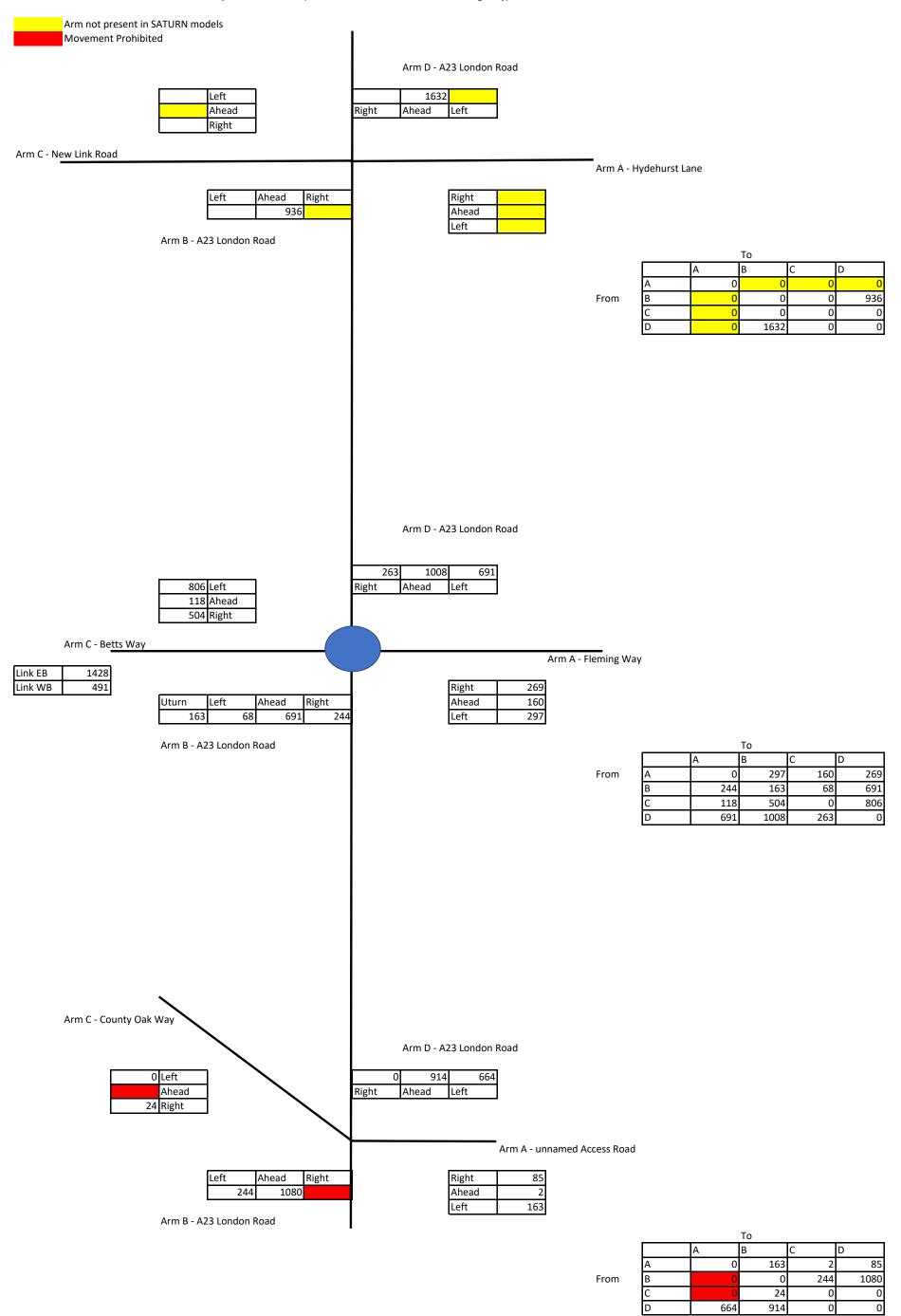
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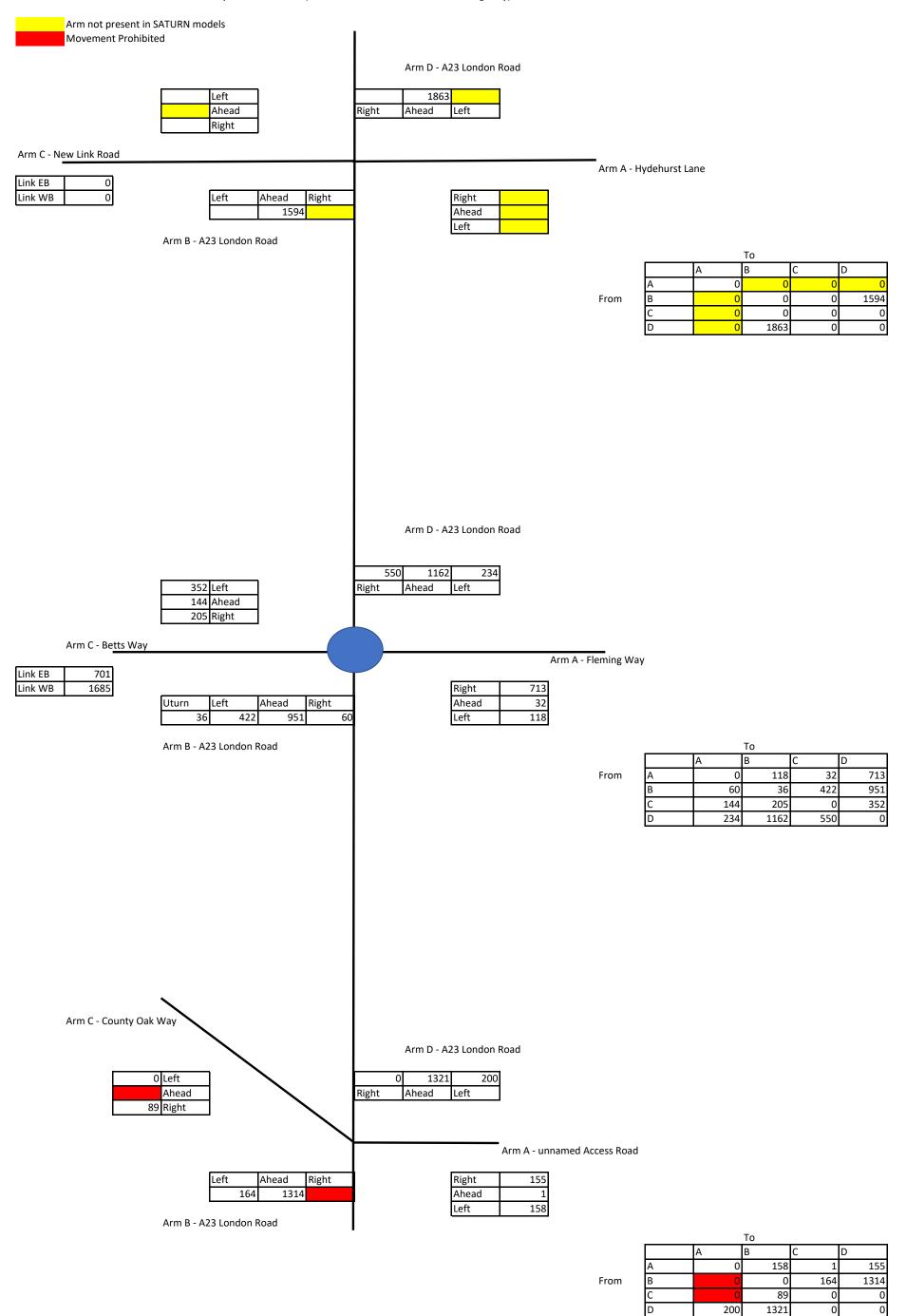
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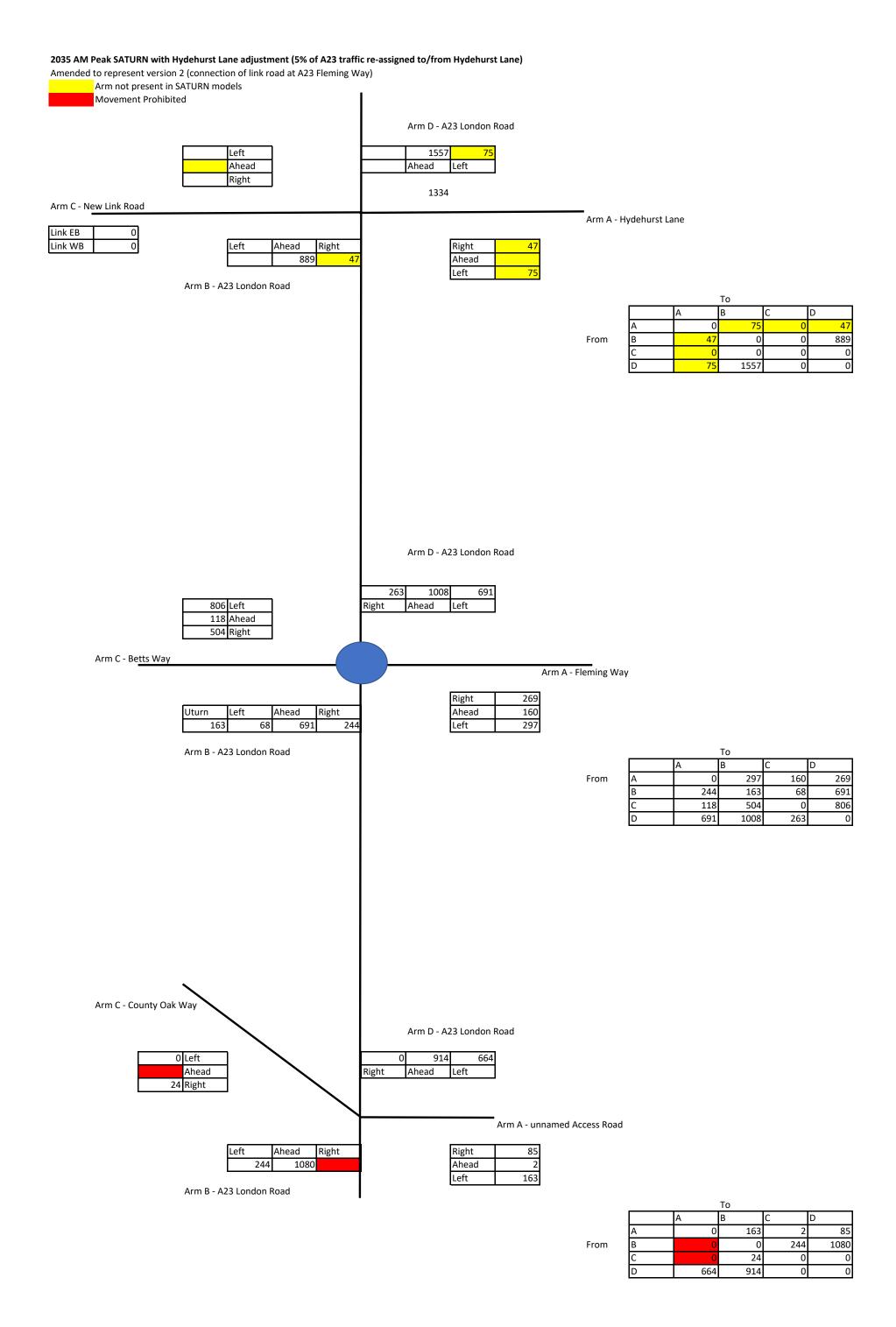
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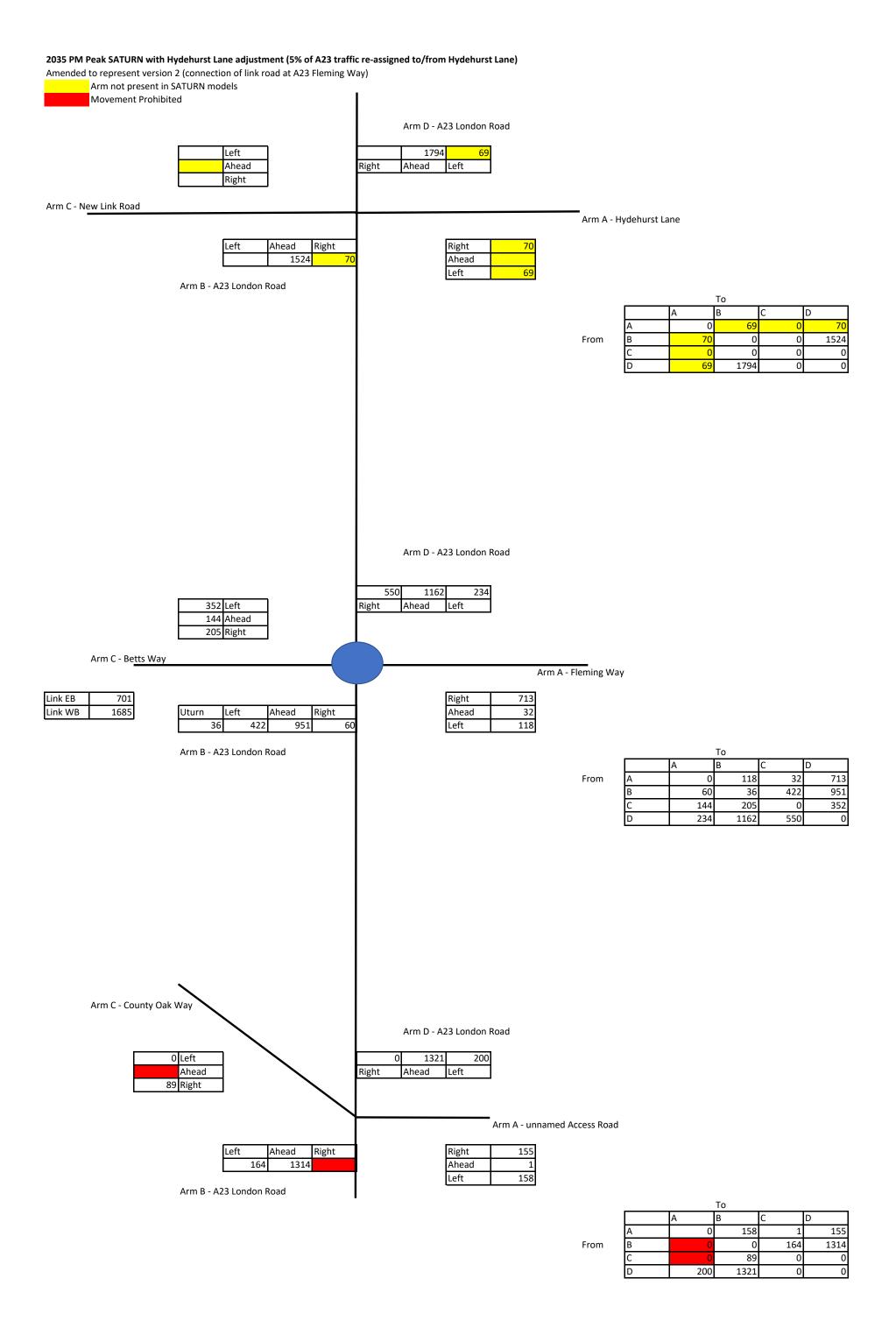
