

Appendix A

From 24 June 2012

Leaflet
101

Clitheroe Local Services and Pendle Witch Hopper

Bus times

Services: **2, 4, 7, 7A, 7B, 7S, 72**

2 Sawley - Grindleton - Chatburn -
Clitheroe - Low Moor

4 Clitheroe - Peel Park Circular

7, 7A, 7B Pendle Witch Hopper
Clitheroe - Waddington -
West Bradford -
Grindleton (7B) -
Chatburn - Downham -
Barley (7,7B) -
Rimington (7A) -
Blacko - Nelson

7S, 72 Pendle Witch Hopper
(Summer Sunday
Service)



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Lancashire
County
Council



Monday to Saturday



Operator Code	HWC	HWC	HWC	HWC	HWC	HWC	HWC		HWC	HWC		HWC	HWC	HWC	HWC	HWC
Service Number	2	2	2	2	2	2	2		2	2		2	2	2	2	2
Notes	\$	\$	\$	\$	\$	\$	\$		\$	\$		\$	\$	\$	\$	\$
Notes	NS	NS	NS													
SAWLEY Spread Eagle	....	....	....	0758	....	0903	....		08	....		1608	....	1708	....	1813
GRINDLETON Stone Hill Farm	....	....	....	0803	....	0913	....		13	....		1613	....	1713	....	1818
CHATBURN Village Hall	....	....	....	0810	....	0920	....		20	....		1620	....	1720	....	1825
CLITHEROE Hospital	....	....	....	0814	....	0924	....		24	....		1624	....	1724	....	1829
CLITHEROE Market Place	....	0719	....	0819	0859	0929	0959		29	59		1629	1659	1734	1804	1834
CLITHEROE Interchange	0656	0721	0756	0821	0901	0931	1001		31	01	mins.	1631	1701	1736	1806	1836
CLITHEROE Kenilworth Drive	0703	0728	0803	0828	0908	0938	1008	then	38	08	past	1638	1708	1743	1813	1843
CLITHEROE Garnett Road	0705	0730	0805	0830	0910	0940	1010	at	40	10	each	1640	1710	1745	1815	1845
LOW MOOR St. Ann's Court	0709	0734	0809	0834	0914	0944	1014		44	14	hour	1644	1714	1749	1819	1849
CLITHEROE Interchange	0715	0740	0815	0845	0920	0950	1020		50	20	until	1650	1720	1755	1825	1855
CLITHEROE Market Place	0716	0744	0821	0849	0926	0954	1026		54	26		1654	1726	1759	1826	1856
CLITHEROE Hospital	....	0749	....	0854	....	0959	....		59	....		1659	....	1804	....	....
CHATBURN Village Hall	....	0753	....	0858	....	1003	....		03	....		1703	....	1808	....	....
SAWLEY Spread Eagle	....	0758	....	0903	....	1008	....		08	....		1708	....	1813	....	....
GRINDLETON Stone Hill Farm	....	0803	....	0908	....	1013	....		13	....		1713	....	1818	....	....

NS - Not Saturdays

\$ - Operated on behalf of Lancashire County Council

HWC - Holmeswood Coaches Ltd

For other journeys to Chatburn and Grindleton see Services 7, 7A and 7B

Sundays and Bank Holidays



Operator Code	HWC	HWC	HWC	HWC	HWC	HWC	HWC
Service Number	2	2	2	2	2	2	2
Notes	\$	\$	\$	\$	\$	\$	\$
CLITHEROE Market Place	0959	1059	1159	1359	1459	1559	1659
CLITHEROE Interchange	1001	1101	1201	1401	1501	1601	1701
CLITHEROE Kenilworth Drive	1008	1108	1208	1408	1508	1608	1708
CLITHEROE Garnett Road	1010	1110	1210	1410	1510	1610	1710
LOW MOOR St. Ann's Court	1014	1114	1214	1414	1514	1614	1714
CLITHEROE Interchange	1020	1120	1220	1420	1520	1620	1720
CLITHEROE Market Place	1026	1126	1226	1426	1526	1626	1726

\$ - Operated on behalf of Lancashire County Council

HWC - Holmeswood Coaches Ltd

For other journeys to Chatburn and Grindleton see Services 7, 7A and 7B



SERVICE 2 ROUTE DESCRIPTION

From SAWLEY Spread Eagle via Sawley Bridge Lane, Sawley Road, GRINDLETON, Main Street, GRINDLETON Stone Hill Farm – turn in bus parking area, Main Street, Grindleton Brow, Ribble Lane, CHATBURN, Bridge Road, Ribblesdale View, Downham Road, Bridge Road, Crow Trees Brow, Clitheroe Road, Chatburn Road, CLITHEROE, Well Terrace, Railway View Road, Railway View Avenue, Market Place, Wellgate, Lowergate, King Lane, King Street, Station Road, Parson Lane, Bawdlands, Henthorn Road*, Conway Avenue*, Windsor Avenue*, Kemple View*, Kenilworth Drive*, Henthorn Road*, Garnett Road*, Lancaster Drive*, Edisford Road, LOW MOOR, St Paul's Street*, High Street* then either Union Street* & Queen Street* or Riverside* & High Street* to St Paul's Street* then Edisford Road, CLITHEROE, Bawdlands, Parson Lane, Station Road, Railway View Road, CLITHEROE Interchange, Railway View Road, Railway View Avenue, King Street, Market Place, York Street, Chatburn Road, Clitheroe Road, CHATBURN, Crow Trees Brow, Bridge Road, Ribblesdale View, Downham Road, Bridge Road, Sawley Road, A59 and SAWLEY Sawley Road to SAWLEY Spread Eagle.

* - Hail and Ride applies on these roads and all rural roads where there are no bus stops.

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information centre, tourist
information centre or local library

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Lancashire

Monday to Saturday



Operator Code	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC
Service Number	4	4	4	4	4	4	4	4
Notes	\$	\$	\$	\$	\$	\$	\$	\$
CLITHEROE Interchange	0929	1029	1129	1229	1329	1429	1529	1629
CLITHEROE Market Place	0934	1034	1134	1234	1334	1434	1534	1634
PEEL PARK Claremont Avenue	0938	1038	1138	1238	1338	1438	1538	1638
PEEL PARK Standen Road	0940	1040	1140	1240	1340	1440	1540	1640
PEEL PARK Langshaw Drive	0943	1043	1143	1243	1343	1443	1543	1643
PEEL PARK Turner Street	0946	1046	1146	1246	1346	1446	1546	1646
CLITHEROE Victoria Street	0949	1049	1149	1249	1349	1449	1549	1649
CLITHEROE Interchange	0954	1054	1154	1254	1354	1454	1554	1654
CLITHEROE Market Place	0955	1055	1155	1255	1355	1455	1555	1655

\$ - Operated on behalf of Lancashire County Council

HWC - Holmeswood Coaches Ltd

**SERVICE 4 ROUTE DESCRIPTION**

From CLITHEROE Market Place via Wellgate, Shawbridge Street, Pendle Road, Claremont Ave*, Goosebutts Lane*, Bolland Prospect*, Hayhurst Street*, Standen Road*, Mayfield Avenue*, Peel Park Avenue*, Langshaw Drive*, Beechwood Avenue*, Littlemoor Road*, Turner Street*, Greenacre Street*, Woone Lane*, Victoria Street*, West View*, Eshton Terrace*, Woone Lane*, Moor Lane, Castle Gate, Parson Lane, Station Road and King Street to CLITHEROE Market Place.

* - Hail and Ride applies on these roads and all rural roads where there are no bus stops.

CLITHEROE - CHATBURN - BARLEY - BARROWFORD - NELSON**7**

via Waddington - West Bradford - Downham - Newchurch - Blacko

CLITHEROE - CHATBURN - RIMINGTON - BARROWFORD - NELSON**7A**

via Waddington - West Bradford - Downham - Todber - Blacko

CLITHEROE - CHATBURN - BARLEY - BARROWFORD - NELSON**7B**

via Waddington - West Bradford - Grindleton - Downham - Newchurch - Blacko

Monday to Saturday

Operator Code	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	STG	STG
Service Number	7	7	7	7	7A	7	7A	7	7A	7	7	7B	7B	7B	7B	7B	7B
Notes	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	ThFS	ThFS
Notes	NS																
CLITHEROE Interchange .....	....	0720	0820	0925	1025	1125	1225	1325	1425	1525	1600	1625	1706	1725	1825	2025	2225
CLITHEROE Market Place .....	....	0721	0821	0926	1026	1126	1226	1326	1426	1526	1601	1626	1707	1726	1826	2026	2226
WADDINGTON Hospital .....	....	0728	0828	0933	1033	1133	1233	1333	1433	1533	1608	1633	1714	1733	1833	2033	2233
WEST BRADFORD Old Post Office .....	....	0732	0832	0937	1037	1137	1237	1337	1437	1537	1612	1637	1718	1737	1837	2037	2237
GRINDLETON Stone Hill Farm .....	....	....	....	....	....	....	....	....	....	....	....	1642	1723	1742	1842	2042	2242
CHATBURN opp Village Hall .....	....	0738	0838	0943	1043	1143	1243	1343	1443	1543	1618	....	1728	....	1847	....	....
CHATBURN Village Hall .....	....	....	....	....	....	....	....	....	....	....	....	1647	....	1747	....	2047	2247
CLITHEROE Interchange .....	....	....	....	....	....	....	....	....	....	....	....	1654	....	1754	....	2054	2254
DOWNHAM Church	0637	0742	0842	0947	1047	1147	1247	1347	1447	....	1622	....	1732	....	1851	....	....
RIMINGTON Black Bull .....	....	....	....	....	1054	....	1254	....	1454	....	....	....	....	....	....	....	....
TODBER Caravan Park .....	....	....	....	....	1101	....	1301	....	1501	....	....	....	....	....	....	....	....
BARLEY Barley Mow	0647	0752	0852	0957	....	1157	....	1357	....	....	1632	....	1742	....	1901	....	....
SPENBROOK Osbourne Terrace	0652	0757	0857	1002	....	1202	....	1402	....	....	1637	....	1747	....	....	....	....
NEWCHURCH Witches Galore	0655	0800	0900	1005	....	1205	....	1405	....	....	1640	....	1750	....	....	....	....
THORNEYHOLME Square	0658	0803	0903	1008	....	1208	....	1408	....	....	1643	....	1753	....	....	....	....
ROUGHLEE Bay Horse	0701	0806	0906	1011	....	1211	....	1411	....	....	1646	....	1756	....	....	....	....
BLACKO Rising Sun	0705	0810	0910	1015	1115	1215	1315	1415	1515	....	1650	....	1800	....	....	....	....
BARROWFORD White Bear	0708	0813	0913	1018	1118	1218	1318	1418	1518	....	1653	....	1803	....	....	....	....
NELSON Morrisons Store	0712	0817	0917	1022	1122	1222	1322	1422	1522	....	1657	....	1807	....	....	....	....
NELSON Interchange	0715	0820	0920	1025	1125	1225	1325	1425	1525	....	1700	....	1810	....	....	....	....

\$ - Operated on behalf of Lancashire County Council NS - Not Saturday ThFS - Thursdays, Fridays and Saturdays Only

HWC - Holmeswood Coaches Ltd STG - Stagecoach in Lancashire

NELSON - BARROWFORD - BARLEY - CHATBURN - CLITHEROE**7**

via Blacko - Newchurch - Downham - West Bradford - Waddington

NELSON - BARROWFORD - RIMINGTON - CHATBURN - CLITHEROE**7A**

via Blacko - Todber - Downham - West Bradford - Waddington

NELSON - BARROWFORD - BARLEY - CHATBURN - CLITHEROE**7B**

via Blacko - Newchurch - Downham - Grindleton - West Bradford - Waddington

Monday to Saturday

Operator Code	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC
Service Number	7B	7B	7B	7	7B	7A	7	7A	7	7A	7	7A	7	7	7B
Notes	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Notes	NS	NS													
NELSON Interchange .....	....	....	....	0720	....	0830	0930	1030	1130	1230	1330	1430	1530	1710	1815
NELSON Morrisons Store .....	....	....	....	0724	....	0834	0934	1034	1134	1234	1334	1434	1534	1714	1819
BARROWFORD White Bear .....	....	....	....	0728	....	0838	0938	1038	1138	1238	1338	1438	1538	1718	1823
BLACKO Rising Sun .....	....	....	....	0731	....	0841	0941	1041	1141	1241	1341	1441	1541	1721	1826
ROUGHLEE Bay Horse .....	....	....	....	0735	....	....	0945	....	1145	....	1345	....	1545	1725	1830
THORNEYHOLME Square .....	....	....	....	0737	....	....	0947	....	1147	....	1347	....	1547	1727	1832
NEWCHURCH Witches Galore .....	....	....	....	0741	....	....	0951	....	1151	....	1351	....	1551	1731	1836
SPENBROOK Osbourne Terrace .....	....	....	....	0744	....	....	0954	....	1154	....	1354	....	1554	1734	1839
BARLEY Barley Mow .....	....	....	....	0749	....	....	0959	....	1159	....	1359	....	1559	1739	1844
TODBER Caravan Park .....	....	....	....	....	....	0854	....	1054	....	1254	....	1454	....	....	....
RIMINGTON Black Bull .....	....	....	....	....	....	0901	....	1101	....	1301	....	1501	....	....	....
DOWNHAM Church .....	....	....	....	0759	....	0909	1009	1109	1209	1309	1409	1509	1609	1749	1854
CHATBURN Village Hall	0634	0704	0734	0803	0834	0913	1013	1113	1213	1313	1413	1513	1613	1753	1858
GRINDLETON Stone Hill Farm	0639	0709	0739	....	0839	....	....	....	....	....	....	....	....	....	1903
WEST BRADFORD Old Post Office	0644	0714	0744	0809	0844	0919	1019	1119	1219	1319	1419	1519	1619	1759	1908
WADDINGTON Waddington Arms	0648	0718	0748	0813	0848	0923	1023	1123	1223	1323	1423	1523	1623	1803	1912
CLITHEROE Interchange	0654	0724	0754	0819	0854	0929	1029	1129	1229	1329	1429	1529	1629	1809	1918
CLITHEROE Market Place	0655	0725	0755	0820	0855	0930	1030	1130	1230	1330	1430	1530	1630	1810	1919

\$ - Operated on behalf of Lancashire County Council

NS - Not Saturday

HWC - Holmeswood Coaches Ltd

CLITHEROE - CHATBURN - GRINDLETON - CLITHEROE
via West Bradford - Waddington

7B

Sundays and Bank Holidays

Operator Code	HWC	HWC	HWC	HWC	HWC	HWC	HWC	HWC
Service Number	7B	7B	7B	7B	7B	7B	7B	7B
Notes	\$	\$	\$	\$	\$	\$	\$	\$
CLITHEROE Interchange	0925	1025	1125	1225	1425	1525	1625	1725
CLITHEROE Market Place	0926	1026	1126	1226	1426	1526	1626	1726
CHATBURN Village Hall	0933	1033	1133	1233	1433	1533	1633	1733
GRINDLETON Stone Hill Farm	0938	1038	1138	1238	1438	1538	1638	1738
WEST BRADFORD Old Post Office	0943	1043	1143	1243	1443	1543	1643	1743
WADDINGTON Waddington Arms	0948	1048	1148	1248	1448	1548	1648	1748
CLITHEROE Interchange	0954	1054	1154	1254	1454	1554	1654	1754
CLITHEROE Market Place	0955	1055	1155	1255	1455	1555	1655	1755

\$ - Operated on behalf of Lancashire County Council

HWC - Holmeswood Coaches Ltd



SERVICE 7 ROUTE DESCRIPTION

From CLITHEROE Interchange via Railway View Road, Railway View Avenue, King Street, Market Place, York Street, Well Terrace, Waddington Road, B6478, WADDINGTON, Clitheroe Road, West Bradford Road, WEST BRADFORD, Waddington Road, Grindleton Road, (Certain journeys additionally serve GRINDLETON via Grindleton Brow, Main Street, GRINDLETON Stone Hill Farm – turn in bus parking area, Main Street, Grindleton Brow), Ribble Lane, CHATBURN, Bridge Road, Downham Road, DOWNHAM, Chatburn Road, Main Street, Pendle Road, Barley Lane, BARLEY Bus Turning Circle, Barley Lane, Cross Lane, NEWCHURCH-IN-PENDLE, Cross Lane, Spenbrook Road, SPENBROOK, Osbourne Terrace, Spenbrook Road, NEWCHURCH-IN-PENDLE, Cross Lane, BARLEY, The Avenue, Barley New Road, THORNEYHOLME, Blacko Bar Road, ROUGHLEE, A682, BLACKO, Gisburn Road, HIGHERFORD, BARROWFORD, NELSON, Scotland Road, Clayton Street, Pendle Street, Every Street, North Street, New Scotland Road, Holme Street and Broadway to NELSON Interchange.

Returning from NELSON Interchange via Broad Street, Broadway, Holme Street, New Scotland Road, Pendle Street, Clayton Street then outward route reversed to CLITHEROE, Waddington Road, Railway View Road and King Street to CLITHEROE Market Place.

* - Hail and Ride applies on these roads and all rural roads where there are no bus stops.



SERVICE 7A ROUTE DESCRIPTION

From CLITHEROE Interchange via Service 7 route to DOWNHAM Chatburn Road then Main Street, reverse into West Lane, Main Street, Green Lane, Rimington Lane, RIMINGTON, Stoops Lane, NEWBY, Newby Lane, Long Lover Lane, HOWGILL, Howgill Lane, A682, TODBER Caravan Park, A682, BLACKO, Gisburn Road, HIGHERFORD, BARROWFORD, NELSON, Scotland Road, Clayton Street, Pendle Street, Every Street, North Street, New Scotland Road, Holme Street and Broadway to NELSON Interchange.

Returning from NELSON Interchange via Broad Street, Broadway, Holme Street, New Scotland Road, Pendle Street, Clayton Street then outward route reversed to CLITHEROE, Waddington Road, Railway View Road and King Street to CLITHEROE Market Place.

* - Hail and Ride applies on these roads and all rural roads where there are no bus stops.



SERVICE 7B ROUTE DESCRIPTION

From CLITHEROE Interchange via Service 7 route to GRINDLETON Grindleton Road then via Grindleton Brow, Main Street, GRINDLETON Stone Hill Farm – turn in bus parking area, Main Street, Grindleton Brow, Ribble Lane then via Service 7 route to NELSON Interchange.

Returning from NELSON Interchange via Service 7 return route then outward route reversed to CLITHEROE, Waddington Road, Railway View Road and King Street to CLITHEROE Market Place.

Certain Service 7B journeys operate a circular route from CLITHEROE Interchange via Railway View Road, Railway View Avenue, King Street, Market Place, York Street, Chatburn Road, Clitheroe Road, CHATBURN, Crow Trees Brow, Bridge Road, Ribblesdale View, Downham Road then standard Service 7B return route to CLITHEROE Market Place; or from CLITHEROE Interchange via standard Service 7B outward route to CHATBURN Ribblesdale View then via Downham Road, Bridge Road, Crow Trees Brow, Clitheroe Road, Chatburn Road, CLITHEROE, Well Terrace and Railway View Road to CLITHEROE Interchange.

* - Hail and Ride applies on these roads and all rural roads where there are no bus stops.

CLITHEROE - WADDINGTON - BARLEY - NELSON via West Bradford - Chatburn - Downham - Roughlee NELSON - BURNLEY - PADIHAM - CLITHEROE via Brierfield - Sabden - Pendleton	PENDLE WITCH HOPPER 7S PENDLE WITCH HOPPER 72

Summer Sunday & Bank Holidays	from the Sunday before Easter Sunday until the last Sunday in October

Operator Code Service Number Notes	BPT 72 \$	BPT 7S \$	BPT 72 \$	BPT 7S \$	BPT 72 \$	BPT 7S \$	BPT 72 \$	BPT 7S \$	BPT 72 \$
CLITHEROE Interchange	....	0958	....	1158	....	1358	....	1558	....
CLITHEROE Market Place	....	0959	....	1159	....	1359	....	1559	....
WADDINGTON Hospital	....	1005	....	1205	....	1405	....	1605	....
WEST BRADFORD Old Post Office	....	1009	....	1209	....	1409	....	1609	....
CHATBURN Village Hall	....	1015	....	1215	....	1415	....	1615	....
DOWNHAM Church	....	1018	....	1218	....	1418	....	1618	....
BARLEY The Barley Mow	....	1028	....	1228	....	1428	....	1628	....
SPENBROOK Osbourne Terrace	....	1033	....	1233	....	1433	....	1633	....
NEWCHURCH Witches Galore	....	1037	....	1237	....	1437	....	1637	....
DIMPENLEY Clarion House	....	1040	....	1240	....	1440	....	1640	....
ROUGHLEE Bay Horse	....	1042	....	1242	....	1442	....	1642	....
BLACKO Rising Sun	....	1046	....	1246	....	1446	....	1646	....
BARROWFORD White Bear	....	1048	....	1248	....	1448	....	1648	....
NELSON Interchange	0858	1053	1058	1253	1258	1453	1458	1653	1658
BRIERFIELD Centre	0901	....	1101	....	1301	....	1501	....	1701
BURNLEY Bus Station	0915	....	1115	....	1315	....	1515	....	1715
PADIHAM Bridge Inn	0927	....	1127	....	1327	....	1527	....	....
SABDEN White Hart	0937	....	1137	....	1337	....	1537	....	....
NICK O' PENDLE Wellsprings Inn	0942	....	1142	....	1342	....	1542	....	....
PENDLETON Swan with Two Necks	0945		1145		1345		1545		
CLITHEROE Interchange	0955		1155		1355		1555		

HAIL & RIDE

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\$ - Operated on behalf of Lancashire County Council
BPT - Transdev Burnley & Pendle

NELSON - BARLEY - WADDINGTON - CLITHEROE
via Roughlee - Downham - Chatburn - West Bradford

PENDLE WITCH HOPPER 7S

CLITHEROE - PADIHAM - BURNLEY - NELSON
via Pendleton - Sabden - Brierfield

PENDLE WITCH HOPPER 72

Summer Sunday & Bank Holidays

from the Sunday before Easter Sunday until the last Sunday in October

Operator Code Service Number Notes	BPT 72 \$	BPT 7S \$	BPT 72 \$	BPT 7S \$	BPT 72 \$	BPT 7S \$	BPT 72 \$	BPT 7S \$	BPT 72 \$
CLITHEROE Interchange			1133	....	1333	....	1533	....	1733
CLITHEROE Market Place			1134	....	1334	....	1534	....	1734
PENDLETON Swan with Two Necks			1140	....	1340	....	1540	....	1740
NICK O' PENDLE Wellsprings Inn			1145	....	1345	....	1545	....	1745
SABDEN White Hart			1150	....	1350	....	1550	....	1750
PADIHAM Bridge Inn			1200	....	1400	....	1600	....	1800
BURNLEY Bus Station	1015	....	1215	....	1415	....	1615	....	1815
BRIERFIELD Centre	1025	....	1225	....	1425	....	1625	....	1825
NELSON Interchange	1030	1035	1230	1235	1430	1435	1630	1635	1830
BARROWFORD White Bear		1040	....	1240	....	1440	....	1640	....
BLACKO Rising Sun		1044	....	1244	....	1444	....	1644	....
ROUGHLEE Bay Horse		1048	....	1248	....	1448	....	1648	....
DIMPENLEY Clarion House		1050	....	1250	....	1450	....	1650	....
NEWCHURCH Witches Galore		1053	....	1253	....	1453	....	1653	....
SPENBROOK Osbourne Terrace		1056	....	1256	....	1456	....	1656	....
BARLEY The Barley Mow		1101	....	1301	....	1501	....	1701	....
DOWNHAM Church		1111	....	1311	....	1511	....	1711	....
CHATBURN Village Hall		1114	....	1314	....	1514	....	1714	....
WEST BRADFORD Post Office		1120	....	1320	....	1520	....	1720	....
WADDINGTON Hospital		1124	....	1324	....	1524	....	1724	....
CLITHEROE Interchange		1130	....	1330	....	1530	....	1730	....

HAIL & RIDE

The bus will stop anywhere on the route where it is safe to do so.

\$ - Operated on behalf of Lancashire County Council

BPT - Transdev Burnley & Pendle



SERVICE 7S ROUTE DESCRIPTION

From CLITHEROE Interchange via Railway View Road, Railway View Avenue, King Street, Market Place, York Street, Well Terrace, Waddington Road, B6478, WADDINGTON, Clitheroe Road, West Bradford Road, WEST BRADFORD, Waddington Road, Grindleton Road, Ribble Lane, CHATBURN, Bridge Road, Downham Road, DOWNHAM, Chatburn Road, Main Street, Pendle Road, Barley Lane, BARLEY Bus Turning Circle, Barley Lane, Cross Lane, NEWCHURCH-IN-PENDLE, Cross Lane, Spenbrook Road, SPENBROOK, Osbourne Terrace, Spenbrook Road, NEWCHURCH-IN-PENDLE, Cross Lane, Jinny Lane, Blacko Bar Road, ROUGHLEE, A682, BLACKO, Gisburn Road, HIGHERFORD, BARROWFORD, NELSON, Scotland Road, New Scotland Road, Holme Street and Broadway to NELSON Interchange.

From NELSON Interchange via Broad Street, Broadway, Holme Street then reverse of outward route to CLITHEROE Waddington Road and Railway View Road to CLITHEROE Interchange.

* - Hail and Ride applies on these roads and all rural roads when there are no bus stops.



SERVICE 72 ROUTE DESCRIPTION

From NELSON Interchange via Broad Street, Broadway, Manchester Road, BRIERFIELD, Colne Road, Burnley Road, REEDLEY, Colne Road, BURNLEY, Colne Road, Church Street, Yorkshire Street, Croft Street, Red Lion Street, BURNLEY Bus Station, Croft Street, Red Lion Street, Parker Lane, Grimshaw Street, Manchester Road, Trafalgar Street, Westway, Cavalry Way, Padiham Road, A671, PADIHAM, Burnley Road, Moor Lane, Slade Lane, A6068, Slade Lane, Whins Lane, Trapp Lane, Simonstone Road, SADBEN, Padiham Road, Clitheroe Road, Nick of Pendle, unclassified road through PENDLETON, A59, unclassified road, Standen Hall, unclassified road, CLITHEROE, Pendle Road, Shawbridge Street, Peel Street, Wellgate, Lowergate, King Lane and King Street CLITHEROE Interchange.

Returning from CLITHEROE Interchange via Railway View Road, Railway View Avenue, King Street, Market Place, Wellgate, Shawbridge Street, Pendle Road then reverse of outward route to BURNLEY Red Lion Street, BURNLEY Bus Station, Croft Street, Yorkshire Street then reverse of outward route to NELSON Broadway then NELSON Interchange.

* - Hail and Ride applies on these roads and all rural roads when there are no bus stops.

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About this leaflet

This leaflet has been published by Lancashire County Council and contains details of bus services on the routes shown on the front cover.

On Bank Holidays many bus companies revise their services, it is advisable to contact

TRAVELINE on 0871 200 22 33, your local Information Outlet or the operator of the service for full details before travelling.

Every effort has been made to ensure the accuracy of this leaflet, however Lancashire County Council are not able to accept any responsibility for inaccuracy.

What if the service changes?

In the event of a service change an amendment sheet or new leaflet will be published.

Journeys marked with a \$ sign in the timetable are paid for, and operated, on behalf of Lancashire County Council.

The 24 hour clock

Times shown in this leaflet are in the 24 hour clock. After midday times may be converted to the 12 hour clock as follows:

1200 - 12 noon	1800 - 6pm
1300 - 1pm	1900 - 7pm
1400 - 2pm	2000 - 8pm
1500 - 3pm	2100 - 9pm
1600 - 4pm	2200 - 10pm
1700 - 5pm	2300 - 11pm

How to get more information

A comprehensive information service for all Lancashire's local bus & rail network is available from your local **INFORMATION OUTLET** or by writing to:

Alternatively, scan this with your smartphone

**Passenger Transport
Environment Directorate
Lancashire County Council
PO Box 100
County Hall
Preston PR1 0LD
timetableorders@lancashire.gov.uk**



If you have difficulty reading this timetable, larger print copies are available by writing to the address above.

PASSENGERS ARE ADVISED TO CHECK TIMES BEFORE TRAVELLING



If you have a problem on a bus journey, please let the bus company know first. If you don't feel they

have resolved it to your satisfaction, Bus Users UK, an independent organisation that represents bus passengers, may be able to help. Email, telephone or write to them giving

them as much detail as you can.

They will take things further for you. If they can't resolve it, they are partners in the Bus Appeals Body who will issue a decision about your difficulty.

Bus Users UK, PO Box 119,
Shepperton TW17 8UX
Telephone: 01932 232574
Email: enquiries@bususers.org
Website: www.bususers.org

Why not give
it a try -
you might love it!



'Love Your Bus' campaign is
supported by local authorities
and public transport operators
in Lancashire.

To find out more visit -

www.lancashire.gov.uk/buses

Supporting local buses in Lancashire

Lancashire

County
Council



Changes to the timetable since the last edition

Service 2

Low Moor – Clitheroe – Chatburn – Sawley – Grindleton

The route and timetable has been revised, renumbered from Service C2. Service 2 operates between Low Moor, Clitheroe and Grindleton via Chatburn and Sawley.

This service runs half-hourly, between Low Moor and Clitheroe (partially replacing Service C1), and continues hourly through to Grindleton in each direction on a Monday to Saturday daytime basis. Certain Peak journeys on new Service 7B (see below for details) additionally serve Grindleton to maintain an half-hourly link with Clitheroe at these times.

There is also an hourly Sunday daytime service between Low Moor and Clitheroe only. A new Sunday service for Grindleton is provided by Service 7B (see below for details).

Furthermore a two hourly evening service on Thursday, Friday and Saturday evenings on a six month trial basis has been introduced in the Low Moor area on Service 5A and in the Chatburn & Grindleton areas on Service 7B; please refer to Leaflet 103 for further details of Service 5A.

Service 4

Clitheroe – Peel Park Circular

The route and timetable has been revised, combining part of Service C1 and the whole of Service C4. Service 4 continues to operate a circular town service between Clitheroe and Peel Park.

This circular service continues to run hourly on a Monday to Saturday daytime basis.

Service 7/7A/7B

Clitheroe – Waddington – Chatburn – Barley/Rimington – Nelson

The route and timetable has been revised, renumbered from Service 71. The route between Clitheroe and Chatburn has been revised to operate via Waddington and West Bradford, to replace services C5 & C15, and journeys between Downham and Blacko operate alternately via Barley or Rimington during the middle of the day.

Service 7 operates between Clitheroe and Nelson via Waddington, West Bradford, Chatburn, Downham, Barley, Newchurch, Spenbrook, Roughlee, Blacko and Barrowford. Certain Peak journeys run as Service 7B and additionally serve Grindleton.

Service 7A operates between Clitheroe and Nelson via Waddington, West Bradford, Chatburn, Downham, Rimington, Howgill, Todber, Blacko and Barrowford.

The service runs hourly in each direction on a Monday to Saturday daytime basis, with most journeys running as Service 7 and three/four journeys per day in each direction as Service 7A.

There is also an hourly Sunday daytime circular service between Clitheroe, Chatburn, Grindleton, West Bradford and Waddington, numbered Service 7B. Furthermore a two hourly evening service on Thursday, Friday and Saturday evenings on a six month trial basis has been introduced on this route.

Pimlico will now be served by extended journeys of new Service 14/14A between Chatburn, Clitheroe, Accrington and Royal Blackburn Hospital; please refer to Leaflet 105 for further details.

Co-ordinated and connecting timetables

These proposed route and timetable revisions will enable surrounding villages to have improved connections at Clitheroe Interchange with train services and other local bus services.

Holmeswood Coaches Ltd will operate this group of services on behalf of Lancashire County Council.

The following subsidised bus services have been withdrawn and replaced as detailed:

Service C1 Clitheroe Town Service (Low Moor & Peel Park)

Service C1 has been withdrawn and replaced by new Services 2 & 4.

Service C2 Low Moor – Clitheroe – Chatburn – Sawley – Grindleton

Service C2 has been withdrawn and replaced by new Service 2.

Service C4 Clitheroe – Peel Park

Service C4 has been withdrawn and replaced by new Service 4.

Services C5/C15 Clitheroe – Waddington – West Bradford – Clitheroe

Services C5/C15 have been withdrawn and replaced by new Services 7/7A/7B.

Changes to the timetable since the last edition

See inside back cover for details.
(Replaces leaflet dated 3 April 2011)

For lost property or complaints please contact the operator of the service

Stagecoach in Lancashire
(Stagecoach North West)
2nd Floor, Broadacre House
16-20 Lowther Street
Carlisle CA3 8DA
Tel. 01772 884484

Holmeswood Coaches
Sandy Way
Holmeswood
Ormskirk L40 0UB
Tel. 01704 821245

Transdev Burnley & Pendle
Queensgate Bus Depot
Colne Road
Burnley BB10 1HH
Tel. 0845 60 40 110

National Rail Enquiries

08457 484950

Travel Information on the Net

www.lancashire.gov.uk/buses



traveline
public transport info

0871 200 22 33

Calls cost 10p per minute
plus network extras

www.traveline.info

**open 8am to 8pm
7 days a week**

RNID Tynetalk Textphone users can
dial 18001 then 0871 200 22 33 for a
tynetalk assisted call

Detailed information on public transport can be obtained from:

**ACCRINGTON LIBRARY &
INFORMATION SERVICE**
St James Street

NELSON INTERCHANGE
Broadway

BURNLEY
Bus Station

ORMSKIRK
Bus Station, 45 Moor Street

**BURSCOUGH BRIDGE
INTERCHANGE**
Liverpool Road

PRESTON
Bus Station

CARNFORTH CONNECT
Carnforth Station

**RAWTENSTALL LIBRARY &
INFORMATION SERVICE**
Queen's Square,
Haslingden Road

CHORLEY INTERCHANGE
Clifford Street

**SKELMERSDALE LIBRARY
& INFORMATION SERVICE**
Southway

**CLITHEROE
INTERCHANGE**
Railway View Road

For details about bus
services in Blackburn
please contact:

**FLEETWOOD LIBRARY &
INFORMATION SERVICE**
North Albert Street

**BLACKBURN
with DARWEN
BOROUGH COUNCIL**
3-5 Salford

LANCASTER
Stagecoach Travel Shop

**LEYLAND LIBRARY &
INFORMATION SERVICE**
Lancastergate

For details about bus
services in Blackpool
please contact:

MORECAMBE
Tourist Information Centre,
Station Buildings,
Marine Road

**BLACKPOOL TRANSPORT
TRAVEL OFFICES**
Market Street, Blackpool and
Rigby Road, Blackpool

Appendix B

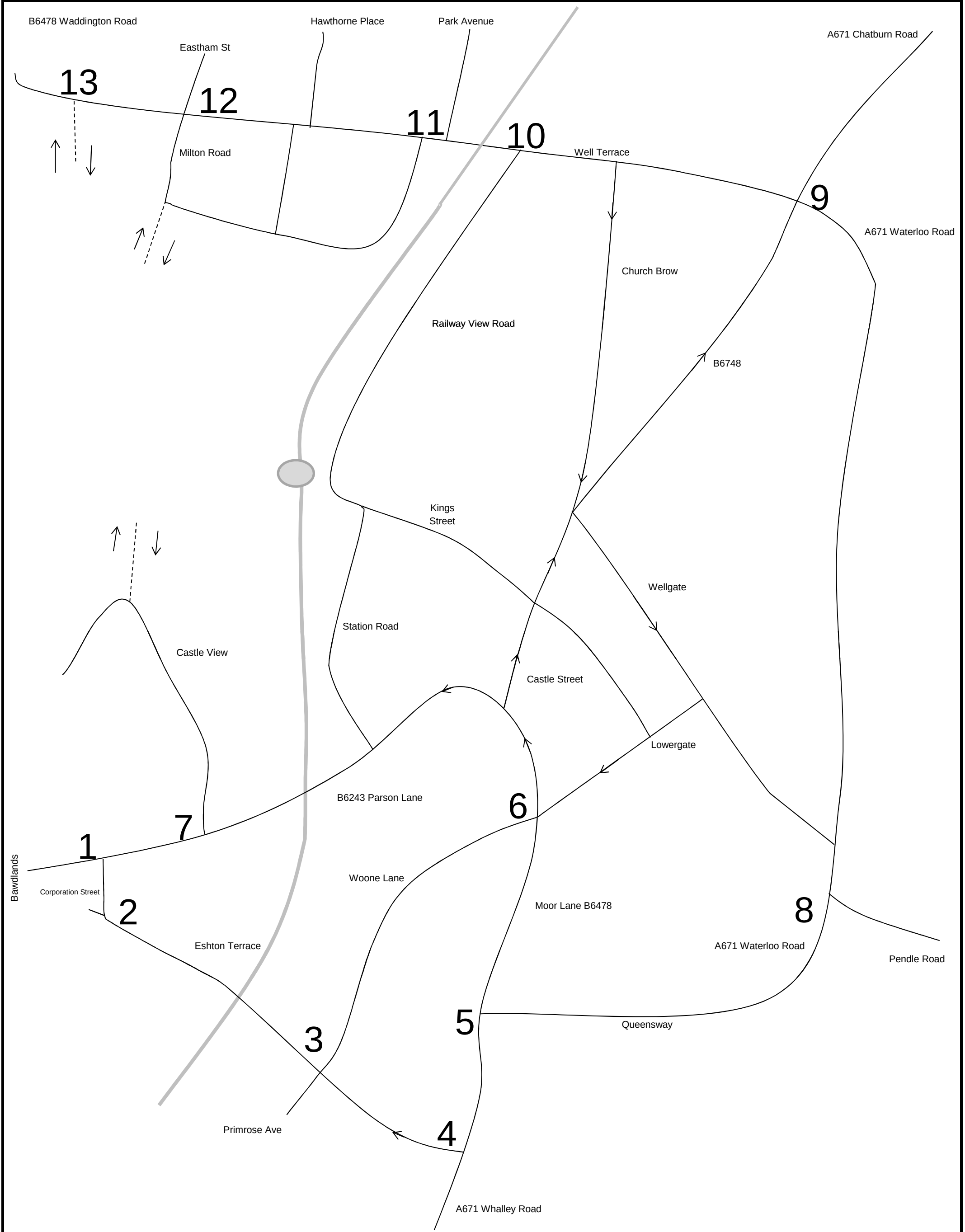


Figure: 0
Title: Junction ID Plan

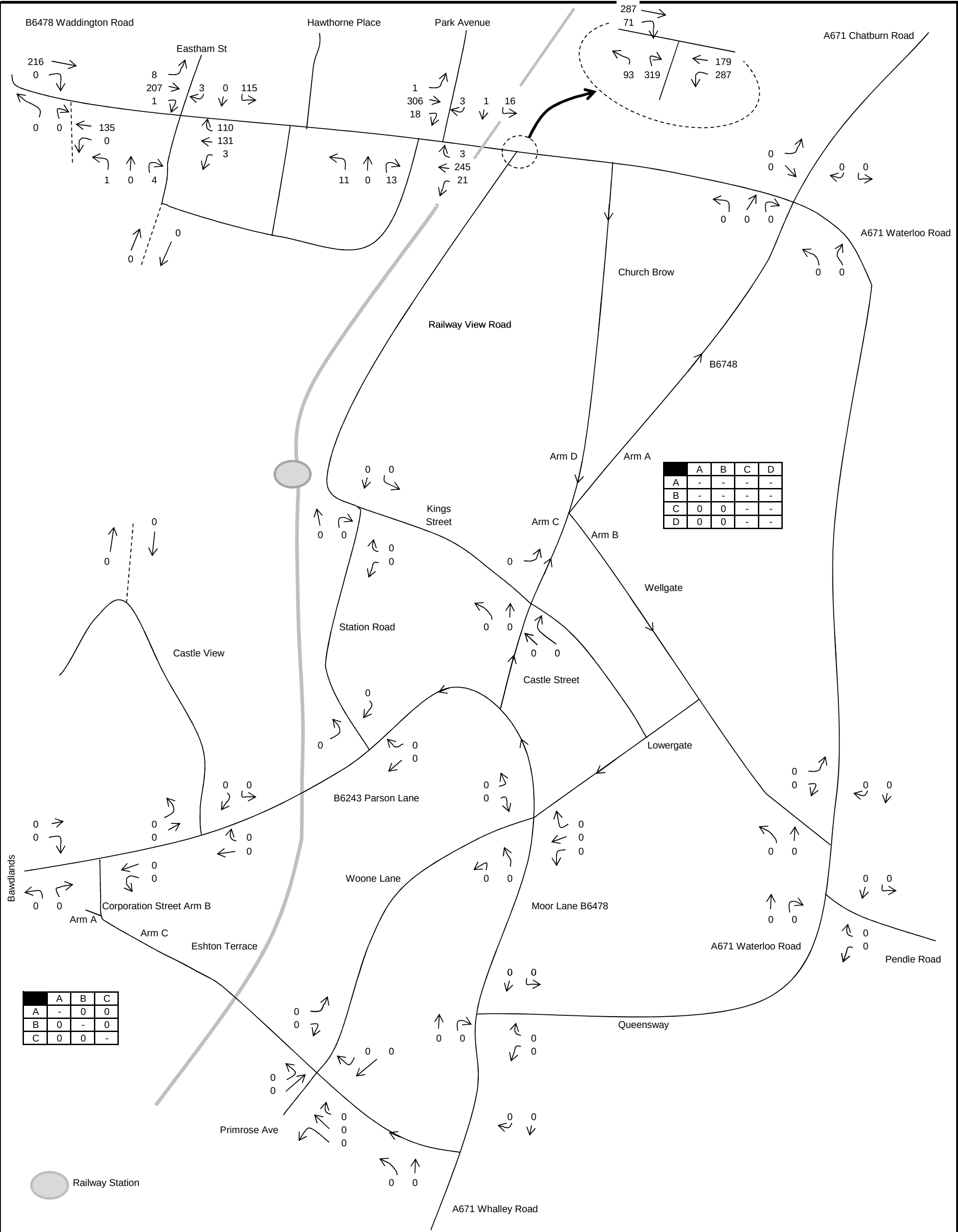


Figure: 1
Title: Maximum Vehicle Flow Movements - Derived From 2011 and 2012 Surveys - PCUs
Peak Period: AM



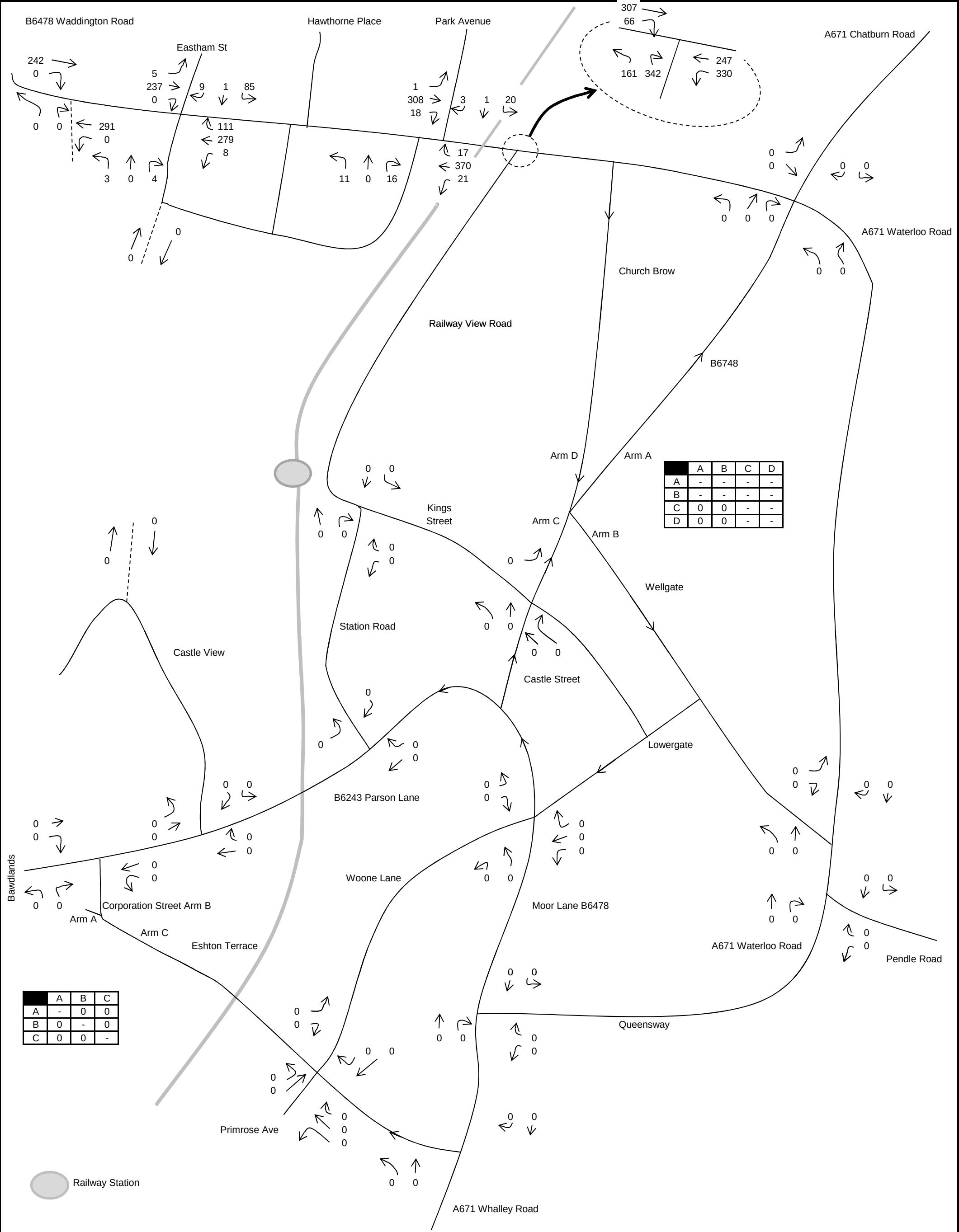


Figure: 2
Title: Maximum Vehicle Flow Movements - Derived From 2011 and 2012 Surveys - PCUs
Peak Period: PM

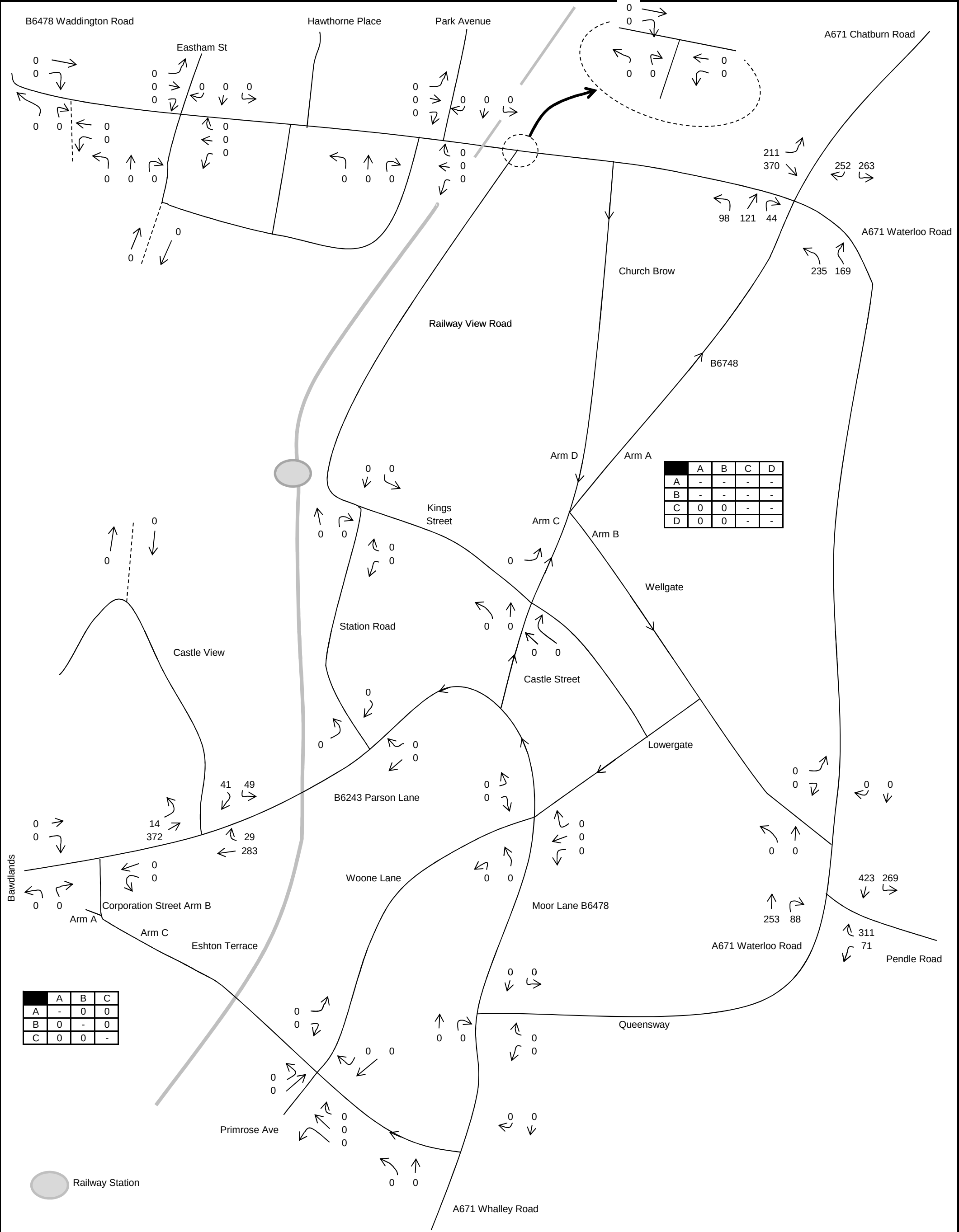


Figure: 3
Title: DTPC Sept 2012 Surveyed Flows - PCUs
Peak Period: AM



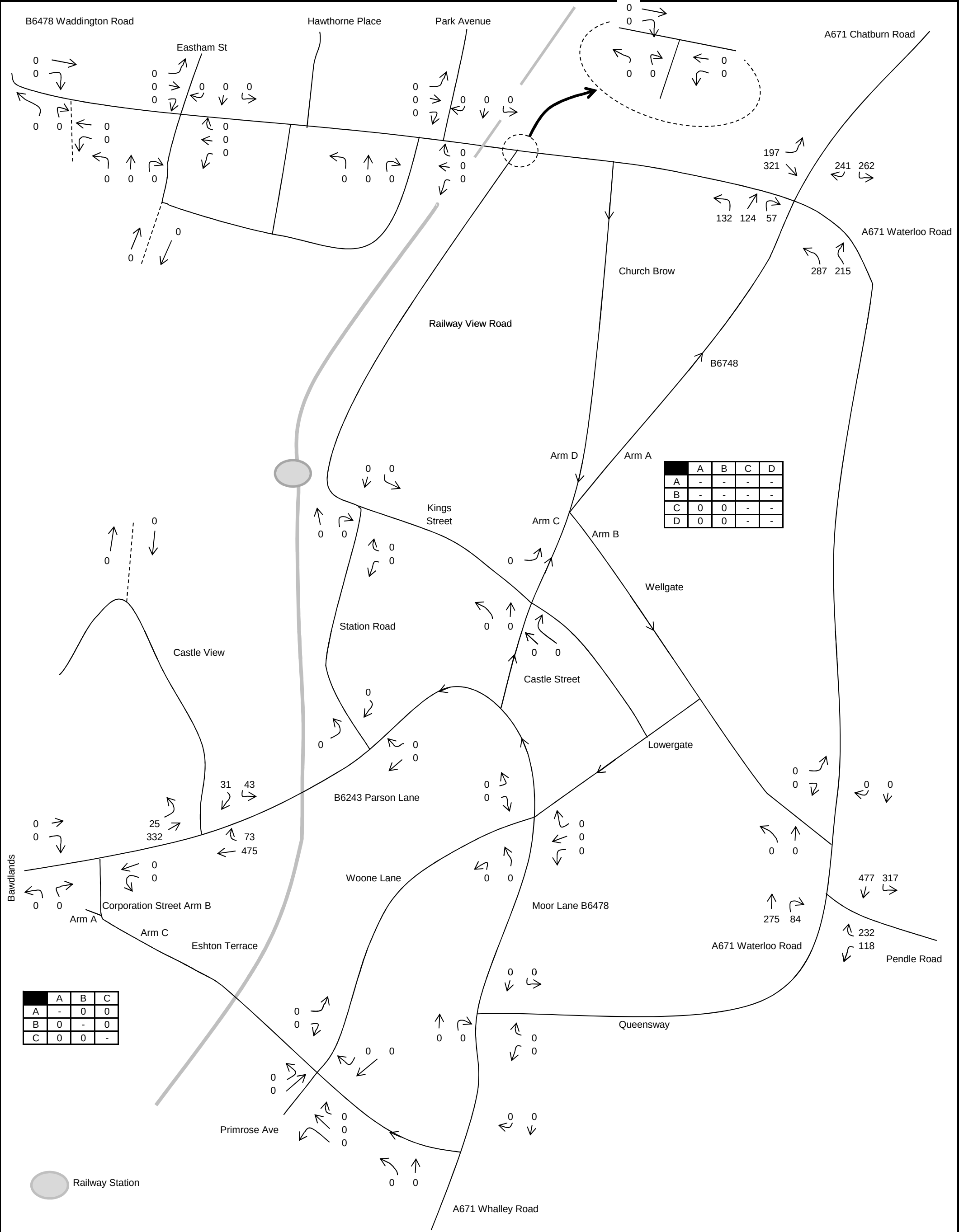


Figure: 4
Title: DTPC Sept 2012 Surveyed Flows - PCUs
Peak Period: PM



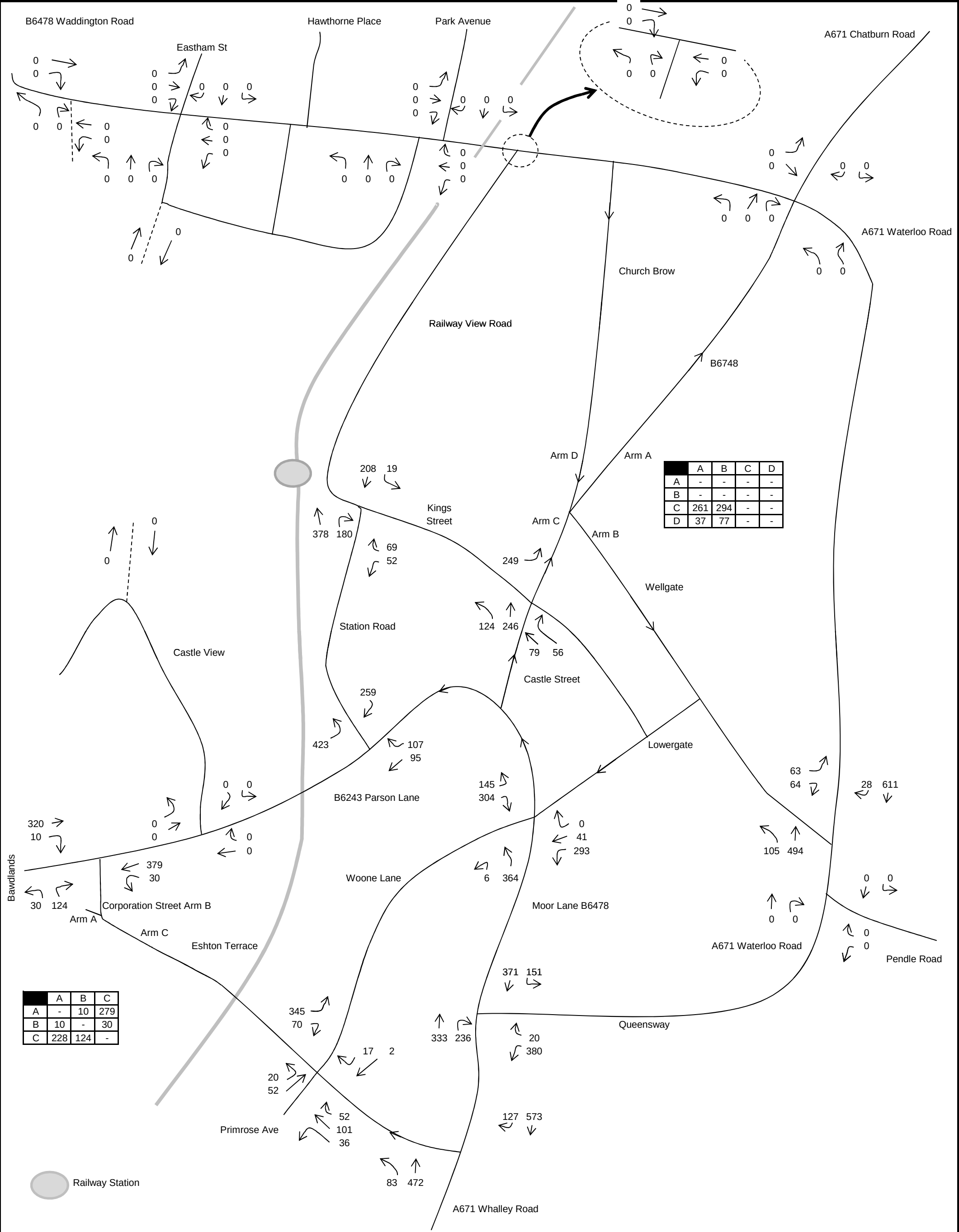


Figure: 5
Title: AHA Surveyed Flows 2010
Peak Period: AM



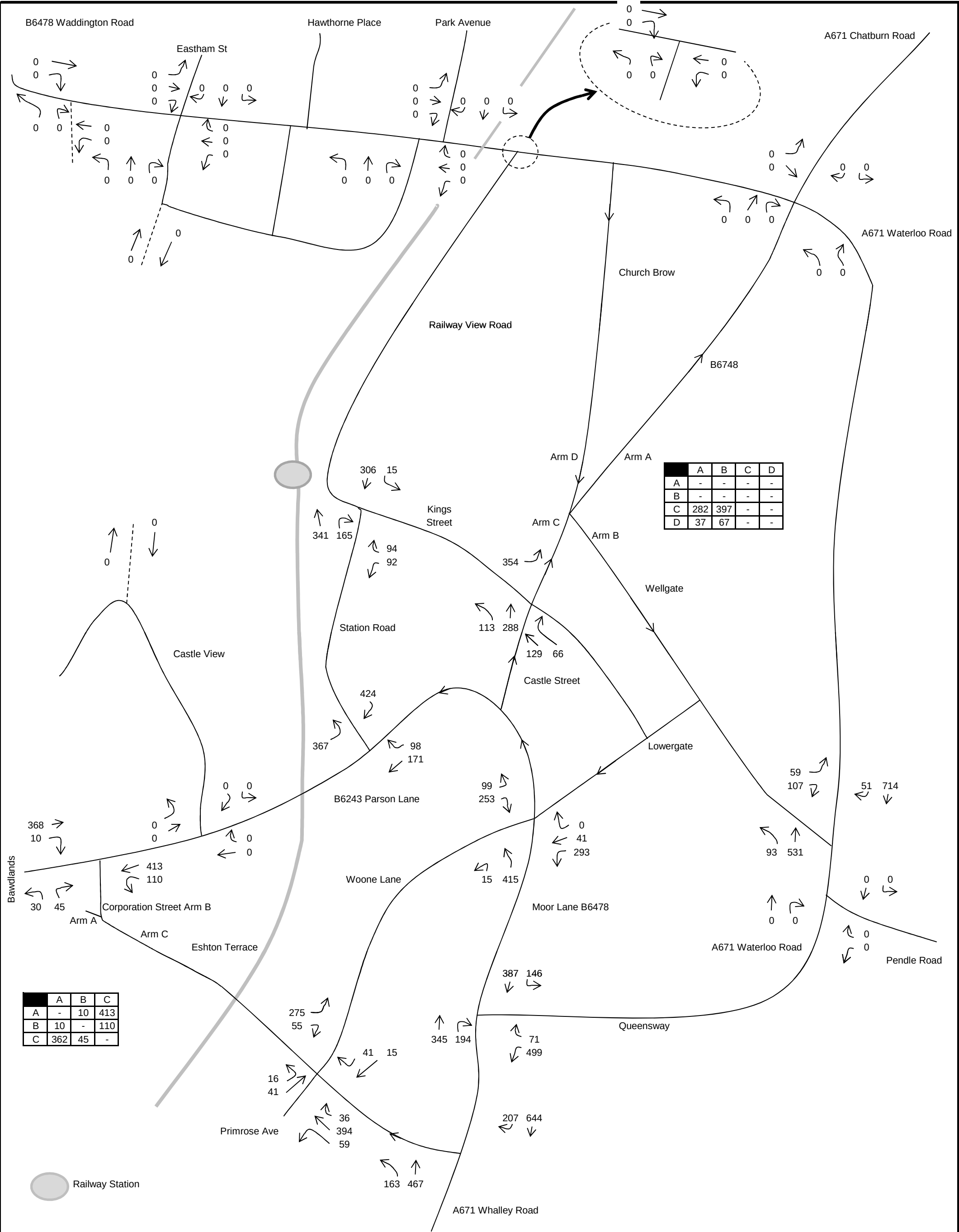


Figure: 6
Title: AHA Surveyed Flows 2010
Peak Period: PM



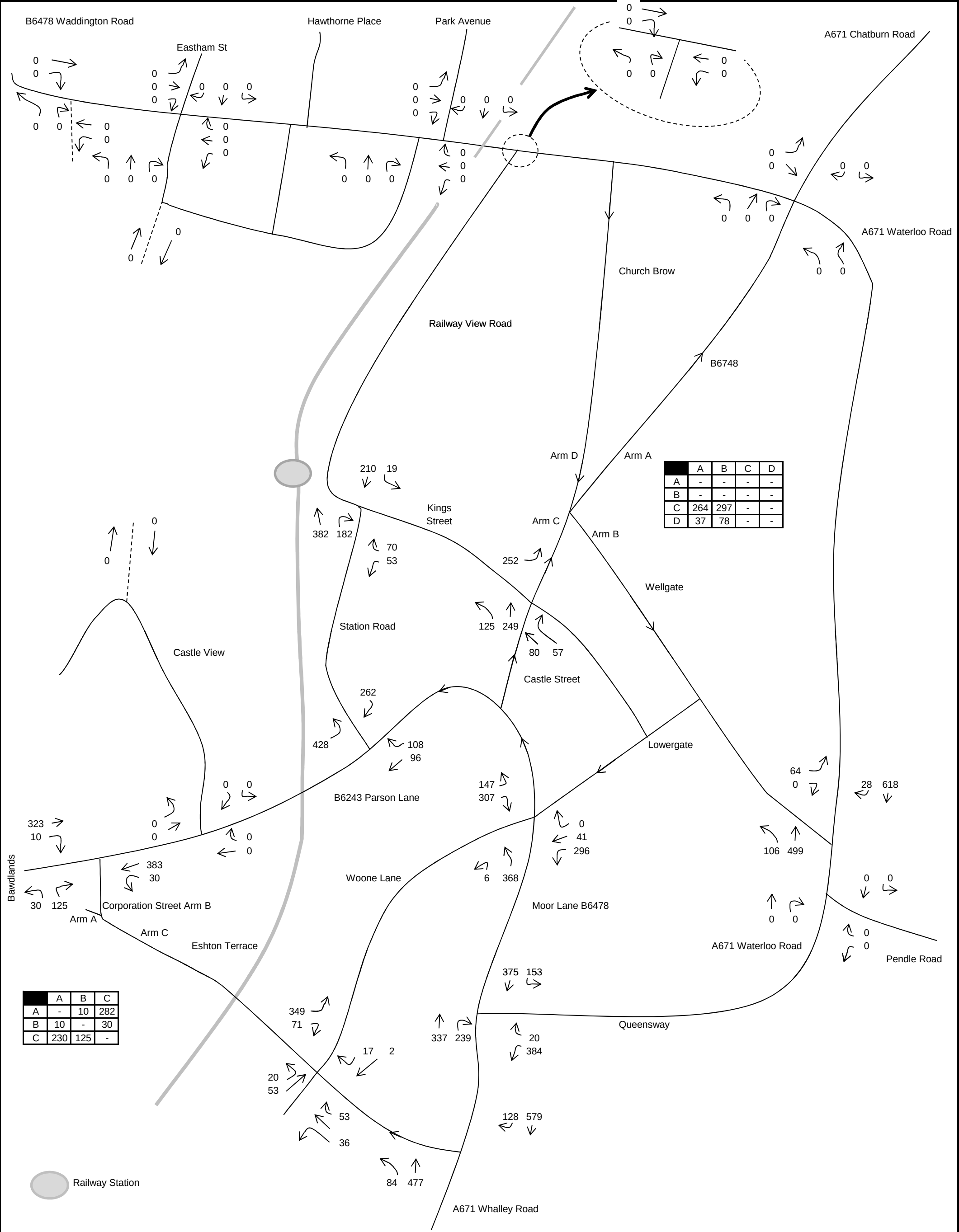


Figure: 7
Title: AHA Surveyed Flows Factored to 2012
Peak Period: AM



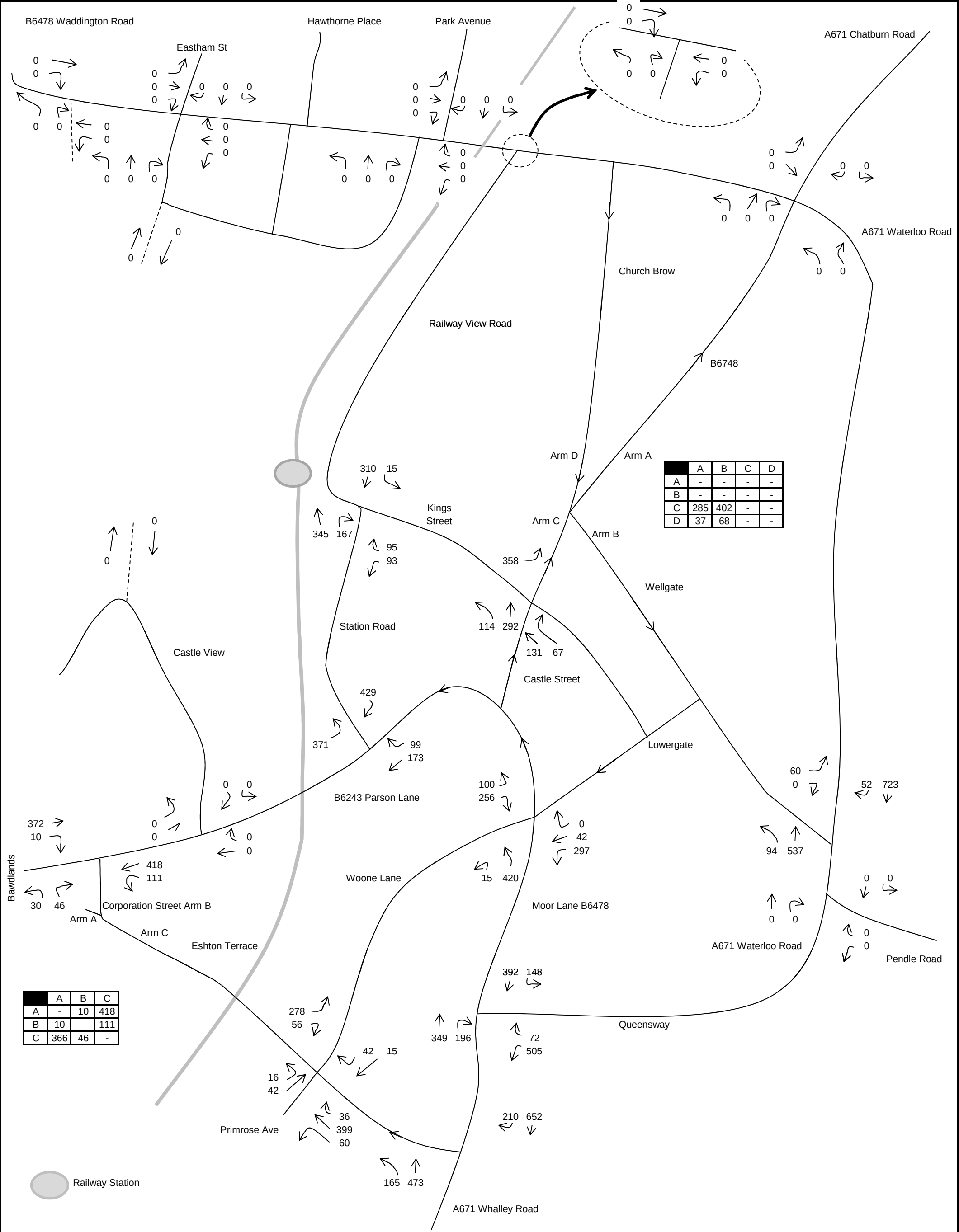


Figure: 8
Title: AHA Surveyed Flows Factored to 2012
Peak Period: PM



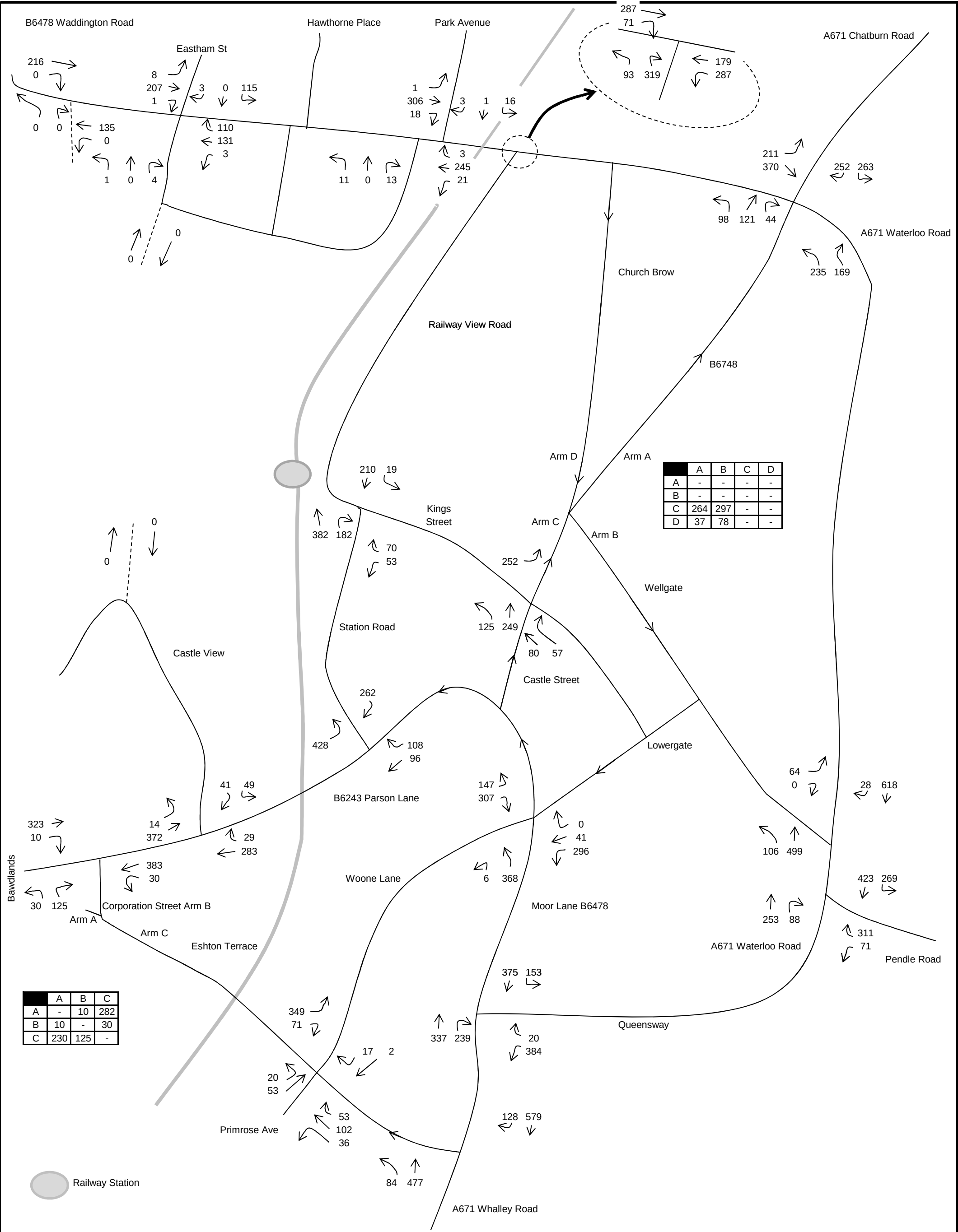


Figure: 9
Title: Combined Surveyed Network Flows 2012
Peak Period: AM



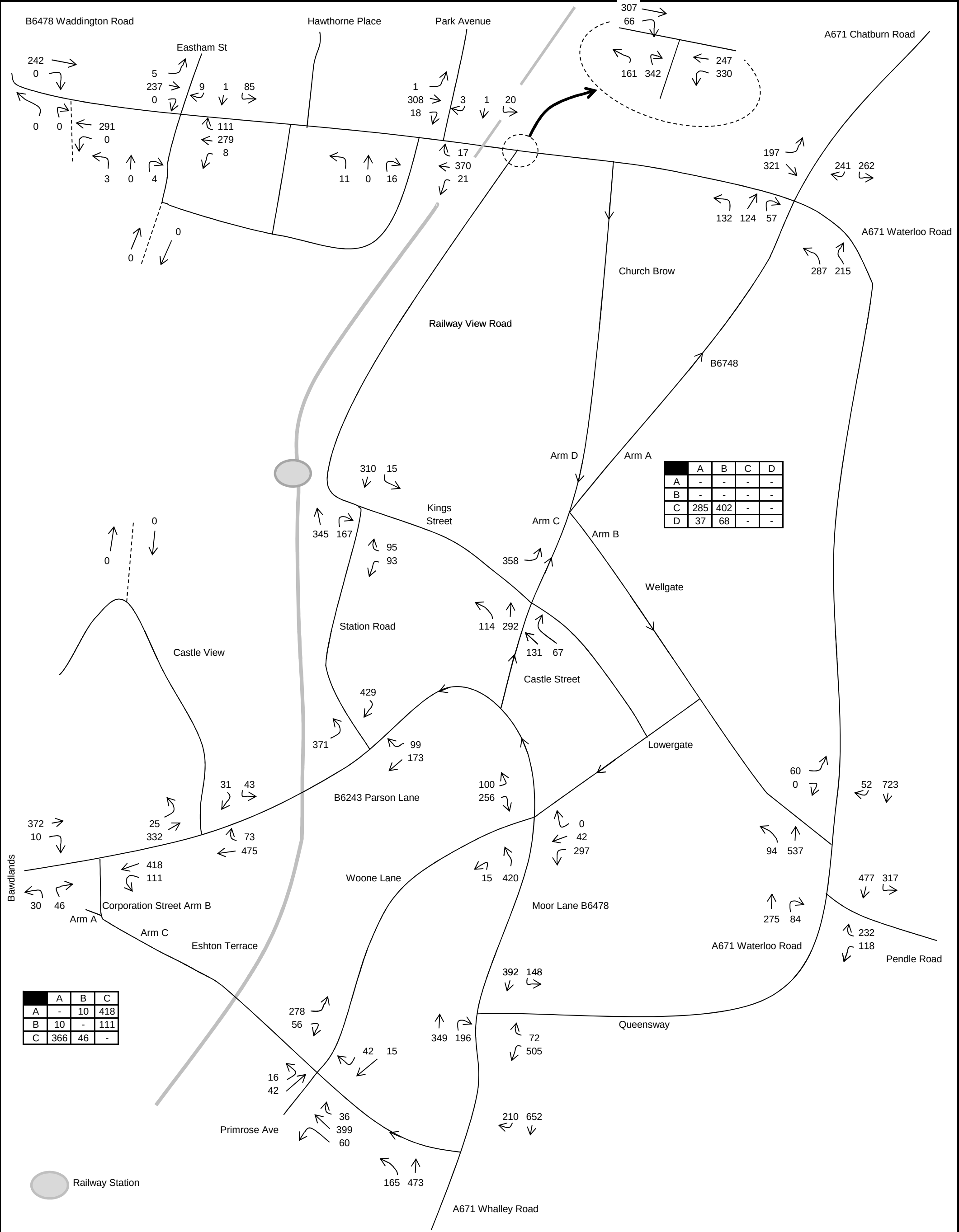


Figure: 10
Title: Combined Surveyed Network Flows 2012
Peak Period: PM



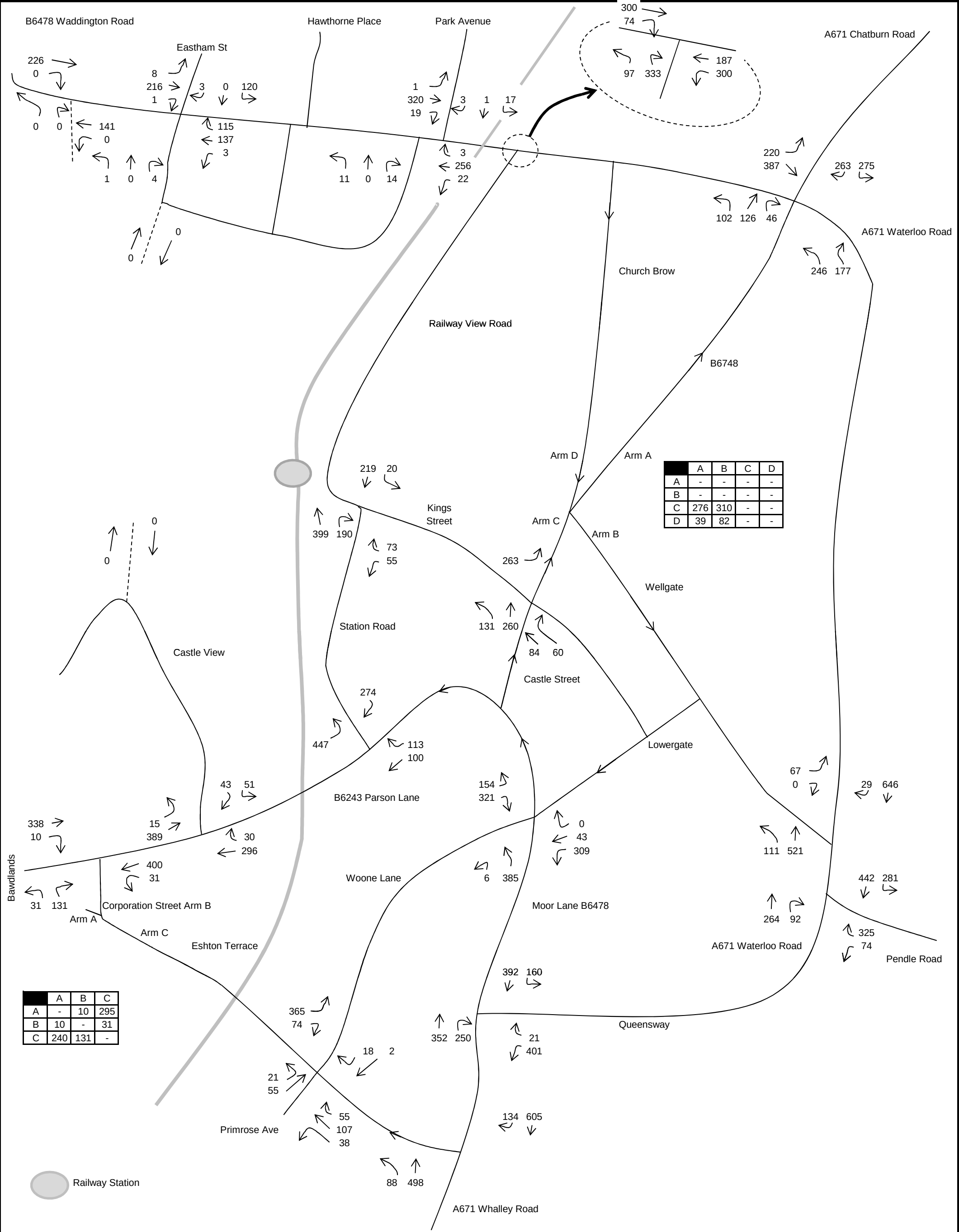


Figure: 11
Title: 2012 Surveyed Flows Grown to 2017 - PCUs
Peak Period: AM



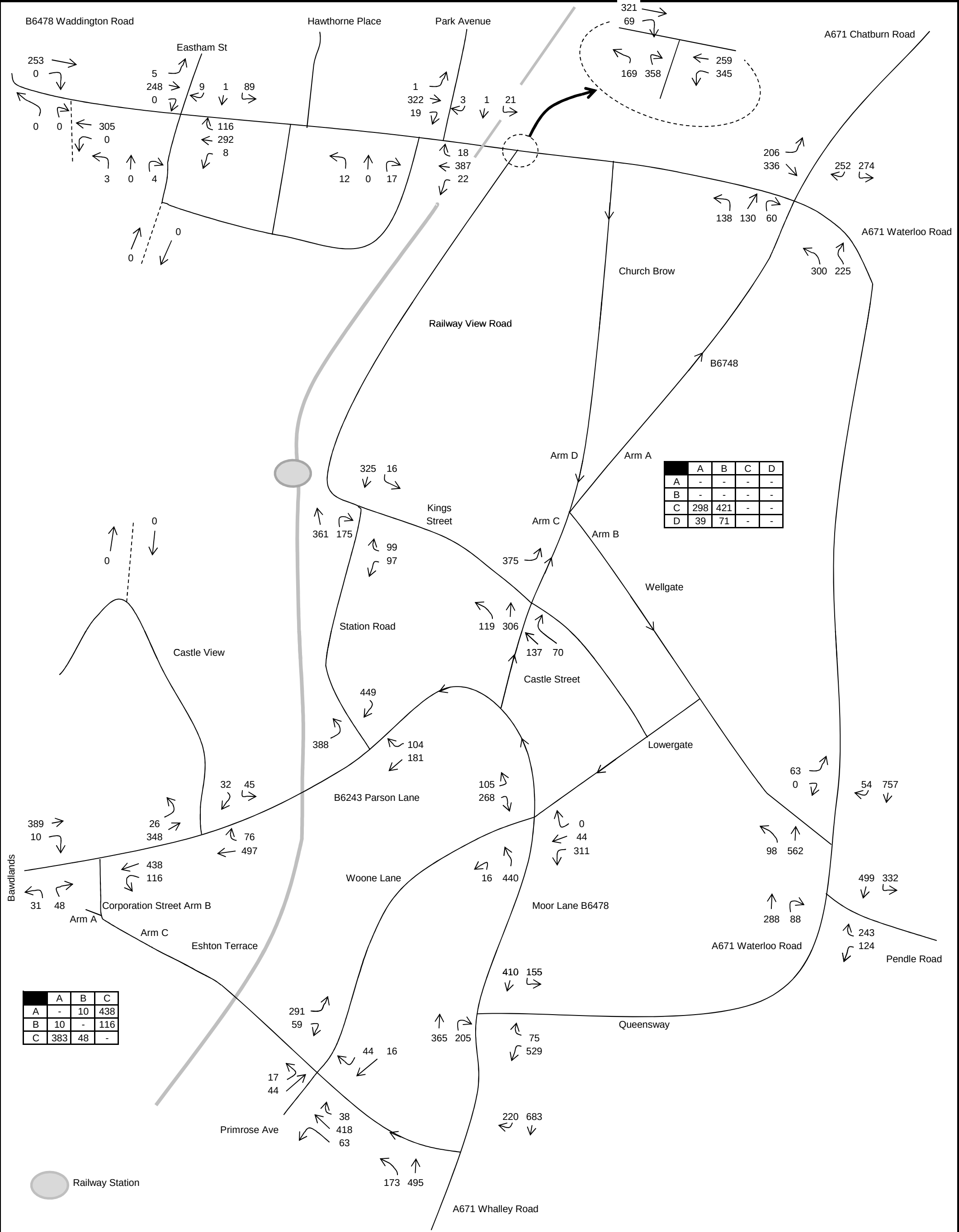


Figure: 12
Title: 2012 Surveyed Flows Grown to 2017 - PCUs
Peak Period: PM



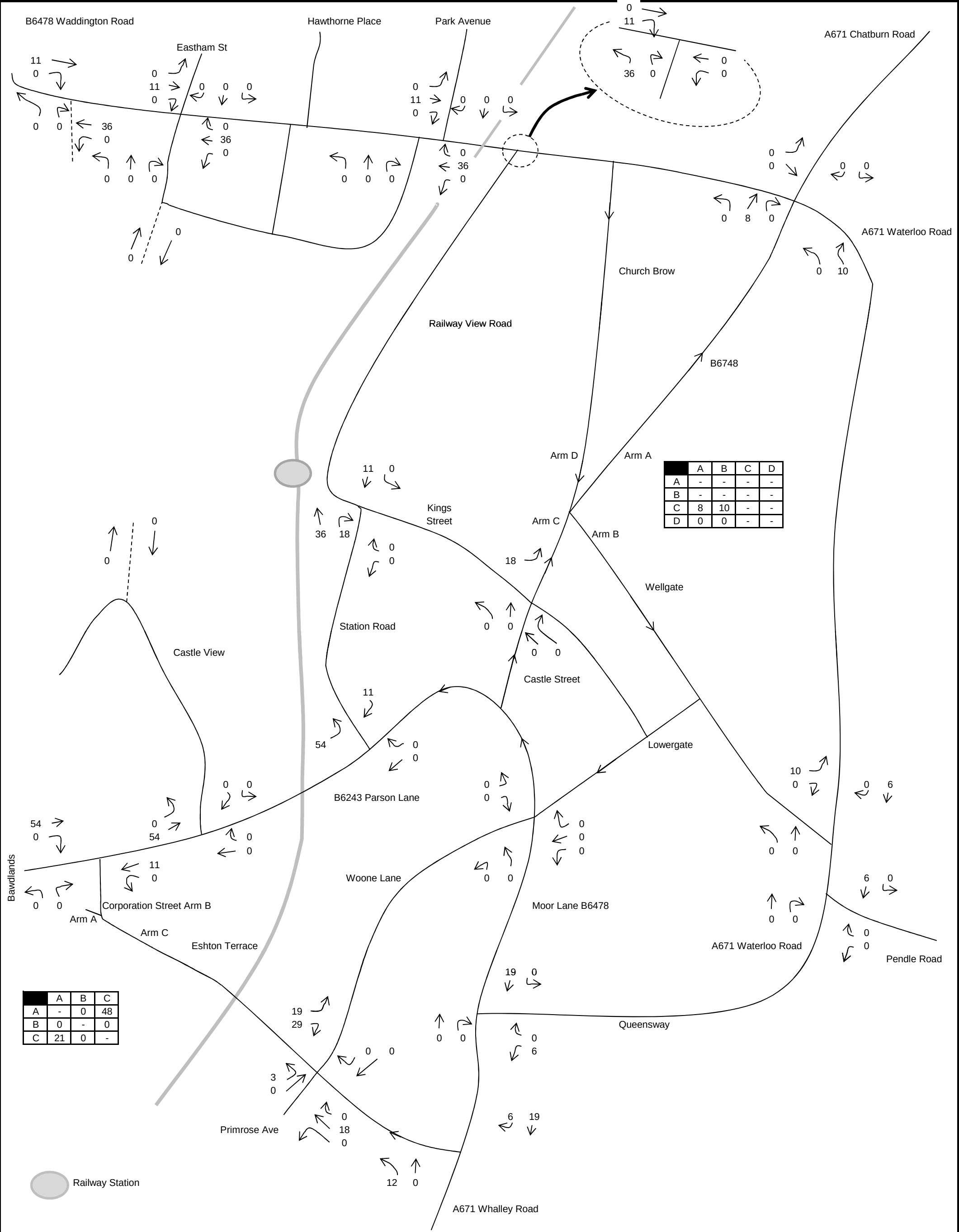


Figure: 13
Title: Henthorn Road Committed Development
Peak Period: AM



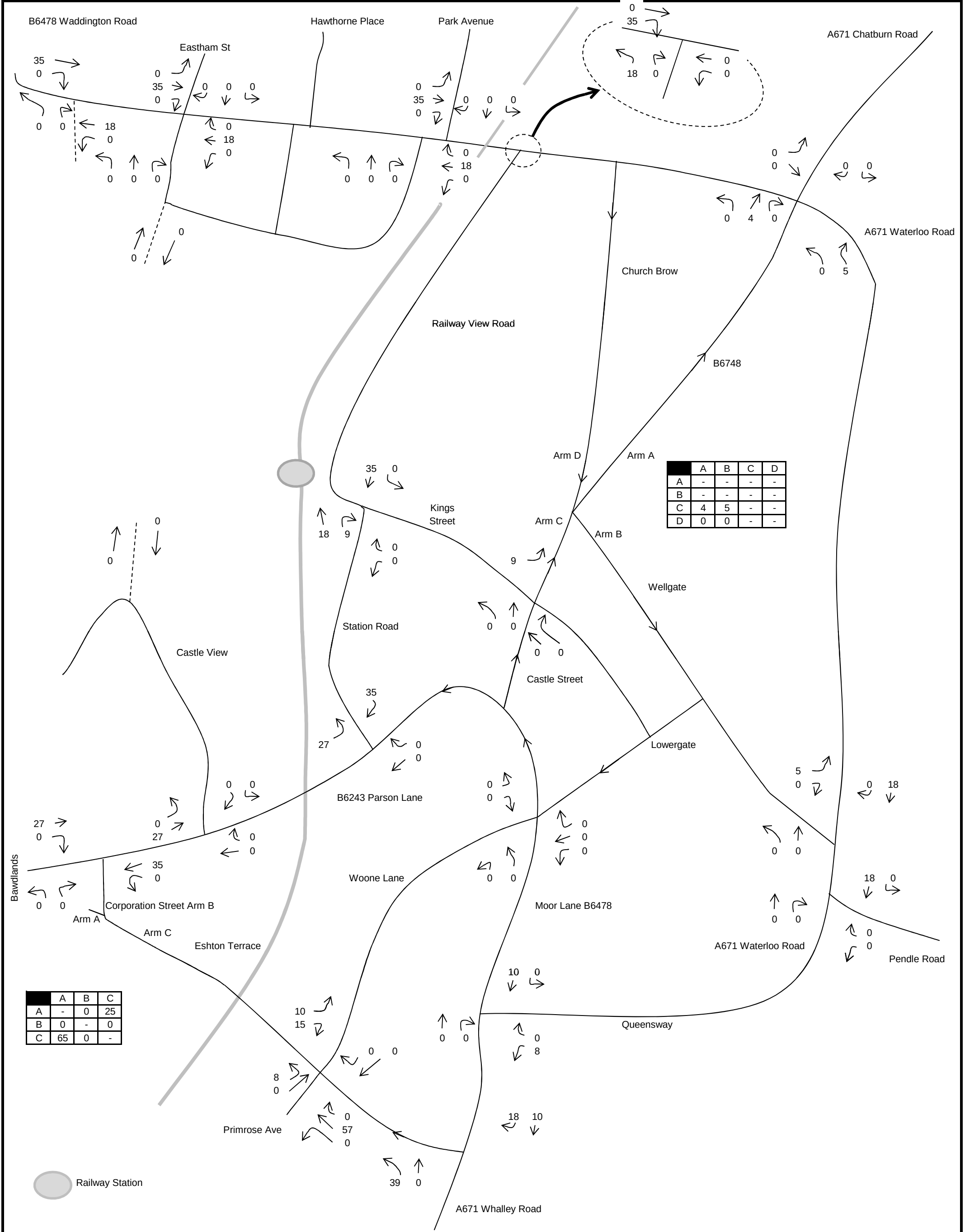


Figure: 14
Title: Henthorn Road Committed Development
Peak Period: PM



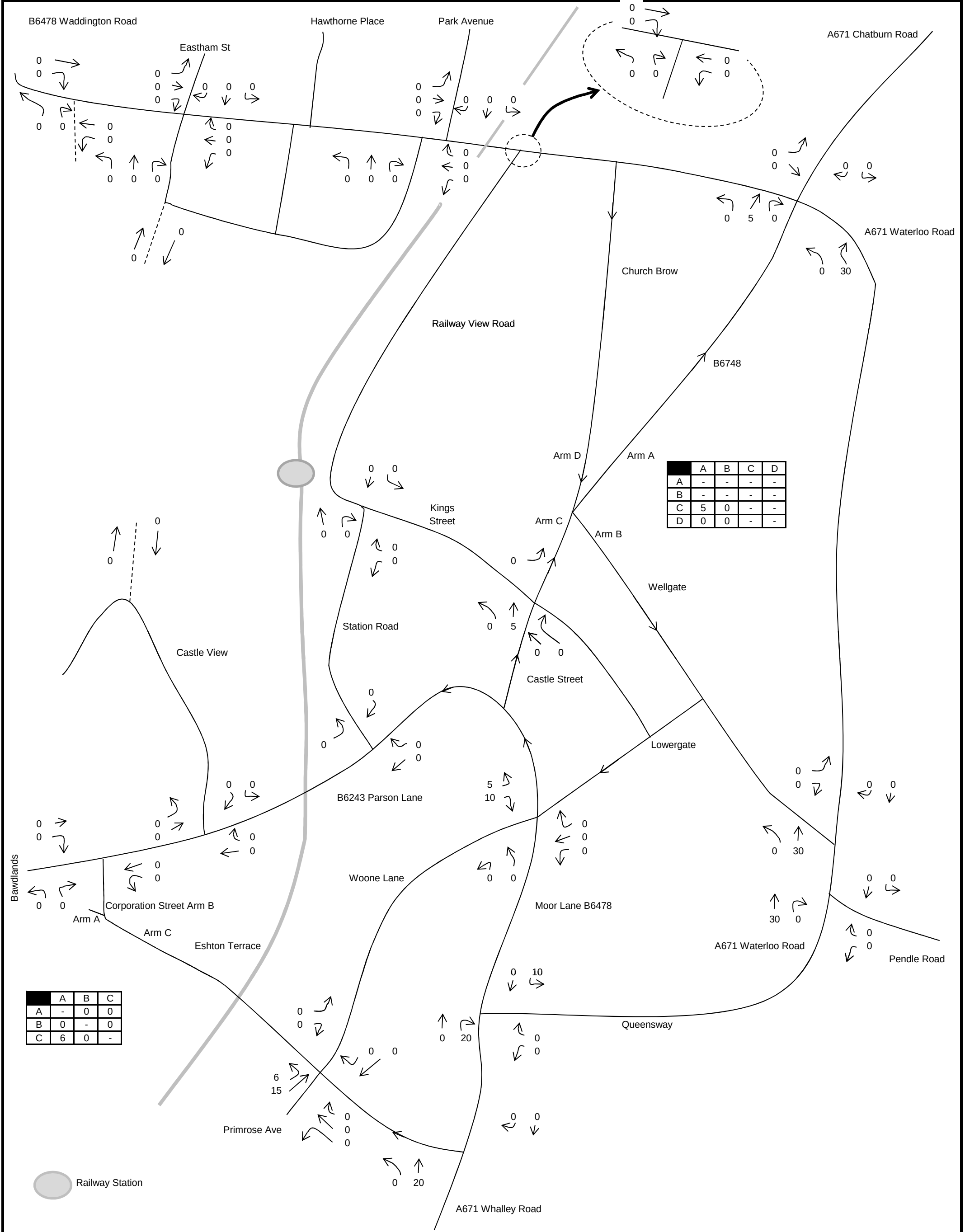


Figure: 15
Title: Primrose Avenue Committed Development as Denoted by AHA Transport Assessment
Peak Period: AM