2035 AM Peak SATURN Data - amended to represent version 2 (connection of link road at A23 Fleming Way)



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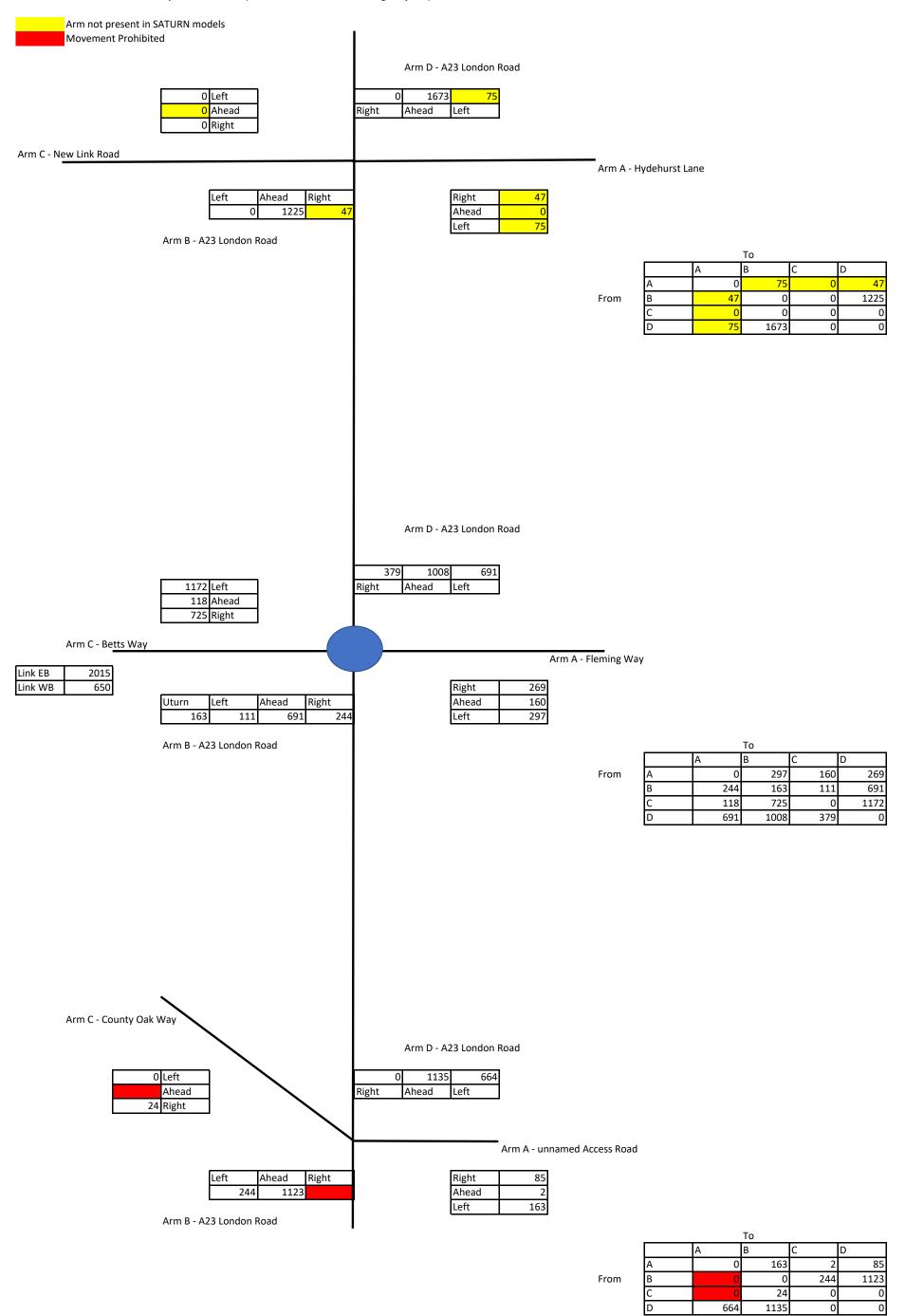
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		Α	В	С	D
From	Α	0	0	0	0
	В	0	0	0	43
	С	0	0	0	0
	D	0	221	0	0

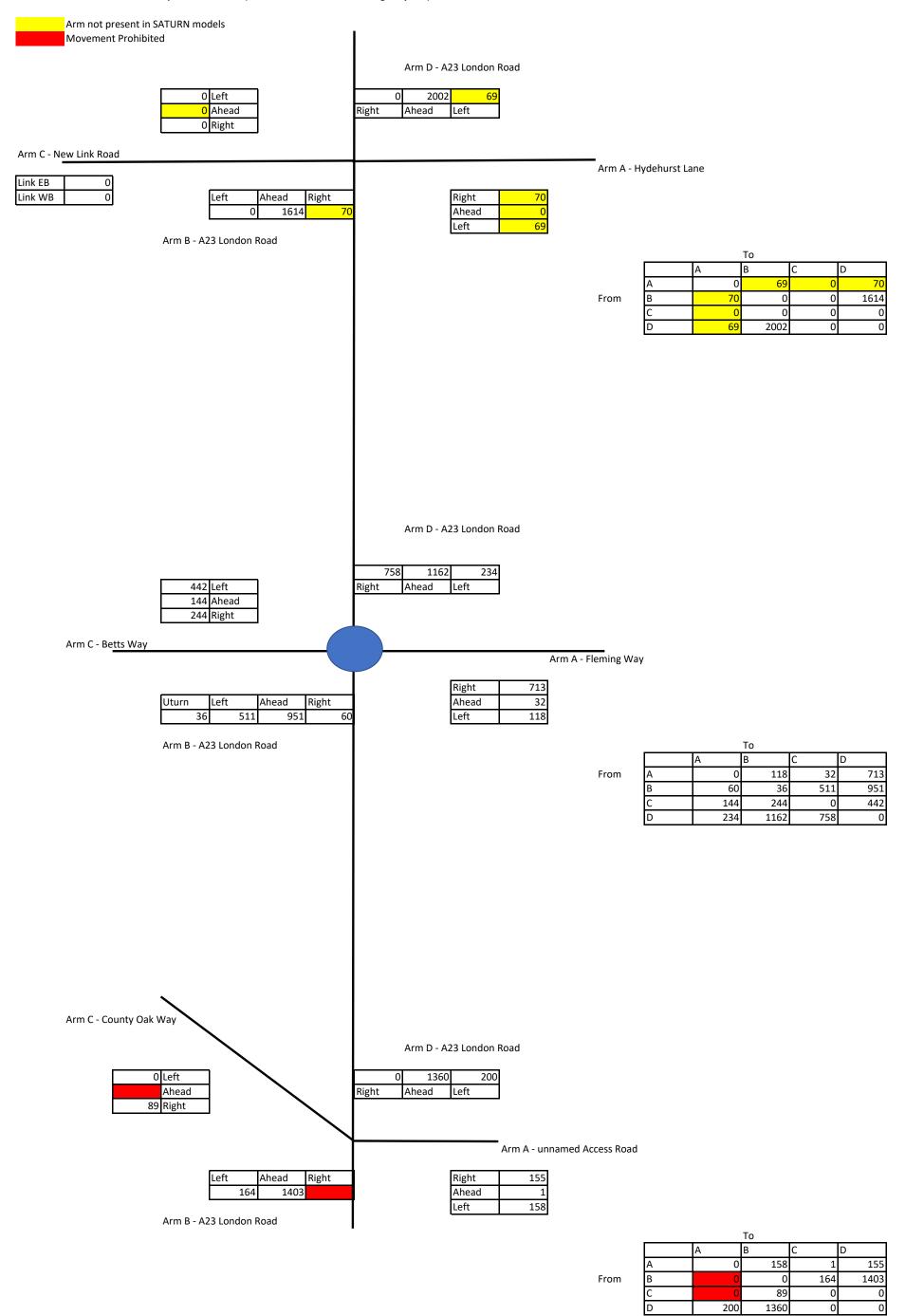
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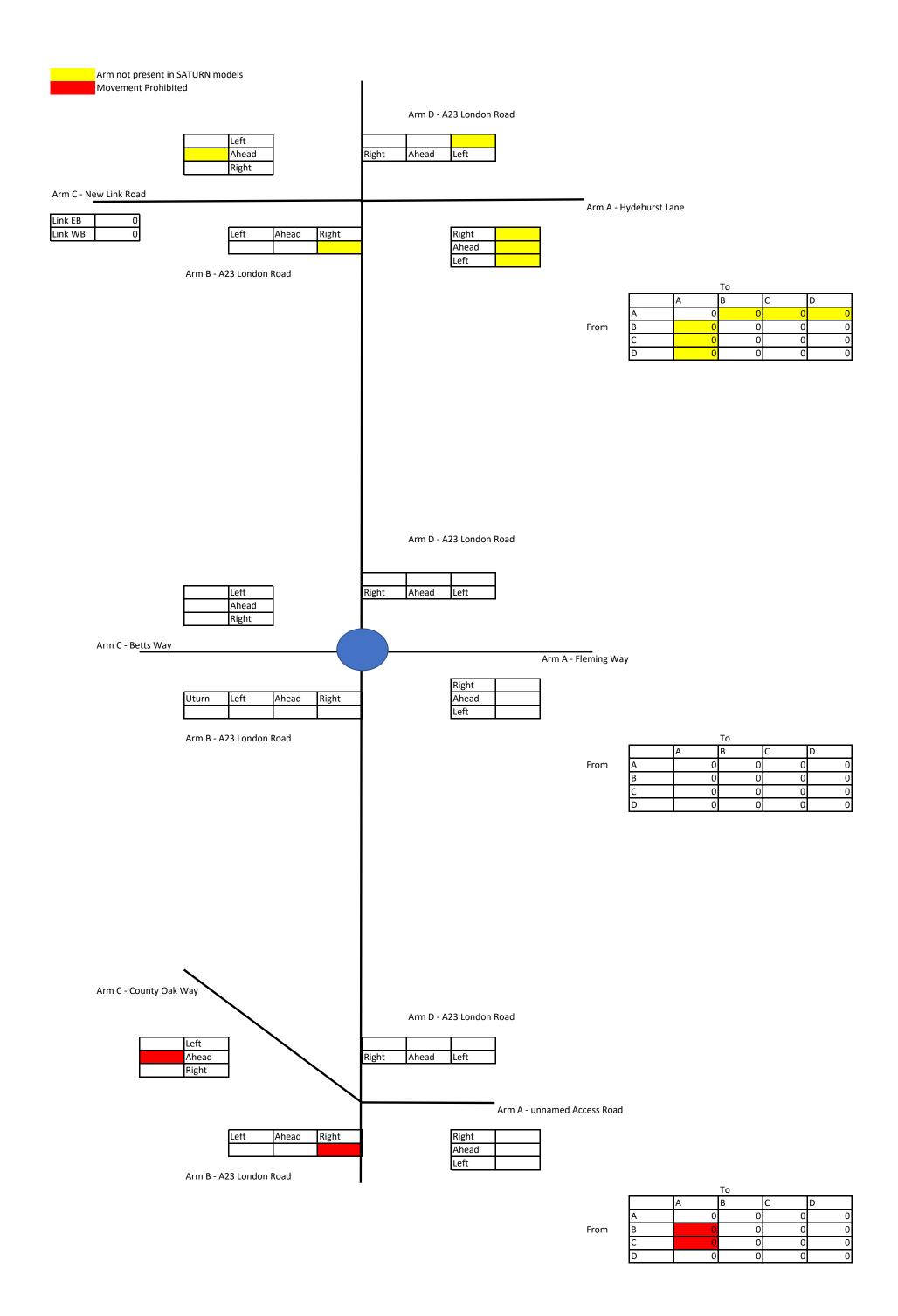
		Α	В	С	D
From	Α	0	0	0	(
	В	0	0	0	89
	С	0	0	0	(
	D	0	39	0	(

2035 AM Total flows with development version 2 (Link Road connects at Fleming Way Rbt)



2035 PM Total flows with development version 2 (Link Road connects at Fleming Way Rbt)