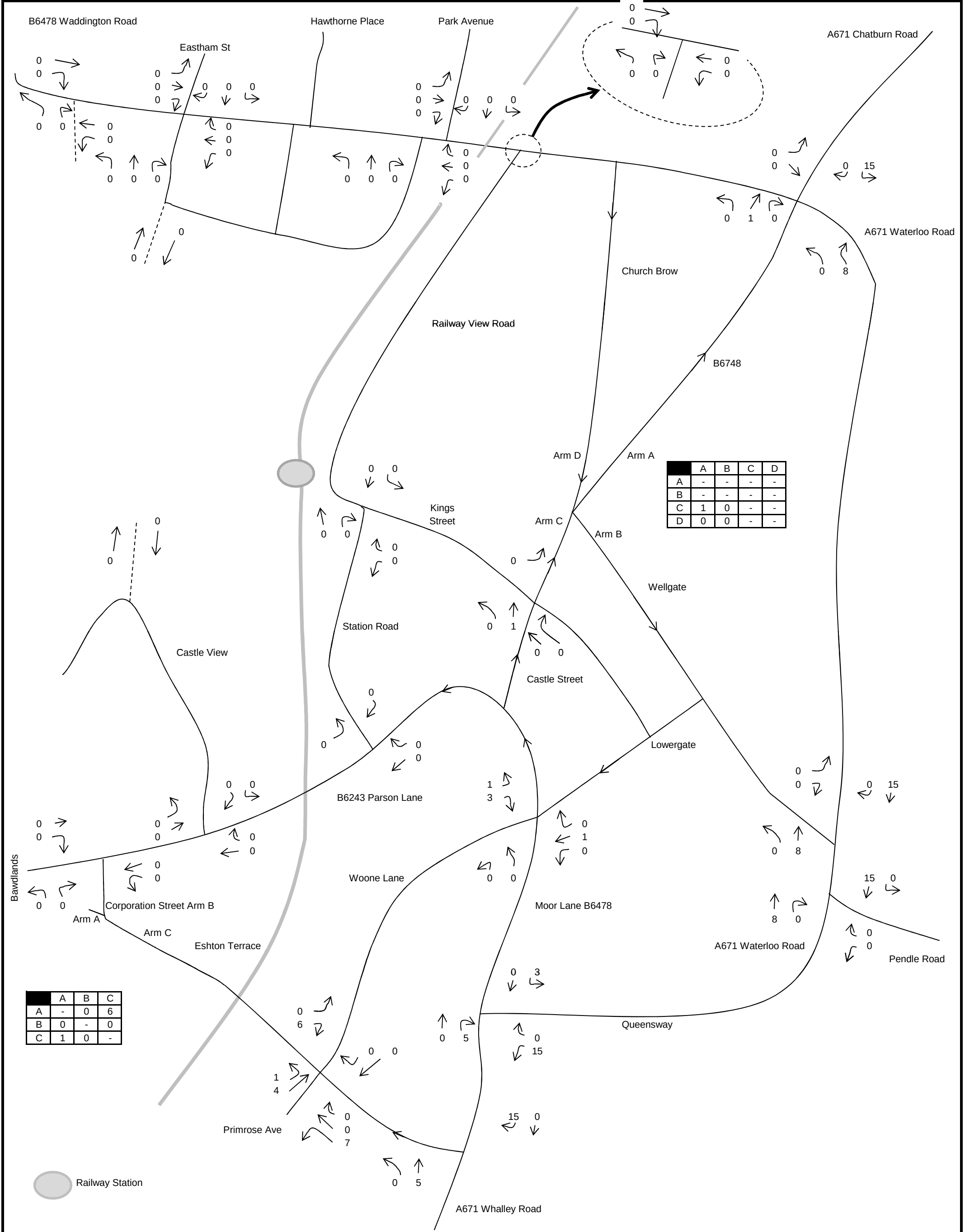


Figure: 16
Title: Primrose Avenue Committed Development as Denoted by AHA Transport Assessment
Peak Period: PM



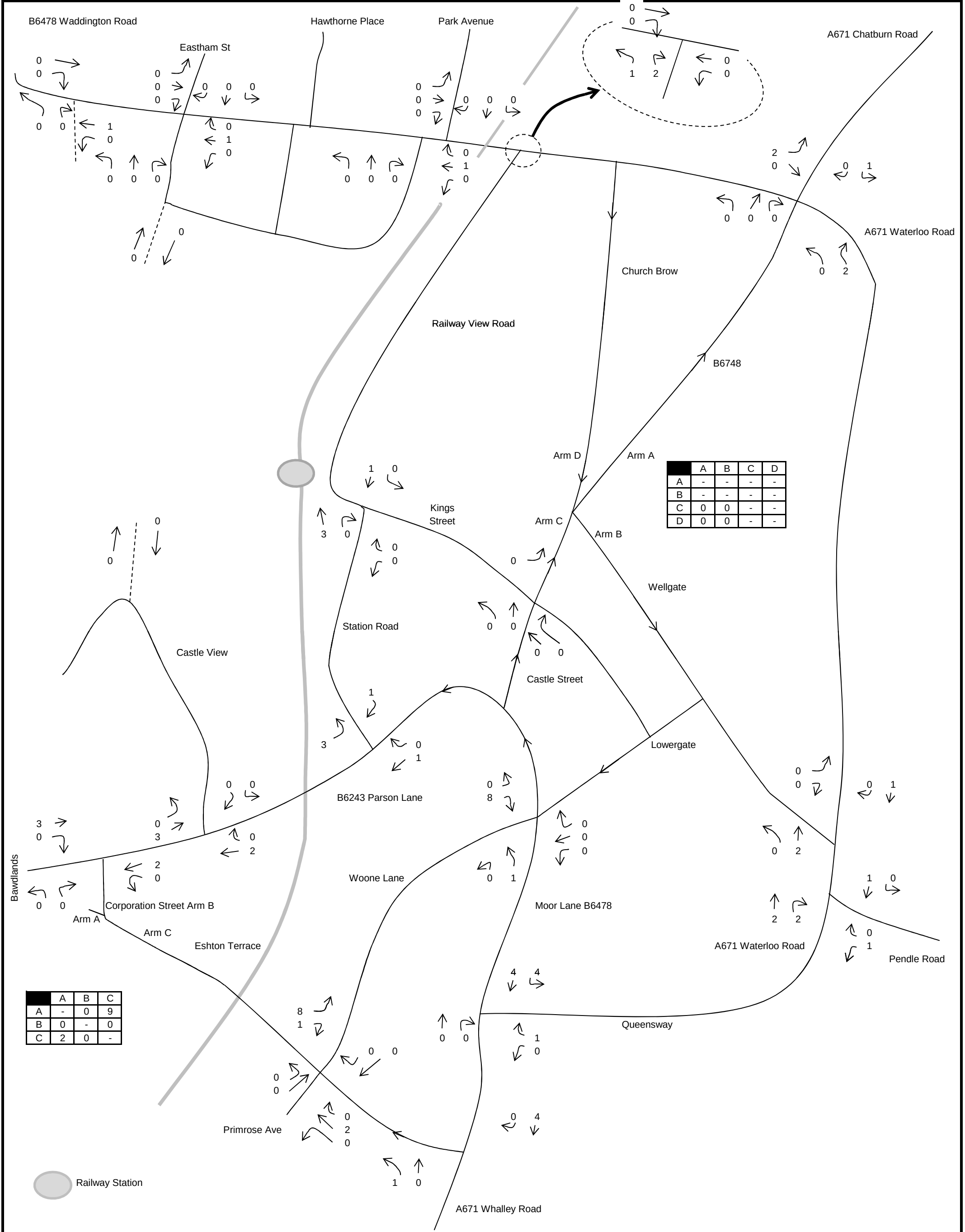


Figure: 17
Title: Union Street Trips 30 Residential Dwellings
Peak Period: AM

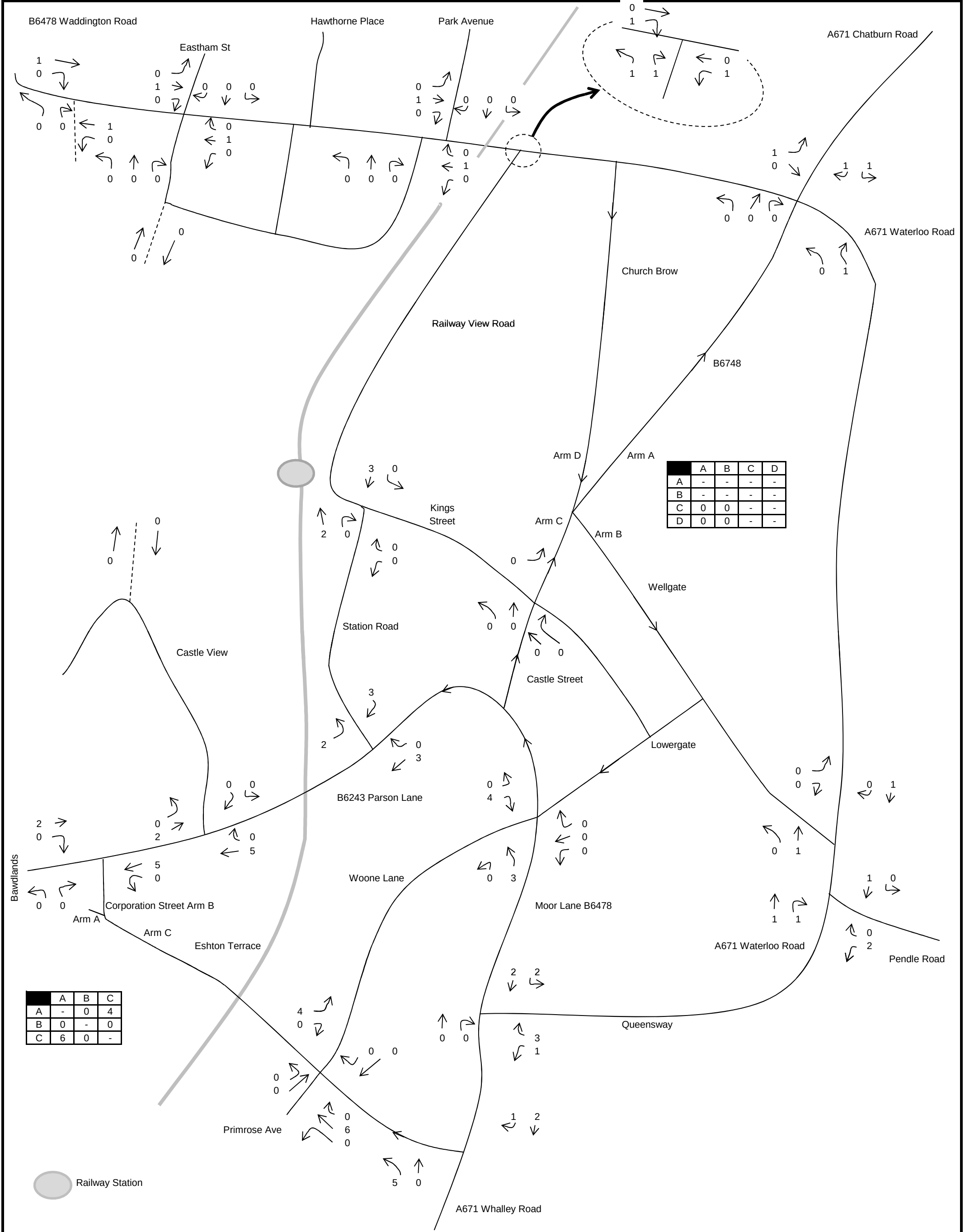


Figure: 18
Title: Union Street Trips 30 Residential Dwellings
Peak Period: PM

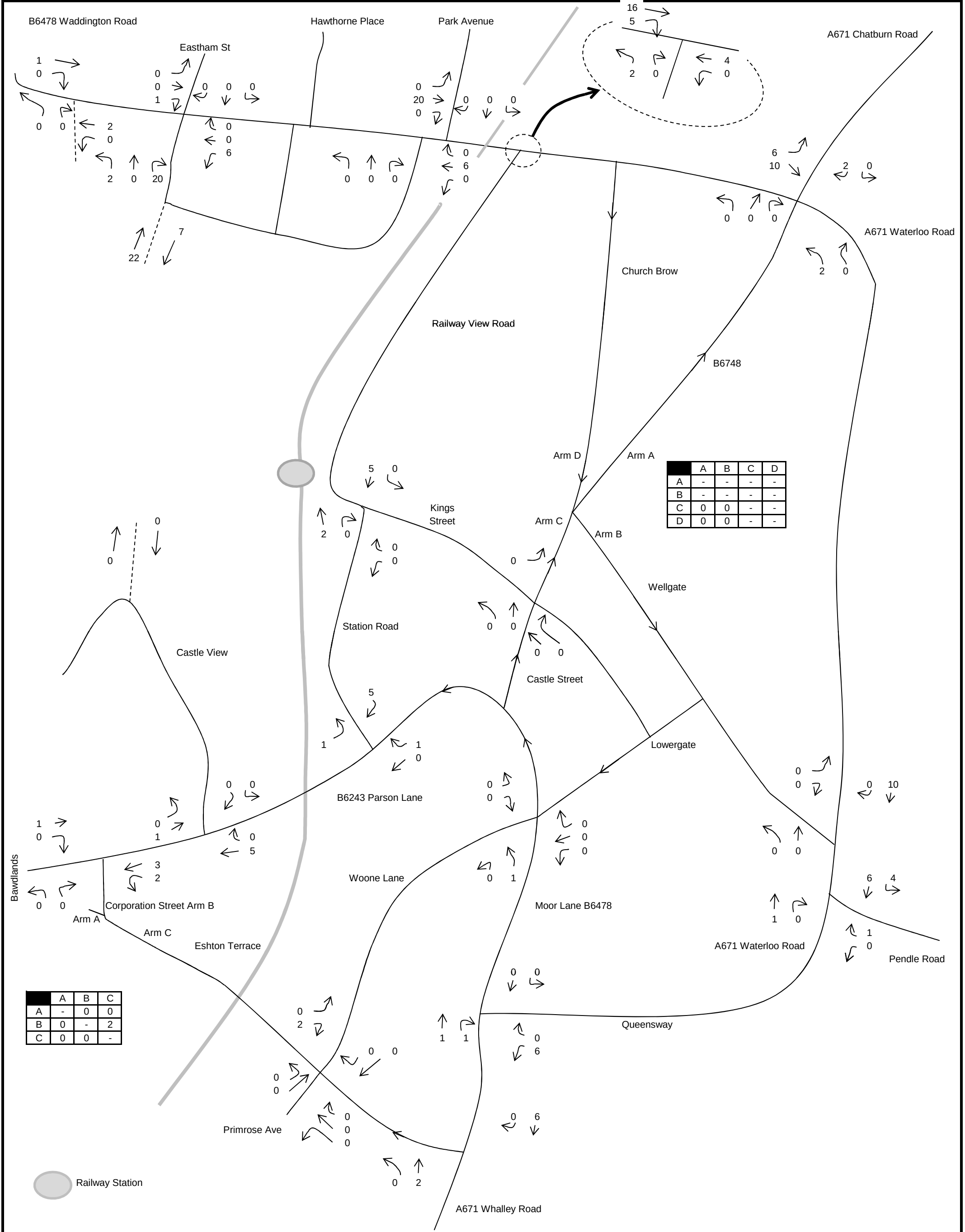
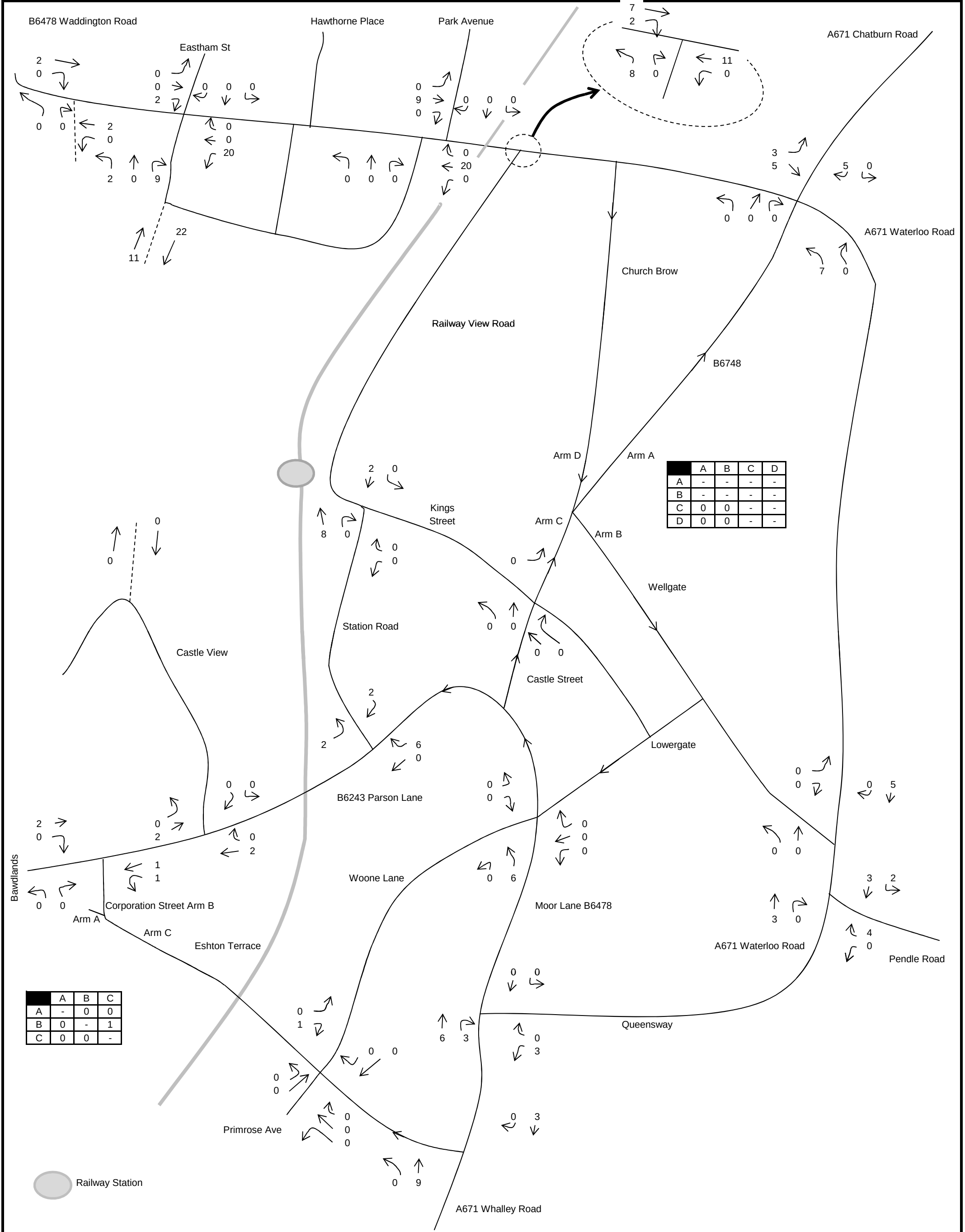


Figure: 19
Title: Committed Phase 1 Development Flows - 50 Dwellings
Peak Period: AM



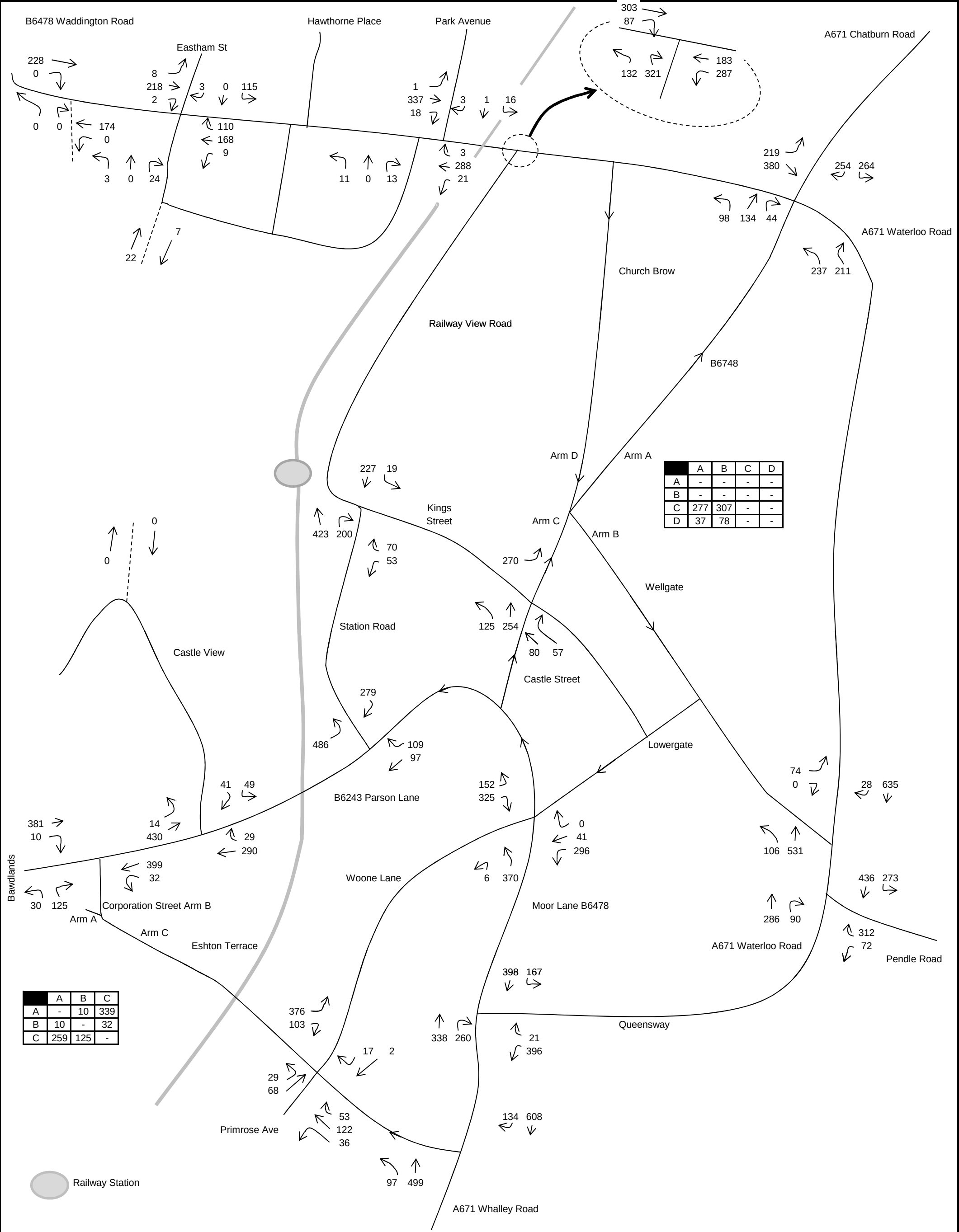


Figure: 21
Title: 2012 Base Flows
Peak Period: AM



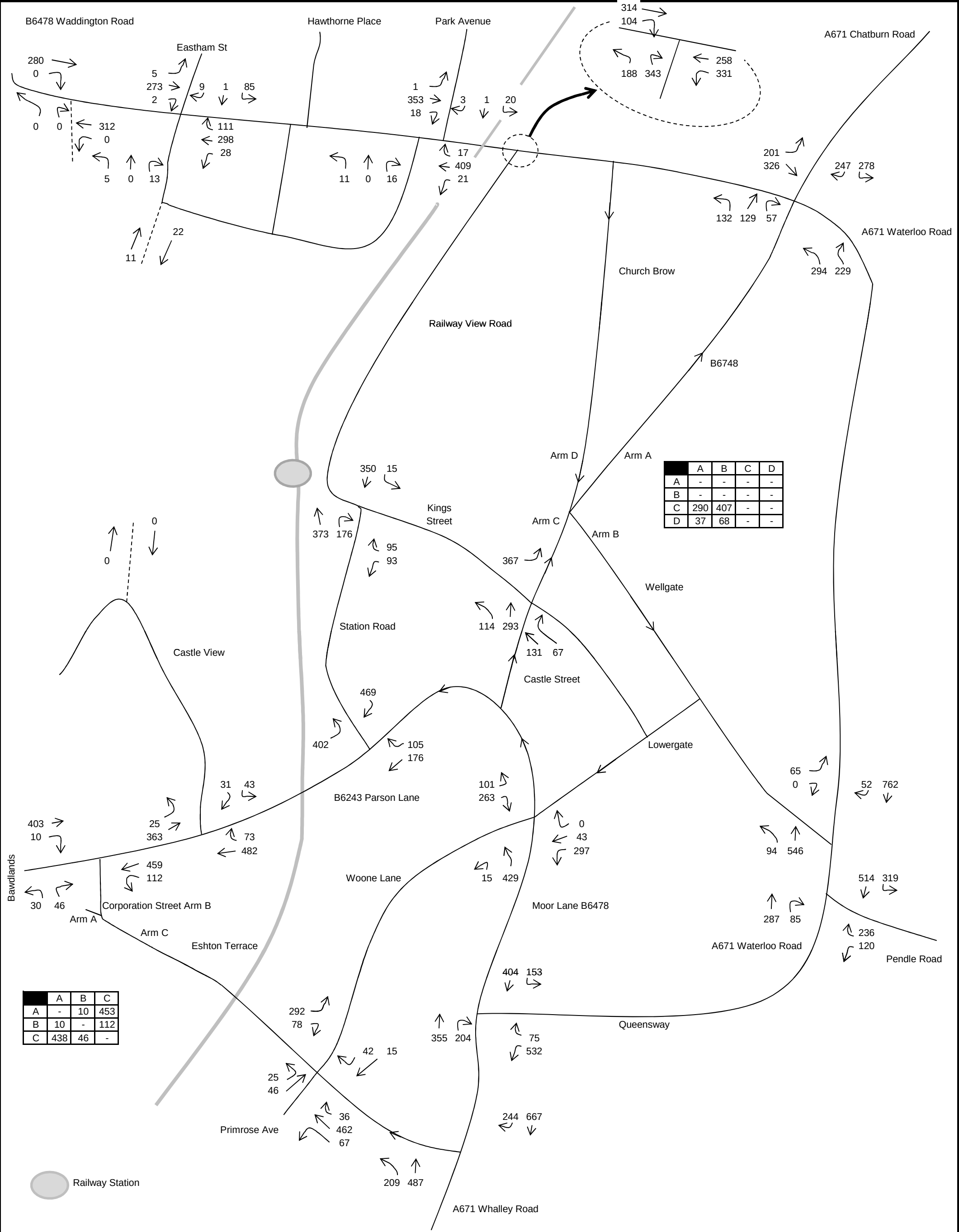


Figure: 22
Title: 2012 Base Flows
Peak Period: PM

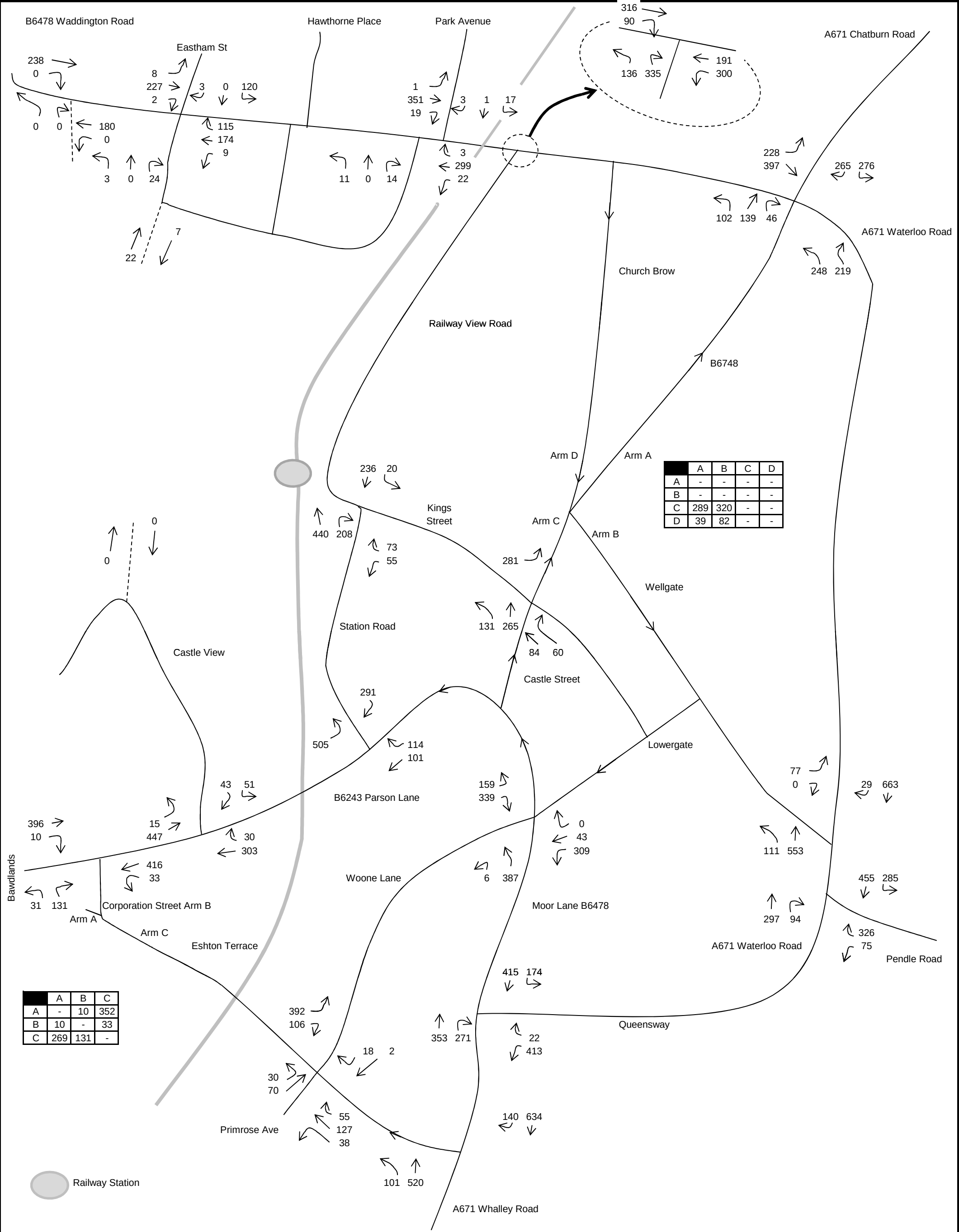


Figure: 23
Title: 2017 Base Flows
Peak Period: AM

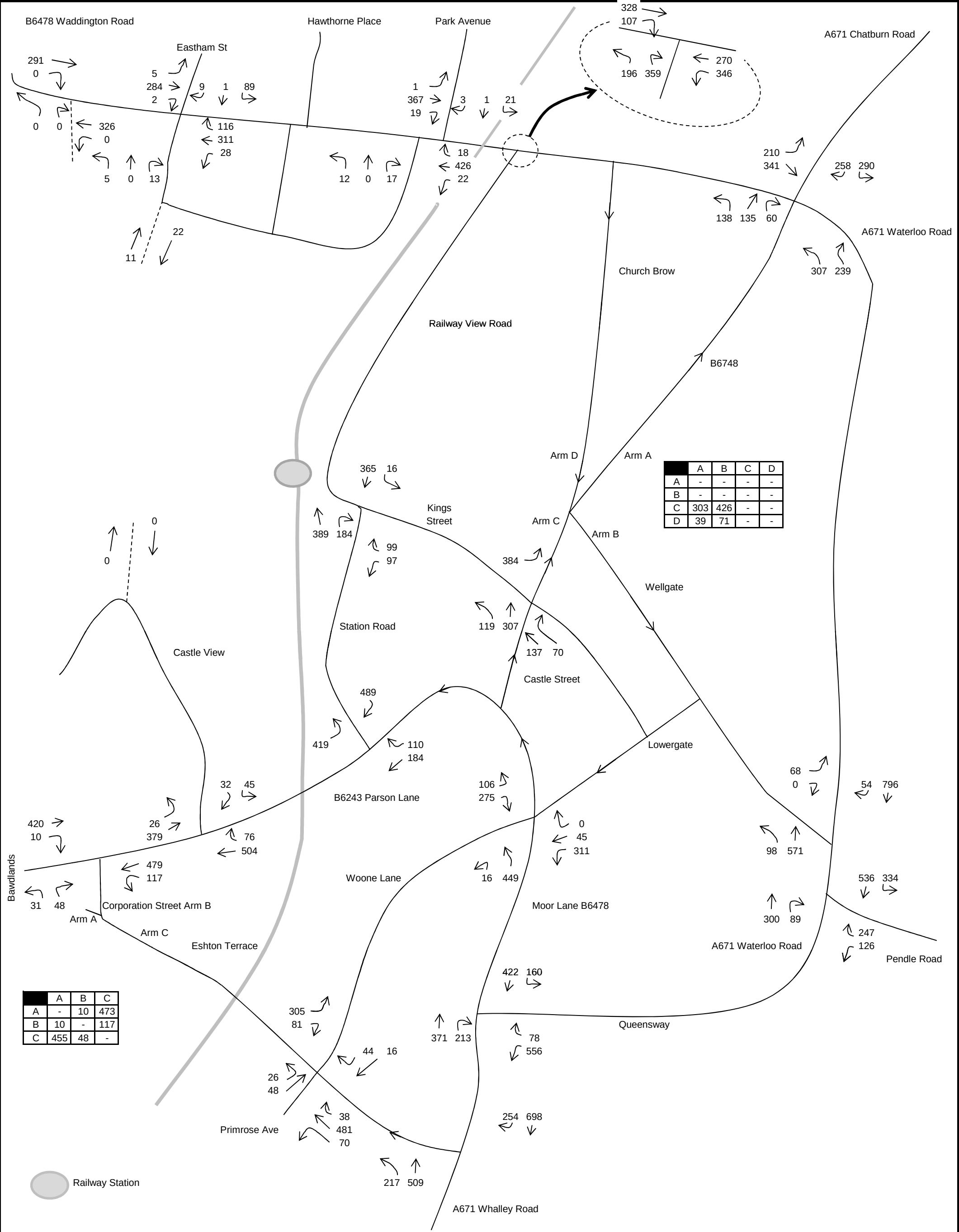


Figure: 24
Title: 2017 Base Flows
Peak Period: PM

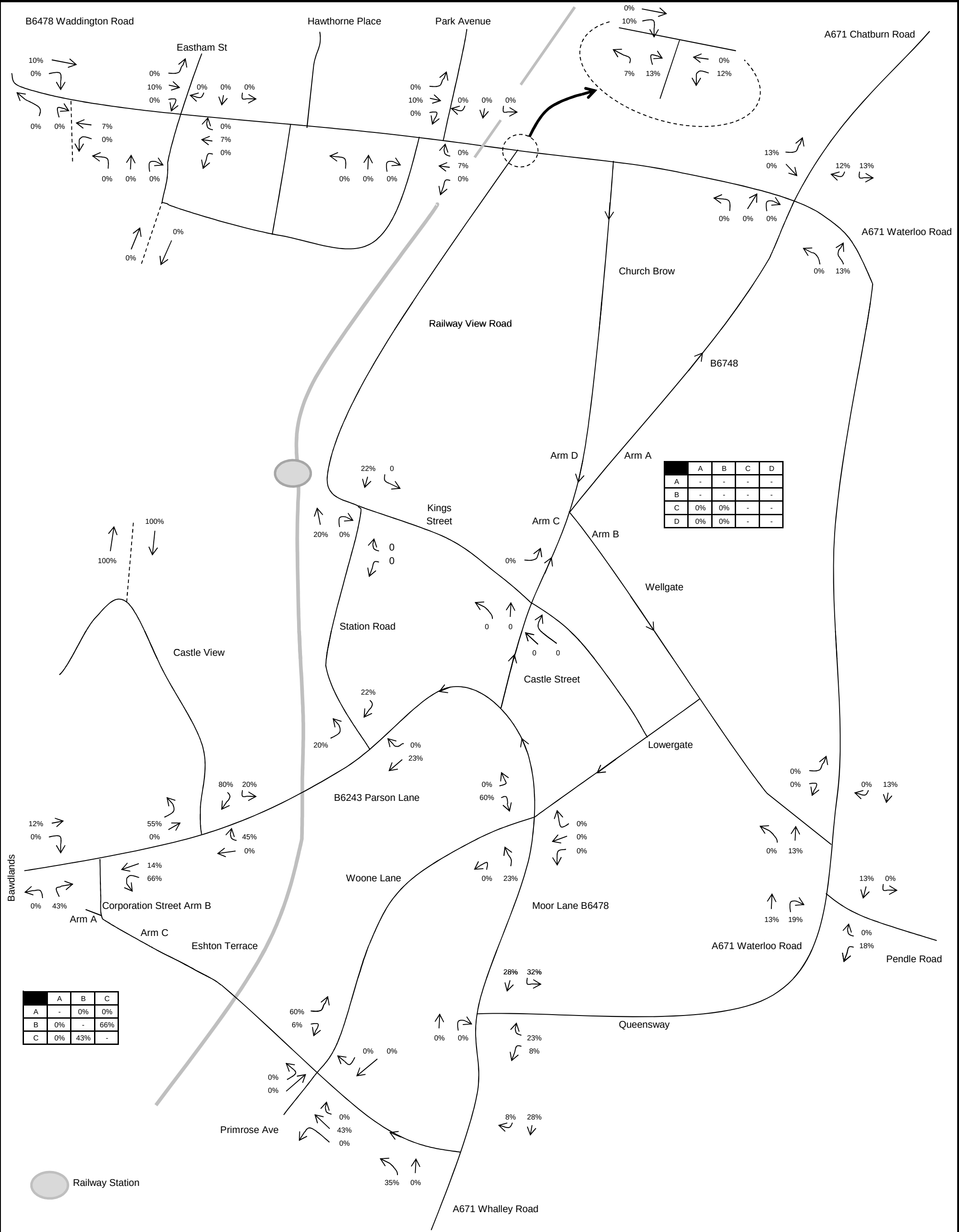


Figure: 25
Title: Castle View Access Development Distribution
Peak Period: AM



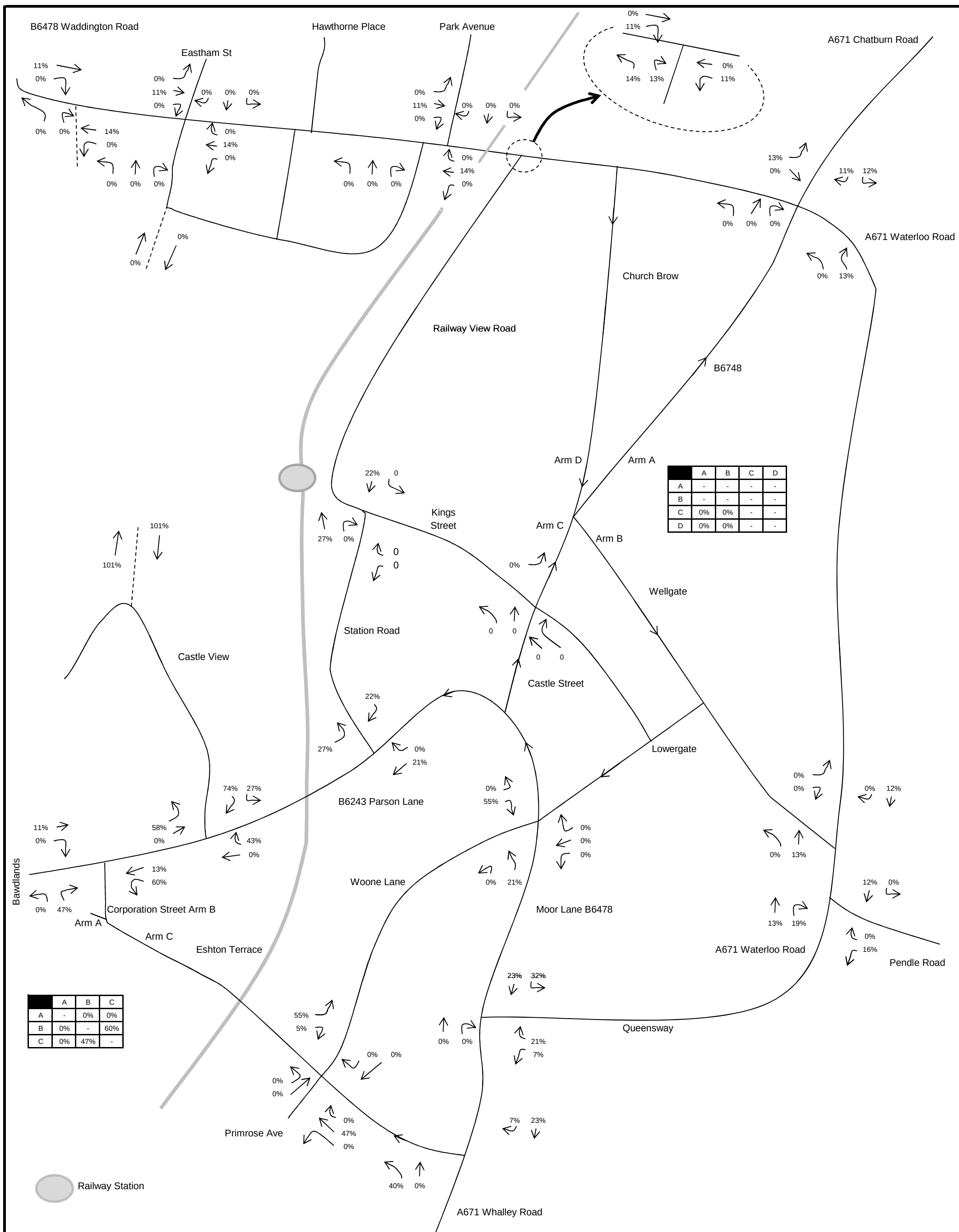


Figure: 26
Title: Castle View Access Development Distribution

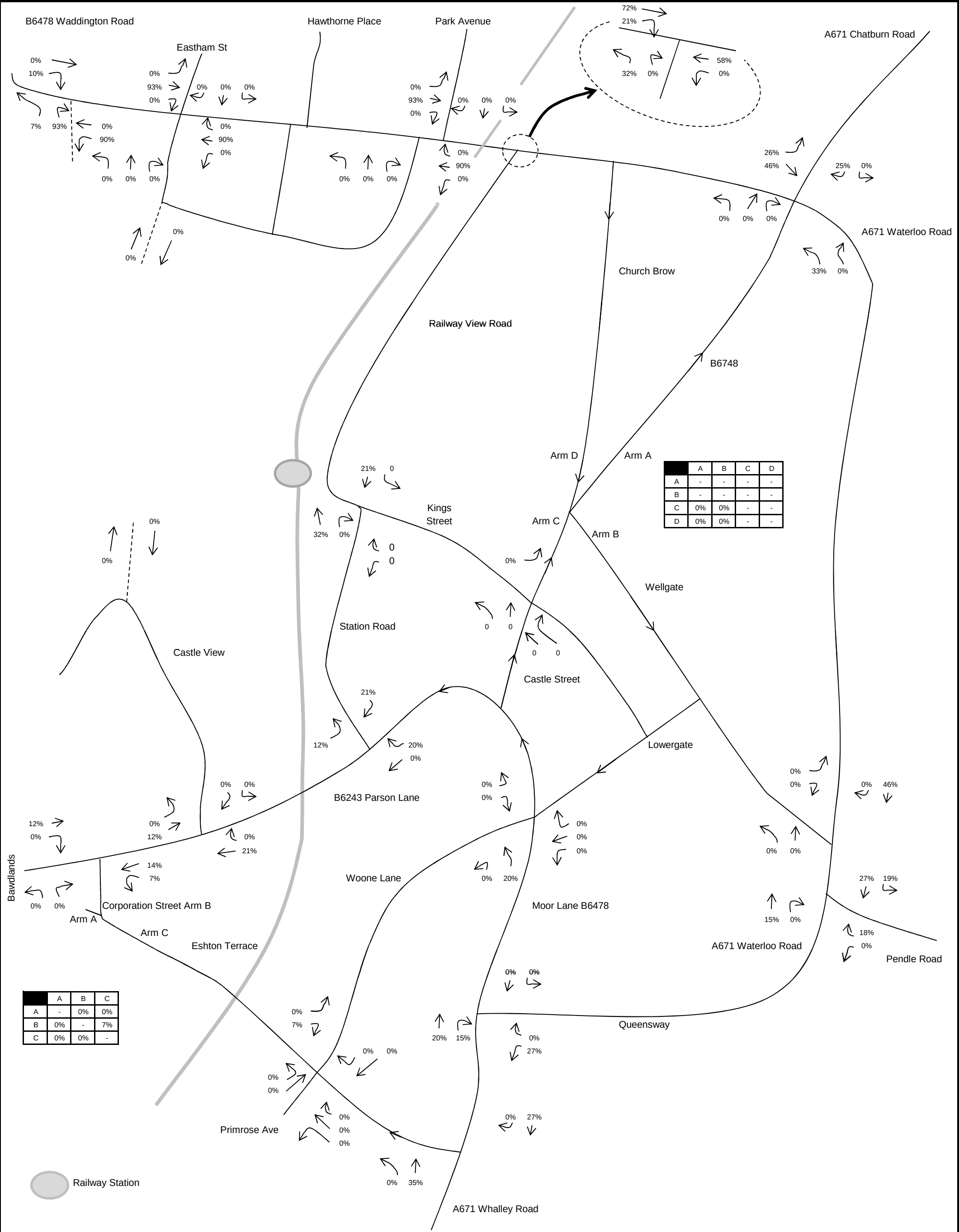


Figure: 27
Title: Waddington Road Site Access Distribution
Peak Period: AM



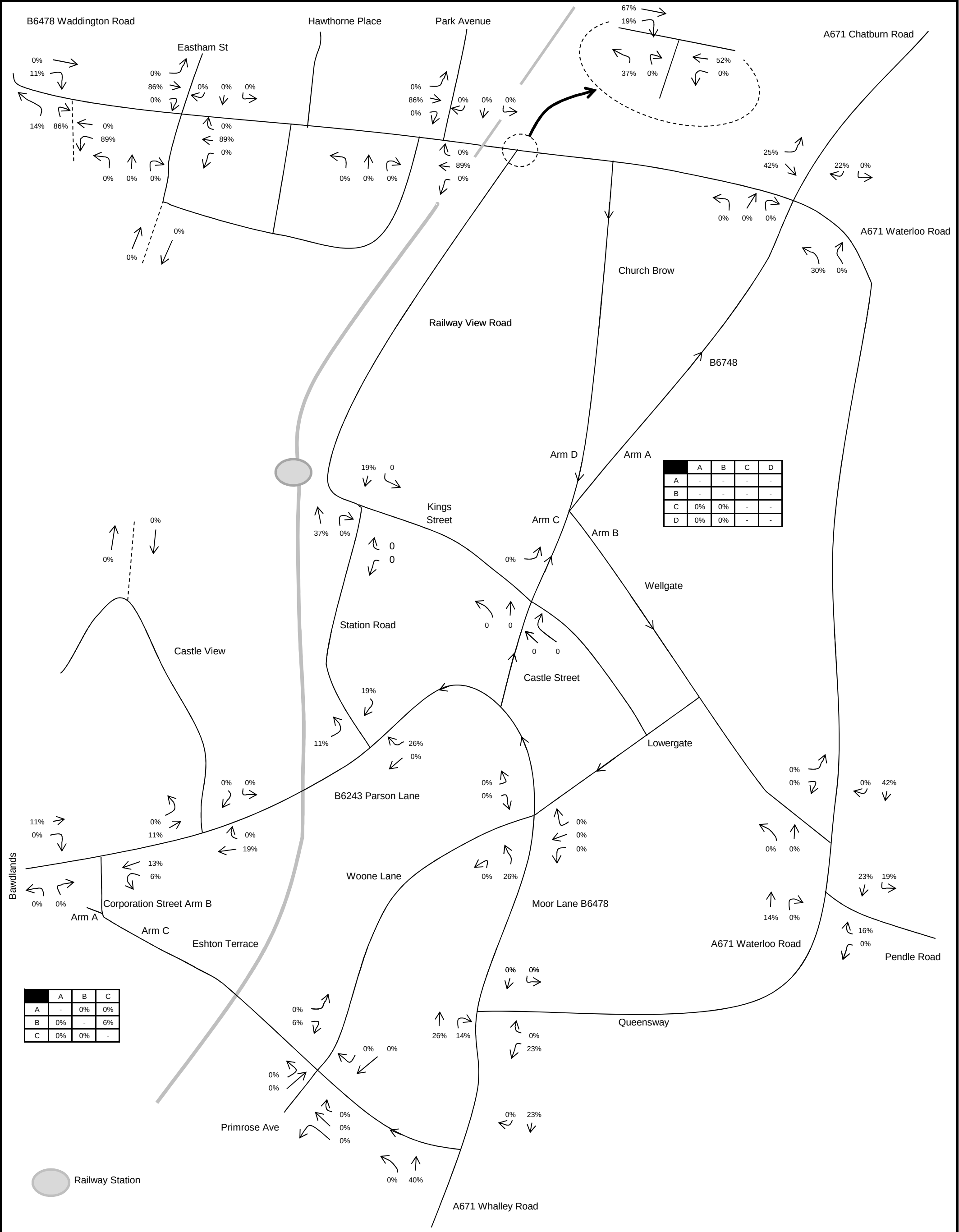


Figure: 28
Title: Waddington Road Site Access Distribution
Peak Period: PM



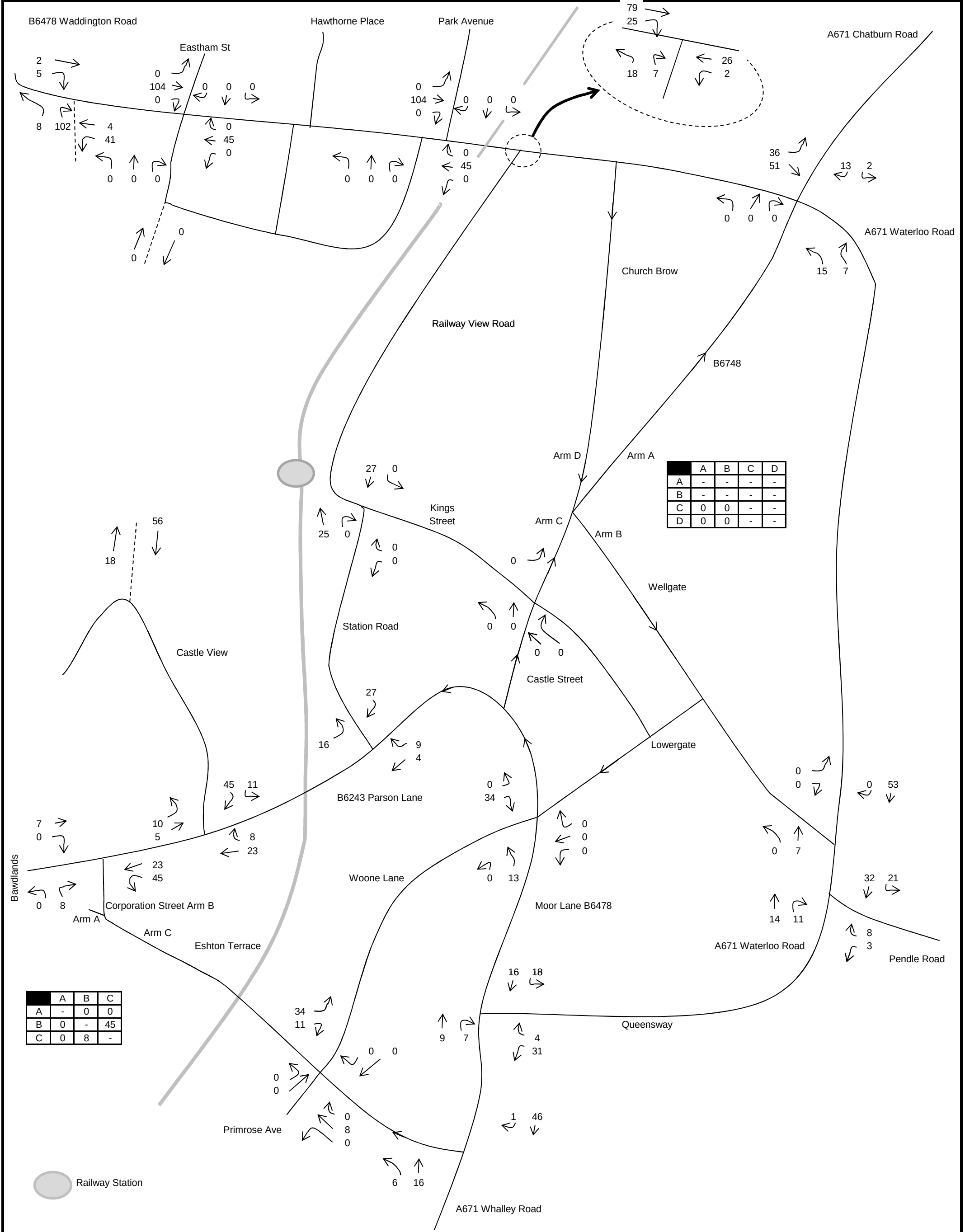


Figure: 29
Title: Total Phase 2 Development
Peak Period: AM

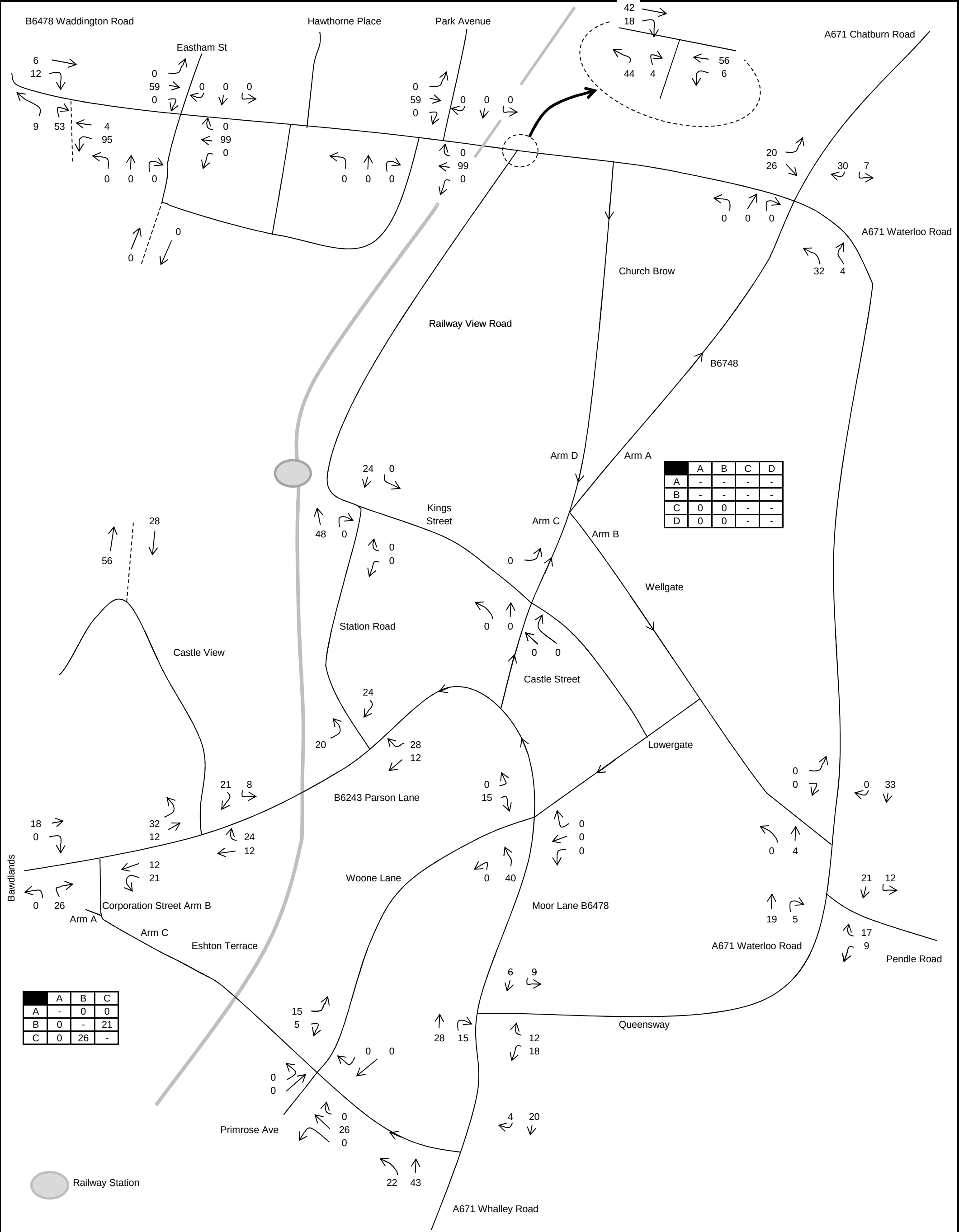


Figure: 30
Title: Total Phase 2 Development
Peak Period: PM



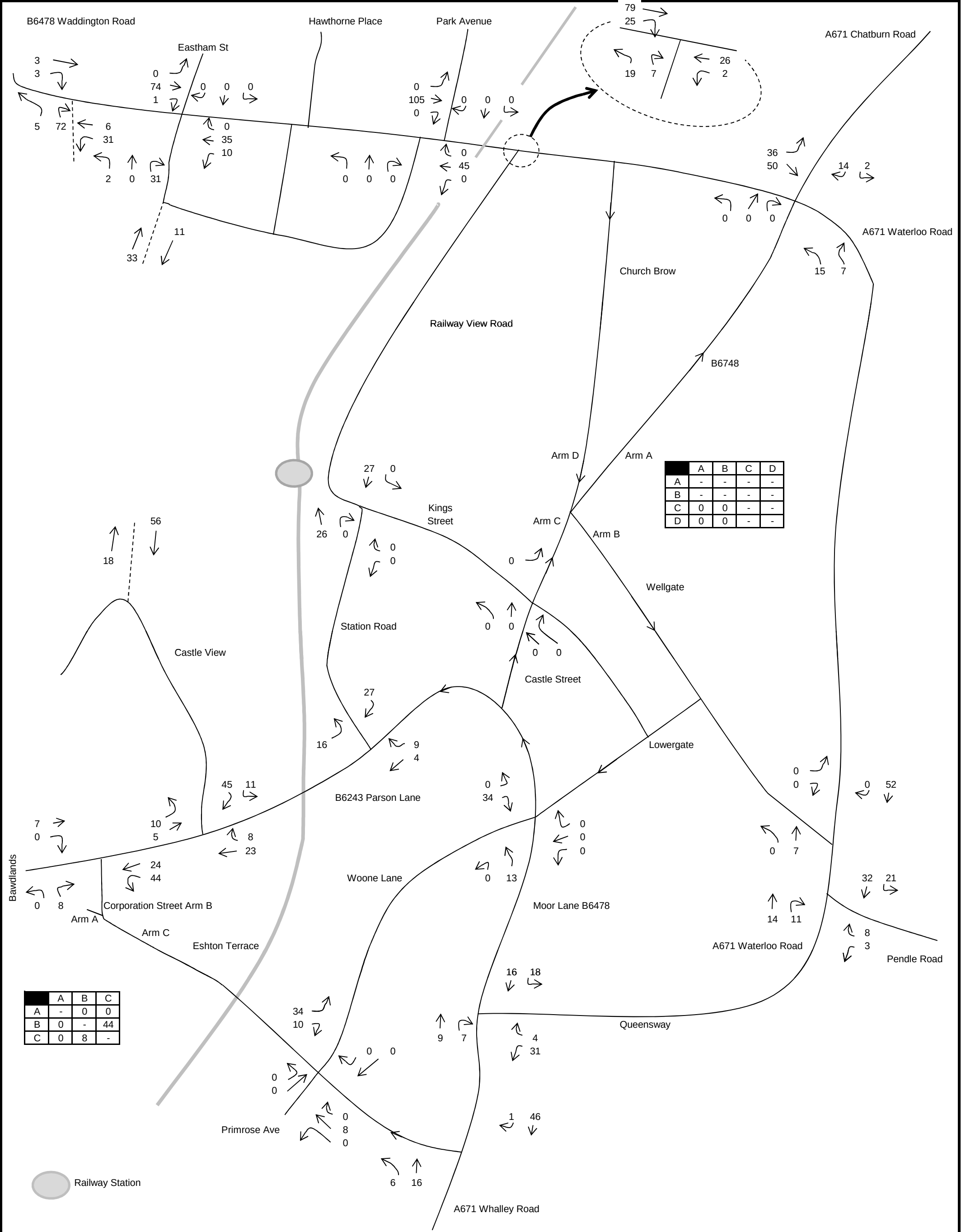


Figure: 31
Title: Total Phase 2 (Scenario 2) Development
Peak Period: AM



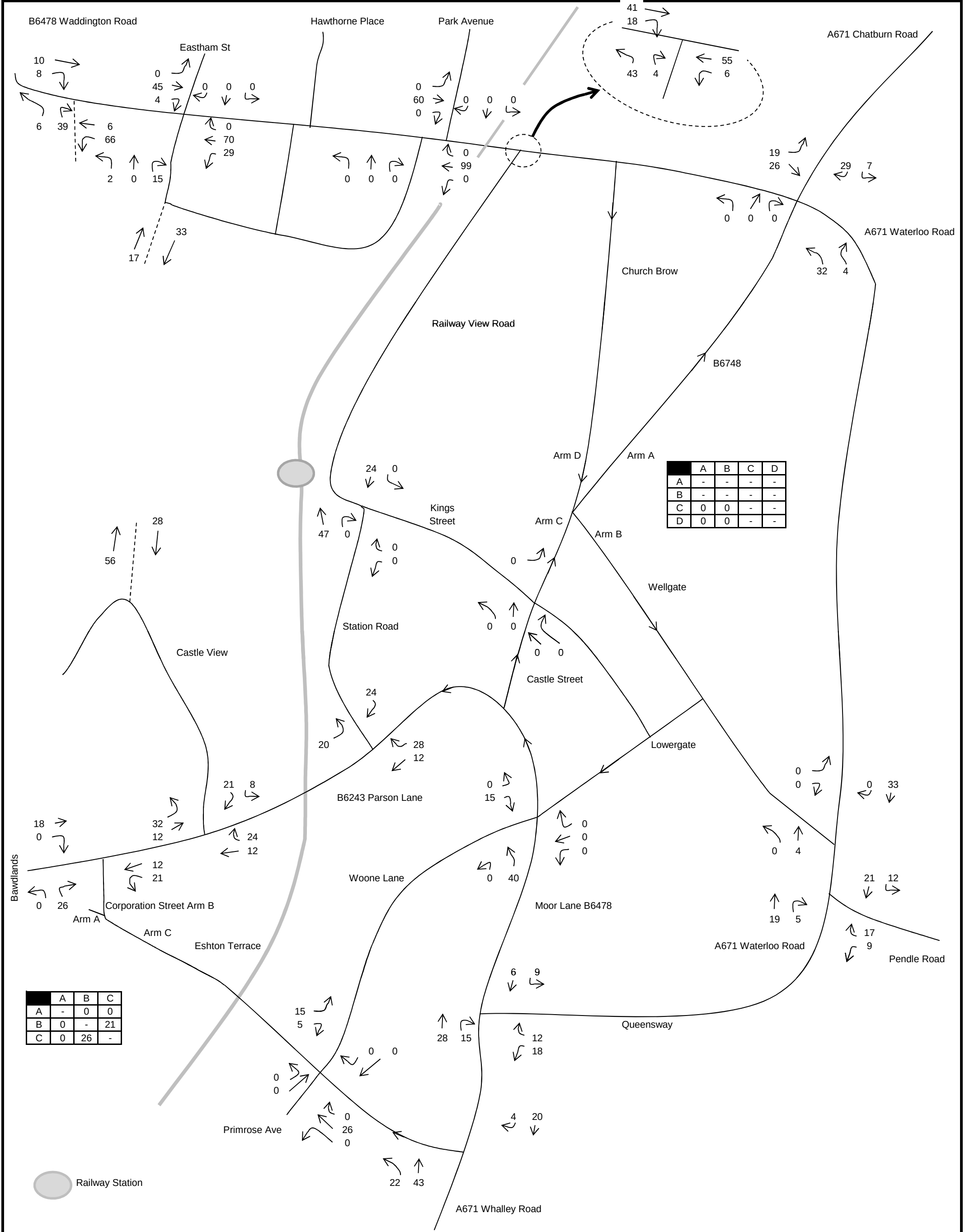


Figure: 32
Title: Total Phase 2 (Scenario 2) Development
Peak Period: PM

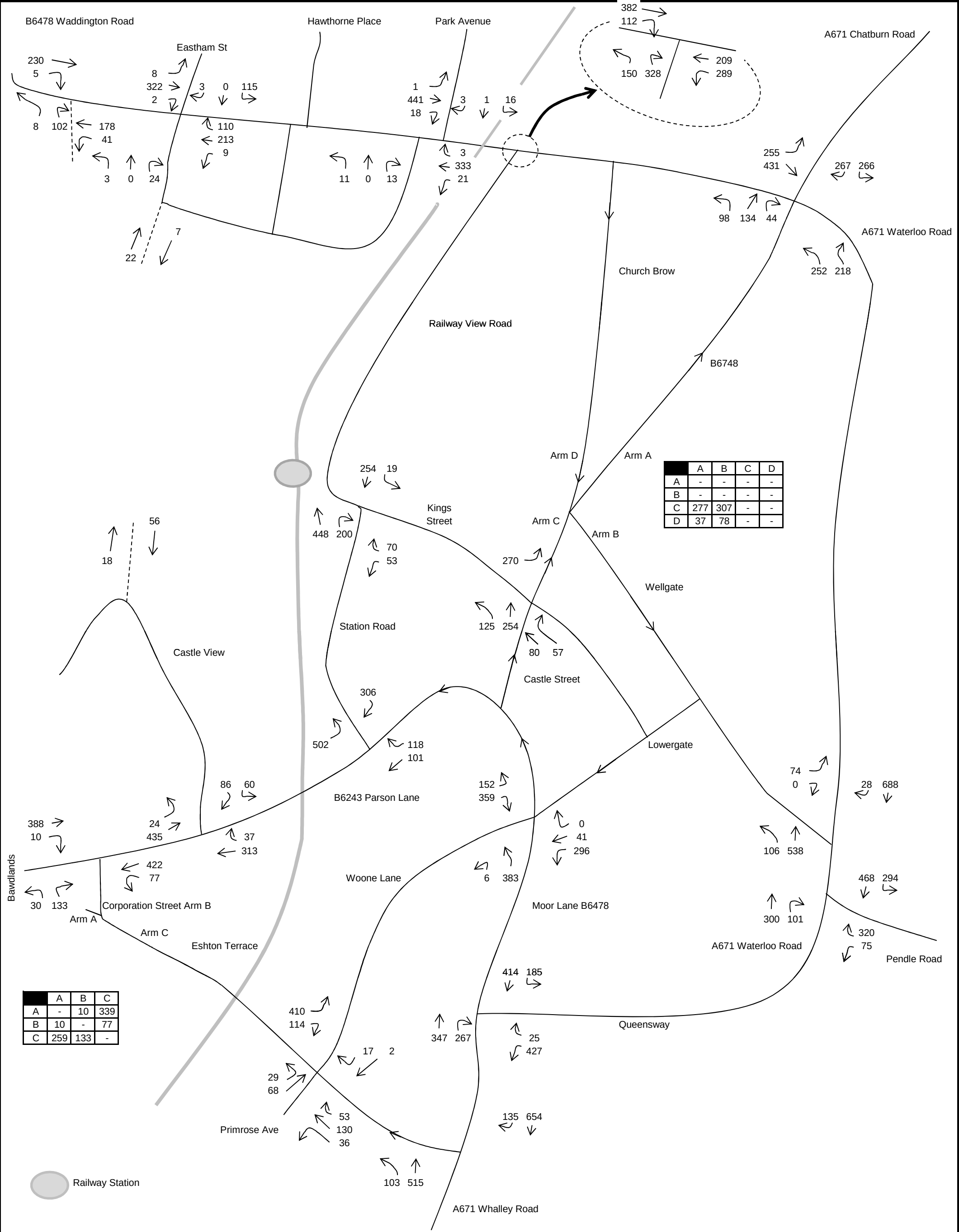


Figure: 33
Title: 2012 Base Flows plus Phase 2 - Scenario 1 - Development Flows
Peak Period: AM



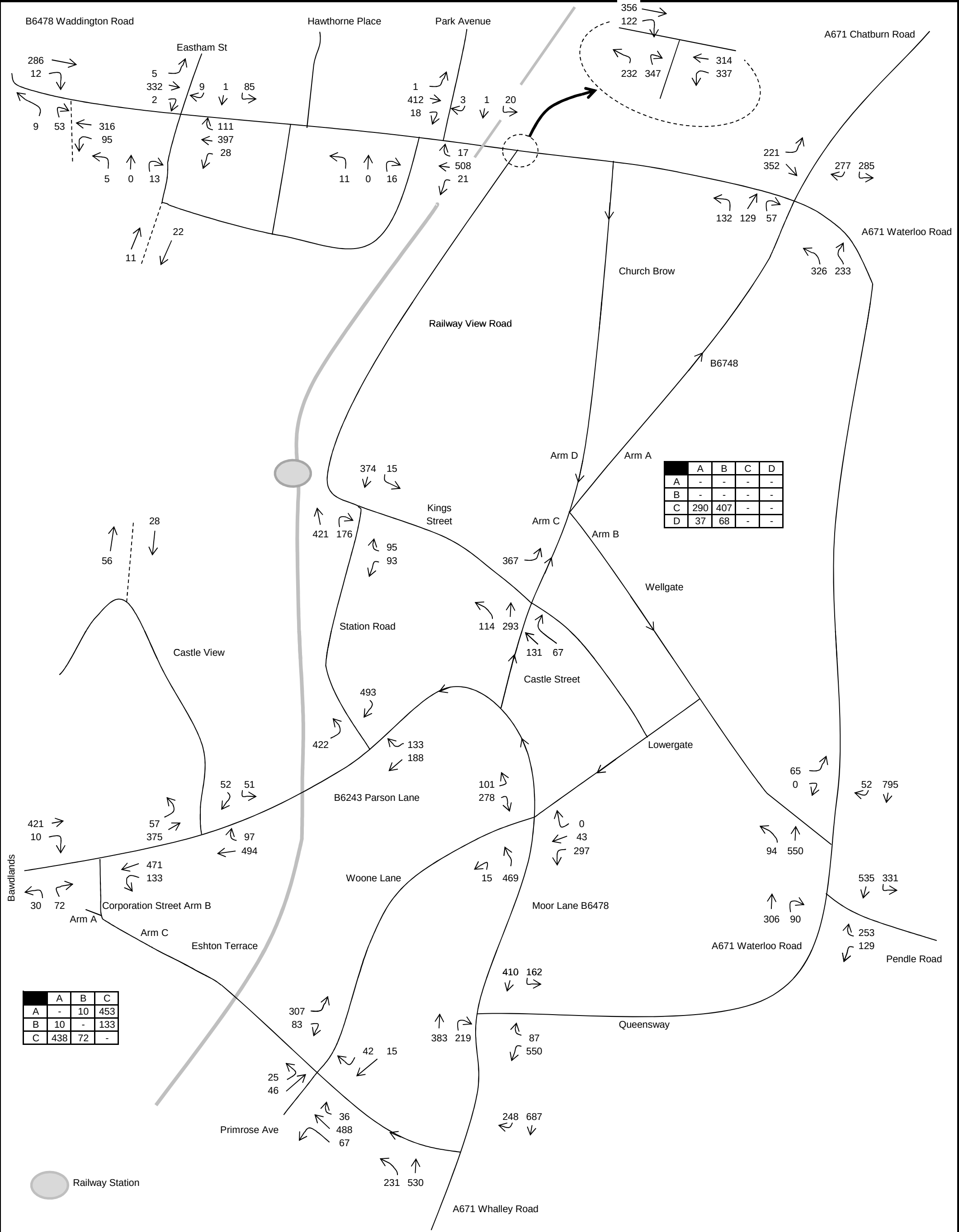


Figure: 34
Title: 2012 Base Flows plus Phase 2 - Scenario 1 - Development Flows
Peak Period: PM



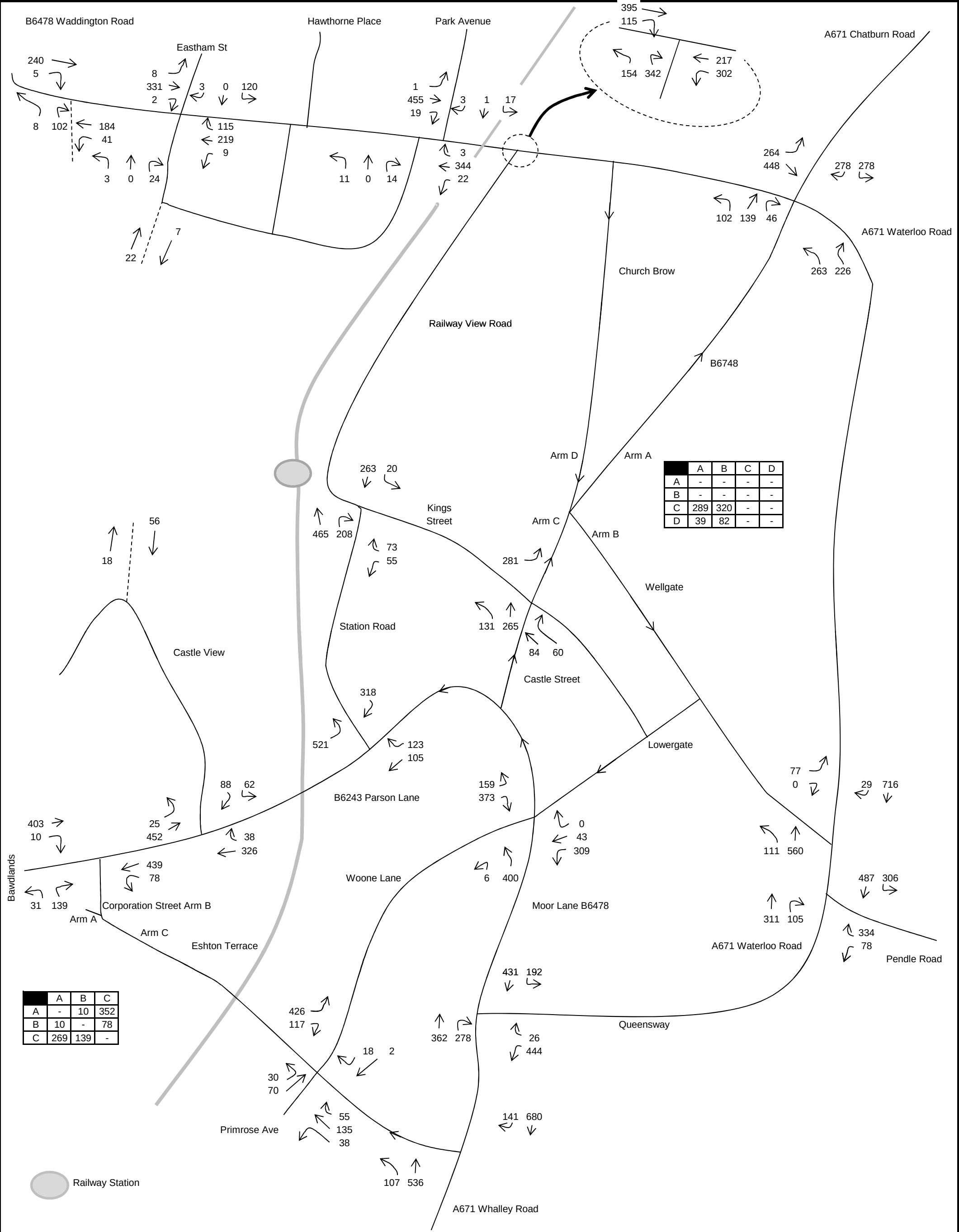


Figure: 35
Title: 2017 Base Flows plus Phase 2 - Scenario 1 - Development Flows
Peak Period: AM



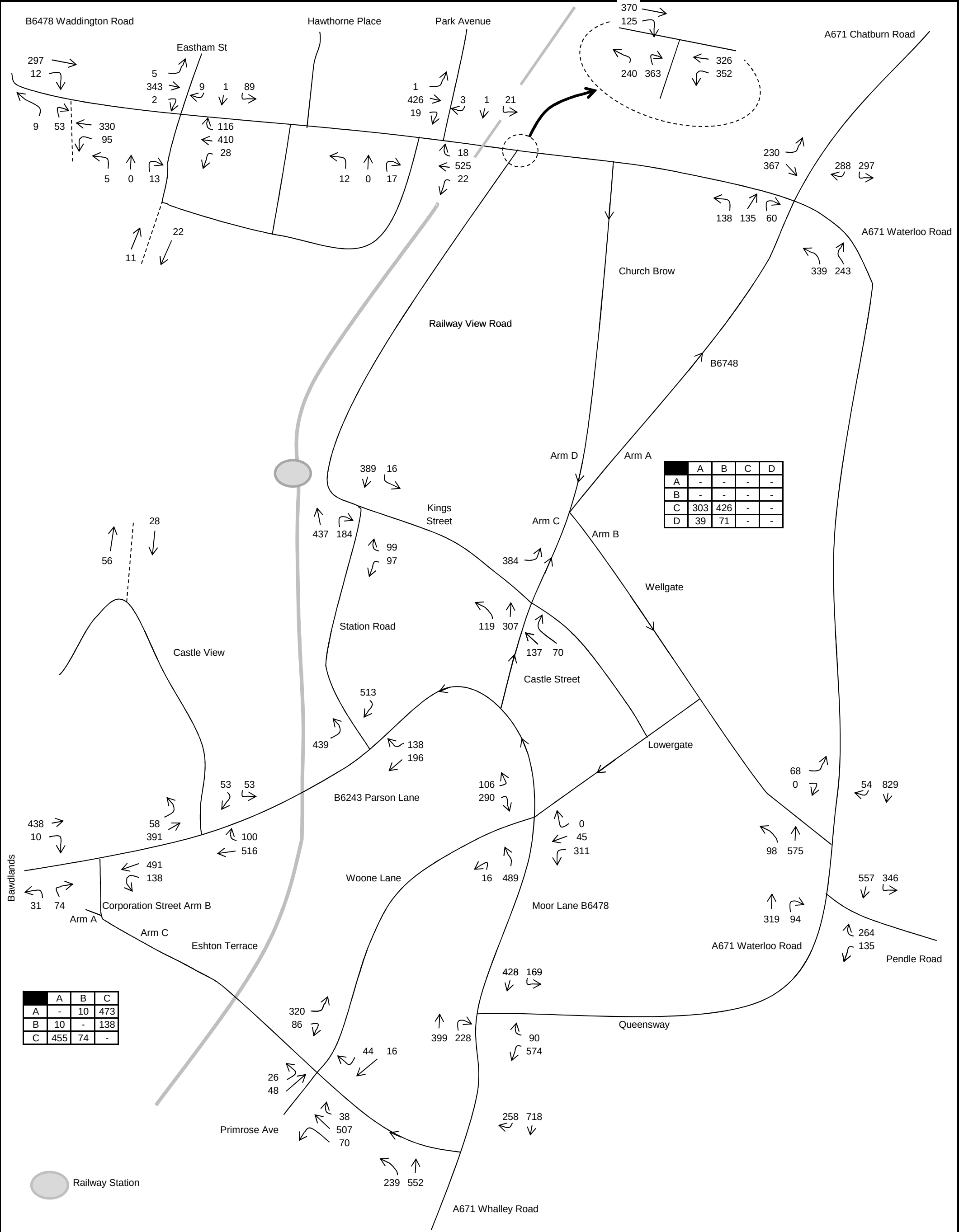


Figure: 36
Title: 2017 Base Flows plus Phase 2 - Scenario 1 - Development Flows
Peak Period: PM



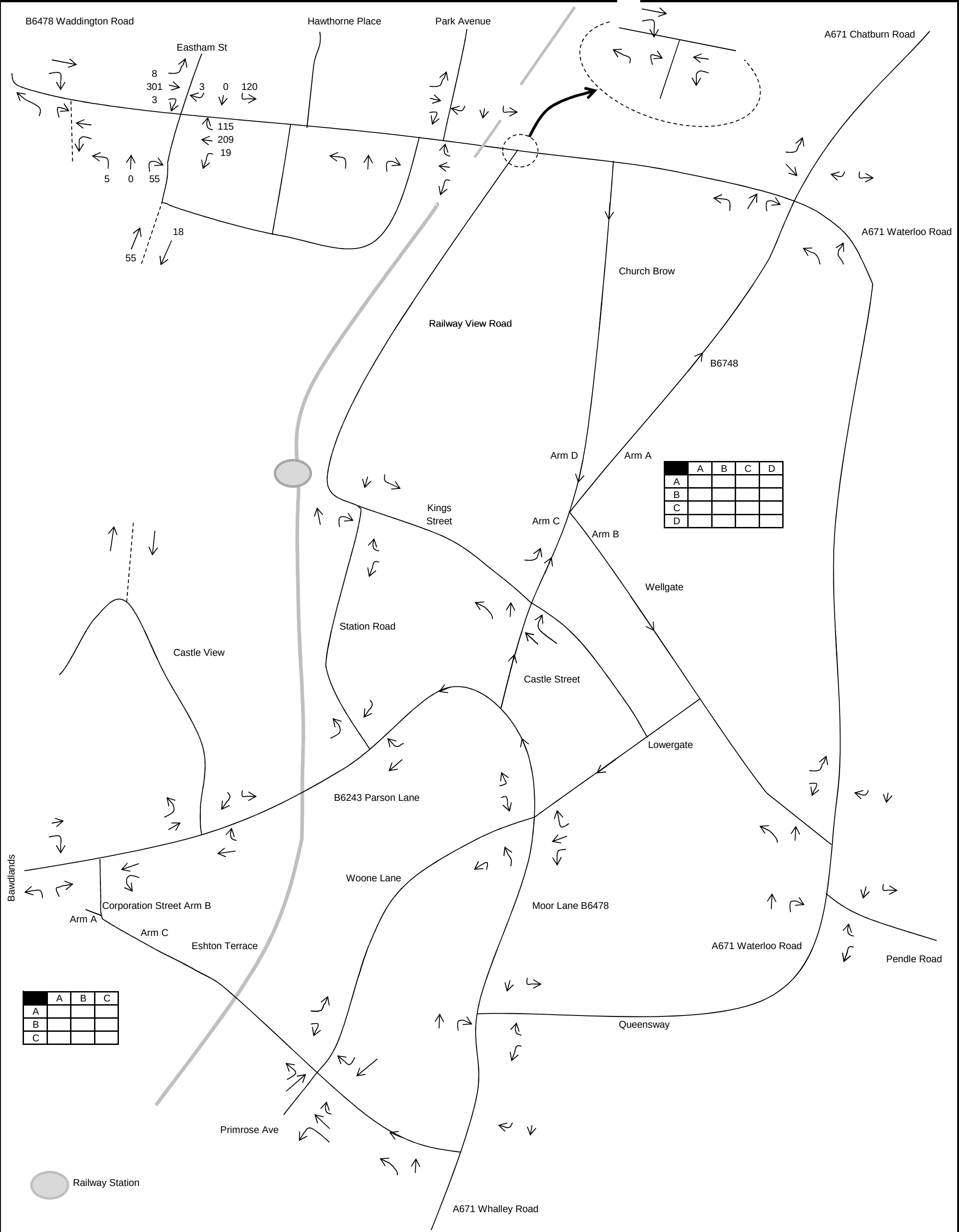


Figure: 37
Title: 2017 Base Flows plus Phase 2 - Milton Road Crossroad Junction Sensitivity Test
Peak Period: AM



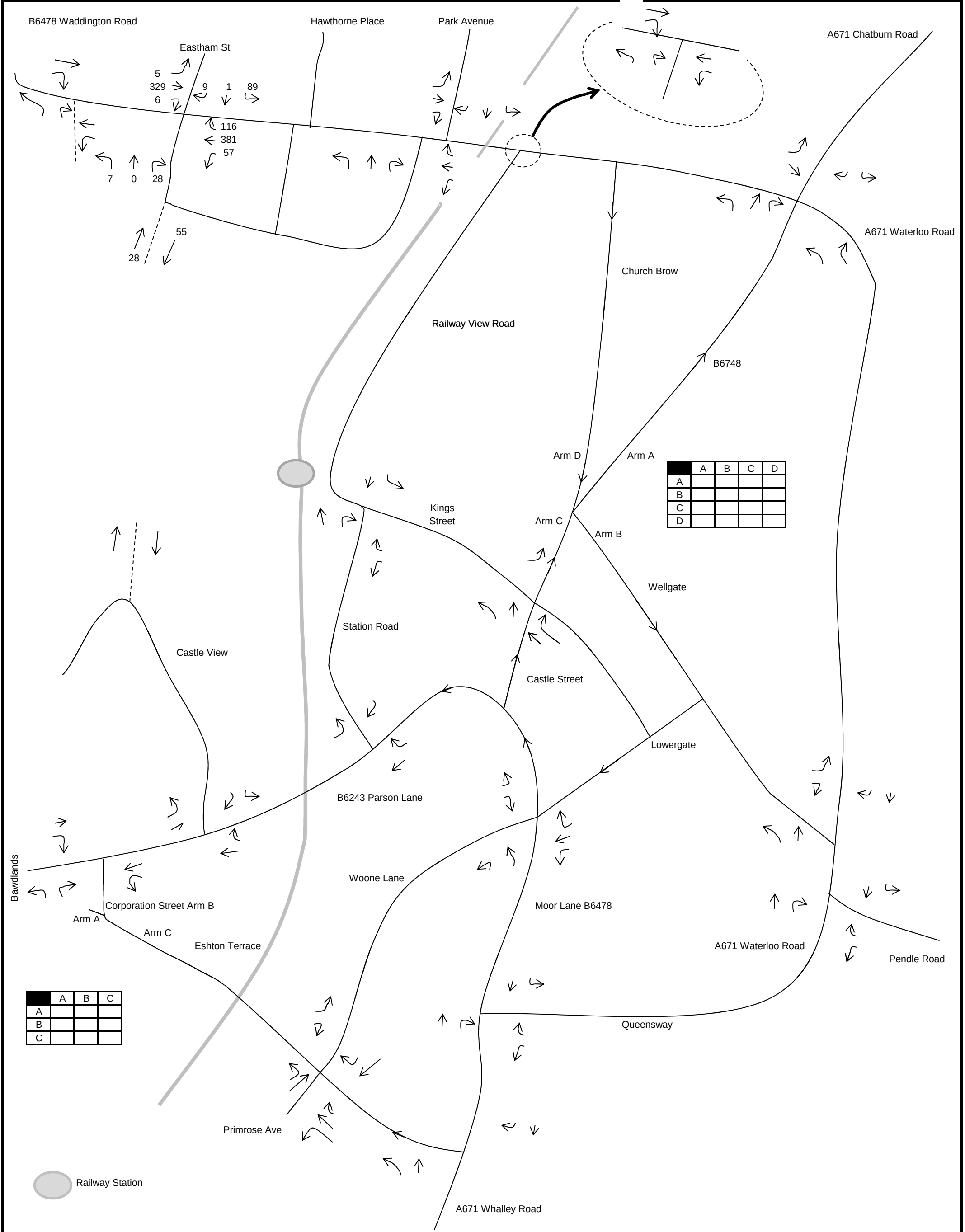
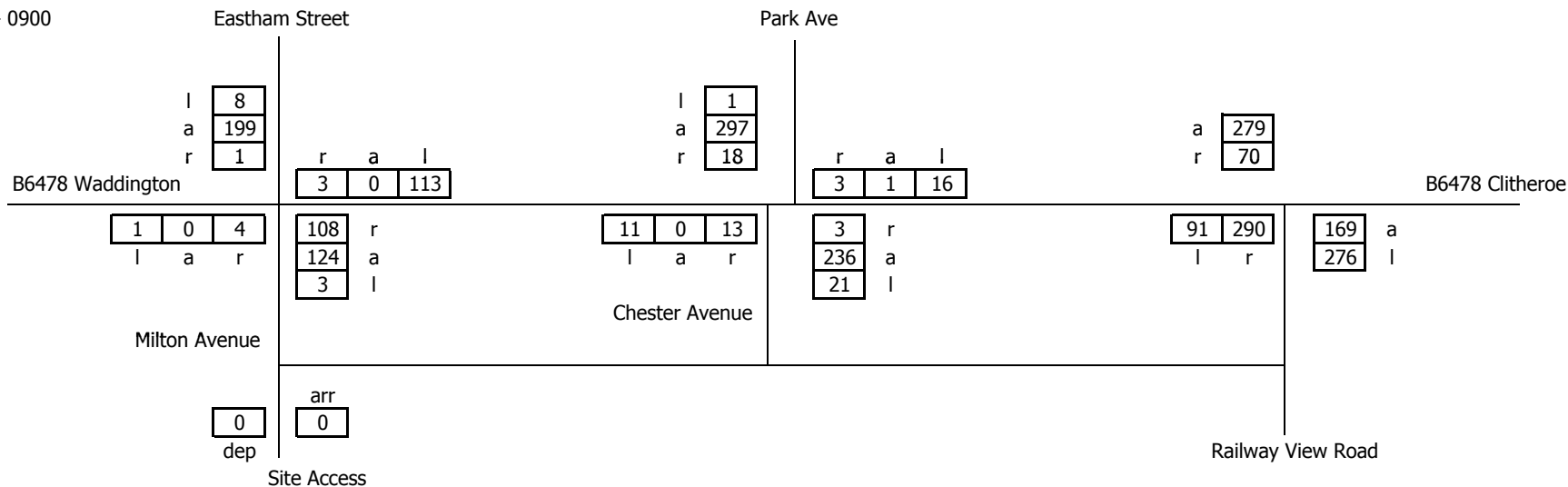


Figure: 38
Title: 2017 Base Flows plus Phase 2 - Milton Road Crossroad Junction Sensitivity Test
Peak Period: PM



Appendix C

AM 0800 - 0900



PM 1645 - 1745

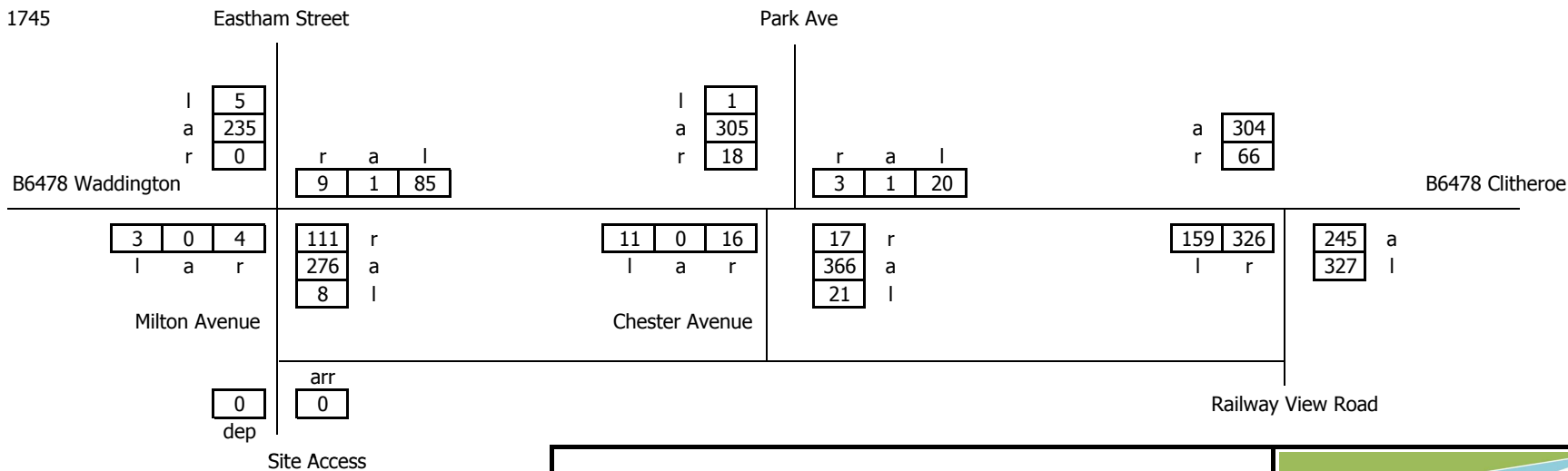
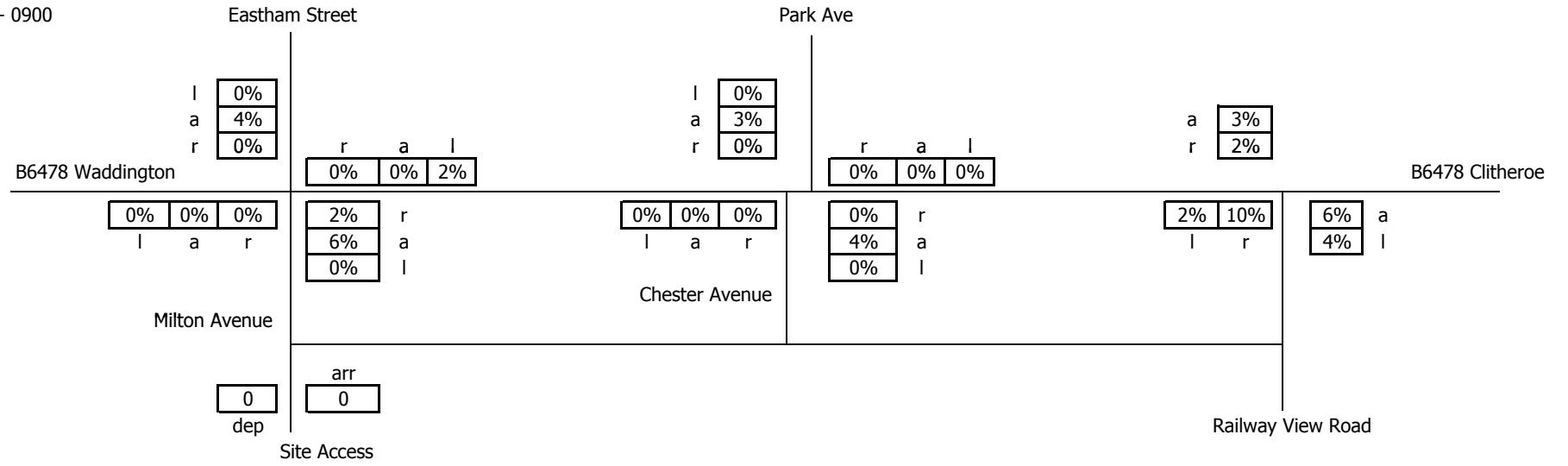


Figure: 3
Title: Maximum Vehicle Flow Movements - Derived From 2011 and 2012 Surveys



AM 0800 - 0900



PM 1645 - 1745

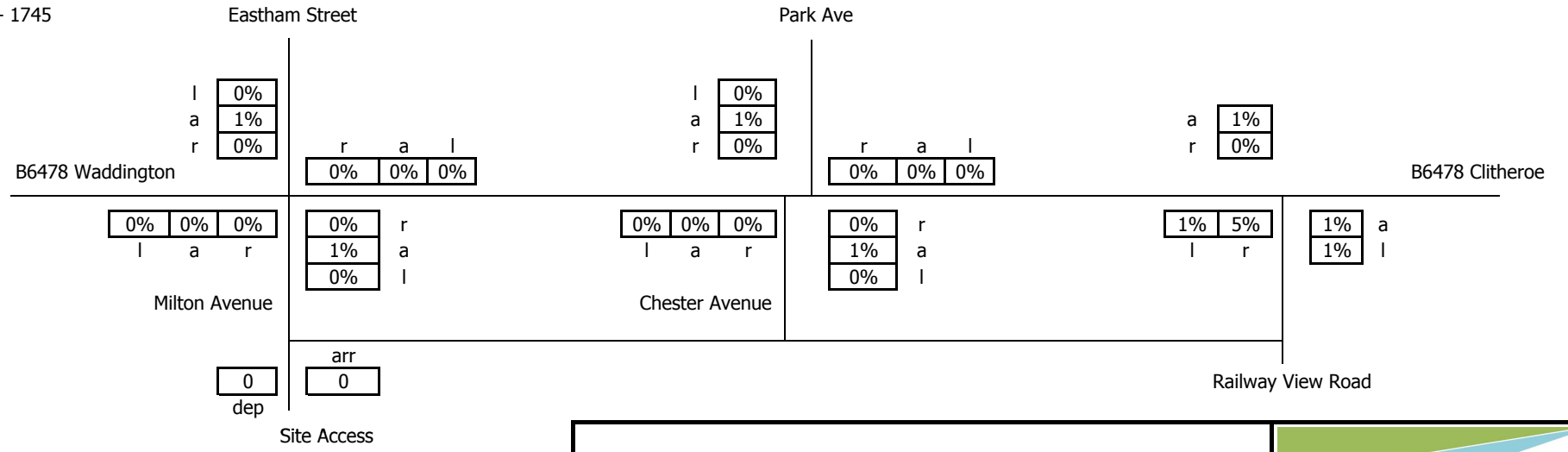


Figure: 4
Title: 2011 Survey Flows - % HGV



Classified Turning Counts, Clitheroe

DATE: THURSDAY 13th SEPTEMBER 2012

LOCATION: WATERLOO ROAD / SHAWBRIDGE STREET



ARM: WATERLOO ROAD (NORTH)

TIME / CLASS	LEFT TO SHAWBRIDGE STREET							STRAIGHT TO WATERLOO ROAD (SOUTH)							TOTAL MOVEMENT FROM ARM
	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	
7:30 - 7:45	0	62	9	2	0	0	73	0	62	20	2	0	1	85	158
7:45 - 8:00	1	37	7	1	0	0	46	2	81	13	2	0	2	100	146
8:00 - 8:15	1	59	10	1	0	0	71	2	53	9	1	0	0	65	136
8:15 - 8:30	0	56	4	0	0	0	60	1	78	14	1	0	1	95	155
HOURLY TOTAL	2	214	30	4	0	0	250	5	274	56	6	0	4	345	595
8:30 - 8:45	1	59	8	3	0	1	72	1	93	12	1	0	6	113	185
8:45 - 9:00	0	68	7	1	0	1	77	0	86	11	1	0	1	99	176
9:00 - 9:15	1	49	6	1	0	0	57	2	91	14	1	0	0	108	165
9:15 - 9:30	0	32	4	1	0	0	37	0	65	12	8	0	2	87	124
HOURLY TOTAL	2	208	25	6	0	2	243	3	335	49	11	0	9	407	650

PERIOD TOTAL	3	245	32	7	0	2	289	5	416	62	13	0	11	507	796

15:00 - 15:15	0	55	12	1	0	0	68	2	108	9	1	2	4	126	194
15:15 - 15:30	0	52	8	1	0	0	61	0	91	11	1	0	0	103	164
15:30 - 15:45	0	60	18	0	0	1	79	0	95	16	0	0	0	111	190
15:45 - 16:00	1	73	9	0	0	0	83	0	114	12	2	1	3	132	215
HOURLY TOTAL	1	240	47	2	0	1	291	2	408	48	4	3	7	472	763
16:00 - 16:15	0	80	6	1	0	3	90	3	101	15	0	0	4	123	213
16:15 - 16:30	0	56	3	0	0	1	60	0	96	10	1	0	1	108	168
16:30 - 16:45	0	70	8	1	0	1	80	1	90	9	1	0	2	103	183
16:45 - 17:00	1	73	6	1	0	0	81	0	85	1	2	1	0	89	170
HOURLY TOTAL	1	279	23	3	0	5	311	4	372	35	4	1	7	423	734
17:00 - 17:15	1	65	5	1	0	0	72	0	103	13	2	0	3	121	193
17:15 - 17:30	1	66	6	1	0	1	75	2	94	7	1	0	0	104	179
17:30 - 17:45	0	76	9	0	0	0	85	1	89	11	1	0	0	102	187
17:45 - 18:00	0	71	4	0	0	1	76	1	77	6	0	0	0	84	160
HOURLY TOTAL	2	278	24	2	0	2	308	4	363	37	4	0	3	411	719
18:00 - 18:15	0	61	5	1	0	1	68	1	80	8	1	0	0	90	158
18:15 - 18:30	0	49	5	0	0	1	55	1	63	5	1	0	1	71	126
1/2 HOUR TOTAL	0	110	10	1	0	2	123	2	143	13	2	0	1	161	284

PERIOD TOTAL	4	907	104	8	0	10	1033	12	1286	133	14	4	18	1467	2500

Classified Turning Counts, Clitheroe

DATE: THURSDAY 13th SEPTEMBER 2012

LOCATION: WATERLOO ROAD / SHAWBRIDGE STREET



ARM: SHAWBRIDGE STREET

TIME / CLASS	LEFT TO WATERLOO ROAD (SOUTH)							RIGHT TO WATERLOO ROAD (NORTH)							TOTAL MOVEMENT FROM ARM
	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	
7:30 - 7:45	0	8	1	0	0	0	9	0	31	4	0	0	1	36	45
7:45 - 8:00	0	3	0	1	0	0	4	0	20	8	0	0	0	28	32
8:00 - 8:15	0	8	6	0	0	0	14	0	40	5	1	0	0	46	60
8:15 - 8:30	0	11	1	0	0	0	12	1	53	4	0	0	0	58	70
HOURLY TOTAL	0	30	8	1	0	0	39	1	144	21	1	0	1	168	207
8:30 - 8:45	0	5	0	1	0	1	7	1	94	6	1	0	1	103	110
8:45 - 9:00	0	14	2	2	0	0	18	0	75	11	0	0	0	86	104
9:00 - 9:15	0	29	2	0	0	0	31	0	54	8	1	0	0	63	94
9:15 - 9:30	0	15	2	1	0	0	18	1	41	7	1	0	0	50	68
HOURLY TOTAL	0	63	6	4	0	1	74	2	264	32	3	0	1	302	376
PERIOD TOTAL	0	66	6	5	0	1	78	2	284	40	3	0	1	330	408
15:00 - 15:15	0	25	2	0	0	1	28	0	52	6	0	0	0	58	86
15:15 - 15:30	0	16	7	1	0	1	25	0	55	8	0	0	0	63	88
15:30 - 15:45	0	26	3	0	0	0	29	0	54	7	0	0	0	61	90
15:45 - 16:00	0	25	5	2	0	0	32	0	52	4	0	0	0	56	88
HOURLY TOTAL	0	92	17	3	0	2	114	0	213	25	0	0	0	238	352
16:00 - 16:15	1	27	2	0	0	0	30	0	47	2	2	0	0	51	81
16:15 - 16:30	0	24	3	0	0	0	27	1	46	8	2	0	0	57	84
16:30 - 16:45	0	24	0	0	0	0	24	1	56	4	1	0	0	62	86
16:45 - 17:00	0	22	3	0	0	0	25	0	48	4	0	0	0	52	77
HOURLY TOTAL	1	97	8	0	0	0	106	2	197	18	5	0	0	222	328
17:00 - 17:15	0	28	5	0	0	0	33	0	63	8	0	0	0	71	104
17:15 - 17:30	1	16	2	0	0	0	19	1	73	1	0	0	0	75	94
17:30 - 17:45	1	25	1	0	0	0	27	0	66	5	0	0	1	72	99
17:45 - 18:00	0	19	0	0	0	0	19	0	65	1	0	0	0	66	85
HOURLY TOTAL	2	88	8	0	0	0	98	1	267	15	0	0	1	284	382
18:00 - 18:15	0	24	1	0	0	0	25	0	52	2	0	0	0	54	79
18:15 - 18:30	0	11	2	0	0	0	13	1	40	10	0	0	0	51	64
1/2 HOUR TOTAL	0	35	3	0	0	0	38	1	92	12	0	0	0	105	143
PERIOD TOTAL	3	312	36	3	0	2	356	4	769	70	5	0	1	849	1205

Classified Turning Counts, Clitheroe

DATE: THURSDAY 13th SEPTEMBER 2012

LOCATION: WATERLOO ROAD / SHAWBRIDGE STREET



ARM: WATERLOO ROAD (SOUTH)

TIME / CLASS	STRAIGHT TO WATERLOO ROAD (NORTH)							RIGHT TO SHAWBRIDGE STREET							TOTAL MOVEMENT FROM ARM
	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	
7:30 - 7:45	1	16	6	1	0	0	24	1	13	3	0	0	0	17	41
7:45 - 8:00	0	29	7	1	0	0	37	1	29	5	0	0	0	35	72
8:00 - 8:15	0	32	9	1	0	0	42	0	12	1	1	0	0	14	56
8:15 - 8:30	1	36	9	2	0	0	48	0	14	2	0	0	1	17	65
HOURLY TOTAL	2	113	31	5	0	0	151	2	68	11	1	0	1	83	234
8:30 - 8:45	1	56	9	1	1	2	70	0	20	0	1	1	0	22	92
8:45 - 9:00	0	69	8	2	0	0	79	0	23	2	0	0	0	25	104
9:00 - 9:15	0	40	8	2	0	0	50	0	19	1	1	0	0	21	71
9:15 - 9:30	0	33	1	0	0	0	34	0	11	0	0	0	0	11	45
HOURLY TOTAL	1	198	26	5	1	2	233	0	73	3	2	1	0	79	312
PERIOD TOTAL	1	227	33	6	1	2	270	1	102	8	2	1	0	114	384
15:00 - 15:15	0	47	4	1	0	0	52	0	17	3	1	0	0	21	73
15:15 - 15:30	0	61	3	1	0	1	66	0	16	3	0	0	0	19	85
15:30 - 15:45	0	71	3	2	0	1	77	0	18	3	0	0	0	21	98
15:45 - 16:00	0	62	7	1	0	0	70	0	21	3	2	0	0	26	96
HOURLY TOTAL	0	241	17	5	0	2	265	0	72	12	3	0	0	87	352
16:00 - 16:15	0	55	3	0	0	0	58	0	16	1	0	0	0	17	75
16:15 - 16:30	1	61	7	1	1	0	71	1	12	0	0	0	0	13	84
16:30 - 16:45	3	66	4	1	0	0	74	0	16	2	1	0	0	19	93
16:45 - 17:00	0	58	8	1	0	0	67	0	14	1	1	0	0	16	83
HOURLY TOTAL	4	240	22	3	1	0	270	1	58	4	2	0	0	65	335
17:00 - 17:15	0	75	1	0	0	0	76	0	21	0	0	0	0	21	97
17:15 - 17:30	2	65	3	0	0	0	70	0	20	1	0	0	0	21	91
17:30 - 17:45	3	68	8	0	0	0	79	0	13	2	0	0	0	15	94
17:45 - 18:00	0	70	6	0	0	1	77	0	17	1	1	0	0	19	96
HOURLY TOTAL	5	278	18	0	0	1	302	0	71	4	1	0	0	76	378
18:00 - 18:15	0	62	4	0	0	0	66	0	16	1	0	0	0	17	83
18:15 - 18:30	1	43	1	0	0	0	45	0	19	2	1	0	0	22	67
1/2 HOUR TOTAL	1	105	5	0	0	0	111	0	35	3	1	0	0	39	150
PERIOD TOTAL	10	864	62	8	1	3	948	1	236	23	7	0	0	267	1215

Classified Turning Counts, Clitheroe

DATE: THURSDAY 13th SEPTEMBER 2012

LOCATION: CHATBURN ROAD / WATERLOO ROAD / YORK STREET / WELL TERRACE



ARM: CHATBURN ROAD

TIME / CLASS	LEFT TO WATERLOO ROAD							STRAIGHT TO YORK STREET							RIGHT TO WELL TERRACE							U-TURN TO CHATBURN ROAD							TOTAL MOVEMENT FROM ARM
	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	
7:30 - 7:45	0	31	6	2	0	0	39	0	0	0	0	0	0	0	0	33	1	2	0	2	38	0	1	0	0	0	0	1	78
7:45 - 8:00	1	45	8	2	0	1	57	0	0	0	0	0	0	0	0	30	11	1	0	1	43	0	0	0	0	0	0	0	100
8:00 - 8:15	1	34	4	0	0	0	39	0	0	0	0	0	0	0	1	27	11	0	0	1	40	0	0	0	0	0	0	0	79
8:15 - 8:30	0	40	5	1	0	2	48	0	0	0	0	0	0	0	0	32	12	0	0	4	48	0	0	0	0	0	0	0	96
HOURLY TOTAL	2	150	23	5	0	3	183	0	0	0	0	0	0	0	1	122	35	3	0	8	169	0	1	0	0	0	0	1	353
8:30 - 8:45	0	58	4	0	0	8	70	0	0	0	0	0	0	0	0	47	11	1	0	2	61	0	1	0	0	0	0	1	132
8:45 - 9:00	0	59	4	1	0	1	65	0	0	0	0	0	0	0	0	63	6	1	0	1	71	0	2	1	0	0	0	3	139
9:00 - 9:15	0	60	8	0	0	0	68	0	0	0	0	0	0	0	0	48	9	2	1	1	61	0	0	2	0	0	0	2	131
9:15 - 9:30	0	26	6	0	0	2	34	0	0	0	0	0	0	0	0	35	9	1	0	1	46	0	2	0	0	0	0	2	82
HOURLY TOTAL	0	203	22	1	0	11	237	0	0	0	0	0	0	0	0	193	35	5	1	5	239	0	5	3	0	0	0	8	484
PERIOD TOTAL	1	248	30	3	0	12	294	0	0	0	0	0	0	0	0	223	46	6	1	6	282	0	5	3	0	0	0	8	584
15:00 - 15:15	0	61	5	0	0	4	70	0	0	0	0	0	0	0	0	28	4	3	0	0	35	0	1	0	0	0	0	1	106
15:15 - 15:30	1	41	5	0	0	0	47	0	0	0	0	0	0	0	0	28	4	0	0	0	32	0	3	0	0	0	0	3	82
15:30 - 15:45	0	51	6	1	0	0	58	0	0	0	0	0	0	0	2	34	7	4	0	1	48	0	1	0	0	0	0	1	107
15:45 - 16:00	0	65	7	0	0	1	73	0	0	0	0	0	0	0	0	46	5	2	0	7	60	0	2	0	0	0	0	2	135
HOURLY TOTAL	1	218	23	1	0	5	248	0	0	0	0	0	0	0	2	136	20	9	0	8	175	0	7	0	0	0	0	7	430
16:00 - 16:15	0	61	13	0	1	9	84	0	0	0	0	0	0	0	1	36	5	1	2	2	47	0	1	0	0	0	0	1	132
16:15 - 16:30	0	34	5	0	0	3	42	0	0	0	0	0	0	0	2	46	4	1	1	1	55	0	0	0	0	0	0	0	97
16:30 - 16:45	0	46	8	2	1	2	59	0	0	0	0	0	0	0	0	38	4	1	1	0	44	0	0	0	0	0	0	0	103
16:45 - 17:00	0	55	3	0	0	0	58	0	0	0	0	0	0	0	0	35	7	2	2	1	47	0	0	0	0	0	0	0	105
HOURLY TOTAL	0	196	29	2	2	14	243	0	0	0	0	0	0	0	3	155	20	5	6	4	193	0	1	0	0	0	0	1	437
17:00 - 17:15	0	77	2	0	0	3	82	0	0	0	0	0	0	0	0	57	7	0	0	0	64	0	0	0	0	0	0	0	146
17:15 - 17:30	0	43	3	0	0	0	46	0	0	0	0	0	0	0	0	53	5	0	0	1	59	0	0	0	0	0	0	0	105
17:30 - 17:45	1	68	2	2	0	0	73	0	0	0	0	0	0	0	0	58	4	1	0	1	64	0	0	0	0	0	0	0	137
17:45 - 18:00	0	52	5	0	0	1	58	0	0	0	0	0	0	0	2	47	3	0	0	0	52	0	0	0	0	0	0	0	110
HOURLY TOTAL	1	240	12	2	0	4	259	0	0	0	0	0	0	0	2	215	19	1	0	2	239	0	0	0	0	0	0	0	498
18:00 - 18:15	0	42	1	1	0	0	44	0	0	0	0	0	0	0	0	46	3	2	0	0	51	0	1	0	0	0	0	1	96
18:15 - 18:30	0	35	3	0	0	1	39	0	0	0	0	0	0	0	0	23	4	0	0	0	27	0	0	0	0	0	0	0	66
1/2 HOUR TOTAL	0	77	4	1	0	1	83	0	0	0	0	0	0	0	0	69	7	2	0	0	78	0	1	0	0	0	0	1	162
PERIOD TOTAL	2	731	68	6	2	24	833	0	0	0	0	0	0	0	7	575	66	17	6	14	685	0	9	0	0	0	0	9	1527

Classified Turning Counts, Clitheroe

DATE: THURSDAY 13th SEPTEMBER 2012

LOCATION: CHATBURN ROAD / WATERLOO ROAD / YORK STREET / WELL TERRACE



ARM: WATERLOO ROAD

TIME / CLASS	LEFT TO YORK STREET							STRAIGHT TO WELL TERRACE							RIGHT TO CHATBURN ROAD							U-TURN TO WATERLOO ROAD							TOTAL MOVEMENT FROM ARM
	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	
7:30 - 7:45	0	0	0	0	0	0	0	0	25	2	2	0	1	30	1	17	5	0	0	0	23	0	1	0	0	1	0	2	55
7:45 - 8:00	0	0	0	0	0	0	0	0	22	8	1	0	0	31	0	24	11	1	0	0	36	0	0	0	0	0	0	0	67
8:00 - 8:15	0	0	0	0	0	0	0	0	30	8	0	0	0	38	0	26	1	2	0	0	29	0	0	0	1	0	0	1	68
8:15 - 8:30	0	0	0	0	0	0	0	2	43	4	2	0	0	51	0	28	5	1	0	1	35	0	1	1	0	0	0	2	88
HOURLY TOTAL	0	0	0	0	0	0	0	2	120	22	5	0	1	150	1	95	22	4	0	1	123	0	2	1	1	1	0	5	278
8:30 - 8:45	0	0	0	0	0	0	0	2	61	8	1	0	1	73	0	42	2	1	0	2	47	0	2	0	1	0	0	3	123
8:45 - 9:00	0	0	0	0	0	0	0	0	53	11	0	0	0	64	0	47	7	0	0	0	54	0	0	1	1	0	0	2	120
9:00 - 9:15	0	0	0	0	0	0	0	0	36	6	3	0	0	45	0	24	5	0	0	0	29	0	2	2	0	0	0	4	78
9:15 - 9:30	0	0	0	0	0	0	0	0	1	21	4	1	0	27	0	15	4	0	0	0	19	0	0	1	0	0	0	1	47
HOURLY TOTAL	0	0	0	0	0	0	0	3	171	29	5	0	1	209	0	128	18	1	0	2	149	0	4	4	2	0	0	10	368
PERIOD TOTAL	0	0	0	0	0	0	0	3	193	37	6	0	1	240	0	152	29	2	0	2	185	0	4	4	2	0	0	10	435
15:00 - 15:15	0	0	0	0	0	0	0	0	43	4	1	0	0	48	0	61	2	0	0	0	63	0	0	0	0	0	0	0	111
15:15 - 15:30	0	0	0	0	0	0	0	0	44	11	0	0	0	55	0	58	3	1	0	0	62	0	1	0	0	0	0	1	118
15:30 - 15:45	0	0	0	0	0	0	0	0	54	4	1	0	0	59	0	49	2	2	0	1	54	0	1	0	0	0	0	1	114
15:45 - 16:00	0	0	0	0	0	0	0	0	60	5	1	0	0	66	0	52	3	0	0	0	55	0	1	1	0	0	0	2	123
HOURLY TOTAL	0	0	0	0	0	0	0	0	201	24	3	0	0	228	0	220	10	3	0	1	234	0	3	1	0	0	0	4	466
16:00 - 16:15	0	0	0	0	0	0	0	0	53	2	0	0	0	55	0	37	3	0	0	0	40	0	1	0	0	0	0	1	96
16:15 - 16:30	0	0	0	0	0	0	0	2	40	8	0	0	0	50	0	48	7	1	0	0	56	0	1	0	0	0	0	1	107
16:30 - 16:45	0	0	0	0	0	0	0	0	79	5	0	0	2	86	2	39	4	2	0	0	47	0	1	0	0	0	0	1	134
16:45 - 17:00	0	0	0	0	0	0	0	0	50	7	0	0	0	57	2	48	5	0	0	0	55	0	2	0	0	0	0	2	114
HOURLY TOTAL	0	0	0	0	0	0	0	2	222	22	0	0	2	248	4	172	19	3	0	0	198	0	5	0	0	0	0	5	451
17:00 - 17:15	0	0	0	0	0	0	0	0	64	5	0	0	0	69	0	50	4	1	0	0	55	0	4	0	0	0	0	4	128
17:15 - 17:30	0	0	0	0	0	0	0	1	87	3	1	0	0	92	2	47	1	0	0	0	50	0	1	0	0	0	0	1	143
17:30 - 17:45	0	0	0	0	0	0	0	1	64	5	0	0	0	70	0	52	5	0	0	0	57	0	1	0	0	0	0	1	128
17:45 - 18:00	0	0	0	0	0	0	0	0	72	3	1	0	1	77	1	48	2	0	0	0	51	0	1	0	0	0	0	1	129
HOURLY TOTAL	0	0	0	0	0	0	0	2	287	16	2	0	1	308	3	197	12	1	0	0	213	0	7	0	0	0	0	7	528
18:00 - 18:15	0	0	0	0	0	0	0	0	62	5	0	0	0	67	0	45	6	0	0	0	51	0	0	0	0	0	0	0	118
18:15 - 18:30	0	0	0	0	0	0	0	0	39	6	0	0	0	45	2	31	3	0	0	0	36	0	0	0	0	0	0	0	81
1/2 HOUR TOTAL	0	0	0	0	0	0	0	0	101	11	0	0	0	112	2	76	9	0	0	0	87	0	0	0	0	0	0	0	199
PERIOD TOTAL	0	0	0	0	0	0	0	4	811	73	5	0	3	896	9	665	50	7	0	1	732	0	15	1	0	0	0	16	1644

Classified Turning Counts, Clitheroe

DATE: THURSDAY 13th SEPTEMBER 2012

LOCATION: CHATBURN ROAD / WATERLOO ROAD / YORK STREET / WELL TERRACE



ARM: YORK STREET

TIME / CLASS	LEFT TO WELL TERRACE							STRAIGHT TO CHATBURN ROAD							RIGHT TO WATERLOO ROAD							TOTAL MOVEMENT FROM ARM
	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	
7:30 - 7:45	0	1	0	1	0	2	4	0	14	2	1	0	2	19	0	8	2	0	0	0	10	33
7:45 - 8:00	0	3	2	0	0	0	5	0	12	5	0	0	0	17	0	5	0	0	0	0	5	27
8:00 - 8:15	0	8	3	0	0	0	11	0	11	5	2	1	0	19	0	7	0	0	1	0	8	38
8:15 - 8:30	1	15	4	2	0	1	23	0	13	5	1	0	1	20	0	1	3	0	0	0	4	47
HOURLY TOTAL	1	27	9	3	0	3	43	0	50	17	4	1	3	75	0	21	5	0	1	0	27	146
8:30 - 8:45	0	24	3	0	0	0	27	1	20	4	0	0	7	32	0	16	2	0	0	0	18	77
8:45 - 9:00	0	28	1	0	0	0	29	0	28	6	0	0	4	38	0	9	1	0	0	0	10	77
9:00 - 9:15	0	10	6	1	0	0	17	0	14	2	1	0	1	18	0	10	2	0	0	0	12	47
9:15 - 9:30	1	18	6	0	0	1	26	0	16	6	0	0	0	22	0	2	4	0	0	0	6	54
HOURLY TOTAL	1	80	16	1	0	1	99	1	78	18	1	0	12	110	0	37	9	0	0	0	46	257
PERIOD TOTAL	1	83	18	1	0	1	104	1	90	23	1	0	12	127	0	42	9	0	0	0	51	284
15:00 - 15:15	0	23	2	2	0	0	27	0	15	3	0	0	0	18	0	16	2	0	0	0	18	64
15:15 - 15:30	0	16	0	1	0	1	18	0	27	9	0	0	1	37	0	16	3	0	0	0	19	75
15:30 - 15:45	0	27	4	1	0	1	33	0	28	8	0	0	4	40	0	15	2	0	0	0	17	91
15:45 - 16:00	0	27	3	0	0	0	30	2	18	6	0	0	4	30	0	27	1	1	0	0	29	90
HOURLY TOTAL	0	93	9	4	0	2	108	2	88	26	0	0	9	125	0	74	8	1	0	0	83	319
16:00 - 16:15	0	20	2	0	0	1	23	0	33	1	0	0	0	34	0	14	1	0	0	0	15	73
16:15 - 16:30	0	23	3	0	0	3	29	1	16	4	0	0	0	21	0	15	3	1	0	0	19	70
16:30 - 16:45	0	23	1	0	0	0	24	0	31	6	0	0	0	37	0	17	0	0	0	1	18	80
16:45 - 17:00	0	31	2	0	0	0	33	0	28	1	0	0	1	30	0	17	2	0	0	0	19	83
HOURLY TOTAL	0	97	8	0	0	4	109	1	108	12	0	0	1	122	0	63	6	1	0	1	71	305
17:00 - 17:15	0	32	2	0	0	1	35	0	29	4	0	0	0	33	0	16	0	0	0	0	16	85
17:15 - 17:30	0	34	3	0	0	0	37	0	28	4	0	0	0	32	0	12	1	0	0	0	13	83
17:30 - 17:45	0	21	1	1	0	1	24	0	25	3	0	0	0	28	0	9	0	0	0	0	9	62
17:45 - 18:00	0	19	4	0	0	0	23	1	18	2	0	0	0	21	0	10	3	0	0	0	13	58
HOURLY TOTAL	0	106	10	1	0	2	119	1	100	13	0	0	0	114	0	47	4	0	0	0	51	287
18:00 - 18:15	0	21	2	0	0	0	23	0	28	3	0	0	1	32	0	7	1	0	0	0	8	64
18:15 - 18:30	0	25	2	0	0	1	28	0	23	2	0	0	0	25	0	6	2	0	0	1	9	63
1/2 HOUR TOTAL	0	46	4	0	0	1	51	0	51	5	0	0	1	57	0	13	3	0	0	1	17	127
PERIOD TOTAL	0	342	31	5	0	9	387	4	347	56	0	0	11	418	0	197	21	2	0	2	222	1037

Classified Turning Counts, Clitheroe

DATE: THURSDAY 13th SEPTEMBER 2012

LOCATION: CHATBURN ROAD / WATERLOO ROAD / YORK STREET / WELL TERRACE



ARM: WELL TERRACE

TIME / CLASS	LEFT TO CHATBURN ROAD							STRAIGHT TO WATERLOO ROAD							RIGHT TO YORK STREET							U-TURN TO WELL TERRACE							TOTAL MOVEMENT FROM ARM
	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	
7:30 - 7:45	0	23	4	4	0	0	31	0	72	11	0	0	3	86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	117
7:45 - 8:00	0	43	3	1	0	0	47	0	66	7	1	0	4	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	125
8:00 - 8:15	0	28	8	0	0	1	37	1	71	7	0	0	0	79	0	0	0	0	0	0	0	0	1	0	0	0	0	1	117
8:15 - 8:30	0	32	4	3	0	4	43	0	81	7	1	0	4	93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136
HOURLY TOTAL	0	126	19	8	0	5	158	1	290	32	2	0	11	336	0	0	0	0	0	0	0	0	1	0	0	0	0	1	495
8:30 - 8:45	0	42	7	2	0	8	59	2	78	8	3	0	2	93	0	0	0	0	0	0	0	0	2	0	0	0	0	2	154
8:45 - 9:00	0	47	8	0	0	0	55	0	75	7	0	0	5	87	0	0	0	0	0	0	0	0	1	0	0	0	0	1	143
9:00 - 9:15	0	32	4	1	0	1	38	2	73	8	1	0	1	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	123
9:15 - 9:30	0	23	9	4	0	0	36	0	50	5	3	0	1	59	0	0	0	0	0	0	0	0	1	0	0	0	0	1	96
HOURLY TOTAL	0	144	28	7	0	9	188	4	276	28	7	0	9	324	0	0	0	0	0	0	0	0	4	0	0	0	0	4	516
PERIOD TOTAL	0	187	31	8	0	9	235	4	342	35	8	0	13	402	0	0	0	0	0	0	0	0	4	0	0	0	0	4	641
15:00 - 15:15	0	42	6	1	0	2	51	0	68	10	1	1	2	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133
15:15 - 15:30	0	36	8	1	0	0	45	0	59	7	1	0	3	70	0	0	0	0	0	0	0	0	0	1	0	0	0	1	116
15:30 - 15:45	0	36	6	1	0	0	43	0	73	9	2	0	0	84	0	0	0	0	0	0	0	0	4	0	0	0	0	4	131
15:45 - 16:00	0	28	7	1	0	3	39	0	76	10	0	0	4	90	0	0	0	0	0	0	0	0	2	0	0	0	0	2	131
HOURLY TOTAL	0	142	27	4	0	5	178	0	276	36	4	1	9	326	0	0	0	0	0	0	0	0	6	1	0	0	0	7	511
16:00 - 16:15	0	35	4	0	0	2	41	1	82	6	2	0	2	93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134
16:15 - 16:30	0	37	2	7	0	4	50	0	69	12	1	0	1	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133
16:30 - 16:45	0	17	4	1	1	1	24	1	60	14	1	0	2	78	0	0	0	0	0	0	0	0	1	0	0	0	0	1	103
16:45 - 17:00	1	33	5	0	0	2	41	0	76	3	1	0	3	83	0	0	0	0	0	0	0	0	1	0	0	0	0	1	125
HOURLY TOTAL	1	122	15	8	1	9	156	2	287	35	5	0	8	337	0	0	0	0	0	0	0	0	2	0	0	0	0	2	495
17:00 - 17:15	1	53	14	1	0	1	70	1	73	3	3	0	2	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	152
17:15 - 17:30	1	30	7	0	0	0	38	2	70	3	2	0	1	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116
17:30 - 17:45	0	39	3	0	2	0	44	0	58	9	1	0	1	69	0	0	0	0	0	0	0	0	2	0	0	0	0	2	115
17:45 - 18:00	0	41	3	0	1	0	45	0	63	6	0	0	1	70	0	0	0	0	0	0	0	0	0	1	0	0	0	1	116
HOURLY TOTAL	2	163	27	1	3	1	197	3	264	21	6	0	5	299	0	0	0	0	0	0	0	0	2	1	0	0	0	3	499
18:00 - 18:15	0	36	2	0	0	0	38	0	68	4	1	0	2	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113
18:15 - 18:30	0	24	4	1	0	1	30	0	54	1	1	0	3	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	89
1/2 HOUR TOTAL	0	60	6	1	0	1	68	0	122	5	2	0	5	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	202
PERIOD TOTAL	3	487	75	14	4	16	599	5	949	97	17	1	27	1096	0	0	0	0	0	0	0	0	10	2	0	0	0	12	1707

Flow Diagram, Clitheroe

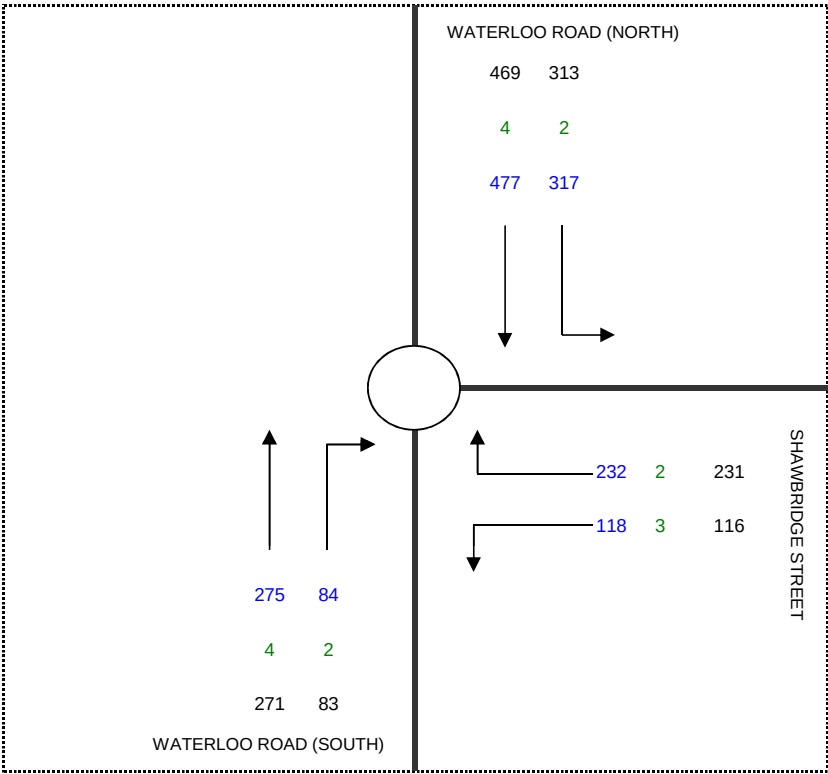
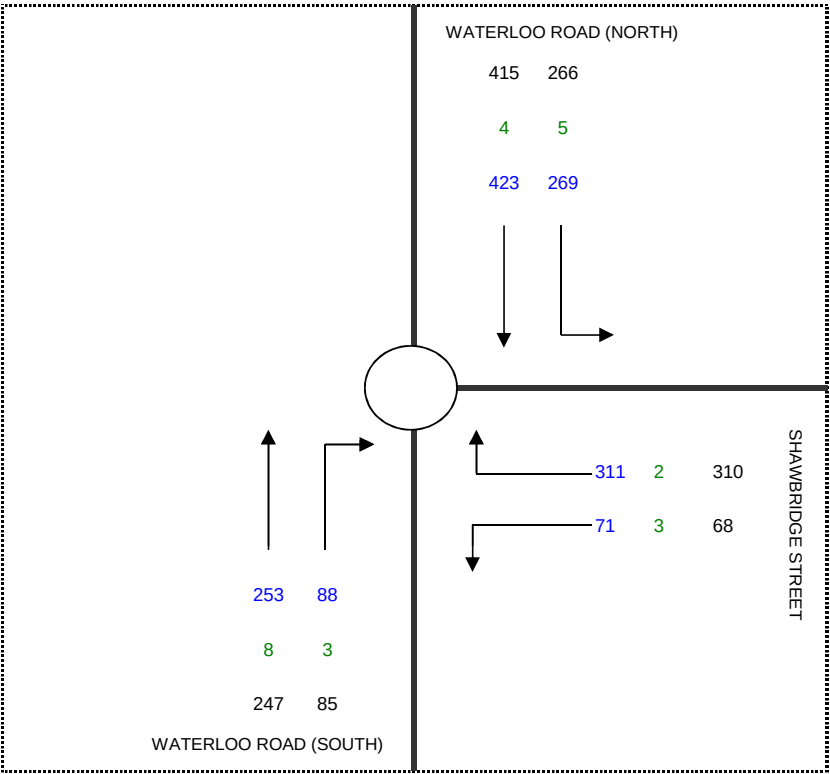
DATE: THURSDAY 13th SEPTEMBER 2012

TOTAL HGV'S PCU'S

LOCATION: WATERLOO ROAD / SHAWBRIDGE STREET

AM PEAK 8:15 - 9:15

PM PEAK 15:15 - 16:15



ARM / TURNING DIRECTION		LEFT TURN							STRAIGHT ON							RIGHT TURN						
		MOTO R	CAR TAXI	LGV	OGV1	OGV2	BUS COAC	TOTAL	MOTO R	CAR TAXI	LGV	OGV1	OGV2	BUS COAC	TOTAL	MOTO R	CAR TAXI	LGV	OGV1	OGV2	BUS COAC	TOTAL
AM PEAK	WATERLOO ROAD (NORTH)	2	232	25	5	0	2	266	4	348	51	4	0	8	415							
	SHAWBRIDGE STREET	0	59	5	3	0	1	68								2	276	29	2	0	1	310
	WATERLOO ROAD (SOUTH)								2	201	34	7	1	2	247	0	76	5	2	1	1	85
PM PEAK	WATERLOO ROAD (NORTH)	1	265	41	2	0	4	313	3	401	54	3	1	7	469							
	SHAWBRIDGE STREET	1	94	17	3	0	1	116								0	208	21	2	0	0	231
	WATERLOO ROAD (SOUTH)								0	249	16	4	0	2	271	0	71	10	2	0	0	83

Flow Diagram, Clitheroe

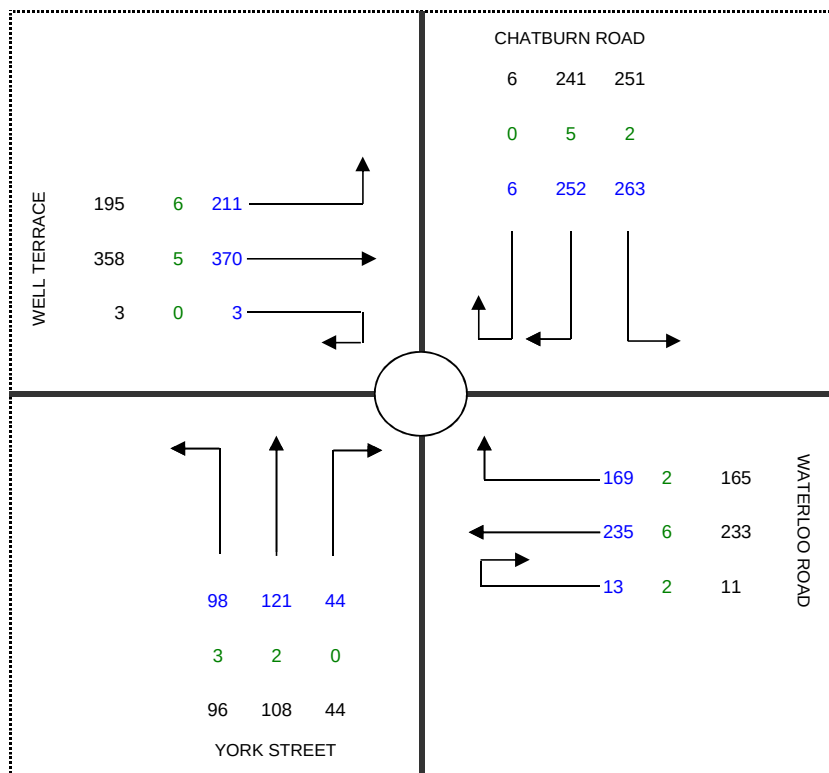
DATE: THURSDAY 13th SEPTEMBER 2012

TOTAL HGV'S PCU'S

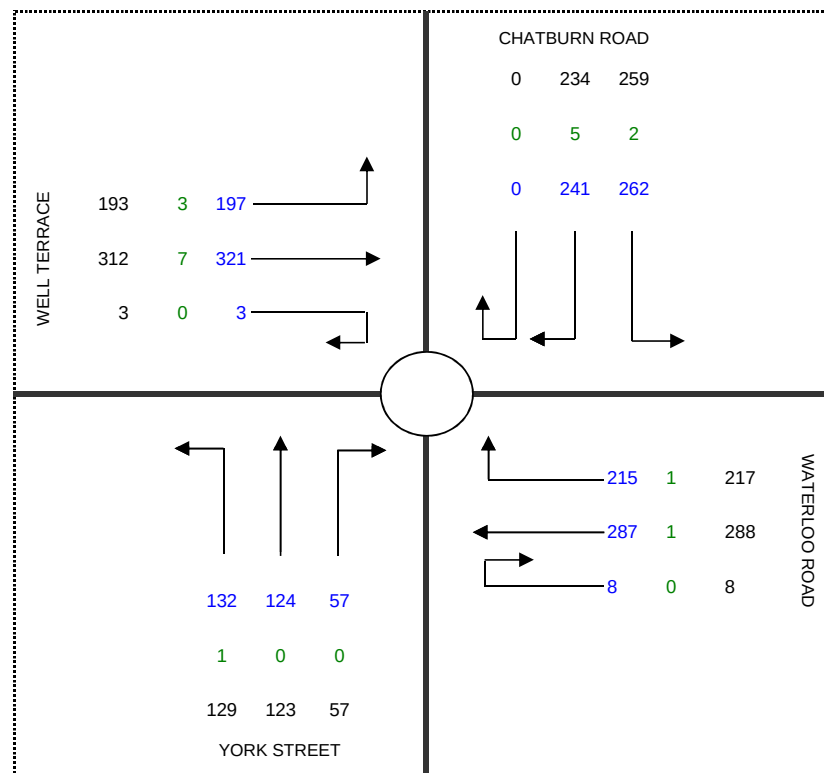


LOCATION: CHATBURN ROAD / WATERLOO ROAD / YORK STREET / WELL TERRACE

AM PEAK 8:15 - 9:15



PM PEAK 16:45 - 17:45



ARM / TURNING DIRECTION		LEFT TURN							STRAIGHT ON							RIGHT TURN						
		MOTO R	CAR TAXI	LGV	OGV1	OGV2	BUS COAC	TOTAL	MOTO R	CAR TAXI	LGV	OGV1	OGV2	BUS COAC	TOTAL	MOTO R	CAR TAXI	LGV	OGV1	OGV2	BUS COAC	TOTAL
AM PEAK	CHATBURN ROAD	0	217	21	2	0	11	251	0	0	0	0	0	0	0	0	190	38	4	1	8	241
	WATERLOO ROAD	0	0	0	0	0	0	0	4	193	29	6	0	1	233	0	141	19	2	0	3	165
	YORK STREET	1	77	14	3	0	1	96	1	75	17	2	0	13	108	0	36	8	0	0	0	44
	WELL TERRACE	0	153	23	6	0	13	195	4	307	30	5	0	12	358	0	0	0	0	0	0	0

PM PEAK	CHATBURN ROAD	1	243	10	2	0	3	259	0	0	0	0	0	0	0	0	203	23	3	2	3	234
	WATERLOO ROAD	0	0	0	0	0	0	0	2	265	20	1	0	0	288	4	197	15	1	0	0	217
	YORK STREET	0	118	8	1	0	2	129	0	110	12	0	0	1	123	0	54	3	0	0	0	57
	WELL TERRACE	3	155	29	1	2	3	193	3	277	18	7	0	7	312	0	0	0	0	0	0	0

Classified Turning Counts, Clitheroe

DATE: TUESDAY 2nd OCTOBER 2012

LOCATION: BAWDLANDS / CASTLE VIEW / PARSON LANE



ARM: BAWDLANDS

TIME / CLASS	LEFT TO CASTLE VIEW							STRAIGHT TO PARSON LANE							TOTAL MOVEMENT FROM ARM
	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	
7:30 - 7:45	0	4	0	0	0	0	4	0	60	7	0	0	4	71	75
7:45 - 8:00	0	3	1	0	0	0	4	0	50	9	0	1	1	61	65
8:00 - 8:15	0	2	0	0	0	0	2	0	70	5	0	0	3	78	80
8:15 - 8:30	0	1	0	0	0	0	1	0	82	4	0	0	2	88	89
HOURLY TOTAL	0	10	1	0	0	0	11	0	262	25	0	1	10	298	309
8:30 - 8:45	0	4	0	0	0	0	4	0	108	7	4	0	1	120	124
8:45 - 9:00	0	7	0	0	0	0	7	0	62	7	2	0	3	74	81
9:00 - 9:15	0	2	0	0	0	0	2	0	51	8	1	1	0	61	63
9:15 - 9:30	0	3	0	0	0	0	3	0	57	11	0	0	2	70	73
HOURLY TOTAL	0	16	0	0	0	0	16	0	278	33	7	1	6	325	341
PERIOD TOTAL	0	26	1	0	0	0	27	0	540	58	7	2	16	623	650
15:00 - 15:15	0	3	0	1	0	0	4	0	57	5	2	0	0	64	68
15:15 - 15:30	0	5	0	0	0	0	5	0	69	2	1	0	2	74	79
15:30 - 15:45	0	2	0	0	0	0	2	0	53	6	1	1	0	61	63
15:45 - 16:00	0	5	0	0	0	0	5	0	62	5	1	0	1	69	74
HOURLY TOTAL	0	15	0	1	0	0	16	0	241	18	5	1	3	268	284
16:00 - 16:15	0	7	1	0	0	1	9	0	67	12	0	0	1	80	89
16:15 - 16:30	0	6	2	0	0	0	8	0	49	8	1	0	1	59	67
16:30 - 16:45	0	4	0	0	0	0	4	0	83	7	0	0	0	90	94
16:45 - 17:00	0	6	0	0	0	0	6	0	61	6	1	0	3	71	77
HOURLY TOTAL	0	23	3	0	0	1	27	0	260	33	2	0	5	300	327
17:00 - 17:15	0	6	1	0	0	0	7	0	98	5	1	0	1	105	112
17:15 - 17:30	0	3	1	0	0	0	4	0	42	2	0	0	0	44	48
17:30 - 17:45	0	5	0	0	0	0	5	0	51	2	1	0	0	54	59
17:45 - 18:00	0	8	1	0	0	0	9	0	68	4	0	0	0	72	81
HOURLY TOTAL	0	22	3	0	0	0	25	0	259	13	2	0	1	275	300
18:00 - 18:15	0	4	0	0	0	0	4	0	60	3	1	0	1	65	69
18:15 - 18:30	0	3	0	0	0	0	3	0	54	3	2	0	0	59	62
1/2 HOUR TOTAL	0	7	0	0	0	0	7	0	114	6	3	0	1	124	131
PERIOD TOTAL	0	67	6	1	0	1	75	0	874	70	12	1	10	967	1042

Classified Turning Counts, Clitheroe

DATE: TUESDAY 2nd OCTOBER 2012

LOCATION: BAWDLANDS / CASTLE VIEW / PARSON LANE



ARM: CASTLE VIEW

TIME / CLASS	LEFT TO PARSON LANE							RIGHT TO BAWDLANDS							TOTAL MOVEMENT FROM ARM
	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	
7:30 - 7:45	0	12	4	0	0	0	16	0	10	0	0	0	0	10	26
7:45 - 8:00	0	11	2	0	0	0	13	0	16	1	0	0	0	17	30
8:00 - 8:15	0	14	0	0	0	0	14	0	16	0	0	0	0	16	30
8:15 - 8:30	0	8	1	0	0	0	9	0	7	2	0	0	0	9	18
HOURLY TOTAL	0	45	7	0	0	0	52	0	49	3	0	0	0	52	104
8:30 - 8:45	0	14	1	0	0	0	15	0	8	0	0	0	0	8	23
8:45 - 9:00	0	11	0	0	0	0	11	0	8	0	0	0	0	8	19
9:00 - 9:15	0	2	0	0	0	0	2	0	10	0	0	0	1	11	13
9:15 - 9:30	0	5	0	0	0	0	5	0	5	0	0	0	0	5	10
HOURLY TOTAL	0	32	1	0	0	0	33	0	31	0	0	0	1	32	65

PERIOD TOTAL	0	77	8	0	0	0	85	0	80	3	0	0	1	84	169

15:00 - 15:15	0	11	4	0	0	0	15	0	11	0	0	0	0	11	26
15:15 - 15:30	0	9	1	0	0	0	10	0	0	0	0	0	0	0	10
15:30 - 15:45	0	6	1	0	0	0	7	0	5	0	0	0	0	5	12
15:45 - 16:00	0	7	4	0	0	0	11	0	6	0	0	0	0	6	17
HOURLY TOTAL	0	33	10	0	0	0	43	0	22	0	0	0	0	22	65
16:00 - 16:15	0	4	4	0	0	0	8	0	4	1	0	0	1	6	14
16:15 - 16:30	0	11	1	0	0	0	12	0	11	0	0	0	0	11	23
16:30 - 16:45	0	6	3	0	0	0	9	0	4	2	0	0	0	6	15
16:45 - 17:00	0	7	1	0	0	0	8	0	6	2	0	0	0	8	16
HOURLY TOTAL	0	28	9	0	0	0	37	0	25	5	0	0	1	31	68
17:00 - 17:15	0	14	0	0	0	0	14	0	5	1	0	0	0	6	20
17:15 - 17:30	0	9	0	0	0	0	9	0	8	1	0	0	0	9	18
17:30 - 17:45	0	13	0	0	0	0	13	0	3	1	0	0	0	4	17
17:45 - 18:00	0	7	3	0	0	0	10	0	10	0	0	0	0	10	20
HOURLY TOTAL	0	43	3	0	0	0	46	0	26	3	0	0	0	29	75
18:00 - 18:15	0	7	2	0	0	0	9	0	7	1	0	0	0	8	17
18:15 - 18:30	0	8	0	0	0	0	8	0	4	1	0	0	0	5	13
1/2 HOUR TOTAL	0	15	2	0	0	0	17	0	11	2	0	0	0	13	30

PERIOD TOTAL	0	119	24	0	0	0	143	0	84	10	0	0	1	95	238

Classified Turning Counts, Clitheroe

DATE: TUESDAY 2nd OCTOBER 2012

LOCATION: BAWDLANDS / CASTLE VIEW / PARSON LANE



ARM: PARSON LANE

TIME / CLASS	STRAIGHT TO BAWDLANDS							RIGHT TO CASTLE VIEW							TOTAL MOVEMENT FROM ARM
	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	MOTOR CYCLE	CAR TAXI	LGV	OGV1	OGV2	BUS COACH	TOTAL	
7:30 - 7:45	0	33	7	3	0	1	44	0	6	0	0	0	0	6	50
7:45 - 8:00	0	32	3	1	0	0	36	0	6	3	0	0	0	9	45
8:00 - 8:15	0	47	10	2	0	1	60	0	4	2	0	0	0	6	66
8:15 - 8:30	0	50	7	0	0	2	59	0	8	1	0	0	0	9	68
HOURLY TOTAL	0	162	27	6	0	4	199	0	24	6	0	0	0	30	229
8:30 - 8:45	0	61	4	2	0	0	67	0	5	2	0	0	0	7	74
8:45 - 9:00	0	72	18	0	0	1	91	0	5	2	0	0	0	7	98
9:00 - 9:15	0	62	9	0	0	1	72	0	8	0	0	0	1	9	81
9:15 - 9:30	1	48	7	0	0	0	56	0	9	3	0	0	0	12	68
HOURLY TOTAL	1	243	38	2	0	2	286	0	27	7	0	0	1	35	321

PERIOD TOTAL	1	405	65	8	0	6	485	0	51	13	0	0	1	65	550

15:00 - 15:15	1	71	11	0	0	1	84	0	12	0	0	0	0	12	96
15:15 - 15:30	0	88	10	0	0	0	98	0	14	1	0	0	0	15	113
15:30 - 15:45	0	108	6	2	0	1	117	0	9	1	0	0	0	10	127
15:45 - 16:00	0	78	11	0	1	2	92	0	10	1	0	0	0	11	103
HOURLY TOTAL	1	345	38	2	1	4	391	0	45	3	0	0	0	48	439
16:00 - 16:15	0	117	7	0	0	3	127	0	21	0	0	0	0	21	148
16:15 - 16:30	0	114	8	0	0	1	123	0	17	0	0	0	0	17	140
16:30 - 16:45	0	91	5	0	0	1	97	0	13	2	0	0	0	15	112
16:45 - 17:00	0	102	7	0	0	1	110	0	22	2	0	0	0	24	134
HOURLY TOTAL	0	424	27	0	0	6	457	0	73	4	0	0	0	77	534
17:00 - 17:15	1	128	10	0	0	2	141	0	15	2	0	0	0	17	158
17:15 - 17:30	0	126	10	0	0	1	137	0	12	1	0	0	0	13	150
17:30 - 17:45	0	100	6	0	0	1	107	0	24	1	0	0	0	25	132
17:45 - 18:00	0	106	8	0	0	0	114	0	18	1	0	0	0	19	133
HOURLY TOTAL	1	460	34	0	0	4	499	0	69	5	0	0	0	74	573
18:00 - 18:15	0	104	2	0	0	1	107	0	13	0	0	0	0	13	120
18:15 - 18:30	0	77	1	0	0	0	78	0	17	1	0	0	0	18	96
1/2 HOUR TOTAL	0	181	3	0	0	1	185	0	30	1	0	0	0	31	216

PERIOD TOTAL	2	1410	102	2	1	15	1532	0	217	13	0	0	0	230	1762

Flow Diagram, Clitheroe

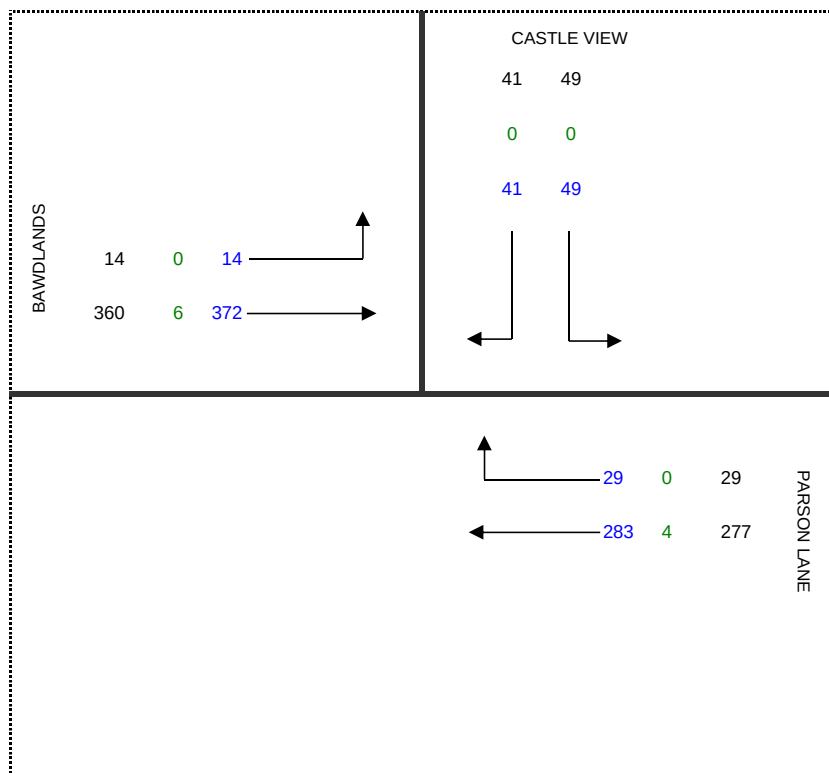
DATE: TUESDAY 2nd OCTOBER 2012

TOTAL HGV'S PCU'S

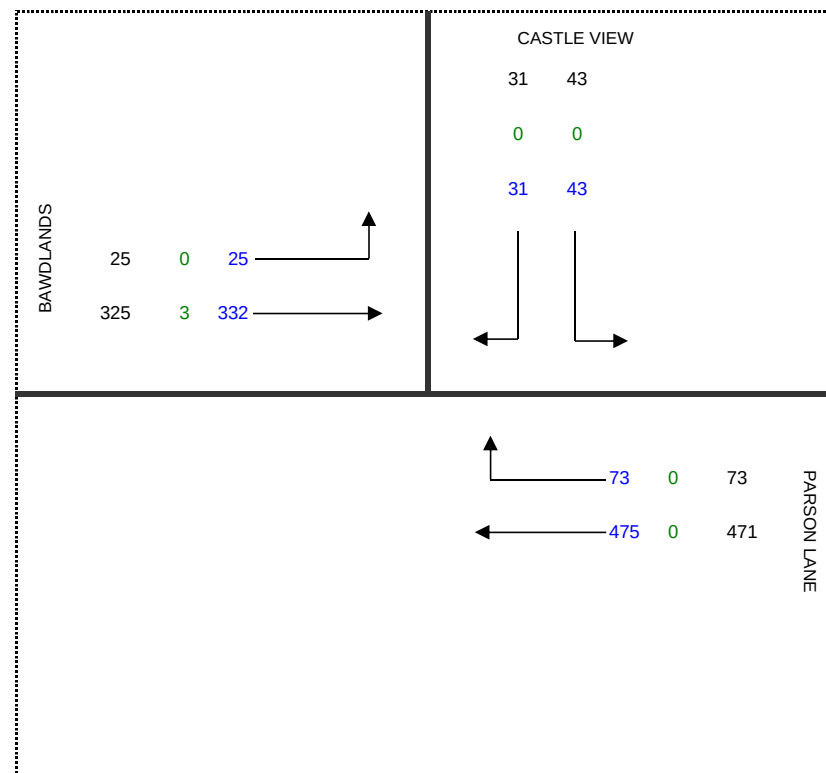


LOCATION: BAWDLANDS / CASTLE VIEW / PARSON LANE

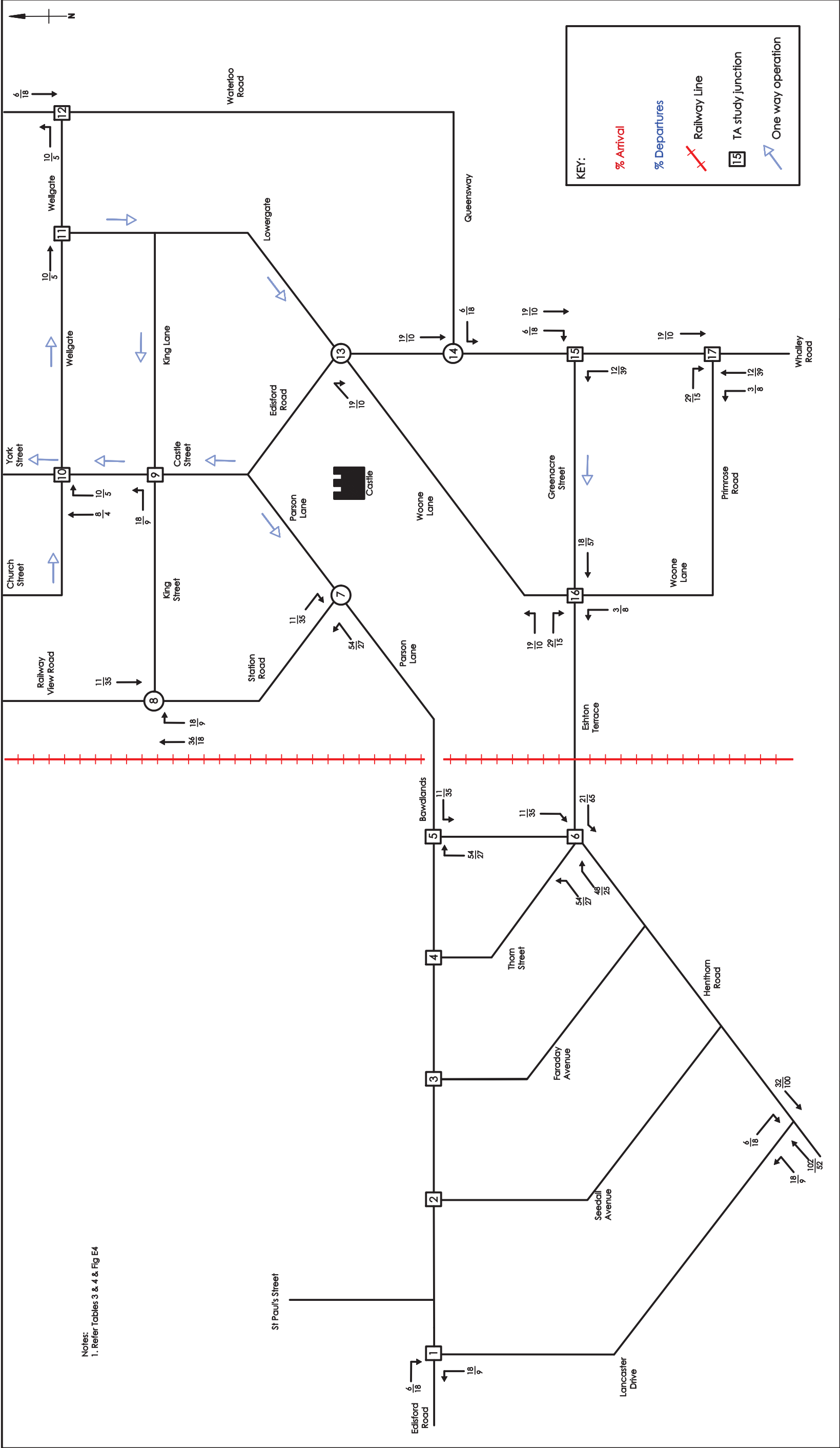
AM PEAK 8:00 - 9:00



PM PEAK 16:15 - 17:15



ARM / TURNING DIRECTION		LEFT TURN							STRAIGHT ON							RIGHT TURN						
		MOTO R	CAR TAXI	LGV	OGV1	OGV2	BUS COAC	TOTAL	MOTO R	CAR TAXI	LGV	OGV1	OGV2	BUS COAC	TOTAL	MOTO R	CAR TAXI	LGV	OGV1	OGV2	BUS COAC	TOTAL
AM PEAK	BAWDLANDS	0	14	0	0	0	0	14	0	322	23	6	0	9	360							
	CASTLE VIEW	0	47	2	0	0	0	49								0	39	2	0	0	0	41
	PARSON LANE								0	230	39	4	0	4	277	0	22	7	0	0	0	29
PM PEAK	BAWDLANDS	0	22	3	0	0	0	25	0	291	26	3	0	5	325							
	CASTLE VIEW	0	38	5	0	0	0	43								0	26	5	0	0	0	31
	PARSON LANE								1	435	30	0	0	5	471	0	67	6	0	0	0	73



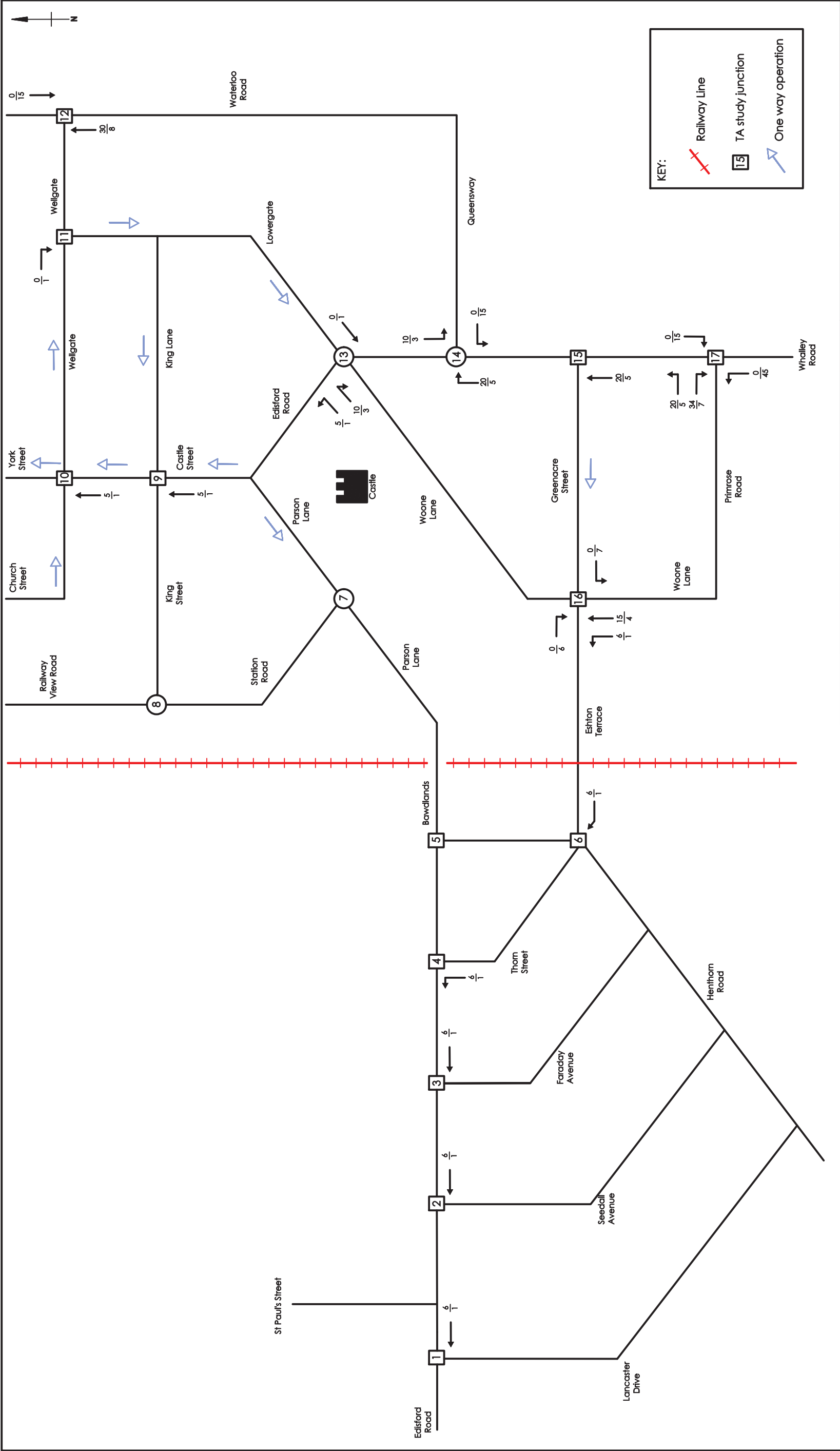


FIGURE E5

COMMITTED DEVELOPMENT

ashleyhelme
a s s o c i a t e s

76 washway road, sale, manchester, m33 7re
email: aha@ashleyhelme.co.uk tel: 0161 972 0552 fax: 0161 972 0553

Key:

AM = 0800-0900 pcu
PM 1700-1800

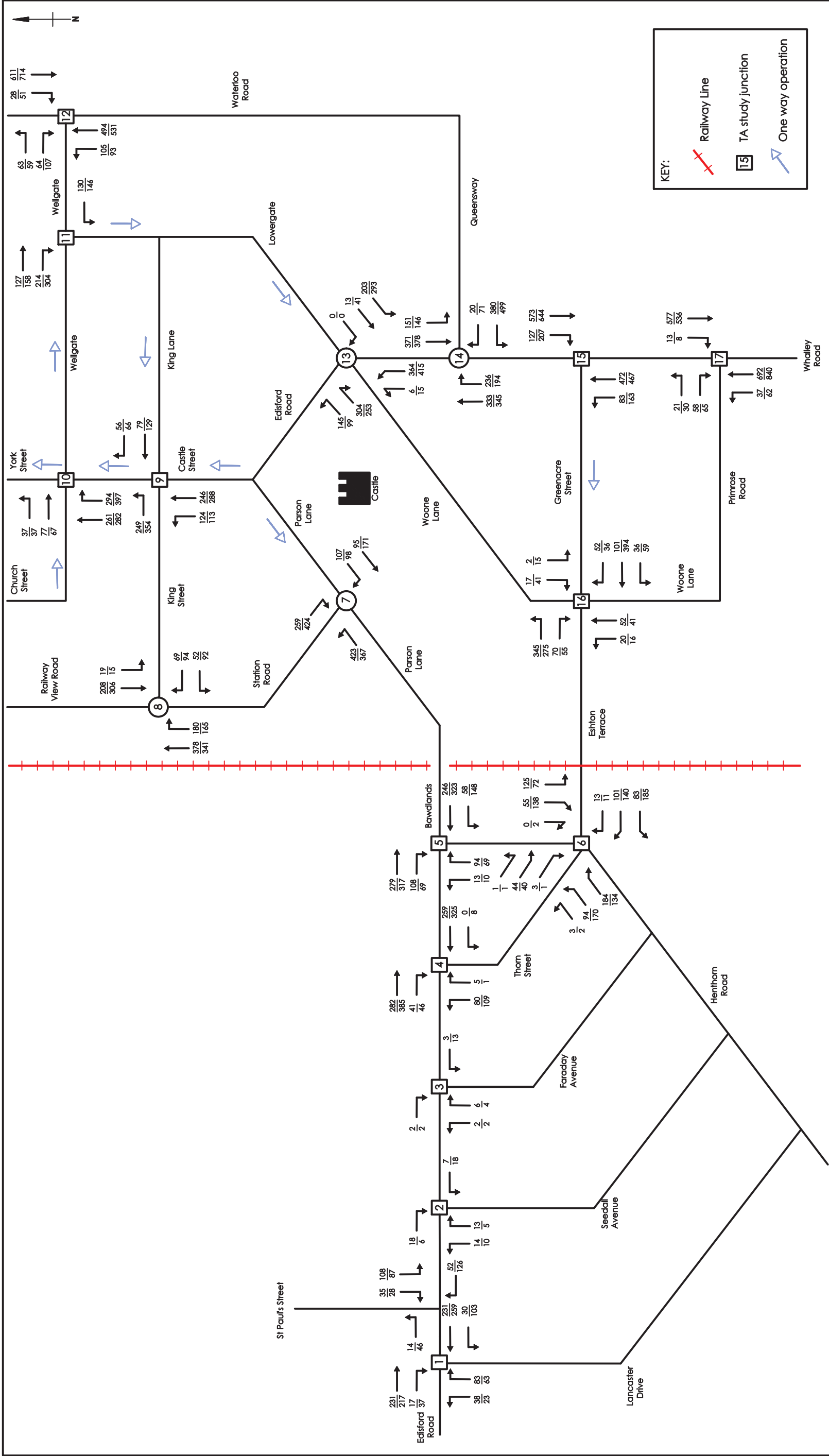


FIGURE E1

TRAFFIC COUNT

AM & PM PEAK HOURS

Key:

AM = 0800-0900 pcu

PM = 1700-1800

Appendix D

KTP Norfolk Norfolk

Licence No: 550501

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION

Category : D - NURSERY

VEHICLES

Selected regions and areas:

04	EAST ANGLIA	
	SF SUFFOLK	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
09	NORTH	
	DH DURHAM	1 days
10	WALES	
	GW GWYNEDD	1 days
	MT MERTHYR TYDFIL	1 days
11	SCOTLAND	
	EA EAST AYRSHIRE	1 days
	HI HIGHLAND	1 days

Filtering Stage 2 selection:

Parameter:	Number of pupils
Actual Range:	35 to 450 (units:)
Range Selected by User:	29 to 100 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/04 to 16/11/09

Selected survey days:

Monday	1 days
Tuesday	3 days
Thursday	2 days
Friday	1 days

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	2
Neighbourhood Centre (PPS6 Local Centre)	1
Free Standing (PPS6 Out of Town)	1

Selected Location Sub Categories:

Commercial Zone	1
Residential Zone	1
Village	1
Out of Town	1
No Sub Category	3

KTP Norfolk Norfolk

Licence No: 550501

LIST OF SITES relevant to selection parameters

1	DH-04-D-02	NURSERY, DURHAM	DURHAM
	PRIORY ROAD		
	FRAMWELLGATE MOOR		
	DURHAM		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of pupils:	40	
	Survey date: THURSDAY	27/11/08	Survey Type: MANUAL
2	EA-04-D-01	NURSERY, KILMARNOCK	EAST AYRSHIRE
	ALTONHILL AVENUE		
	KILMARNOCK		
	Edge of Town		
	No Sub Category		
	Total Number of pupils:	130	
	Survey date: THURSDAY	19/05/05	Survey Type: MANUAL
3	GW-04-D-01	NURSERY, BANGOR	GWYNEDD
	FFORDD GELLI MORGAN		
	PARC MENAI		
	BANGOR		
	Edge of Town		
	Commercial Zone		
	Total Number of pupils:	46	
	Survey date: MONDAY	13/07/09	Survey Type: MANUAL
4	HI-04-D-01	NURSERY, INVERNESS	HIGHLAND
	STRATHERRICK ROAD		
	UPPER DRUMMOND		
	INVERNESS		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of pupils:	138	
	Survey date: FRIDAY	26/05/06	Survey Type: MANUAL
5	MT-04-D-01	NURSERY, MERTHYR TYDFIL	MERTHYR TYDFIL
	BREWERY ROAD		
	DOWLAIS		
	MERTHYR TYDFIL		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of pupils:	40	
	Survey date: TUESDAY	09/10/07	Survey Type: MANUAL
6	NY-04-D-01	NURSERY, NEAR TADCASTER	NORTH YORKSHIRE
	LONDON ROAD		
	BARKSTON ASH		
	NEAR TADCASTER		
	Free Standing (PPS6 Out of Town)		
	Out of Town		
	Total Number of pupils:	450	
	Survey date: TUESDAY	10/05/05	Survey Type: MANUAL
7	SF-04-D-01	NURSERY, NR BURY ST EDMUNDS	SUFFOLK
	IXWORTH ROAD		
	THURSTON		
	NEAR BURY ST EDMUNDS		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total Number of pupils:	35	
	Survey date: TUESDAY	09/05/06	Survey Type: MANUAL

KTP Norfolk Norfolk

Licence No: 550501

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY

VEHICLES

Calculation factor: 1

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	6	140	0.066	6	140	0.017	6	140	0.083
08:00 - 09:00	7	126	0.279	7	126	0.237	7	126	0.516
09:00 - 10:00	7	126	0.115	7	126	0.130	7	126	0.245
10:00 - 11:00	7	126	0.026	7	126	0.024	7	126	0.050
11:00 - 12:00	7	126	0.053	7	126	0.055	7	126	0.108
12:00 - 13:00	7	126	0.059	7	126	0.059	7	126	0.118
13:00 - 14:00	7	126	0.049	7	126	0.052	7	126	0.101
14:00 - 15:00	7	126	0.048	7	126	0.046	7	126	0.094
15:00 - 16:00	7	126	0.044	7	126	0.049	7	126	0.093
16:00 - 17:00	7	126	0.099	7	126	0.086	7	126	0.185
17:00 - 18:00	7	126	0.212	7	126	0.249	7	126	0.461
18:00 - 19:00	6	139	0.008	6	139	0.049	6	139	0.057
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			1.058			1.053			2.111

Parameter summary

Trip rate parameter range selected: 35 - 450 (units:)
 Survey date range: 01/01/04 - 16/11/09
 Number of weekdays (Monday-Friday): 7
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

KTP Norfolk Norfolk

Licence No: 550501

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY

OGVS

Calculation factor: 1

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	6	140	0.000	6	140	0.000	6	140	0.000
08:00 - 09:00	7	126	0.000	7	126	0.000	7	126	0.000
09:00 - 10:00	7	126	0.000	7	126	0.000	7	126	0.000
10:00 - 11:00	7	126	0.000	7	126	0.000	7	126	0.000
11:00 - 12:00	7	126	0.001	7	126	0.001	7	126	0.002
12:00 - 13:00	7	126	0.001	7	126	0.001	7	126	0.002
13:00 - 14:00	7	126	0.001	7	126	0.001	7	126	0.002
14:00 - 15:00	7	126	0.000	7	126	0.000	7	126	0.000
15:00 - 16:00	7	126	0.000	7	126	0.000	7	126	0.000
16:00 - 17:00	7	126	0.000	7	126	0.000	7	126	0.000
17:00 - 18:00	7	126	0.000	7	126	0.000	7	126	0.000
18:00 - 19:00	6	139	0.000	6	139	0.000	6	139	0.000
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			0.003			0.003			0.006

Parameter summary

Trip rate parameter range selected: 35 - 450 (units:)
Survey date range: 01/01/04 - 16/11/09
Number of weekdays (Monday-Friday): 7
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 0

KTP Norfolk Norfolk

Licence No: 550501

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY

PSVS

Calculation factor: 1

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	6	140	0.000	6	140	0.000	6	140	0.000
08:00 - 09:00	7	126	0.002	7	126	0.006	7	126	0.008
09:00 - 10:00	7	126	0.006	7	126	0.001	7	126	0.007
10:00 - 11:00	7	126	0.000	7	126	0.000	7	126	0.000
11:00 - 12:00	7	126	0.000	7	126	0.000	7	126	0.000
12:00 - 13:00	7	126	0.000	7	126	0.001	7	126	0.001
13:00 - 14:00	7	126	0.002	7	126	0.000	7	126	0.002
14:00 - 15:00	7	126	0.000	7	126	0.001	7	126	0.001
15:00 - 16:00	7	126	0.008	7	126	0.007	7	126	0.015
16:00 - 17:00	7	126	0.000	7	126	0.000	7	126	0.000
17:00 - 18:00	7	126	0.000	7	126	0.000	7	126	0.000
18:00 - 19:00	6	139	0.000	6	139	0.000	6	139	0.000
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			0.018			0.016			0.034

Parameter summary

Trip rate parameter range selected: 35 - 450 (units:)
 Survey date range: 01/01/04 - 16/11/09
 Number of weekdays (Monday-Friday): 7
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

KTP Norfolk Norfolk

Licence No: 550501

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY

CYCLISTS

Calculation factor: 1

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	6	140	0.002	6	140	0.000	6	140	0.002
08:00 - 09:00	7	126	0.001	7	126	0.000	7	126	0.001
09:00 - 10:00	7	126	0.001	7	126	0.001	7	126	0.002
10:00 - 11:00	7	126	0.000	7	126	0.000	7	126	0.000
11:00 - 12:00	7	126	0.000	7	126	0.000	7	126	0.000
12:00 - 13:00	7	126	0.002	7	126	0.002	7	126	0.004
13:00 - 14:00	7	126	0.001	7	126	0.002	7	126	0.003
14:00 - 15:00	7	126	0.000	7	126	0.000	7	126	0.000
15:00 - 16:00	7	126	0.000	7	126	0.000	7	126	0.000
16:00 - 17:00	7	126	0.000	7	126	0.000	7	126	0.000
17:00 - 18:00	7	126	0.000	7	126	0.002	7	126	0.002
18:00 - 19:00	6	139	0.000	6	139	0.000	6	139	0.000
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			0.007				0.007	0.014	

Parameter summary

Trip rate parameter range selected: 35 - 450 (units:)
Survey date range: 01/01/04 - 16/11/09
Number of weekdays (Monday-Friday): 7
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 0

Appendix E

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT
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FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: Software@trl.co.uk

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF HIS/HER RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\PICADY\Castle View\Castle View Parsons Bawdlands.vpi"
(drive-on-the-left) at 10:48:21 on Sunday, 7 October 2012

RUN INFORMATION

RUN TITLE : Clitheroe
LOCATION :
DATE : 05/10/12
CLIENT :
ENUMERATOR : Administrator
JOB NUMBER :
STATUS :
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
I
I
I

MINOR ROAD (ARM B)

ARM A IS Bawdlands
ARM B IS Castle View
ARM C IS Parsons Lane

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.35 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 18.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 48.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 2.50 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	621.41		0.24		0.09	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	481.56		0.22		0.09		0.14		0.31	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	573.96		0.22		0.22	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2017 AM Base + Dev

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	BEFORE I AT TOP I AFTER	I
I	I	I	TO RISE I IS REACHED I FALLING	I	PEAK I OF PEAK I PEAK	I
I	I	I		I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00	I	5.96 I 8.94 I 5.96	I
I	ARM B	I	15.00 I 45.00 I 75.00	I	1.88 I 2.81 I 1.88	I
I	ARM C	I	15.00 I 45.00 I 75.00	I	4.55 I 6.83 I 4.55	I

Demand set: 2017 AM Base + Dev

I		I	TURNING PROPORTIONS	I
I		I	TURNING COUNTS	I
I		I	(PERCENTAGE OF H.V.S)	I
I		I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C	I
I	08.00 - 08.15	I	I I I	I
I		I	ARM A I 0.000 I 0.052 I 0.948	I
I		I	I 0.0 I 25.0 I 452.0	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I	I
I		I	ARM B I 0.587 I 0.000 I 0.413	I
I		I	I 88.0 I 0.0 I 62.0	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I	I
I		I	ARM C I 0.896 I 0.104 I 0.000	I
I		I	I 326.0 I 38.0 I 0.0	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
 AND FOR TIME PERIOD

1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	1.88	6.99	0.269		0.00	0.36	5.1		0.19
C-AB	0.48	8.26	0.058		0.00	0.06	0.9		0.13
A-B	0.31								
A-C	5.67								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	2.25	6.62	0.339		0.36	0.50	7.2		0.23
C-AB	0.57	8.00	0.071		0.06	0.08	1.2		0.13
A-B	0.37								
A-C	6.77								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	2.75	6.11	0.451		0.50	0.79	11.2		0.29
C-AB	0.70	7.65	0.091		0.08	0.11	1.6		0.14
A-B	0.46								
A-C	8.29								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	2.75	6.11	0.451		0.79	0.81	12.0		0.30
C-AB	0.70	7.65	0.091		0.11	0.11	1.6		0.14
A-B	0.46								
A-C	8.29								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	2.25	6.62	0.339		0.81	0.52	8.3		0.23
C-AB	0.57	8.00	0.071		0.11	0.08	1.2		0.13
A-B	0.37								
A-C	6.77								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.15-09.30									
B-AC	1.88	6.99	0.269		0.52	0.37	5.8		0.20
C-AB	0.48	8.26	0.058		0.08	0.06	1.0		0.13
A-B	0.31								
A-C	5.67								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.4
08.30	0.5 *
08.45	0.8 *
09.00	0.8 *
09.15	0.5 *
09.30	0.4

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1
09.30	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-AC	I	206.5	I	137.6	I	49.7	I	0.24
I	C-AB	I	52.3	I	34.9	I	7.5	I	0.14
I	A-B	I	34.4	I	22.9	I	I	I	I
I	A-C	I	622.1	I	414.8	I	I	I	I
I	ALL	I	1364.0	I	909.4	I	57.2	I	0.04

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	621.41		0.24		0.09	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	481.56		0.22		0.09		0.14		0.31	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	573.96		0.22		0.22	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

Demand set: 2017 PM Base + Dev

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 5.61 I 8.42 I 5.61	I	I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I 1.33 I 1.99 I 1.33	I	I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I 7.70 I 11.55 I 7.70	I	I	I

Demand set: 2017 PM Base + Dev

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	17.00 - 17.15	I	ARM A	I	0.000	I	0.129	I	0.871	I			I
I		I		I	0.0	I	58.0	I	391.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM B	I	0.500	I	0.000	I	0.500	I			I
I		I		I	53.0	I	0.0	I	53.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM C	I	0.838	I	0.162	I	0.000	I			I
I		I		I	516.0	I	100.0	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD

2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	1.33	6.95	0.191		0.00	0.23	3.3		0.18
C-AB	1.25	8.33	0.151		0.00	0.20	2.9		0.14
A-B	0.73								
A-C	4.91								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	1.59	6.51	0.244		0.23	0.32	4.6		0.20
C-AB	1.50	8.09	0.185		0.20	0.26	3.9		0.15
A-B	0.87								
A-C	5.86								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	1.95	5.89	0.330		0.32	0.48	6.9		0.25
C-AB	1.84	7.76	0.236		0.26	0.39	5.8		0.17
A-B	1.06								
A-C	7.17								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	1.95	5.89	0.330		0.48	0.49	7.3		0.25
C-AB	1.84	7.76	0.236		0.39	0.39	6.0		0.17
A-B	1.06								
A-C	7.17								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	1.59	6.51	0.244		0.49	0.33	5.1		0.20
C-AB	1.50	8.09	0.185		0.39	0.27	4.1		0.15
A-B	0.87								
A-C	5.86								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.15-18.30									
B-AC	1.33	6.95	0.192		0.33	0.24	3.7		0.18
C-AB	1.25	8.33	0.151		0.27	0.20	3.0		0.14
A-B	0.73								
A-C	4.91								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.3
17.45	0.5
18.00	0.5
18.15	0.3
18.30	0.2

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.3
17.45	0.4
18.00	0.4
18.15	0.3
18.30	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I		I			I	* DELAY	*	I	* DELAY	*	I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B-AC	I	145.9	I 97.3	I	31.0	I 0.21	I	31.0	I 0.21	I
I	C-AB	I	137.6	I 91.8	I	25.8	I 0.19	I	25.8	I 0.19	I
I	A-B	I	79.8	I 53.2	I		I	I		I	I
I	A-C	I	538.2	I 358.8	I		I	I		I	I
I	ALL	I	1611.8	I 1074.5	I	56.7	I 0.04	I	56.7	I 0.04	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

Printed at 10:50:14 on 07/10/2012]

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-
"A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\PICADY\Chester Ave\Chester Av Park Av B6478.vpi"
(drive-on-the-left) at 10:55:59 on Sunday, 7 October 2012

RUN INFORMATION *****

RUN TITLE : Clitheroe
LOCATION :
DATE : 04/10/12
CLIENT :
ENUMERATOR :
JOB NUMBER :
STATUS :
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY *****

INPUT DATA -----

MINOR ROAD (ARM D)
I
I
I
I
I
I
I
MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS B6478 Clitheroe
ARM B IS Chester Avenue
ARM C IS B6478 Waddington
ARM D IS Park Avenue

STREAM LABELLING CONVENTION -----

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 7.60 M.	I	(W) 7.50 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I	(WCR) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I	(WA-D) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 57.00 M.	I	(VA-D) 68.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I	YES	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 11.0 M.	I	(VD-A) 12.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 12.0 M.	I	(VD-C) 12.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 4.90 M.	I	(WD-A) 4.50 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I	(WD-C) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

B-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	D-C	STREAM	A-B	STREAM	D-B	I
I	751.61		0.27		0.27		0.11		0.11	I

B-AD Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-AD	STREAM	A-C	STREAM	A-D	STREAM	D-A	STREAM	D-B	I
I	579.81		0.25		0.25		0.10		0.10	I

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	C-A	STREAM	C-B	STREAM	C-D	STREAM	D-B	I
I			0.16		0.16		0.35			I

D-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-A	STREAM	C-A	STREAM	D-C	STREAM	A-B	STREAM	D-B	I
I	726.33		0.26		0.26		0.10		0.10	I

D-BC Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-BC	STREAM	C-A	STREAM	B-A	STREAM	C-D	STREAM	B-D	I
I	560.67		0.24		0.24		0.10		0.10	I

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	A-C	STREAM	A-B	STREAM	A-D	STREAM	D-B	I
I			0.15		0.15		0.34			I

C-B Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	STREAM	D-C	STREAM	D-B	I
I	606.97		0.22		0.22		0.22		0.22	I

A-D Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM A-D	STREAM	C-A	STREAM	C-D	STREAM	B-A	STREAM	B-D	I
I	606.97		0.22		0.22		0.22		0.22	I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I
I	D	I	100		I

Demand set: 2012 PM Base

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	I	I	NUMBER OF MINUTES FROM START WHEN				I	RATE OF FLOW (VEH/MIN)				I						
			I	I	I	I		I	I	I	I							
													I	I	I	I	I	I
ARM			FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER	PEAK	OF PEAK	PEAK							
			TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK										
I	ARM	A	I	15.00	I	45.00	I	75.00	I	5.59	I	8.38	I	5.59	I			
I	ARM	B	I	15.00	I	45.00	I	75.00	I	0.34	I	0.51	I	0.34	I			
I	ARM	C	I	15.00	I	45.00	I	75.00	I	4.65	I	6.98	I	4.65	I			
I	ARM	D	I	15.00	I	45.00	I	75.00	I	0.30	I	0.45	I	0.30	I			

Demand set: 2012 PM Base

		TURNING PROPORTIONS								
		TURNING COUNTS								
		(PERCENTAGE OF H.V.S)								
	TIME	FROM/TO	ARM	A	ARM	B	ARM	C	ARM	D
	16.45 - 17.00									
		ARM	A	0.000	0.047	0.915	0.038			
				0.0	21.0	409.0	17.0			
				(0.0)	(0.0)	(0.0)	(0.0)			
		ARM	B	0.593	0.000	0.407	0.000			
				16.0	0.0	11.0	0.0			
				(0.0)	(0.0)	(0.0)	(0.0)			
		ARM	C	0.949	0.048	0.000	0.003			
				353.0	18.0	0.0	1.0			
				(0.0)	(0.0)	(0.0)	(0.0)			
		ARM	D	0.833	0.042	0.125	0.000			
				20.0	1.0	3.0	0.0			
				(0.0)	(0.0)	(0.0)	(0.0)			

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 PM Base
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-ACD	0.34	8.70	0.039		0.00	0.04	0.6		0.12
A-BCD	0.21	9.19	0.023		0.00	0.02	0.4		0.11
D-ABC	0.30	10.07	0.030		0.00	0.03	0.4		0.10
C-ABD	0.23	8.92	0.025		0.00	0.03	0.4		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-ACD	0.40	8.31	0.049		0.04	0.05	0.7		0.13
A-BCD	0.25	8.99	0.028		0.02	0.03	0.4		0.11
D-ABC	0.36	9.78	0.037		0.03	0.04	0.6		0.11
C-ABD	0.27	8.69	0.031		0.03	0.03	0.5		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-ACD	0.50	7.77	0.064		0.05	0.07	1.0		0.14
A-BCD	0.31	8.71	0.036		0.03	0.04	0.6		0.12
D-ABC	0.44	9.37	0.047		0.04	0.05	0.7		0.11
C-ABD	0.33	8.37	0.039		0.03	0.04	0.6		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-ACD	0.50	7.77	0.064		0.07	0.07	1.0		0.14
A-BCD	0.31	8.71	0.036		0.04	0.04	0.6		0.12
D-ABC	0.44	9.37	0.047		0.05	0.05	0.7		0.11
C-ABD	0.33	8.37	0.039		0.04	0.04	0.6		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-ACD	0.40	8.31	0.049		0.07	0.05	0.8		0.13
A-BCD	0.25	8.99	0.028		0.04	0.03	0.5		0.11
D-ABC	0.36	9.78	0.037		0.05	0.04	0.6		0.11
C-ABD	0.27	8.69	0.031		0.04	0.03	0.5		0.12

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-ACD	0.34	8.70	0.039		0.05	0.04	0.6		0.12	I
I	A-BCD	0.21	9.19	0.023		0.03	0.02	0.4		0.11	I
I	D-ABC	0.30	10.07	0.030		0.04	0.03	0.5		0.10	I
I	C-ABD	0.23	8.92	0.025		0.03	0.03	0.4		0.11	I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	B-ACD	I	37.2	I	24.8	I	4.7	I	0.13	I
I	A-BCD	I	23.4	I	15.6	I	2.8	I	0.12	I
I	D-ABC	I	33.0	I	22.0	I	3.5	I	0.11	I
I	C-ABD	I	24.8	I	16.5	I	3.0	I	0.12	I
I	ALL	I	1197.5	I	798.3	I	14.1	I	0.01	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

B-C Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-C	STREAM	A-C	STREAM	D-C	STREAM	A-B	STREAM	D-B	STREAM	D-B	STREAM	D-B	I
I		751.61		0.27		0.27		0.11		0.11					I

B-AD Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-AD	STREAM	A-C	STREAM	A-D	STREAM	D-A	STREAM	D-B	STREAM	D-B	STREAM	D-B	I
I		579.81		0.25		0.25		0.10		0.10					I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing
I	STREAM C-A	STREAM C-B	STREAM C-D	STREAM C-D
I	0.16	0.16	0.35	0.35

D-A Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	D-A	STREAM	C-A	STREAM	D-C	STREAM	A-B	STREAM	D-B	STREAM	D-B	STREAM	D-B	I
I		726.33		0.26		0.26		0.10		0.10					I

D-BC Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	D-BC	STREAM	C-A	STREAM	B-A	STREAM	C-D	STREAM	B-D	STREAM	B-D	STREAM	B-D	I
I		560.67		0.24		0.24		0.10		0.10					I

I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For OpposingI
I		STREAM A-C	STREAM A-B	STREAM A-D	
I		0.15	0.15	0.34	
I		0.15	0.15	0.34	
I		0.15	0.15	0.34	
I		0.15	0.15	0.34	
I		0.15	0.15	0.34	
I		0.15	0.15	0.34	
I		0.15	0.15	0.34	
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I		0.15	0.15	0.34	
I		0.15	0.15	0.34	
I		0.15	0.15	0.34	
I		0.15	0.15	0.34	
I		0.15	0.15	0.34	
I		0.15	0.15	0.34	

C-B Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	C-B	STREAM	A-C	STREAM	A-B	STREAM	D-C	STREAM	D-B	STREAM	D-B	STREAM	D-B	I
I		606.97		0.22		0.22		0.22		0.22					I

A-D Stream

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	A-D	STREAM	C-A	STREAM	C-D	STREAM	B-A	STREAM	B-D	STREAM	B-D	STREAM	B-D	I
I		606.97		0.22		0.22		0.22		0.22					I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I
I	D	I	100	I	I

Demand set: 2012 PM Base + Dev

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	I	I	NUMBER OF MINUTES FROM START WHEN				I	RATE OF FLOW (VEH/MIN)			I		
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	6.82	I	10.24	I	6.82
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.34	I	0.51	I	0.34
I	ARM C	I	15.00	I	45.00	I	75.00	I	5.39	I	8.08	I	5.39
I	ARM D	I	15.00	I	45.00	I	75.00	I	0.30	I	0.45	I	0.30

Demand set: 2012 PM Base + Dev

			TURNING PROPORTIONS													
			TURNING COUNTS													
			(PERCENTAGE OF H.V.S)													
	TIME		FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I
	16.45 - 17.00															
			ARM	A		0.000		0.038		0.930		0.031				
						0.0		21.0		508.0		17.0				
						(0.0)		(0.0)		(0.0)		(0.0)				
			ARM	B		0.593		0.000		0.407		0.000				
						16.0		0.0		11.0		0.0				
						(0.0)		(0.0)		(0.0)		(0.0)				
			ARM	C		0.956		0.042		0.000		0.002				
						412.0		18.0		0.0		1.0				
						(0.0)		(0.0)		(0.0)		(0.0)				
			ARM	D		0.833		0.042		0.125		0.000				
						20.0		1.0		3.0		0.0				
						(0.0)		(0.0)		(0.0)		(0.0)				

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 PM Base + Dev
AND FOR TIME PERIOD 2

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	16.45-17.00										I
I	B-ACD	0.34	8.29	0.041		0.00	0.04	0.6		0.13	I
I	A-BCD	0.21	9.03	0.024		0.00	0.02	0.4		0.11	I
I	D-ABC	0.30	9.82	0.031		0.00	0.03	0.5		0.11	I
I	C-ABD	0.23	8.65	0.026		0.00	0.03	0.4		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	B-ACD	0.40	7.81	0.052		0.04	0.05	0.8		0.14	I
I	A-BCD	0.25	8.79	0.029		0.02	0.03	0.5		0.12	I
I	D-ABC	0.36	9.47	0.038		0.03	0.04	0.6		0.11	I
I	C-ABD	0.27	8.37	0.032		0.03	0.03	0.5		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-ACD	0.50	7.15	0.069		0.05	0.07	1.1		0.15	I
I	A-BCD	0.31	8.47	0.037		0.03	0.04	0.6		0.12	I
I	D-ABC	0.44	8.97	0.049		0.04	0.05	0.8		0.12	I
I	C-ABD	0.33	7.98	0.041		0.03	0.04	0.7		0.13	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	B-ACD	0.50	7.15	0.069		0.07	0.07	1.1		0.15	I
I	A-BCD	0.31	8.47	0.037		0.04	0.04	0.6		0.12	I
I	D-ABC	0.44	8.97	0.049		0.05	0.05	0.8		0.12	I
I	C-ABD	0.33	7.98	0.041		0.04	0.04	0.7		0.13	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-ACD	0.40	7.81	0.052		0.07	0.06	0.8		0.14	I
I	A-BCD	0.25	8.79	0.029		0.04	0.03	0.5		0.12	I
I	D-ABC	0.36	9.47	0.038		0.05	0.04	0.6		0.11	I
I	C-ABD	0.27	8.37	0.032		0.04	0.03	0.5		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-ACD	0.34	8.28	0.041		0.06	0.04	0.7		0.13	I
I	A-BCD	0.21	9.03	0.024		0.03	0.02	0.4		0.11	I
I	D-ABC	0.30	9.82	0.031		0.04	0.03	0.5		0.11	I
I	C-ABD	0.23	8.65	0.026		0.03	0.03	0.4		0.12	I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	37.2	I	24.8	I	5.1	I
I	A-BCD	I	23.4	I	15.6	I	2.8	I
I	D-ABC	I	33.0	I	22.0	I	3.7	I
I	C-ABD	I	24.8	I	16.5	I	3.2	I
I	ALL	I	1415.0	I	943.3	I	14.8	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

B-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	D-C	STREAM	A-B	STREAM	D-B	I
I	751.61		0.27		0.27		0.11		0.11	I

B-AD Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-AD	STREAM	A-C	STREAM	A-D	STREAM	D-A	STREAM	D-B	I
I	579.81		0.25		0.25		0.10		0.10	I

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	C-A	STREAM	C-B	STREAM	C-D			I
I			0.16		0.16		0.35			I

D-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-A	STREAM	C-A	STREAM	D-C	STREAM	A-B	STREAM	D-B	I
I	726.33		0.26		0.26		0.10		0.10	I

D-BC Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-BC	STREAM	C-A	STREAM	B-A	STREAM	C-D	STREAM	B-D	I
I	560.67		0.24		0.24		0.10		0.10	I

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	A-C	STREAM	A-B	STREAM	A-D			I
I			0.15		0.15		0.34			I

C-B Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	STREAM	D-C	STREAM	D-B	I
I	606.97		0.22		0.22		0.22		0.22	I

A-D Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM A-D	STREAM	C-A	STREAM	C-D	STREAM	B-A	STREAM	B-D	I
I	606.97		0.22		0.22		0.22		0.22	I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I
I	D	I	100		I

Demand set: 2012 AM Base

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	I	I	NUMBER OF MINUTES FROM START WHEN				I	RATE OF FLOW (VEH/MIN)			I			
			I	FLOW STARTS	I	TOP OF PEAK		I	FLOW STOPS	I		BEFORE	I	AT TOP	I	AFTER
I	ARM	I	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK
I	I	I	I		I		I		I		I		I	
I	ARM A	I	15.00	I	45.00	I	75.00	I	3.90	I	5.85	I	3.90	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.30	I	0.45	I	0.30	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.45	I	6.67	I	4.45	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	0.25	I	0.38	I	0.25	I

Demand set: 2012 AM Base

			TURNING PROPORTIONS													
			TURNING COUNTS													
			(PERCENTAGE OF H.V.S)													

	TIME		FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I
I	08.00 - 08.15	I		I			I			I			I			I
I		I	ARM	A	I	0.000	I	0.067	I	0.923	I	0.010	I			I
I		I		I	I	0.0	I	21.0	I	288.0	I	3.0	I			I
I		I		I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I	I		I		I		I		I			I
I		I	ARM	B	I	0.542	I	0.000	I	0.458	I	0.000	I			I
I		I		I	I	13.0	I	0.0	I	11.0	I	0.0	I			I
I		I		I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I	I		I		I		I		I			I
I		I	ARM	C	I	0.947	I	0.051	I	0.000	I	0.003	I			I
I		I		I	I	337.0	I	18.0	I	0.0	I	1.0	I			I
I		I		I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I	I		I		I		I		I			I
I		I	ARM	D	I	0.800	I	0.050	I	0.150	I	0.000	I			I
I		I		I	I	16.0	I	1.0	I	3.0	I	0.0	I			I
I		I		I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I	I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 AM Base
 AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-ACD	0.30	9.29	0.032		0.00	0.03	0.5		0.11	I
I	A-BCD	0.04	9.24	0.004		0.00	0.00	0.1		0.11	I
I	D-ABC	0.25	10.09	0.025		0.00	0.03	0.4		0.10	I
I	C-ABD	0.23	9.26	0.024		0.00	0.03	0.4		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-ACD	0.36	8.99	0.040		0.03	0.04	0.6		0.12	I
I	A-BCD	0.04	9.05	0.005		0.00	0.00	0.1		0.11	I
I	D-ABC	0.30	9.83	0.030		0.03	0.03	0.5		0.10	I
I	C-ABD	0.27	9.09	0.030		0.03	0.03	0.5		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-ACD	0.44	8.57	0.051		0.04	0.05	0.8		0.12	I
I	A-BCD	0.06	8.79	0.006		0.00	0.01	0.1		0.11	I
I	D-ABC	0.37	9.46	0.039		0.03	0.04	0.6		0.11	I
I	C-ABD	0.33	8.86	0.037		0.03	0.04	0.6		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-ACD	0.44	8.57	0.051		0.05	0.05	0.8		0.12	I
I	A-BCD	0.06	8.79	0.006		0.01	0.01	0.1		0.11	I
I	D-ABC	0.37	9.46	0.039		0.04	0.04	0.6		0.11	I
I	C-ABD	0.33	8.86	0.037		0.04	0.04	0.6		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-ACD	0.36	8.99	0.040		0.05	0.04	0.6		0.12	I
I	A-BCD	0.04	9.05	0.005		0.01	0.01	0.1		0.11	I
I	D-ABC	0.30	9.83	0.030		0.04	0.03	0.5		0.10	I
I	C-ABD	0.27	9.09	0.030		0.04	0.03	0.5		0.11	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-ACD	0.30	9.29	0.032		0.04	0.03	0.5		0.11	I
I	A-BCD	0.04	9.24	0.004		0.01	0.00	0.1		0.11	I
I	D-ABC	0.25	10.09	0.025		0.03	0.03	0.4		0.10	I
I	C-ABD	0.23	9.26	0.024		0.03	0.03	0.4		0.11	I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.1
09.00	0.1
09.15	0.0
09.30	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	33.0	I	22.0	I	3.8	I
I	A-BCD	I	4.1	I	2.8	I	0.5	I
I	D-ABC	I	27.5	I	18.4	I	2.9	I
I	C-ABD	I	24.8	I	16.5	I	2.9	I
I	ALL	I	980.0	I	653.3	I	10.1	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

B-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	D-C	STREAM	A-B	STREAM	D-B	I
I	751.61		0.27		0.27		0.11		0.11	I

B-AD Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-AD	STREAM	A-C	STREAM	A-D	STREAM	D-A	STREAM	D-B	I
I	579.81		0.25		0.25		0.10		0.10	I

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	C-A	STREAM	C-B	STREAM	C-D	STREAM	C-D	I
I			0.16		0.16		0.35			I

D-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-A	STREAM	C-A	STREAM	D-C	STREAM	A-B	STREAM	D-B	I
I	726.33		0.26		0.26		0.10		0.10	I

D-BC Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-BC	STREAM	C-A	STREAM	B-A	STREAM	C-D	STREAM	B-D	I
I	560.67		0.24		0.24		0.10		0.10	I

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	A-C	STREAM	A-B	STREAM	A-D	STREAM	A-D	I
I			0.15		0.15		0.34			I

C-B Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	STREAM	D-C	STREAM	D-B	I
I	606.97		0.22		0.22		0.22		0.22	I

A-D Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM A-D	STREAM	C-A	STREAM	C-D	STREAM	B-A	STREAM	B-D	I
I	606.97		0.22		0.22		0.22		0.22	I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I
I	D	I	100		I

Demand set: 2012 AM Base + Dev

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	I	I	NUMBER OF MINUTES FROM START WHEN				I	RATE OF FLOW (VEH/MIN)			I		
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	
I	I	I	I	I	I	I	I	I	I	I	I	I	
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.46	I	6.69	I	4.46
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.30	I	0.45	I	0.30
I	ARM C	I	15.00	I	45.00	I	75.00	I	5.75	I	8.63	I	5.75
I	ARM D	I	15.00	I	45.00	I	75.00	I	0.25	I	0.38	I	0.25

Demand set: 2012 AM Base + Dev

				TURNING PROPORTIONS												
				TURNING COUNTS												
				(PERCENTAGE OF H.V.S)												

	TIME		FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I
I	08.00 - 08.15	I		I			I			I			I			I
I		I	ARM A	I	0.000	I	0.059	I	0.933	I	0.008	I	3.0	I		I
I		I		I	0.0	I	21.0	I	333.0	I		I		I		I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I		I		I
I		I		I		I		I		I		I		I		I
I		I	ARM B	I	0.542	I	0.000	I	0.458	I	0.000	I		I		I
I		I		I	13.0	I	0.0	I	11.0	I	0.0	I		I		I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I		I		I
I		I		I		I		I		I		I		I		I
I		I	ARM C	I	0.959	I	0.039	I	0.000	I	0.002	I		I		I
I		I		I	441.0	I	18.0	I	0.0	I	1.0	I		I		I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I		I		I
I		I		I		I		I		I		I		I		I
I		I	ARM D	I	0.800	I	0.050	I	0.150	I	0.000	I		I		I
I		I		I	16.0	I	1.0	I	3.0	I	0.0	I		I		I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I		I		I
I		I		I		I		I		I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 AM Base + Dev
 AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-ACD	0.30	8.99	0.033		0.00	0.03	0.5		0.11	I
I	A-BCD	0.04	8.95	0.004		0.00	0.00	0.1		0.11	I
I	D-ABC	0.25	9.72	0.026		0.00	0.03	0.4		0.11	I
I	C-ABD	0.23	9.13	0.025		0.00	0.03	0.4		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-ACD	0.36	8.63	0.042		0.03	0.04	0.6		0.12	I
I	A-BCD	0.04	8.71	0.005		0.00	0.01	0.1		0.12	I
I	D-ABC	0.30	9.38	0.032		0.03	0.03	0.5		0.11	I
I	C-ABD	0.27	8.94	0.030		0.03	0.03	0.5		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-ACD	0.44	8.12	0.054		0.04	0.06	0.8		0.13	I
I	A-BCD	0.06	8.37	0.007		0.01	0.01	0.1		0.12	I
I	D-ABC	0.37	8.90	0.041		0.03	0.04	0.6		0.12	I
I	C-ABD	0.33	8.68	0.038		0.03	0.04	0.6		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-ACD	0.44	8.12	0.054		0.06	0.06	0.9		0.13	I
I	A-BCD	0.06	8.37	0.007		0.01	0.01	0.1		0.12	I
I	D-ABC	0.37	8.90	0.041		0.04	0.04	0.6		0.12	I
I	C-ABD	0.33	8.68	0.038		0.04	0.04	0.6		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-ACD	0.36	8.63	0.042		0.06	0.04	0.7		0.12	I
I	A-BCD	0.04	8.71	0.005		0.01	0.01	0.1		0.12	I
I	D-ABC	0.30	9.38	0.032		0.04	0.03	0.5		0.11	I
I	C-ABD	0.27	8.94	0.030		0.04	0.03	0.5		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-ACD	0.30	8.99	0.034		0.04	0.03	0.5		0.12	I
I	A-BCD	0.04	8.95	0.004		0.01	0.00	0.1		0.11	I
I	D-ABC	0.25	9.72	0.026		0.03	0.03	0.4		0.11	I
I	C-ABD	0.23	9.13	0.025		0.03	0.03	0.4		0.11	I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.1
09.00	0.1
09.15	0.0
09.30	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	33.0	I	22.0	I	4.0	I
I	A-BCD	I	4.1	I	2.8	I	0.5	I
I	D-ABC	I	27.5	I	18.4	I	3.1	I
I	C-ABD	I	24.8	I	16.5	I	2.9	I
I	ALL	I	1185.1	I	790.1	I	10.5	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

B-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I	STREAM B-C	STREAM	A-C	STREAM	D-C	STREAM	A-B	STREAM	D-B
I	751.61		0.27		0.27		0.11		0.11

B-AD Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I	STREAM B-AD	STREAM	A-C	STREAM	A-D	STREAM	D-A	STREAM	D-B
I	579.81		0.25		0.25		0.10		0.10

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I		STREAM	C-A	STREAM	C-B	STREAM	C-D	STREAM	C-B
I			0.16		0.16		0.35		

D-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I	STREAM D-A	STREAM	C-A	STREAM	D-C	STREAM	A-B	STREAM	D-B
I	726.33		0.26		0.26		0.10		0.10

D-BC Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I	STREAM D-BC	STREAM	C-A	STREAM	B-A	STREAM	C-D	STREAM	B-D
I	560.67		0.24		0.24		0.10		0.10

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I		STREAM	A-C	STREAM	A-B	STREAM	A-D	STREAM	A-D
I			0.15		0.15		0.34		

C-B Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I	STREAM C-B	STREAM	A-C	STREAM	A-B	STREAM	D-C	STREAM	D-B
I	606.97		0.22		0.22		0.22		0.22

A-D Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I	STREAM A-D	STREAM	C-A	STREAM	C-D	STREAM	B-A	STREAM	B-D
I	606.97		0.22		0.22		0.22		0.22

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	
I	D	I	100	I	

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-ACD	0.37	8.86	0.042		0.06	0.04	0.7		0.12	I
I	A-BCD	0.04	9.00	0.005		0.01	0.01	0.1		0.11	I
I	D-ABC	0.31	9.80	0.032		0.04	0.03	0.5		0.11	I
I	C-ABD	0.28	9.05	0.031		0.04	0.03	0.5		0.11	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-ACD	0.31	9.17	0.034		0.04	0.04	0.5		0.11	I
I	A-BCD	0.04	9.20	0.004		0.01	0.00	0.1		0.11	I
I	D-ABC	0.26	10.07	0.026		0.03	0.03	0.4		0.10	I
I	C-ABD	0.24	9.23	0.026		0.03	0.03	0.4		0.11	I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.1
09.00	0.1
09.15	0.0
09.30	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	34.4	I	22.9	I	4.1	I
I	A-BCD	I	4.1	I	2.8	I	0.5	I
I	D-ABC	I	28.9	I	19.3	I	3.1	I
I	C-ABD	I	26.2	I	17.4	I	3.1	I
I	ALL	I	1018.6	I	679.0	I	10.7	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

B-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	D-C	STREAM	A-B	STREAM	D-B	I
I	751.61		0.27		0.27		0.11		0.11	I

B-AD Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-AD	STREAM	A-C	STREAM	A-D	STREAM	D-A	STREAM	D-B	I
I	579.81		0.25		0.25		0.10		0.10	I

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	C-A	STREAM	C-B	STREAM	C-D			I
I			0.16		0.16		0.35			I

D-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-A	STREAM	C-A	STREAM	D-C	STREAM	A-B	STREAM	D-B	I
I	726.33		0.26		0.26		0.10		0.10	I

D-BC Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-BC	STREAM	C-A	STREAM	B-A	STREAM	C-D	STREAM	B-D	I
I	560.67		0.24		0.24		0.10		0.10	I

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	A-C	STREAM	A-B	STREAM	A-D			I
I			0.15		0.15		0.34			I

C-B Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	STREAM	D-C	STREAM	D-B	I
I	606.97		0.22		0.22		0.22		0.22	I

A-D Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM A-D	STREAM	C-A	STREAM	C-D	STREAM	B-A	STREAM	B-D	I
I	606.97		0.22		0.22		0.22		0.22	I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I
I	D	I	100		I

Demand set: 2017 PM Base

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	I	I	NUMBER OF MINUTES FROM START WHEN				I	RATE OF FLOW (VEH/MIN)			I		
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK
I	I	I	I	I	I	I	I	I	I	I	I	I	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	5.82	I	8.74	I	5.82
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.36	I	0.54	I	0.36
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.84	I	7.26	I	4.84
I	ARM D	I	15.00	I	45.00	I	75.00	I	0.31	I	0.47	I	0.31

Demand set: 2017 PM Base

		TURNING PROPORTIONS												
		TURNING COUNTS												
		(PERCENTAGE OF H.V.S)												
TIME		FROM/TO	ARM	A	ARM	B	ARM	C	ARM	D				
16.45	- 17.00													
		ARM	A	0.000	0.047	0.914	0.039							
				0.0	22.0	426.0	18.0							
				(0.0)	(0.0)	(0.0)	(0.0)							
		ARM	B	0.586	0.000	0.414	0.000							
				17.0	0.0	12.0	0.0							
				(0.0)	(0.0)	(0.0)	(0.0)							
		ARM	C	0.948	0.049	0.000	0.003							
				367.0	19.0	0.0	1.0							
				(0.0)	(0.0)	(0.0)	(0.0)							
		ARM	D	0.840	0.040	0.120	0.000							
				21.0	1.0	3.0	0.0							
				(0.0)	(0.0)	(0.0)	(0.0)							

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 PM Base
AND FOR TIME PERIOD 2

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	16.45-17.00										I
I	B-ACD	0.36	8.64	0.042		0.00	0.04	0.6		0.12	I
I	A-BCD	0.23	9.15	0.025		0.00	0.03	0.4		0.11	I
I	D-ABC	0.31	10.04	0.031		0.00	0.03	0.5		0.10	I
I	C-ABD	0.24	8.88	0.027		0.00	0.03	0.4		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	B-ACD	0.43	8.24	0.053		0.04	0.06	0.8		0.13	I
I	A-BCD	0.27	8.94	0.030		0.03	0.03	0.5		0.12	I
I	D-ABC	0.37	9.74	0.038		0.03	0.04	0.6		0.11	I
I	C-ABD	0.28	8.63	0.033		0.03	0.03	0.5		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-ACD	0.53	7.67	0.069		0.06	0.07	1.1		0.14	I
I	A-BCD	0.33	8.65	0.038		0.03	0.04	0.6		0.12	I
I	D-ABC	0.46	9.31	0.049		0.04	0.05	0.8		0.11	I
I	C-ABD	0.35	8.30	0.042		0.03	0.04	0.7		0.13	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	B-ACD	0.53	7.67	0.069		0.07	0.07	1.1		0.14	I
I	A-BCD	0.33	8.65	0.038		0.04	0.04	0.6		0.12	I
I	D-ABC	0.46	9.31	0.049		0.05	0.05	0.8		0.11	I
I	C-ABD	0.35	8.30	0.042		0.04	0.05	0.7		0.13	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-ACD	0.43	8.24	0.053		0.07	0.06	0.9		0.13	I
I	A-BCD	0.27	8.94	0.030		0.04	0.03	0.5		0.12	I
I	D-ABC	0.37	9.74	0.038		0.05	0.04	0.6		0.11	I
I	C-ABD	0.28	8.63	0.033		0.05	0.04	0.5		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-ACD	0.36	8.64	0.042		0.06	0.04	0.7		0.12	I
I	A-BCD	0.23	9.15	0.025		0.03	0.03	0.4		0.11	I
I	D-ABC	0.31	10.04	0.031		0.04	0.03	0.5		0.10	I
I	C-ABD	0.24	8.88	0.027		0.04	0.03	0.4		0.12	I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	39.9	I	26.6	I	5.2	I
I	A-BCD	I	24.8	I	16.5	I	3.0	I
I	D-ABC	I	34.4	I	22.9	I	3.7	I
I	C-ABD	I	26.2	I	17.4	I	3.2	I
I	ALL	I	1248.4	I	832.3	I	15.1	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

B-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	D-C	STREAM	A-B	STREAM	D-B	I
I	751.61		0.27		0.27		0.11		0.11	I

B-AD Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-AD	STREAM	A-C	STREAM	A-D	STREAM	D-A	STREAM	D-B	I
I	579.81		0.25		0.25		0.10		0.10	I

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	C-A	STREAM	C-B	STREAM	C-D			I
I			0.16		0.16		0.35			I

D-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-A	STREAM	C-A	STREAM	D-C	STREAM	A-B	STREAM	D-B	I
I	726.33		0.26		0.26		0.10		0.10	I

D-BC Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-BC	STREAM	C-A	STREAM	B-A	STREAM	C-D	STREAM	B-D	I
I	560.67		0.24		0.24		0.10		0.10	I

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	A-C	STREAM	A-B	STREAM	A-D			I
I			0.15		0.15		0.34			I

C-B Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	STREAM	D-C	STREAM	D-B	I
I	606.97		0.22		0.22		0.22		0.22	I

A-D Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM A-D	STREAM	C-A	STREAM	C-D	STREAM	B-A	STREAM	B-D	I
I	606.97		0.22		0.22		0.22		0.22	I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I
I	D	I	100		I

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45										
B-ACD	0.53	7.05	0.076			0.08	0.08	1.2		0.15
A-BCD	0.33	8.41	0.039			0.04	0.04	0.6		0.12
D-ABC	0.46	8.92	0.051			0.05	0.05	0.8		0.12
C-ABD	0.35	7.90	0.044			0.05	0.05	0.7		0.13

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-ACD	0.43	7.73	0.056		0.08	0.06	0.9		0.14	I
I	A-BCD	0.27	8.74	0.031		0.04	0.03	0.5		0.12	I
I	D-ABC	0.37	9.43	0.040		0.05	0.04	0.6		0.11	I
I	C-ABD	0.28	8.31	0.034		0.05	0.04	0.6		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-ACD	0.36	8.22	0.044		0.06	0.05	0.7		0.13	I
I	A-BCD	0.23	8.98	0.025		0.03	0.03	0.4		0.11	I
I	D-ABC	0.31	9.79	0.032		0.04	0.03	0.5		0.11	I
I	C-ABD	0.24	8.60	0.028		0.04	0.03	0.4		0.12	I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	39.9	I	26.6	I	5.6	I
I	A-BCD	I	24.8	I	16.5	I	3.0	I
I	D-ABC	I	34.4	I	22.9	I	3.8	I
I	C-ABD	I	26.2	I	17.4	I	3.4	I
I	ALL	I	1465.9	I	977.3	I	15.8	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

B-C Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	D-C	STREAM	A-B	STREAM	D-B	I
I	751.61		0.27		0.27		0.11		0.11	I

B-AD Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-AD	STREAM	A-C	STREAM	A-D	STREAM	D-A	STREAM	D-B	I
I	579.81		0.25		0.25		0.10		0.10	I

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	C-A	STREAM	C-B	STREAM	C-D			I
I			0.16		0.16		0.35			I

D-A Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-A	STREAM	C-A	STREAM	D-C	STREAM	A-B	STREAM	D-B	I
I	726.33		0.26		0.26		0.10		0.10	I

D-BC Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-BC	STREAM	C-A	STREAM	B-A	STREAM	C-D	STREAM	B-D	I
I	560.67		0.24		0.24		0.10		0.10	I

I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	A-C	STREAM	A-B	STREAM	A-D			I
I			0.15		0.15		0.34			I

C-B Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	STREAM	D-C	STREAM	D-B	I
I	606.97		0.22		0.22		0.22		0.22	I

A-D Stream

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM A-D	STREAM	C-A	STREAM	C-D	STREAM	B-A	STREAM	B-D	I
I	606.97		0.22		0.22		0.22		0.22	I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I
I	D	I	100		I

Demand set: 2017 AM Base + Dev

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	I	I	NUMBER OF MINUTES FROM START WHEN				I	RATE OF FLOW (VEH/MIN)			I		
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	
I	I	I	I	I	I	I	I	I	I	I	I	I	
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.61	I	6.92	I	4.61
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.31	I	0.47	I	0.31
I	ARM C	I	15.00	I	45.00	I	75.00	I	5.94	I	8.91	I	5.94
I	ARM D	I	15.00	I	45.00	I	75.00	I	0.26	I	0.39	I	0.26

Demand set: 2017 AM Base + Dev

		TURNING PROPORTIONS										
		TURNING COUNTS										
		(PERCENTAGE OF H.V.S)										
TIME		FROM/TO	ARM	A	ARM	B	ARM	C	ARM	D		
08.00	- 08.15											
		ARM	A	0.000	0.060	0.932	0.008					
				0.0	22.0	344.0	3.0					
				(0.0)	(0.0)	(0.0)	(0.0)					
		ARM	B	0.560	0.000	0.440	0.000					
				14.0	0.0	11.0	0.0					
				(0.0)	(0.0)	(0.0)	(0.0)					
		ARM	C	0.958	0.040	0.000	0.002					
				455.0	19.0	0.0	1.0					
				(0.0)	(0.0)	(0.0)	(0.0)					
		ARM	D	0.810	0.048	0.143	0.000					
				17.0	1.0	3.0	0.0					
				(0.0)	(0.0)	(0.0)	(0.0)					

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 AM Base + Dev
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-ACD	0.31	8.86	0.035		0.00	0.04	0.5		0.12	I
I	A-BCD	0.04	8.91	0.004		0.00	0.00	0.1		0.11	I
I	D-ABC	0.26	9.70	0.027		0.00	0.03	0.4		0.11	I
I	C-ABD	0.24	9.10	0.026		0.00	0.03	0.4		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-ACD	0.37	8.49	0.044		0.04	0.05	0.7		0.12	I
I	A-BCD	0.04	8.66	0.005		0.00	0.01	0.1		0.12	I
I	D-ABC	0.31	9.35	0.034		0.03	0.03	0.5		0.11	I
I	C-ABD	0.28	8.90	0.032		0.03	0.03	0.5		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-ACD	0.46	7.96	0.058		0.05	0.06	0.9		0.13	I
I	A-BCD	0.06	8.31	0.007		0.01	0.01	0.1		0.12	I
I	D-ABC	0.39	8.86	0.043		0.03	0.05	0.7		0.12	I
I	C-ABD	0.35	8.63	0.040		0.03	0.04	0.7		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-ACD	0.46	7.96	0.058		0.06	0.06	0.9		0.13	I
I	A-BCD	0.06	8.31	0.007		0.01	0.01	0.1		0.12	I
I	D-ABC	0.39	8.86	0.043		0.05	0.05	0.7		0.12	I
I	C-ABD	0.35	8.63	0.040		0.04	0.04	0.7		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-ACD	0.37	8.49	0.044		0.06	0.05	0.7		0.12	I
I	A-BCD	0.04	8.66	0.005		0.01	0.01	0.1		0.12	I
I	D-ABC	0.31	9.35	0.034		0.05	0.04	0.5		0.11	I
I	C-ABD	0.28	8.90	0.032		0.04	0.03	0.5		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-ACD	0.31	8.86	0.035		0.05	0.04	0.6		0.12	I
I	A-BCD	0.04	8.91	0.004		0.01	0.00	0.1		0.11	I
I	D-ABC	0.26	9.70	0.027		0.04	0.03	0.4		0.11	I
I	C-ABD	0.24	9.10	0.026		0.03	0.03	0.4		0.11	I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.1
09.00	0.1
09.15	0.0
09.30	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUE FOR STREAM D-ABC

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUE FOR STREAM C-ABD

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	B-ACD	I	34.4	I	22.9	I	4.3	I	0.12	I
I	A-BCD	I	4.1	I	2.8	I	0.5	I	0.12	I
I	D-ABC	I	28.9	I	19.3	I	3.2	I	0.11	I
I	C-ABD	I	26.2	I	17.4	I	3.1	I	0.12	I
I	ALL	I	1225.0	I	816.7	I	11.1	I	0.01	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-
"A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\PICADY\Corporation Street Bawdlands\
Corporation Street Bawdlands.vpi"
(drive-on-the-left) at 11:22:48 on Sunday, 7 October 2012

RUN INFORMATION

RUN TITLE : Clitheroe
LOCATION :
DATE : 06/10/12
CLIENT :
ENUMERATOR : Administrator
JOB NUMBER :
STATUS :
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Bawdlands E
ARM B IS Corporation St
ARM C IS Bawdlands W

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 7.20 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 76.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 20.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 14.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.90 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	689.76	0.25	0.10			I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	535.23	0.23	0.09	0.15	0.33					I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	617.98	0.23	0.23			I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2012 AM Base + Dev

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	BEFORE I AT TOP I AFTER	I
I	I	I	TO RISE I IS REACHED I FALLING	I	PEAK I OF PEAK I PEAK	I
I	I	I		I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00	I	6.24 I 9.36 I 6.24	I
I	ARM B	I	15.00 I 45.00 I 75.00	I	2.04 I 3.06 I 2.04	I
I	ARM C	I	15.00 I 45.00 I 75.00	I	4.97 I 7.46 I 4.97	I

Demand set: 2012 AM Base + Dev

I		I	TURNING PROPORTIONS	I
I		I	TURNING COUNTS	I
I		I	(PERCENTAGE OF H.V.S)	I
I		I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C	I
I	08.00 - 08.15	I	I I I I I	I
I		I	ARM A I 0.000 I 0.154 I 0.846	I
I		I	I 0.0 I 77.0 I 422.0	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I	I
I		I	ARM B I 0.816 I 0.000 I 0.184	I
I		I	I 133.0 I 0.0 I 30.0	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I	I
I		I	ARM C I 0.975 I 0.025 I 0.000	I
I		I	I 388.0 I 10.0 I 0.0	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 AM Base + Dev
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	2.05	7.27	0.281		0.00	0.38	5.5		0.19
C-AB	0.13	8.88	0.014		0.00	0.01	0.2		0.11
A-B	0.97								
A-C	5.30								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	2.44	6.87	0.356		0.38	0.54	7.8		0.22
C-AB	0.15	8.60	0.017		0.01	0.02	0.3		0.12
A-B	1.15								
A-C	6.32								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	2.99	6.31	0.474		0.54	0.87	12.3		0.30
C-AB	0.18	8.22	0.022		0.02	0.02	0.3		0.12
A-B	1.41								
A-C	7.74								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	2.99	6.31	0.474		0.87	0.89	13.2		0.30
C-AB	0.18	8.22	0.022		0.02	0.02	0.3		0.12
A-B	1.41								
A-C	7.74								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	2.44	6.87	0.356		0.89	0.56	8.9		0.23
C-AB	0.15	8.60	0.017		0.02	0.02	0.3		0.12
A-B	1.15								
A-C	6.32								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.15-09.30									
B-AC	2.05	7.27	0.282		0.56	0.40	6.2		0.19
C-AB	0.13	8.88	0.014		0.02	0.01	0.2		0.11
A-B	0.97								
A-C	5.30								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.4
08.30	0.5 *
08.45	0.9 *
09.00	0.9 *
09.15	0.6 *
09.30	0.4

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)
I	B-AC	I	224.4	I	149.6	I	53.8	I	0.24	I
I	C-AB	I	13.8	I	9.2	I	1.7	I	0.12	I
I	A-B	I	106.0	I	70.7	I	I	I	I	I
I	A-C	I	580.9	I	387.2	I	I	I	I	I
I	ALL	I	1459.0	I	972.7	I	55.5	I	0.04	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	689.76		0.25		0.10	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	535.23		0.23		0.09		0.15		0.33	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	617.98		0.23		0.23	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

Demand set: 2012 PM Base + Dev

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 7.55 I 11.33 I 7.55	I	I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I 1.27 I 1.91 I 1.27	I	I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I 5.39 I 8.08 I 5.39	I	I	I

Demand set: 2012 PM Base + Dev

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	17.00 - 17.15	I	I	I	I	I	I	I	I	I	I	I	I
I		I	ARM A	I	0.000	I	0.220	I	0.780	I			I
I		I	I	I	0.0	I	133.0	I	471.0	I			I
I		I	I	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	I	I	I	I	I	I	I	I			I
I		I	ARM B	I	0.706	I	0.000	I	0.294	I			I
I		I	I	I	72.0	I	0.0	I	30.0	I			I
I		I	I	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	I	I	I	I	I	I	I	I			I
I		I	ARM C	I	0.977	I	0.023	I	0.000	I			I
I		I	I	I	421.0	I	10.0	I	0.0	I			I
I		I	I	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	I	I	I	I	I	I	I	I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 PM Base + Dev
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	1.28	7.28	0.176		0.00	0.21	3.0		0.17
C-AB	0.13	8.58	0.015		0.00	0.01	0.2		0.12
A-B	1.67								
A-C	5.91								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	1.53	6.83	0.224		0.21	0.28	4.1		0.19
C-AB	0.15	8.25	0.018		0.01	0.02	0.3		0.12
A-B	1.99								
A-C	7.06								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	1.87	6.20	0.302		0.28	0.42	6.1		0.23
C-AB	0.18	7.78	0.024		0.02	0.02	0.4		0.13
A-B	2.44								
A-C	8.64								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	1.87	6.20	0.302		0.42	0.43	6.4		0.23
C-AB	0.18	7.78	0.024		0.02	0.02	0.4		0.13
A-B	2.44								
A-C	8.64								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	1.53	6.83	0.224		0.43	0.29	4.6		0.19
C-AB	0.15	8.25	0.018		0.02	0.02	0.3		0.12
A-B	1.99								
A-C	7.06								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.15-18.30									
B-AC	1.28	7.28	0.176		0.29	0.22	3.3		0.17
C-AB	0.13	8.58	0.015		0.02	0.02	0.2		0.12
A-B	1.67								
A-C	5.91								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.3
17.45	0.4
18.00	0.4
18.15	0.3
18.30	0.2

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0
18.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	B-AC	I	140.4	I	93.6	I	27.5	I	0.20	I
I	C-AB	I	13.8	I	9.2	I	1.7	I	0.13	I
I	A-B	I	183.1	I	122.0	I	I	I	I	I
I	A-C	I	648.3	I	432.2	I	I	I	I	I
I	ALL	I	1565.0	I	1043.3	I	29.3	I	0.02	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-C	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	689.76		0.25		0.10				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	C-B	STREAM	C-B	I
I	535.23		0.23		0.09		0.15		0.33						I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	617.98		0.23		0.23				I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

Demand set: 2017 AM Base + Dev

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	ARM	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	ARM	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 6.46 I 9.69 I 6.46	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 2.13 I 3.19 I 2.13	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 5.16 I 7.74 I 5.16	I		I

Demand set: 2017 AM Base + Dev

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	08.00 - 08.15	I	ARM A	I	0.000	I	0.151	I	0.849	I			I
I		I	I	I	0.0	I	78.0	I	439.0	I			I
I		I	I	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	I	I	I	I	I	I	I	I			I
I		I	ARM B	I	0.818	I	0.000	I	0.182	I			I
I		I	I	I	139.0	I	0.0	I	31.0	I			I
I		I	I	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	I	I	I	I	I	I	I	I			I
I		I	ARM C	I	0.976	I	0.024	I	0.000	I			I
I		I	I	I	403.0	I	10.0	I	0.0	I			I
I		I	I	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	I	I	I	I	I	I	I	I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 AM Base + Dev
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	2.13	7.18	0.297		0.00	0.41	5.9		0.20
C-AB	0.13	8.83	0.014		0.00	0.01	0.2		0.11
A-B	0.98								
A-C	5.51								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	2.55	6.77	0.376		0.41	0.59	8.5		0.24
C-AB	0.15	8.54	0.018		0.01	0.02	0.3		0.12
A-B	1.17								
A-C	6.58								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	3.12	6.19	0.504		0.59	0.98	13.7		0.32
C-AB	0.18	8.15	0.023		0.02	0.02	0.4		0.13
A-B	1.43								
A-C	8.06								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	3.12	6.19	0.504		0.98	1.00	14.8		0.33
C-AB	0.18	8.15	0.023		0.02	0.02	0.4		0.13
A-B	1.43								
A-C	8.06								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	2.55	6.77	0.376		1.00	0.62	9.8		0.24
C-AB	0.15	8.54	0.018		0.02	0.02	0.3		0.12
A-B	1.17								
A-C	6.58								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.15-09.30									
B-AC	2.13	7.18	0.297		0.62	0.43	6.7		0.20
C-AB	0.13	8.83	0.014		0.02	0.01	0.2		0.11
A-B	0.98								
A-C	5.51								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.4
08.30	0.6 *
08.45	1.0 *
09.00	1.0 *
09.15	0.6 *
09.30	0.4

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)
I	B-AC	I	234.0	I	156.0	I	59.4	I	0.25	I
I	C-AB	I	13.8	I	9.2	I	1.7	I	0.12	I
I	A-B	I	107.4	I	71.6	I	I	I	I	I
I	A-C	I	604.3	I	402.8	I	I	I	I	I
I	ALL	I	1514.1	I	1009.4	I	61.0	I	0.04	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	STREAM	A-B	STREAM	I
I	689.76		0.25		0.10				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	C-B	STREAM	I
I	535.23		0.23		0.09				0.15		0.33				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	STREAM	I
I	617.98		0.23		0.23				I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

Demand set: 2012 AM Base

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 5.39 I 8.08 I 5.39	I	I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I 1.94 I 2.91 I 1.94	I	I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I 4.89 I 7.33 I 4.89	I	I	I

Demand set: 2012 AM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	08.00 - 08.15	I	ARM A	I	0.000	I	0.074	I	0.926	I			I
I		I		I	0.0	I	32.0	I	399.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM B	I	0.806	I	0.000	I	0.194	I			I
I		I		I	125.0	I	0.0	I	30.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM C	I	0.974	I	0.026	I	0.000	I			I
I		I		I	381.0	I	10.0	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 AM Base
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	1.94	7.42	0.262		0.00	0.35	5.0		0.18
C-AB	0.13	9.07	0.014		0.00	0.01	0.2		0.11
A-B	0.40								
A-C	5.01								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	2.32	7.05	0.329		0.35	0.48	7.0		0.21
C-AB	0.15	8.83	0.017		0.01	0.02	0.3		0.12
A-B	0.48								
A-C	5.98								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	2.84	6.53	0.435		0.48	0.75	10.6		0.27
C-AB	0.18	8.50	0.022		0.02	0.02	0.3		0.12
A-B	0.59								
A-C	7.32								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	2.84	6.53	0.435		0.75	0.76	11.3		0.27
C-AB	0.18	8.50	0.022		0.02	0.02	0.3		0.12
A-B	0.59								
A-C	7.32								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	2.32	7.05	0.329		0.76	0.50	7.9		0.21
C-AB	0.15	8.83	0.017		0.02	0.02	0.3		0.12
A-B	0.48								
A-C	5.98								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.15-09.30									
B-AC	1.94	7.42	0.262		0.50	0.36	5.6		0.18
C-AB	0.13	9.07	0.014		0.02	0.01	0.2		0.11
A-B	0.40								
A-C	5.01								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.3
08.30	0.5
08.45	0.7 *
09.00	0.8 *
09.15	0.5 *
09.30	0.4

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	D	I	* QUEUING *	I	* INCLUSIVE QUEUING *	I	
I	I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	B-AC	I	213.3	I	142.2	I	47.4	I	0.22	I
I	C-AB	I	13.8	I	9.2	I	1.6	I	0.12	I
I	A-B	I	44.0	I	29.4	I	I	I	I	I
I	A-C	I	549.2	I	366.1	I	I	I	I	I
I	ALL	I	1344.8	I	896.5	I	49.0	I	0.04	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-C	STREAM	STREAM	A-C	STREAM	STREAM A-B	STREAM	A-B	I
I	689.76		0.25		0.10				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-A	STREAM	STREAM	A-C	STREAM	STREAM A-B	STREAM	STREAM C-A	STREAM	STREAM C-B	STREAM	STREAM	STREAM C-B	STREAM	I
I	535.23		0.23		0.09		0.15		0.33						I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM C-B	STREAM	STREAM	A-C	STREAM	STREAM A-B	STREAM	A-B	I
I	617.98		0.23		0.23				I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

Demand set: 2017 AM Base

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 5.61 I 8.42 I 5.61	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 2.03 I 3.04 I 2.03	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 5.07 I 7.61 I 5.07	I		I

Demand set: 2017 AM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	08.00 - 08.15	I	ARM A	I	0.000	I	0.073	I	0.927	I			I
I		I		I	0.0	I	33.0	I	416.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM B	I	0.809	I	0.000	I	0.191	I			I
I		I		I	131.0	I	0.0	I	31.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM C	I	0.975	I	0.025	I	0.000	I			I
I		I		I	396.0	I	10.0	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 AM Base
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	2.03	7.34	0.277		0.00	0.38	5.4		0.19
C-AB	0.13	9.02	0.014		0.00	0.01	0.2		0.11
A-B	0.41								
A-C	5.22								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	2.43	6.95	0.349		0.38	0.53	7.6		0.22
C-AB	0.15	8.77	0.017		0.01	0.02	0.3		0.12
A-B	0.49								
A-C	6.23								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	2.97	6.41	0.464		0.53	0.84	11.8		0.29
C-AB	0.18	8.43	0.022		0.02	0.02	0.3		0.12
A-B	0.61								
A-C	7.63								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	2.97	6.41	0.464		0.84	0.85	12.7		0.29
C-AB	0.18	8.43	0.022		0.02	0.02	0.3		0.12
A-B	0.61								
A-C	7.63								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	2.43	6.95	0.349		0.85	0.55	8.6		0.22
C-AB	0.15	8.77	0.017		0.02	0.02	0.3		0.12
A-B	0.49								
A-C	6.23								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.15-09.30									
B-AC	2.03	7.34	0.277		0.55	0.39	6.1		0.19
C-AB	0.13	9.02	0.014		0.02	0.01	0.2		0.11
A-B	0.41								
A-C	5.22								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.4
08.30	0.5 *
08.45	0.8 *
09.00	0.8 *
09.15	0.5 *
09.30	0.4

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-AC	I	223.0	I	148.7	I	52.1	I	0.23
I	C-AB	I	13.8	I	9.2	I	1.6	I	0.12
I	A-B	I	45.4	I	30.3	I	I	I	I
I	A-C	I	572.6	I	381.7	I	I	I	I
I	ALL	I	1399.8	I	933.2	I	53.7	I	0.04

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-C	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	689.76		0.25		0.10				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	C-B	STREAM	C-B	I
I	535.23		0.23		0.09		0.15		0.33						I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	617.98		0.23		0.23				I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

Demand set: 2017 PM Base + Dev

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 7.86 I 11.79 I 7.86	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 1.31 I 1.97 I 1.31	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 5.60 I 8.40 I 5.60	I		I

Demand set: 2017 PM Base + Dev

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I
I	17.00 - 17.15	I	ARM A	I	0.000	I	0.219	I	0.781	I			I
I		I		I	0.0	I	138.0	I	491.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I
I		I	ARM B	I	0.705	I	0.000	I	0.295	I			I
I		I		I	74.0	I	0.0	I	31.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I
I		I	ARM C	I	0.978	I	0.022	I	0.000	I			I
I		I		I	438.0	I	10.0	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 PM Base + Dev
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	1.32	7.19	0.183		0.00	0.22	3.2		0.17
C-AB	0.13	8.51	0.015		0.00	0.02	0.2		0.12
A-B	1.73								
A-C	6.16								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	1.57	6.72	0.234		0.22	0.30	4.4		0.19
C-AB	0.15	8.16	0.018		0.02	0.02	0.3		0.12
A-B	2.07								
A-C	7.36								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	1.93	6.06	0.318		0.30	0.46	6.5		0.24
C-AB	0.18	7.68	0.024		0.02	0.02	0.4		0.13
A-B	2.53								
A-C	9.01								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	1.93	6.06	0.318		0.46	0.46	6.9		0.24
C-AB	0.18	7.68	0.024		0.02	0.03	0.4		0.13
A-B	2.53								
A-C	9.01								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	1.57	6.72	0.234		0.46	0.31	4.9		0.20
C-AB	0.15	8.16	0.018		0.03	0.02	0.3		0.12
A-B	2.07								
A-C	7.36								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.15-18.30									
B-AC	1.32	7.19	0.183		0.31	0.23	3.5		0.17
C-AB	0.13	8.51	0.015		0.02	0.02	0.2		0.12
A-B	1.73								
A-C	6.16								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.3
17.45	0.5
18.00	0.5
18.15	0.3
18.30	0.2

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0
18.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)
I	B-AC	I	144.5	I	96.3	I	29.3	I	0.20
I	C-AB	I	13.8	I	9.2	I	1.8	I	0.13
I	A-B	I	189.9	I	126.6	I	I	I	I
I	A-C	I	675.8	I	450.6	I	I	I	I
I	ALL	I	1626.9	I	1084.6	I	31.1	I	0.02

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	STREAM	A-B	STREAM	I
I	689.76		0.25		0.10				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	C-B	STREAM	C-B	STREAM	I
I	535.23		0.23		0.09		0.15		0.33						I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	STREAM	I
I	617.98		0.23		0.23				I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

Demand set: 2012 PM Base

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 7.14 I 10.71 I 7.14	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 0.95 I 1.42 I 0.95	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 5.16 I 7.74 I 5.16	I		I

Demand set: 2012 PM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	17.00 - 17.15	I	ARM A	I	0.000	I	0.196	I	0.804	I			I
I		I		I	0.0	I	112.0	I	459.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM B	I	0.605	I	0.000	I	0.395	I			I
I		I		I	46.0	I	0.0	I	30.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM C	I	0.976	I	0.024	I	0.000	I			I
I		I		I	403.0	I	10.0	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 PM Base
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	0.95	7.65	0.125		0.00	0.14	2.0		0.15
C-AB	0.13	8.67	0.014		0.00	0.01	0.2		0.12
A-B	1.41								
A-C	5.76								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	1.14	7.22	0.158		0.14	0.18	2.7		0.16
C-AB	0.15	8.36	0.018		0.01	0.02	0.3		0.12
A-B	1.68								
A-C	6.88								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	1.39	6.63	0.210		0.18	0.26	3.8		0.19
C-AB	0.18	7.92	0.023		0.02	0.02	0.4		0.13
A-B	2.06								
A-C	8.42								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	1.39	6.63	0.210		0.26	0.26	4.0		0.19
C-AB	0.18	7.92	0.023		0.02	0.02	0.4		0.13
A-B	2.06								
A-C	8.42								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	1.14	7.22	0.158		0.26	0.19	2.9		0.16
C-AB	0.15	8.36	0.018		0.02	0.02	0.3		0.12
A-B	1.68								
A-C	6.88								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.15-18.30									
B-AC	0.95	7.65	0.125		0.19	0.14	2.2		0.15
C-AB	0.13	8.67	0.014		0.02	0.01	0.2		0.12
A-B	1.41								
A-C	5.76								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.3
18.00	0.3
18.15	0.2
18.30	0.1

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0
18.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	B-AC	I	104.6	I	69.7	I	17.6	I	0.17	I
I	C-AB	I	13.8	I	9.2	I	1.7	I	0.13	I
I	A-B	I	154.2	I	102.8	I	I	I	I	I
I	A-C	I	631.8	I	421.2	I	I	I	I	I
I	ALL	I	1459.0	I	972.7	I	19.4	I	0.01	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
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 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-C	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	689.76		0.25		0.10				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	C-B	STREAM	C-B	I
I	535.23		0.23		0.09		0.15		0.33						I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	617.98		0.23		0.23				I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

Demand set: 2017 PM Base

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 7.45 I 11.17 I 7.45	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 0.99 I 1.48 I 0.99	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 5.38 I 8.06 I 5.38	I		I

Demand set: 2017 PM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I
I	17.00 - 17.15	I	ARM A	I	0.000	I	0.196	I	0.804	I			I
I		I		I	0.0	I	117.0	I	479.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I
I		I	ARM B	I	0.608	I	0.000	I	0.392	I			I
I		I		I	48.0	I	0.0	I	31.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I
I		I	ARM C	I	0.977	I	0.023	I	0.000	I			I
I		I		I	420.0	I	10.0	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 PM Base
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	0.99	7.55	0.131		0.00	0.15	2.2		0.15
C-AB	0.13	8.60	0.015		0.00	0.01	0.2		0.12
A-B	1.47								
A-C	6.01								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	1.18	7.10	0.167		0.15	0.20	2.9		0.17
C-AB	0.15	8.27	0.018		0.01	0.02	0.3		0.12
A-B	1.75								
A-C	7.18								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	1.45	6.48	0.224		0.20	0.28	4.1		0.20
C-AB	0.18	7.82	0.023		0.02	0.02	0.4		0.13
A-B	2.15								
A-C	8.79								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	1.45	6.48	0.224		0.28	0.29	4.3		0.20
C-AB	0.18	7.82	0.023		0.02	0.02	0.4		0.13
A-B	2.15								
A-C	8.79								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	1.18	7.10	0.167		0.29	0.20	3.1		0.17
C-AB	0.15	8.27	0.018		0.02	0.02	0.3		0.12
A-B	1.75								
A-C	7.18								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.15-18.30									
B-AC	0.99	7.55	0.131		0.20	0.15	2.4		0.15
C-AB	0.13	8.60	0.015		0.02	0.02	0.2		0.12
A-B	1.47								
A-C	6.01								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.3
18.00	0.3
18.15	0.2
18.30	0.2

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0
18.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	108.7	I	72.5	I	18.9	I	18.9	I
I	C-AB	I	13.8	I	9.2	I	1.7	I	1.7	I
I	A-B	I	161.0	I	107.4	I		I		I
I	A-C	I	659.3	I	439.5	I		I		I
I	ALL	I	1521.0	I	1014.0	I	20.6	I	20.6	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-
"A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\PICADY\Greenacre Woone Lane\Greenacre Woone Lane.vpi"
(drive-on-the-left) at 11:42:45 on Sunday, 7 October 2012

RUN INFORMATION

RUN TITLE : Clitheroe
LOCATION :
DATE : 03/10/12
CLIENT :
ENUMERATOR : Administrator
JOB NUMBER :
STATUS :
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

```

                MINOR ROAD (ARM D)
                I
                I
                I
                I
                I
                I
MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
                I
                I
                I
                I
                I
                I
                MINOR ROAD (ARM B)
```

ARM A IS Greenacre Street
ARM B IS Woone Lane S
ARM C IS Eshton Terrace
ARM D IS Woone Lane N

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 7.20 M.	I	(W) 7.20 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I	(WCR) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I	(WA-D) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 100.00 M.	I	(VA-D) 0.00 M.	I
I	- BLOCKS TRAFFIC	I	NO	I	NO	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 19.0 M.	I	(VD-A) 19.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 14.0 M.	I	(VD-C) 16.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.75 M.	I	(WD-A) 3.75 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I	(WD-C) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	680.26	0.25	0.10	I

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	681.62	0.25	0.10	I

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	527.52	0.23	0.23	0.23	0.23	I

I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I		0.09	0.14	0.33	0.12	I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	528.57	0.23	0.23	0.23	0.23	I

I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I		0.09	0.15	0.33	0.12	I

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-D	I
I	631.87	0.23	0.33	I

STREAM A-D

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM A-D	STREAM C-A	STREAM C-B	I
I	573.96	0.23	0.30	I

B-D Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I
I	527.52	0.23	0.23	0.09	0.33	I

I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-A	STREAM C-D			I
I		0.14	0.14			I

B-D Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I
I	527.52	0.23	0.23	0.09	0.33	I

I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-A	STREAM C-D			I

I	0.14	0.14	I

D-B Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-B	STREAM C-A	STREAM C-B	STREAM D-C	STREAM A-D	I
I	528.57	0.23	0.23	0.09	0.33	I
I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing		I
I	STREAM A-C	STREAM A-B				I
I	0.15	0.15				I

D-B Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-D	I
I	528.57	0.23	0.23	0.09	0.33	I
I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing		I
I	STREAM A-C	STREAM A-B				I
I	0.15	0.15				I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

Demand set: 2017 AM Base + Dev

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 2.85 I 4.27 I 2.85	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 1.25 I 1.88 I 1.25	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 6.79 I 10.18 I 6.79	I		I
I	ARM D	I	15.00 I 45.00 I 75.00 I 0.25 I 0.38 I 0.25	I		I

Demand set: 2017 AM Base + Dev

I		I	TURNING PROPORTIONS	I
I		I	TURNING COUNTS	I
I		I	(PERCENTAGE OF H.V.S)	I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D	I
I	08.00 - 08.15	I	I	I
I	I	I	ARM A I 0.000 I 0.167 I 0.592 I 0.241	I
I	I	I	I 0.0 I 38.0 I 135.0 I 55.0	I
I	I	I	I (0.0)I (0.0)I (0.0)I (0.0)	I
I	I	I	I I I I	I
I	I	I	ARM B I 0.000 I 0.000 I 0.300 I 0.700	I
I	I	I	I 0.0 I 0.0 I 30.0 I 70.0	I
I	I	I	I (0.0)I (0.0)I (0.0)I (0.0)	I
I	I	I	I I I I	I
I	I	I	ARM C I 0.000 I 0.215 I 0.000 I 0.785	I
I	I	I	I 0.0 I 117.0 I 0.0 I 426.0	I
I	I	I	I (0.0)I (0.0)I (0.0)I (0.0)	I
I	I	I	I I I I	I
I	I	I	ARM D I 0.000 I 0.100 I 0.900 I 0.000	I
I	I	I	I 0.0 I 2.0 I 18.0 I 0.0	I
I	I	I	I (0.0)I (0.0)I (0.0)I (0.0)	I
I	I	I	I I I I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 AM Base + Dev
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-ACD	1.25	7.79	0.161		0.00	0.19	2.7		0.15	I
I	A-B	0.48									I
I	A-C	1.69									I
I	A-D	0.69	8.00	0.086		0.00	0.09	1.4		0.14	I
I	D-ABC	0.25	7.24	0.035		0.00	0.04	0.5		0.14	I
I	C-D	5.35									I
I	C-A	0.00									I
I	C-B	1.47	9.80	0.150		0.00	0.17	2.5		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-ACD	1.50	7.45	0.201		0.19	0.25	3.6		0.17	I
I	A-B	0.57									I
I	A-C	2.02									I
I	A-D	0.82	7.69	0.107		0.09	0.12	1.7		0.15	I
I	D-ABC	0.30	6.93	0.043		0.04	0.04	0.7		0.15	I
I	C-D	6.38									I
I	C-A	0.00									I
I	C-B	1.75	9.65	0.182		0.17	0.22	3.2		0.13	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-ACD	1.84	6.98	0.263		0.25	0.35	5.1		0.19	I
I	A-B	0.70									I
I	A-C	2.48									I
I	A-D	1.01	7.27	0.139		0.12	0.16	2.3		0.16	I
I	D-ABC	0.37	6.51	0.056		0.04	0.06	0.9		0.16	I
I	C-D	7.82									I
I	C-A	0.00									I
I	C-B	2.15	9.46	0.227		0.22	0.29	4.2		0.14	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-ACD	1.84	6.98	0.263		0.35	0.35	5.3		0.19	I
I	A-B	0.70									I
I	A-C	2.48									I
I	A-D	1.01	7.27	0.139		0.16	0.16	2.4		0.16	I
I	D-ABC	0.37	6.51	0.056		0.06	0.06	0.9		0.16	I
I	C-D	7.82									I
I	C-A	0.00									I
I	C-B	2.15	9.46	0.227		0.29	0.29	4.4		0.14	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-ACD	1.50	7.45	0.201		0.35	0.26	4.0		0.17	I
I	A-B	0.57									I
I	A-C	2.02									I
I	A-D	0.82	7.69	0.107		0.16	0.12	1.9		0.15	I
I	D-ABC	0.30	6.93	0.043		0.06	0.05	0.7		0.15	I
I	C-D	6.38									I
I	C-A	0.00									I
I	C-B	1.75	9.65	0.182		0.29	0.22	3.4		0.13	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-ACD	1.25	7.78	0.161		0.26	0.19	3.0		0.15	I
I	A-B	0.48									I
I	A-C	1.69									I
I	A-D	0.69	7.99	0.086		0.12	0.10	1.5		0.14	I
I	D-ABC	0.25	7.23	0.035		0.05	0.04	0.6		0.14	I
I	C-D	5.35									I
I	C-A	0.00									I
I	C-B	1.47	9.80	0.150		0.22	0.18	2.7		0.12	I

 QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.4
09.00	0.4
09.15	0.3
09.30	0.2

 QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.1
08.45	0.2
09.00	0.2
09.15	0.1
09.30	0.1

 QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.1
09.00	0.1
09.15	0.0
09.30	0.0

 QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.3
09.00	0.3
09.15	0.2
09.30	0.2

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	I	I	I	I	I	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-ACD	I	137.6	I	91.8	I	23.7	I	0.17
I	A-B	I	52.3	I	34.9	I	I	I	I
I	A-C	I	185.8	I	123.9	I	I	I	I
I	A-D	I	75.7	I	50.5	I	11.2	I	0.15
I	D-ABC	I	27.5	I	18.4	I	4.2	I	0.15
I	C-D	I	586.4	I	390.9	I	I	I	I
I	C-A	I	0.0	I	0.0	I	I	I	I
I	C-B	I	161.0	I	107.4	I	20.5	I	0.13
I	ALL	I	1226.4	I	817.6	I	59.6	I	0.05

*****END OF RUN*****

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	680.26		0.25		0.10	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-A	STREAM	C-A	STREAM	C-D	I
I	681.62		0.25		0.10	I

I Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I STREAM B-A	STREAM	A-C	STREAM	A-D	STREAM	D-A	STREAM	D-B
I	527.52	0.23		0.23		0.23		0.23

STREAM	D-C							
I	Intercept	For Slope	For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM	C-A	STREAM C-B	STREAM B-C	STREAM B-C	STREAM B-D	I
I	528.57		0.23	0.23		0.23	0.23	I

STREAM	C-B							
I Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I STREAM	C-B		STREAM	A-C		STREAM	A-D	I
I	631.87			0.23			0.33	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM A-D	STREAM	C-A	STREAM	C-B	I
I	573.96		0.23		0.30	I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-D	STREAM	A-C	STREAM	A-D	STREAM	A-B	STREAM	C-B	STREAM	C-B	STREAM	C-B	I
I	527.52			0.23		0.23		0.09		0.33		0.33		0.33	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For OpposingI
I	STREAM C-A	STREAM C-D		
I	0.14	0.14		I

FOR DEMAND SET 2017 PM Base + Dev
AND FOR TIME PERIOD 2

 QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.3
18.00	0.3
18.15	0.2
18.30	0.1

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1
18.30	0.1

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.2
18.30	0.1

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.3
18.15	0.2
18.30	0.1

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	I	I	I	I	I	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-ACD	I	100.5	I	67.0	I	18.9	I	0.19
I	A-B	I	96.3	I	64.2	I		I	
I	A-C	I	697.8	I	465.2	I		I	
I	A-D	I	52.3	I	34.9	I	6.9	I	0.13
I	D-ABC	I	81.2	I	54.1	I	14.6	I	0.18
I	C-D	I	440.5	I	293.6	I		I	
I	C-A	I	0.0	I	0.0	I		I	
I	C-B	I	118.4	I	78.9	I	17.1	I	0.14
I	ALL	I	1587.0	I	1058.0	I	57.5	I	0.04

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-
"A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\PICADY\Milton Ave\Milton Av B6478.vpi"
(drive-on-the-left) at 11:51:38 on Sunday, 7 October 2012

RUN INFORMATION

RUN TITLE : Run 1
LOCATION :
DATE : 09/08/11
CLIENT :
ENUMERATOR :
JOB NUMBER :
STATUS :
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MINOR ROAD (ARM D)
I
I
I
I
I
I
MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS B6478 Clitheroe
ARM B IS Milton Avenue
ARM C IS B6478 Waddington
ARM D IS Eastham Street

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 8.30 M.	I	(W) 8.30 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I	(WCR) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I	(WA-D) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 66.00 M.	I	(VA-D) 76.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I	YES	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 12.0 M.	I	(VD-A) 13.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 12.0 M.	I	(VD-C) 12.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 4.80 M.	I	(WD-A) 4.90 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I	(WD-C) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	745.29	0.26	0.10	I

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	751.61	0.26	0.10	I

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	575.31	0.24	0.24	0.24	0.24	I

I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I		0.09	0.15	0.34	0.12	I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	580.57	0.24	0.24	0.24	0.24	I

I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I		0.10	0.15	0.34	0.12	I

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-D	I
I	612.18	0.21	0.30	I

STREAM A-D

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM A-D	STREAM C-A	STREAM C-B	I
I	617.98	0.21	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I
I	575.31	0.24	0.24	0.09	0.34	I

I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-A	STREAM C-D			I
I		0.15	0.15			I

B-D Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I
I	575.31	0.24	0.24	0.09	0.34	I

I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-A	STREAM C-D			I

I	0.15	0.15	I

D-B Stream From Left Hand Lane

I Intercept For I STREAM D-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-C	Slope For Opposing STREAM A-D	I
I 580.57	I 0.24	I 0.24	I 0.10	I 0.34	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	I 0.15	I 0.15			I

D-B Stream From Right Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I 580.57	I 0.24	I 0.24	I 0.10	I 0.34	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	I 0.15	I 0.15			I

TRAFFIC DEMAND DATA

I ARM	I FLOW SCALE (%)	I
I A	I 100	I
I B	I 100	I
I C	I 100	I
I D	I 100	I

Demand set: 2012 AM Base

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I ARM	I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS I TOP OF PEAK I FLOW STOPS I	I	RATE OF FLOW (VEH/MIN) I BEFORE I AT TOP I AFTER I PEAK I OF PEAK I PEAK	I
I ARM A	I	I 15.00 I 45.00 I 75.00	I	I 3.59 I 5.38 I 3.59	I
I ARM B	I	I 15.00 I 45.00 I 75.00	I	I 0.34 I 0.51 I 0.34	I
I ARM C	I	I 15.00 I 45.00 I 75.00	I	I 2.85 I 4.27 I 2.85	I
I ARM D	I	I 15.00 I 45.00 I 75.00	I	I 1.48 I 2.21 I 1.48	I

Demand set: 2012 AM Base

I	I	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)	I
I TIME	I FROM/TO	I ARM A I ARM B I ARM C I ARM D	I
I 08.00 - 08.15	I	I 0.000 I 0.031 I 0.585 I 0.383	I
I	I	I 0.0 I 9.0 I 168.0 I 110.0	I
I	I	I (0.0) I (0.0) I (0.0) I (0.0)	I
I	I	I I I I I	I
I	I	I 0.889 I 0.000 I 0.111 I 0.000	I
I	I	I 24.0 I 0.0 I 3.0 I 0.0	I
I	I	I (0.0) I (0.0) I (0.0) I (0.0)	I
I	I	I I I I I	I
I	I	I 0.956 I 0.009 I 0.000 I 0.035	I
I	I	I 218.0 I 2.0 I 0.0 I 8.0	I
I	I	I (0.0) I (0.0) I (0.0) I (0.0)	I
I	I	I I I I I	I
I	I	I 0.975 I 0.000 I 0.025 I 0.000	I
I	I	I 115.0 I 0.0 I 3.0 I 0.0	I
I	I	I (0.0) I (0.0) I (0.0) I (0.0)	I
I	I	I I I I I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 AM Base
AND FOR TIME PERIOD 1

I TIME	I DEMAND (VEH/MIN)	I CAPACITY (VEH/MIN)	I DEMAND/ CAPACITY (RFC)	I PEDESTRIAN FLOW (PEDS/MIN)	I START QUEUE (VEHS)	I END QUEUE (VEHS)	I DELAY (VEH.MIN/ TIME SEGMENT)	I GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I 08.00-08.15										I
I B-ACD	I 0.34	I 8.28	I 0.041		I 0.00	I 0.04	I 0.6		I 0.13	I
I A-BCD	I 1.38	I 9.68	I 0.143		I 0.00	I 0.17	I 2.5		I 0.12	I
I D-ABC	I 1.48	I 11.67	I 0.127		I 0.00	I 0.14	I 2.1		I 0.10	I
I C-ABD	I 0.03	I 9.31	I 0.003		I 0.00	I 0.00	I 0.0		I 0.11	I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-ACD	0.40	7.97	0.051		0.04	0.05	0.8		0.13
A-BCD	1.65	9.56	0.172		0.17	0.22	3.2		0.13
D-ABC	1.77	11.52	0.154		0.14	0.18	2.6		0.10
C-ABD	0.03	9.13	0.003		0.00	0.00	0.0		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-ACD	0.50	7.54	0.066		0.05	0.07	1.0		0.14
A-BCD	2.02	9.39	0.215		0.22	0.29	4.4		0.14
D-ABC	2.17	11.31	0.191		0.18	0.23	3.4		0.11
C-ABD	0.04	8.89	0.004		0.00	0.00	0.1		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-ACD	0.50	7.54	0.066		0.07	0.07	1.0		0.14
A-BCD	2.02	9.39	0.215		0.29	0.29	4.4		0.14
D-ABC	2.17	11.31	0.191		0.23	0.24	3.5		0.11
C-ABD	0.04	8.89	0.004		0.00	0.00	0.1		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-ACD	0.40	7.97	0.051		0.07	0.05	0.8		0.13
A-BCD	1.65	9.56	0.172		0.29	0.22	3.3		0.13
D-ABC	1.77	11.52	0.154		0.24	0.18	2.8		0.10
C-ABD	0.03	9.13	0.003		0.00	0.00	0.0		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.15-09.30									
B-ACD	0.34	8.27	0.041		0.05	0.04	0.7		0.13
A-BCD	1.38	9.68	0.143		0.22	0.17	2.6		0.12
D-ABC	1.48	11.67	0.127		0.18	0.15	2.2		0.10
C-ABD	0.03	9.30	0.003		0.00	0.00	0.0		0.11

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1
09.30	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.3
09.00	0.3
09.15	0.2
09.30	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.2
09.30	0.1

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	37.2	I	24.8	I	4.9	I
I	A-BCD	I	151.4	I	100.9	I	20.4	I
I	D-ABC	I	162.4	I	108.3	I	16.8	I
I	C-ABD	I	2.8	I	1.8	I	0.3	I
I	ALL	I	908.4	I	605.6	I	42.5	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	STREAM	A-C	STREAM	A-B
I	745.29		0.26		0.10				I

STREAM D-A

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM D-A	STREAM	C-A	STREAM	C-D	STREAM	C-A	STREAM	C-D
I	751.61		0.26		0.10				I

STREAM B-A

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-D	STREAM	A-B	STREAM	D-A	STREAM	D-B	STREAM	D-C	STREAM	D-A
I	575.31		0.24		0.24		0.24		0.24		0.24		0.12		I
I			0.09		0.15		0.34		0.12						I

STREAM D-C

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM D-C	STREAM	C-A	STREAM	C-B	STREAM	B-C	STREAM	B-D	STREAM	B-A	STREAM	C-B	STREAM	C-D
I	580.57		0.24		0.24		0.24		0.24		0.12		0.34		I
I			0.10		0.15		0.34		0.12						I

STREAM C-B

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-D	STREAM	A-B	STREAM	A-C
I	612.18		0.21		0.30				I

STREAM A-D

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM A-D	STREAM	C-A	STREAM	C-B	STREAM	C-A	STREAM	C-B
I	617.98		0.21		0.31				I

B-D Stream From Left Hand Lane

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-D	STREAM	A-C	STREAM	A-D	STREAM	A-B	STREAM	C-B	STREAM	C-B	STREAM	C-B	STREAM	C-B
I	575.31		0.24		0.24		0.09		0.34						I
I			0.15		0.15										I

B-D Stream From Right Hand Lane

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-D	STREAM	A-C	STREAM	A-D	STREAM	A-B	STREAM	C-B	STREAM	C-B	STREAM	C-B	STREAM	C-B

I	575.31	0.24	0.24	0.09	0.34	I
I		Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

D-B Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For OpposingI	I
I	STREAM D-B	STREAM C-A	STREAM C-B	STREAM D-C	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

D-B Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For OpposingI	I
I	STREAM B-D	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

Demand set: 2012 PM Base

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I	I	5.46 I 8.19 I 5.46 I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I	I	0.22 I 0.34 I 0.22 I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I	I	3.50 I 5.25 I 3.50 I	I
I	ARM D	I	15.00 I 45.00 I 75.00 I	I	1.19 I 1.78 I 1.19 I	I

Demand set: 2012 PM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I
I	16.45 - 17.00	I		I				I		I			I			I
I		I	ARM A	I	0.000	I	0.064	I	0.682	I	0.254	I				I
I		I		I	0.0	I	28.0	I	298.0	I	111.0	I				I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I		I		I		I		I		I				I
I		I	ARM B	I	0.722	I	0.000	I	0.278	I	0.000	I				I
I		I		I	13.0	I	0.0	I	5.0	I	0.0	I				I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I		I		I		I		I		I				I
I		I	ARM C	I	0.975	I	0.007	I	0.000	I	0.018	I				I
I		I		I	273.0	I	2.0	I	0.0	I	5.0	I				I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I		I		I		I		I		I				I
I		I	ARM D	I	0.895	I	0.011	I	0.095	I	0.000	I				I
I		I		I	85.0	I	1.0	I	9.0	I	0.0	I				I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I		I		I		I		I		I				I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 PM Base
AND FOR TIME PERIOD 2

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	16.45-17.00										I
I	B-ACD	0.23	8.32	0.027		0.00	0.03	0.4		0.12	I
I	A-BCD	1.39	9.54	0.146		0.00	0.18	2.7		0.12	I
I	D-ABC	1.19	11.04	0.108		0.00	0.12	1.7		0.10	I
I	C-ABD	0.03	8.91	0.003		0.00	0.00	0.0		0.11	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	B-ACD	0.27	7.94	0.034		0.03	0.03	0.5		0.13	I
I	A-BCD	1.66	9.39	0.177		0.18	0.23	3.5		0.13	I
I	D-ABC	1.42	10.82	0.132		0.12	0.15	2.2		0.11	I
I	C-ABD	0.03	8.65	0.003		0.00	0.00	0.1		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-ACD	0.33	7.41	0.045		0.03	0.05	0.7		0.14	I
I	A-BCD	2.04	9.19	0.222		0.23	0.32	4.8		0.14	I
I	D-ABC	1.74	10.51	0.166		0.15	0.20	2.9		0.11	I
I	C-ABD	0.04	8.30	0.004		0.00	0.00	0.1		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	B-ACD	0.33	7.40	0.045		0.05	0.05	0.7		0.14	I
I	A-BCD	2.04	9.19	0.222		0.32	0.32	4.9		0.14	I
I	D-ABC	1.74	10.51	0.166		0.20	0.20	3.0		0.11	I
I	C-ABD	0.04	8.30	0.004		0.00	0.00	0.1		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-ACD	0.27	7.94	0.034		0.05	0.04	0.5		0.13	I
I	A-BCD	1.66	9.39	0.177		0.32	0.24	3.6		0.13	I
I	D-ABC	1.42	10.82	0.132		0.20	0.15	2.3		0.11	I
I	C-ABD	0.03	8.65	0.003		0.00	0.00	0.1		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-ACD	0.23	8.32	0.027		0.04	0.03	0.4		0.12	I
I	A-BCD	1.39	9.54	0.146		0.24	0.18	2.8		0.12	I
I	D-ABC	1.19	11.04	0.108		0.15	0.12	1.9		0.10	I
I	C-ABD	0.03	8.90	0.003		0.00	0.00	0.0		0.11	I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	24.8	I	16.5	I	3.3	I
I	A-BCD	I	152.8	I	101.9	I	22.2	I
I	D-ABC	I	130.8	I	87.2	I	14.0	I
I	C-ABD	I	2.8	I	1.8	I	0.3	I
I	ALL	I	1142.4	I	761.6	I	39.8	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	745.29		0.26		0.10	I

STREAM D-A

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-A	STREAM	C-A	STREAM	C-D	I
I	751.61		0.26		0.10	I

STREAM B-A

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-D	STREAM	D-A	STREAM	D-B	I
I	575.31		0.24		0.24		0.24		0.24	I
I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	D-C	I
I			0.09		0.15		0.34		0.12	I

STREAM D-C

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-C	STREAM	C-A	STREAM	C-B	STREAM	B-C	STREAM	B-D	I
I	580.57		0.24		0.24		0.24		0.24	I
I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	C-D	STREAM	A-C	STREAM	A-D	STREAM	B-A	I
I			0.10		0.15		0.34		0.12	I

STREAM C-B

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-D	I
I	612.18		0.21		0.30	I

STREAM A-D

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM A-D	STREAM	C-A	STREAM	C-B	I
I	617.98		0.21		0.31	I

B-D Stream From Left Hand Lane

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-D	STREAM	A-C	STREAM	A-D	STREAM	A-B	STREAM	C-B	I
I	575.31		0.24		0.24		0.09		0.34	I
I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	C-A	STREAM	C-D	STREAM	A-B	STREAM	C-B	I
I			0.15		0.15					I

B-D Stream From Right Hand Lane

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-D	STREAM	A-C	STREAM	A-D	STREAM	A-B	STREAM	C-B	I

I	575.31	0.24	0.24	0.09	0.34	I
I		Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I		0.15	0.15			I

D-B Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-B	STREAM C-A	STREAM C-B	STREAM D-C	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I		0.15	0.15			I

D-B Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I		0.15	0.15			I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

Demand set: 2012 PM Base + Dev

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS I TOP OF PEAK I FLOW STOPS I TO RISE I IS REACHED I FALLING I	I	RATE OF FLOW (VEH/MIN) BEFORE I AT TOP I AFTER PEAK I OF PEAK I PEAK I I I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I	I	6.70 I 10.05 I 6.70 I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I	I	0.25 I 0.38 I 0.25 I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I	I	4.24 I 6.36 I 4.24 I	I
I	ARM D	I	15.00 I 45.00 I 75.00 I	I	1.19 I 1.78 I 1.19 I	I

Demand set: 2012 PM Base + Dev

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I
I	16.45 - 17.00	I	ARM A	I	0.000	I	0.052	I	0.741	I	0.207	I				I
I		I		I	0.0	I	28.0	I	397.0	I	111.0	I				I
I		I	(	I	0.0)	I	(	I	0.0)	I	(	I	0.0)	I		I
I		I	ARM B	I	0.650	I	0.000	I	0.350	I	0.000	I				I
I		I		I	13.0	I	0.0	I	7.0	I	0.0	I				I
I		I	(	I	0.0)	I	(	I	0.0)	I	(	I	0.0)	I		I
I		I	ARM C	I	0.979	I	0.006	I	0.000	I	0.015	I				I
I		I		I	332.0	I	2.0	I	0.0	I	5.0	I				I
I		I	(	I	0.0)	I	(	I	0.0)	I	(	I	0.0)	I		I
I		I	ARM D	I	0.895	I	0.011	I	0.095	I	0.000	I				I
I		I		I	85.0	I	1.0	I	9.0	I	0.0	I				I
I		I	(	I	0.0)	I	(	I	0.0)	I	(	I	0.0)	I		I
I		I		I		I		I		I		I				I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 PM Base + Dev
AND FOR TIME PERIOD 2

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	16.45-17.00										I
I	B-ACD	0.25	8.15	0.031		0.00	0.03	0.5		0.13	I
I	A-BCD	1.39	9.38	0.148		0.00	0.19	2.8		0.12	I
I	D-ABC	1.19	10.81	0.110		0.00	0.12	1.8		0.10	I
I	C-ABD	0.03	8.64	0.003		0.00	0.00	0.0		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	B-ACD	0.30	7.69	0.039		0.03	0.04	0.6		0.14	I
I	A-BCD	1.66	9.20	0.181		0.19	0.24	3.7		0.13	I
I	D-ABC	1.42	10.53	0.135		0.12	0.15	2.3		0.11	I
I	C-ABD	0.03	8.33	0.004		0.00	0.00	0.1		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-ACD	0.37	7.05	0.052		0.04	0.05	0.8		0.15	I
I	A-BCD	2.04	8.96	0.227		0.24	0.35	5.2		0.14	I
I	D-ABC	1.74	10.14	0.172		0.15	0.21	3.0		0.12	I
I	C-ABD	0.04	7.91	0.005		0.00	0.00	0.1		0.13	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	B-ACD	0.37	7.04	0.052		0.05	0.05	0.8		0.15	I
I	A-BCD	2.04	8.96	0.227		0.35	0.35	5.3		0.14	I
I	D-ABC	1.74	10.14	0.172		0.21	0.21	3.1		0.12	I
I	C-ABD	0.04	7.91	0.005		0.00	0.00	0.1		0.13	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-ACD	0.30	7.69	0.039		0.05	0.04	0.6		0.14	I
I	A-BCD	1.66	9.20	0.181		0.35	0.25	3.8		0.13	I
I	D-ABC	1.42	10.53	0.135		0.21	0.16	2.4		0.11	I
I	C-ABD	0.03	8.33	0.004		0.00	0.00	0.1		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-ACD	0.25	8.14	0.031		0.04	0.03	0.5		0.13	I
I	A-BCD	1.39	9.38	0.148		0.25	0.19	2.9		0.13	I
I	D-ABC	1.19	10.81	0.110		0.16	0.12	1.9		0.10	I
I	C-ABD	0.03	8.63	0.003		0.00	0.00	0.0		0.12	I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.0
18.15	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.3
18.15	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	27.5	I	18.4	I	3.8	I
I	A-BCD	I	152.8	I	101.9	I	23.6	I
I	D-ABC	I	130.8	I	87.2	I	14.5	I
I	C-ABD	I	2.8	I	1.8	I	0.3	I
I	ALL	I	1362.7	I	908.4	I	42.2	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	745.29	0.26	0.10	I

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	751.61	0.26	0.10	I

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	575.31	0.24	0.24	0.24	0.24	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I		0.09	0.15	0.34	0.12	I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	580.57	0.24	0.24	0.24	0.24	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I		0.10	0.15	0.34	0.12	I

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-D	I
I	612.18	0.21	0.30	I

STREAM A-D

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM A-D	STREAM C-A	STREAM C-B	I
I	617.98	0.21	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I
I	575.31	0.24	0.24	0.09	0.34	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-A	STREAM C-D			I
I		0.15	0.15			I

B-D Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I

I	575.31	0.24	0.24	0.09	0.34	I
I		Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

D-B Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For OpposingI	I
I	STREAM D-B	STREAM C-A	STREAM C-B	STREAM D-C	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

D-B Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For OpposingI	I
I	STREAM B-D	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

Demand set: 2012 AM Base + Dev

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I		I
I		I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I		I
I		I	I I I I I I I	I		I
I	ARM A	I	15.00 I 45.00 I 75.00 I 4.15 I 6.23 I 4.15	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 0.34 I 0.51 I 0.34	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 4.15 I 6.23 I 4.15	I		I
I	ARM D	I	15.00 I 45.00 I 75.00 I 1.48 I 2.21 I 1.48	I		I

Demand set: 2012 AM Base + Dev

I		I	TURNING PROPORTIONS	I
I		I	TURNING COUNTS	I
I		I	(PERCENTAGE OF H.V.S)	I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	08.00 - 08.15	I	I I I I I I I	I
I		I	ARM A I 0.000 I 0.027 I 0.642 I 0.331 I	I
I		I	I I 0.0 I 9.0 I 213.0 I 110.0 I	I
I		I	I (0.0)I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I I I	I
I		I	ARM B I 0.889 I 0.000 I 0.111 I 0.000 I	I
I		I	I I 24.0 I 0.0 I 3.0 I 0.0 I	I
I		I	I (0.0)I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I I I	I
I		I	ARM C I 0.970 I 0.006 I 0.000 I 0.024 I	I
I		I	I I 322.0 I 2.0 I 0.0 I 8.0 I	I
I		I	I (0.0)I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I I I	I
I		I	ARM D I 0.975 I 0.000 I 0.025 I 0.000 I	I
I		I	I I 115.0 I 0.0 I 3.0 I 0.0 I	I
I		I	I (0.0)I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I I I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 AM Base + Dev
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-ACD	0.34	7.96	0.043		0.00	0.04	0.6		0.13	I
I	A-BCD	1.38	9.40	0.147		0.00	0.18	2.6		0.12	I
I	D-ABC	1.48	11.32	0.131		0.00	0.15	2.2		0.10	I
I	C-ABD	0.03	9.19	0.003		0.00	0.00	0.0		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-ACD	0.40	7.58	0.053		0.04	0.06	0.8		0.14	I
I	A-BCD	1.65	9.22	0.179		0.18	0.23	3.4		0.13	I
I	D-ABC	1.77	11.10	0.159		0.15	0.19	2.8		0.11	I
I	C-ABD	0.03	8.99	0.003		0.00	0.00	0.0		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-ACD	0.50	7.07	0.070		0.06	0.07	1.1		0.15	I
I	A-BCD	2.02	8.98	0.225		0.23	0.31	4.7		0.14	I
I	D-ABC	2.17	10.80	0.200		0.19	0.25	3.6		0.12	I
I	C-ABD	0.04	8.71	0.004		0.00	0.00	0.1		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-ACD	0.50	7.06	0.070		0.07	0.08	1.1		0.15	I
I	A-BCD	2.02	8.98	0.225		0.31	0.32	4.8		0.14	I
I	D-ABC	2.17	10.80	0.200		0.25	0.25	3.7		0.12	I
I	C-ABD	0.04	8.71	0.004		0.00	0.00	0.1		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-ACD	0.40	7.58	0.053		0.08	0.06	0.9		0.14	I
I	A-BCD	1.65	9.22	0.179		0.32	0.23	3.5		0.13	I
I	D-ABC	1.77	11.10	0.159		0.25	0.19	2.9		0.11	I
I	C-ABD	0.03	8.98	0.003		0.00	0.00	0.1		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-ACD	0.34	7.95	0.043		0.06	0.04	0.7		0.13	I
I	A-BCD	1.38	9.40	0.147		0.23	0.18	2.7		0.12	I
I	D-ABC	1.48	11.32	0.131		0.19	0.15	2.3		0.10	I
I	C-ABD	0.03	9.18	0.003		0.00	0.00	0.0		0.11	I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1
09.30	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.3
09.00	0.3
09.15	0.2
09.30	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.2
09.30	0.2

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	37.2	I	24.8	I	5.2	I
I	A-BCD	I	151.4	I	100.9	I	21.8	I
I	D-ABC	I	162.4	I	108.3	I	17.6	I
I	C-ABD	I	2.8	I	1.8	I	0.3	I
I	ALL	I	1113.5	I	742.4	I	44.9	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	745.29	0.26	0.10	I

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	751.61	0.26	0.10	I

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	575.31	0.24	0.24	0.24	0.24	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I		0.09	0.15	0.34	0.12	I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	580.57	0.24	0.24	0.24	0.24	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I		0.10	0.15	0.34	0.12	I

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-D	I
I	612.18	0.21	0.30	I

STREAM A-D

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM A-D	STREAM C-A	STREAM C-B	I
I	617.98	0.21	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I
I	575.31	0.24	0.24	0.09	0.34	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-A	STREAM C-D			I
I		0.15	0.15			I

B-D Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I

I	575.31	0.24	0.24	0.09	0.34	I
I		Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I		0.15	0.15			I

D-B Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-B	STREAM C-A	STREAM C-B	STREAM D-C	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I		0.15	0.15			I

D-B Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I		0.15	0.15			I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

Demand set: 2017 AM Base

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS I TOP OF PEAK I FLOW STOPS I TO RISE I IS REACHED I FALLING I	I	RATE OF FLOW (VEH/MIN) BEFORE I AT TOP I AFTER PEAK I OF PEAK I PEAK I I I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I	I	3.72 I 5.59 I 3.72 I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I	I	0.34 I 0.51 I 0.34 I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I	I	2.96 I 4.44 I 2.96 I	I
I	ARM D	I	15.00 I 45.00 I 75.00 I	I	1.54 I 2.31 I 1.54 I	I

Demand set: 2017 AM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I
I	08.00 - 08.15	I		I				I		I			I			I
I		I	ARM A	I	0.000	I	0.030	I	0.584	I	0.386	I				I
I		I		I	0.0	I	9.0	I	174.0	I	115.0	I				I
I		I	(	I	(	I	(	I	(	I	(	I				I
I		I		I		I		I		I		I				I
I		I	ARM B	I	0.889	I	0.000	I	0.111	I	0.000	I				I
I		I		I	24.0	I	0.0	I	3.0	I	0.0	I				I
I		I	(	I	(	I	(	I	(	I	(	I				I
I		I		I		I		I		I		I				I
I		I	ARM C	I	0.958	I	0.008	I	0.000	I	0.034	I				I
I		I		I	227.0	I	2.0	I	0.0	I	8.0	I				I
I		I	(	I	(	I	(	I	(	I	(	I				I
I		I		I		I		I		I		I				I
I		I	ARM D	I	0.976	I	0.000	I	0.024	I	0.000	I				I
I		I		I	120.0	I	0.0	I	3.0	I	0.0	I				I
I		I	(	I	(	I	(	I	(	I	(	I				I
I		I		I		I		I		I		I				I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 AM Base
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-ACD	0.34	8.22	0.041		0.00	0.04	0.6		0.13	I
I	A-BCD	1.44	9.66	0.149		0.00	0.18	2.7		0.12	I
I	D-ABC	1.54	11.64	0.133		0.00	0.15	2.2		0.10	I
I	C-ABD	0.03	9.27	0.003		0.00	0.00	0.0		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-ACD	0.40	7.89	0.051		0.04	0.05	0.8		0.13	I
I	A-BCD	1.72	9.53	0.181		0.18	0.23	3.5		0.13	I
I	D-ABC	1.84	11.49	0.160		0.15	0.19	2.8		0.10	I
I	C-ABD	0.03	9.09	0.003		0.00	0.00	0.0		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-ACD	0.50	7.45	0.066		0.05	0.07	1.0		0.14	I
I	A-BCD	2.11	9.36	0.225		0.23	0.31	4.7		0.14	I
I	D-ABC	2.26	11.27	0.200		0.19	0.25	3.6		0.11	I
I	C-ABD	0.04	8.84	0.004		0.00	0.00	0.1		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-ACD	0.50	7.45	0.067		0.07	0.07	1.1		0.14	I
I	A-BCD	2.11	9.36	0.225		0.31	0.31	4.7		0.14	I
I	D-ABC	2.26	11.27	0.200		0.25	0.25	3.7		0.11	I
I	C-ABD	0.04	8.84	0.004		0.00	0.00	0.1		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-ACD	0.40	7.89	0.051		0.07	0.05	0.8		0.13	I
I	A-BCD	1.72	9.53	0.181		0.31	0.23	3.5		0.13	I
I	D-ABC	1.84	11.49	0.160		0.25	0.19	3.0		0.10	I
I	C-ABD	0.03	9.09	0.003		0.00	0.00	0.0		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-ACD	0.34	8.21	0.041		0.05	0.04	0.7		0.13	I
I	A-BCD	1.44	9.66	0.149		0.23	0.18	2.8		0.12	I
I	D-ABC	1.54	11.64	0.133		0.19	0.15	2.4		0.10	I
I	C-ABD	0.03	9.27	0.003		0.00	0.00	0.0		0.11	I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1
09.30	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.3
09.00	0.3
09.15	0.2
09.30	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.2
09.30	0.2

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

I	I	I	TOTAL DEMAND		* QUEUING * * DELAY *		* INCLUSIVE QUEUING * * DELAY *			
			(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	B-ACD	I	37.2	24.8	I	5.0	0.13	I	5.0	0.13
I	A-BCD	I	158.3	105.5	I	21.8	0.14	I	21.8	0.14
I	D-ABC	I	169.3	112.9	I	17.7	0.10	I	17.7	0.10
I	C-ABD	I	2.8	1.8	I	0.3	0.11	I	0.3	0.11
I	ALL	I	942.9	628.6	I	44.8	0.05	I	44.8	0.05

*****END OF RUN*****

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	745.29		0.26		0.10	I

I	Intercept	For Slope	For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM	C-A	STREAM C-D	I
I	751.61		0.26	0.10	I

I Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I STREAM B-A	STREAM	A-C	STREAM	A-D	STREAM	D-A	STREAM	D-B
I	575.31	0.24		0.24		0.24		0.24

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing
I	STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C
I	0.09	0.15	0.34	0.12

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	D-C	STREAM	C-A	Opposing	STREAM	C-B	Opposing	STREAM	B-C	Opposing	STREAM	B-D	Opposing	I
I	580.57			0.24		0.24			0.24			0.24			I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing
I	STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A
I	0.10	0.15	0.34	0.12

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-D	I
I	612.18		0.21		0.30	I

I Intercept For	Slope For	Opposing	Slope For	Opposing	I
I STREAM A-D	STREAM	C-A	STREAM	C-B	I
I	617.98	0.21		0.31	I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-D	STREAM	A-C	STREAM	A-D	STREAM	A-B	STREAM	C-B	STREAM	C-B	STREAM	C-B	I
I	575.31			0.24		0.24		0.09		0.34		0.34		0.34	I

I	Slope For STREAM	Opposing C-A	Slope For STREAM	Opposing C-D	Slope For STREAM	Opposing C-E	Slope For STREAM	Opposing C-F
I		0.15		0.15				I

I Intercept	For Slope	For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing
I STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I

D-B Stream From Left Hand Lane

D-B Stream From Right Hand Lane

TRAFFIC DEMAND DATADemand set: 2017 PM Base

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

Demand set: 2017 PM BaseTURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 PM Base
AND FOR TIME PERIOD 2

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	16.45-17.00										I
I	B-ACD	0.23	8.24	0.027		0.00	0.03	0.4		0.12	I
I	A-BCD	1.46	9.51	0.153		0.00	0.19	2.8		0.12	I
I	D-ABC	1.24	11.02	0.113		0.00	0.13	1.8		0.10	I
I	C-ABD	0.03	8.85	0.003		0.00	0.00	0.0		0.11	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	B-ACD	0.27	7.84	0.034		0.03	0.04	0.5		0.13	I
I	A-BCD	1.74	9.36	0.186		0.19	0.25	3.7		0.13	I
I	D-ABC	1.48	10.79	0.137		0.13	0.16	2.3		0.11	I
I	C-ABD	0.03	8.58	0.003		0.00	0.00	0.1		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-ACD	0.33	7.28	0.045		0.04	0.05	0.7		0.14	I
I	A-BCD	2.13	9.15	0.233		0.25	0.35	5.2		0.14	I
I	D-ABC	1.82	10.46	0.174		0.16	0.21	3.1		0.12	I
I	C-ABD	0.04	8.22	0.004		0.00	0.00	0.1		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	B-ACD	0.33	7.28	0.045		0.05	0.05	0.7		0.14	I
I	A-BCD	2.13	9.15	0.233		0.35	0.35	5.3		0.14	I
I	D-ABC	1.82	10.46	0.174		0.21	0.21	3.1		0.12	I
I	C-ABD	0.04	8.22	0.004		0.00	0.00	0.1		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-ACD	0.27	7.84	0.034		0.05	0.04	0.6		0.13	I
I	A-BCD	1.74	9.36	0.186		0.35	0.25	3.8		0.13	I
I	D-ABC	1.48	10.79	0.138		0.21	0.16	2.5		0.11	I
I	C-ABD	0.03	8.58	0.003		0.00	0.00	0.1		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-ACD	0.23	8.24	0.027		0.04	0.03	0.4		0.12	I
I	A-BCD	1.46	9.51	0.153		0.25	0.20	2.9		0.12	I
I	D-ABC	1.24	11.02	0.113		0.16	0.13	2.0		0.10	I
I	C-ABD	0.03	8.85	0.003		0.00	0.00	0.0		0.11	I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.3
18.15	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	24.8	I	16.5	I	3.3	I
I	A-BCD	I	159.7	I	106.4	I	23.8	I
I	D-ABC	I	136.3	I	90.8	I	14.8	I
I	C-ABD	I	2.8	I	1.8	I	0.3	I
I	ALL	I	1187.9	I	791.9	I	42.2	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	745.29		0.26		0.10	I

STREAM D-A

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-A	STREAM	C-A	STREAM	C-D	I
I	751.61		0.26		0.10	I

STREAM B-A

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-D	STREAM	D-A	STREAM	D-B	I
I	575.31		0.24		0.24		0.24		0.24	I
I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	D-C	I
I			0.09		0.15		0.34		0.12	I

STREAM D-C

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-C	STREAM	C-A	STREAM	C-B	STREAM	B-C	STREAM	B-D	I
I	580.57		0.24		0.24		0.24		0.24	I
I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	C-D	STREAM	A-C	STREAM	A-D	STREAM	B-A	I
I			0.10		0.15		0.34		0.12	I

STREAM C-B

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-D	I
I	612.18		0.21		0.30	I

STREAM A-D

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM A-D	STREAM	C-A	STREAM	C-B	I
I	617.98		0.21		0.31	I

B-D Stream From Left Hand Lane

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-D	STREAM	A-C	STREAM	A-D	STREAM	A-B	STREAM	C-B	I
I	575.31		0.24		0.24		0.09		0.34	I
I		Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I		STREAM	C-A	STREAM	C-D	STREAM	A-B	STREAM	C-B	I
I			0.15		0.15					I

B-D Stream From Right Hand Lane

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-D	STREAM	A-C	STREAM	A-D	STREAM	A-B	STREAM	C-B	I

I	575.31	0.24	0.24	0.09	0.34	I
I		Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

D-B Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For OpposingI	I
I	STREAM D-B	STREAM C-A	STREAM C-B	STREAM D-C	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

D-B Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For OpposingI	I
I	STREAM B-D	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

Demand set: 2017 AM Base + Dev

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS I TOP OF PEAK I FLOW STOPS I TO RISE I IS REACHED I FALLING I	I	RATE OF FLOW (VEH/MIN) BEFORE I AT TOP I AFTER PEAK I OF PEAK I PEAK I I I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I	I	4.29 I 6.43 I 4.29 I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I	I	0.34 I 0.51 I 0.34 I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I	I	4.26 I 6.39 I 4.26 I	I
I	ARM D	I	15.00 I 45.00 I 75.00 I	I	1.54 I 2.31 I 1.54 I	I

Demand set: 2017 AM Base + Dev

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I
I	08.00 - 08.15	I	ARM A	I	0.000	I	0.026	I	0.638	I	0.335	I				I
I		I		I	0.0	I	9.0	I	219.0	I	115.0	I				I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I	ARM B	I	0.889	I	0.000	I	0.111	I	0.000	I				I
I		I		I	24.0	I	0.0	I	3.0	I	0.0	I				I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I	ARM C	I	0.971	I	0.006	I	0.000	I	0.023	I				I
I		I		I	331.0	I	2.0	I	0.0	I	8.0	I				I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I	ARM D	I	0.976	I	0.000	I	0.024	I	0.000	I				I
I		I		I	120.0	I	0.0	I	3.0	I	0.0	I				I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				I
I		I		I		I		I		I		I				I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 AM Base + Dev
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-ACD	0.34	7.89	0.043		0.00	0.04	0.6		0.13	I
I	A-BCD	1.44	9.38	0.154		0.00	0.19	2.8		0.13	I
I	D-ABC	1.54	11.29	0.137		0.00	0.16	2.3		0.10	I
I	C-ABD	0.03	9.15	0.003		0.00	0.00	0.0		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-ACD	0.40	7.50	0.054		0.04	0.06	0.8		0.14	I
I	A-BCD	1.72	9.20	0.187		0.19	0.24	3.7		0.13	I
I	D-ABC	1.84	11.07	0.166		0.16	0.20	2.9		0.11	I
I	C-ABD	0.03	8.94	0.003		0.00	0.00	0.1		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-ACD	0.50	6.97	0.071		0.06	0.08	1.1		0.15	I
I	A-BCD	2.11	8.95	0.236		0.24	0.34	5.1		0.15	I
I	D-ABC	2.26	10.76	0.210		0.20	0.26	3.9		0.12	I
I	C-ABD	0.04	8.66	0.004		0.00	0.00	0.1		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-ACD	0.50	6.97	0.071		0.08	0.08	1.1		0.15	I
I	A-BCD	2.11	8.95	0.236		0.34	0.34	5.1		0.15	I
I	D-ABC	2.26	10.76	0.210		0.26	0.26	4.0		0.12	I
I	C-ABD	0.04	8.66	0.004		0.00	0.00	0.1		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-ACD	0.40	7.50	0.054		0.08	0.06	0.9		0.14	I
I	A-BCD	1.72	9.20	0.187		0.34	0.25	3.8		0.13	I
I	D-ABC	1.84	11.07	0.166		0.26	0.20	3.1		0.11	I
I	C-ABD	0.03	8.94	0.003		0.00	0.00	0.1		0.11	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-ACD	0.34	7.89	0.043		0.06	0.05	0.7		0.13	I
I	A-BCD	1.44	9.38	0.154		0.25	0.19	2.9		0.13	I
I	D-ABC	1.54	11.29	0.137		0.20	0.16	2.4		0.10	I
I	C-ABD	0.03	9.15	0.003		0.00	0.00	0.0		0.11	I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1
09.30	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.3
09.00	0.3
09.15	0.2
09.30	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.3
09.00	0.3
09.15	0.2
09.30	0.2

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	37.2	I	24.8	I	5.3	I
I	A-BCD	I	158.3	I	105.5	I	23.3	I
I	D-ABC	I	169.3	I	112.9	I	18.5	I
I	C-ABD	I	2.8	I	1.8	I	0.3	I
I	ALL	I	1147.9	I	765.3	I	47.4	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	745.29	0.26	0.10	I

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	751.61	0.26	0.10	I

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	575.31	0.24	0.24	0.24	0.24	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I		0.09	0.15	0.34	0.12	I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	580.57	0.24	0.24	0.24	0.24	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I		0.10	0.15	0.34	0.12	I

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-D	I
I	612.18	0.21	0.30	I

STREAM A-D

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM A-D	STREAM C-A	STREAM C-B	I
I	617.98	0.21	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I
I	575.31	0.24	0.24	0.09	0.34	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-A	STREAM C-D			I
I		0.15	0.15			I

B-D Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I

I	575.31	0.24	0.24	0.09	0.34	I
I		Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I		0.15	0.15			I

D-B Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-B	STREAM C-A	STREAM C-B	STREAM D-C	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I		0.15	0.15			I

D-B Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I		0.15	0.15			I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

Demand set: 2017 PM Base + Dev

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS I TOP OF PEAK I FLOW STOPS I	I	RATE OF FLOW (VEH/MIN) BEFORE I AT TOP I AFTER I OF PEAK I PEAK	I
I	A	I	15.00 I 45.00 I 75.00 I	I	7.18 I 10.76 I 7.18 I	I
I	B	I	15.00 I 45.00 I 75.00 I	I	0.22 I 0.34 I 0.22 I	I
I	C	I	15.00 I 45.00 I 75.00 I	I	4.38 I 6.56 I 4.38 I	I
I	D	I	15.00 I 45.00 I 75.00 I	I	1.24 I 1.86 I 1.24 I	I

Demand set: 2017 PM Base + Dev

I	TIME	I	FROM/TO I ARM	A I ARM	B I ARM	C I ARM	D I	I
I	16.45 - 17.00	I	ARM A	I 0.000 I 0.084 I 0.714 I 0.202 I	I			I
I		I		I 0.0 I 48.0 I 410.0 I 116.0 I	I			I
I		I		I (0.0)I (0.0)I (0.0)I (0.0)I	I			I
I		I	ARM B	I 0.722 I 0.000 I 0.278 I 0.000 I	I			I
I		I		I 13.0 I 0.0 I 5.0 I 0.0 I	I			I
I		I		I (0.0)I (0.0)I (0.0)I (0.0)I	I			I
I		I	ARM C	I 0.980 I 0.006 I 0.000 I 0.014 I	I			I
I		I		I 343.0 I 2.0 I 0.0 I 5.0 I	I			I
I		I		I (0.0)I (0.0)I (0.0)I (0.0)I	I			I
I		I	ARM D	I 0.899 I 0.010 I 0.091 I 0.000 I	I			I
I		I		I 89.0 I 1.0 I 9.0 I 0.0 I	I			I
I		I		I (0.0)I (0.0)I (0.0)I (0.0)I	I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 PM Base + Dev
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-ACD	0.23	7.81	0.029		0.00	0.03	0.4		0.13
A-BCD	1.46	9.35	0.156		0.00	0.20	3.0		0.13
D-ABC	1.24	10.78	0.115		0.00	0.13	1.9		0.10
C-ABD	0.03	8.53	0.003		0.00	0.00	0.0		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-ACD	0.27	7.32	0.037		0.03	0.04	0.6		0.14
A-BCD	1.74	9.17	0.190		0.20	0.26	4.0		0.13
D-ABC	1.48	10.50	0.141		0.13	0.16	2.4		0.11
C-ABD	0.03	8.20	0.004		0.00	0.00	0.1		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-ACD	0.33	6.64	0.050		0.04	0.05	0.8		0.16
A-BCD	2.13	8.91	0.239		0.26	0.38	5.6		0.15
D-ABC	1.82	10.10	0.180		0.16	0.22	3.2		0.12
C-ABD	0.04	7.75	0.005		0.00	0.00	0.1		0.13

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-ACD	0.33	6.63	0.050		0.05	0.05	0.8		0.16
A-BCD	2.13	8.91	0.239		0.38	0.38	5.8		0.15
D-ABC	1.82	10.10	0.180		0.22	0.22	3.3		0.12
C-ABD	0.04	7.75	0.005		0.00	0.00	0.1		0.13

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-ACD	0.27	7.32	0.037		0.05	0.04	0.6		0.14
A-BCD	1.74	9.17	0.190		0.38	0.27	4.1		0.13
D-ABC	1.48	10.50	0.141		0.22	0.17	2.5		0.11
C-ABD	0.03	8.20	0.004		0.00	0.00	0.1		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-ACD	0.23	7.80	0.029		0.04	0.03	0.5		0.13
A-BCD	1.46	9.35	0.156		0.27	0.20	3.1		0.13
D-ABC	1.24	10.78	0.115		0.17	0.13	2.0		0.10
C-ABD	0.03	8.53	0.003		0.00	0.00	0.0		0.12

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.0
18.15	0.0

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	24.8	I	16.5	I	3.6	I
I	A-BCD	I	159.7	I	106.4	I	25.5	I
I	D-ABC	I	136.3	I	90.8	I	15.3	I
I	C-ABD	I	2.8	I	1.8	I	0.3	I
I	ALL	I	1432.9	I	955.2	I	44.7	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	745.29	0.26	0.10	I

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	751.61	0.26	0.10	I

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	575.31	0.24	0.24	0.24	0.24	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I		0.09	0.15	0.34	0.12	I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	580.57	0.24	0.24	0.24	0.24	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I		0.10	0.15	0.34	0.12	I

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-D	I
I	612.18	0.21	0.30	I

STREAM A-D

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM A-D	STREAM C-A	STREAM C-B	I
I	617.98	0.21	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I
I	575.31	0.24	0.24	0.09	0.34	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-A	STREAM C-D			I
I		0.15	0.15			I

B-D Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I

I	575.31	0.24	0.24	0.09	0.34	I
I		Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

D-B Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For OpposingI	I
I	STREAM D-B	STREAM C-A	STREAM C-B	STREAM D-C	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

D-B Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For OpposingI	I
I	STREAM B-D	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

Demand set: 2017 AM Base + Dev + Sens

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I		I
I		I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I		I
I		I	I I I I I I I	I		I
I	ARM A	I	15.00 I 45.00 I 75.00 I 4.29 I 6.43 I 4.29	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 0.75 I 1.13 I 0.75	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 3.90 I 5.85 I 3.90	I		I
I	ARM D	I	15.00 I 45.00 I 75.00 I 1.54 I 2.31 I 1.54	I		I

Demand set: 2017 AM Base + Dev + Sens

I		I	TURNING PROPORTIONS	I
I		I	TURNING COUNTS	I
I		I	(PERCENTAGE OF H.V.S)	I
I		I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	08.00 - 08.15	I	I I I I I I I	I
I		I	ARM A I 0.000 I 0.055 I 0.609 I 0.335 I	I
I		I	I I 0.0 I 19.0 I 209.0 I 115.0 I	I
I		I	I (0.0)I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I I I	I
I		I	ARM B I 0.917 I 0.000 I 0.083 I 0.000 I	I
I		I	I I 55.0 I 0.0 I 5.0 I 0.0 I	I
I		I	I (0.0)I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I I I	I
I		I	ARM C I 0.965 I 0.010 I 0.000 I 0.026 I	I
I		I	I I 301.0 I 3.0 I 0.0 I 8.0 I	I
I		I	I (0.0)I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I I I	I
I		I	ARM D I 0.976 I 0.000 I 0.024 I 0.000 I	I
I		I	I I 120.0 I 0.0 I 3.0 I 0.0 I	I
I		I	I (0.0)I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I I I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 AM Base + Dev + Sens
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-ACD	0.75	7.88	0.096		0.00	0.10	1.5		0.14	I
I	A-BCD	1.44	9.45	0.153		0.00	0.19	2.8		0.12	I
I	D-ABC	1.54	11.39	0.135		0.00	0.16	2.3		0.10	I
I	C-ABD	0.04	9.15	0.004		0.00	0.00	0.1		0.11	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-ACD	0.90	7.51	0.120		0.10	0.13	2.0		0.15	I
I	A-BCD	1.72	9.29	0.186		0.19	0.24	3.6		0.13	I
I	D-ABC	1.84	11.19	0.165		0.16	0.20	2.9		0.11	I
I	C-ABD	0.04	8.94	0.005		0.00	0.00	0.1		0.11	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-ACD	1.10	6.99	0.158		0.13	0.18	2.7		0.17	I
I	A-BCD	2.11	9.06	0.233		0.24	0.33	5.0		0.14	I
I	D-ABC	2.26	10.90	0.207		0.20	0.26	3.8		0.12	I
I	C-ABD	0.06	8.66	0.006		0.00	0.01	0.1		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-ACD	1.10	6.99	0.158		0.18	0.19	2.8		0.17	I
I	A-BCD	2.11	9.06	0.233		0.33	0.33	5.0		0.14	I
I	D-ABC	2.26	10.90	0.207		0.26	0.26	3.9		0.12	I
I	C-ABD	0.06	8.66	0.006		0.01	0.01	0.1		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-ACD	0.90	7.50	0.120		0.19	0.14	2.1		0.15	I
I	A-BCD	1.72	9.29	0.186		0.33	0.25	3.7		0.13	I
I	D-ABC	1.84	11.19	0.165		0.26	0.20	3.1		0.11	I
I	C-ABD	0.04	8.94	0.005		0.01	0.01	0.1		0.11	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-ACD	0.75	7.88	0.096		0.14	0.11	1.6		0.14	I
I	A-BCD	1.44	9.45	0.153		0.25	0.19	2.9		0.13	I
I	D-ABC	1.54	11.39	0.135		0.20	0.16	2.4		0.10	I
I	C-ABD	0.04	9.15	0.004		0.01	0.00	0.1		0.11	I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.1
08.45	0.2
09.00	0.2
09.15	0.1
09.30	0.1

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.3
09.00	0.3
09.15	0.2
09.30	0.2

QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.2
08.45	0.3
09.00	0.3
09.15	0.2
09.30	0.2

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	82.6	I	55.1	I	12.7	I
I	A-BCD	I	158.3	I	105.5	I	22.9	I
I	D-ABC	I	169.3	I	112.9	I	18.3	I
I	C-ABD	I	4.1	I	2.8	I	0.5	I
I	ALL	I	1153.4	I	769.0	I	54.4	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	745.29	0.26	0.10	I

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	751.61	0.26	0.10	I

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	575.31	0.24	0.24	0.24	0.24	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I		0.09	0.15	0.34	0.12	I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	580.57	0.24	0.24	0.24	0.24	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I		0.10	0.15	0.34	0.12	I

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-D	I
I	612.18	0.21	0.30	I

STREAM A-D

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM A-D	STREAM C-A	STREAM C-B	I
I	617.98	0.21	0.31	I

B-D Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I
I	575.31	0.24	0.24	0.09	0.34	I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-A	STREAM C-D			I
I		0.15	0.15			I

B-D Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I

I	575.31	0.24	0.24	0.09	0.34	I
I		Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

D-B Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For OpposingI	I
I	STREAM D-B	STREAM C-A	STREAM C-B	STREAM D-C	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

D-B Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For OpposingI	I
I	STREAM B-D	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-D	I
I	580.57	0.24	0.24	0.10	0.34	I
I		Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For OpposingI	I
I		0.15	0.15			I

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

Demand set: 2017 PM Base + Dev + Sens

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I	I	6.93 I 10.39 I 6.93 I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I	I	0.44 I 0.66 I 0.44 I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I	I	4.25 I 6.38 I 4.25 I	I
I	ARM D	I	15.00 I 45.00 I 75.00 I	I	1.24 I 1.86 I 1.24 I	I

Demand set: 2017 PM Base + Dev + Sens

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I
I	16.45 - 17.00	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
I		I	ARM A	I	0.000	I	0.103	I	0.688	I	0.209	I				
I		I	I	I	0.0	I	57.0	I	381.0	I	116.0	I				
I		I	I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				
I		I	I	I	I	I	I	I	I	I	I	I				
I		I	ARM B	I	0.800	I	0.000	I	0.200	I	0.000	I				
I		I	I	I	28.0	I	0.0	I	7.0	I	0.0	I				
I		I	I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				
I		I	I	I	I	I	I	I	I	I	I	I				
I		I	ARM C	I	0.968	I	0.018	I	0.000	I	0.015	I				
I		I	I	I	329.0	I	6.0	I	0.0	I	5.0	I				
I		I	I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				
I		I	I	I	I	I	I	I	I	I	I	I				
I		I	ARM D	I	0.899	I	0.010	I	0.091	I	0.000	I				
I		I	I	I	89.0	I	1.0	I	9.0	I	0.0	I				
I		I	I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I				
I		I	I	I	I	I	I	I	I	I	I	I				

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 PM Base + Dev + Sens
AND FOR TIME PERIOD 2

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	16.45-17.00										I
I	B-ACD	0.44	7.66	0.057		0.00	0.06	0.9		0.14	I
I	A-BCD	1.46	9.37	0.155		0.00	0.20	2.9		0.13	I
I	D-ABC	1.24	10.83	0.115		0.00	0.13	1.9		0.10	I
I	C-ABD	0.08	8.59	0.009		0.00	0.01	0.1		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	B-ACD	0.52	7.18	0.073		0.06	0.08	1.1		0.15	I
I	A-BCD	1.74	9.19	0.189		0.20	0.26	3.9		0.13	I
I	D-ABC	1.48	10.56	0.140		0.13	0.16	2.4		0.11	I
I	C-ABD	0.09	8.27	0.011		0.01	0.01	0.2		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-ACD	0.64	6.52	0.099		0.08	0.11	1.6		0.17	I
I	A-BCD	2.13	8.94	0.238		0.26	0.37	5.6		0.15	I
I	D-ABC	1.82	10.18	0.179		0.16	0.22	3.2		0.12	I
I	C-ABD	0.11	7.83	0.014		0.01	0.01	0.2		0.13	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	B-ACD	0.64	6.51	0.099		0.11	0.11	1.6		0.17	I
I	A-BCD	2.13	8.94	0.238		0.37	0.38	5.7		0.15	I
I	D-ABC	1.82	10.18	0.179		0.22	0.22	3.2		0.12	I
I	C-ABD	0.11	7.83	0.014		0.01	0.01	0.2		0.13	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-ACD	0.52	7.18	0.073		0.11	0.08	1.2		0.15	I
I	A-BCD	1.74	9.19	0.189		0.38	0.27	4.0		0.13	I
I	D-ABC	1.48	10.56	0.140		0.22	0.16	2.5		0.11	I
I	C-ABD	0.09	8.26	0.011		0.01	0.01	0.2		0.12	I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-ACD	0.44	7.65	0.057		0.08	0.06	0.9		0.14	I
I	A-BCD	1.46	9.37	0.155		0.27	0.20	3.0		0.13	I
I	D-ABC	1.24	10.83	0.115		0.16	0.13	2.0		0.10	I
I	C-ABD	0.08	8.58	0.009		0.01	0.01	0.1		0.12	I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

 QUEUE FOR STREAM D-ABC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	I	I	I	I	I	I	I	I	
I	B-ACD	I	48.2	I	32.1	I	7.4	I	0.15
I	A-BCD	I	159.7	I	106.4	I	25.2	I	0.16
I	D-ABC	I	136.3	I	90.8	I	15.2	I	0.11
I	C-ABD	I	8.3	I	5.5	I	1.0	I	0.12
I	ALL	I	1415.0	I	943.3	I	48.8	I	0.03

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-
"A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\PICADY\Northern Site Access\
Northern Site Access Base + Dev.vpi"
(drive-on-the-left) at 12:01:23 on Sunday, 7 October 2012

RUN INFORMATION

RUN TITLE : clitheroe
LOCATION :
DATE : 06/10/12
CLIENT :
ENUMERATOR : Administrator
JOB NUMBER :
STATUS :
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Waddington Road E
ARM B IS Site Access
ARM C IS Waddington Road W

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

DATA ITEM		MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	6.40 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	3.00 M.
- VISIBILITY	(VC-B)	100.00 M.
- BLOCKS TRAFFIC	NO	
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	65.0 M.
- VISIBILITY TO RIGHT	(VB-A)	65.0 M.
- LANE 1 WIDTH	(WB-C)	2.50 M.
- LANE 2 WIDTH	(WB-A)	0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
631.57	0.24	0.10

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
504.43	0.23	0.09	0.14	0.33

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
686.89	0.26	0.26

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2012 AM Base + Dev

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
A	15.00	45.00	75.00	2.74	4.11	2.74
B	15.00	45.00	75.00	1.38	2.06	1.38
C	15.00	45.00	75.00	2.94	4.41	2.94

Demand set: 2012 AM Base + Dev

TIME		FROM/TO	ARM	A	ARM	B	ARM	C
08.00 - 08.15		ARM A	0.000	0.187	0.813			
			0.0	41.0	178.0			
		(0.0)	(0.0)	(0.0)	(0.0)			
		ARM B	0.927	0.000	0.073			
			102.0	0.0	8.0			
		(0.0)	(0.0)	(0.0)	(0.0)			
		ARM C	0.979	0.021	0.000			
			230.0	5.0	0.0			
		(0.0)	(0.0)	(0.0)	(0.0)			

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 AM Base + Dev
 AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-AC	1.38	7.56	0.183		0.00	0.22	3.2		0.16	I
I	C-A	2.89									I
I	C-B	0.06	10.73	0.006		0.00	0.01	0.1		0.09	I
I	A-B	0.51									I
I	A-C	2.23									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-AC	1.65	7.37	0.224		0.22	0.28	4.1		0.17	I
I	C-A	3.45									I
I	C-B	0.07	10.59	0.007		0.01	0.01	0.1		0.10	I
I	A-B	0.61									I
I	A-C	2.67									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-AC	2.02	7.10	0.284		0.28	0.39	5.7		0.20	I
I	C-A	4.22									I
I	C-B	0.09	10.40	0.009		0.01	0.01	0.1		0.10	I
I	A-B	0.75									I
I	A-C	3.27									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-AC	2.02	7.10	0.284		0.39	0.39	5.9		0.20	I
I	C-A	4.22									I
I	C-B	0.09	10.40	0.009		0.01	0.01	0.1		0.10	I
I	A-B	0.75									I
I	A-C	3.27									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-AC	1.65	7.37	0.224		0.39	0.29	4.5		0.18	I
I	C-A	3.45									I
I	C-B	0.07	10.59	0.007		0.01	0.01	0.1		0.10	I
I	A-B	0.61									I
I	A-C	2.67									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-AC	1.38	7.56	0.183		0.29	0.23	3.5		0.16	I
I	C-A	2.89									I
I	C-B	0.06	10.73	0.006		0.01	0.01	0.1		0.09	I
I	A-B	0.51									I
I	A-C	2.23									I

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.3
08.45	0.4
09.00	0.4
09.15	0.3
09.30	0.2

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
I	I	I		I		I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	151.4	I	100.9	I	26.9	I	0.18	I
I	C-A	I	316.6	I	211.1	I	I	I	I	I
I	C-B	I	6.9	I	4.6	I	0.7	I	0.09	I
I	A-B	I	56.4	I	37.6	I	I	I	I	I
I	A-C	I	245.0	I	163.3	I	I	I	I	I
I	ALL	I	776.3	I	517.5	I	27.5	I	0.04	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	631.57		0.24		0.10	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	504.43		0.23		0.09		0.14		0.33	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	686.89		0.26		0.26	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

Demand set: 2012 PM Base + Dev

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	BEFORE I AT TOP I AFTER	I
I	I	I	TO RISE I IS REACHED I FALLING	I	PEAK I OF PEAK I PEAK	I
I		I	I	I	I	I
I	ARM A	I	15.00	I	45.00	I
I	ARM B	I	15.00	I	75.00	I
I	ARM C	I	15.00	I	75.00	I

Demand set: 2012 PM Base + Dev

I	TIME	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I	FROM/TO I ARM A I ARM B I ARM C	I
I	17.00 - 17.15	I	I	I
I		I	ARM A	I
I		I	0.000	I
I		I	0.0	I
I		I	(0.0)	I
I		I	I	I
I		I	ARM B	I
I		I	0.855	I
I		I	53.0	I
I		I	(0.0)	I
I		I	(0.0)	I
I		I	ARM C	I
I		I	0.960	I
I		I	286.0	I
I		I	(0.0)	I
I		I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 PM Base + Dev
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	0.78	7.12	0.109		0.00	0.12	1.7		0.16
C-A	3.59								
C-B	0.15	10.10	0.015		0.00	0.02	0.2		0.10
A-B	1.19								
A-C	3.97								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	0.93	6.82	0.136		0.12	0.16	2.3		0.17
C-A	4.29								
C-B	0.18	9.84	0.018		0.02	0.02	0.3		0.10
A-B	1.42								
A-C	4.73								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	1.14	6.40	0.178		0.16	0.21	3.1		0.19
C-A	5.25								
C-B	0.22	9.48	0.023		0.02	0.02	0.3		0.11
A-B	1.74								
A-C	5.80								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	1.14	6.40	0.178		0.21	0.21	3.2		0.19
C-A	5.25								
C-B	0.22	9.48	0.023		0.02	0.02	0.4		0.11
A-B	1.74								
A-C	5.80								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	0.93	6.82	0.136		0.21	0.16	2.5		0.17
C-A	4.29								
C-B	0.18	9.84	0.018		0.02	0.02	0.3		0.10
A-B	1.42								
A-C	4.73								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.15-18.30									
B-AC	0.78	7.12	0.109		0.16	0.12	1.9		0.16
C-A	3.59								
C-B	0.15	10.10	0.015		0.02	0.02	0.2		0.10
A-B	1.19								
A-C	3.97								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.2
18.30	0.1

 QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0
18.30	0.0

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-AC	I	85.3	I	56.9	I	14.7	I	0.17
I	C-A	I	393.7	I	262.4	I	I	I	I
I	C-B	I	16.5	I	11.0	I	1.7	I	0.10
I	A-B	I	130.8	I	87.2	I	I	I	I
I	A-C	I	435.0	I	290.0	I	I	I	I
I	ALL	I	1061.2	I	707.5	I	16.4	I	0.02

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 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	631.57		0.24		0.10	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	504.43		0.23		0.09		0.14		0.33	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	686.89		0.26		0.26	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	I	I	I	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2017 AM Base + Dev

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

		NUMBER OF MINUTES FROM START WHEN		RATE OF FLOW (VEH/MIN)										
I	ARM	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	BEFORE I AT TOP I AFTER									
I	I	I	TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK									
I	I	I	I	I	I									
I	ARM A	I	15.00	I	45.00	I	75.00	I	2.81	I	4.22	I	2.81	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	1.38	I	2.06	I	1.38	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	3.06	I	4.59	I	3.06	I

Demand set: 2017 AM Base + Dev

TIME	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)							
	FROM/TO	ARM	A	ARM	B	ARM	C	
08.00 - 08.15	ARM A	I	0.000	I	0.182	I	0.818	I
		I	0.0	I	41.0	I	184.0	I
		I	(0.0)	I	(0.0)	I	(0.0)	I
	ARM B	I	0.927	I	0.000	I	0.073	I
		I	102.0	I	0.0	I	8.0	I
		I	(0.0)	I	(0.0)	I	(0.0)	I
	ARM C	I	0.980	I	0.020	I	0.000	I
		I	240.0	I	5.0	I	0.0	I
		I	(0.0)	I	(0.0)	I	(0.0)	I
		I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 AM Base + Dev
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	1.38	7.52	0.184		0.00	0.22	3.2		0.16
C-A	3.01								
C-B	0.06	10.71	0.006		0.00	0.01	0.1		0.09
A-B	0.51								
A-C	2.31								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	1.65	7.32	0.225		0.22	0.29	4.2		0.18
C-A	3.60								
C-B	0.07	10.57	0.007		0.01	0.01	0.1		0.10
A-B	0.61								
A-C	2.76								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	2.02	7.05	0.286		0.29	0.39	5.7		0.20
C-A	4.40								
C-B	0.09	10.37	0.009		0.01	0.01	0.1		0.10
A-B	0.75								
A-C	3.38								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	2.02	7.05	0.286		0.39	0.40	5.9		0.20
C-A	4.40								
C-B	0.09	10.37	0.009		0.01	0.01	0.1		0.10
A-B	0.75								
A-C	3.38								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	1.65	7.32	0.225		0.40	0.29	4.6		0.18
C-A	3.60								
C-B	0.07	10.57	0.007		0.01	0.01	0.1		0.10
A-B	0.61								
A-C	2.76								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.15-09.30									
B-AC	1.38	7.52	0.184		0.29	0.23	3.5		0.16
C-A	3.01								
C-B	0.06	10.71	0.006		0.01	0.01	0.1		0.09
A-B	0.51								
A-C	2.31								

 QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.3
08.45	0.4
09.00	0.4
09.15	0.3
09.30	0.2

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	B-AC	I	151.4	I	100.9	I	27.1	I	0.18	I
I	C-A	I	330.3	I	220.2	I		I		I
I	C-B	I	6.9	I	4.6	I	0.7	I	0.10	I
I	A-B	I	56.4	I	37.6	I		I		I
I	A-C	I	253.3	I	168.8	I		I		I
I	ALL	I	798.3	I	532.2	I	27.7	I	0.03	I

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 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	631.57		0.24		0.10	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	504.43		0.23		0.09		0.14		0.33	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	686.89		0.26		0.26	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2017 PM Base + Dev

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.15-18.30									
B-AC	0.78	7.06	0.110		0.16	0.13	1.9		0.16
C-A	3.73								
C-B	0.15	10.05	0.015		0.02	0.02	0.2		0.10
A-B	1.19								
A-C	4.14								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.2
18.30	0.1

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0
18.30	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND	* QUEUEING *	* INCLUSIVE QUEUEING *
		* DELAY *	* DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
B-AC	85.3	14.9	0.17
C-A	408.8		
C-B	16.5	1.7	0.10
A-B	130.8		
A-C	454.2		
ALL	1095.6	16.6	0.02

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
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Run with file:-
"A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\PICADY\Railway View Road\
Railway View Road PICADY Results Rev C.vpi"
(drive-on-the-left) at 12:07:40 on Sunday, 7 October 2012

RUN INFORMATION

RUN TITLE : Run 1
LOCATION :
DATE : 09/08/11
CLIENT :
ENUMERATOR :
JOB NUMBER :
STATUS :
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Railway View Road
ARM B IS B6478 Waddington
ARM C IS B6478 Clitheroe

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 8.50 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 100.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 100.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 100.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 4.00 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	755.66	0.26	0.10	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	616.89	0.25	0.10	0.16	0.36	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	631.87	0.22	0.22	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	95	I
I	B	I	95	I
I	C	I	95	I

Demand set: 2012 AM Base

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	I BEFORE I AT TOP I AFTER	I
I	I	I	I TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK	I
I	A	I	15.00 I 45.00 I 75.00	I	5.38 I 8.07 I 5.38	I
I	B	I	15.00 I 45.00 I 75.00	I	4.63 I 6.95 I 4.63	I
I	C	I	15.00 I 45.00 I 75.00	I	5.58 I 8.37 I 5.58	I

Demand set: 2012 AM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	07.45 - 08.00	I		I				I		I			I
I		I	ARM A	I	0.000	I	0.291	I	0.709	I			I
I		I		I	0.0	I	125.4	I	305.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I
I		I	ARM B	I	0.223	I	0.000	I	0.777	I			I
I		I		I	82.7	I	0.0	I	287.9	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I
I		I	ARM C	I	0.611	I	0.389	I	0.000	I			I
I		I		I	272.6	I	173.9	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 AM Base
 AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	4.65	10.37	0.448		0.00	0.80	11.3		0.17
C-AB	2.18	9.35	0.233		0.00	0.33	4.8		0.14
A-B	1.57								
A-C	3.83								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	5.55	10.03	0.554		0.80	1.20	17.1		0.22
C-AB	2.60	9.12	0.285		0.33	0.44	6.6		0.15
A-B	1.88								
A-C	4.57								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	6.80	9.55	0.712		1.20	2.30	31.2		0.35
C-AB	3.19	8.81	0.362		0.44	0.67	10.0		0.18
A-B	2.30								
A-C	5.60								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	6.80	9.55	0.712		2.30	2.38	35.2		0.36
C-AB	3.19	8.81	0.362		0.67	0.68	10.3		0.18
A-B	2.30								
A-C	5.60								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	5.55	10.02	0.554		2.38	1.28	20.6		0.23
C-AB	2.60	9.12	0.285		0.68	0.46	6.9		0.15
A-B	1.88								
A-C	4.57								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	4.65	10.36	0.449		1.28	0.83	13.1		0.18
C-AB	2.18	9.35	0.233		0.46	0.33	5.0		0.14
A-B	1.57								
A-C	3.83								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.8 *
08.15	1.2 *
08.30	2.3 **
08.45	2.4 **
09.00	1.3 *
09.15	0.8 *

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.4
08.30	0.7 *
08.45	0.7 *
09.00	0.5
09.15	0.3

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
I	I	I		I		I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	510.0	I	340.0	I	128.3	I	0.25	I
I	C-AB	I	239.3	I	159.5	I	43.7	I	0.18	I
I	A-B	I	172.6	I	115.1	I	I	I	I	I
I	A-C	I	419.7	I	279.8	I	I	I	I	I
I	ALL	I	1716.9	I	1144.6	I	172.0	I	0.10	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	755.66		0.26		0.10	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	616.89		0.25		0.10		0.16		0.36	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	631.87		0.22		0.22	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	95	I	I
I	B	I	95	I	I
I	C	I	95	I	I

Demand set: 2012 PM Base

TIME PERIOD BEGINS 16.30 AND ENDS 18.00

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 6.31 I 9.46 I 6.31	I	I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I 4.96 I 7.45 I 4.96	I	I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I 6.99 I 10.49 I 6.99	I	I	I

Demand set: 2012 PM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.30 - 16.45	I	ARM A	I	0.000	I	0.354	I	0.646	I			I
I		I		I	0.0	I	178.6	I	325.9	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM B	I	0.249	I	0.000	I	0.751	I			I
I		I		I	98.8	I	0.0	I	298.3	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM C	I	0.562	I	0.438	I	0.000	I			I
I		I		I	314.5	I	245.1	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 PM Base
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-AC	4.98	9.93	0.502		0.00	0.98	13.7		0.20
C-AB	3.08	9.15	0.336		0.00	0.57	8.3		0.16
A-B	2.24								
A-C	4.09								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	5.95	9.50	0.626		0.98	1.60	22.4		0.27
C-AB	3.67	8.88	0.413		0.57	0.83	12.5		0.19
A-B	2.68								
A-C	4.88								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	7.29	8.88	0.820		1.60	3.84	48.8		0.53
C-AB	4.50	8.51	0.528		0.83	1.46	21.8		0.25
A-B	3.28								
A-C	5.98								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	7.29	8.87	0.821		3.84	4.15	60.3		0.60
C-AB	4.50	8.51	0.528		1.46	1.49	22.7		0.25
A-B	3.28								
A-C	5.98								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	5.95	9.49	0.627		4.15	1.76	29.6		0.31
C-AB	3.67	8.88	0.413		1.49	0.89	13.5		0.20
A-B	2.68								
A-C	4.88								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	4.98	9.92	0.502		1.76	1.03	16.4		0.21
C-AB	3.08	9.15	0.336		0.89	0.59	9.0		0.17
A-B	2.24								
A-C	4.09								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.45	1.0	*
17.00	1.6	**
17.15	3.8	****
17.30	4.2	****
17.45	1.8	**
18.00	1.0	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.45	0.6	*
17.00	0.8	*
17.15	1.5	*
17.30	1.5	*
17.45	0.9	*
18.00	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	
I	B-AC	I	546.6	I	364.4	I	191.3	I	0.35
I	C-AB	I	337.4	I	224.9	I	87.9	I	0.26
I	A-B	I	245.8	I	163.9	I	I	I	I
I	A-C	I	448.5	I	299.0	I	I	I	I
I	ALL	I	2011.1	I	1340.7	I	279.2	I	0.14

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-C	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	755.66		0.26		0.10				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	C-B	STREAM	C-B	I
I	616.89		0.25		0.10		0.16		0.36						I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	631.87		0.22		0.22				I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	95		I
I	B	I	95		I
I	C	I	95		I

Demand set: 2012 AM Base + Dev

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	ARM	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	ARM	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 5.68 I 8.51 I 5.68	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 5.87 I 8.80 I 5.87	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 5.91 I 8.87 I 5.91	I		I

Demand set: 2012 AM Base + Dev

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	07.45 - 08.00	I	ARM A	I	0.000	I	0.314	I	0.686	I			I
I		I		I	0.0	I	142.5	I	311.6	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM B	I	0.227	I	0.000	I	0.773	I			I
I		I		I	106.4	I	0.0	I	362.9	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM C	I	0.580	I	0.420	I	0.000	I			I
I		I		I	274.5	I	198.6	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 AM Base + Dev
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	5.89	10.26	0.574		0.00	1.30	18.0		0.22
C-AB	2.49	9.29	0.268		0.00	0.40	5.9		0.15
A-B	1.79								
A-C	3.91								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	7.03	9.90	0.710		1.30	2.29	31.3		0.33
C-AB	2.97	9.05	0.329		0.40	0.55	8.3		0.16
A-B	2.14								
A-C	4.67								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	8.61	9.38	0.918		2.29	6.85	79.8		0.77
C-AB	3.64	8.71	0.418		0.55	0.86	13.0		0.20
A-B	2.61								
A-C	5.72								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	8.61	9.38	0.918		6.85	8.12	113.5		1.01
C-AB	3.64	8.71	0.418		0.86	0.88	13.4		0.20
A-B	2.61								
A-C	5.72								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	7.03	9.89	0.711		8.12	2.65	50.7		0.45
C-AB	2.97	9.05	0.329		0.88	0.58	8.7		0.17
A-B	2.14								
A-C	4.67								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	5.89	10.25	0.574		2.65	1.40	22.5		0.24
C-AB	2.49	9.29	0.268		0.58	0.41	6.2		0.15
A-B	1.79								
A-C	3.91								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.3	*
08.15	2.3	**
08.30	6.9	*****
08.45	8.1	*****
09.00	2.7	***
09.15	1.4	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.6	*
08.30	0.9	*
08.45	0.9	*
09.00	0.6	*
09.15	0.4	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	D	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-AC	I	646.0	I	430.6	I	315.7	I	0.49
I	C-AB	I	273.3	I	182.2	I	55.3	I	0.20
I	A-B	I	196.1	I	130.8	I	I	I	I
I	A-C	I	428.9	I	285.9	I	I	I	I
I	ALL	I	1922.2	I	1281.5	I	371.0	I	0.19

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	755.66		0.26		0.10	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	616.89		0.25		0.10		0.16		0.36	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	631.87		0.22		0.22	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	95	I	I
I	B	I	95	I	I
I	C	I	95	I	I

Demand set: 2012 PM Base + Dev

TIME PERIOD BEGINS 16.30 AND ENDS 18.00

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 6.88 I 10.31 I 6.88	I	I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I 5.68 I 8.51 I 5.68	I	I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I 7.73 I 11.60 I 7.73	I	I	I

Demand set: 2012 PM Base + Dev

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.30 - 16.45	I	I	I	I	I	I	I	I	I	I	I	I
I		I	ARM A	I	0.000	I	0.401	I	0.599	I			I
I		I	I	I	0.0	I	220.4	I	329.6	I			I
I		I	I	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	I	I	I	I	I	I	I	I			I
I		I	ARM B	I	0.255	I	0.000	I	0.745	I			I
I		I	I	I	115.9	I	0.0	I	338.2	I			I
I		I	I	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	I	I	I	I	I	I	I	I			I
I		I	ARM C	I	0.518	I	0.482	I	0.000	I			I
I		I	I	I	320.1	I	298.3	I	0.0	I			I
I		I	I	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	I	I	I	I	I	I	I	I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 PM Base + Dev
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I									I
I									I
I									I
I	16.30-16.45								I
I									I
I	B-AC	5.70	9.71		0.00	1.37	18.7		0.24
I	C-AB	3.74	9.03		0.00	0.82	12.0		0.19
I	A-B	2.77							
I	A-C	4.14							
I									I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I									I
I									I
I									I
I	16.45-17.00								I
I									I
I	B-AC	6.80	9.22		1.37	2.57	34.6		0.39
I	C-AB	4.47	8.73		0.82	1.29	19.4		0.23
I	A-B	3.30							
I	A-C	4.94							
I									I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I									I
I									I
I									I
I	17.00-17.15								I
I									I
I	B-AC	8.33	8.51		2.57	9.85	105.3		1.08
I	C-AB	5.47	8.33		1.29	2.61	38.3		0.34
I	A-B	4.04							
I	A-C	6.05							
I									I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I									I
I									I
I									I
I	17.15-17.30								I
I									I
I	B-AC	8.33	8.49		9.85	13.38	176.1		1.66
I	C-AB	5.47	8.33		2.61	2.70	41.6		0.36
I	A-B	4.04							
I	A-C	6.05							
I									I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I									I
I									I
I									I
I	17.30-17.45								I
I									I
I	B-AC	6.80	9.20		13.38	3.19	79.9		0.73
I	C-AB	4.47	8.73		2.70	1.40	21.6		0.25
I	A-B	3.30							
I	A-C	4.94							
I									I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I									I
I									I
I									I
I	17.45-18.00								I
I									I
I	B-AC	5.70	9.69		3.19	1.48	24.3		0.26
I	C-AB	3.74	9.03		1.40	0.86	13.1		0.19
I	A-B	2.77							
I	A-C	4.14							
I									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.45	1.4	*
17.00	2.6	***
17.15	9.9	*****
17.30	13.4	*****
17.45	3.2	***
18.00	1.5	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.45	0.8	*
17.00	1.3	*
17.15	2.6	***
17.30	2.7	***
17.45	1.4	*
18.00	0.9	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)
I	B-AC	I	625.0	I	416.7	I	438.9	I	0.70	I
I	C-AB	I	410.6	I	273.7	I	145.9	I	0.36	I
I	A-B	I	303.4	I	202.2	I	I	I	I	I
I	A-C	I	453.7	I	302.5	I	I	I	I	I
I	ALL	I	2233.4	I	1488.9	I	584.8	I	0.26	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-C	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	755.66		0.26		0.10				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	C-B	STREAM	C-B	I
I	616.89		0.25		0.10		0.16		0.36						I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	631.87		0.22		0.22				I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	95	I	I
I	B	I	95	I	I
I	C	I	95	I	I

Demand set: 2017 AM Base

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 5.59 I 8.39 I 5.59	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 4.82 I 7.23 I 4.82	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 5.83 I 8.75 I 5.83	I		I

Demand set: 2017 AM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	07.45 - 08.00	I	ARM A	I	0.000	I	0.289	I	0.711	I			I
I		I		I	0.0	I	129.2	I	318.3	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM B	I	0.222	I	0.000	I	0.778	I			I
I		I		I	85.5	I	0.0	I	300.2	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM C	I	0.611	I	0.389	I	0.000	I			I
I		I		I	285.0	I	181.4	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 AM Base
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	4.84	10.30	0.470		0.00	0.87	12.2		0.18
C-AB	2.28	9.31	0.245		0.00	0.35	5.2		0.14
A-B	1.62								
A-C	3.99								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	5.78	9.95	0.581		0.87	1.34	18.9		0.24
C-AB	2.72	9.07	0.300		0.35	0.48	7.2		0.16
A-B	1.94								
A-C	4.77								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	7.08	9.44	0.750		1.34	2.72	36.3		0.39
C-AB	3.33	8.74	0.381		0.48	0.73	11.0		0.18
A-B	2.37								
A-C	5.84								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	7.08	9.44	0.750		2.72	2.85	41.9		0.42
C-AB	3.33	8.74	0.381		0.73	0.74	11.3		0.19
A-B	2.37								
A-C	5.84								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	5.78	9.94	0.581		2.85	1.44	23.3		0.25
C-AB	2.72	9.07	0.300		0.74	0.50	7.5		0.16
A-B	1.94								
A-C	4.77								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	4.84	10.29	0.470		1.44	0.91	14.3		0.19
C-AB	2.28	9.31	0.245		0.50	0.36	5.4		0.14
A-B	1.62								
A-C	3.99								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.9	*
08.15	1.3	*
08.30	2.7	***
08.45	2.8	***
09.00	1.4	*
09.15	0.9	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.5	
08.30	0.7	*
08.45	0.7	*
09.00	0.5	
09.15	0.4	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-AC	I	530.9	I	353.9	I	147.0	I	0.28	I
I	C-AB	I	249.8	I	166.5	I	47.6	I	0.19	I
I	A-B	I	177.8	I	118.6	I	I	I	I	I
I	A-C	I	438.0	I	292.0	I	I	I	I	I
I	ALL	I	1788.8	I	1192.5	I	194.6	I	0.11	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	STREAM	A-B	STREAM	I
I	755.66		0.26		0.10				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	C-B	STREAM	C-B	STREAM	I
I	616.89		0.25		0.10		0.16		0.36						I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	STREAM	I
I	631.87		0.22		0.22				I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	95	I	I
I	B	I	95	I	I
I	C	I	95	I	I

Demand set: 2017 PM Base

TIME PERIOD BEGINS 16.30 AND ENDS 18.00

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 6.59 I 9.89 I 6.59	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 5.17 I 7.75 I 5.17	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 7.32 I 10.97 I 7.32	I		I

Demand set: 2017 PM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.30 - 16.45	I	ARM A	I	0.000	I	0.353	I	0.647	I			I
I		I		I	0.0	I	186.2	I	341.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM B	I	0.246	I	0.000	I	0.754	I			I
I		I		I	101.7	I	0.0	I	311.6	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM C	I	0.562	I	0.438	I	0.000	I			I
I		I		I	328.7	I	256.5	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 PM Base
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-AC	5.19	9.85	0.526		0.00	1.08	15.0		0.21
C-AB	3.22	9.09	0.354		0.00	0.62	9.1		0.17
A-B	2.34								
A-C	4.28								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	6.19	9.39	0.659		1.08	1.83	25.4		0.30
C-AB	3.84	8.81	0.436		0.62	0.93	14.0		0.20
A-B	2.79								
A-C	5.11								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	7.58	8.74	0.868		1.83	4.96	60.6		0.65
C-AB	4.71	8.42	0.559		0.93	1.69	25.2		0.27
A-B	3.42								
A-C	6.26								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	7.58	8.73	0.869		4.96	5.58	79.8		0.79
C-AB	4.71	8.42	0.559		1.69	1.73	26.5		0.27
A-B	3.42								
A-C	6.26								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	6.19	9.38	0.660		5.58	2.06	36.3		0.36
C-AB	3.84	8.81	0.436		1.73	1.00	15.2		0.21
A-B	2.79								
A-C	5.11								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	5.19	9.84	0.527		2.06	1.15	18.3		0.22
C-AB	3.22	9.09	0.354		1.00	0.65	9.9		0.17
A-B	2.34								
A-C	4.28								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.45	1.1	*
17.00	1.8	**
17.15	5.0	*****
17.30	5.6	*****
17.45	2.1	**
18.00	1.1	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.45	0.6	*
17.00	0.9	*
17.15	1.7	**
17.30	1.7	**
17.45	1.0	*
18.00	0.7	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
I	I	I		I		I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	568.8	I	379.2	I	235.4	I	0.41	I
I	C-AB	I	353.1	I	235.4	I	99.9	I	0.28	I
I	A-B	I	256.3	I	170.9	I	I	I	I	I
I	A-C	I	469.4	I	313.0	I	I	I	I	I
I	ALL	I	2100.0	I	1400.0	I	335.3	I	0.16	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	STREAM	A-B	STREAM	I
I	755.66		0.26		0.10				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	C-B	STREAM	I
I	616.89		0.25		0.10				0.16		0.36				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	STREAM	I
I	631.87		0.22		0.22				I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	95	I	I
I	B	I	95	I	I
I	C	I	95	I	I

Demand set: 2017 AM Base + Dev

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	A	I	15.00	I	45.00	I
I	B	I	15.00	I	45.00	I
I	C	I	15.00	I	45.00	I

Demand set: 2017 AM Base + Dev

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I
I	07.45 - 08.00	I	ARM A	I	0.000	I	0.310	I	0.690	I			I
I		I		I	0.0	I	146.3	I	324.9	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM B	I	0.225	I	0.000	I	0.775	I			I
I		I		I	109.3	I	0.0	I	375.3	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM C	I	0.582	I	0.418	I	0.000	I			I
I		I		I	286.9	I	206.1	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 AM Base + Dev
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	6.08	10.19	0.597		0.00	1.42	19.5		0.23
C-AB	2.59	9.24	0.280		0.00	0.42	6.2		0.15
A-B	1.84								
A-C	4.08								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	7.26	9.81	0.740		1.42	2.61	35.3		0.37
C-AB	3.09	8.99	0.344		0.42	0.60	8.9		0.17
A-B	2.19								
A-C	4.87								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	8.89	9.27	0.959		2.61	8.94	98.7		0.94
C-AB	3.78	8.64	0.438		0.60	0.95	14.3		0.20
A-B	2.68								
A-C	5.96								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	8.89	9.27	0.959		8.94	11.45	154.6		1.36
C-AB	3.78	8.64	0.438		0.95	0.97	14.8		0.21
A-B	2.68								
A-C	5.96								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	7.26	9.81	0.740		11.45	3.15	69.5		0.60
C-AB	3.09	8.99	0.344		0.97	0.62	9.5		0.17
A-B	2.19								
A-C	4.87								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	6.08	10.18	0.597		3.15	1.54	25.1		0.26
C-AB	2.59	9.24	0.280		0.62	0.44	6.6		0.15
A-B	1.84								
A-C	4.08								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.4	*
08.15	2.6	***
08.30	8.9	*****
08.45	11.4	*****
09.00	3.2	***
09.15	1.5	**

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.6	*
08.30	1.0	*
08.45	1.0	*
09.00	0.6	*
09.15	0.4	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-AC	I	666.9	I	444.6	I	402.8	I	0.60
I	C-AB	I	283.8	I	189.2	I	60.3	I	0.21
I	A-B	I	201.4	I	134.2	I	I	I	I
I	A-C	I	447.2	I	298.1	I	I	I	I
I	ALL	I	1994.1	I	1329.4	I	463.1	I	0.23

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	755.66		0.26		0.10	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	616.89		0.25		0.10		0.16		0.36	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	631.87		0.22		0.22	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	95	I	I
I	B	I	95	I	I
I	C	I	95	I	I

Demand set: 2017 PM Base+ Dev

TIME PERIOD BEGINS 16.30 AND ENDS 18.00

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 7.16 I 10.74 I 7.16	I	I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I 5.88 I 8.82 I 5.88	I	I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I 8.05 I 12.08 I 8.05	I	I	I

Demand set: 2017 PM Base+ Dev

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.30 - 16.45	I	ARM A	I	0.000	I	0.398	I	0.602	I			I
I		I		I	0.0	I	228.0	I	344.9	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM B	I	0.253	I	0.000	I	0.747	I			I
I		I		I	118.8	I	0.0	I	351.5	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM C	I	0.519	I	0.481	I	0.000	I			I
I		I		I	334.4	I	309.7	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 PM Base+ Dev
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.30-16.45									
B-AC	5.90	9.62	0.613		0.00	1.52	20.6		0.26
C-AB	3.89	8.96	0.434		0.00	0.89	13.1		0.19
A-B	2.86								
A-C	4.33								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	7.05	9.11	0.773		1.52	3.04	40.2		0.44
C-AB	4.64	8.66	0.536		0.89	1.45	21.7		0.25
A-B	3.42								
A-C	5.17								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	8.63	8.35	1.033		3.04	13.75	137.4		1.38
C-AB	5.68	8.24	0.690		1.45	3.09	44.9		0.38
A-B	4.18								
A-C	6.33								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	8.63	8.33	1.036		13.75	21.02	262.5		2.39
C-AB	5.68	8.24	0.690		3.09	3.22	49.7		0.41
A-B	4.18								
A-C	6.33								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	7.05	9.08	0.776		21.02	4.24	152.0		1.35
C-AB	4.64	8.66	0.536		3.22	1.58	24.5		0.27
A-B	3.42								
A-C	5.17								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	5.90	9.60	0.614		4.24	1.66	28.2		0.30
C-AB	3.89	8.96	0.434		1.58	0.95	14.5		0.20
A-B	2.86								
A-C	4.33								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.45	1.5	**
17.00	3.0	***
17.15	13.7	*****
17.30	21.0	*****
17.45	4.2	****
18.00	1.7	**

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.45	0.9	*
17.00	1.4	*
17.15	3.1	***
17.30	3.2	***
17.45	1.6	**
18.00	0.9	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I		I			I	* DELAY	*	I	* DELAY	*	I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B-AC	I	647.3	I 431.5	I	640.9	I 0.99	I	641.0	I 0.99	I
I	C-AB	I	426.3	I 284.2	I	168.4	I 0.39	I	168.4	I 0.40	I
I	A-B	I	313.8	I 209.2	I		I	I		I	I
I	A-C	I	474.7	I 316.4	I		I	I		I	I
I	ALL	I	2322.3	I 1548.2	I	809.2	I 0.35	I	809.4	I 0.35	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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EMAIL: Software@trl.co.uk

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF HIS/HER RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\PICADY\Thorn Street Corporation Street\
Thorn Street Corporation Street.vpi"
(drive-on-the-left) at 12:21:29 on Sunday, 7 October 2012

RUN INFORMATION

RUN TITLE : Clitheroe
LOCATION :
DATE : 06/10/12
CLIENT :
ENUMERATOR : Administrator
JOB NUMBER :
STATUS :
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Henthorn Street W
ARM B IS Corporation Street
ARM C IS Henthorn Street E

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 8.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 0.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 48.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 13.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.70 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	676.42	0.24	0.09			I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	534.44	0.22	0.09	0.14	0.32					I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	573.96	0.20	0.20			I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2012 AM Base + Dev

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	I BEFORE I AT TOP I AFTER	I
I	I	I	I TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK	I
I	I	I	I	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00	I	4.36 I 6.54 I 4.36	I
I	ARM B	I	15.00 I 45.00 I 75.00	I	1.09 I 1.63 I 1.09	I
I	ARM C	I	15.00 I 45.00 I 75.00	I	4.90 I 7.35 I 4.90	I

Demand set: 2012 AM Base + Dev

I		I	TURNING PROPORTIONS	I
I		I	TURNING COUNTS	I
I		I	(PERCENTAGE OF H.V.S)	I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C	I
I	08.00 - 08.15	I	I I I	I
I		I	ARM A I 0.000 I 0.029 I 0.971	I
I		I	I 0.0 I 10.0 I 339.0	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I	I
I		I	ARM B I 0.115 I 0.000 I 0.885	I
I		I	I 10.0 I 0.0 I 77.0	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I	I
I		I	ARM C I 0.661 I 0.339 I 0.000	I
I		I	I 259.0 I 133.0 I 0.0	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 AM Base + Dev
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	1.09	9.71	0.112		0.00	0.13	1.8		0.12
C-AB	1.67	8.68	0.192		0.00	0.25	3.7		0.14
A-B	0.13								
A-C	4.25								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	1.30	9.47	0.138		0.13	0.16	2.3		0.12
C-AB	1.99	8.50	0.234		0.25	0.33	5.0		0.15
A-B	0.15								
A-C	5.08								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	1.60	9.12	0.175		0.16	0.21	3.1		0.13
C-AB	2.44	8.27	0.295		0.33	0.48	7.2		0.17
A-B	0.18								
A-C	6.22								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	1.60	9.12	0.175		0.21	0.21	3.2		0.13
C-AB	2.44	8.27	0.295		0.48	0.48	7.3		0.17
A-B	0.18								
A-C	6.22								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	1.30	9.47	0.138		0.21	0.16	2.5		0.12
C-AB	1.99	8.50	0.234		0.48	0.34	5.2		0.15
A-B	0.15								
A-C	5.08								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.15-09.30									
B-AC	1.09	9.71	0.112		0.16	0.13	2.0		0.12
C-AB	1.67	8.68	0.192		0.34	0.26	3.9		0.14
A-B	0.13								
A-C	4.25								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.2
09.30	0.1

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.3
08.30	0.3
08.45	0.5
09.00	0.5
09.15	0.3
09.30	0.3

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	B-AC	I	119.7	I	79.8	I	14.8	I	0.12	I
I	C-AB	I	183.1	I	122.0	I	32.3	I	0.18	I
I	A-B	I	13.8	I	9.2	I	I	I	I	I
I	A-C	I	466.6	I	311.1	I	I	I	I	I
I	ALL	I	1139.7	I	759.8	I	47.1	I	0.04	I

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 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	676.42		0.24		0.09	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	534.44		0.22		0.09		0.14		0.32	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	573.96		0.20		0.20	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

Demand set: 2012 PM Base + Dev

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 5.79 I 8.68 I 5.79	I	I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I 1.79 I 2.68 I 1.79	I	I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I 6.38 I 9.56 I 6.38	I	I	I

Demand set: 2012 PM Base + Dev

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	17.00 - 17.15	I	ARM A	I	0.000	I	0.022	I	0.978	I	I	I	I
I		I		I	0.0	I	10.0	I	453.0	I	I	I	I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	I	I	I
I		I	ARM B	I	0.070	I	0.000	I	0.930	I	I	I	I
I		I		I	10.0	I	0.0	I	133.0	I	I	I	I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	I	I	I
I		I	ARM C	I	0.859	I	0.141	I	0.000	I	I	I	I
I		I		I	438.0	I	72.0	I	0.0	I	I	I	I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	I	I	I
I		I		I	I	I	I	I	I	I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 PM Base + Dev
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	1.79	9.56	0.188		0.00	0.23	3.3		0.13
C-AB	0.90	8.39	0.108		0.00	0.13	1.9		0.13
A-B	0.13								
A-C	5.68								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	2.14	9.26	0.231		0.23	0.30	4.3		0.14
C-AB	1.08	8.16	0.132		0.13	0.17	2.5		0.14
A-B	0.15								
A-C	6.79								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	2.62	8.84	0.297		0.30	0.42	6.0		0.16
C-AB	1.32	7.84	0.169		0.17	0.23	3.5		0.15
A-B	0.18								
A-C	8.31								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	2.62	8.84	0.297		0.42	0.42	6.3		0.16
C-AB	1.32	7.84	0.169		0.23	0.24	3.6		0.15
A-B	0.18								
A-C	8.31								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	2.14	9.26	0.231		0.42	0.30	4.7		0.14
C-AB	1.08	8.16	0.132		0.24	0.17	2.6		0.14
A-B	0.15								
A-C	6.79								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.15-18.30									
B-AC	1.79	9.56	0.188		0.30	0.23	3.6		0.13
C-AB	0.90	8.39	0.108		0.17	0.13	2.0		0.13
A-B	0.13								
A-C	5.68								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.3
17.45	0.4
18.00	0.4
18.15	0.3
18.30	0.2

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.2
18.30	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-AC	I	196.8	I	131.2	I	28.3	I	0.14
I	C-AB	I	99.1	I	66.1	I	16.0	I	0.16
I	A-B	I	13.8	I	9.2	I		I	
I	A-C	I	623.5	I	415.7	I		I	
I	ALL	I	1536.1	I	1024.1	I	44.3	I	0.03

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	676.42	0.24	0.09	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	534.44	0.22	0.09	0.14	0.32	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.20	0.20	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2012 AM Base

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 4.36 I 6.54 I 4.36	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 0.52 I 0.79 I 0.52	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 4.80 I 7.20 I 4.80	I		I

Demand set: 2012 AM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	08.00 - 08.15	I	ARM A	I	0.000	I	0.029	I	0.971	I			I
I		I		I	0.0	I	10.0	I	339.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM B	I	0.238	I	0.000	I	0.762	I			I
I		I		I	10.0	I	0.0	I	32.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM C	I	0.674	I	0.326	I	0.000	I			I
I		I		I	259.0	I	125.0	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 AM Base
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	0.53	9.22	0.057		0.00	0.06	0.9		0.11
C-AB	1.57	8.68	0.181		0.00	0.23	3.4		0.14
A-B	0.13								
A-C	4.25								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	0.63	8.93	0.070		0.06	0.08	1.1		0.12
C-AB	1.87	8.50	0.220		0.23	0.31	4.6		0.15
A-B	0.15								
A-C	5.08								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	0.77	8.53	0.090		0.08	0.10	1.4		0.13
C-AB	2.29	8.27	0.278		0.31	0.44	6.5		0.17
A-B	0.18								
A-C	6.22								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	0.77	8.53	0.090		0.10	0.10	1.5		0.13
C-AB	2.29	8.27	0.278		0.44	0.44	6.7		0.17
A-B	0.18								
A-C	6.22								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	0.63	8.93	0.070		0.10	0.08	1.2		0.12
C-AB	1.87	8.50	0.220		0.44	0.32	4.8		0.15
A-B	0.15								
A-C	5.08								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.15-09.30									
B-AC	0.53	9.21	0.057		0.08	0.06	0.9		0.12
C-AB	1.57	8.68	0.181		0.32	0.24	3.6		0.14
A-B	0.13								
A-C	4.25								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1
09.30	0.1

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.3
08.45	0.4
09.00	0.4
09.15	0.3
09.30	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
I	I	I		I		I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	57.8	I	38.5	I	7.0	I	0.12	I
I	C-AB	I	172.1	I	114.7	I	29.6	I	0.17	I
I	A-B	I	13.8	I	9.2	I	I	I	I	I
I	A-C	I	466.6	I	311.1	I	I	I	I	I
I	ALL	I	1066.7	I	711.2	I	36.6	I	0.03	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-C	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	676.42		0.24		0.09				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	C-B	STREAM	C-B	I
I	534.44		0.22		0.09		0.14		0.32						I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	573.96		0.20		0.20				I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

Demand set: 2017 AM Base

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 4.53 I 6.79 I 4.53	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 0.54 I 0.81 I 0.54	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 5.00 I 7.50 I 5.00	I		I

Demand set: 2017 AM Base

I		I	TURNING PROPORTIONS	I
I		I	TURNING COUNTS	I
I		I	(PERCENTAGE OF H.V.S)	I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C	I
I	08.00 - 08.15	I	I I I I I I	I
I		I	ARM A I 0.000 I 0.028 I 0.972 I	I
I		I	I 0.0 I 10.0 I 352.0 I	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I I	I
I		I	ARM B I 0.233 I 0.000 I 0.767 I	I
I		I	I 10.0 I 0.0 I 33.0 I	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I I	I
I		I	ARM C I 0.673 I 0.327 I 0.000 I	I
I		I	I 269.0 I 131.0 I 0.0 I	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I I I I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 AM Base
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	0.54	9.18	0.059		0.00	0.06	0.9		0.12
C-AB	1.64	8.64	0.190		0.00	0.25	3.7		0.14
A-B	0.13								
A-C	4.42								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	0.64	8.89	0.072		0.06	0.08	1.1		0.12
C-AB	1.96	8.46	0.232		0.25	0.33	5.0		0.15
A-B	0.15								
A-C	5.27								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	0.79	8.47	0.093		0.08	0.10	1.5		0.13
C-AB	2.40	8.22	0.293		0.33	0.48	7.1		0.17
A-B	0.18								
A-C	6.46								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	0.79	8.47	0.093		0.10	0.10	1.5		0.13
C-AB	2.40	8.22	0.293		0.48	0.48	7.3		0.17
A-B	0.18								
A-C	6.46								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	0.64	8.89	0.073		0.10	0.08	1.2		0.12
C-AB	1.96	8.46	0.232		0.48	0.34	5.1		0.15
A-B	0.15								
A-C	5.27								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.15-09.30									
B-AC	0.54	9.18	0.059		0.08	0.06	1.0		0.12
C-AB	1.64	8.64	0.190		0.34	0.26	3.8		0.14
A-B	0.13								
A-C	4.42								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1
09.30	0.1

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.2
08.30	0.3
08.45	0.5
09.00	0.5
09.15	0.3
09.30	0.3

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-AC	I	59.2	I	39.5	I	7.2	I	0.12
I	C-AB	I	180.3	I	120.2	I	32.0	I	0.18
I	A-B	I	13.8	I	9.2	I	I	I	I
I	A-C	I	484.5	I	323.0	I	I	I	I
I	ALL	I	1108.0	I	738.7	I	39.2	I	0.04

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	676.42	0.24	0.09	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	534.44	0.22	0.09	0.14	0.32	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.20	0.20	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2017 AM Base + Dev

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00	I	4.53 I 6.79 I 4.53	I
I	ARM B	I	15.00 I 45.00 I 75.00	I	1.10 I 1.65 I 1.10	I
I	ARM C	I	15.00 I 45.00 I 75.00	I	5.10 I 7.65 I 5.10	I

Demand set: 2017 AM Base + Dev

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	08.00 - 08.15	I	ARM A	I	0.000	I	0.028	I	0.972	I			I
I		I		I	0.0	I	10.0	I	352.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM B	I	0.114	I	0.000	I	0.886	I			I
I		I		I	10.0	I	0.0	I	78.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I	ARM C	I	0.659	I	0.341	I	0.000	I			I
I		I		I	269.0	I	139.0	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 AM Base + Dev
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	1.10	9.67	0.114		0.00	0.13	1.9		0.12
C-AB	1.74	8.64	0.202		0.00	0.27	4.0		0.14
A-B	0.13								
A-C	4.42								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	1.32	9.41	0.140		0.13	0.16	2.4		0.12
C-AB	2.08	8.46	0.246		0.27	0.36	5.4		0.16
A-B	0.15								
A-C	5.27								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	1.61	9.05	0.178		0.16	0.21	3.1		0.13
C-AB	2.55	8.22	0.310		0.36	0.52	7.8		0.18
A-B	0.18								
A-C	6.46								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	1.61	9.05	0.178		0.21	0.22	3.2		0.13
C-AB	2.55	8.22	0.310		0.52	0.53	8.0		0.18
A-B	0.18								
A-C	6.46								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	1.32	9.41	0.140		0.22	0.16	2.5		0.12
C-AB	2.08	8.46	0.246		0.53	0.37	5.6		0.16
A-B	0.15								
A-C	5.27								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.15-09.30									
B-AC	1.10	9.67	0.114		0.16	0.13	2.0		0.12
C-AB	1.74	8.64	0.202		0.37	0.28	4.2		0.15
A-B	0.13								
A-C	4.42								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.2
09.30	0.1

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.15	0.3	
08.30	0.4	
08.45	0.5	*
09.00	0.5	*
09.15	0.4	
09.30	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	B-AC	I	121.1	I	80.8	I	15.1	I	0.12
I	C-AB	I	191.3	I	127.5	I	34.9	I	0.18
I	A-B	I	13.8	I	9.2	I	I	I	I
I	A-C	I	484.5	I	323.0	I	I	I	I
I	ALL	I	1181.0	I	787.3	I	50.0	I	0.04

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-C	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	676.42		0.24		0.09				I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	C-B	STREAM	C-B	I
I	534.44		0.22		0.09		0.14		0.32						I

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM	C-B	STREAM	A-C	STREAM	A-B	STREAM	A-B	I
I	573.96		0.20		0.20				I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

Demand set: 2012 PM Base

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	I	I	I	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 5.79 I 8.68 I 5.79	I		I
I	ARM B	I	15.00 I 45.00 I 75.00 I 1.52 I 2.29 I 1.52	I		I
I	ARM C	I	15.00 I 45.00 I 75.00 I 6.05 I 9.08 I 6.05	I		I

Demand set: 2012 PM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I
I	17.00 - 17.15	I	ARM A	I	0.000	I	0.022	I	0.978	I			I
I		I		I	0.0	I	10.0	I	453.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I
I		I	ARM B	I	0.082	I	0.000	I	0.918	I			I
I		I		I	10.0	I	0.0	I	112.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I
I		I	ARM C	I	0.905	I	0.095	I	0.000	I			I
I		I		I	438.0	I	46.0	I	0.0	I			I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2012 PM Base
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	1.53	9.52	0.161		0.00	0.19	2.7		0.12
C-AB	0.58	8.39	0.069		0.00	0.08	1.1		0.13
A-B	0.13								
A-C	5.68								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	1.83	9.22	0.198		0.19	0.24	3.6		0.14
C-AB	0.69	8.16	0.084		0.08	0.10	1.5		0.13
A-B	0.15								
A-C	6.79								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	2.24	8.80	0.254		0.24	0.34	4.9		0.15
C-AB	0.84	7.84	0.108		0.10	0.13	2.0		0.14
A-B	0.18								
A-C	8.31								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	2.24	8.80	0.254		0.34	0.34	5.1		0.15
C-AB	0.84	7.84	0.108		0.13	0.13	2.0		0.14
A-B	0.18								
A-C	8.31								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	1.83	9.22	0.198		0.34	0.25	3.9		0.14
C-AB	0.69	8.16	0.084		0.13	0.10	1.5		0.13
A-B	0.15								
A-C	6.79								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.15-18.30									
B-AC	1.53	9.52	0.161		0.25	0.19	3.0		0.13
C-AB	0.58	8.39	0.069		0.10	0.08	1.2		0.13
A-B	0.13								
A-C	5.68								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.2
17.45	0.3
18.00	0.3
18.15	0.2
18.30	0.2

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1
18.30	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	D	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	B-AC	I	167.9	I	111.9	I	23.1	I	0.14	I
I	C-AB	I	63.3	I	42.2	I	9.3	I	0.15	I
I	A-B	I	13.8	I	9.2	I	I	I	I	I
I	A-C	I	623.5	I	415.7	I	I	I	I	I
I	ALL	I	1471.4	I	980.9	I	32.4	I	0.02	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	676.42		0.24		0.09	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	534.44		0.22		0.09		0.14		0.32	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	573.96		0.20		0.20	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

Demand set: 2017 PM Base

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 6.04 I 9.06 I 6.04	I	I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I 1.59 I 2.38 I 1.59	I	I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I 6.29 I 9.43 I 6.29	I	I	I

Demand set: 2017 PM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	17.00 - 17.15	I	ARM A	I	0.000	I	0.021	I	0.979	I	I	I	I
I		I		I	0.0	I	10.0	I	473.0	I	I	I	I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	I	I	I
I		I	ARM B	I	0.079	I	0.000	I	0.921	I	I	I	I
I		I		I	10.0	I	0.0	I	117.0	I	I	I	I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	I	I	I
I		I	ARM C	I	0.905	I	0.095	I	0.000	I	I	I	I
I		I		I	455.0	I	48.0	I	0.0	I	I	I	I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	I	I	I
I		I		I	I	I	I	I	I	I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 PM Base
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	1.59	9.47	0.168		0.00	0.20	2.9		0.13
C-AB	0.60	8.34	0.072		0.00	0.08	1.2		0.13
A-B	0.13								
A-C	5.93								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	1.90	9.16	0.208		0.20	0.26	3.8		0.14
C-AB	0.72	8.10	0.089		0.08	0.10	1.6		0.14
A-B	0.15								
A-C	7.09								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	2.33	8.72	0.267		0.26	0.36	5.2		0.16
C-AB	0.88	7.77	0.113		0.10	0.14	2.1		0.15
A-B	0.18								
A-C	8.68								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	2.33	8.72	0.267		0.36	0.36	5.4		0.16
C-AB	0.88	7.77	0.113		0.14	0.14	2.2		0.15
A-B	0.18								
A-C	8.68								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	1.90	9.16	0.208		0.36	0.27	4.1		0.14
C-AB	0.72	8.10	0.089		0.14	0.11	1.6		0.14
A-B	0.15								
A-C	7.09								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.15-18.30									
B-AC	1.59	9.47	0.168		0.27	0.20	3.1		0.13
C-AB	0.60	8.34	0.072		0.11	0.08	1.2		0.13
A-B	0.13								
A-C	5.93								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.3
17.45	0.4
18.00	0.4
18.15	0.3
18.30	0.2

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1
18.30	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	B-AC	I	174.8	I	116.5	I	24.6	I	0.14	I
I	C-AB	I	66.1	I	44.0	I	9.9	I	0.15	I
I	A-B	I	13.8	I	9.2	I	I	I	I	I
I	A-C	I	651.0	I	434.0	I	I	I	I	I
I	ALL	I	1532.0	I	1021.3	I	34.5	I	0.02	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
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 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	676.42	0.24	0.09	I

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-B	STREAM C-A	STREAM C-B	I
I	534.44	0.22	0.09	0.14	0.32	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-B	I
I	573.96	0.20	0.20	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2017 PM Base + Dev

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 6.04 I 9.06 I 6.04	I	I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I 1.85 I 2.78 I 1.85	I	I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I 6.61 I 9.92 I 6.61	I	I	I

Demand set: 2017 PM Base + Dev

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	17.00 - 17.15	I	I	I	I	I	I	I	I	I	I	I	I
I	I	I	ARM A	I	0.000	I	0.021	I	0.979	I	I	I	I
I	I	I	I	I	0.0	I	10.0	I	473.0	I	I	I	I
I	I	I	I	I	(0.0)	I	(0.0)	I	(0.0)	I	I	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I
I	I	I	ARM B	I	0.068	I	0.000	I	0.932	I	I	I	I
I	I	I	I	I	10.0	I	0.0	I	138.0	I	I	I	I
I	I	I	I	I	(0.0)	I	(0.0)	I	(0.0)	I	I	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I
I	I	I	ARM C	I	0.860	I	0.140	I	0.000	I	I	I	I
I	I	I	I	I	455.0	I	74.0	I	0.0	I	I	I	I
I	I	I	I	I	(0.0)	I	(0.0)	I	(0.0)	I	I	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 PM Base + Dev
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	1.86	9.51	0.195		0.00	0.24	3.5		0.13
C-AB	0.93	8.34	0.111		0.00	0.13	2.0		0.13
A-B	0.13								
A-C	5.93								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	2.22	9.19	0.241		0.24	0.31	4.6		0.14
C-AB	1.11	8.10	0.137		0.13	0.17	2.6		0.14
A-B	0.15								
A-C	7.09								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	2.72	8.75	0.310		0.31	0.44	6.4		0.17
C-AB	1.36	7.77	0.175		0.17	0.25	3.7		0.16
A-B	0.18								
A-C	8.68								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	2.72	8.75	0.310		0.44	0.45	6.7		0.17
C-AB	1.36	7.77	0.175		0.25	0.25	3.8		0.16
A-B	0.18								
A-C	8.68								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	2.22	9.19	0.241		0.45	0.32	5.0		0.14
C-AB	1.11	8.10	0.137		0.25	0.18	2.7		0.14
A-B	0.15								
A-C	7.09								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.15-18.30									
B-AC	1.86	9.50	0.195		0.32	0.25	3.8		0.13
C-AB	0.93	8.34	0.111		0.18	0.14	2.0		0.14
A-B	0.13								
A-C	5.93								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.2
17.30	0.3
17.45	0.4
18.00	0.4
18.15	0.3
18.30	0.2

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.2
18.30	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
I		I			I	* DELAY	*	I	* DELAY	*	I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B-AC	I	203.7	I 135.8	I	29.9	I 0.15	I	29.9	I 0.15	I
I	C-AB	I	101.9	I 67.9	I	16.8	I 0.17	I	16.8	I 0.17	I
I	A-B	I	13.8	I 9.2	I		I	I		I	I
I	A-C	I	651.0	I 434.0	I		I	I		I	I
I	ALL	I	1596.7	I 1064.4	I	46.7	I 0.03	I	46.7	I 0.03	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

Printed at 12:26:54 on 07/10/2012]

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-
"A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\PICADY\Whalley Road Greenacre\
Whalley Road Greenacre PICADY Results.vpi"
(drive-on-the-left) at 12:31:29 on Sunday, 7 October 2012

RUN INFORMATION

RUN TITLE : Clitheroe
LOCATION :
DATE : 06/10/12
CLIENT :
ENUMERATOR : Administrator
JOB NUMBER :
STATUS :
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Whalley Road S
ARM B IS Greenacre
ARM C IS Whalley Road N

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 8.35 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 100.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 0.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 0.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 2.20 M.	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	573.96		0.20		0.08	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	439.58		0.18		0.07		0.11		0.26	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	631.87		0.22		0.22	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2017 AM Base + Dev

TIME PERIOD BEGINS 08.00 AND ENDS 09.30

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	BEFORE I AT TOP I AFTER	I
I	I	I	TO RISE I IS REACHED I FALLING	I	PEAK I OF PEAK I PEAK	I
I	I	I	I	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00	I	8.04 I 12.06 I 8.04	I
I	ARM B	I	15.00 I 45.00 I 75.00	I	0.00 I 0.00 I 0.00	I
I	ARM C	I	15.00 I 45.00 I 75.00	I	10.26 I 15.39 I 10.26	I

Demand set: 2017 AM Base + Dev

I		I	TURNING PROPORTIONS	I
I		I	TURNING COUNTS	I
I		I	(PERCENTAGE OF H.V.S)	I
I		I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C	I
I	08.00 - 08.15	I	I I I	I
I		I	ARM A I 0.000 I 0.166 I 0.834	I
I		I	I 0.0 I 107.0 I 536.0	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I	I
I		I	ARM B I 0.000 I 0.000 I 0.000	I
I		I	I 0.0 I 0.0 I 0.0	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I	I
I		I	ARM C I 0.828 I 0.172 I 0.000	I
I		I	I 680.0 I 141.0 I 0.0	I
I		I	I (0.0)I (0.0)I (0.0)I	I
I		I	I I I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

PEDESTRIAN CROSSING DATA

ARM A: FLOW IS 600.0 PEDESTRIANS PER HOUR AND IS CONSTANT
THROUGHOUT PERIOD 1
ARM A: FLOW IS 600.0 PEDESTRIANS PER HOUR AND IS CONSTANT
THROUGHOUT PERIOD 2

PELICAN CROSSINGS

I	(times in seconds)	I	ARM A	I
I	amber time	I	1.0	I
I	"green" amber time	I	2.9	I
I	both signals red time	I	0.0	I
I	green man time	I	7.0	I
I	flashing amber time	I	6.0	I
I	minimum green time	I	20.0	I
I	queuing space(pcu)	I	4.0	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 AM Base + Dev
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-AC	0.00	5.32	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	1.77	8.76	0.202		0.00	0.30	4.4		0.14	I
I	A-BC	8.07	26.19	0.308	10.0	0.00	0.44	6.5			I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-AC	0.00	4.84	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	2.11	8.41	0.251		0.30	0.43	6.4		0.16	I
I	A-BC	9.63	26.19	0.368	10.0	0.44	0.58	8.5			I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-AC	0.00	4.14	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	2.59	7.93	0.326		0.43	0.71	10.6		0.19	I
I	A-BC	11.80	26.19	0.450	10.0	0.58	0.81	11.9			I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-AC	0.00	4.14	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	2.59	7.93	0.326		0.71	0.72	11.0		0.19	I
I	A-BC	11.80	26.19	0.450	10.0	0.81	0.82	12.2			I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-AC	0.00	4.83	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	2.11	8.40	0.251		0.72	0.45	6.8		0.16	I
I	A-BC	9.63	26.19	0.368	10.0	0.82	0.59	9.0			I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.15-09.30										I
I	B-AC	0.00	5.31	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	1.77	8.75	0.202		0.45	0.31	4.7		0.14	I
I	A-BC	8.07	26.19	0.308	10.0	0.59	0.45	6.8			I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0
09.30	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.15	0.3	
08.30	0.4	
08.45	0.7	*
09.00	0.7	*
09.15	0.4	
09.30	0.3	

QUEUE FOR STREAM A-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.15	0.4	
08.30	0.6	*
08.45	0.8	*
09.00	0.8	*
09.15	0.6	*
09.30	0.4	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-AC	I	0.0	I	0.0	I	0.00	I
I	C-AB	I	194.1	I	129.4	I	43.8	I
I	A-BC	I	885.0	I	590.0	I	54.9	I
I	ALL	I	2015.1	I	1343.4	I	98.8	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	573.96		0.20		0.08	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM
I	439.58		0.18		0.07		0.11	0.26

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	631.87		0.22		0.22	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

Demand set: 2017 PM Base + Dev

TIME PERIOD BEGINS 17.00 AND ENDS 18.30

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

		NUMBER OF MINUTES FROM START WHEN		RATE OF FLOW (VEH/MIN)									
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK
I		I		I		I		I		I		I	
I	ARM A	I	15.00	I	45.00	I	75.00	I	9.89	I	14.83	I	9.89
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00
I	ARM C	I	15.00	I	45.00	I	75.00	I	12.20	I	18.30	I	12.20

Demand set: 2017 PM Base + Dev

		TURNING PROPORTIONS							
		TURNING COUNTS							
		(PERCENTAGE OF H.V.S)							
TIME		FROM/TO	ARM	A	ARM	B	ARM	C	
17.00	- 17.15	ARM A	0.000	0.302	0.698				
			0.0	239.0	552.0				
			(0.0)	(0.0)	(0.0)				
		ARM B	0.000	0.000	0.000				
			0.0	0.0	0.0				
			(0.0)	(0.0)	(0.0)				
		ARM C	0.736	0.264	0.000				
			718.0	258.0	0.0				
			(0.0)	(0.0)	(0.0)				

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

PEDESTRIAN CROSSING DATA

ARM A: FLOW IS 600.0 PEDESTRIANS PER HOUR AND IS CONSTANT
THROUGHOUT PERIOD 1
ARM A: FLOW IS 600.0 PEDESTRIANS PER HOUR AND IS CONSTANT
THROUGHOUT PERIOD 2

PELICAN CROSSINGS

I	(times in seconds)	I	ARM A	I
I	amber time	I	1.0	I
I	"green" amber time	I	2.9	I
I	both signals red time	I	0.0	I
I	green man time	I	7.0	I
I	flashing amber time	I	6.0	I
I	minimum green time	I	20.0	I
I	queuing space(pcu)	I	4.0	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2017 PM Base + Dev
AND FOR TIME PERIOD 2

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	B-AC	0.00	4.82	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	3.24	8.35	0.388		0.00	0.86	12.6		0.19	I
I	A-BC	9.93	26.19	0.379	10.0	0.00	0.61	8.9			I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-AC	0.00	4.20	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	3.87	7.92	0.488		0.86	1.51	22.7		0.25	I
I	A-BC	11.85	26.19	0.452	10.0	0.61	0.82	12.0			I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	B-AC	0.00	3.27	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	4.73	7.33	0.646		1.51	3.62	52.9		0.38	I
I	A-BC	14.52	26.19	0.554	10.0	0.82	1.23	17.9			I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-AC	0.00	3.23	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	4.73	7.32	0.647		3.62	3.78	58.5		0.42	I
I	A-BC	14.52	26.19	0.554	10.0	1.23	1.24	18.5			I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-AC	0.00	4.15	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	3.87	7.91	0.489		3.78	1.68	26.0		0.27	I
I	A-BC	11.85	26.19	0.452	10.0	1.24	0.83	12.8			I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.15-18.30										I
I	B-AC	0.00	4.79	0.000		0.00	0.00	0.0		0.00	I
I	C-AB	3.24	8.34	0.388		1.68	0.94	14.3		0.20	I
I	A-BC	9.93	26.19	0.379	10.0	0.83	0.61	9.4			I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0
18.30	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.9	*
17.30	1.5	**
17.45	3.6	****
18.00	3.8	****
18.15	1.7	**
18.30	0.9	*

QUEUE FOR STREAM A-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.15	0.6	*
17.30	0.8	*
17.45	1.2	*
18.00	1.2	*
18.15	0.8	*
18.30	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-AC	I	0.0	I	0.00	I	0.0	I
I	C-AB	I	355.1	I	0.53	I	187.1	I
I	A-BC	I	1088.8	I	0.07	I	79.4	I
I	ALL	I	2432.1	I	0.11	I	266.5	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

Appendix F

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Crowthorne House Fax: +44 (0) 1344 770356
Nine Mile Ride Email: software@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008 02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Chatburn Well Terrace\ChatBurn Well Terrace AM.vai"
(drive-on-the-left) at 09:50:21 on Sunday, 7 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Chatburn Road
ARM B - Waterloo Road
ARM C - B6748
ARM D - Well Terrace

GEOMETRIC DATA

I ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	T5
I ARM A	I	6.25	I	7.00	I	9.00	I	25.00	I	30.00	I	13.0	I	0.785	I	36.929	I	
I ARM B	I	3.50	I	7.15	I	9.50	I	180.00	I	30.00	I	26.0	I	0.665	I	27.430	I	
I ARM C	I	4.60	I	6.90	I	1.70	I	23.00	I	30.00	I	4.0	I	0.682	I	27.864	I	
I ARM D	I	3.75	I	7.00	I	16.00	I	10.00	I	30.00	I	20.0	I	0.655	I	28.474	I	

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

I ARM	I	FLOW SCALE(%)	I	T13
I A	I	100	I	
I B	I	100	I	
I C	I	100	I	
I D	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD - (90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2012 Base

										T15
I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I				I	
I	ARM	I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER	I	I	
I	I	I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK	I	I	
I	ARM A	I 15.00	I 45.00	I 75.00	I 6.47	I 9.71	I 6.47	I	I	
I	ARM B	I 15.00	I 45.00	I 75.00	I 5.60	I 8.40	I 5.60	I	I	
I	ARM C	I 15.00	I 45.00	I 75.00	I 3.45	I 5.18	I 3.45	I	I	
I	ARM D	I 15.00	I 45.00	I 75.00	I 7.49	I 11.23	I 7.49	I	I	

DEMAND SET TITLE: 2012 Base

										T33

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	17.45-18.00										I	
I	ARM A	7.76	31.93	0.243	- -	-	0.4	0.3	4.9	-	0.041	I
I	ARM B	6.71	24.90	0.270	- -	-	0.5	0.4	5.7	-	0.055	I
I	ARM C	4.14	20.68	0.200	- -	-	0.4	0.3	3.8	-	0.061	I
I	ARM D	8.97	24.65	0.364	- -	-	0.9	0.6	8.8	-	0.064	I
I											I	

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	18.00-18.15										I	
I	ARM A	6.50	32.75	0.198	- -	-	0.3	0.2	3.8	-	0.038	I
I	ARM B	5.62	25.31	0.222	- -	-	0.4	0.3	4.4	-	0.051	I
I	ARM C	3.46	21.85	0.158	- -	-	0.3	0.2	2.9	-	0.054	I
I	ARM D	7.52	25.27	0.297	- -	-	0.6	0.4	6.5	-	0.056	I
I											I	

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5 *
17.45	0.5 *
18.00	0.4
18.15	0.3

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.6 *
17.30	0.8 *
17.45	0.9 *
18.00	0.6 *
18.15	0.4

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

-----												T75	
I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I					
I		I		I	* DELAY *	I	* DELAY *	I					
I		I											
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I		

I	A	I	713.0	I	475.3	I	30.3	I	0.04	I	30.3	I	0.04
I	B	I	616.6	I	411.1	I	34.7	I	0.06	I	34.7	I	0.06
I	C	I	379.9	I	253.3	I	23.8	I	0.06	I	23.8	I	0.06
I	D	I	824.5	I	549.7	I	55.1	I	0.07	I	55.1	I	0.07

I	ALL	I	2534.0	I	1689.3	I	143.9	I	0.06	I	143.9	I	0.06

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008 02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Chatburn Well Terrace\ChatBurn Well Terrace PM.vai"
(drive-on-the-left) at 10:03:52 on Sunday, 7 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Chatburn Road
ARM B - Waterloo Road
ARM C - B6748
ARM D - Well Terrace

GEOMETRIC DATA

I ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	T5
I ARM A	I	6.25	I	7.00	I	9.00	I	25.00	I	30.00	I	13.0	I	0.785	I	36.929	I	
I ARM B	I	3.50	I	7.15	I	9.50	I	180.00	I	30.00	I	26.0	I	0.665	I	27.430	I	
I ARM C	I	4.60	I	6.90	I	1.70	I	23.00	I	30.00	I	4.0	I	0.682	I	27.864	I	
I ARM D	I	3.75	I	7.00	I	16.00	I	10.00	I	30.00	I	20.0	I	0.655	I	28.474	I	

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

I ARM	I	FLOW SCALE(%)	I	T13
I A	I	100	I	
I B	I	100	I	
I C	I	100	I	
I D	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD - (90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2012 Base

T15									
I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I				I
I	ARM	I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER	I	I
I	I	I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK	I	I
I	ARM A	I 15.00	I 45.00	I 75.00	I 6.56	I 9.84	I 6.56	I	I
I	ARM B	I 15.00	I 45.00	I 75.00	I 6.54	I 9.81	I 6.54	I	I
I	ARM C	I 15.00	I 45.00	I 75.00	I 3.97	I 5.96	I 3.97	I	I
I	ARM D	I 15.00	I 45.00	I 75.00	I 6.59	I 9.88	I 6.59	I	I

DEMAND SET TITLE: 2012 Base

T33									
I	TURNING PROPORTIONS								I
I	TURNING COUNTS								I
I	(PERCENTAGE OF H.V.S)								I
I	TIME	I FROM/TO	I ARM A	I ARM B	I ARM C	I ARM D	I		I
I	16.45 - 18.15	I	I	I	I	I	I		I
I		I ARM A	I 0.000	I 0.530	I 0.000	I 0.470	I		I
I		I	I 0.0	I 278.0	I 0.0	I 247.0	I		I
I		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I	I		I
I		I ARM B	I 0.438	I 0.000	I 0.000	I 0.562	I		I
I		I	I 229.0	I 0.0	I 0.0	I 294.0	I		I
I		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I	I		I
I		I ARM C	I 0.406	I 0.179	I 0.000	I 0.415	I		I
I		I	I 129.0	I 57.0	I 0.0	I 132.0	I		I
I		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I	I		I
I		I ARM D	I 0.381	I 0.619	I 0.000	I 0.000	I		I
I		I	I 201.0	I 326.0	I 0.0	I 0.0	I		I
I		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I	I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70										
I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	16.45-17.00									
I	ARM A	6.59	33.17	0.199	-	0.0	0.2	3.7	-	0.038
I	ARM B	6.56	25.38	0.259	-	0.0	0.3	5.1	-	0.053
I	ARM C	3.99	21.29	0.187	-	0.0	0.2	3.4	-	0.058
I	ARM D	6.61	25.07	0.264	-	0.0	0.4	5.2	-	0.054

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.00-17.15									
I	ARM A	7.87	32.43	0.243	-	0.2	0.3	4.7	-	0.041
I	ARM B	7.84	24.97	0.314	-	0.3	0.5	6.7	-	0.058
I	ARM C	4.76	20.00	0.238	-	0.2	0.3	4.6	-	0.066
I	ARM D	7.90	24.40	0.324	-	0.4	0.5	7.0	-	0.061

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.15-17.30									
I	ARM A	9.63	31.42	0.307	-	0.3	0.4	6.5	-	0.046
I	ARM B	9.60	24.42	0.393	-	0.5	0.6	9.4	-	0.067
I	ARM C	5.84	18.24	0.320	-	0.3	0.5	6.8	-	0.080
I	ARM D	9.67	23.49	0.412	-	0.5	0.7	10.2	-	0.072

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.30-17.45									
I	ARM A	9.63	31.41	0.307	-	0.4	0.4	6.6	-	0.046
I	ARM B	9.60	24.42	0.393	-	0.6	0.6	9.7	-	0.067
I	ARM C	5.84	18.23	0.320	-	0.5	0.5	7.0	-	0.081
I	ARM D	9.67	23.48	0.412	-	0.7	0.7	10.4	-	0.072

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	17.45-18.00										I	
I	ARM A	7.87	32.42	0.243	- -	-	0.4	0.3	4.9	-	0.041	I
I	ARM B	7.84	24.97	0.314	- -	-	0.6	0.5	7.0	-	0.058	I
I	ARM C	4.76	19.98	0.238	- -	-	0.5	0.3	4.8	-	0.066	I
I	ARM D	7.90	24.39	0.324	- -	-	0.7	0.5	7.4	-	0.061	I
I											I	

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	18.00-18.15										I	
I	ARM A	6.59	33.15	0.199	- -	-	0.3	0.2	3.8	-	0.038	I
I	ARM B	6.56	25.37	0.259	- -	-	0.5	0.4	5.3	-	0.053	I
I	ARM C	3.99	21.27	0.188	- -	-	0.3	0.2	3.5	-	0.058	I
I	ARM D	6.61	25.06	0.264	- -	-	0.5	0.4	5.5	-	0.054	I
I											I	

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.5
17.30	0.6 *
17.45	0.6 *
18.00	0.5
18.15	0.4

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.2

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.5
17.30	0.7 *
17.45	0.7 *
18.00	0.5
18.15	0.4

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

-----											T75			
I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I				I		
I		I		I	* DELAY *	I	* DELAY *	I				I		
I		I	-----											
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I	I		

I	A	I	722.6	I	481.7	I	30.2	I	0.04	I	30.2	I	0.04	I
I	B	I	719.9	I	479.9	I	43.3	I	0.06	I	43.3	I	0.06	I
I	C	I	437.7	I	291.8	I	30.2	I	0.07	I	30.2	I	0.07	I
I	D	I	725.4	I	483.6	I	45.7	I	0.06	I	45.7	I	0.06	I

I	ALL	I	2605.6	I	1737.0	I	149.4	I	0.06	I	149.4	I	0.06	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
===== end of file =====

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ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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Wokingham, Berks.	Web: www.trlsoftware.co.uk
RG40 3GA,UK	

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008 02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Chatburn Well Terrace\ChatBurn Well Terrace AM.vai"
(drive-on-the-left) at 09:53:06 on Sunday, 7 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Chatburn Road
ARM B - Waterloo Road
ARM C - B6748
ARM D - Well Terrace

GEOMETRIC DATA

I ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	T5
I ARM A	I	6.25	I	7.00	I	9.00	I	25.00	I	30.00	I	13.0	I	0.785	I	36.929	I	
I ARM B	I	3.50	I	7.15	I	9.50	I	180.00	I	30.00	I	26.0	I	0.665	I	27.430	I	
I ARM C	I	4.60	I	6.90	I	1.70	I	23.00	I	30.00	I	4.0	I	0.682	I	27.864	I	
I ARM D	I	3.75	I	7.00	I	16.00	I	10.00	I	30.00	I	20.0	I	0.655	I	28.474	I	

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

I ARM	I	FLOW SCALE(%)	I	T13
I A	I	100	I	
I B	I	100	I	
I C	I	100	I	
I D	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD - (90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 Base

T15									
ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER	TO RISE	IS REACHED	FALLING
ARM	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK	TO RISE	IS REACHED	FALLING
ARM A	15.00	45.00	75.00	6.76	10.14	6.76	15.00	45.00	75.00
ARM B	15.00	45.00	75.00	5.71	8.57	5.71	15.00	45.00	75.00
ARM C	15.00	45.00	75.00	3.59	5.38	3.59	15.00	45.00	75.00
ARM D	15.00	45.00	75.00	7.81	11.72	7.81	15.00	45.00	75.00

DEMAND SET TITLE: 2017 Base

T33									
TURNING PROPORTIONS									
TURNING COUNTS									
(PERCENTAGE OF H.V.S)									
TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.510	0.000	0.490	0.000	0.510	0.000	0.490
		0.0	276.0	0.0	265.0	0.0	276.0	0.0	265.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.457	0.000	0.000	0.543	0.457	0.000	0.000	0.543
		209.0	0.0	0.0	248.0	209.0	0.0	0.0	248.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM C	0.484	0.160	0.000	0.355	0.484	0.160	0.000	0.355
		139.0	46.0	0.0	102.0	139.0	46.0	0.0	102.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.365	0.635	0.000	0.000	0.365	0.635	0.000	0.000
		228.0	397.0	0.0	0.0	228.0	397.0	0.0	0.0
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70										
TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
16.45-17.00										
ARM A	6.79	32.58	0.208	-	0.0	0.3	3.9	-	0.039	
ARM B	5.73	25.23	0.227	-	0.0	0.3	4.3	-	0.051	
ARM C	3.60	21.70	0.166	-	0.0	0.2	2.9	-	0.055	
ARM D	7.84	25.25	0.311	-	0.0	0.4	6.6	-	0.057	
17.00-17.15										
ARM A	8.11	31.73	0.255	-	0.3	0.3	5.1	-	0.042	
ARM B	6.85	24.79	0.276	-	0.3	0.4	5.6	-	0.056	
ARM C	4.30	20.49	0.210	-	0.2	0.3	3.9	-	0.062	
ARM D	9.36	24.61	0.381	-	0.4	0.6	9.0	-	0.066	
17.15-17.30										
ARM A	9.93	30.56	0.325	-	0.3	0.5	7.1	-	0.048	
ARM B	8.39	24.20	0.347	-	0.4	0.5	7.8	-	0.063	
ARM C	5.27	18.84	0.280	-	0.3	0.4	5.7	-	0.074	
ARM D	11.47	23.74	0.483	-	0.6	0.9	13.5	-	0.081	
17.30-17.45										
ARM A	9.93	30.55	0.325	-	0.5	0.5	7.2	-	0.048	
ARM B	8.39	24.20	0.347	-	0.5	0.5	7.9	-	0.063	
ARM C	5.27	18.83	0.280	-	0.4	0.4	5.8	-	0.074	
ARM D	11.47	23.74	0.483	-	0.9	0.9	13.9	-	0.081	
17.45-18.00										
ARM A	8.11	31.71	0.256	-	0.5	0.3	5.2	-	0.042	
ARM B	6.85	24.79	0.276	-	0.5	0.4	5.9	-	0.056	
ARM C	4.30	20.48	0.210	-	0.4	0.3	4.1	-	0.062	
ARM D	9.36	24.60	0.381	-	0.9	0.6	9.5	-	0.066	

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	18.00-18.15										I	
I	ARM A	6.79	32.56	0.208	- -	-	0.3	0.3	4.0	-	0.039	I
I	ARM B	5.73	25.22	0.227	- -	-	0.4	0.3	4.5	-	0.051	I
I	ARM C	3.60	21.68	0.166	- -	-	0.3	0.2	3.0	-	0.055	I
I	ARM D	7.84	25.23	0.311	- -	-	0.6	0.5	6.9	-	0.058	I
I											I	

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.3

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5 *
17.45	0.5 *
18.00	0.4
18.15	0.3

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.6 *
17.30	0.9 *
17.45	0.9 *
18.00	0.6 *
18.15	0.5

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75									
I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I
I	A	I	744.6	I	496.4	I	32.5	I	0.04
I	B	I	629.0	I	419.4	I	35.9	I	0.06
I	C	I	395.0	I	263.4	I	25.4	I	0.06
I	D	I	860.3	I	573.5	I	59.4	I	0.07
I	ALL	I	2629.0	I	1752.6	I	153.2	I	0.06

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008 02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Chatburn Well Terrace\ChatBurn Well Terrace PM.vai"
(drive-on-the-left) at 10:05:29 on Sunday, 7 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Chatburn Road
ARM B - Waterloo Road
ARM C - B6748
ARM D - Well Terrace

GEOMETRIC DATA

I ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	T5
I ARM A	I	6.25	I	7.00	I	9.00	I	25.00	I	30.00	I	13.0	I	0.785	I	36.929	I	
I ARM B	I	3.50	I	7.15	I	9.50	I	180.00	I	30.00	I	26.0	I	0.665	I	27.430	I	
I ARM C	I	4.60	I	6.90	I	1.70	I	23.00	I	30.00	I	4.0	I	0.682	I	27.864	I	
I ARM D	I	3.75	I	7.00	I	16.00	I	10.00	I	30.00	I	20.0	I	0.655	I	28.474	I	

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

I ARM	I	FLOW SCALE(%)	I	T13
I A	I	100	I	
I B	I	100	I	
I C	I	100	I	
I D	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD - (90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 Base

T15									
ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER			
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK			
ARM A	15.00	45.00	75.00	6.85	10.27	6.85			
ARM B	15.00	45.00	75.00	6.82	10.24	6.82			
ARM C	15.00	45.00	75.00	4.16	6.24	4.16			
ARM D	15.00	45.00	75.00	6.89	10.33	6.89			

DEMAND SET TITLE: 2017 Base

T33									
TURNING PROPORTIONS									
TURNING COUNTS									
(PERCENTAGE OF H.V.S)									
TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D				
16.45 - 18.15									
	ARM A	0.000	0.529	0.000	0.471				
		0.0	290.0	0.0	258.0				
		(0.0)	(0.0)	(0.0)	(0.0)				
	ARM B	0.438	0.000	0.000	0.562				
		239.0	0.0	0.0	307.0				
		(0.0)	(0.0)	(0.0)	(0.0)				
	ARM C	0.405	0.180	0.000	0.414				
		135.0	60.0	0.0	138.0				
		(0.0)	(0.0)	(0.0)	(0.0)				
	ARM D	0.381	0.619	0.000	0.000				
		210.0	341.0	0.0	0.0				
		(0.0)	(0.0)	(0.0)	(0.0)				

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70										
TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
16.45-17.00										
ARM A	6.88	32.99	0.208	-	0.0	0.3	3.9	-	0.038	
ARM B	6.85	25.28	0.271	-	0.0	0.4	5.4	-	0.054	
ARM C	4.18	21.01	0.199	-	0.0	0.2	3.6	-	0.059	
ARM D	6.91	24.92	0.277	-	0.0	0.4	5.6	-	0.055	
17.00-17.15										
ARM A	8.21	32.22	0.255	-	0.3	0.3	5.1	-	0.042	
ARM B	8.18	24.86	0.329	-	0.4	0.5	7.2	-	0.060	
ARM C	4.99	19.65	0.254	-	0.2	0.3	5.0	-	0.068	
ARM D	8.26	24.22	0.341	-	0.4	0.5	7.6	-	0.063	
17.15-17.30										
ARM A	10.06	31.16	0.323	-	0.3	0.5	7.0	-	0.047	
ARM B	10.02	24.29	0.413	-	0.5	0.7	10.2	-	0.070	
ARM C	6.11	17.81	0.343	-	0.3	0.5	7.6	-	0.085	
ARM D	10.11	23.26	0.435	-	0.5	0.8	11.2	-	0.076	
17.30-17.45										
ARM A	10.06	31.15	0.323	-	0.5	0.5	7.1	-	0.047	
ARM B	10.02	24.28	0.413	-	0.7	0.7	10.5	-	0.070	
ARM C	6.11	17.80	0.343	-	0.5	0.5	7.8	-	0.085	
ARM D	10.11	23.26	0.435	-	0.8	0.8	11.5	-	0.076	
17.45-18.00										
ARM A	8.21	32.20	0.255	-	0.5	0.3	5.2	-	0.042	
ARM B	8.18	24.86	0.329	-	0.7	0.5	7.5	-	0.060	
ARM C	4.99	19.64	0.254	-	0.5	0.3	5.2	-	0.068	
ARM D	8.26	24.21	0.341	-	0.8	0.5	8.0	-	0.063	

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	18.00-18.15										I	
I	ARM A	6.88	32.98	0.209	- -	-	0.3	0.3	4.0	-	0.038	I
I	ARM B	6.85	25.28	0.271	- -	-	0.5	0.4	5.7	-	0.054	I
I	ARM C	4.18	20.98	0.199	- -	-	0.3	0.2	3.8	-	0.060	I
I	ARM D	6.91	24.90	0.278	- -	-	0.5	0.4	5.9	-	0.056	I
I											I	

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.3

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.5
17.30	0.7 *
17.45	0.7 *
18.00	0.5
18.15	0.4

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.5 *
17.45	0.5 *
18.00	0.3
18.15	0.2

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.5 *
17.30	0.8 *
17.45	0.8 *
18.00	0.5 *
18.15	0.4

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75									
I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I
I	A	I	754.3	I	502.9	I	32.3	I	0.04
I	B	I	751.5	I	501.0	I	46.6	I	0.06
I	C	I	458.3	I	305.6	I	33.0	I	0.07
I	D	I	758.4	I	505.6	I	49.7	I	0.07
I	ALL	I	2722.6	I	1815.0	I	161.6	I	0.06

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Run with file:-
"a:\Project_008 02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Chatburn Well Terrace\ChatBurn Well Terrace AM.vai"
(drive-on-the-left) at 09:54:37 on Sunday, 7 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Chatburn Road
ARM B - Waterloo Road
ARM C - B6748
ARM D - Well Terrace

GEOMETRIC DATA

I ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	T5
I ARM A	I	6.25	I	7.00	I	9.00	I	25.00	I	30.00	I	13.0	I	0.785	I	36.929	I	
I ARM B	I	3.50	I	7.15	I	9.50	I	180.00	I	30.00	I	26.0	I	0.665	I	27.430	I	
I ARM C	I	4.60	I	6.90	I	1.70	I	23.00	I	30.00	I	4.0	I	0.682	I	27.864	I	
I ARM D	I	3.75	I	7.00	I	16.00	I	10.00	I	30.00	I	20.0	I	0.655	I	28.474	I	

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

I ARM	I	FLOW SCALE(%)	I	T13
I A	I	100	I	
I B	I	100	I	
I C	I	100	I	
I D	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2012 Base + Dev

TABLE 1										T15	
I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)				I	
I	ARM	I	I	I	I	I	I	I	I	I	
I	I	I	I	I	I	I	I	I	I	I	
I	I	TO RISE	I	IS REACHED	I	PEAK	I	OF PEAK	I	PEAK	
I	ARM A	I	15.00	I	45.00	I	6.66	I	9.99	I	6.66
I	ARM B	I	15.00	I	45.00	I	5.75	I	8.63	I	5.75
I	ARM C	I	15.00	I	45.00	I	3.45	I	5.18	I	3.45
I	ARM D	I	15.00	I	45.00	I	8.57	I	12.86	I	8.57

DEMAND SET TITLE: 2012 Base + Dev

									T33				
		I	TURNING PROPORTIONS						I				
		I	TURNING COUNTS						I				
		I	(PERCENTAGE OF H.V.S)						I				
TIME		I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	
I		I		I		I		I		I		I	
I	16.45 - 18.15	I		I		I		I		I		I	
I		I	ARM	A	I	0.000	I	0.499	I	0.000	I	0.501	I
I		I		I	I	0.0	I	266.0	I	0.0	I	267.0	I
I		I		I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I	I		I		I		I		I
I		I		I	I		I		I		I		I
I		I	ARM	B	I	0.452	I	0.000	I	0.000	I	0.548	I
I		I		I	I	208.0	I	0.0	I	0.0	I	252.0	I
I		I		I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I	I		I		I		I		I
I		I		I	I		I		I		I		I
I		I	ARM	C	I	0.486	I	0.159	I	0.000	I	0.355	I
I		I		I	I	134.0	I	44.0	I	0.0	I	98.0	I
I		I		I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I	I		I		I		I		I
I		I		I	I		I		I		I		I
I		I	ARM	D	I	0.372	I	0.628	I	0.000	I	0.000	I
I		I		I	I	255.0	I	431.0	I	0.0	I	0.0	I
I		I		I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	TOTAL
	16.45-17.00										
	ARM A	6.69	32.27	0.207	-	0.0	0.3	3.8	-	0.039	
	ARM B	5.77	25.21	0.229	-	0.0	0.3	4.3	-	0.051	
	ARM C	3.46	21.66	0.160	-	0.0	0.2	2.8	-	0.055	
	ARM D	8.61	25.31	0.340	-	0.0	0.5	7.5	-	0.060	

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15										
ARM A	7.99	31.35	0.255	- -	-	0.3	0.3	5.0	-	0.043
ARM B	6.89	24.77	0.278	- -	-	0.3	0.4	5.7	-	0.056
ARM C	4.14	20.44	0.202	- -	-	0.2	0.3	3.7	-	0.061
ARM D	10.28	24.69	0.416	- -	-	0.5	0.7	10.4	-	0.069

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30										
ARM A	9.78	30.10	0.325	-	-	0.3	0.5	7.1	-	0.049
ARM B	8.44	24.18	0.349	-	-	0.4	0.5	7.8	-	0.063
ARM C	5.06	18.77	0.270	-	-	0.3	0.4	5.4	-	0.073
ARM D	12.59	23.84	0.528	-	-	0.7	1.1	16.1	-	0.088

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	9.78	30.09	0.325	-	-	0.5	0.5	-	0.049
ARM B	8.44	24.17	0.349	-	-	0.5	8.0	-	0.064
ARM C	5.06	18.76	0.270	-	-	0.4	5.5	-	0.073
ARM D	12.59	23.83	0.528	-	-	1.1	16.6	-	0.089

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	7.99	31.33	0.255	-	-	0.5	0.3	5.2	0.043
ARM B	6.89	24.77	0.278	-	-	0.5	0.4	5.9	0.056
ARM C	4.14	20.42	0.202	-	-	0.4	0.3	3.9	0.061
ARM D	10.28	24.68	0.416	-	-	1.1	0.7	11.1	0.070

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH_MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH_MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	18.00-18.15										I	
I	ARM A	6.69	32.24	0.207	- -	-	0.3	0.3	4.0	-	0.039	I
I	ARM B	5.77	25.20	0.229	- -	-	0.4	0.3	4.5	-	0.052	I
I	ARM C	3.46	21.64	0.160	- -	-	0.3	0.2	2.9	-	0.055	I
I	ARM D	8.61	25.30	0.340	- -	-	0.7	0.5	7.9	-	0.060	I
I											I	

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.3

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5 *
17.45	0.5 *
18.00	0.4
18.15	0.3

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5 *
17.15	0.7 *
17.30	1.1 *
17.45	1.1 *
18.00	0.7 *
18.15	0.5 *

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75										
I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I		I		I	* DELAY *	I	* DELAY *	I		
I		I		I		I		I		
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)
I	A	I	733.6	I	489.1	I	32.4	I	0.04	I
I	B	I	633.2	I	422.1	I	36.3	I	0.06	I
I	C	I	379.9	I	253.3	I	24.2	I	0.06	I
I	D	I	944.2	I	629.5	I	69.6	I	0.07	I
I	ALL	I	2690.9	I	1793.9	I	162.5	I	0.06	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008 02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Chatburn Well Terrace\ChatBurn Well Terrace PM.vai"
(drive-on-the-left) at 10:07:34 on Sunday, 7 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Chatburn Road
ARM B - Waterloo Road
ARM C - B6748
ARM D - Well Terrace

GEOMETRIC DATA

I ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	T5
I ARM A	I	6.25	I	7.00	I	9.00	I	25.00	I	30.00	I	13.0	I	0.785	I	36.929	I	
I ARM B	I	3.50	I	7.15	I	9.50	I	180.00	I	30.00	I	26.0	I	0.665	I	27.430	I	
I ARM C	I	4.60	I	6.90	I	1.70	I	23.00	I	30.00	I	4.0	I	0.682	I	27.864	I	
I ARM D	I	3.75	I	7.00	I	16.00	I	10.00	I	30.00	I	20.0	I	0.655	I	28.474	I	

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

I ARM	I	FLOW SCALE(%)	I	T13
I A	I	100	I	
I B	I	100	I	
I C	I	100	I	
I D	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2012 Base + Dev

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)			T15							
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS								
I	ARM	I	TO RISE	I	IS REACHED	I	FALLING								
I	ARM	I	BEFORE	I	AT TOP	I	AFTER								
I	ARM	I	OF PEAK	I	PEAK	I	PEAK								
I	ARM	A	I	15.00	I	45.00	I	75.00	I	7.03	I	10.54	I	7.03	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	6.99	I	10.48	I	6.99	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	3.97	I	5.96	I	3.97	I
I	ARM	D	I	15.00	I	45.00	I	75.00	I	7.16	I	10.74	I	7.16	I

DEMAND SET TITLE: 2012 Base + Dev

								T33			
	I	TURNING PROPORTIONS						I			
	I	TURNING COUNTS						I			
	I	(PERCENTAGE OF H.V.S)						I			
TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
16.45 - 18.15	I		I		I		I		I		I
	I	ARM	A	0.000	I	0.507	I	0.000	I	0.493	I
	I		I	0.0	I	285.0	I	0.0	I	277.0	I
	I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
	I		I		I		I		I		I
	I	ARM	B	0.417	I	0.000	I	0.000	I	0.583	I
	I		I	233.0	I	0.0	I	0.0	I	326.0	I
	I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
	I		I		I		I		I		I
	I	ARM	C	0.406	I	0.179	I	0.000	I	0.415	I
	I		I	129.0	I	57.0	I	0.0	I	132.0	I
	I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
	I		I		I		I		I		I
	I	ARM	D	0.386	I	0.614	I	0.000	I	0.000	I
	I		I	221.0	I	352.0	I	0.0	I	0.0	I
	I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
	I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	16.45-17.00										I	
I	ARM A	7.05	32.92	0.214	- -	-	0.0	0.3	4.0	-	0.039	I
I	ARM B	7.01	25.13	0.279	- -	-	0.0	0.4	5.7	-	0.055	I
I	ARM C	3.99	20.73	0.192	- -	-	0.0	0.2	3.5	-	0.060	I
I	ARM D	7.19	25.04	0.287	- -	-	0.0	0.4	5.9	-	0.056	I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	8.42	32.13	0.262	-	-	0.3	0.4	-	0.042
ARM B	8.38	24.67	0.339	-	-	0.4	0.5	-	0.061
ARM C	4.76	19.33	0.247	-	-	0.2	0.3	-	0.069
ARM D	8.59	24.37	0.352	-	-	0.4	0.5	-	0.063

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30										
ARM A	10.31	31.05	0.332	- -	-	0.4	0.5	7.3	-	0.048
ARM B	10.26	24.06	0.426	- -	-	0.5	0.7	10.8	-	0.072
ARM C	5.84	17.41	0.335	- -	-	0.3	0.5	7.3	-	0.086
ARM D	10.51	23.45	0.448	- -	-	0.5	0.8	11.8	-	0.077

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45										
ARM A	10.31	31.04	0.332	- -	-	0.5	0.5	7.4	-	0.048
ARM B	10.26	24.05	0.426	- -	-	0.7	0.7	11.1	-	0.072
ARM C	5.84	17.40	0.335	- -	-	0.5	0.5	7.5	-	0.086
ARM D	10.51	23.44	0.449	- -	-	0.8	0.8	12.1	-	0.077

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	17.45-18.00										I	
I	ARM A	8.42	32.11	0.262	-	-	0.5	0.4	5.4	-	0.042	I
I	ARM B	8.38	24.67	0.340	-	-	0.7	0.5	7.9	-	0.062	I
I	ARM C	4.76	19.31	0.247	-	-	0.5	0.3	5.0	-	0.069	I
I	ARM D	8.59	24.35	0.353	-	-	0.8	0.5	8.4	-	0.064	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I											I	
I	18.00-18.15										I	
I	ARM A	7.05	32.90	0.214	- -	-	0.4	0.3	4.2	-	0.039	I
I	ARM B	7.01	25.12	0.279	- -	-	0.5	0.4	5.9	-	0.055	I
I	ARM C	3.99	20.70	0.193	- -	-	0.3	0.2	3.7	-	0.060	I
I	ARM D	7.19	25.02	0.287	- -	-	0.5	0.4	6.2	-	0.056	I
I											I	

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5
17.45	0.5
18.00	0.4
18.15	0.3

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.5 *
17.30	0.7 *
17.45	0.7 *
18.00	0.5 *
18.15	0.4

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.5
17.45	0.5 *
18.00	0.3
18.15	0.2

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.5 *
17.30	0.8 *
17.45	0.8 *
18.00	0.5 *
18.15	0.4

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75									
ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		I
	I		I	* DELAY *	I	* DELAY *	I		I
	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		I
A	I	773.6	I	515.7	I	33.6	I	0.04	I
B	I	769.4	I	512.9	I	48.9	I	0.06	I
C	I	437.7	I	291.8	I	31.8	I	0.07	I
D	I	788.7	I	525.8	I	52.3	I	0.07	I
ALL	I	2769.4	I	1846.2	I	166.7	I	0.06	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008 02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Chatburn Well Terrace\ChatBurn Well Terrace AM.vai"
(drive-on-the-left) at 09:55:47 on Sunday, 7 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Chatburn Road
ARM B - Waterloo Road
ARM C - B6748
ARM D - Well Terrace

GEOMETRIC DATA

I ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	T5
I ARM A	I	6.25	I	7.00	I	9.00	I	25.00	I	30.00	I	13.0	I	0.785	I	36.929	I	
I ARM B	I	3.50	I	7.15	I	9.50	I	180.00	I	30.00	I	26.0	I	0.665	I	27.430	I	
I ARM C	I	4.60	I	6.90	I	1.70	I	23.00	I	30.00	I	4.0	I	0.682	I	27.864	I	
I ARM D	I	3.75	I	7.00	I	16.00	I	10.00	I	30.00	I	20.0	I	0.655	I	28.474	I	

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

I ARM	I	FLOW SCALE(%)	I	T13
I A	I	100	I	
I B	I	100	I	
I C	I	100	I	
I D	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 Base + Dev

TABLE 1. DATA FOR THE 1980-1981 FLOODING OF THE T15									
I		I		I		I		I	
ARM	FLOW	NUMBER OF FLOW STARTS	TOP OF PEAK	MINUTES FROM START WHEN FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE AT TOP	AT TOP	AFTER		
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK		
I ARM A	I	15.00	I	45.00	I	75.00	I	6.95	I
I ARM B	I	15.00	I	45.00	I	75.00	I	6.11	I
I ARM C	I	15.00	I	45.00	I	75.00	I	3.59	I
I ARM D	I	15.00	I	45.00	I	75.00	I	8.90	I

DEMAND SET TITLE: 2017 Base + Dev

T33									
		TURNING PROPORTIONS							
		TURNING COUNTS							
		(PERCENTAGE OF H.V.S)							
TIME		FROM/TO	ARM A	ARM B	ARM C	ARM D			
16.45	18.15	ARM A	0.000	0.500	0.000	0.500			
			0.0	278.0	0.0	278.0			
			(0.0)	(0.0)	(0.0)	(0.0)			
		ARM B	0.462	0.000	0.000	0.538			
			226.0	0.0	0.0	263.0			
			(0.0)	(0.0)	(0.0)	(0.0)			
		ARM C	0.484	0.160	0.000	0.355			
			139.0	46.0	0.0	102.0			
			(0.0)	(0.0)	(0.0)	(0.0)			
		ARM D	0.371	0.629	0.000	0.000			
			264.0	448.0	0.0	0.0			
			(0.0)	(0.0)	(0.0)	(0.0)			

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	T70
I	16.45-17.00										I
I	ARM A	6.98	32.08	0.217	- -	-	0.0	4.1	-	0.040	I
I	ARM B	6.14	25.12	0.244	- -	-	0.0	4.7	-	0.053	I
I	ARM C	3.60	21.32	0.169	- -	-	0.0	3.0	-	0.056	I
I	ARM D	8.93	25.11	0.356	- -	-	0.0	8.0	-	0.062	I

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15										
ARM A	8.33	31.13	0.268	- -	-	0.3	0.4	5.4	-	0.044
ARM B	7.33	24.66	0.297	- -	-	0.3	0.4	6.2	-	0.058
ARM C	4.30	20.03	0.215	- -	-	0.2	0.3	4.0	-	0.064
ARM D	10.67	24.44	0.436	- -	-	0.5	0.8	11.3	-	0.072

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	10.20	29.83	0.342	-	-	0.4	0.5	7.6	0.051
ARM B	8.97	24.04	0.373	-	-	0.4	0.6	8.7	0.066
ARM C	5.27	18.28	0.288	-	-	0.3	0.4	5.9	0.077
ARM D	13.07	23.54	0.555	-	-	0.8	1.2	17.8	0.095

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	17.30-17.45										I	
I	ARM A	10.20	29.82	0.342	-	-	0.5	0.5	7.8	-	0.051	I
I	ARM B	8.97	24.04	0.373	-	-	0.6	0.6	8.9	-	0.066	I
I	ARM C	5.27	18.26	0.288	-	-	0.4	0.4	6.0	-	0.077	I
I	ARM D	13.07	23.53	0.555	-	-	1.2	1.2	18.5	-	0.095	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	17.45-18.00										I	
I	ARM A	8.33	31.10	0.268	-	-	0.5	0.4	5.6	-	0.044	I
I	ARM B	7.33	24.66	0.297	-	-	0.6	0.4	6.5	-	0.058	I
I	ARM C	4.30	20.01	0.215	-	-	0.4	0.3	4.2	-	0.064	I
I	ARM D	10.67	24.43	0.437	-	-	1.2	0.8	12.0	-	0.073	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	18.00-18.15										I	
I	ARM A	6.98	32.06	0.218	- -	-	0.4	0.3	4.2	-	0.040	I
I	ARM B	6.14	25.11	0.244	- -	-	0.4	0.3	4.9	-	0.053	I
I	ARM C	3.60	21.29	0.169	- -	-	0.3	0.2	3.1	-	0.057	I
I	ARM D	8.93	25.09	0.356	- -	-	0.8	0.6	8.5	-	0.062	I
I											I	

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5 *
17.45	0.5 *
18.00	0.4
18.15	0.3

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.6 *
17.45	0.6 *
18.00	0.4
18.15	0.3

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5 *
17.15	0.8 *
17.30	1.2 *
17.45	1.2 *
18.00	0.8 *
18.15	0.6 *

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75									
ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		I
	I		I	* DELAY *	I	* DELAY *	I		I
	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		I
A	I	765.3	I	510.2	I	34.7	I	0.05	I
B	I	673.1	I	448.7	I	40.0	I	0.06	I
C	I	395.0	I	263.4	I	26.3	I	0.07	I
D	I	980.0	I	653.3	I	76.2	I	0.08	I
ALL	I	2813.4	I	1875.6	I	177.1	I	0.06	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008 02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Chatburn Well Terrace\ChatBurn Well Terrace PM.vai"
(drive-on-the-left) at 10:08:30 on Sunday, 7 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Chatburn Road
ARM B - Waterloo Road
ARM C - B6748
ARM D - Well Terrace

GEOMETRIC DATA

I ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	T5
I ARM A	I	6.25	I	7.00	I	9.00	I	25.00	I	30.00	I	13.0	I	0.785	I	36.929	I	
I ARM B	I	3.50	I	7.15	I	9.50	I	180.00	I	30.00	I	26.0	I	0.665	I	27.430	I	
I ARM C	I	4.60	I	6.90	I	1.70	I	23.00	I	30.00	I	4.0	I	0.682	I	27.864	I	
I ARM D	I	3.75	I	7.00	I	16.00	I	10.00	I	30.00	I	20.0	I	0.655	I	28.474	I	

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

I ARM	I	FLOW SCALE(%)	I	T13
I A	I	100	I	
I B	I	100	I	
I C	I	100	I	
I D	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 Base + Dev

T15									
I	I	NUMBER OF MINUTES FROM START WHEN				I	RATE OF FLOW (VEH/MIN)		
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE
I	I	I	I	I	I	I	I	I	AT TOP
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	OF PEAK
I	I	I	I	I	I	I	I	I	PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	7.31
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.28
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.16
I	ARM D	I	15.00	I	45.00	I	75.00	I	7.46

DEMAND SET TITLE: 2017 Base + Dev

T33									
TURNING PROPORTIONS									
TURNING COUNTS									
(PERCENTAGE OF H.V.S)									
I	TIME		I	FROM/TO	I	ARM A	I	ARM B	I
I			I		I		I		I
I	16.45 - 18.15		I		I		I		I
I			I	ARM A	I	0.000	I	0.508	I
I			I		I	0.0	I	297.0	I
I			I		I	(0.0)	I	(0.0)	I
I			I		I		I		I
I			I	ARM B	I	0.418	I	0.000	I
I			I		I	243.0	I	0.0	I
I			I		I	(0.0)	I	(0.0)	I
I			I		I		I		I
I			I	ARM C	I	0.405	I	0.180	I
I			I		I	135.0	I	60.0	I
I			I		I	(0.0)	I	(0.0)	I
I			I		I		I		I
I			I	ARM D	I	0.385	I	0.615	I
I			I		I	230.0	I	367.0	I
I			I		I	(0.0)	I	(0.0)	I
I			I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00									
I	ARM A	7.34	32.74	0.224	- -	-	0.0	0.3	4.3	0.039
I	ARM B	7.30	25.04	0.292	- -	-	0.0	0.4	6.0	0.056
I	ARM C	4.18	20.44	0.204	- -	-	0.0	0.3	3.8	0.061
I	ARM D	7.49	24.89	0.301	- -	-	0.0	0.4	6.3	0.057
I										
I	17.00-17.15									
I	ARM A	8.77	31.91	0.275	- -	-	0.3	0.4	5.6	0.043
I	ARM B	8.72	24.56	0.355	- -	-	0.4	0.5	8.1	0.063
I	ARM C	4.99	18.98	0.263	- -	-	0.3	0.4	5.2	0.071
I	ARM D	8.94	24.18	0.370	- -	-	0.4	0.6	8.6	0.066
I										
I	17.15-17.30									
I	ARM A	10.73	30.79	0.349	- -	-	0.4	0.5	7.9	0.050
I	ARM B	10.68	23.92	0.446	- -	-	0.5	0.8	11.7	0.075
I	ARM C	6.11	16.99	0.360	- -	-	0.4	0.6	8.1	0.092
I	ARM D	10.96	23.22	0.472	- -	-	0.6	0.9	12.9	0.081
I										
I	17.30-17.45									
I	ARM A	10.73	30.78	0.349	- -	-	0.5	0.5	8.0	0.050
I	ARM B	10.68	23.92	0.447	- -	-	0.8	0.8	12.0	0.076
I	ARM C	6.11	16.97	0.360	- -	-	0.6	0.6	8.4	0.092
I	ARM D	10.96	23.21	0.472	- -	-	0.9	0.9	13.3	0.082
I										
I	17.45-18.00									
I	ARM A	8.77	31.90	0.275	- -	-	0.5	0.4	5.8	0.043
I	ARM B	8.72	24.56	0.355	- -	-	0.8	0.6	8.5	0.063
I	ARM C	4.99	18.96	0.263	- -	-	0.6	0.4	5.5	0.072
I	ARM D	8.94	24.16	0.370	- -	-	0.9	0.6	9.1	0.066

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	18.00-18.15										I	
I	ARM A	7.34	32.72	0.224	- -	-	0.4	0.3	4.4	-	0.039	I
I	ARM B	7.30	25.03	0.292	- -	-	0.6	0.4	6.3	-	0.057	I
I	ARM C	4.18	20.41	0.205	- -	-	0.4	0.3	3.9	-	0.062	I
I	ARM D	7.49	24.87	0.301	- -	-	0.6	0.4	6.6	-	0.058	I
I											I	

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5 *
17.45	0.5 *
18.00	0.4
18.15	0.3

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.5 *
17.30	0.8 *
17.45	0.8 *
18.00	0.6 *
18.15	0.4

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.6 *
17.45	0.6 *
18.00	0.4
18.15	0.3

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.6 *
17.30	0.9 *
17.45	0.9 *
18.00	0.6 *
18.15	0.4

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75											
I	ARM	I	TOTAL DEMAND		I	* QUEUEING * * DELAY *		I	* INCLUSIVE QUEUEING * * DELAY *		I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	A	I	805.2	I 536.8	I	35.9	I 0.04	I	35.9	I 0.04	I
I	B	I	801.1	I 534.1	I	52.6	I 0.07	I	52.6	I 0.07	I
I	C	I	458.3	I 305.6	I	34.9	I 0.08	I	34.9	I 0.08	I
I	D	I	821.7	I 547.8	I	56.8	I 0.07	I	56.8	I 0.07	I
I	ALL	I	2886.4	I 1924.2	I	180.2	I 0.06	I	180.2	I 0.06	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Moor Lane Woone Lane AM.vai"
(drive-on-the-left) at 15:44:12 on Thursday, 4 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 04/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Woone Lane
ARM B - Moor Lane E / Lowergate
ARM C - Moor lane W

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM B HAS A CENTRAL ISLAND

T5																				
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.55	I	5.30	I	3.50	I	3.25	I	12.50	I	11.00	I	4.00	I	0.648	I	15.643	I
I	ARM B	I	6.00	I	3.50	I	0.00	I	3.50	I	17.25	I	17.00	I	-2.00	I	0.515	I	14.477	I
I	ARM C	I	3.50	I	3.50	I	0.00	I	3.50	I	9.00	I	3.50	I	6.00	I	0.719	I	17.124	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I	ARM	I	FLOW	SCALE (%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2012 AM Base

T15									
I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE
I	I	I	I	I	I	I	I	I	AT TOP
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	OF PEAK
I	I	I	I	I	I	I	I	I	PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.21
I	ARM B	I	15.00	I	45.00	I	75.00	I	4.70
I	ARM C	I	15.00	I	45.00	I	75.00	I	5.96

DEMAND SET TITLE: 2012 AM Base

T33									
I	TURNING PROPORTIONS								I
I	TURNING COUNTS								I
I	(PERCENTAGE OF H.V.S)								I
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	07.45 - 09.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.878	I	0.122
I		I		I	0.0	I	296.0	I	41.0
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	
I		I	ARM B	I	0.984	I	0.000	I	0.016
I		I		I	370.0	I	0.0	I	6.0
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	
I		I	ARM C	I	0.319	I	0.681	I	0.000
I		I		I	152.0	I	325.0	I	0.0
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70									
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00								
I	ARM A	4.23	13.02	0.325	- -	0.0	0.5	6.9	0.113
I	ARM B	4.72	14.21	0.332	- -	0.0	0.5	7.1	0.105
I	ARM C	5.99	13.81	0.433	- -	0.0	0.8	10.8	0.126

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	08.00-08.15								
I	ARM A	5.05	12.50	0.404	- -	0.5	0.7	9.7	0.134
I	ARM B	5.63	14.16	0.398	- -	0.5	0.7	9.5	0.117
I	ARM C	7.15	13.15	0.544	- -	0.8	1.2	16.7	0.165

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	08.15-08.30								
I	ARM A	6.18	11.81	0.523	- -	0.7	1.1	15.3	0.176
I	ARM B	6.90	14.09	0.490	- -	0.7	0.9	13.6	0.139
I	ARM C	8.75	12.26	0.714	- -	1.2	2.4	32.2	0.273

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	08.30-08.45								
I	ARM A	6.18	11.78	0.525	- -	1.1	1.1	16.3	0.179
I	ARM B	6.90	14.09	0.490	- -	0.9	1.0	14.2	0.139
I	ARM C	8.75	12.24	0.715	- -	2.4	2.4	36.0	0.286

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	08.45-09.00								
I	ARM A	5.05	12.45	0.405	- -	1.1	0.7	10.8	0.136
I	ARM B	5.63	14.16	0.398	- -	1.0	0.7	10.4	0.118
I	ARM C	7.15	13.13	0.544	- -	2.4	1.2	19.5	0.171

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	09.00-09.15									I	
I	ARM A	4.23	12.99	0.326	-	-	0.7	0.5	7.5	-	0.115
I	ARM B	4.72	14.21	0.332	-	-	0.7	0.5	7.7	-	0.106
I	ARM C	5.99	13.78	0.434	-	-	1.2	0.8	12.2	-	0.129
I											I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5
08.15	0.7 *
08.30	1.1 *
08.45	1.1 *
09.00	0.7 *
09.15	0.5

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5
08.15	0.7 *
08.30	0.9 *
08.45	1.0 *
09.00	0.7 *
09.15	0.5 *

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.8 *
08.15	1.2 *
08.30	2.4 **
08.45	2.4 **
09.00	1.2 *
09.15	0.8 *

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75									
I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	I
I	A	I	463.9	I	309.2	I	66.5	I	0.14
I	B	I	517.5	I	345.0	I	62.6	I	0.12
I	C	I	656.6	I	437.7	I	127.2	I	0.19
I	ALL	I	1637.9	I	1092.0	I	256.3	I	0.16

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Moor Lane Woone Lane PM.vai"
(drive-on-the-left) at 15:52:52 on Thursday, 4 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 04/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Woone Lane
ARM B - Moor Lane E / Lowergate
ARM C - Moor lane W

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM B HAS A CENTRAL ISLAND

																			T5	
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	3.55	I	5.30	I	3.50	I	3.25	I	12.50	I	11.00	I	4.00	I	0.648	I	15.643	I
I	ARM B	I	6.00	I	3.50	I	0.00	I	3.50	I	17.25	I	17.00	I	-2.00	I	0.515	I	14.477	I
I	ARM C	I	3.50	I	3.50	I	0.00	I	3.50	I	9.00	I	3.50	I	6.00	I	0.719	I	17.124	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I	ARM	I	FLOW SCALE (%)	I	
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2012 PM Base

T15									
I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE
I	I	I	I	I	I	I	I	I	AT TOP
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	OF PEAK
I	I	I	I	I	I	I	I	I	PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.24
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.55
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.55
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.55

DEMAND SET TITLE: 2012 PM Base

T33									
I	TURNING PROPORTIONS								I
I	TURNING COUNTS								I
I	(PERCENTAGE OF H.V.S)								I
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.876	I	0.124
I		I		I	0.0	I	297.0	I	42.0
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	
I		I	ARM B	I	0.966	I	0.000	I	0.034
I		I		I	429.0	I	0.0	I	15.0
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	
I		I	ARM C	I	0.277	I	0.723	I	0.000
I		I		I	101.0	I	263.0	I	0.0
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70									
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00								
I	ARM A	4.25	13.52	0.315	- -	0.0	0.5	6.6	0.107
I	ARM B	5.57	14.21	0.392	- -	0.0	0.6	9.2	0.115
I	ARM C	4.57	13.28	0.344	- -	0.0	0.5	7.5	0.114

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	17.00-17.15								
I	ARM A	5.08	13.10	0.388	- -	0.5	0.6	9.1	0.124
I	ARM B	6.65	14.15	0.470	- -	0.6	0.9	12.7	0.133
I	ARM C	5.45	12.51	0.436	- -	0.5	0.8	11.0	0.141

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	17.15-17.30								
I	ARM A	6.22	12.53	0.496	- -	0.6	1.0	13.9	0.157
I	ARM B	8.15	14.08	0.579	- -	0.9	1.3	19.1	0.167
I	ARM C	6.68	11.49	0.581	- -	0.8	1.3	19.0	0.205

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	17.30-17.45								
I	ARM A	6.22	12.52	0.497	- -	1.0	1.0	14.6	0.159
I	ARM B	8.15	14.08	0.579	- -	1.3	1.4	20.2	0.168
I	ARM C	6.68	11.47	0.583	- -	1.3	1.4	20.4	0.209

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	17.45-18.00								
I	ARM A	5.08	13.07	0.389	- -	1.0	0.6	10.0	0.126
I	ARM B	6.65	14.15	0.470	- -	1.4	0.9	14.1	0.135
I	ARM C	5.45	12.48	0.437	- -	1.4	0.8	12.4	0.144

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15									I
I	ARM A	4.25	13.50	0.315	- -	0.6	0.5	7.2	-	0.108
I	ARM B	5.57	14.20	0.392	- -	0.9	0.7	10.1	-	0.116
I	ARM C	4.57	13.24	0.345	- -	0.8	0.5	8.2	-	0.116
I										I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.6 *
17.30	1.0 *
17.45	1.0 *
18.00	0.6 *
18.15	0.5

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.9 *
17.30	1.3 *
17.45	1.4 *
18.00	0.9 *
18.15	0.7 *

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5 *
17.15	0.8 *
17.30	1.3 *
17.45	1.4 *
18.00	0.8 *
18.15	0.5 *

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	T75
I	I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	I
I	A	I	466.6	I	311.1	I	61.3	I	0.13
I	B	I	611.1	I	407.4	I	85.4	I	0.14
I	C	I	501.0	I	334.0	I	78.5	I	0.16
I	ALL	I	1578.8	I	1052.5	I	225.2	I	0.14

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Moor Lane Woone Lane AM.vai"
(drive-on-the-left) at 15:45:48 on Thursday, 4 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 04/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Woone Lane
ARM B - Moor Lane E / Lowergate
ARM C - Moor lane W

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM B HAS A CENTRAL ISLAND

T5																				
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.55	I	5.30	I	3.50	I	3.25	I	12.50	I	11.00	I	4.00	I	0.648	I	15.643	I
I	ARM B	I	6.00	I	3.50	I	0.00	I	3.50	I	17.25	I	17.00	I	-2.00	I	0.515	I	14.477	I
I	ARM C	I	3.50	I	3.50	I	0.00	I	3.50	I	9.00	I	3.50	I	6.00	I	0.719	I	17.124	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I	ARM	I	FLOW SCALE(%)	I	
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 AM Base

T15															
I	I	NUMBER OF MINUTES FROM START WHEN					I	RATE OF FLOW (VEH/MIN)		I					
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I	
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	I	
I	ARM	A	I	15.00	I	45.00	I	75.00	I	4.40	I	6.60	I	4.40	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	4.91	I	7.37	I	4.91	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	6.22	I	9.34	I	6.22	I

DEMAND SET TITLE: 2017 AM Base

T33									
I	TURNING PROPORTIONS								I
I	TURNING COUNTS								I
I	(PERCENTAGE OF H.V.S)								I
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	07.45 - 09.15	I	I	I	I	I	I	I	I
I		I	ARM A	I	0.000	I	0.878	I	0.122
I		I		I	0.0	I	309.0	I	43.0
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I	I	I	I	I	I	I	I
I		I	ARM B	I	0.985	I	0.000	I	0.015
I		I		I	387.0	I	0.0	I	6.0
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I	I	I	I	I	I	I	I
I		I	ARM C	I	0.319	I	0.681	I	0.000
I		I		I	159.0	I	339.0	I	0.0
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	07.45-08.00									I
I	ARM A	4.42	12.91	0.342	- -	0.0	0.5	7.4	-	0.117
I	ARM B	4.93	14.20	0.347	- -	0.0	0.5	7.6	-	0.107
I	ARM C	6.25	13.66	0.458	- -	0.0	0.8	11.8	-	0.133

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	08.00-08.15									I
I	ARM A	5.27	12.37	0.426	- -	0.5	0.7	10.6	-	0.140
I	ARM B	5.89	14.15	0.416	- -	0.5	0.7	10.3	-	0.121
I	ARM C	7.46	12.96	0.576	- -	0.8	1.3	18.8	-	0.180

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	08.15-08.30									I
I	ARM A	6.46	11.66	0.554	- -	0.7	1.2	17.2	-	0.190
I	ARM B	7.21	14.07	0.512	- -	0.7	1.0	14.9	-	0.145
I	ARM C	9.14	12.03	0.759	- -	1.3	2.9	38.9	-	0.322

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	08.30-08.45									I
I	ARM A	6.46	11.62	0.556	- -	1.2	1.2	18.4	-	0.194
I	ARM B	7.21	14.07	0.513	- -	1.0	1.0	15.6	-	0.146
I	ARM C	9.14	12.02	0.760	- -	2.9	3.0	44.7	-	0.343

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	08.45-09.00									I
I	ARM A	5.27	12.30	0.429	- -	1.2	0.8	11.9	-	0.144
I	ARM B	5.89	14.14	0.416	- -	1.0	0.7	11.2	-	0.122
I	ARM C	7.46	12.94	0.577	- -	3.0	1.4	22.6	-	0.190

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15									I
I	ARM A	4.42	12.87	0.343	- -	-	0.8	0.5	8.2	-
I	ARM B	4.93	14.20	0.347	- -	-	0.7	0.5	8.3	-
I	ARM C	6.25	13.62	0.459	- -	-	1.4	0.9	13.5	-
I										I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.7	*
08.30	1.2	*
08.45	1.2	*
09.00	0.8	*
09.15	0.5	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.7	*
08.30	1.0	*
08.45	1.0	*
09.00	0.7	*
09.15	0.5	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.3	*
08.30	2.9	***
08.45	3.0	***
09.00	1.4	*
09.15	0.9	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	T75
I	I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	I
I	A	I	484.5	I	323.0	I	73.7	I	0.15
I	B	I	540.9	I	360.6	I	67.8	I	0.13
I	C	I	685.5	I	457.0	I	150.3	I	0.22
I	ALL	I	1710.9	I	1140.6	I	291.7	I	0.17

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Moor Lane Woone Lane PM.vai"
(drive-on-the-left) at 15:54:24 on Thursday, 4 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 04/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Woone Lane
ARM B - Moor Lane E / Lowergate
ARM C - Moor lane W

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM B HAS A CENTRAL ISLAND

																			T5	
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	3.55	I	5.30	I	3.50	I	3.25	I	12.50	I	11.00	I	4.00	I	0.648	I	15.643	I
I	ARM B	I	6.00	I	3.50	I	0.00	I	3.50	I	17.25	I	17.00	I	-2.00	I	0.515	I	14.477	I
I	ARM C	I	3.50	I	3.50	I	0.00	I	3.50	I	9.00	I	3.50	I	6.00	I	0.719	I	17.124	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I	ARM	I	FLOW SCALE (%)	I	
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 PM Base

T15															
		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)										
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE I AT TOP	I	AFTER I				
I		I		I		I		I		I					
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK				
I		I		I		I		I		I	PEAK				
I	ARM	A	I	15.00	I	45.00	I	75.00	I	4.44	I	6.66	I	4.44	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	5.81	I	8.72	I	5.81	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	4.76	I	7.14	I	4.76	I

DEMAND SET TITLE: 2017 PM Base

T33									
		TURNING PROPORTIONS							
		TURNING COUNTS							
		(PERCENTAGE OF H.V.S)							
TIME		FROM/TO	ARM	A	ARM	B	ARM	C	
16.45	- 18.15	ARM A	0.000	0.876	0.124				
			0.0	311.0	44.0				
			(0.0)	(0.0)	(0.0)				
		ARM B	0.966	0.000	0.034				
			449.0	0.0	16.0				
			(0.0)	(0.0)	(0.0)				
		ARM C	0.278	0.722	0.000				
			106.0	275.0	0.0				
			(0.0)	(0.0)	(0.0)				

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	16.45-17.00								
ARM A		4.45	13.42	0.332	-	0.0	0.5	7.1	0.111
ARM B		5.83	14.19	0.411	-	0.0	0.7	9.9	0.118
ARM C		4.78	13.11	0.365	-	0.0	0.6	8.2	0.119

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15									I
I	ARM A	5.32	12.98	0.410	-	-	0.5	0.7	-	0.130
I	ARM B	6.97	14.14	0.493	-	-	0.7	1.0	-	0.139
I	ARM C	5.71	12.30	0.464	-	-	0.6	0.9	-	0.151

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH. MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	17.15-17.30									I
I	ARM A	6.51	12.40	0.525	-	-	0.7	1.1	15.5	0.168
I	ARM B	8.53	14.06	0.607	-	-	1.0	1.5	21.3	0.179
I	ARM C	6.99	11.23	0.623	-	-	0.9	1.6	22.2	0.231

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I	(VEH/MIN)	(VEH/MIN)	CAPACITY	RFC)	FLOW	QUEUE	QUEUE	(VEH_MIN/	PER ARRIVING
I					(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	17.30-17.45								
I	ARM A	6.51	12.37	0.526	-	-	1.1	16.4	0.171
I	ARM B	8.53	14.06	0.607	-	-	1.5	22.7	0.181
I	ARM C	6.99	11.20	0.624	-	-	1.6	24.2	0.237

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
17.45-18.00									
ARM A	5.32	12.95	0.411	-	-	1.1	0.7	11.0	0.132
ARM B	6.97	14.14	0.493	-	-	1.5	1.0	15.5	0.141
ARM C	5.71	12.26	0.465	-	-	1.6	0.9	14.0	0.155

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	18.00-18.15									I	
I	ARM A	4.45	13.40	0.332	- -	-	0.7	0.5	7.8	-	0.112
I	ARM B	5.83	14.19	0.411	- -	-	1.0	0.7	11.0	-	0.120
I	ARM C	4.78	13.06	0.366	- -	-	0.9	0.6	9.1	-	0.121
I											I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.7	*
17.30	1.1	*
17.45	1.1	*
18.00	0.7	*
18.15	0.5	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.7	*
17.15	1.0	*
17.30	1.5	*
17.45	1.5	**
18.00	1.0	*
18.15	0.7	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.9	*
17.30	1.6	**
17.45	1.6	**
18.00	0.9	*
18.15	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

										T75	
I	ARM	I	TOTAL DEMAND		I	* QUEUEING * * DELAY *		I	* INCLUSIVE QUEUEING * * DELAY *		I
I		I			I			I			I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	A	I	488.6	I 325.8	I	67.7	I 0.14	I	67.7	I 0.14	I
I	B	I	640.0	I 426.7	I	94.2	I 0.15	I	94.2	I 0.15	I
I	C	I	524.4	I 349.6	I	89.8	I 0.17	I	89.9	I 0.17	I
I	ALL	I	1653.1	I 1102.1	I	251.7	I 0.15	I	251.7	I 0.15	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Moor Lane Woone Lane AM.vai"
(drive-on-the-left) at 15:48:19 on Thursday, 4 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 04/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Woone Lane
ARM B - Moor Lane E / Lowergate
ARM C - Moor lane W

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM B HAS A CENTRAL ISLAND

																			T5	
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.55	I	5.30	I	3.50	I	3.25	I	12.50	I	11.00	I	4.00	I	0.648	I	15.643	I
I	ARM B	I	6.00	I	3.50	I	0.00	I	3.50	I	17.25	I	17.00	I	-2.00	I	0.515	I	14.477	I
I	ARM C	I	3.50	I	3.50	I	0.00	I	3.50	I	9.00	I	3.50	I	6.00	I	0.719	I	17.124	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I	ARM	I	FLOW SCALE (%)	I	
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

-----T33-----										
		I	TURNING PROPORTIONS						I	
		I	TURNING COUNTS						I	
		I	(PERCENTAGE OF H.V.S)						I	

TIME		I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I

I	07.45 - 09.15	I		I		I		I		I
I		I	ARM A	I	0.000	I	0.878	I	0.122	I
I		I		I	0.0	I	296.0	I	41.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM B	I	0.985	I	0.000	I	0.015	I
I		I		I	384.0	I	0.0	I	6.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM C	I	0.297	I	0.703	I	0.000	I
I		I		I	152.0	I	359.0	I	0.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	4.23	12.75	0.332	-	0.0	0.5	7.1	0.117
ARM B	4.89	14.21	0.344	-	0.0	0.5	7.5	0.106
ARM C	6.41	13.68	0.469	-	0.0	0.9	12.3	0.136

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY		AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH. MIN/		PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)		VEHICLE (MIN)
I										
I	08.00-08.15									
I	ARM A	5.05	12.17	0.415	-	-	0.5	0.7	10.1	-
I	ARM B	5.84	14.16	0.413	-	-	0.5	0.7	10.1	-
I	ARM C	7.66	13.00	0.589	-	-	0.9	1.4	19.8	-
I										
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I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30									I
I	ARM A	6.18	11.43	0.541	-	-	0.7	1.1	16.4	0.188
I	ARM B	7.16	14.09	0.508	-	-	0.7	1.0	14.6	0.143
I	ARM C	9.38	12.07	0.777	-	-	1.4	3.2	42.0	0.342

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH_MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I										I	
I										I	
I	08.30-08.45									I	
I	ARM A	6.18	11.38	0.543	- -	1.1	1.2	17.4	-	0.192	I
I	ARM B	7.16	14.09	0.508	- -	1.0	1.0	15.3	-	0.144	I
I	ARM C	9.38	12.06	0.778	- -	3.2	3.3	48.8	-	0.369	I
I										I	

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH_MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00									I
I	ARM A	5.05	12.10	0.417	- -	-	1.2	0.7	11.4	-
I	ARM B	5.84	14.16	0.413	- -	-	1.0	0.7	11.0	-
I	ARM C	7.66	12.97	0.590	- -	-	3.3	1.5	24.0	-

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	09.00-09.15									I	
I	ARM A	4.23	12.71	0.333	-	-	0.7	0.5	7.8	-	0.118
I	ARM B	4.89	14.21	0.344	-	-	0.7	0.5	8.2	-	0.108
I	ARM C	6.41	13.65	0.470	-	-	1.5	0.9	14.1	-	0.140
I											I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5
08.15	0.7 *
08.30	1.1 *
08.45	1.2 *
09.00	0.7 *
09.15	0.5 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5 *
08.15	0.7 *
08.30	1.0 *
08.45	1.0 *
09.00	0.7 *
09.15	0.5 *

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.9 *
08.15	1.4 *
08.30	3.2 ***
08.45	3.3 ***
09.00	1.5 *
09.15	0.9 *

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	T75
I		I	(VEH)	I	(MIN)	I	(MIN)	I	
I	A	I	463.9	I	70.2	I	70.2	I	
I	B	I	536.8	I	66.7	I	66.7	I	
I	C	I	703.4	I	161.1	I	161.2	I	
I	ALL	I	1704.0	I	298.0	I	298.1	I	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Moor Lane Woone Lane PM.vai"
(drive-on-the-left) at 15:56:09 on Thursday, 4 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 04/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Woone Lane
ARM B - Moor Lane E / Lowergate
ARM C - Moor lane W

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM B HAS A CENTRAL ISLAND

																			T5	
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.55	I	5.30	I	3.50	I	3.25	I	12.50	I	11.00	I	4.00	I	0.648	I	15.643	I
I	ARM B	I	6.00	I	3.50	I	0.00	I	3.50	I	17.25	I	17.00	I	-2.00	I	0.515	I	14.477	I
I	ARM C	I	3.50	I	3.50	I	0.00	I	3.50	I	9.00	I	3.50	I	6.00	I	0.719	I	17.124	I

DEMAND SET TITLE: 2012 PM Base + Dev

									T15					
I			I	NUMBER OF MINUTES FROM START WHEN		I	RATE OF FLOW (VEH/MIN)							
I	ARM	I	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE I AT TOP	I	AFTER I		
I		I	I		I		I		I	I	I			
I		I	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK
I	ARM	A	I	15.00	I	45.00	I	75.00	I	4.24	I	6.36	I	4.24
I	ARM	B	I	15.00	I	45.00	I	75.00	I	6.13	I	9.19	I	6.13
I	ARM	C	I	15.00	I	45.00	I	75.00	I	4.74	I	7.11	I	4.74

DEMAND SET TITLE: 2012 PM Base + Dev

TURNING PROPORTIONS							T33
TURNING COUNTS							
(PERCENTAGE OF H.V.S)							
TIME	FROM/TO	ARM	A	ARM	B	ARM	C
16.45 - 18.15							
	ARM	A	0.000	0.876	0.124		
			0.0	297.0	42.0		
			(0.0)	(0.0)	(0.0)		
	ARM	B	0.969	0.000	0.031		
			475.0	0.0	15.0		
			(0.0)	(0.0)	(0.0)		
	ARM	C	0.266	0.734	0.000		
			101.0	278.0	0.0		
			(0.0)	(0.0)	(0.0)		

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	4.25	13.40	0.317	-	-	0.0	0.5	6.6	0.109
ARM B	6.15	14.21	0.433	-	-	0.0	0.8	10.8	0.123
ARM C	4.76	12.87	0.369	-	-	0.0	0.6	8.3	0.122

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15								
ARM A	5.08	12.95	0.392	-	-	0.5	9.3	0.127
ARM B	7.34	14.15	0.519	-	-	0.8	15.3	0.146
ARM C	5.68	12.02	0.472	-	-	0.6	12.6	0.157

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH_MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.15-17.30								
I	ARM A	6.22	12.36	0.503	- -	0.6	1.0	14.2	0.161
I	ARM B	8.99	14.08	0.639	- -	1.1	1.7	24.1	0.194
I	ARM C	6.95	10.89	0.639	- -	0.9	1.7	23.5	0.248

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45									I
I	ARM A	6.22	12.34	0.504	-	-	1.0	15.0	0.163	I
I	ARM B	8.99	14.08	0.639	-	-	1.7	25.9	0.196	I
I	ARM C	6.95	10.86	0.640	-	-	1.7	25.8	0.255	I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH_MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00								
ARM A	5.08	12.92	0.393	-	-	1.0	0.7	10.2
ARM B	7.34	14.15	0.519	-	-	1.7	1.1	17.3
ARM C	5.68	11.98	0.474	-	-	1.7	0.9	14.5

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15								
ARM A	4.25	13.37	0.318	-	-	0.7	7.3	0.110
ARM B	6.15	14.20	0.433	-	-	1.1	12.0	0.125
ARM C	4.76	12.82	0.371	-	-	0.9	9.3	0.125

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.6
17.30	1.0
17.45	1.0
18.00	0.7
18.15	0.5

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.1	*
17.30	1.7	**
17.45	1.7	**
18.00	1.1	*
18.15	0.8	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.9	*
17.30	1.7	**
17.45	1.7	**
18.00	0.9	*
18.15	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75										
I	ARM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I	(MIN/VEH)	I
I	A	I	466.6	I	311.1	I	62.6	I	0.13	I
I	B	I	674.4	I	449.6	I	105.3	I	0.16	I
I	C	I	521.7	I	347.8	I	94.1	I	0.18	I
I	ALL	I	1662.7	I	1108.5	I	262.1	I	0.16	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

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END OF JOB
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===== end of file =====
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A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Moor Lane Woone Lane AM.vai"
(drive-on-the-left) at 15:42:59 on Thursday, 4 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 04/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Woone Lane
ARM B - Moor Lane E / Lowergate
ARM C - Moor lane W

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM B HAS A CENTRAL ISLAND

T5																				
I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.55	I	5.30	I	3.50	I	3.25	I	12.50	I	11.00	I	4.00	I	0.648	I	15.643	I
I	ARM B	I	6.00	I	3.50	I	0.00	I	3.50	I	17.25	I	17.00	I	-2.00	I	0.515	I	14.477	I
I	ARM C	I	3.50	I	3.50	I	0.00	I	3.50	I	9.00	I	3.50	I	6.00	I	0.719	I	17.124	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I	ARM	I	FLOW	SCALE (%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

TIME PERIOD BEGINS (07.45) AND ENDS (09.15)

LENGTH OF TIME PERIOD - (90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

T15									
		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)				
ARM		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER		
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK		
ARM A	I	15.00	I	45.00	I	75.00	I	4.40	I
ARM B	I	15.00	I	45.00	I	75.00	I	5.09	I
ARM C	I	15.00	I	45.00	I	75.00	I	6.65	I

-----T33									
		I	TURNING PROPORTIONS			I			
		I	TURNING COUNTS			I			
		I	(PERCENTAGE OF H.V.S)			I			

TIME		I FROM/TO	I	ARM A	I	ARM B	I	ARM C	I

I	07.45 - 09.15	I	I	I	I	I	I	I	I
I		I	ARM A	I	0.000	I	0.878	I	0.122
I		I		I	0.0	I	309.0	I	43.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	
I		I	ARM B	I	0.985	I	0.000	I	0.015
I		I		I	401.0	I	0.0	I	6.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	
I		I	ARM C	I	0.299	I	0.701	I	0.000
I		I		I	159.0	I	373.0	I	0.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	4.42	12.64	0.349	-	-	0.0	7.6	0.121
ARM B	5.11	14.20	0.360	-	-	0.0	8.0	0.109
ARM C	6.68	13.53	0.493	-	-	0.0	13.6	0.143

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH_MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30								
ARM A	6.46	11.28	0.572	-	-	0.8	1.3	18.4
ARM B	7.47	14.07	0.531	-	-	0.7	1.1	15.9
ARM C	9.76	11.85	0.824	-	-	1.6	4.0	52.0

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM A	5.27	11.94	0.442	-	-	1.3	0.8	12.6	0.152
ARM B	6.10	14.14	0.431	-	-	1.1	0.8	11.9	0.125
ARM C	7.97	12.79	0.623	-	-	4.3	1.7	28.5	0.222

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15									I
I	ARM A	4.42	12.59	0.351	- -	-	0.8	0.5	8.5	-
I	ARM B	5.11	14.20	0.360	- -	-	0.8	0.6	8.8	-
I	ARM C	6.68	13.50	0.495	- -	-	1.7	1.0	15.7	-
I										I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.3	*
08.45	1.3	*
09.00	0.8	*
09.15	0.5	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.7	*
08.30	1.1	*
08.45	1.1	*
09.00	0.8	*
09.15	0.6	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.6	**
08.30	4.0	****
08.45	4.3	****
09.00	1.7	**
09.15	1.0	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

										T75	
I	ARM	I	TOTAL DEMAND		I	* QUEUEING * * DELAY *		I	* INCLUSIVE QUEUEING * * DELAY *		I
I		I			I			I			I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	A	I	484.5	I 323.0	I	78.0	I 0.16	I	78.0	I 0.16	I
I	B	I	560.2	I 373.5	I	72.3	I 0.13	I	72.3	I 0.13	I
I	C	I	732.3	I 488.2	I	195.5	I 0.27	I	195.5	I 0.27	I
I	ALL	I	1777.0	I 1184.6	I	345.8	I 0.19	I	345.8	I 0.19	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

Printed at 15:43:09 on 04/10/2012]

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK

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Run with file:-
"a:\Project_008 02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Moor Lane Woone Lane\Moor Lane Woone Lane PM.vai"
(drive-on-the-left) at 20:17:50 on Sunday, 7 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 04/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Woone Lane
ARM B - Moor Lane E / Lowergate
ARM C - Moor lane W

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL
ARM B HAS A CENTRAL ISLAND

T5																				
I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	3.55	I	5.30	I	3.50	I	3.25	I	12.50	I	11.00	I	4.00	I	0.648	I	15.643	I
I	ARM B	I	6.00	I	3.50	I	0.00	I	3.50	I	17.25	I	17.00	I	-2.00	I	0.515	I	14.477	I
I	ARM C	I	3.50	I	3.50	I	0.00	I	3.50	I	9.00	I	3.50	I	6.00	I	0.719	I	17.124	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I	ARM	I	FLOW SCALE(%)	I	
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 PM Base + Dev

T15									
		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)				
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE I AT TOP I AFTER I
I		I		I		I		I	
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK I OF PEAK I PEAK I
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.44 I 6.66 I 4.44 I
I	ARM B	I	15.00	I	45.00	I	75.00	I	6.39 I 9.58 I 6.39 I
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.95 I 7.42 I 4.95 I

DEMAND SET TITLE: 2017 PM Base + Dev

		TURNING PROPORTIONS						T33
		TURNING COUNTS						
		(PERCENTAGE OF H.V.S)						
TIME		FROM/TO	ARM A	ARM B	ARM C			
16.45	- 18.15	ARM A	0.000	0.876	0.124			
			0.0	311.0	44.0			
		(0.0)	(0.0)	(0.0)	(0.0)			
		ARM B	0.969	0.000	0.031			
			495.0	0.0	16.0			
		(0.0)	(0.0)	(0.0)	(0.0)			
		ARM C	0.268	0.732	0.000			
			106.0	290.0	0.0			
		(0.0)	(0.0)	(0.0)	(0.0)			

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH_MIN/ TIME SEGMENT)	AVERAGE DELAY I PER ARRIVING I VEHICLE (MIN)
I	-								-
I	16.45-17.00								-
I	ARM A	4.45	13.31	0.335	- -	0.0	0.5	7.2	0.112
I	ARM B	6.41	14.19	0.452	- -	0.0	0.8	11.6	0.127
I	ARM C	4.97	12.70	0.391	- -	0.0	0.6	9.1	0.128

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15								
ARM A	5.32	12.84	0.414	-	-	0.5	10.1	0.132
ARM B	7.66	14.14	0.542	-	-	0.8	16.7	0.153
ARM C	5.93	11.81	0.502	-	-	0.6	14.2	0.169

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30								
ARM A	6.51	12.23	0.533	-	0.7	1.1	15.9	0.173
ARM B	9.38	14.06	0.667	-	1.2	1.9	27.0	0.209
ARM C	7.27	10.63	0.684	-	1.0	2.0	28.0	0.286

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45								
ARM A	6.51	12.20	0.534	-	1.1	1.1	16.9	0.176
ARM B	9.38	14.06	0.667	-	1.9	2.0	29.2	0.213
ARM C	7.27	10.60	0.686	-	2.0	2.1	31.3	0.298

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00								
ARM A	5.32	12.79	0.416	-	-	1.1	0.7	11.3
ARM B	7.66	14.14	0.542	-	-	2.0	1.2	19.0
ARM C	5.93	11.76	0.505	-	-	2.1	1.0	16.6

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15									I
I	ARM A	4.45	13.27	0.336	- -	-	0.7	0.5	7.9	-
I	ARM B	6.41	14.19	0.452	- -	-	1.2	0.8	13.0	-
I	ARM C	4.97	12.64	0.393	- -	-	1.0	0.7	10.2	-
I										I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.7 *
17.30	1.1 *
17.45	1.1 *
18.00	0.7 *
18.15	0.5 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.8 *
17.15	1.2 *
17.30	1.9 **
17.45	2.0 **
18.00	1.2 *
18.15	0.8 *

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	1.0 *
17.30	2.0 **
17.45	2.1 **
18.00	1.0 *
18.15	0.7 *

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	T75
I		I	(VEH)	I	(MIN)	I	(MIN)	I	
I	A	I	488.6	I	69.2	I	69.2	I	
I	B	I	703.4	I	116.5	I	116.5	I	
I	C	I	545.1	I	109.3	I	109.3	I	
I	ALL	I	1737.0	I	295.0	I	295.1	I	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
 ===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Proposed Railway View Road Mini Rbt\
Proposed Railway View Road Min Rbt AM.vai"
(drive-on-the-left) at 13:41:35 on Sunday, 7 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 06/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Railway View Road S
ARM B - Waddington Road
ARM C - Railway View Road N

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

T5																				
I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	(PCU/MIN)	I
I	ARM A	I	4.15	I	4.15	I	0.00	I	4.15	I	9.00	I	7.80	I	0.00	I	0.452	I	14.498	I
I	ARM B	I	3.70	I	3.70	I	0.00	I	3.70	I	11.60	I	10.80	I	0.00	I	0.434	I	14.537	I
I	ARM C	I	3.50	I	3.50	I	0.00	I	3.50	I	8.90	I	5.10	I	0.00	I	0.418	I	13.959	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K = entry corner kerb line G = gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I	ARM	I	FLOW SCALE (%)	I	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

TIME PERIOD BEGINS (07.45) AND ENDS (09.15)

LENGTH OF TIME PERIOD - (90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 Base + Dev

									T15
I		I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I		I	
I	ARM	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	BEFORE I AT TOP I AFTER	I		I	
I		I	I	I	I	I		I	
I		I	TO RISE I IS REACHED I FALLING	I	PEAK I OF PEAK I PEAK	I		I	
I	ARM A	I	15.00 I	45.00 I	75.00 I	6.20 I	9.30 I	6.20 I	
I	ARM B	I	15.00 I	45.00 I	75.00 I	6.38 I	9.56 I	6.38 I	
I	ARM C	I	15.00 I	45.00 I	75.00 I	6.49 I	9.73 I	6.49 I	

DEMAND SET TITLE: 2017 Base + Dev

-----T33-----										
		TURNING PROPORTIONS						I		
		TURNING COUNTS						I		
		(PERCENTAGE OF H.V.S)						I		

TIME		I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I

I	07.45 - 09.15	I		I		I		I		I
I		I	ARM A	I	0.000	I	0.310	I	0.690	I
I		I		I	0.0	I	154.0	I	342.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM B	I	0.225	I	0.000	I	0.775	I
I		I		I	115.0	I	0.0	I	395.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM C	I	0.582	I	0.418	I	0.000	I
I		I		I	302.0	I	217.0	I	0.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY I PER ARRIVING I VEHICLE (MIN)
I	07.45-08.00								
I	ARM A	6.22	13.28	0.469	- -	0.0	0.9	12.3	0.140
I	ARM B	6.40	12.69	0.504	- -	0.0	1.0	14.1	0.156
I	ARM C	6.51	13.36	0.487	- -	0.0	0.9	13.2	0.143

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I	
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH. MIN/	PER ARRIVING	I	
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I	
I	08.00-08.15									I	
I	ARM A	7.43	13.04	0.570	-	-	1.3	18.5	-	0.177	I
I	ARM B	7.64	12.32	0.620	-	-	1.6	22.3	-	0.210	I
I	ARM C	7.78	13.24	0.587	-	-	1.4	19.8	-	0.181	I

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
ARM A	9.10	12.71	0.716	-	-	1.3	2.4	32.7	0.266
ARM B	9.36	11.84	0.791	-	-	1.6	3.4	44.9	0.369
ARM C	9.52	13.09	0.728	-	-	1.4	2.5	34.5	0.269

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH. MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	08.30-08.45								
I	ARM A	9.10	12.70	0.717	- -	2.4	2.5	36.3	0.277
I	ARM B	9.36	11.82	0.792	- -	3.4	3.6	52.6	0.400
I	ARM C	9.52	13.08	0.728	- -	2.5	2.6	38.4	0.279

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	08.45-09.00									I	
I	ARM A	7.43	13.02	0.571	-	-	2.5	1.4	-	0.184	I
I	ARM B	7.64	12.29	0.622	-	-	3.6	1.7	-	0.227	I
I	ARM C	7.78	13.23	0.588	-	-	2.6	1.5	-	0.189	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15									I
I	ARM A	6.22	13.26	0.469	- -	-	1.4	0.9	14.1	-
I	ARM B	6.40	12.67	0.505	- -	-	1.7	1.0	16.4	-
I	ARM C	6.51	13.35	0.488	- -	-	1.5	1.0	15.2	-
I										I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.9	*
08.15	1.3	*
08.30	2.4	**
08.45	2.5	**
09.00	1.4	*
09.15	0.9	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.6	**
08.30	3.4	***
08.45	3.6	****
09.00	1.7	**
09.15	1.0	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.9	*
08.15	1.4	*
08.30	2.5	***
08.45	2.6	***
09.00	1.5	*
09.15	1.0	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	T75
I	I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	I
I	A	I	682.7	I	455.1	I	135.7	I	0.20
I	B	I	702.0	I	468.0	I	178.0	I	0.25
I	C	I	714.4	I	476.2	I	144.6	I	0.20
I	ALL	I	2099.0	I	1399.4	I	458.2	I	0.22

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 Base + Dev

									T15						
I		I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)								
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I	
I		I		I		I		I		I		I		I	
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	I	
I	ARM	A	I	15.00	I	45.00	I	75.00	I	7.41	I	11.12	I	7.41	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	5.86	I	8.79	I	5.86	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	8.61	I	12.92	I	8.61	I

DEMAND SET TITLE: 2017 Base + Dev

-----T33-----										
		TURNING PROPORTIONS						I		
		TURNING COUNTS						I		
		(PERCENTAGE OF H.V.S)						I		

TIME		I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I

I	16.45 - 18.15	I		I		I		I		I
I		I	ARM A	I	0.000	I	0.388	I	0.612	I
I		I		I	0.0	I	230.0	I	363.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM B	I	0.196	I	0.000	I	0.804	I
I		I		I	92.0	I	0.0	I	377.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM C	I	0.511	I	0.489	I	0.000	I
I		I		I	352.0	I	337.0	I	0.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00								
ARM A	7.44	12.61	0.590	-	-	0.0	1.4	0.187
ARM B	5.88	12.59	0.468	-	-	0.0	0.9	0.147
ARM C	8.65	13.48	0.641	-	-	0.0	1.7	0.198

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY I PER ARRIVING I VEHICLE (MIN)
I	17.00-17.15								
I	ARM A	8.88	12.24	0.726	- -	1.4	2.5	34.1	0.286
I	ARM B	7.03	12.20	0.576	- -	0.9	1.3	18.8	0.191
I	ARM C	10.32	13.39	0.771	- -	1.7	3.1	42.2	0.307

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30									I
I	ARM A	10.88	11.80	0.922	-	-	2.5	87.7	0.666	I
I	ARM B	8.61	11.74	0.733	-	-	1.3	34.9	0.303	I
I	ARM C	12.64	13.26	0.954	-	-	3.1	111.2	0.734	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45									I
I	ARM A	10.88	11.74	0.927	-	-	7.5	125.7	0.892	I
I	ARM B	8.61	11.67	0.737	-	-	2.6	39.6	0.323	I
I	ARM C	12.64	13.25	0.954	-	-	9.8	167.1	1.023	I

[illegible]

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15									I
I	ARM A	7.44	12.56	0.592	- -	3.0	1.5	24.1	-	0.203
I	ARM B	5.88	12.53	0.469	- -	1.4	0.9	14.1	-	0.152
I	ARM C	8.65	13.47	0.642	- -	3.7	1.9	30.1	-	0.218
I										I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.4	*
17.15	2.5	**
17.30	7.5	*****
17.45	9.1	*****
18.00	3.0	***
18.15	1.5	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.3	*
17.30	2.6	***
17.45	2.7	***
18.00	1.4	*
18.15	0.9	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.7	**
17.15	3.1	***
17.30	9.8	*****
17.45	12.2	*****
18.00	3.7	****
18.15	1.9	**

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	T75
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	A	I	816.2	I	544.1	I	347.7	I	0.43
I	B	I	645.5	I	430.4	I	142.7	I	0.22
I	C	I	948.4	I	632.2	I	450.7	I	0.48
I	ALL	I	2410.1	I	1606.7	I	941.0	I	0.39

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
 ===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Shawbridge Street Waterloo Road AM.vai"
(drive-on-the-left) at 16:22:00 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Shawbridge St
ARM B - Waterloo Road S
ARM C - Walerloo Road N

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																		TS		
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	4.35	I	4.35	I	0.00	I	4.35	I	8.50	I	6.50	I	0.00	I	0.461	I	12.341	I
I	ARM B	I	3.65	I	3.65	I	0.00	I	3.65	I	18.90	I	21.00	I	0.00	I	1.377	I	29.873	I
I	ARM C	I	3.85	I	3.85	I	0.00	I	3.85	I	12.70	I	9.30	I	0.00	I	0.438	I	14.958	I

DEMAND SET TITLE: 2012 Base

T15									
I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I				I
I	ARM	I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER	I	I
I	I	I	I	I	I	I	I	I	I
I	I	TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK	I	I
I	ARM A	I 15.00	I 45.00	I 75.00	I 4.80	I 7.20	I 4.80	I	I
I	ARM B	I 15.00	I 45.00	I 75.00	I 4.70	I 7.05	I 4.70	I	I
I	ARM C	I 15.00	I 45.00	I 75.00	I 8.79	I 13.18	I 8.79	I	I

DEMAND SET TITLE: 2012 Base

T33									
I				TURNING PROPORTIONS	I				
I				TURNING COUNTS	I				
I				(PERCENTAGE OF H.V.S)	I				
I	TIME	I FROM/TO	I ARM A	I ARM B	I ARM C	I			
I	07.45 - 09.15	I	I	I	I	I			
I		I	ARM A	I 0.000	I 0.188	I 0.813	I		
I		I		I 0.0	I 72.0	I 312.0	I		
I		I		I (0.0)	I (0.0)	I (0.0)	I		
I		I		I	I	I	I		
I		I	ARM B	I 0.239	I 0.000	I 0.761	I		
I		I		I 90.0	I 0.0	I 286.0	I		
I		I		I (0.0)	I (0.0)	I (0.0)	I		
I		I		I	I	I	I		
I		I	ARM C	I 0.388	I 0.612	I 0.000	I		
I		I		I 273.0	I 430.0	I 0.0	I		
I		I		I (0.0)	I (0.0)	I (0.0)	I		
I		I		I	I	I	I		

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70										
I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	07.45-08.00									
I	ARM A	4.82	9.88	0.488	- -	0.0	0.9	13.0	-	0.193
I	ARM B	4.72	24.55	0.192	- -	0.0	0.2	3.5	-	0.050
I	ARM C	8.82	14.46	0.610	- -	0.0	1.5	21.1	-	0.171

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.00-08.15									
I	ARM A	5.75	9.39	0.613	- -	0.9	1.5	21.2	-	0.269
I	ARM B	5.63	23.48	0.240	- -	0.2	0.3	4.6	-	0.056
I	ARM C	10.53	14.37	0.733	- -	1.5	2.6	35.8	-	0.251

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30									
I	ARM A	7.05	8.79	0.802	- -	1.5	3.5	44.9	-	0.501
I	ARM B	6.90	22.15	0.311	- -	0.3	0.4	6.6	-	0.065
I	ARM C	12.90	14.23	0.906	- -	2.6	7.0	85.0	-	0.534

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.30-08.45									
I	ARM A	7.05	8.72	0.808	- -	3.5	3.8	55.3	-	0.574
I	ARM B	6.90	22.03	0.313	- -	0.4	0.5	6.8	-	0.066
I	ARM C	12.90	14.23	0.906	- -	7.0	7.9	113.3	-	0.658

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.45-09.00									
I	ARM A	5.75	9.27	0.620	- -	3.8	1.7	28.5	-	0.307
I	ARM B	5.63	23.28	0.242	- -	0.5	0.3	4.9	-	0.057
I	ARM C	10.53	14.37	0.733	- -	7.9	2.9	52.1	-	0.309

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15									I
I	ARM A	4.82	9.83	0.490	- -	1.7	1.0	15.7	0.203	I
I	ARM B	4.72	24.43	0.193	- -	0.3	0.2	3.7	0.051	I
I	ARM C	8.82	14.46	0.610	- -	2.9	1.6	25.7	0.183	I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.9 *
08.15	1.5 **
08.30	3.5 ***
08.45	3.8 ****
09.00	1.7 **
09.15	1.0 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.4
08.45	0.5
09.00	0.3
09.15	0.2

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.5 **
08.15	2.6 ***
08.30	7.0 *****
08.45	7.9 *****
09.00	2.9 ***
09.15	1.6 **

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	T75
I	I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	I
I	A	I	528.5	I	352.4	I	178.6	I	0.34
I	B	I	517.5	I	345.0	I	30.1	I	0.06
I	C	I	967.6	I	645.1	I	333.1	I	0.34
I	ALL	I	2013.7	I	1342.5	I	541.8	I	0.27

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
 ===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Shawbridge Street Waterloo Road PM.vai"
(drive-on-the-left) at 16:42:54 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Shawbridge St
ARM B - Waterloo Road S
ARM C - Warerloo Road N

MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																T5	
I ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I SLOPE	I INTERCEPT	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I (PCU/MIN)	I
I ARM A	I	4.35	I	4.35	I	0.00	I	4.35	I	8.50	I	6.50	I	0.00	I 0.572	I 12.341	I
I ARM B	I	3.65	I	3.65	I	0.00	I	3.65	I	18.90	I	21.00	I	0.00	I 1.488	I 29.873	I
I ARM C	I	3.85	I	3.85	I	0.00	I	3.85	I	12.70	I	9.30	I	0.00	I 0.549	I 14.958	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K = entry corner kerb line G=gradient over 50 m
WARNING ARM B Entry corner kerb line distance is in range 20m-40m
provided only for compatibility with accidents analysis.
Treat capacities with increasing caution.

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I ARM	I	FLOW	SCALE (%)	I	I
I A	I	100	I		
I B	I	100	I		
I C	I	100	I		

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

T33									
		TURNING PROPORTIONS							
		TURNING COUNTS							
		(PERCENTAGE OF H.V.S)							
TIME		FROM/TO	ARM A	ARM B	ARM C				
I	16.45 - 18.15	I	I	I	I	I	I	I	I
I		I	ARM A	I	0.000	I	0.337	I	0.663
I		I		I	0.0	I	120.0	I	236.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	
I		I	ARM B	I	0.228	I	0.000	I	0.772
I		I		I	85.0	I	0.0	I	287.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	
I		I	ARM C	I	0.391	I	0.609	I	0.000
I		I		I	319.0	I	496.0	I	0.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY I PER ARRIVING I VEHICLE (MIN)	I	T70	
I	16.45-17.00									I		
I	ARM A	4.47	8.83	0.506	- -	-	0.0	1.0	13.8	-	0.223	I
I	ARM B	4.67	25.53	0.183	- -	-	0.0	0.2	3.3	-	0.048	I
I	ARM C	10.23	14.37	0.711	- -	-	0.0	2.3	31.6	-	0.225	I

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	17.00-17.15								
	ARM A	5.33	8.15	0.654	-	-	1.0	1.8	24.5
	ARM B	5.57	24.67	0.226	-	-	0.2	0.3	4.3
	ARM C	12.21	14.26	0.856	-	-	2.3	5.0	64.8

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH_MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30								
ARM A	6.53	7.56	0.864	-	1.8	4.7	57.3	0.723
ARM B	6.83	23.62	0.289	-	0.3	0.4	6.0	0.059
ARM C	14.96	14.10	1.061	-	5.0	23.6	227.6	1.294

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RPC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I										I
I										I
I										I
I	17.30-17.45									I
I	ARM A	6.53	7.47	0.874	-	-	4.7	5.6	78.0	0.915
I	ARM B	6.83	23.49	0.291	-	-	0.4	0.4	6.1	0.060
I	ARM C	14.96	14.10	1.061	-	-	23.6	38.3	466.2	2.419
I										I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	17.45-18.00									I	
I	ARM A	5.33	7.50	0.711	-	-	5.6	2.7	46.5	0.546	I
I	ARM B	5.57	24.44	0.228	-	-	0.4	0.3	4.5	0.053	I
I	ARM C	12.21	14.26	0.856	-	-	38.3	13.1	385.2	1.946	I
I										I	

QUEUE AT ARM A

QUEUE AT ARM B

QUEUE AT ARM C

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

Printed at 16:44:00 on 05/10/2012]

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Shawbridge Street Waterloo Road AM.vai"
(drive-on-the-left) at 16:31:29 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Shawbridge St
ARM B - Waterloo Road S
ARM C - Walerloo Road N

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																			TS		
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	
I	ARM	A	I	4.35	I	4.35	I	0.00	I	4.35	I	8.50	I	6.50	I	0.00	I	0.461	I	12.341	I
I	ARM	B	I	3.65	I	3.65	I	0.00	I	3.65	I	18.90	I	21.00	I	0.00	I	1.377	I	29.873	I
I	ARM	C	I	3.85	I	3.85	I	0.00	I	3.85	I	12.70	I	9.30	I	0.00	I	0.438	I	14.958	I

T33									
		TURNING PROPORTIONS						I	
		TURNING COUNTS						I	
		(PERCENTAGE OF H.V.S)						I	
TIME		I FROM/TO I		ARM A I		ARM B I		ARM C I	
I	07.45 - 09.15	I	I	I	I	I	I	I	I
I		I	ARM A	I	0.000	I	0.187	I	0.813
I		I		I	0.0	I	75.0	I	326.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)
I		I		I	I	I	I	I	I
I		I	ARM B	I	0.240	I	0.000	I	0.760
I		I		I	94.0	I	0.0	I	297.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)
I		I		I	I	I	I	I	I
I		I	ARM C	I	0.388	I	0.612	I	0.000
I		I		I	285.0	I	449.0	I	0.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)
I		I		I	I	I	I	I	I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	5.03	9.77	0.515	-	-	0.0	1.0	14.4
ARM B	4.91	24.32	0.202	-	-	0.0	0.3	3.7
ARM C	9.21	14.44	0.638	-	-	0.0	1.7	23.5

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH_MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15								
ARM A	6.01	9.26	0.649	-	1.0	1.8	24.3	0.298
ARM B	5.86	23.20	0.252	-	0.3	0.3	5.0	0.058
ARM C	11.00	14.34	0.767	-	1.7	3.1	41.6	0.284

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I										I	
I										I	
I	08.15-08.30									I	
I	ARM A	7.36	8.66	0.849	-	-	1.8	4.5	55.4	0.610	I
I	ARM B	7.17	21.84	0.329	-	-	0.3	0.5	7.1	0.068	I
I	ARM C	13.47	14.20	0.948	-	-	3.1	9.7	110.1	0.678	I
I										I	

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	08.30-08.45									I	
I	ARM A	7.36	8.58	0.858	- -	4.5	5.1	72.6	-	0.747	I
I	ARM B	7.17	21.68	0.331	- -	0.5	0.5	7.4	-	0.069	I
I	ARM C	13.47	14.20	0.948	- -	9.7	11.8	162.5	-	0.931	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00									I
I	ARM A	6.01	9.08	0.661	- -	5.1	2.1	35.9	-	0.369
I	ARM B	5.86	22.93	0.256	- -	0.5	0.3	5.3	-	0.059
I	ARM C	11.00	14.34	0.767	- -	11.8	3.6	71.9	-	0.413

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	09.00-09.15									I	
I	ARM A	5.03	9.71	0.518	-	-	2.1	1.1	17.7	-	0.220
I	ARM B	4.91	24.17	0.203	-	-	0.3	0.3	3.9	-	0.052
I	ARM C	9.21	14.44	0.638	-	-	3.6	1.8	29.3	-	0.200
I											

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.0 *
08.15	1.8 **
08.30	4.5 ****
08.45	5.1 *****
09.00	2.1 **
09.15	1.1 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.3
08.30	0.5
08.45	0.5
09.00	0.3
09.15	0.3

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.7 **
08.15	3.1 ***
08.30	9.7 *****
08.45	11.8 *****
09.00	3.6 ****
09.15	1.8 **

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75									
I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	I
I	A	I	551.9	I	368.0	I	220.3	I	0.40
I	B	I	538.2	I	358.8	I	32.3	I	0.06
I	C	I	1010.3	I	673.5	I	438.9	I	0.43
I	ALL	I	2100.4	I	1400.3	I	691.7	I	0.33

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
 ===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Shawbridge Street Waterloo Road PM.vai"
(drive-on-the-left) at 16:44:35 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Shawbridge St
ARM B - Waterloo Road S
ARM C - Warerloo Road N

MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

T5																				
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	4.35	I	4.35	I	0.00	I	4.35	I	8.50	I	6.50	I	0.00	I	0.572	I	12.341	I
I	ARM B	I	3.65	I	3.65	I	0.00	I	3.65	I	18.90	I	21.00	I	0.00	I	1.488	I	29.873	I
I	ARM C	I	3.85	I	3.85	I	0.00	I	3.85	I	12.70	I	9.30	I	0.00	I	0.549	I	14.958	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m
WARNING ARM B Entry corner kerb line distance is in range 20m-40m
provided only for compatibility with accidents analysis.
Treat capacities with increasing caution.

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I	ARM	I	FLOW SCALE (%)	I	
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 Base

T15									
I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I				I
I	ARM	I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER	I	I
I	I	I	I	I	I	I	I	I	I
I	I	TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK	I	I
I	ARM A	I 15.00	I 45.00	I 75.00	I 4.66	I 6.99	I 4.66	I	I
I	ARM B	I 15.00	I 45.00	I 75.00	I 4.86	I 7.29	I 4.86	I	I
I	ARM C	I 15.00	I 45.00	I 75.00	I 10.65	I 15.97	I 10.65	I	I

DEMAND SET TITLE: 2017 Base

T33									
I	I	TURNING PROPORTIONS				I			I
I	I	TURNING COUNTS				I			I
I	I	(PERCENTAGE OF H.V.S)				I			I
I	TIME	I FROM/TO	I ARM A	I ARM B	I ARM C	I			I
I	16.45 - 18.15	I	I	I	I	I			I
I		I	ARM A	I 0.000	I 0.338	I 0.662	I		I
I		I	I	I 0.0	I 126.0	I 247.0	I		I
I		I	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I			I
I		I	ARM B	I 0.229	I 0.000	I 0.771	I		I
I		I	I	I 89.0	I 0.0	I 300.0	I		I
I		I	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I			I
I		I	ARM C	I 0.392	I 0.608	I 0.000	I		I
I		I	I	I 334.0	I 518.0	I 0.0	I		I
I		I	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I			I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70										
I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY I PER ARRIVING I VEHICLE (MIN)	I
I	16.45-17.00									I
I	ARM A	4.68	8.69	0.539	- -	0.0	1.1	15.6	- 0.241	I
I	ARM B	4.88	25.34	0.193	- -	0.0	0.2	3.5	- 0.049	I
I	ARM C	10.69	14.35	0.745	- -	0.0	2.7	36.4	- 0.250	I
I										I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15									I
I	ARM A	5.59	7.99	0.699	- -	1.1	2.1	29.1	- 0.393	I
I	ARM B	5.83	24.44	0.238	- -	0.2	0.3	4.6	- 0.054	I
I	ARM C	12.77	14.23	0.897	- -	2.7	6.6	81.5	- 0.514	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30									I
I	ARM A	6.84	7.53	0.909	- -	2.1	6.1	71.4	- 0.872	I
I	ARM B	7.14	23.39	0.305	- -	0.3	0.4	6.4	- 0.061	I
I	ARM C	15.63	14.06	1.112	- -	6.6	33.5	309.9	- 1.695	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45									I
I	ARM A	6.84	7.47	0.917	- -	6.1	7.5	103.5	- 1.179	I
I	ARM B	7.14	23.23	0.307	- -	0.4	0.4	6.6	- 0.062	I
I	ARM C	15.63	14.06	1.112	- -	33.5	57.9	686.3	- 3.442	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00									I
I	ARM A	5.59	7.48	0.747	- -	7.5	3.3	61.0	- 0.691	I
I	ARM B	5.83	24.10	0.242	- -	0.4	0.3	4.9	- 0.055	I
I	ARM C	12.77	14.22	0.897	- -	57.9	39.6	731.1	- 3.517	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15									I
I	ARM A	4.68	7.78	0.601	- -	3.3	1.6	26.3	0.346	I
I	ARM B	4.88	25.15	0.194	- -	0.3	0.2	3.7	0.049	I
I	ARM C	10.69	14.34	0.745	- -	39.6	3.4	251.0	1.316	I
I										I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.1	*
17.15	2.1	**
17.30	6.1	*****
17.45	7.5	*****
18.00	3.3	***
18.15	1.6	**

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.2	
17.15	0.3	
17.30	0.4	
17.45	0.4	
18.00	0.3	
18.15	0.2	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	2.7	***
17.15	6.6	*****
17.30	33.5	*****
17.45	57.9	*****
18.00	39.6	*****
18.15	3.4	***

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	T75
I	I	I	I	I	* DELAY *	I	* DELAY *	I	I
I	I	I	I	I	I	I	I	I	I
I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I	I
I	A	I 513.4	I 342.3	I 306.8	I 0.60	I 307.0	I 0.60	I	I
I	B	I 535.4	I 357.0	I 29.7	I 0.06	I 29.7	I 0.06	I	I
I	C	I 1172.7	I 781.8	I 2096.2	I 1.79	I 2096.6	I 1.79	I	I
I	ALL	I 2221.6	I 1481.0	I 2432.7	I 1.10	I 2433.3	I 1.10	I	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
 ===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Shawbridge Street Waterloo Road AM.vai"
(drive-on-the-left) at 16:33:16 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Shawbridge St
ARM B - Waterloo Road S
ARM C - Walerloo Road N

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																		T5		
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	4.35	I	4.35	I	0.00	I	4.35	I	8.50	I	6.50	I	0.00	I	0.461	I	12.341	I
I	ARM B	I	3.65	I	3.65	I	0.00	I	3.65	I	18.90	I	21.00	I	0.00	I	1.377	I	29.873	I
I	ARM C	I	3.85	I	3.85	I	0.00	I	3.85	I	12.70	I	9.30	I	0.00	I	0.438	I	14.958	I

DEMAND SET TITLE: 2012 Base + Dev

T15									
I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I				I
I	ARM	I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER	I	I
I	I	I	I	I	I	I	I	I	I
I	I	TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK	I	I
I	ARM A	I 15.00	I 45.00	I 75.00	I 4.95	I 7.42	I 4.95	I	I
I	ARM B	I 15.00	I 45.00	I 75.00	I 5.03	I 7.54	I 5.03	I	I
I	ARM C	I 15.00	I 45.00	I 75.00	I 9.57	I 14.36	I 9.57	I	I

DEMAND SET TITLE: 2012 Base + Dev

T33									
I	I	TURNING PROPORTIONS	I						I
I	I	TURNING COUNTS	I						I
I	I	(PERCENTAGE OF H.V.S)	I						I
I	TIME	I FROM/TO	I ARM A	I ARM B	I ARM C	I			I
I	07.45 - 09.15	I	I	I	I	I			I
I		I	ARM A	I 0.000	I 0.189	I 0.811	I		I
I		I	I	I 0.0	I 75.0	I 321.0	I		I
I		I	I	I (0.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I	I		I
I		I	ARM B	I 0.251	I 0.000	I 0.749	I		I
I		I	I	I 101.0	I 0.0	I 301.0	I		I
I		I	I	I (0.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I	I		I
I		I	ARM C	I 0.389	I 0.611	I 0.000	I		I
I		I	I	I 298.0	I 468.0	I 0.0	I		I
I		I	I	I (0.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I	I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY		AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/		PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)		VEHICLE (MIN)
I	07.45-08.00									
I	ARM A	4.97	9.67	0.514	- -	0.0	1.0	14.3	-	0.207
I	ARM B	5.04	24.40	0.207	- -	0.0	0.3	3.8	-	0.052
I	ARM C	9.61	14.40	0.667	- -	0.0	1.9	26.4	-	0.198

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY		AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/		PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)		VEHICLE (MIN)
I	08.00-08.15									
I	ARM A	5.93	9.14	0.649	- -	1.0	1.8	24.3	-	0.302
I	ARM B	6.02	23.31	0.258	- -	0.3	0.3	5.1	-	0.058
I	ARM C	11.48	14.30	0.803	- -	1.9	3.7	49.3	-	0.327

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY		AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/		PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)		VEHICLE (MIN)
I	08.15-08.30									
I	ARM A	7.27	8.57	0.848	- -	1.8	4.4	55.0	-	0.613
I	ARM B	7.38	21.96	0.336	- -	0.3	0.5	7.4	-	0.068
I	ARM C	14.06	14.15	0.994	- -	3.7	13.9	147.5	-	0.886

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY		AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/		PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)		VEHICLE (MIN)
I	08.30-08.45									
I	ARM A	7.27	8.48	0.857	- -	4.4	5.1	72.1	-	0.747
I	ARM B	7.38	21.81	0.338	- -	0.5	0.5	7.6	-	0.069
I	ARM C	14.06	14.15	0.994	- -	13.9	19.1	250.5	-	1.389

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY		AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/		PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)		VEHICLE (MIN)
I	08.45-09.00									
I	ARM A	5.93	8.83	0.672	- -	5.1	2.2	37.5	-	0.393
I	ARM B	6.02	23.04	0.261	- -	0.5	0.4	5.4	-	0.059
I	ARM C	11.48	14.29	0.803	- -	19.1	4.6	122.6	-	0.690

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15									I
I	ARM A	4.97	9.58	0.518	- -	2.2	1.1	17.8	0.223	I
I	ARM B	5.04	24.25	0.208	- -	0.4	0.3	4.0	0.052	I
I	ARM C	9.61	14.40	0.667	- -	4.6	2.1	34.4	0.223	I
I										I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.8	**
08.30	4.4	****
08.45	5.1	*****
09.00	2.2	**
09.15	1.1	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.3	
08.30	0.5	*
08.45	0.5	*
09.00	0.4	
09.15	0.3	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.9	**
08.15	3.7	****
08.30	13.9	*****
08.45	19.1	*****
09.00	4.6	*****
09.15	2.1	**

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	T75
I		I	(VEH)	I	(MIN)	I	(MIN)	I	
I	A	I	545.1	I	221.0	I	221.0	I	
I	B	I	553.3	I	33.4	I	33.4	I	
I	C	I	1054.3	I	630.7	I	630.8	I	
I	ALL	I	2152.7	I	885.0	I	885.2	I	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
 ===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Shawbridge Street Waterloo Road PM.vai"
(drive-on-the-left) at 16:45:59 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Shawbridge St
ARM B - Waterloo Road S
ARM C - Warerloo Road N

MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

T5																				
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	4.35	I	4.35	I	0.00	I	4.35	I	8.50	I	6.50	I	0.00	I	0.572	I	12.341	I
I	ARM B	I	3.65	I	3.65	I	0.00	I	3.65	I	18.90	I	21.00	I	0.00	I	1.488	I	29.873	I
I	ARM C	I	3.85	I	3.85	I	0.00	I	3.85	I	12.70	I	9.30	I	0.00	I	0.549	I	14.958	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K = entry corner kerb line G=gradient over 50 m
WARNING ARM B Entry corner kerb line distance is in range 20m-40m
provided only for compatibility with accidents analysis.
Treat capacities with increasing caution.

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I	ARM	I	FLOW SCALE (%)	I	
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2012 Base + Dev

T15									
I	I	NUMBER OF MINUTES FROM START WHEN				I	RATE OF FLOW (VEH/MIN)		
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE
I	I	I	I	I	I	I	I	I	AT TOP
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	OF PEAK
I	I	I	I	I	I	I	I	I	PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.82
I	ARM B	I	15.00	I	45.00	I	75.00	I	4.99
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.66

DEMAND SET TITLE: 2012 Base + Dev

T33									
I	TURNING PROPORTIONS				I				
I	TURNING COUNTS				I				
I	(PERCENTAGE OF H.V.S)				I				
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I	I	I	I	I	I	I	I
I		I	ARM A	I	0.000	I	0.334	I	0.666
I		I	I	I	0.0	I	129.0	I	257.0
I		I	I (0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I	I	I	I	I	I	I	I
I		I	ARM B	I	0.226	I	0.000	I	0.774
I		I	I	I	90.0	I	0.0	I	309.0
I		I	I (0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I	I	I	I	I	I	I	I
I		I	ARM C	I	0.390	I	0.610	I	0.000
I		I	I	I	333.0	I	520.0	I	0.0
I		I	I (0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	16.45-17.00									I
I	ARM A	4.84	8.67	0.559	- -	0.0	1.2	16.7	0.251	I
I	ARM B	5.01	25.16	0.199	- -	0.0	0.2	3.6	0.050	I
I	ARM C	10.70	14.34	0.746	- -	0.0	2.8	36.6	0.251	I

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	17.00-17.15									I
I	ARM A	5.78	7.97	0.725	- -	1.2	2.4	32.2	0.425	I
I	ARM B	5.98	24.23	0.247	- -	0.2	0.3	4.8	0.055	I
I	ARM C	12.78	14.22	0.899	- -	2.8	6.7	82.2	0.521	I

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	17.15-17.30									I
I	ARM A	7.08	7.51	0.943	- -	2.4	7.5	84.0	1.012	I
I	ARM B	7.32	23.19	0.316	- -	0.3	0.5	6.8	0.063	I
I	ARM C	15.65	14.05	1.114	- -	6.7	34.0	313.5	1.714	I

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	17.30-17.45									I
I	ARM A	7.08	7.46	0.950	- -	7.5	9.7	130.1	1.455	I
I	ARM B	7.32	22.99	0.318	- -	0.5	0.5	6.9	0.064	I
I	ARM C	15.65	14.05	1.114	- -	34.0	58.7	695.6	3.492	I

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	17.45-18.00									I
I	ARM A	5.78	7.47	0.775	- -	9.7	4.0	78.6	0.883	I
I	ARM B	5.98	23.78	0.251	- -	0.5	0.3	5.1	0.056	I
I	ARM C	12.78	14.22	0.899	- -	58.7	40.7	745.7	3.585	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15									I
I	ARM A	4.84	7.74	0.626	- -	4.0	1.8	29.9	0.381	I
I	ARM B	5.01	24.93	0.201	- -	0.3	0.3	3.8	0.050	I
I	ARM C	10.70	14.34	0.747	- -	40.7	3.5	264.2	1.387	I
I										I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.2	*
17.15	2.4	**
17.30	7.5	*****
17.45	9.7	*****
18.00	4.0	****
18.15	1.8	**

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.2	
17.15	0.3	
17.30	0.5	
17.45	0.5	
18.00	0.3	
18.15	0.3	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	2.8	***
17.15	6.7	*****
17.30	34.0	*****
17.45	58.7	*****
18.00	40.7	*****
18.15	3.5	***

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	T75
I	I	I	I	I	* DELAY *	I	* DELAY *	I	I
I	I	I	I	I	I	I	I	I	I
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)
I	A	I 531.3	I 354.2	I 371.6	I 0.70	I 371.8	I 0.70	I	
I	B	I 549.2	I 366.1	I 31.2	I 0.06	I 31.2	I 0.06	I	
I	C	I 1174.1	I 782.7	I 2137.8	I 1.82	I 2138.3	I 1.82	I	
I	ALL	I 2254.6	I 1503.1	I 2540.5	I 1.13	I 2541.2	I 1.13	I	

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 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
 ===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Shawbridge Street Waterloo Road AM.vai"
(drive-on-the-left) at 16:39:01 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Shawbridge St
ARM B - Waterloo Road S
ARM C - Walerloo Road N

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

T5																				
I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	4.35	I	4.35	I	0.00	I	4.35	I	8.50	I	6.50	I	0.00	I	0.461	I	12.341	I
I	ARM B	I	3.65	I	3.65	I	0.00	I	3.65	I	18.90	I	21.00	I	0.00	I	1.377	I	29.873	I
I	ARM C	I	3.85	I	3.85	I	0.00	I	3.85	I	12.70	I	9.30	I	0.00	I	0.438	I	14.958	I

-----T33-----										
		TURNING PROPORTIONS						I		
		TURNING COUNTS						I		
		(PERCENTAGE OF H.V.S)						I		

TIME		I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I

I	07.45 - 09.15	I		I		I		I		I
I		I	ARM A	I	0.000	I	0.189	I	0.811	I
I		I		I	0.0	I	78.0	I	335.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM B	I	0.252	I	0.000	I	0.748	I
I		I		I	105.0	I	0.0	I	312.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM C	I	0.389	I	0.611	I	0.000	I
I		I		I	310.0	I	487.0	I	0.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.45-08.00									I
I	ARM A	5.18	9.56	0.542	- -	0.0	1.1	15.9	0.221	I
I	ARM B	5.23	24.17	0.216	- -	0.0	0.3	4.0	0.053	I
I	ARM C	10.00	14.38	0.695	- -	0.0	2.2	29.6	0.214	I

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	08.15-08.30								
ARM A		7.58	8.50	0.891	-	2.0	5.7	67.6	0.735
ARM B		7.65	21.68	0.353	-	0.4	0.5	8.0	0.071
ARM C		14.63	14.11	1.036	-	4.5	19.6	194.8	1.130

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00									I
I	ARM A	6.19	8.53	0.725	-	-	6.8	51.9	0.525	I
I	ARM B	6.25	22.68	0.275	-	-	0.5	5.8	0.061	I
I	ARM C	11.94	14.27	0.837	-	-	30.3	249.6	1.358	I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15								
ARM A	5.18	9.44	0.549	-	2.9	1.3	20.6	0.247
ARM B	5.23	23.97	0.218	-	0.4	0.3	4.3	0.053
ARM C	10.00	14.38	0.695	-	6.7	2.4	41.7	0.259

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.1
08.15	2.0
08.30	5.7
08.45	6.8
09.00	2.9
09.15	1.3

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.4
08.30	0.5
08.45	0.5
09.00	0.4
09.15	0.3

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	2.2	**
08.15	4.5	****
08.30	19.6	*****
08.45	30.3	*****
09.00	6.7	*****
09.15	2.4	**

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75									
I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	
I		I	(VEH)	I	(MIN)	I	(MIN)	I	(MIN/VEH)
I	A	I	568.5	I	379.0	I	278.7	I	0.49
I	B	I	574.0	I	382.6	I	35.8	I	0.06
I	C	I	1097.0	I	731.3	I	950.6	I	0.87
I	ALL	I	2239.4	I	1493.0	I	1265.1	I	0.56

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

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=====
END OF JOB
=====
===== end of file =====
=====

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A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Shawbridge Street Waterloo Road PM.vai"
(drive-on-the-left) at 16:48:23 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Shawbridge St
ARM B - Waterloo Road S
ARM C - Warerloo Road N

MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																		T5		
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	4.35	I	4.35	I	0.00	I	4.35	I	8.50	I	6.50	I	0.00	I	0.572	I	12.341	I
I	ARM B	I	3.65	I	3.65	I	0.00	I	3.65	I	18.90	I	21.00	I	0.00	I	1.488	I	29.873	I
I	ARM C	I	3.85	I	3.85	I	0.00	I	3.85	I	12.70	I	9.30	I	0.00	I	0.549	I	14.958	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K = entry corner kerb line G=gradient over 50 m
WARNING ARM B Entry corner kerb line distance is in range 20m-40m
provided only for compatibility with accidents analysis.
Treat capacities with increasing caution.

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I	ARM	I	FLOW SCALE(%)	I	
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

-----T33-----										
		TURNING PROPORTIONS						I		
		TURNING COUNTS						I		
		(PERCENTAGE OF H.V.S)						I		

TIME		I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I

I	16.45 - 18.15	I		I		I		I		I
I		I	ARM A	I	0.000	I	0.335	I	0.665	I
I		I		I	0.0	I	135.0	I	268.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM B	I	0.226	I	0.000	I	0.774	I
I		I		I	94.0	I	0.0	I	322.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM C	I	0.391	I	0.609	I	0.000	I
I		I		I	348.0	I	542.0	I	0.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	16.45-17.00									I
I	ARM A	5.06	8.53	0.593	- -	0.0	1.4	18.9	0.274	I
I	ARM B	5.22	24.96	0.209	- -	0.0	0.3	3.9	0.051	I
I	ARM C	11.17	14.31	0.780	- -	0.0	3.3	42.5	0.282	I

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	6.04	7.83	0.771	-	-	1.4	3.0	38.7	0.501
ARM B	6.23	24.00	0.260	-	-	0.3	0.3	5.2	0.056
ARM C	13.33	14.18	0.940	-	-	3.3	9.1	105.8	0.658

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	17.15-17.30									I	
I	ARM A	7.40	7.50	0.986	-	-	3.0	9.8	105.5	1.237	I
I	ARM B	7.63	23.01	0.332	-	-	0.3	0.5	7.3	0.065	I
I	ARM C	16.33	14.01	1.166	-	-	9.1	45.7	416.5	2.208	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45									I
I	ARM A	7.40	7.47	0.990	- -	9.8	13.6	177.2	1.900	I
I	ARM B	7.63	22.80	0.335	- -	0.5	0.5	7.5	0.066	I
I	ARM C	16.33	14.01	1.166	- -	45.7	80.9	949.8	4.680	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00									I
I	ARM A	6.04	7.46	0.810	-	-	13.6	5.3	118.1	1.303
I	ARM B	6.23	23.37	0.267	-	-	0.5	0.4	5.6	0.058
I	ARM C	13.33	14.18	0.940	-	-	80.9	70.7	1137.0	5.415
I										I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	18.00-18.15									I	
I	ARM A	5.06	7.42	0.681	-	-	5.3	2.3	40.4	-	0.496
I	ARM B	5.22	24.68	0.212	-	-	0.4	0.3	4.1	-	0.051
I	ARM C	11.17	14.31	0.780	-	-	70.7	26.6	730.1	-	3.510
I											

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.4	*
17.15	3.0	***
17.30	9.8	*****
17.45	13.6	*****
18.00	5.3	*****
18.15	2.3	**

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.3	
17.30	0.5	
17.45	0.5	*
18.00	0.4	
18.15	0.3	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	3.3	***
17.15	9.1	*****
17.30	45.7	*****
17.45	80.9	*****
18.00	70.7	*****
18.15	26.6	*****

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75									
I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	I	I	I	I	I	I	
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)
I	A	I 554.7	I 369.8	I 498.8	I 0.90	I 499.2	I 0.90	I	
I	B	I 572.6	I 381.7	I 33.5	I 0.06	I 33.5	I 0.06	I	
I	C	I 1225.0	I 816.7	I 3381.5	I 2.76	I 3406.3	I 2.78	I	
I	ALL	I 2352.3	I 1568.2	I 3913.8	I 1.66	I 3938.9	I 1.67	I	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
 ===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Queensway Whalley Road AM.vai"
(drive-on-the-left) at 16:00:30 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Whalley Rd N
ARM B - Queensway
ARM C - Whalley Rd S

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																		TS		
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I SLOPE	I INTERCEPT	I		
I		I		I		I		I		I		I		I		I	(PCU/MIN)	I		
I	ARM A	I	4.00	I	5.90	I	10.00	I	4.00	I	10.00	I	7.10	I	0.00	I	0.503	I	15.331	I
I	ARM B	I	3.40	I	4.00	I	5.00	I	3.50	I	20.00	I	19.00	I	0.00	I	0.787	I	18.259	I
I	ARM C	I	4.35	I	4.35	I	0.00	I	4.35	I	18.50	I	19.00	I	0.00	I	0.810	I	21.705	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13
I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2012 Base

T15									
I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I				I
I	ARM	I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER	I	I
I	I	I	I	I	I	I	I	I	I
I	I	TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK	I	I
I	ARM A	I 15.00	I 45.00	I 75.00	I 6.82	I 10.24	I 6.82	I	I
I	ARM B	I 15.00	I 45.00	I 75.00	I 5.14	I 7.71	I 5.14	I	I
I	ARM C	I 15.00	I 45.00	I 75.00	I 7.47	I 11.21	I 7.47	I	I

DEMAND SET TITLE: 2012 Base

T33									
I				TURNING PROPORTIONS	I				
I				TURNING COUNTS	I				
I				(PERCENTAGE OF H.V.S)	I				
I	TIME	I FROM/TO	I ARM A	I ARM B	I ARM C	I			
I	07.45 - 09.15	I	I	I	I	I			
I		I	ARM A	I 0.000	I 0.306	I 0.694	I		
I		I		I 0.0	I 167.0	I 379.0	I		
I		I		I (0.0)	I (0.0)	I (0.0)	I		
I		I		I	I	I	I		
I		I	ARM B	I 0.051	I 0.000	I 0.949	I		
I		I		I 21.0	I 0.0	I 390.0	I		
I		I		I (0.0)	I (0.0)	I (0.0)	I		
I		I		I	I	I	I		
I		I	ARM C	I 0.565	I 0.435	I 0.000	I		
I		I		I 338.0	I 260.0	I 0.0	I		
I		I		I (0.0)	I (0.0)	I (0.0)	I		
I		I		I	I	I	I		

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70									
I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	07.45-08.00								
I	ARM A	6.85	13.70	0.500	- -	0.0	1.0	13.9	0.143
I	ARM B	5.16	14.55	0.354	- -	0.0	0.5	7.8	0.106
I	ARM C	7.50	21.49	0.349	- -	0.0	0.5	7.8	0.071

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.00-08.15								
I	ARM A	8.18	13.37	0.612	- -	1.0	1.5	21.7	0.190
I	ARM B	6.16	13.81	0.446	- -	0.5	0.8	11.5	0.130
I	ARM C	8.96	21.45	0.418	- -	0.5	0.7	10.4	0.080

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30								
I	ARM A	10.02	12.94	0.775	- -	1.5	3.1	42.2	0.320
I	ARM B	7.54	12.85	0.587	- -	0.8	1.4	19.6	0.186
I	ARM C	10.97	21.39	0.513	- -	0.7	1.0	15.1	0.096

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.30-08.45								
I	ARM A	10.02	12.93	0.775	- -	3.1	3.3	48.4	0.339
I	ARM B	7.54	12.79	0.590	- -	1.4	1.4	21.0	0.191
I	ARM C	10.97	21.39	0.513	- -	1.0	1.0	15.7	0.096

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.45-09.00								
I	ARM A	8.18	13.37	0.612	- -	3.3	1.6	26.2	0.201
I	ARM B	6.16	13.73	0.448	- -	1.4	0.8	12.9	0.133
I	ARM C	8.96	21.45	0.418	- -	1.0	0.7	11.1	0.080

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	09.00-09.15									I	
I	ARM A	6.85	13.69	0.501	-	-	1.6	1.0	16.0	-	0.148
I	ARM B	5.16	14.49	0.356	-	-	0.8	0.6	8.6	-	0.108
I	ARM C	7.50	21.49	0.349	-	-	0.7	0.5	8.3	-	0.072
I											I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.5	**
08.30	3.1	***
08.45	3.3	***
09.00	1.6	**
09.15	1.0	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.8	*
08.30	1.4	*
08.45	1.4	*
09.00	0.8	*
09.15	0.6	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	0.7	*
08.30	1.0	*
08.45	1.0	*
09.00	0.7	*
09.15	0.5	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	T75
I	I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	I
I	A	I	751.5	I	501.0	I	168.5	I	0.22
I	B	I	565.7	I	377.1	I	81.5	I	0.14
I	C	I	823.1	I	548.7	I	68.4	I	0.08
I	ALL	I	2140.3	I	1426.9	I	318.4	I	0.15

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Queensway Whalley Road PM.vai"
(drive-on-the-left) at 16:13:17 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Whalley Rd N
ARM B - Queensway
ARM C - Whalley Rd S

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

T5																		
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I SLOPE	I INTERCEPT	I
I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	4.00	I	5.90	I	10.00	I	4.00	I	10.00	I	7.10	I	0.00	I 0.503	I 15.331	I
I	ARM B	I	3.40	I	4.00	I	5.00	I	3.50	I	20.00	I	19.00	I	0.00	I 0.787	I 18.259	I
I	ARM C	I	4.35	I	4.35	I	0.00	I	4.35	I	18.50	I	19.00	I	0.00	I 0.810	I 21.705	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13
I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2012 Base

T15									
I	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)			
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE
I	I	I	I	I	I	I	I	I	AT TOP
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	OF PEAK
I	I	I	I	I	I	I	I	I	PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	6.84
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.49
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.99

DEMAND SET TITLE: 2012 Base

T33									
TURNING PROPORTIONS									
TURNING COUNTS									
(PERCENTAGE OF H.V.S)									
TIME									
FROM/TO									
ARM A									
ARM B									
ARM C									
I	16.45 - 18.15	I	I	I	I	I	I	I	I
I	I	I	ARM A	I	0.000	I	0.280	I	0.720
I	I	I	I	I	0.0	I	153.0	I	394.0
I	I	I	I	I	(0.0)	I	(0.0)	I	(0.0)
I	I	I	I	I	I	I	I	I	I
I	I	I	ARM B	I	0.125	I	0.000	I	0.875
I	I	I	I	I	75.0	I	0.0	I	524.0
I	I	I	I	I	(0.0)	I	(0.0)	I	(0.0)
I	I	I	I	I	I	I	I	I	I
I	I	I	ARM C	I	0.635	I	0.365	I	0.000
I	I	I	I	I	355.0	I	204.0	I	0.0
I	I	I	I	I	(0.0)	I	(0.0)	I	(0.0)
I	I	I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70										
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	16.45-17.00									I
I	ARM A	6.86	14.05	0.489	- -	-	0.0	0.9	13.3	-
I	ARM B	7.52	14.40	0.522	- -	-	0.0	1.1	15.2	-
I	ARM C	7.01	20.95	0.335	- -	-	0.0	0.5	7.3	-

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	17.00-17.15									I
I	ARM A	8.20	13.80	0.594	- -	-	0.9	1.4	20.3	-
I	ARM B	8.97	13.63	0.658	- -	-	1.1	1.9	26.0	-
I	ARM C	8.38	20.80	0.403	- -	-	0.5	0.7	9.8	-

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	17.15-17.30									I
I	ARM A	10.04	13.45	0.746	- -	-	1.4	2.7	37.4	-
I	ARM B	10.99	12.62	0.871	- -	-	1.9	5.4	66.7	-
I	ARM C	10.26	20.62	0.498	- -	-	0.7	1.0	14.2	-

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	17.30-17.45									I
I	ARM A	10.04	13.45	0.746	- -	-	2.7	2.8	42.0	-
I	ARM B	10.99	12.57	0.874	- -	-	5.4	6.0	86.5	-
I	ARM C	10.26	20.60	0.498	- -	-	1.0	1.0	14.7	-

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	I
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	I
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	I
I	17.45-18.00									I
I	ARM A	8.20	13.79	0.594	- -	-	2.8	1.5	24.1	-
I	ARM B	8.97	13.56	0.662	- -	-	6.0	2.0	35.3	-
I	ARM C	8.38	20.77	0.403	- -	-	1.0	0.7	10.5	-

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	18.00-18.15									I	
I	ARM A	6.86	14.04	0.489	-	-	1.5	1.0	15.2	-	0.141
I	ARM B	7.52	14.35	0.524	-	-	2.0	1.1	17.7	-	0.149
I	ARM C	7.01	20.94	0.335	-	-	0.7	0.5	7.8	-	0.072
I											

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.4	**
17.30	2.7	***
17.45	2.8	***
18.00	1.5	**
18.15	1.0	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.1	*
17.15	1.9	**
17.30	5.4	*****
17.45	6.0	*****
18.00	2.0	**
18.15	1.1	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.7	*
17.30	1.0	*
17.45	1.0	*
18.00	0.7	*
18.15	0.5	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	T75
I		I	(VEH)	I	(MIN)	I	(MIN)	I	
I	A	I	752.9	I	152.4	I	152.4	I	
I	B	I	824.5	I	247.4	I	247.5	I	
I	C	I	769.4	I	64.3	I	64.3	I	
I	ALL	I	2346.8	I	464.2	I	464.3	I	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Queensway Whalley Road AM.vai"
(drive-on-the-left) at 16:04:32 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Whalley Rd N
ARM B - Queensway
ARM C - Whalley Rd S

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																		TS
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I SLOPE	I INTERCEPT	I
		I			I			I			I			I			I (PCU/MIN)	I
I	ARM A	I	4.00	I	5.90	I	10.00	I	4.00	I	10.00	I	7.10	I	0.00	I 0.503	I 15.331	I
I	ARM B	I	3.40	I	4.00	I	5.00	I	3.50	I	20.00	I	19.00	I	0.00	I 0.787	I 18.259	I
I	ARM C	I	4.35	I	4.35	I	0.00	I	4.35	I	18.50	I	19.00	I	0.00	I 0.810	I 21.705	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13
I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 Base

T15									
I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I				I
I	ARM	I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER	I	I
I	I	I	I	I	I	I	I	I	I
I	I	TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK	I	I
I	ARM A	I 15.00	I 45.00	I 75.00	I 7.13	I 10.69	I 7.13	I	I
I	ARM B	I 15.00	I 45.00	I 75.00	I 5.36	I 8.04	I 5.36	I	I
I	ARM C	I 15.00	I 45.00	I 75.00	I 7.80	I 11.70	I 7.80	I	I

DEMAND SET TITLE: 2017 Base

T33									
I	I	TURNING PROPORTIONS				I			I
I	I	TURNING COUNTS				I			I
I	I	(PERCENTAGE OF H.V.S)				I			I
I	TIME	I FROM/TO	I ARM A	I ARM B	I ARM C	I			I
I	07.45 - 09.15	I	I	I	I	I			I
I		I	ARM A	I 0.000	I 0.305	I 0.695	I		I
I		I	I	I 0.0	I 174.0	I 396.0	I		I
I		I	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I			I
I		I	ARM B	I 0.051	I 0.000	I 0.949	I		I
I		I	I	I 22.0	I 0.0	I 407.0	I		I
I		I	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I			I
I		I	ARM C	I 0.566	I 0.434	I 0.000	I		I
I		I	I	I 353.0	I 271.0	I 0.0	I		I
I		I	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I		I
I		I	I	I	I	I			I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70										
I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.45-08.00									I
I	ARM A	7.15	13.63	0.525	- -	0.0	1.1	15.3	0.151	I
I	ARM B	5.38	14.39	0.374	- -	0.0	0.6	8.5	0.110	I
I	ARM C	7.83	21.48	0.364	- -	0.0	0.6	8.3	0.073	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15									I
I	ARM A	8.54	13.29	0.643	- -	1.1	1.7	24.5	0.207	I
I	ARM B	6.43	13.61	0.472	- -	0.6	0.9	12.7	0.138	I
I	ARM C	9.35	21.44	0.436	- -	0.6	0.8	11.2	0.083	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30									I
I	ARM A	10.46	12.84	0.815	- -	1.7	3.9	50.9	0.376	I
I	ARM B	7.87	12.62	0.624	- -	0.9	1.6	22.5	0.207	I
I	ARM C	11.45	21.38	0.536	- -	0.8	1.1	16.5	0.100	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45									I
I	ARM A	10.46	12.83	0.815	- -	3.9	4.1	60.4	0.412	I
I	ARM B	7.87	12.55	0.627	- -	1.6	1.6	24.5	0.213	I
I	ARM C	11.45	21.38	0.536	- -	1.1	1.1	17.1	0.101	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00									I
I	ARM A	8.54	13.28	0.643	- -	4.1	1.9	30.7	0.224	I
I	ARM B	6.43	13.51	0.476	- -	1.6	0.9	14.5	0.143	I
I	ARM C	9.35	21.44	0.436	- -	1.1	0.8	12.0	0.083	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15									I
I	ARM A	7.15	13.62	0.525	- -	1.9	1.1	17.8	0.157	I
I	ARM B	5.38	14.32	0.376	- -	0.9	0.6	9.4	0.112	I
I	ARM C	7.83	21.48	0.365	- -	0.8	0.6	8.9	0.073	I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.1	*
08.15	1.7	**
08.30	3.9	****
08.45	4.1	****
09.00	1.9	**
09.15	1.1	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.9	*
08.30	1.6	**
08.45	1.6	**
09.00	0.9	*
09.15	0.6	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.8	*
08.30	1.1	*
08.45	1.1	*
09.00	0.8	*
09.15	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	T75
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I	
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	
I	A	I	784.6	I	523.0	I	199.5	I	0.25
I	B	I	590.5	I	393.7	I	92.1	I	0.16
I	C	I	858.9	I	572.6	I	74.1	I	0.09
I	ALL	I	2233.9	I	1489.3	I	365.7	I	0.16

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
 ===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Queensway Whalley Road PM.vai"
(drive-on-the-left) at 16:14:48 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Whalley Rd N
ARM B - Queensway
ARM C - Whalley Rd S

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																		TS
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I SLOPE	I INTERCEPT	I
		I			I			I			I			I			I (PCU/MIN)	I
I	ARM A	I	4.00	I	5.90	I	10.00	I	4.00	I	10.00	I	7.10	I	0.00	I 0.503	I 15.331	I
I	ARM B	I	3.40	I	4.00	I	5.00	I	3.50	I	20.00	I	19.00	I	0.00	I 0.787	I 18.259	I
I	ARM C	I	4.35	I	4.35	I	0.00	I	4.35	I	18.50	I	19.00	I	0.00	I 0.810	I 21.705	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13
I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 Base

T15									
I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE
I	I	I	I	I	I	I	I	I	AT TOP
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	OF PEAK
I	I	I	I	I	I	I	I	I	PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	7.15
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.82
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.30

DEMAND SET TITLE: 2017 Base

T33									
I	TURNING PROPORTIONS								I
I	TURNING COUNTS								I
I	(PERCENTAGE OF H.V.S)								I
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.280	I	0.720
I		I		I	0.0	I	160.0	I	412.0
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	
I		I	ARM B	I	0.125	I	0.000	I	0.875
I		I		I	78.0	I	0.0	I	548.0
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	
I		I	ARM C	I	0.635	I	0.365	I	0.000
I		I		I	371.0	I	213.0	I	0.0
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I	

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70									
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00								
I	ARM A	7.18	13.99	0.513	- -	0.0	1.0	14.6	0.144
I	ARM B	7.85	14.23	0.552	- -	0.0	1.2	17.0	0.153
I	ARM C	7.33	20.92	0.350	- -	0.0	0.5	7.8	0.073

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	17.00-17.15								
I	ARM A	8.57	13.73	0.624	- -	1.0	1.6	22.8	0.191
I	ARM B	9.38	13.42	0.699	- -	1.2	2.2	30.6	0.240
I	ARM C	8.75	20.76	0.421	- -	0.5	0.7	10.6	0.083

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	17.15-17.30								
I	ARM A	10.50	13.37	0.785	- -	1.6	3.3	44.5	0.322
I	ARM B	11.49	12.38	0.928	- -	2.2	7.9	90.9	0.650
I	ARM C	10.72	20.58	0.521	- -	0.7	1.1	15.6	0.101

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	17.30-17.45								
I	ARM A	10.50	13.37	0.785	- -	3.3	3.5	51.3	0.343
I	ARM B	11.49	12.32	0.933	- -	7.9	9.6	133.3	0.898
I	ARM C	10.72	20.56	0.521	- -	1.1	1.1	16.2	0.102

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	17.45-18.00								
I	ARM A	8.57	13.72	0.625	- -	3.5	1.7	27.8	0.203
I	ARM B	9.38	13.34	0.703	- -	9.6	2.5	49.3	0.321
I	ARM C	8.75	20.71	0.422	- -	1.1	0.7	11.4	0.084

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15									I
I	ARM A	7.18	13.98	0.513	-	-	1.7	1.1	16.9	0.149
I	ARM B	7.85	14.17	0.554	-	-	2.5	1.3	20.2	0.162
I	ARM C	7.33	20.90	0.351	-	-	0.7	0.5	8.3	0.074
I										I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.6	**
17.30	3.3	***
17.45	3.5	***
18.00	1.7	**
18.15	1.1	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.2	*
17.15	2.2	**
17.30	7.9	*****
17.45	9.6	*****
18.00	2.5	***
18.15	1.3	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	*
17.15	0.7	*
17.30	1.1	*
17.45	1.1	*
18.00	0.7	*
18.15	0.5	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75											
I	ARM	I	TOTAL DEMAND		I	* QUEUEING * * DELAY *		I	* INCLUSIVE QUEUEING * * DELAY *		I
I		I			I			I			I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	A	I	787.3	I 524.9	I	177.9	I 0.23	I	178.0	I 0.23	I
I	B	I	861.6	I 574.4	I	341.3	I 0.40	I	341.3	I 0.40	I
I	C	I	803.8	I 535.9	I	69.8	I 0.09	I	69.8	I 0.09	I
I	ALL	I	2452.8	I 1635.2	I	589.0	I 0.24	I	589.1	I 0.24	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
 ===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Queensway Whalley Road AM.vai"
(drive-on-the-left) at 16:05:47 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Whalley Rd N
ARM B - Queensway
ARM C - Whalley Rd S

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																		TS
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I SLOPE	I INTERCEPT	I
		I			I			I			I			I			I (PCU/MIN)	I
I	ARM A	I	4.00	I	5.90	I	10.00	I	4.00	I	10.00	I	7.10	I	0.00	I 0.503	I 15.331	I
I	ARM B	I	3.40	I	4.00	I	5.00	I	3.50	I	20.00	I	19.00	I	0.00	I 0.787	I 18.259	I
I	ARM C	I	4.35	I	4.35	I	0.00	I	4.35	I	18.50	I	19.00	I	0.00	I 0.810	I 21.705	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

----- T13				
I	ARM	I	FLOW SCALE (%)	I

I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

----- T15

I ARM	A I	15.00	I	45.00	I	75.00	I	7.25	I	10.88	I	7.25	I
I ARM	B I	15.00	I	45.00	I	75.00	I	5.65	I	8.48	I	5.65	I
I ARM	C I	15.00	I	45.00	I	75.00	I	7.70	I	11.55	I	7.70	I

----- T33

```

I      -----
I      TIME      I FROM/TO I  ARM A I  ARM B I  ARM C I

```

I	07.45 - 09.15	I	I	I	I	I
I		ARM A	A	0.000 I	0.319 I	0.681 I
I			I	0.0 I	185.0 I	395.0 I
I			I	(0.0)I	(0.0)I	(0.0)I
I			I	I	I	I
I		ARM B	B	0.055 I	0.000 I	0.945 I
I			I	25.0 I	0.0 I	427.0 I
I			I	(0.0)I	(0.0)I	(0.0)I
I			I	I	I	I
I		ARM C	C	0.565 I	0.435 I	0.000 I
I			I	348.0 I	268.0 I	0.0 I
I			I	(0.0)I	(0.0)I	(0.0)I
I			I	I	I	I

.....

[illegible][illegible][illegible][illegible][illegible]

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15									I
I	ARM A	7.28	13.64	0.534	- -	-	2.0	1.2	18.5	I
I	ARM B	5.67	14.33	0.396	- -	-	1.0	0.7	10.3	I
I	ARM C	7.73	21.45	0.360	- -	-	0.8	0.6	8.7	I
I										I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.1	*
08.15	1.8	**
08.30	4.2	****
08.45	4.4	****
09.00	2.0	**
09.15	1.2	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	1.0	*
08.30	1.8	**
08.45	1.9	**
09.00	1.0	*
09.15	0.7	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.8	*
08.30	1.1	*
08.45	1.1	*
09.00	0.8	*
09.15	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	T75
I	I	I	I	I	* DELAY *	I	* DELAY *	I	I
I	I	I	I	I	I	I	I	I	I
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)
I	A	I	798.3	I	532.2	I	211.2	I	0.26
I	B	I	622.1	I	414.8	I	103.2	I	0.17
I	C	I	847.9	I	565.3	I	72.5	I	0.09
I	ALL	I	2268.4	I	1512.2	I	387.0	I	0.17

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
 ===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Queensway Whalley Road PM.vai"
(drive-on-the-left) at 16:16:01 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Whalley Rd N
ARM B - Queensway
ARM C - Whalley Rd S

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																		TS
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I SLOPE	I INTERCEPT	I
		I			I			I			I			I			I (PCU/MIN)	I
I	ARM A	I	4.00	I	5.90	I	10.00	I	4.00	I	10.00	I	7.10	I	0.00	I 0.503	I 15.331	I
I	ARM B	I	3.40	I	4.00	I	5.00	I	3.50	I	20.00	I	19.00	I	0.00	I 0.787	I 18.259	I
I	ARM C	I	4.35	I	4.35	I	0.00	I	4.35	I	18.50	I	19.00	I	0.00	I 0.810	I 21.705	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13
I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2012 Base + Dev

T15															
ARM		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)										
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	I	
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	I	
I	ARM	A	I	15.00	I	45.00	I	75.00	I	7.03	I	10.54	I	7.03	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	7.90	I	11.85	I	7.90	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	7.64	I	11.46	I	7.64	I

DEMAND SET TITLE: 2012 Base + Dev

T33									
		TURNING PROPORTIONS							
		TURNING COUNTS							
		(PERCENTAGE OF H.V.S)							
TIME		FROM/TO	ARM	A	ARM	B	ARM	C	
16.45	- 18.15								
		ARM A	0.000		0.288		0.712		
			0.0		162.0		400.0		
			(0.0)		(0.0)		(0.0)		
		ARM B	0.138		0.000		0.862		
			87.0		0.0		545.0		
			(0.0)		(0.0)		(0.0)		
		ARM C	0.637		0.363		0.000		
			389.0		222.0		0.0		
			(0.0)		(0.0)		(0.0)		

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	T70	
I	16.45-17.00									I	
I	ARM A	7.05	13.94	0.506	-	-	0.0	14.2	-	0.142	I
I	ARM B	7.93	14.35	0.553	-	-	0.0	17.0	-	0.152	I
I	ARM C	7.67	20.83	0.368	-	-	0.0	8.4	-	0.076	I

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	17.00-17.15								
	ARM A	8.42	13.66	0.616	-	-	1.0	1.6	0.188
	ARM B	9.47	13.56	0.698	-	-	1.2	2.2	0.236
	ARM C	9.15	20.66	0.443	-	-	0.6	0.8	0.087

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH_MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30									I
I	ARM A	10.31	13.29	0.776	-	-	1.6	42.7	0.314	I
I	ARM B	11.60	12.54	0.925	-	-	2.2	89.5	0.635	I
I	ARM C	11.21	20.45	0.548	-	-	0.8	17.3	0.108	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	17.30-17.45									I	
I	ARM A	10.31	13.28	0.776	-	-	3.2	3.3	48.9	0.333	I
I	ARM B	11.60	12.49	0.929	-	-	7.7	9.3	129.5	0.861	I
I	ARM C	11.21	20.42	0.549	-	-	1.2	1.2	18.0	0.109	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00									I
I	ARM A	8.42	13.65	0.617	-	-	3.3	1.7	-	0.199
I	ARM B	9.47	13.48	0.702	-	-	9.3	2.5	48.3	0.312
I	ARM C	9.15	20.60	0.444	-	-	1.2	0.8	12.5	0.088

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	ARM A	7.05	13.93	0.506	- -	1.7	1.0	16.4	-	0.147	I
I	ARM B	7.93	14.29	0.555	- -	2.5	1.3	20.3	-	0.161	I
I	ARM C	7.67	20.81	0.368	- -	0.8	0.6	9.0	-	0.076	I
I											I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.6	**
17.30	3.2	***
17.45	3.3	***
18.00	1.7	**
18.15	1.0	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.2	*
17.15	2.2	**
17.30	7.7	*****
17.45	9.3	*****
18.00	2.5	**
18.15	1.3	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.6	*
17.15	0.8	*
17.30	1.2	*
17.45	1.2	*
18.00	0.8	*
18.15	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75									
I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I
I	A	I	773.6	I	515.7	I	171.1	I	0.22
I	B	I	869.9	I	579.9	I	335.1	I	0.39
I	C	I	841.0	I	560.7	I	76.8	I	0.09
I	ALL	I	2484.4	I	1656.3	I	583.0	I	0.23

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA.

DEMAND SET TITLE: 2017 Base + Dev

T15															
		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)										
I		I	I	I	I		I		I						
I	ARM	I	I	I	I	I	I	I	I						
I	I	I	I	I	I	I	I	I	I						
I	I	I	I	I	I	I	I	I	I						
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK	PEAK							
I	ARM	A	I	15.00	I	45.00	I	75.00	I	7.55	I	11.33	I	7.55	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	5.88	I	8.81	I	5.88	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	8.02	I	12.04	I	8.02	I

DEMAND SET TITLE: 2017 Base + Dev

-----										T33
		I		TURNING PROPORTIONS				I		
		I		TURNING COUNTS				I		
		I		(PERCENTAGE OF H.V.S)				I		

TIME		I FROM/TO		I ARM A		I ARM B		I ARM C		

I	07.45 - 09.15	I	I	I		I		I		
I		I	ARM A	0.000	I	0.318	I	0.682	I	
I		I		0.0	I	192.0	I	412.0	I	
I		I		(0.0)	I	(0.0)	I	(0.0)	I	
I		I			I		I		I	
I		I	ARM B	0.055	I	0.000	I	0.945	I	
I		I		26.0	I	0.0	I	444.0	I	
I		I		(0.0)	I	(0.0)	I	(0.0)	I	
I		I			I		I		I	
I		I	ARM C	0.565	I	0.435	I	0.000	I	
I		I		363.0	I	279.0	I	0.0	I	
I		I		(0.0)	I	(0.0)	I	(0.0)	I	
I		I			I		I		I	

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	7.58	13.58	0.558	-	-	0.0	17.3	0.162
ARM B	5.90	14.24	0.414	-	-	0.0	10.0	0.119
ARM C	8.06	21.44	0.376	-	-	0.0	8.7	0.074

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15								
ARM A	9.05	13.23	0.684	-	-	1.2	2.1	28.8
ARM B	7.04	13.43	0.524	-	-	0.7	1.1	15.5
ARM C	9.62	21.39	0.450	-	-	0.6	0.8	11.8

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH_MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30								
I	ARM A	11.08	12.76	0.868	- -	2.1	5.3	66.6	0.479
I	ARM B	8.62	12.43	0.694	- -	1.1	2.2	29.7	0.254
I	ARM C	11.78	21.32	0.553	- -	0.8	1.2	17.6	0.104

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I	
I	08.30-08.45									I	
I	ARM A	11.08	12.76	0.869	- -	5.3	5.8	84.5	-	0.560	I
I	ARM B	8.62	12.33	0.700	- -	2.2	2.3	33.2	-	0.269	I
I	ARM C	11.78	21.32	0.553	- -	1.2	1.2	18.3	-	0.105	I

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY		AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH. MIN/		PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)		VEHICLE (MIN)
I										
I	08.45-09.00									
I	ARM A	9.05	13.22	0.684	-	-	5.8	2.3	38.9	0.267
I	ARM B	7.04	13.27	0.531	-	-	2.3	1.2	18.3	0.165
I	ARM C	9.62	21.39	0.450	-	-	1.2	0.8	12.7	0.085

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15									I
I	ARM A	7.58	13.57	0.559	- -	2.3	1.3	20.6	0.171	I
I	ARM B	5.90	14.16	0.417	- -	1.2	0.7	11.3	0.122	I
I	ARM C	8.06	21.44	0.376	- -	0.8	0.6	9.3	0.075	I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.2	*
08.15	2.1	**
08.30	5.3	*****
08.45	5.8	*****
09.00	2.3	**
09.15	1.3	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.1	*
08.30	2.2	**
08.45	2.3	**
09.00	1.2	*
09.15	0.7	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.8	*
08.30	1.2	*
08.45	1.2	*
09.00	0.8	*
09.15	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75									
I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	I
I	A	I	831.4	I	554.2	I	256.7	I	0.31
I	B	I	646.9	I	431.3	I	118.0	I	0.18
I	C	I	883.7	I	589.1	I	78.5	I	0.09
I	ALL	I	2361.9	I	1574.6	I	453.2	I	0.19

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
 ===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Queensway Whalley Road PM.vai"
(drive-on-the-left) at 16:19:31 on Friday, 5 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Whalley Rd N
ARM B - Queensway
ARM C - Whalley Rd S

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																		TS		
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I SLOPE	I INTERCEPT	I		
		I			I			I					I			I	(PCU/MIN)	I		
I	ARM A	I	4.00	I	5.90	I	10.00	I	4.00	I	10.00	I	7.10	I	0.00	I	0.503	I	15.331	I
I	ARM B	I	3.40	I	4.00	I	5.00	I	3.50	I	20.00	I	19.00	I	0.00	I	0.787	I	18.259	I
I	ARM C	I	4.35	I	4.35	I	0.00	I	4.35	I	18.50	I	19.00	I	0.00	I	0.810	I	21.705	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13
I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

T15										
ARM		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)					
I	I	I	I	I	I	I	I	I	I	
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE I AT TOP I AFTER I	
I	I	I	I	I	I	I	I	I	I	
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK I OF PEAK I PEAK I	
I	ARM	A	I	15.00	I	45.00	I	75.00	I	7.34 I 11.01 I 7.34 I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	8.24 I 12.36 I 8.24 I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	7.95 I 11.92 I 7.95 I

-----T33-----										
		TURNING PROPORTIONS						I		
		TURNING COUNTS						I		
		(PERCENTAGE OF H.V.S)						I		

TIME		I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I

I	16.45 - 18.15	I		I		I		I		I
I		I	ARM A	I	0.000	I	0.288	I	0.712	I
I		I		I	0.0	I	169.0	I	418.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM B	I	0.137	I	0.000	I	0.863	I
I		I		I	90.0	I	0.0	I	569.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM C	I	0.637	I	0.363	I	0.000	I
I		I		I	405.0	I	231.0	I	0.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00								
ARM A	7.37	13.88	0.531	-	-	0.0	15.6	0.150
ARM B	8.27	14.17	0.583	-	-	0.0	19.1	0.164
ARM C	7.98	20.80	0.384	-	-	0.0	9.0	0.078

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	10.77	13.20	0.816	-	-	1.8	3.9	51.4	0.370
ARM B	12.09	12.30	0.983	-	-	2.7	11.8	125.2	0.873
ARM C	11.67	20.43	0.571	-	-	0.8	1.3	18.9	0.113

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.45-18.00								
I	ARM A	8.80	13.59	0.647	- -	4.1	1.9	31.2	0.221
I	ARM B	9.87	13.25	0.745	- -	16.5	3.2	84.5	0.513
I	ARM C	9.53	20.51	0.465	- -	1.3	0.9	13.6	0.092

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15								
ARM A	7.37	13.87	0.531	-	-	1.9	18.2	0.156
ARM B	8.27	14.10	0.586	-	-	3.2	23.4	0.178
ARM C	7.98	20.78	0.384	-	-	0.9	9.7	0.078

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	1.1
17.15	1.8
17.30	3.9
17.45	4.1
18.00	1.9
18.15	1.2

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.4	*
17.15	2.7	***
17.30	11.8	*****
17.45	16.5	*****
18.00	3.2	***
18.15	1.5	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6
17.15	0.8
17.30	1.3
17.45	1.3
18.00	0.9
18.15	0.6

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75									
I	ARM	I	TOTAL	I	* QUEUEING *	I	* INCLUSIVE	I	* QUEUEING *
I		I	DEMAND	I	* DELAY *	I	* DELAY *	I	
I		I	(VEH)	I	(MIN)	I	(MIN)	I	(MIN)
I	A	I	808.0	I	538.6	I	202.2	I	0.25
I	B	I	907.1	I	604.7	I	503.7	I	0.56
I	C	I	875.4	I	583.6	I	83.3	I	0.10
I	ALL	I	2590.4	I	1727.0	I	789.2	I	0.30

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

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END OF JOB
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===== end of file =====
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A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Whalley Road Queensway\
Queensway Whalley Road AM With Improvments.vai"
(drive-on-the-left) at 10:27:58 on Sunday, 7 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Whalley Rd N
ARM B - Queensway
ARM C - Whalley Rd S

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																			T5	
I	ARM	I	V (M)	I	E (M)	I	Lm (M)	I	Vm (M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	4.00	I	7.50	I	20.00	I	4.00	I	10.00	I	7.10	I	0.00	I	0.556	I	19.066	I
I	ARM B	I	3.40	I	6.50	I	15.00	I	3.50	I	20.00	I	19.00	I	0.00	I	0.859	I	23.360	I
I	ARM C	I	4.35	I	7.00	I	15.00	I	4.35	I	18.50	I	19.00	I	0.00	I	0.895	I	27.659	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13			
I	ARM	I	FLOW SCALE(%)
I	A	I	100
I	B	I	100
I	C	I	100

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 Base + Dev

T15															
		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)										
I	I	I	I	I	I	I	I	I							
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE I AT TOP I AFTER I						
I		I		I		I		I							
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK I OF PEAK I PEAK I						
I	ARM	A	I	15.00	I	45.00	I	75.00	I	7.79	I	11.68	I	7.79	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	5.88	I	8.81	I	5.88	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	8.00	I	12.00	I	8.00	I

DEMAND SET TITLE: 2017 Base + Dev

							T33
		I	TURNING PROPORTIONS			I	
		I	TURNING COUNTS			I	
		I	(PERCENTAGE OF H.V.S)			I	
		I				I	
TIME		I FROM/TO I	ARM A I	ARM B I	ARM C I		
I	07.45 - 09.15	I	I	I	I	I	
I		I	ARM A I	0.000 I	0.308 I	0.692 I	
I		I	I	0.0 I	192.0 I	431.0 I	
I		I	I	(0.0)I	(0.0)I	(0.0)I	
I		I	I	I	I	I	
I		I	ARM B I	0.055 I	0.000 I	0.945 I	
I		I	I	26.0 I	0.0 I	444.0 I	
I		I	I	(0.0)I	(0.0)I	(0.0)I	
I		I	I	I	I	I	
I		I	ARM C I	0.566 I	0.434 I	0.000 I	
I		I	I	362.0 I	278.0 I	0.0 I	
I		I	I	(0.0)I	(0.0)I	(0.0)I	
I		I	I	I	I	I	

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	7.82	17.13	0.456	-	0.0	0.8	11.9	0.106
ARM B	5.90	18.75	0.315	-	0.0	0.5	6.6	0.077
ARM C	8.03	27.37	0.293	-	0.0	0.4	6.1	0.052

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15								
ARM A	9.33	16.75	0.557	-	-	0.8	1.2	17.8
ARM B	7.04	17.83	0.395	-	-	0.5	0.6	9.5
ARM C	9.59	27.31	0.351	-	-	0.4	0.5	7.9

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH. MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
	08.15-08.30									
	ARM A	11.43	16.23	0.704	-	-	1.2	2.3	31.8	0.202
	ARM B	8.62	16.60	0.519	-	-	0.6	1.1	15.3	0.124
	ARM C	11.74	27.23	0.431	-	-	0.5	0.8	11.1	0.064

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH_MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	-								
I	08.30-08.45								
I	ARM A	11.43	16.23	0.704	- -	2.3	2.3	34.7	0.208
I	ARM B	8.62	16.56	0.521	- -	1.1	1.1	16.1	0.126
I	ARM C	11.74	27.23	0.431	- -	0.8	0.8	11.3	0.065

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH_MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	
08.45-09.00									
ARM A	9.33	16.75	0.557	-	-	2.3	1.3	20.3	0.137
ARM B	7.04	17.77	0.396	-	-	1.1	0.7	10.3	0.094
ARM C	9.59	27.31	0.351	-	-	0.8	0.5	8.3	0.057

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	ARM A	7.82	17.12	0.456	- -	1.3	0.9	13.2	-	0.108	I
I	ARM B	5.90	18.70	0.315	- -	0.7	0.5	7.1	-	0.078	I
I	ARM C	8.03	27.37	0.293	- -	0.5	0.4	6.4	-	0.052	I
I											I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.2	*
08.30	2.3	**
08.45	2.3	**
09.00	1.3	*
09.15	0.9	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	
08.15	0.6	*
08.30	1.1	*
08.45	1.1	*
09.00	0.7	*
09.15	0.5	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.5	*
08.30	0.8	*
08.45	0.8	*
09.00	0.5	*
09.15	0.4	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	T75
I	I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	I
I	A	I	857.5	I	571.7	I	129.6	I	0.15
I	B	I	646.9	I	431.3	I	64.9	I	0.10
I	C	I	880.9	I	587.3	I	51.1	I	0.06
I	ALL	I	2385.3	I	1590.2	I	245.5	I	0.10

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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RG40 3GA,UK

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Whalley Road Queensway\
Queensway Whalley Road PM With Improvments.vai"
(drive-on-the-left) at 10:26:18 on Sunday, 7 October 2012

FILE PROPERTIES

RUN TITLE: Clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Whalley Rd N
ARM B - Queensway
ARM C - Whalley Rd S

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

T5																				
I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	4.00	I	7.50	I	20.00	I	4.00	I	10.00	I	7.10	I	0.00	I	0.556	I	19.066	I
I	ARM B	I	3.40	I	6.50	I	15.00	I	3.50	I	20.00	I	19.00	I	0.00	I	0.859	I	23.360	I
I	ARM C	I	4.35	I	7.00	I	15.00	I	4.35	I	18.50	I	19.00	I	0.00	I	0.895	I	27.659	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

----- T13			
I	ARM	I	FLOW SCALE(%) I
I	A	I	100 I
I	B	I	100 I
I	C	I	100 I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

T15

I ARM	A I	15.00	I	45.00	I	75.00	I	7.46	I	11.19	I	7.46	I
I ARM	B I	15.00	I	45.00	I	75.00	I	8.30	I	12.45	I	8.30	I
I ARM	C I	15.00	I	45.00	I	75.00	I	7.84	I	11.76	I	7.84	I

T33

[illegible]

T70

I 16.45-17.00											
I ARM A	7.49	17.48	0.429	-	-	-	0.0	0.7	10.7	-	0.099
I ARM B	8.33	18.78	0.444	-	-	-	0.0	0.8	11.4	-	0.095
I ARM C	7.87	26.65	0.295	-	-	-	0.0	0.4	6.1	-	0.053

I 17.00-17.15										
I ARM A	8.94	17.17	0.521	-	-	-	0.7	1.1	15.5	-
I ARM B	9.95	17.86	0.557	-	-	-	0.8	1.2	17.8	-
I ARM C	9.39	26.46	0.355	-	-	-	0.4	0.5	8.1	-

I 17.15-17.30											
I ARM A	10.96	16.74	0.654	-	-	-	1.1	1.8	25.9	-	0.170
I ARM B	12.18	16.64	0.732	-	-	-	1.2	2.6	35.8	-	0.215
I ARM C	11.51	26.19	0.439	-	-	-	0.5	0.8	11.4	-	0.068

I	17.30-17.45											
I	ARM A	10.96	16.74	0.654	-	-	-	1.8	1.9	27.8	-	0.172
I	ARM B	12.18	16.61	0.734	-	-	-	2.6	2.7	39.7	-	0.225
I	ARM C	11.51	26.18	0.439	-	-	-	0.8	0.8	11.7	-	0.068

I	17.45-18.00										
I ARM A	8.94	17.16	0.521	-	-	-	1.9	1.1	17.3	-	0.123
I ARM B	9.95	17.82	0.558	-	-	-	2.7	1.3	20.4	-	0.130
I ARM C	9.39	26.44	0.355	-	-	-	0.8	0.6	8.5	-	0.059

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	ARM A	7.49	17.47	0.429	- -	1.1	0.8	11.7	-	0.101	I
I	ARM B	8.33	18.73	0.445	- -	1.3	0.8	12.6	-	0.097	I
I	ARM C	7.87	26.64	0.295	- -	0.6	0.4	6.4	-	0.053	I
I											I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.7	*
17.15	1.1	*
17.30	1.8	**
17.45	1.9	**
18.00	1.1	*
18.15	0.8	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.2	*
17.30	2.6	***
17.45	2.7	***
18.00	1.3	*
18.15	0.8	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	*
17.30	0.8	*
17.45	0.8	*
18.00	0.6	*
18.15	0.4	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I		I
I		I	(VEH)	I	(MIN)	I	(MIN)	I	(MIN/VEH)	I
I	A	I	821.7	I	547.8	I	109.0	I	0.13	I
I	B	I	913.9	I	609.3	I	137.5	I	0.15	I
I	C	I	863.0	I	575.3	I	52.2	I	0.06	I
I	ALL	I	2598.7	I	1732.5	I	298.7	I	0.11	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Shawbridge Street Waterloo Road\
Shawbridge Street Waterloo Road 2017 Base Plus Improvements AM and PM.vai"
(drive-on-the-left) at 09:43:42 on Monday, 8 October 2012

FILE PROPERTIES

RUN TITLE: clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Shawbridge St
ARM B - Waterloo Road S
ARM C - Waterloo Road N

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																			T5	
I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	4.35	I	5.50	I	2.60	I	4.35	I	11.80	I	8.30	I	0.00	I	0.486	I	14.352	I
I	ARM B	I	3.65	I	5.80	I	5.80	I	3.65	I	18.00	I	19.00	I	0.00	I	0.825	I	23.430	I
I	ARM C	I	3.65	I	5.20	I	7.60	I	3.65	I	10.50	I	4.30	I	0.00	I	0.473	I	16.595	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K = entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I	ARM	I	FLOW SCALE(%)	I	
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 AM Base + Dev

T15									
I	I	NUMBER OF MINUTES FROM START WHEN			I	RATE OF FLOW (VEH/MIN)			I
		I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS		I BEFORE	I AT TOP	I AFTER	
I	I	I	I	I	I	I	I	I	I
I	I	I TO RISE	I IS REACHED	I FALLING	I	I PEAK	I OF PEAK	I PEAK	I
I ARM A	I	15.00	45.00	75.00	I	5.15	7.73	5.15	I
I ARM B	I	15.00	45.00	75.00	I	5.20	7.80	5.20	I
I ARM C	I	15.00	45.00	75.00	I	9.91	14.87	9.91	I

DEMAND SET TITLE: 2017 AM Base + Dev

										T33
I			TURNING PROPORTIONS						I	
I			TURNING COUNTS						I	
I			(PERCENTAGE OF H.V.S)						I	
I									I	
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
I									I	
I	07.45 - 09.15	I		I		I		I		I
I		I	ARM A	I	0.000	I	0.189	I	0.811	I
I		I		I	0.0	I	78.0	I	334.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM B	I	0.252	I	0.000	I	0.748	I
I		I		I	105.0	I	0.0	I	311.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM C	I	0.386	I	0.614	I	0.000	I
I		I		I	306.0	I	487.0	I	0.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70									
I	I	I	I	I	I	I	I	I	I
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY	
(VEH/MIN)	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING	
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)	
07.45-08.00									
I ARM A	5.17	11.41	0.453	-	0.0	0.8	11.5	0.158	I
I ARM B	5.22	20.01	0.261	-	0.0	0.4	5.1	0.067	I
I ARM C	9.95	15.98	0.623	-	0.0	1.6	22.4	0.160	I
08.00-08.15									
I ARM A	6.17	10.83	0.570	-	0.8	1.3	18.2	0.212	I
I ARM B	6.23	19.32	0.323	-	0.4	0.5	6.9	0.076	I
I ARM C	11.88	15.85	0.750	-	1.6	2.8	38.8	0.242	I
08.15-08.30									
I ARM A	7.56	10.12	0.747	-	1.3	2.7	36.2	0.364	I
I ARM B	7.63	18.45	0.414	-	0.5	0.7	10.2	0.092	I
I ARM C	14.55	15.69	0.928	-	2.8	8.4	99.4	0.558	I
08.30-08.45									
I ARM A	7.56	10.04	0.753	-	2.7	2.9	42.2	0.397	I
I ARM B	7.63	18.39	0.415	-	0.7	0.7	10.5	0.093	I
I ARM C	14.55	15.68	0.928	-	8.4	9.8	138.2	0.722	I
08.45-09.00									
I ARM A	6.17	10.67	0.578	-	2.9	1.4	22.9	0.232	I
I ARM B	6.23	19.24	0.324	-	0.7	0.5	7.4	0.077	I
I ARM C	11.88	15.85	0.750	-	9.8	3.2	59.5	0.314	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	ARM A	5.17	11.35	0.455	- -	1.4	0.9	13.4	-	0.164	I
I	ARM B	5.22	19.95	0.262	- -	0.5	0.4	5.4	-	0.068	I
I	ARM C	9.95	15.97	0.623	- -	3.2	1.7	27.1	-	0.172	I
I											I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.3	*
08.30	2.7	***
08.45	2.9	***
09.00	1.4	*
09.15	0.9	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.5	
08.30	0.7	*
08.45	0.7	*
09.00	0.5	
09.15	0.4	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.6	**
08.15	2.8	***
08.30	8.4	*****
08.45	9.8	*****
09.00	3.2	***
09.15	1.7	**

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL	I	DEMAND	I	* QUEUEING	I	* INCLUSIVE	I	QUEUEING	I
I	I	I	I	I	I	I	* DELAY	I	* DELAY	I	* DELAY	I
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I	(MIN)	I
I	A	I	567.1	I	378.1	I	144.4	I	0.25	I	144.5	I
I	B	I	572.6	I	381.7	I	45.7	I	0.08	I	45.7	I
I	C	I	1091.5	I	727.7	I	385.5	I	0.35	I	385.6	I
I	ALL	I	2231.2	I	1487.5	I	575.6	I	0.26	I	575.8	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.

* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.

* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

Printed at 09:45:52 on 08/10/2012]

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"a:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\ARCADY\Shawbridge Street Waterloo Road\
Shawbridge Street Waterloo Road 2017 Base Plus Improvements AM and PM.vai"
(drive-on-the-left) at 09:46:34 on Monday, 8 October 2012

FILE PROPERTIES

RUN TITLE: clitheroe
LOCATION:
DATE: 05/10/12
CLIENT:
ENUMERATOR: Administrator
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Shawbridge St
ARM B - Waterloo Road S
ARM C - Walerloo Road N

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

T5																				
I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	4.35	I	5.50	I	2.60	I	4.35	I	11.80	I	8.30	I	0.00	I	0.486	I	14.352	I
I	ARM B	I	3.65	I	5.80	I	5.80	I	3.65	I	18.00	I	19.00	I	0.00	I	0.825	I	23.430	I
I	ARM C	I	3.65	I	5.20	I	7.60	I	3.65	I	10.50	I	4.30	I	0.00	I	0.473	I	16.595	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

				T13	
I	ARM	I	FLOW SCALE(%)	I	
I	A	I	100	I	
I	B	I	100	I	
I	C	I	100	I	

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2017 PM Base + Dev

T15									
ARM	NUMBER OF FLOW STARTS	MINUTES FROM START WHEN TOP OF PEAK IS REACHED	MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK			
ARM A	15.00	45.00	75.00	4.99	7.48	4.99			
ARM B	15.00	45.00	75.00	5.16	7.74	5.16			
ARM C	15.00	45.00	75.00	11.29	16.93	11.29			

DEMAND SET TITLE: 2017 PM Base + Dev

T33						
TIME	FROM/TO	ARM A	ARM B	ARM C		
07.45 - 09.15						
	ARM A	0.000	0.338	0.662		
		0.0	135.0	264.0		
		(0.0)	(0.0)	(0.0)		
	ARM B	0.228	0.000	0.772		
		94.0	0.0	319.0		
		(0.0)	(0.0)	(0.0)		
	ARM C	0.383	0.617	0.000		
		346.0	557.0	0.0		
		(0.0)	(0.0)	(0.0)		

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	5.01	11.00	0.455	-	0.0	0.8	11.6	0.164
ARM B	5.18	20.73	0.250	-	0.0	0.3	4.9	0.064
ARM C	11.33	16.04	0.706	-	0.0	2.3	31.3	0.200

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15								
ARM A	5.98	10.35	0.578	-	0.8	1.3	18.7	0.225
ARM B	6.19	20.19	0.307	-	0.3	0.4	6.5	0.071
ARM C	13.53	15.93	0.849	-	2.3	4.9	63.5	0.365

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30								
ARM A	7.32	9.76	0.750	-	1.3	2.7	36.6	0.380
ARM B	7.58	19.49	0.389	-	0.4	0.6	9.2	0.084
ARM C	16.57	15.78	1.050	-	4.9	23.5	227.3	1.159

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45								
ARM A	7.32	9.67	0.757	-	2.7	2.9	42.9	0.418
ARM B	7.58	19.44	0.390	-	0.6	0.6	9.5	0.084
ARM C	16.57	15.78	1.050	-	23.5	37.6	460.5	2.147

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00								
ARM A	5.98	9.71	0.616	-	2.9	1.7	27.1	0.280
ARM B	6.19	20.12	0.307	-	0.6	0.4	6.8	0.072
ARM C	13.53	15.93	0.849	-	37.6	8.4	340.5	1.587

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	ARM A	5.01	10.84	0.462	- -	1.7	0.9	13.9	-	0.175	I
I	ARM B	5.18	20.67	0.251	- -	0.4	0.3	5.1	-	0.065	I
I	ARM C	11.33	16.04	0.707	- -	8.4	2.5	45.8	-	0.251	I
I											I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.3	*
08.30	2.7	***
08.45	2.9	***
09.00	1.7	**
09.15	0.9	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.4	
08.30	0.6	*
08.45	0.6	*
09.00	0.4	
09.15	0.3	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	2.3	**
08.15	4.9	*****
08.30	23.5	*****
08.45	37.6	*****
09.00	8.4	*****
09.15	2.5	***

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	T75
I	I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I
I	A	I	549.2	I	366.1	I	150.7	I	0.27
I	B	I	568.5	I	379.0	I	42.0	I	0.07
I	C	I	1242.9	I	828.6	I	1168.8	I	0.94
I	ALL	I	2360.6	I	1573.7	I	1361.6	I	0.58

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB
 ===== end of file =====

Appendix G

OSCADY PRO

GUI Version: 1.3 [16/04/09]
Analysis Program Version: v1.3 23/03/2009

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E-mail: software@trl.co.uk
Web: www.trlsoftware.co.uk

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File: A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Oscady Pro\Castle View Signals\Castle View Bawdlands Parsons Lane Signals.osc
Report generation date: 07/10/2012 12:44:20

Summary

File Description

Title	(untitled)
Date	05/10/2012
Location	
Driving Side	Left
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Status	(new file)
Description	

Run Options

Run Evaluation Set	No
Evaluation Only	No
Optimise Critical Cycle TimeOnly	Yes
Use Horizontal Queues	Yes
Favour Continuous Green	No
Phase Timings Fuzziness (s)	0.5
Integer Phase Timings	Yes
Phase Snapping Distance (s)	0
Automatic Lane Turning Props	Yes
Automatic Vehicle Props	No

Geometry

Arms

Arm	Name	Exit Width (m)	Approach Speed (kph)	Exit Speed (kph)	Speed Limit (kph)	Stagger Distance (m)
1	Parsons Lane	50.0	10	10	80	0
2	Castle View	50.0	10	10	80	0
3	Bawdlands	50.0	10	10	80	0

Traffic Streams

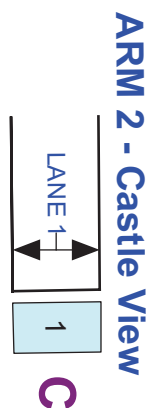
Arm	Traffic Stream	Type	Name	Sat Flow (PCU/hr)	Estimate Sat Flow	Sat Flow 2 (PCU/hr)	Green Phase	Arrow Phase
1	1	Traffic		1859	Yes	0	A	-
2	1	Traffic		1572	Yes	0	C	-
3	1	Traffic		1968	Yes	0	B	-

Arm	Traffic Stream	Relative Start Displacement (s)	Relative End Displacement (s)	Max Deg Sat (%)	Delay Weight (%)	Max Queue (PCU)	Initial Queue (PCU)	Average PCU Per Veh	Heavy Vehicles Percentage
1	1	0.0	0.0	90	100	0	0.0	1.10	0
2	1	0.0	0.0	90	100	0	0.0	1.10	0
3	1	0.0	0.0	90	100	0	0.0	1.10	0

Lanes

Arm	Traffic Stream	Lane	Name	Nearside Dest Arm	Straight Dest Arm	Offside Dest Arm	Proportion That Turn	Turning Radius (m)	IsNearside Lane	Width (m)	Gradient (%)	Short Lane Storage (PCU)
1	1	1			3	2	0.09	7	Yes	2.80	0.0	0
2	1	1		1		3	1.00	6	Yes	3.50	0.0	0
3	1	1		2	1		0.04	16	Yes	3.60	0.0	0

Junction Diagram



ARM 3 - Bawdlands



Signals

Signals

Max Cycle Time (s)	120
Fixed Cycle Time (s)	0
Evaluation Cycle Time (s)	0
Start Displacement (s)	1.4
End Displacement (s)	2.9

Phases

Phase	Name	Type	Associated Phase	Phase Min Green (s)	Phase Max Green (s)	Double Green
A	(Name)	Traffic	-	7.0	0.0	No
B	(Name)	Traffic	-	7.0	0.0	No
C	(Name)	Traffic	-	7.0	0.0	No

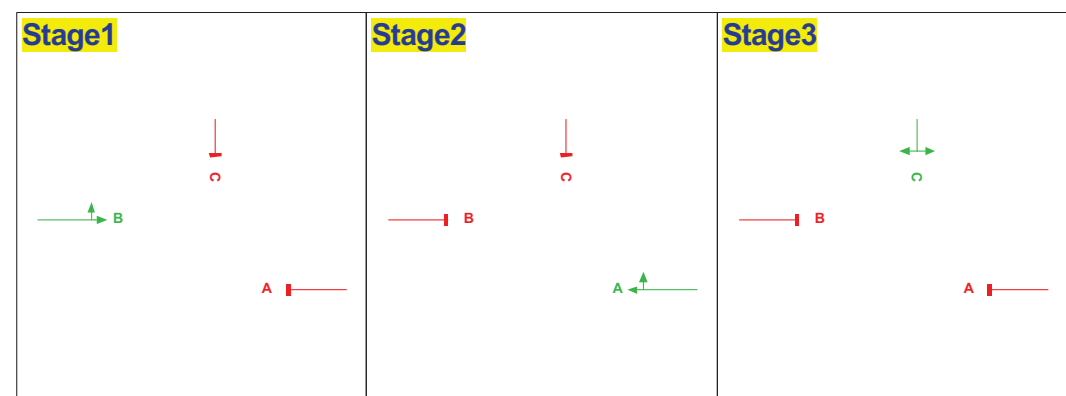
Intergreen Matrix

	To			
		A	B	C
From	A	-	8	8
	B	5	-	5
	C	5	5	-

Stages

Stage	Stage Min Green (s)	Phases In This Stage	Use To Generate Sequences
1	7.0	B	Yes
2	7.0	A	Yes
3	7.0	C	Yes

Stage Diagrams



Sequences

Sequence	Name	Stages In This Sequence
1		1,2,3

Constraints

(No constraints)

Traffic

Note: Traffic flows are only shown for selected demand sets. Resultant flows are the sums of the selected demand sets adjusted by the global traffic scaling factor, and are shown as the arrival rates in the final results tables.

Configuration

Traffic Scaling Factor	1.00
Time Period (min)	60
Time Segment Length (min)	15
Signal Optimiser Flows	Average
PCUs per Heavy Vehicle	2.00

Demand Sets

Name	Selected	Time Start	Time End	Profile Type	Use Relationship	Relationship
2012 AM Base	Yes	08:00	09:00	FLAT	No	D1
2012 PM Base	No	08:00	09:00	FLAT	No	D1
2017 AM Base	No	08:00	09:00	FLAT	No	D1
2017 PM Base	No	08:00	09:00	FLAT	No	D1
2012 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2012 PM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 PM Base + Dev	No	08:00	09:00	FLAT	No	D1

Demand Set1 - 2012 AM Base

Traffic flows (PCU/hr)

Arm	Traffic Stream	Phase	08:00-09:00
1 - Parsons Lane	1	A	319
2 - Castle View	1	C	90
3 - Bawdlands	1	B	430

Turning Proportions

Arm	Left Movement Percentage	Straight Movement Percentage	Right Movement Percentage
1 - Parsons Lane	-	91	9
2 - Castle View	54	-	46
3 - Bawdlands	4	96	-

Results

Note: Duplicate solutions are not shown.

Sequence1; Objective: CRITICAL CYCLE TIME

Errors and Warnings

Code	Description
W6	The option to optimise for critical cycle time only has been selected.

Summary

Cycle Time (s)	Practical Reserve Capacity (%)	Rate of Delay (PCU)	Weighted Rate of Delay (PCU)	Geometric Delay (PCU-min)
41.0	5.49	8.85	8.85	17.0

- Cycle Time is the minimum cycle time that meets all safety criteria whilst optimising this objective.
- PRC is the lowest value encountered over all streams.
- Rate of delay is the sum of each stream's rate of delay.

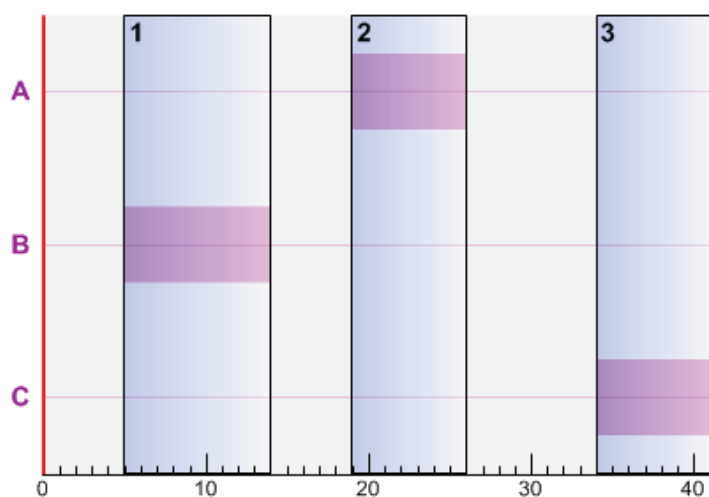
Stage Timings

Stage	Start Time (s)	Duration (s)	End Time (s)
1	5.0	9.0	14.0
2	19.0	7.0	26.0
3	34.0	7.0	0.0

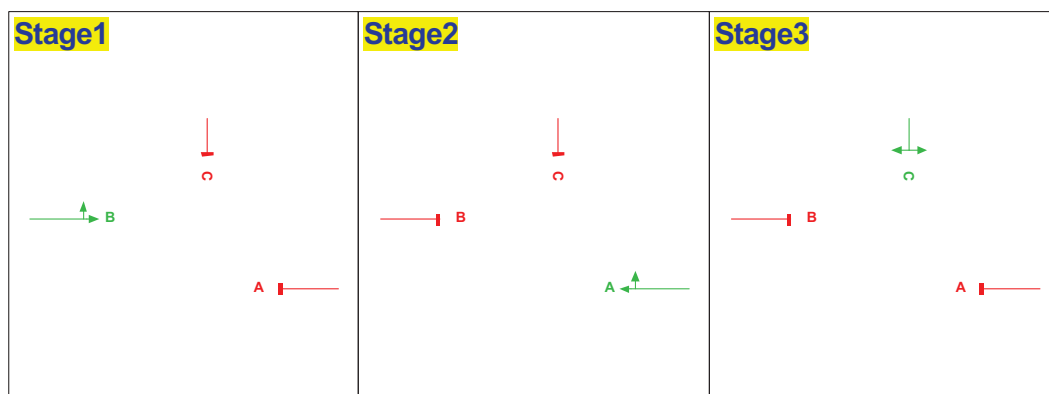
Phase Timings

Phase	Start Time (s)	Duration (s)	End Time (s)	Filter Arrow Time (s)	Indicative Arrow Start (s)	Indicative Arrow Duration (s)	Start Time (s) (2nd green)	Duration (s) (2nd green)	End Time (s) (2nd green)
A	19	7.0	26						
B	5	9.0	14						
C	34	7.0	0						

Phase Timings Diagram



Final Stage Sequence



Traffic Stream Details

Arm	Traffic Stream	Arrival Rate (PCU/hr)	Controlling Phase	Effective Green (s)	Average Delay (s)	Rate of Delay (PCU)	Degree of Saturation (%)	Practical Reserve Capacity (%)	Queue at End of Green (PCU)	Queue at End of Red (PCU)	Uniform Queue (PCU)	Geometric Delay (PCU-min)
1	1	319	A	8.50	42.37	3.75	82.77	8.73	2.66	5.74	3.08	5.50
2	1	90	C	8.50	16.43	0.41	27.62	225.90	0.07	0.90	0.83	3.60
3	1	430	B	10.50	39.20	4.68	85.32	5.49	3.39	7.37	3.99	7.90

OSCADY PRO

GUI Version: 1.3 [16/04/09]
Analysis Program Version: v1.3 23/03/2009

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File: A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Oscady Pro\Castle View Signals\Castle View Bawdlands Parsons Lane Signals.osc
Report generation date: 07/10/2012 12:45:45

Summary

File Description

Title	(untitled)
Date	05/10/2012
Location	
Driving Side	Left
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Status	(new file)
Description	

Run Options

Run Evaluation Set	No
Evaluation Only	No
Optimise Critical Cycle TimeOnly	Yes
Use Horizontal Queues	Yes
Favour Continuous Green	No
Phase Timings Fuzziness (s)	0.5
Integer Phase Timings	Yes
Phase Snapping Distance (s)	0
Automatic Lane Turning Props	Yes
Automatic Vehicle Props	No

Geometry

Arms

Arm	Name	Exit Width (m)	Approach Speed (kph)	Exit Speed (kph)	Speed Limit (kph)	Stagger Distance (m)
1	Parsons Lane	50.0	10	10	80	0
2	Castle View	50.0	10	10	80	0
3	Bawdlands	50.0	10	10	80	0

Traffic Streams

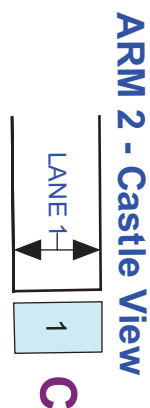
Arm	Traffic Stream	Type	Name	Sat Flow (PCU/hr)	Estimate Sat Flow	Sat Flow 2 (PCU/hr)	Green Phase	Arrow Phase
1	1	Traffic		1859	Yes	0	A	-
2	1	Traffic		1572	Yes	0	C	-
3	1	Traffic		1968	Yes	0	B	-

Arm	Traffic Stream	Relative Start Displacement (s)	Relative End Displacement (s)	Max Deg Sat (%)	Delay Weight (%)	Max Queue (PCU)	Initial Queue (PCU)	Average PCU Per Veh	Heavy Vehicles Percentage
1	1	0.0	0.0	90	100	0	0.0	1.10	0
2	1	0.0	0.0	90	100	0	0.0	1.10	0
3	1	0.0	0.0	90	100	0	0.0	1.10	0

Lanes

Arm	Traffic Stream	Lane	Name	Nearside Dest Arm	Straight Dest Arm	Offside Dest Arm	Proportion That Turn	Turning Radius (m)	IsNearside Lane	Width (m)	Gradient (%)	Short Lane Storage (PCU)
1	1	1			3	2	0.09	7	Yes	2.80	0.0	0
2	1	1		1		3	1.00	6	Yes	3.50	0.0	0
3	1	1		2	1		0.04	16	Yes	3.60	0.0	0

Junction Diagram



ARM 3 - Bawdlands



Signals

Signals

Max Cycle Time (s)	120
Fixed Cycle Time (s)	0
Evaluation Cycle Time (s)	0
Start Displacement (s)	1.4
End Displacement (s)	2.9

Phases

Phase	Name	Type	Associated Phase	Phase Min Green (s)	Phase Max Green (s)	Double Green
A	(Name)	Traffic	-	7.0	0.0	No
B	(Name)	Traffic	-	7.0	0.0	No
C	(Name)	Traffic	-	7.0	0.0	No

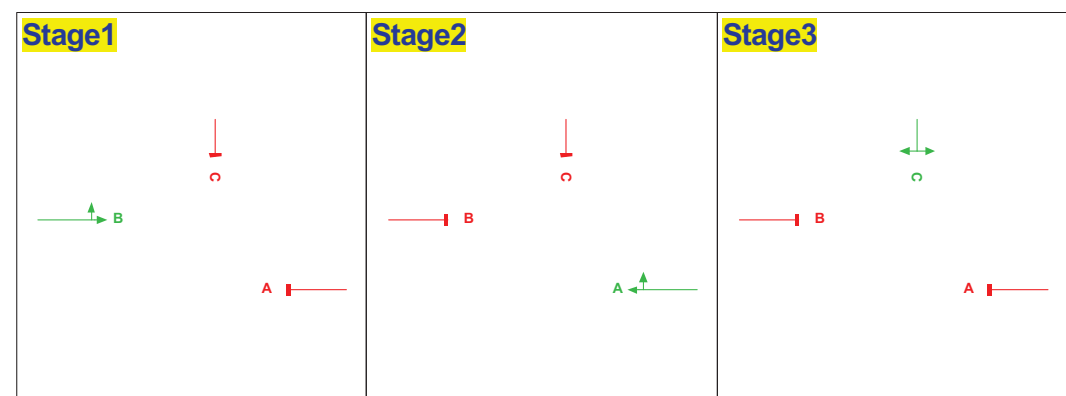
Intergreen Matrix

	To			
		A	B	C
From	A	-	8	8
	B	5	-	5
	C	5	5	-

Stages

Stage	Stage Min Green (s)	Phases In This Stage	Use To Generate Sequences
1	7.0	B	Yes
2	7.0	A	Yes
3	7.0	C	Yes

Stage Diagrams



Sequences

Sequence	Name	Stages In This Sequence
1		1,2,3

Constraints

(No constraints)

Traffic

Note: Traffic flows are only shown for selected demand sets. Resultant flows are the sums of the selected demand sets adjusted by the global traffic scaling factor, and are shown as the arrival rates in the final results tables.

Configuration

Traffic Scaling Factor	1.00
Time Period (min)	60
Time Segment Length (min)	15
Signal Optimiser Flows	Average
PCUs per Heavy Vehicle	2.00

Demand Sets

Name	Selected	Time Start	Time End	Profile Type	Use Relationship	Relationship
2012 AM Base	No	08:00	09:00	FLAT	No	D1
2012 PM Base	Yes	08:00	09:00	FLAT	No	D1
2017 AM Base	No	08:00	09:00	FLAT	No	D1
2017 PM Base	No	08:00	09:00	FLAT	No	D1
2012 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2012 PM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 PM Base + Dev	No	08:00	09:00	FLAT	No	D1

Demand Set2 - 2012 PM Base

Traffic flows (PCU/hr)

Arm	Traffic Stream	Phase	08:00-09:00
1 - Parsons Lane	1	A	555
2 - Castle View	1	C	74
3 - Bawdlands	1	B	363

Turning Proportions

Arm	Left Movement Percentage	Straight Movement Percentage	Right Movement Percentage
1 - Parsons Lane	-	87	13
2 - Castle View	58	-	42
3 - Bawdlands	7	93	-

Results

Note: Duplicate solutions are not shown.

Sequence1; Objective: CRITICAL CYCLE TIME

Errors and Warnings

Code	Description
W6	The option to optimise for critical cycle time only has been selected.

Summary

Cycle Time (s)	Practical Reserve Capacity (%)	Rate of Delay (PCU)	Weighted Rate of Delay (PCU)	Geometric Delay (PCU-min)
49.0	1.51	11.73	11.73	19.5

- Cycle Time is the minimum cycle time that meets all safety criteria whilst optimising this objective.
- PRC is the lowest value encountered over all streams.
- Rate of delay is the sum of each stream's rate of delay.

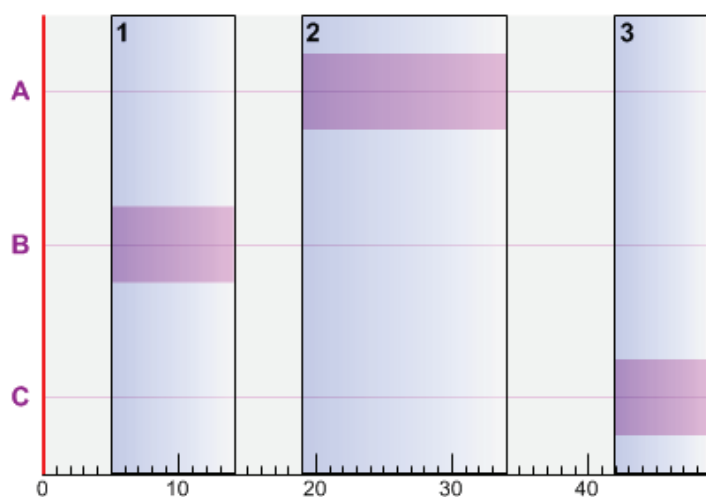
Stage Timings

Stage	Start Time (s)	Duration (s)	End Time (s)
1	5.0	9.0	14.0
2	19.0	15.0	34.0
3	42.0	7.0	0.0

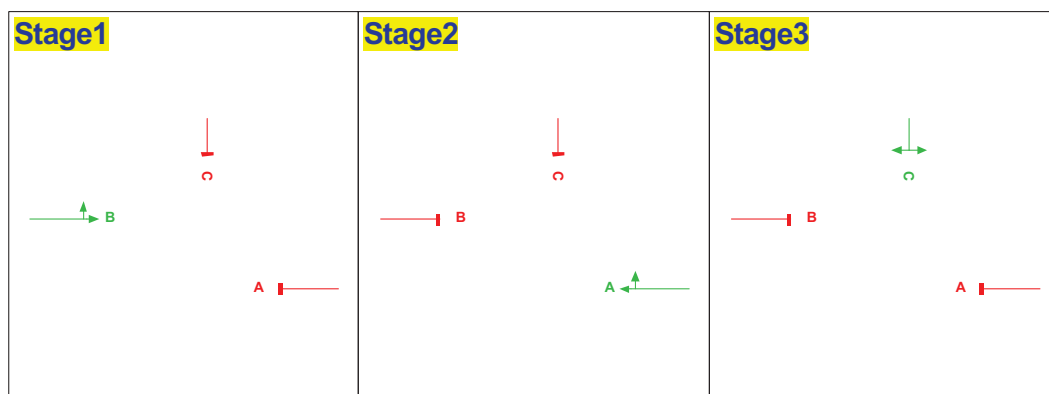
Phase Timings

Phase	Start Time (s)	Duration (s)	End Time (s)	Filter Arrow Time (s)	Indicative Arrow Start (s)	Indicative Arrow Duration (s)	Start Time (s) (2nd green)	Duration (s) (2nd green)	End Time (s) (2nd green)
A	19	15.0	34						
B	5	9.0	14						
C	42	7.0	0						

Phase Timings Diagram



Final Stage Sequence



Traffic Stream Details

Arm	Traffic Stream	Arrival Rate (PCU/hr)	Controlling Phase	Effective Green (s)	Average Delay (s)	Rate of Delay (PCU)	Degree of Saturation (%)	Practical Reserve Capacity (%)	Queue at End of Green (PCU)	Queue at End of Red (PCU)	Uniform Queue (PCU)	Geometric Delay (PCU-min)
1	1	555	A	16.50	41.28	6.36	88.66	1.51	4.78	10.42	5.64	11.10
2	1	74	C	8.50	20.80	0.43	27.14	231.65	0.07	0.91	0.85	2.60
3	1	363	B	10.50	49.02	4.94	86.08	4.56	3.52	7.71	4.19	5.80

OSCADY PRO

GUI Version: 1.3 [16/04/09]
Analysis Program Version: v1.3 23/03/2009

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File: A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Oscady Pro\Castle View Signals\Castle View Bawdlands Parsons Lane Signals.osc
Report generation date: 07/10/2012 12:47:44

Summary

File Description

Title	(untitled)
Date	05/10/2012
Location	
Driving Side	Left
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Status	(new file)
Description	

Run Options

Run Evaluation Set	No
Evaluation Only	No
Optimise Critical Cycle TimeOnly	Yes
Use Horizontal Queues	Yes
Favour Continuous Green	No
Phase Timings Fuzziness (s)	0.5
Integer Phase Timings	Yes
Phase Snapping Distance (s)	0
Automatic Lane Turning Props	Yes
Automatic Vehicle Props	No

Geometry

Arms

Arm	Name	Exit Width (m)	Approach Speed (kph)	Exit Speed (kph)	Speed Limit (kph)	Stagger Distance (m)
1	Parsons Lane	50.0	10	10	80	0
2	Castle View	50.0	10	10	80	0
3	Bawdlands	50.0	10	10	80	0

Traffic Streams

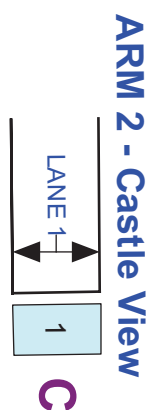
Arm	Traffic Stream	Type	Name	Sat Flow (PCU/hr)	Estimate Sat Flow	Sat Flow 2 (PCU/hr)	Green Phase	Arrow Phase
1	1	Traffic		1859	Yes	0	A	-
2	1	Traffic		1572	Yes	0	C	-
3	1	Traffic		1968	Yes	0	B	-

Arm	Traffic Stream	Relative Start Displacement (s)	Relative End Displacement (s)	Max Deg Sat (%)	Delay Weight (%)	Max Queue (PCU)	Initial Queue (PCU)	Average PCU Per Veh	Heavy Vehicles Percentage
1	1	0.0	0.0	90	100	0	0.0	1.10	0
2	1	0.0	0.0	90	100	0	0.0	1.10	0
3	1	0.0	0.0	90	100	0	0.0	1.10	0

Lanes

Arm	Traffic Stream	Lane	Name	Nearside Dest Arm	Straight Dest Arm	Offside Dest Arm	Proportion That Turn	Turning Radius (m)	IsNearside Lane	Width (m)	Gradient (%)	Short Lane Storage (PCU)
1	1	1			3	2	0.09	7	Yes	2.80	0.0	0
2	1	1		1		3	1.00	6	Yes	3.50	0.0	0
3	1	1		2	1		0.04	16	Yes	3.60	0.0	0

Junction Diagram



ARM 3 - Bawdlands



Signals

Signals

Max Cycle Time (s)	120
Fixed Cycle Time (s)	0
Evaluation Cycle Time (s)	0
Start Displacement (s)	1.4
End Displacement (s)	2.9

Phases

Phase	Name	Type	Associated Phase	Phase Min Green (s)	Phase Max Green (s)	Double Green
A	(Name)	Traffic	-	7.0	0.0	No
B	(Name)	Traffic	-	7.0	0.0	No
C	(Name)	Traffic	-	7.0	0.0	No

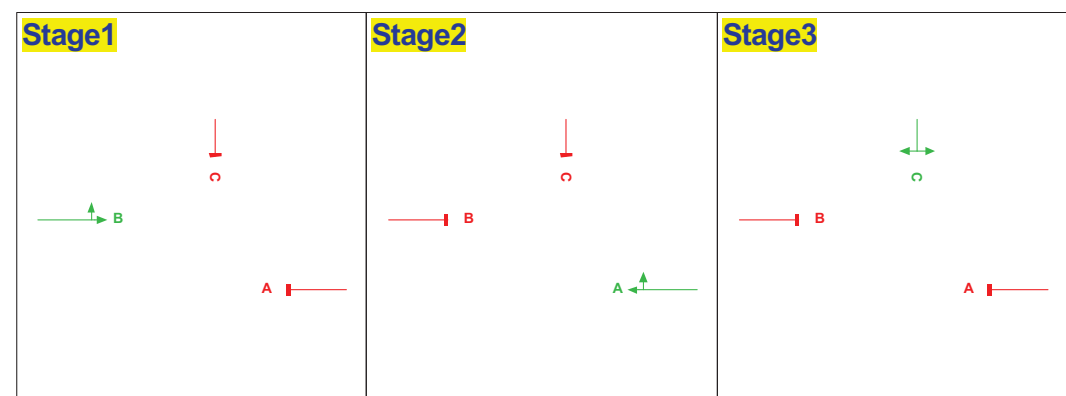
Intergreen Matrix

	To			
		A	B	C
From	A	-	8	8
	B	5	-	5
	C	5	5	-

Stages

Stage	Stage Min Green (s)	Phases In This Stage	Use To Generate Sequences
1	7.0	B	Yes
2	7.0	A	Yes
3	7.0	C	Yes

Stage Diagrams



Sequences

Sequence	Name	Stages In This Sequence
1		1,2,3

Constraints

(No constraints)

Traffic

Note: Traffic flows are only shown for selected demand sets. Resultant flows are the sums of the selected demand sets adjusted by the global traffic scaling factor, and are shown as the arrival rates in the final results tables.

Configuration

Traffic Scaling Factor	1.00
Time Period (min)	60
Time Segment Length (min)	15
Signal Optimiser Flows	Average
PCUs per Heavy Vehicle	2.00

Demand Sets

Name	Selected	Time Start	Time End	Profile Type	Use Relationship	Relationship
2012 AM Base	No	08:00	09:00	FLAT	No	D1
2012 PM Base	No	08:00	09:00	FLAT	No	D1
2017 AM Base	Yes	08:00	09:00	FLAT	No	D1
2017 PM Base	No	08:00	09:00	FLAT	No	D1
2012 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2012 PM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 PM Base + Dev	No	08:00	09:00	FLAT	No	D1

Demand Set3 - 2017 AM Base

Traffic flows (PCU/hr)

Arm	Traffic Stream	Phase	08:00-09:00
1 - Parsons Lane	1	A	333
2 - Castle View	1	C	94
3 - Bawdlands	1	B	447

Turning Proportions

Arm	Left Movement Percentage	Straight Movement Percentage	Right Movement Percentage
1 - Parsons Lane	-	91	9
2 - Castle View	54	-	46
3 - Bawdlands	4	96	-

Results

Note: Duplicate solutions are not shown.

Sequence1; Objective: CRITICAL CYCLE TIME

Errors and Warnings

Code	Description
W6	The option to optimise for critical cycle time only has been selected.

Summary

Cycle Time (s)	Practical Reserve Capacity (%)	Rate of Delay (PCU)	Weighted Rate of Delay (PCU)	Geometric Delay (PCU-min)
41.0	1.48	10.73	10.73	16.3

- Cycle Time is the minimum cycle time that meets all safety criteria whilst optimising this objective.
- PRC is the lowest value encountered over all streams.
- Rate of delay is the sum of each stream's rate of delay.

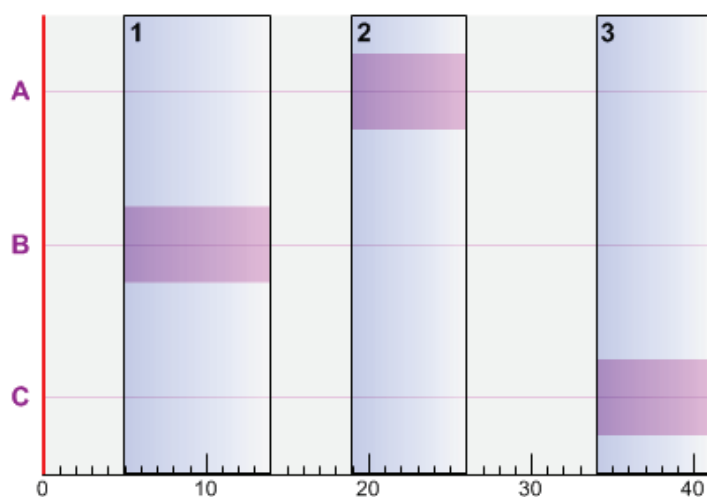
Stage Timings

Stage	Start Time (s)	Duration (s)	End Time (s)
1	5.0	9.0	14.0
2	19.0	7.0	26.0
3	34.0	7.0	0.0

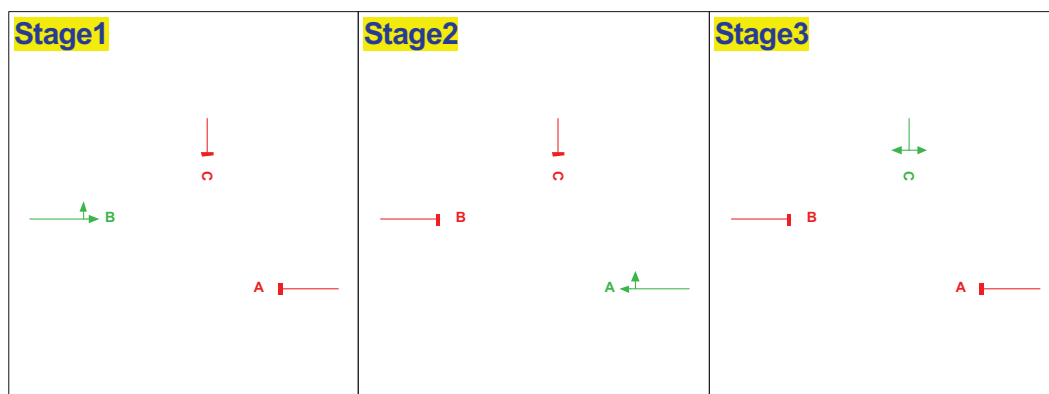
Phase Timings

Phase	Start Time (s)	Duration (s)	End Time (s)	Filter Arrow Time (s)	Indicative Arrow Start (s)	Indicative Arrow Duration (s)	Start Time (s) (2nd green)	Duration (s) (2nd green)	End Time (s) (2nd green)
A	19	7.0	26						
B	5	9.0	14						
C	34	7.0	0						

Phase Timings Diagram



Final Stage Sequence



Traffic Stream Details

Arm	Traffic Stream	Arrival Rate (PCU/hr)	Controlling Phase	Effective Green (s)	Average Delay (s)	Rate of Delay (PCU)	Degree of Saturation (%)	Practical Reserve Capacity (%)	Queue at End of Green (PCU)	Queue at End of Red (PCU)	Uniform Queue (PCU)	Geometric Delay (PCU-min)
1	1	333	A	8.50	49.40	4.57	86.40	4.16	3.58	6.80	3.22	5.20
2	1	94	C	8.50	16.64	0.43	28.84	212.03	0.08	0.94	0.86	3.80
3	1	447	B	10.50	46.08	5.72	88.69	1.48	4.61	8.77	4.16	7.30

OSCADY PRO

GUI Version: 1.3 [16/04/09]
Analysis Program Version: v1.3 23/03/2009

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E-mail: software@trl.co.uk
Web: www.trlsoftware.co.uk

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File: A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Oscady Pro\Castle View Signals\Castle View Bawdlands Parsons Lane Signals.osc
Report generation date: 07/10/2012 12:49:59

Summary

File Description

Title	(untitled)
Date	05/10/2012
Location	
Driving Side	Left
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Status	(new file)
Description	

Run Options

Run Evaluation Set	No
Evaluation Only	No
Optimise Critical Cycle TimeOnly	Yes
Use Horizontal Queues	Yes
Favour Continuous Green	No
Phase Timings Fuzziness (s)	0.5
Integer Phase Timings	Yes
Phase Snapping Distance (s)	0
Automatic Lane Turning Props	Yes
Automatic Vehicle Props	No

Geometry

Arms

Arm	Name	Exit Width (m)	Approach Speed (kph)	Exit Speed (kph)	Speed Limit (kph)	Stagger Distance (m)
1	Parsons Lane	50.0	10	10	80	0
2	Castle View	50.0	10	10	80	0
3	Bawdlands	50.0	10	10	80	0

Traffic Streams

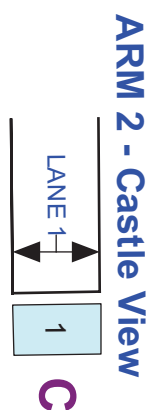
Arm	Traffic Stream	Type	Name	Sat Flow (PCU/hr)	Estimate Sat Flow	Sat Flow 2 (PCU/hr)	Green Phase	Arrow Phase
1	1	Traffic		1859	Yes	0	A	-
2	1	Traffic		1572	Yes	0	C	-
3	1	Traffic		1968	Yes	0	B	-

Arm	Traffic Stream	Relative Start Displacement (s)	Relative End Displacement (s)	Max Deg Sat (%)	Delay Weight (%)	Max Queue (PCU)	Initial Queue (PCU)	Average PCU Per Veh	Heavy Vehicles Percentage
1	1	0.0	0.0	90	100	0	0.0	1.10	0
2	1	0.0	0.0	90	100	0	0.0	1.10	0
3	1	0.0	0.0	90	100	0	0.0	1.10	0

Lanes

Arm	Traffic Stream	Lane	Name	Nearside Dest Arm	Straight Dest Arm	Offside Dest Arm	Proportion That Turn	Turning Radius (m)	IsNearside Lane	Width (m)	Gradient (%)	Short Lane Storage (PCU)
1	1	1			3	2	0.09	7	Yes	2.80	0.0	0
2	1	1		1		3	1.00	6	Yes	3.50	0.0	0
3	1	1		2	1		0.04	16	Yes	3.60	0.0	0

Junction Diagram



ARM 3 - Bawdlands



Signals

Signals

Max Cycle Time (s)	120
Fixed Cycle Time (s)	0
Evaluation Cycle Time (s)	0
Start Displacement (s)	1.4
End Displacement (s)	2.9

Phases

Phase	Name	Type	Associated Phase	Phase Min Green (s)	Phase Max Green (s)	Double Green
A	(Name)	Traffic	-	7.0	0.0	No
B	(Name)	Traffic	-	7.0	0.0	No
C	(Name)	Traffic	-	7.0	0.0	No

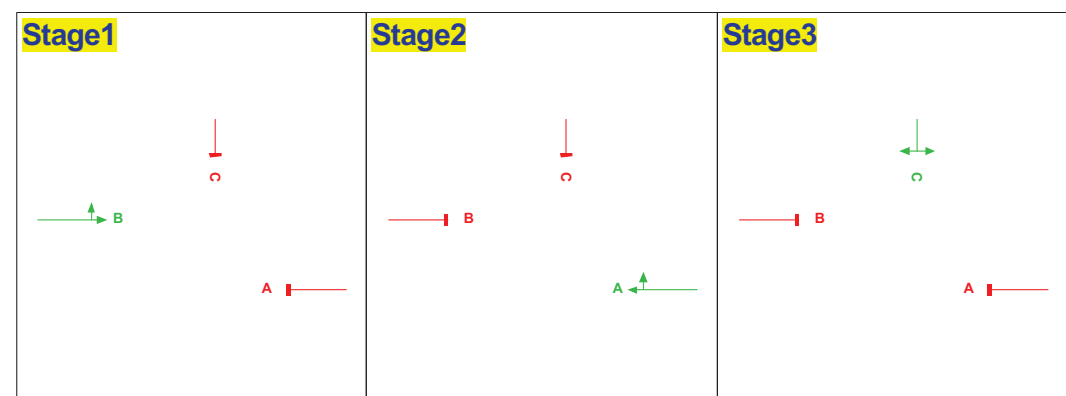
Intergreen Matrix

	To			
		A	B	C
From	A	-	8	8
	B	5	-	5
	C	5	5	-

Stages

Stage	Stage Min Green (s)	Phases In This Stage	Use To Generate Sequences
1	7.0	B	Yes
2	7.0	A	Yes
3	7.0	C	Yes

Stage Diagrams



Sequences

Sequence	Name	Stages In This Sequence
1		1,2,3

Constraints

(No constraints)

Traffic

Note: Traffic flows are only shown for selected demand sets. Resultant flows are the sums of the selected demand sets adjusted by the global traffic scaling factor, and are shown as the arrival rates in the final results tables.

Configuration

Traffic Scaling Factor	1.00
Time Period (min)	60
Time Segment Length (min)	15
Signal Optimiser Flows	Average
PCUs per Heavy Vehicle	2.00

Demand Sets

Name	Selected	Time Start	Time End	Profile Type	Use Relationship	Relationship
2012 AM Base	No	08:00	09:00	FLAT	No	D1
2012 PM Base	No	08:00	09:00	FLAT	No	D1
2017 AM Base	No	08:00	09:00	FLAT	No	D1
2017 PM Base	Yes	08:00	09:00	FLAT	No	D1
2012 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2012 PM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 PM Base + Dev	No	08:00	09:00	FLAT	No	D1

Demand Set4 - 2017 PM Base

Traffic flows (PCU/hr)

Arm	Traffic Stream	Phase	08:00-09:00
1 - Parsons Lane	1	A	580
2 - Castle View	1	C	77
3 - Bawdlands	1	B	379

Turning Proportions

Arm	Left Movement Percentage	Straight Movement Percentage	Right Movement Percentage
1 - Parsons Lane	-	87	13
2 - Castle View	58	-	42
3 - Bawdlands	7	93	-

Results

Note: Duplicate solutions are not shown.

Sequence1; Objective: CRITICAL CYCLE TIME

Errors and Warnings

Code	Description
W6	The option to optimise for critical cycle time only has been selected.

Summary

Cycle Time (s)	Practical Reserve Capacity (%)	Rate of Delay (PCU)	Weighted Rate of Delay (PCU)	Geometric Delay (PCU-min)
52.0	2.63	12.10	12.10	21.1

- Cycle Time is the minimum cycle time that meets all safety criteria whilst optimising this objective.
- PRC is the lowest value encountered over all streams.
- Rate of delay is the sum of each stream's rate of delay.

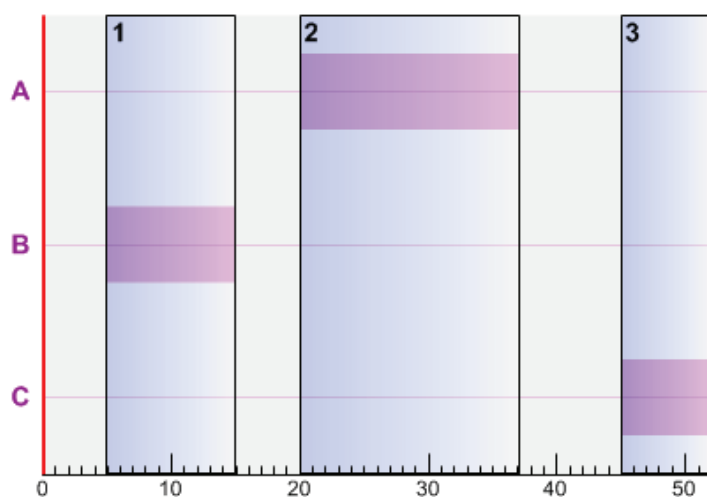
Stage Timings

Stage	Start Time (s)	Duration (s)	End Time (s)
1	5.0	10.0	15.0
2	20.0	17.0	37.0
3	45.0	7.0	0.0

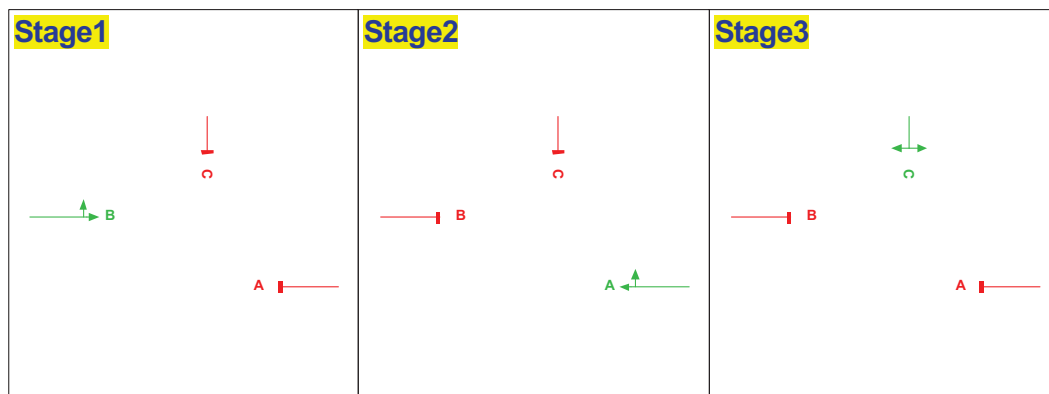
Phase Timings

Phase	Start Time (s)	Duration (s)	End Time (s)	Filter Arrow Time (s)	Indicative Arrow Start (s)	Indicative Arrow Duration (s)	Start Time (s) (2nd green)	Duration (s) (2nd green)	End Time (s) (2nd green)
A	20	17.0	37						
B	5	10.0	15						
C	45	7.0	0						

Phase Timings Diagram



Final Stage Sequence



Traffic Stream Details

Arm	Traffic Stream	Arrival Rate (PCU/hr)	Controlling Phase	Effective Green (s)	Average Delay (s)	Rate of Delay (PCU)	Degree of Saturation (%)	Practical Reserve Capacity (%)	Queue at End of Green (PCU)	Queue at End of Red (PCU)	Uniform Queue (PCU)	Geometric Delay (PCU-min)
1	1	580	A	18.50	38.57	6.21	87.70	2.63	4.39	10.50	6.11	12.60
2	1	77	C	8.50	23.07	0.49	29.97	200.34	0.09	1.03	0.94	2.50
3	1	379	B	11.50	51.27	5.40	87.08	3.35	3.87	8.48	4.61	6.00

OSCADY PRO

GUI Version: 1.3 [16/04/09]
Analysis Program Version: v1.3 23/03/2009

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File: A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Oscady Pro\Castle View Signals\Castle View Bawdlands Parsons Lane Signals.osc
Report generation date: 07/10/2012 12:50:45

Summary

File Description

Title	(untitled)
Date	05/10/2012
Location	
Driving Side	Left
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Status	(new file)
Description	

Run Options

Run Evaluation Set	No
Evaluation Only	No
Optimise Critical Cycle TimeOnly	Yes
Use Horizontal Queues	Yes
Favour Continuous Green	No
Phase Timings Fuzziness (s)	0.5
Integer Phase Timings	Yes
Phase Snapping Distance (s)	0
Automatic Lane Turning Props	Yes
Automatic Vehicle Props	No

Geometry

Arms

Arm	Name	Exit Width (m)	Approach Speed (kph)	Exit Speed (kph)	Speed Limit (kph)	Stagger Distance (m)
1	Parsons Lane	50.0	10	10	80	0
2	Castle View	50.0	10	10	80	0
3	Bawdlands	50.0	10	10	80	0

Traffic Streams

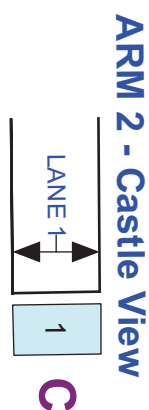
Arm	Traffic Stream	Type	Name	Sat Flow (PCU/hr)	Estimate Sat Flow	Sat Flow 2 (PCU/hr)	Green Phase	Arrow Phase
1	1	Traffic		1859	Yes	0	A	-
2	1	Traffic		1572	Yes	0	C	-
3	1	Traffic		1968	Yes	0	B	-

Arm	Traffic Stream	Relative Start Displacement (s)	Relative End Displacement (s)	Max Deg Sat (%)	Delay Weight (%)	Max Queue (PCU)	Initial Queue (PCU)	Average PCU Per Veh	Heavy Vehicles Percentage
1	1	0.0	0.0	90	100	0	0.0	1.10	0
2	1	0.0	0.0	90	100	0	0.0	1.10	0
3	1	0.0	0.0	90	100	0	0.0	1.10	0

Lanes

Arm	Traffic Stream	Lane	Name	Nearside Dest Arm	Straight Dest Arm	Offside Dest Arm	Proportion That Turn	Turning Radius (m)	IsNearside Lane	Width (m)	Gradient (%)	Short Lane Storage (PCU)
1	1	1			3	2	0.09	7	Yes	2.80	0.0	0
2	1	1		1		3	1.00	6	Yes	3.50	0.0	0
3	1	1		2	1		0.04	16	Yes	3.60	0.0	0

Junction Diagram



ARM 3 - Bawdlands



Signals

Signals

Max Cycle Time (s)	120
Fixed Cycle Time (s)	0
Evaluation Cycle Time (s)	0
Start Displacement (s)	1.4
End Displacement (s)	2.9

Phases

Phase	Name	Type	Associated Phase	Phase Min Green (s)	Phase Max Green (s)	Double Green
A	(Name)	Traffic	-	7.0	0.0	No
B	(Name)	Traffic	-	7.0	0.0	No
C	(Name)	Traffic	-	7.0	0.0	No

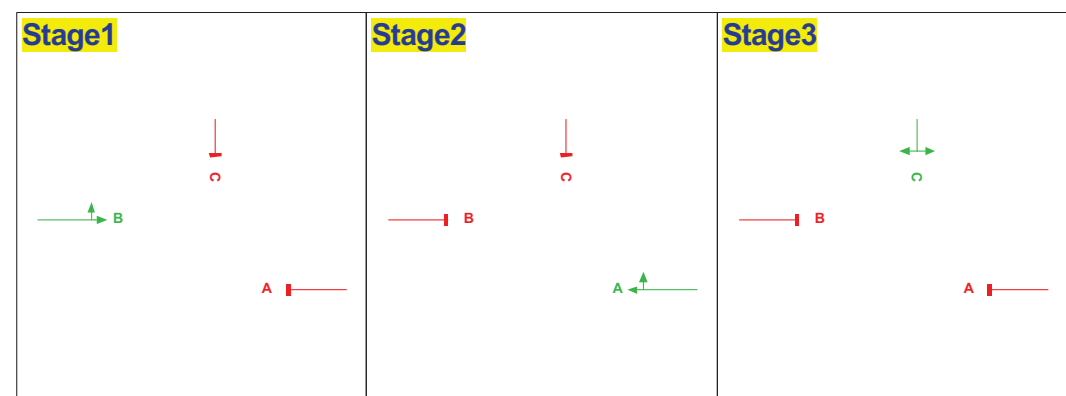
Intergreen Matrix

	To			
		A	B	C
From	A	-	8	8
	B	5	-	5
	C	5	5	-

Stages

Stage	Stage Min Green (s)	Phases In This Stage	Use To Generate Sequences
1	7.0	B	Yes
2	7.0	A	Yes
3	7.0	C	Yes

Stage Diagrams



Sequences

Sequence	Name	Stages In This Sequence
1		1,2,3

Constraints

(No constraints)

Traffic

Note: Traffic flows are only shown for selected demand sets. Resultant flows are the sums of the selected demand sets adjusted by the global traffic scaling factor, and are shown as the arrival rates in the final results tables.

Configuration

Traffic Scaling Factor	1.00
Time Period (min)	60
Time Segment Length (min)	15
Signal Optimiser Flows	Average
PCUs per Heavy Vehicle	2.00

Demand Sets

Name	Selected	Time Start	Time End	Profile Type	Use Relationship	Relationship
2012 AM Base	No	08:00	09:00	FLAT	No	D1
2012 PM Base	No	08:00	09:00	FLAT	No	D1
2017 AM Base	No	08:00	09:00	FLAT	No	D1
2017 PM Base	No	08:00	09:00	FLAT	No	D1
2012 AM Base + Dev	Yes	08:00	09:00	FLAT	No	D1
2012 PM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 PM Base + Dev	No	08:00	09:00	FLAT	No	D1

Demand Set5 - 2012 AM Base + Dev

Traffic flows (PCU/hr)

Arm	Traffic Stream	Phase	08:00-09:00
1 - Parsons Lane	1	A	350
2 - Castle View	1	C	146
3 - Bawdlands	1	B	435

Turning Proportions

Arm	Left Movement Percentage	Straight Movement Percentage	Right Movement Percentage
1 - Parsons Lane	-	90	10
2 - Castle View	41	-	59
3 - Bawdlands	6	94	-

Results

Note: Duplicate solutions are not shown.

Sequence1; Objective: CRITICAL CYCLE TIME

Errors and Warnings

Code	Description
W6	The option to optimise for critical cycle time only has been selected.

Summary

Cycle Time (s)	Practical Reserve Capacity (%)	Rate of Delay (PCU)	Weighted Rate of Delay (PCU)	Geometric Delay (PCU-min)
42.0	1.79	10.46	10.46	18.2

- Cycle Time is the minimum cycle time that meets all safety criteria whilst optimising this objective.
- PRC is the lowest value encountered over all streams.
- Rate of delay is the sum of each stream's rate of delay.

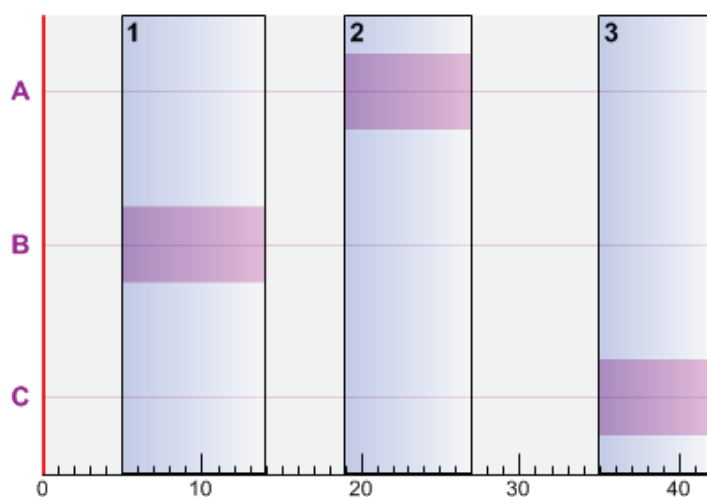
Stage Timings

Stage	Start Time (s)	Duration (s)	End Time (s)
1	5.0	9.0	14.0
2	19.0	8.0	27.0
3	35.0	7.0	0.0

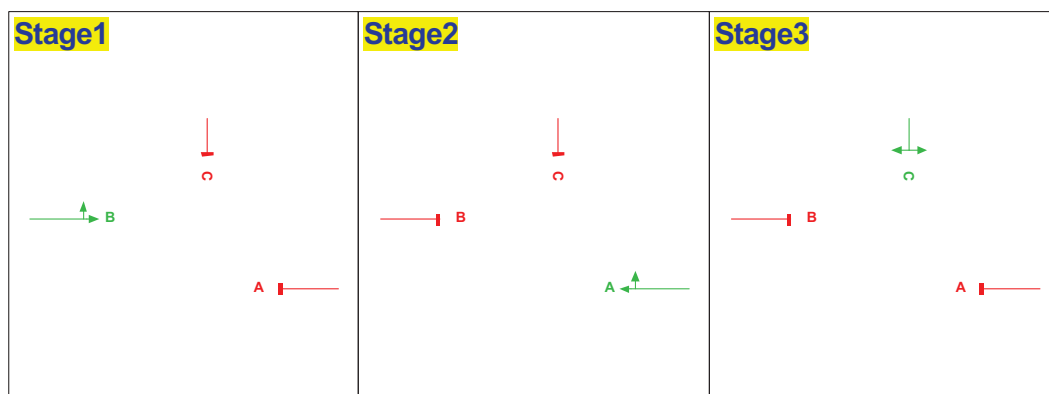
Phase Timings

Phase	Start Time (s)	Duration (s)	End Time (s)	Filter Arrow Time (s)	Indicative Arrow Start (s)	Indicative Arrow Duration (s)	Start Time (s) (2nd green)	Duration (s) (2nd green)	End Time (s) (2nd green)
A	19	8.0	27						
B	5	9.0	14						
C	35	7.0	0						

Phase Timings Diagram



Final Stage Sequence



Traffic Stream Details

Arm	Traffic Stream	Arrival Rate (PCU/hr)	Controlling Phase	Effective Green (s)	Average Delay (s)	Rate of Delay (PCU)	Degree of Saturation (%)	Practical Reserve Capacity (%)	Queue at End of Green (PCU)	Queue at End of Red (PCU)	Uniform Queue (PCU)	Geometric Delay (PCU-min)
1	1	350	A	9.50	40.97	3.98	83.24	8.13	2.79	6.18	3.40	6.30
2	1	146	C	8.50	21.00	0.85	45.89	96.12	0.26	1.66	1.40	4.80
3	1	435	B	10.50	46.56	5.63	88.41	1.79	4.47	8.64	4.17	7.10

OSCADY PRO

GUI Version: 1.3 [16/04/09]
Analysis Program Version: v1.3 23/03/2009

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Web: www.trlsoftware.co.uk

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File: A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Oscady Pro\Castle View Signals\Castle View Bawdlands Parsons Lane Signals.osc
Report generation date: 07/10/2012 12:51:41

Summary

File Description

Title	(untitled)
Date	05/10/2012
Location	
Driving Side	Left
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Status	(new file)
Description	

Run Options

Run Evaluation Set	No
Evaluation Only	No
Optimise Critical Cycle TimeOnly	Yes
Use Horizontal Queues	Yes
Favour Continuous Green	No
Phase Timings Fuzziness (s)	0.5
Integer Phase Timings	Yes
Phase Snapping Distance (s)	0
Automatic Lane Turning Props	Yes
Automatic Vehicle Props	No

Geometry

Arms

Arm	Name	Exit Width (m)	Approach Speed (kph)	Exit Speed (kph)	Speed Limit (kph)	Stagger Distance (m)
1	Parsons Lane	50.0	10	10	80	0
2	Castle View	50.0	10	10	80	0
3	Bawdlands	50.0	10	10	80	0

Traffic Streams

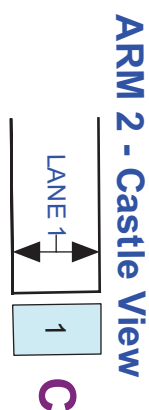
Arm	Traffic Stream	Type	Name	Sat Flow (PCU/hr)	Estimate Sat Flow	Sat Flow 2 (PCU/hr)	Green Phase	Arrow Phase
1	1	Traffic		1859	Yes	0	A	-
2	1	Traffic		1572	Yes	0	C	-
3	1	Traffic		1968	Yes	0	B	-

Arm	Traffic Stream	Relative Start Displacement (s)	Relative End Displacement (s)	Max Deg Sat (%)	Delay Weight (%)	Max Queue (PCU)	Initial Queue (PCU)	Average PCU Per Veh	Heavy Vehicles Percentage
1	1	0.0	0.0	90	100	0	0.0	1.10	0
2	1	0.0	0.0	90	100	0	0.0	1.10	0
3	1	0.0	0.0	90	100	0	0.0	1.10	0

Lanes

Arm	Traffic Stream	Lane	Name	Nearside Dest Arm	Straight Dest Arm	Offside Dest Arm	Proportion That Turn	Turning Radius (m)	IsNearside Lane	Width (m)	Gradient (%)	Short Lane Storage (PCU)
1	1	1			3	2	0.09	7	Yes	2.80	0.0	0
2	1	1		1		3	1.00	6	Yes	3.50	0.0	0
3	1	1		2	1		0.04	16	Yes	3.60	0.0	0

Junction Diagram



ARM 3 - Bawdlands



Signals

Signals

Max Cycle Time (s)	120
Fixed Cycle Time (s)	0
Evaluation Cycle Time (s)	0
Start Displacement (s)	1.4
End Displacement (s)	2.9

Phases

Phase	Name	Type	Associated Phase	Phase Min Green (s)	Phase Max Green (s)	Double Green
A	(Name)	Traffic	-	7.0	0.0	No
B	(Name)	Traffic	-	7.0	0.0	No
C	(Name)	Traffic	-	7.0	0.0	No

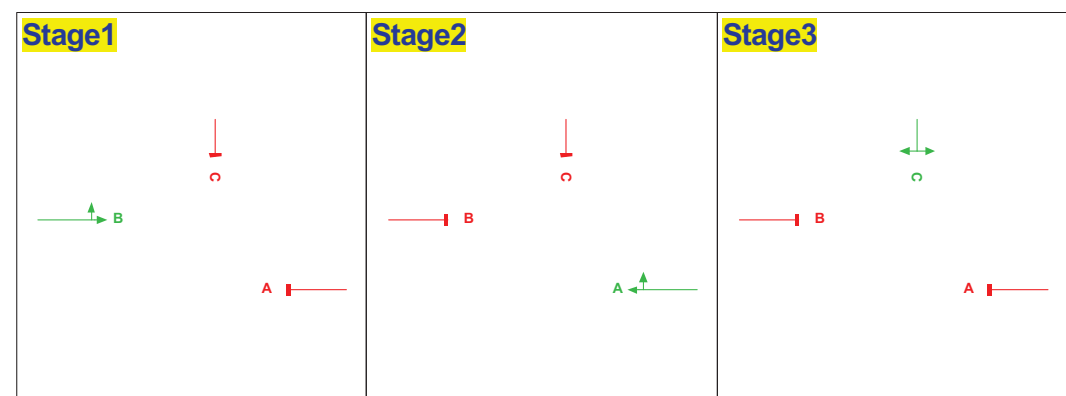
Intergreen Matrix

	To			
		A	B	C
From	A	-	8	8
	B	5	-	5
	C	5	5	-

Stages

Stage	Stage Min Green (s)	Phases In This Stage	Use To Generate Sequences
1	7.0	B	Yes
2	7.0	A	Yes
3	7.0	C	Yes

Stage Diagrams



Sequences

Sequence	Name	Stages In This Sequence
1		1,2,3

Constraints

(No constraints)

Traffic

Note: Traffic flows are only shown for selected demand sets. Resultant flows are the sums of the selected demand sets adjusted by the global traffic scaling factor, and are shown as the arrival rates in the final results tables.

Configuration

Traffic Scaling Factor	1.00
Time Period (min)	60
Time Segment Length (min)	15
Signal Optimiser Flows	Average
PCUs per Heavy Vehicle	2.00

Demand Sets

Name	Selected	Time Start	Time End	Profile Type	Use Relationship	Relationship
2012 AM Base	No	08:00	09:00	FLAT	No	D1
2012 PM Base	No	08:00	09:00	FLAT	No	D1
2017 AM Base	No	08:00	09:00	FLAT	No	D1
2017 PM Base	No	08:00	09:00	FLAT	No	D1
2012 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2012 PM Base + Dev	Yes	08:00	09:00	FLAT	No	D1
2017 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 PM Base + Dev	No	08:00	09:00	FLAT	No	D1

Demand Set6 - 2012 PM Base + Dev

Traffic flows (PCU/hr)

Arm	Traffic Stream	Phase	08:00-09:00
1 - Parsons Lane	1	A	591
2 - Castle View	1	C	103
3 - Bawdlands	1	B	375

Turning Proportions

Arm	Left Movement Percentage	Straight Movement Percentage	Right Movement Percentage
1 - Parsons Lane	-	84	16
2 - Castle View	50	-	50
3 - Bawdlands	14	86	-

Results

Note: Duplicate solutions are not shown.

Sequence1; Objective: CRITICAL CYCLE TIME

Errors and Warnings

Code	Description
W6	The option to optimise for critical cycle time only has been selected.

Summary

Cycle Time (s)	Practical Reserve Capacity (%)	Rate of Delay (PCU)	Weighted Rate of Delay (PCU)	Geometric Delay (PCU-min)
52.0	0.72	12.75	12.75	21.0

- Cycle Time is the minimum cycle time that meets all safety criteria whilst optimising this objective.
- PRC is the lowest value encountered over all streams.
- Rate of delay is the sum of each stream's rate of delay.

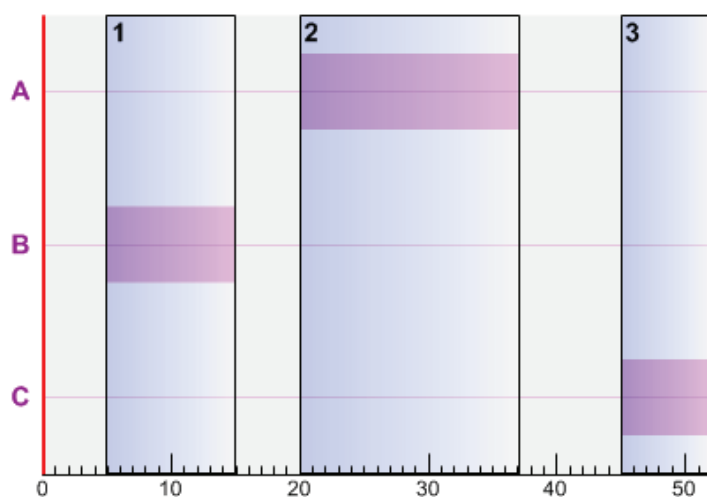
Stage Timings

Stage	Start Time (s)	Duration (s)	End Time (s)
1	5.0	10.0	15.0
2	20.0	17.0	37.0
3	45.0	7.0	0.0

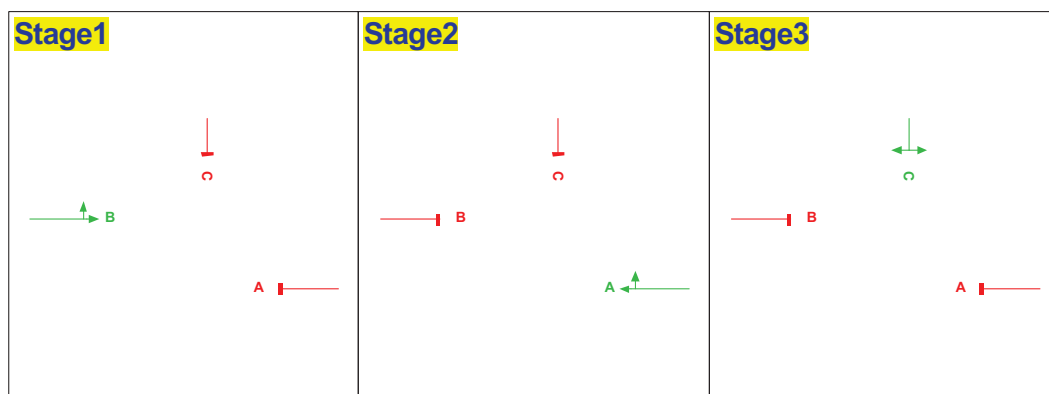
Phase Timings

Phase	Start Time (s)	Duration (s)	End Time (s)	Filter Arrow Time (s)	Indicative Arrow Start (s)	Indicative Arrow Duration (s)	Start Time (s) (2nd green)	Duration (s) (2nd green)	End Time (s) (2nd green)
A	20	17.0	37						
B	5	10.0	15						
C	45	7.0	0						

Phase Timings Diagram



Final Stage Sequence



Traffic Stream Details

Arm	Traffic Stream	Arrival Rate (PCU/hr)	Controlling Phase	Effective Green (s)	Average Delay (s)	Rate of Delay (PCU)	Degree of Saturation (%)	Practical Reserve Capacity (%)	Queue at End of Green (PCU)	Queue at End of Red (PCU)	Uniform Queue (PCU)	Geometric Delay (PCU-min)
1	1	591	A	18.50	41.94	6.88	89.36	0.72	5.19	11.43	6.24	11.90
2	1	103	C	8.50	25.60	0.73	40.08	124.53	0.18	1.45	1.27	3.00
3	1	375	B	11.50	49.29	5.13	86.16	4.46	3.57	8.13	4.56	6.10

OSCADY PRO

GUI Version: 1.3 [16/04/09]
Analysis Program Version: v1.3 23/03/2009

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File: A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Oscady Pro\Castle View Signals\Castle View Bawdlands Parsons Lane Signals.osc
Report generation date: 07/10/2012 12:52:33

Summary

File Description

Title	(untitled)
Date	05/10/2012
Location	
Driving Side	Left
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Status	(new file)
Description	

Run Options

Run Evaluation Set	No
Evaluation Only	No
Optimise Critical Cycle TimeOnly	Yes
Use Horizontal Queues	Yes
Favour Continuous Green	No
Phase Timings Fuzziness (s)	0.5
Integer Phase Timings	Yes
Phase Snapping Distance (s)	0
Automatic Lane Turning Props	Yes
Automatic Vehicle Props	No

Geometry

Arms

Arm	Name	Exit Width (m)	Approach Speed (kph)	Exit Speed (kph)	Speed Limit (kph)	Stagger Distance (m)
1	Parsons Lane	50.0	10	10	80	0
2	Castle View	50.0	10	10	80	0
3	Bawdlands	50.0	10	10	80	0

Traffic Streams

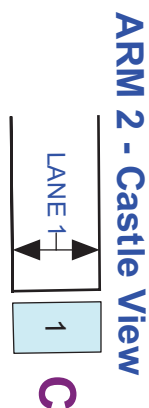
Arm	Traffic Stream	Type	Name	Sat Flow (PCU/hr)	Estimate Sat Flow	Sat Flow 2 (PCU/hr)	Green Phase	Arrow Phase
1	1	Traffic		1859	Yes	0	A	-
2	1	Traffic		1572	Yes	0	C	-
3	1	Traffic		1968	Yes	0	B	-

Arm	Traffic Stream	Relative Start Displacement (s)	Relative End Displacement (s)	Max Deg Sat (%)	Delay Weight (%)	Max Queue (PCU)	Initial Queue (PCU)	Average PCU Per Veh	Heavy Vehicles Percentage
1	1	0.0	0.0	90	100	0	0.0	1.10	0
2	1	0.0	0.0	90	100	0	0.0	1.10	0
3	1	0.0	0.0	90	100	0	0.0	1.10	0

Lanes

Arm	Traffic Stream	Lane	Name	Nearside Dest Arm	Straight Dest Arm	Offside Dest Arm	Proportion That Turn	Turning Radius (m)	IsNearside Lane	Width (m)	Gradient (%)	Short Lane Storage (PCU)
1	1	1			3	2	0.09	7	Yes	2.80	0.0	0
2	1	1		1		3	1.00	6	Yes	3.50	0.0	0
3	1	1		2	1		0.04	16	Yes	3.60	0.0	0

Junction Diagram



ARM 3 - Bawdlands



Signals

Signals

Max Cycle Time (s)	120
Fixed Cycle Time (s)	0
Evaluation Cycle Time (s)	0
Start Displacement (s)	1.4
End Displacement (s)	2.9

Phases

Phase	Name	Type	Associated Phase	Phase Min Green (s)	Phase Max Green (s)	Double Green
A	(Name)	Traffic	-	7.0	0.0	No
B	(Name)	Traffic	-	7.0	0.0	No
C	(Name)	Traffic	-	7.0	0.0	No

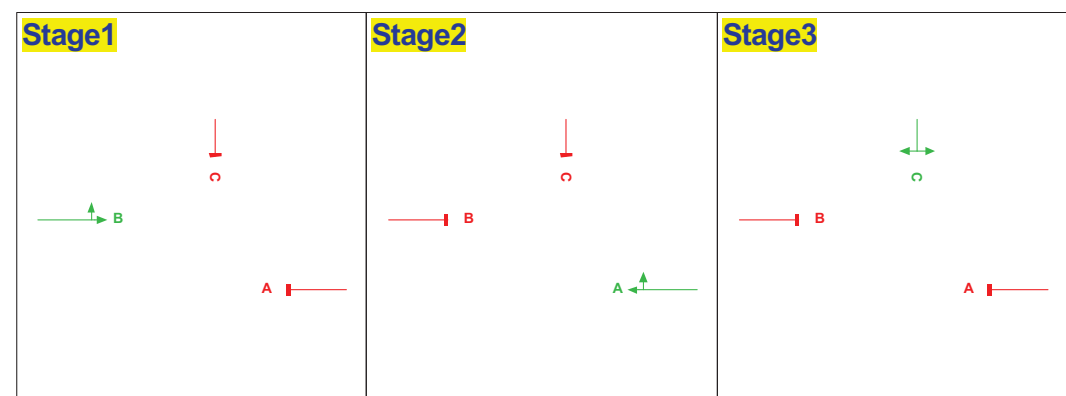
Intergreen Matrix

	To			
		A	B	C
From	A	-	8	8
	B	5	-	5
	C	5	5	-

Stages

Stage	Stage Min Green (s)	Phases In This Stage	Use To Generate Sequences
1	7.0	B	Yes
2	7.0	A	Yes
3	7.0	C	Yes

Stage Diagrams



Sequences

Sequence	Name	Stages In This Sequence
1		1,2,3

Constraints

(No constraints)

Traffic

Note: Traffic flows are only shown for selected demand sets. Resultant flows are the sums of the selected demand sets adjusted by the global traffic scaling factor, and are shown as the arrival rates in the final results tables.

Configuration

Traffic Scaling Factor	1.00
Time Period (min)	60
Time Segment Length (min)	15
Signal Optimiser Flows	Average
PCUs per Heavy Vehicle	2.00

Demand Sets

Name	Selected	Time Start	Time End	Profile Type	Use Relationship	Relationship
2012 AM Base	No	08:00	09:00	FLAT	No	D1
2012 PM Base	No	08:00	09:00	FLAT	No	D1
2017 AM Base	No	08:00	09:00	FLAT	No	D1
2017 PM Base	No	08:00	09:00	FLAT	No	D1
2012 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2012 PM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 AM Base + Dev	Yes	08:00	09:00	FLAT	No	D1
2017 PM Base + Dev	No	08:00	09:00	FLAT	No	D1

Demand Set7 - 2017 AM Base + Dev

Traffic flows (PCU/hr)

Arm	Traffic Stream	Phase	08:00-09:00
1 - Parsons Lane	1	A	364
2 - Castle View	1	C	150
3 - Bawdlands	1	B	452

Turning Proportions

Arm	Left Movement Percentage	Straight Movement Percentage	Right Movement Percentage
1 - Parsons Lane	-	90	10
2 - Castle View	41	-	59
3 - Bawdlands	6	94	-

Results

Note: Duplicate solutions are not shown.

Sequence1; Objective: CRITICAL CYCLE TIME

Errors and Warnings

Code	Description
W6	The option to optimise for critical cycle time only has been selected.

Summary

Cycle Time (s)	Practical Reserve Capacity (%)	Rate of Delay (PCU)	Weighted Rate of Delay (PCU)	Geometric Delay (PCU-min)
43.0	1.55	11.31	11.31	18.6

- Cycle Time is the minimum cycle time that meets all safety criteria whilst optimising this objective.
- PRC is the lowest value encountered over all streams.
- Rate of delay is the sum of each stream's rate of delay.

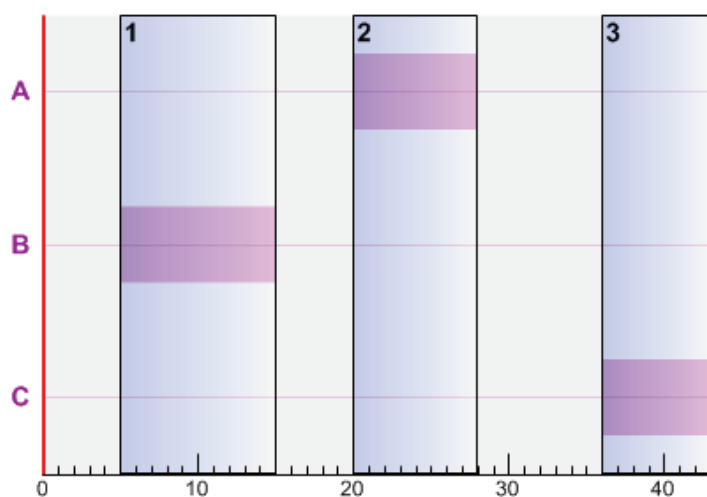
Stage Timings

Stage	Start Time (s)	Duration (s)	End Time (s)
1	5.0	10.0	15.0
2	20.0	8.0	28.0
3	36.0	7.0	0.0

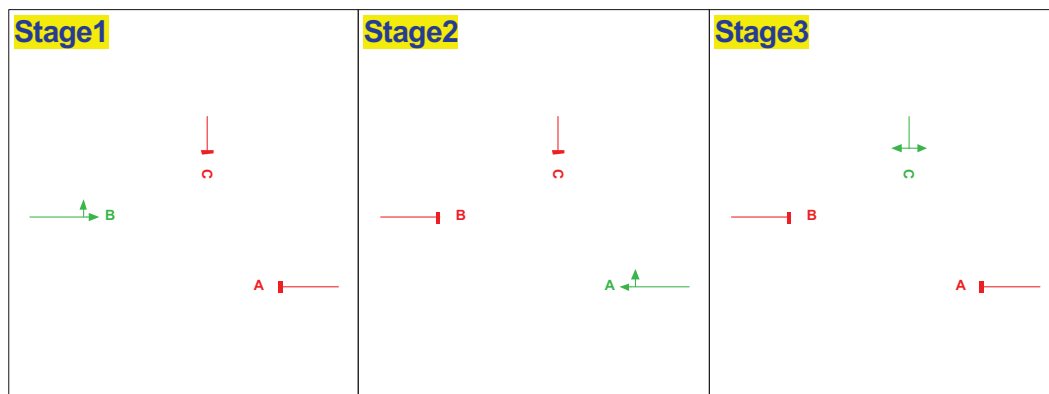
Phase Timings

Phase	Start Time (s)	Duration (s)	End Time (s)	Filter Arrow Time (s)	Indicative Arrow Start (s)	Indicative Arrow Duration (s)	Start Time (s) (2nd green)	Duration (s) (2nd green)	End Time (s) (2nd green)
A	20	8.0	28						
B	5	10.0	15						
C	36	7.0	0						

Phase Timings Diagram



Final Stage Sequence



Traffic Stream Details

Arm	Traffic Stream	Arrival Rate (PCU/hr)	Controlling Phase	Effective Green (s)	Average Delay (s)	Rate of Delay (PCU)	Degree of Saturation (%)	Practical Reserve Capacity (%)	Queue at End of Green (PCU)	Queue at End of Red (PCU)	Uniform Queue (PCU)	Geometric Delay (PCU-min)
1	1	364	A	9.50	53.46	5.41	88.63	1.55	4.42	8.07	3.65	5.50
2	1	150	C	8.50	22.35	0.93	48.27	86.45	0.30	1.79	1.48	4.70
3	1	452	B	11.50	39.63	4.98	85.88	4.80	3.58	7.93	4.35	8.40

OSCADY PRO

GUI Version: 1.3 [16/04/09]
Analysis Program Version: v1.3 23/03/2009

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File: A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Oscady Pro\Castle View Signals\Castle View Bawdlands Parsons Lane Signals.osc
Report generation date: 07/10/2012 12:53:22

Summary

File Description

Title	(untitled)
Date	05/10/2012
Location	
Driving Side	Left
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Status	(new file)
Description	

Run Options

Run Evaluation Set	No
Evaluation Only	No
Optimise Critical Cycle TimeOnly	Yes
Use Horizontal Queues	Yes
Favour Continuous Green	No
Phase Timings Fuzziness (s)	0.5
Integer Phase Timings	Yes
Phase Snapping Distance (s)	0
Automatic Lane Turning Props	Yes
Automatic Vehicle Props	No

Geometry

Arms

Arm	Name	Exit Width (m)	Approach Speed (kph)	Exit Speed (kph)	Speed Limit (kph)	Stagger Distance (m)
1	Parsons Lane	50.0	10	10	80	0
2	Castle View	50.0	10	10	80	0
3	Bawdlands	50.0	10	10	80	0

Traffic Streams

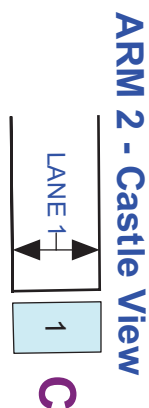
Arm	Traffic Stream	Type	Name	Sat Flow (PCU/hr)	Estimate Sat Flow	Sat Flow 2 (PCU/hr)	Green Phase	Arrow Phase
1	1	Traffic		1859	Yes	0	A	-
2	1	Traffic		1572	Yes	0	C	-
3	1	Traffic		1968	Yes	0	B	-

Arm	Traffic Stream	Relative Start Displacement (s)	Relative End Displacement (s)	Max Deg Sat (%)	Delay Weight (%)	Max Queue (PCU)	