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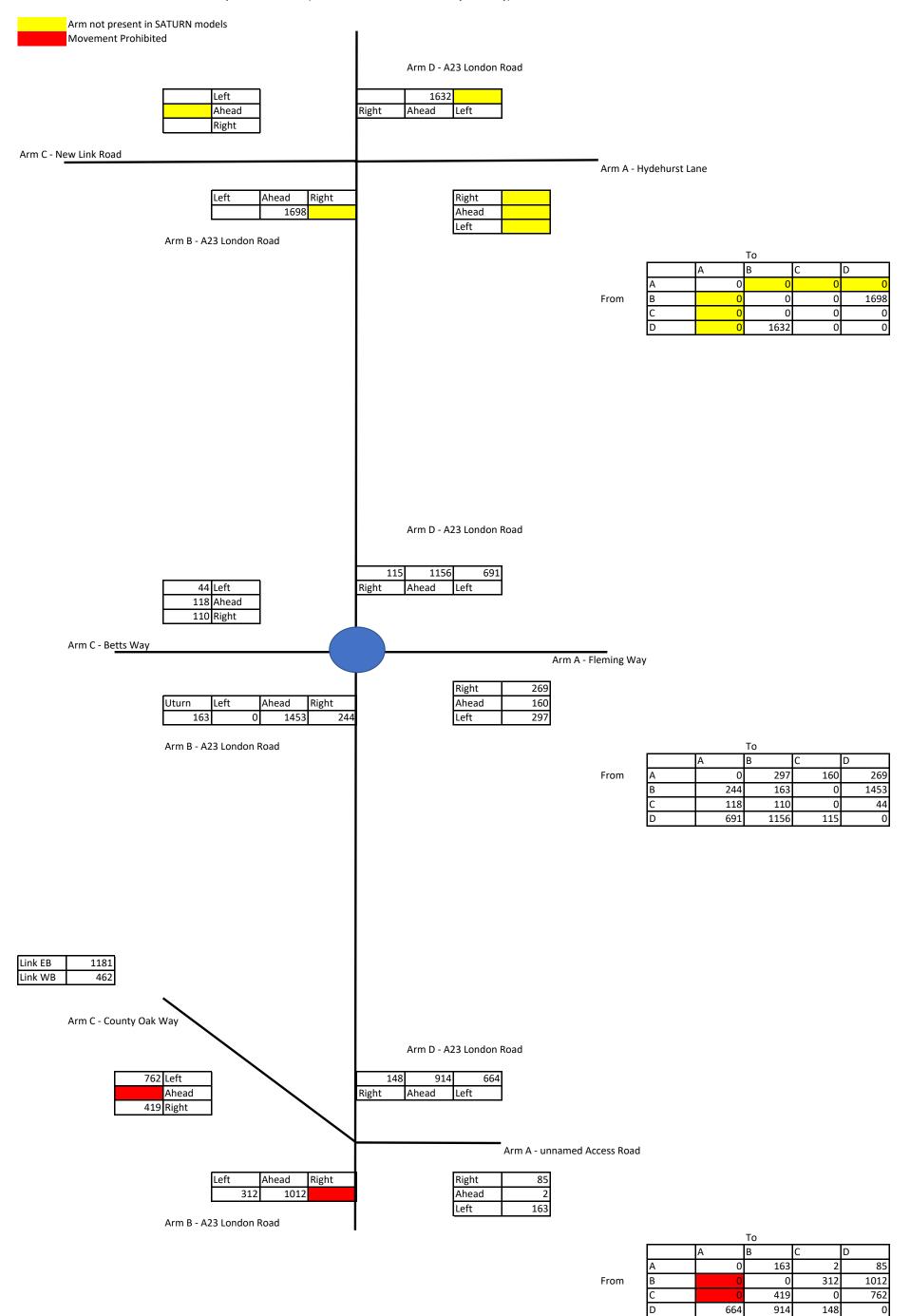
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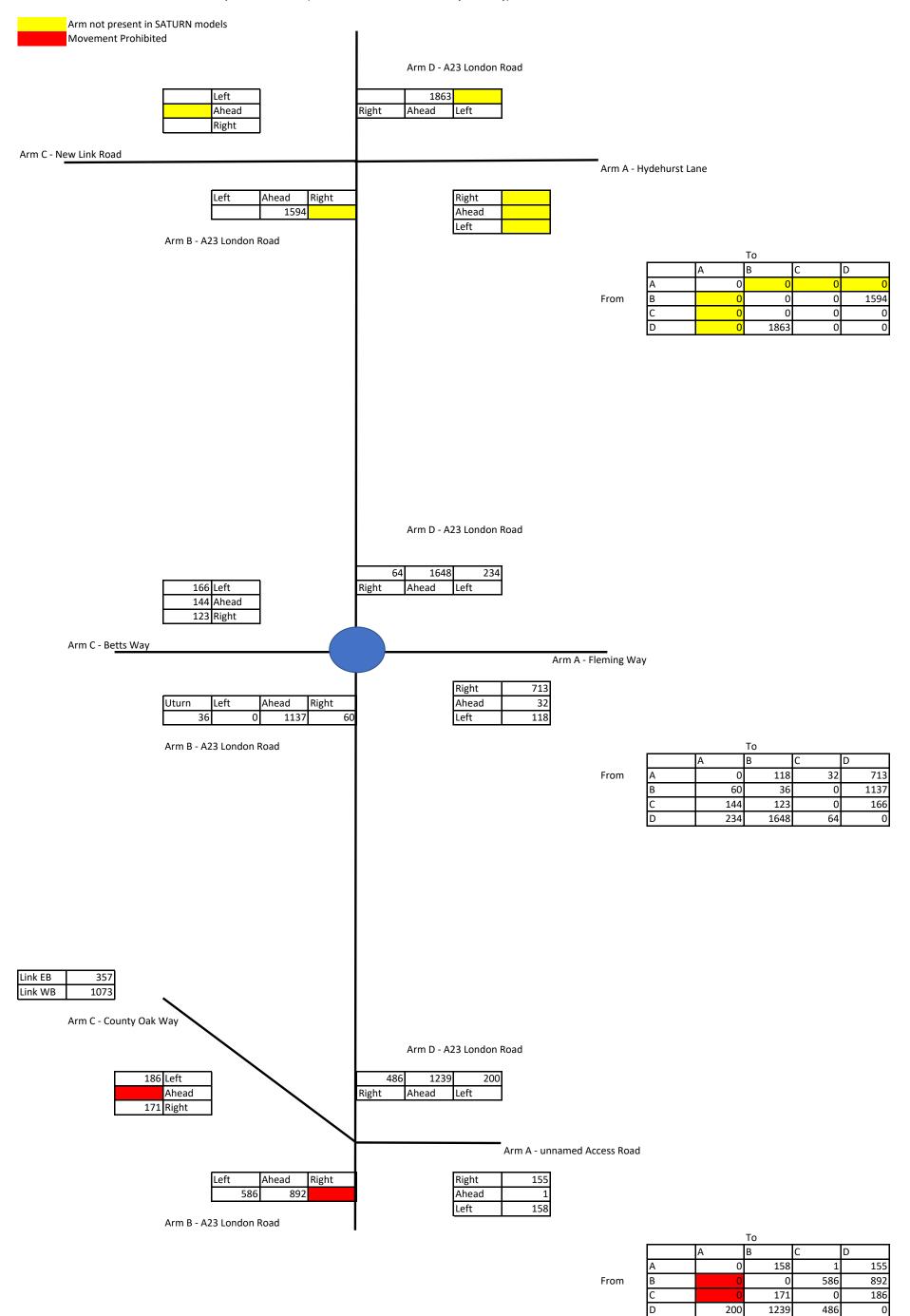
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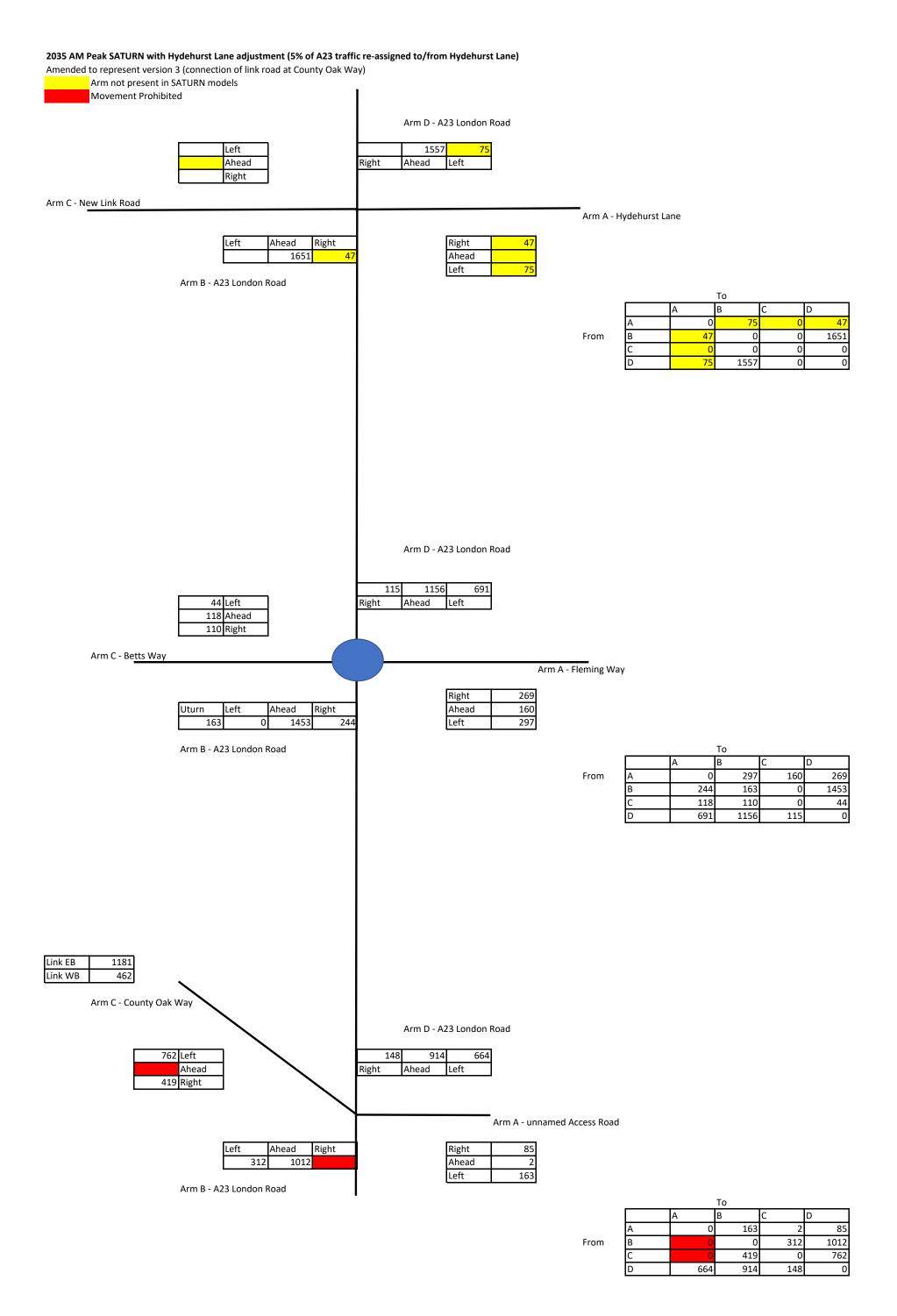
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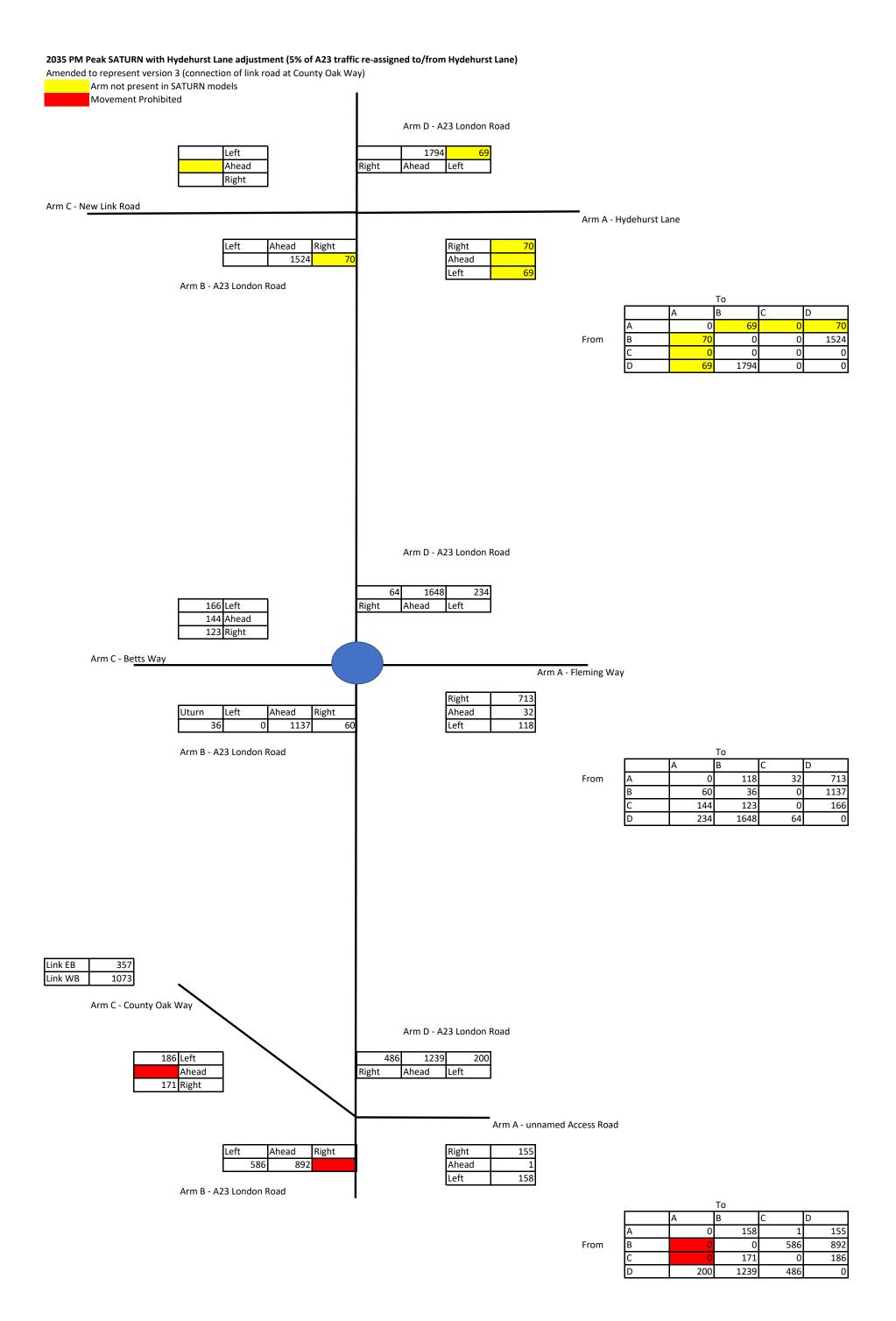
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2035 PM Peak SATURN Data - amended to represent version 3 (connection of link road at County Oak Way)







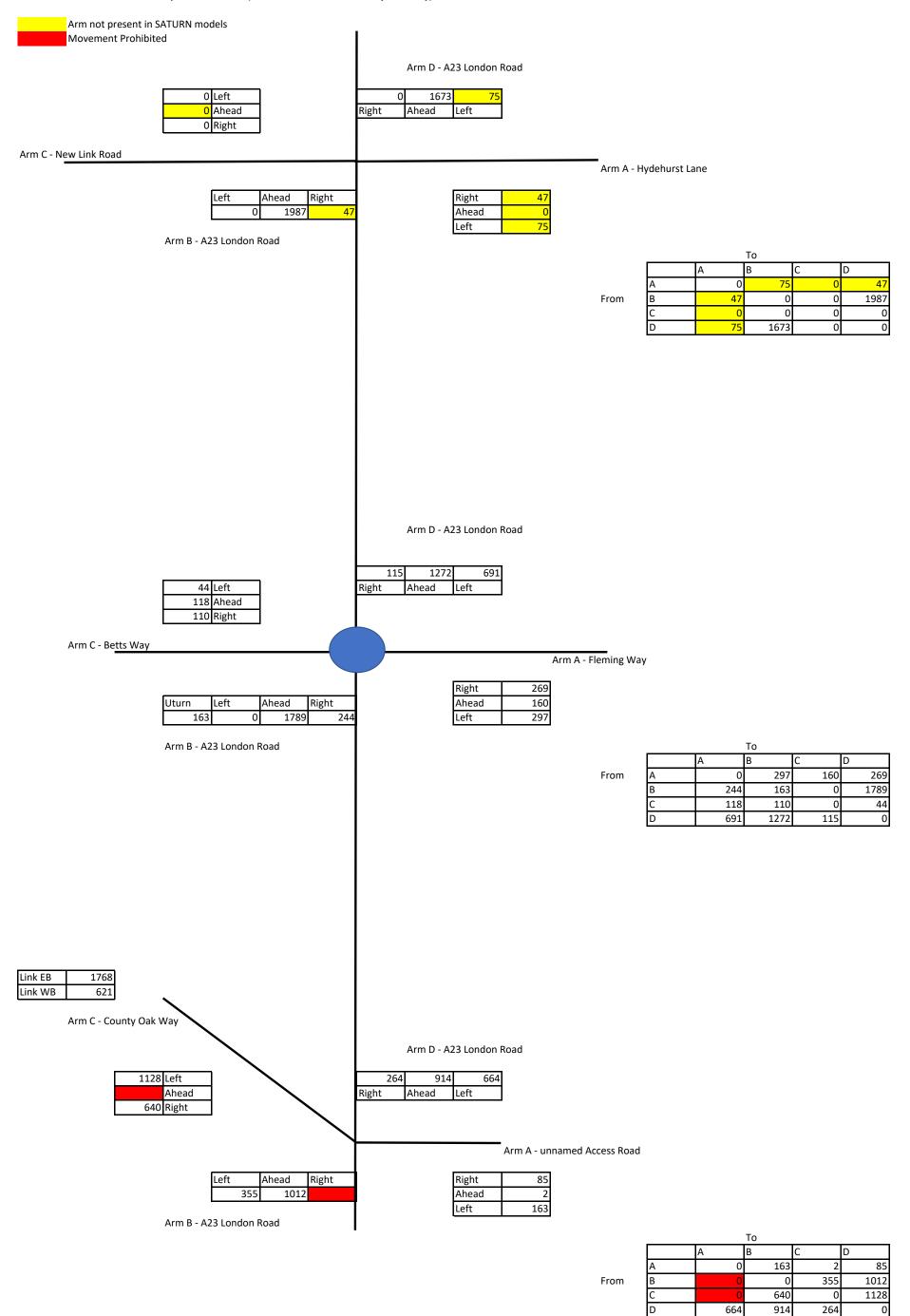
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		Α	В	С	D
From	Α	0	0	0	0
	В	0	0	43	0
	С	0	221	0	366
	D	0	0	116	0

PM Development Flows (see Trip Generation sheet for explanation of calculation and distribution) - Version 3 (Link Road connects at County Oak Way) Arm not present in SATURN models Movement Prohibited Arm D - A23 London Road Left 208 Ahead Right Ahead Left Right Arm C - New Link Road Arm A - Hydehurst Lane Left Ahead Right Right 90 Ahead Left Arm B - A23 London Road To From 208 Arm D - A23 London Road 208 Left Ahead Ahead Right Arm C - Betts Way Arm A - Fleming Way Right Uturn Left Ahead Right Ahead Left Arm B - A23 London Road То From 0 90 0 0 208 Link EB 129 Link WB 297 Arm C - County Oak Way Arm D - A23 London Road Ahead Ahead Left 39 Right Arm A - unnamed Access Road Right Right Left Ahead Ahead 89 Left Arm B - A23 London Road То

		Α	В	С	D
From	Α	0	0	0	C
	В	0	0	89	C
	С	0	39	0	90
	D	0	0	208	C

2035 AM Total flows with development version 3 (Link Road connects at County Oak Way)



2035 PM Total flows with development version 3 (Link Road connects at County Oak Way)

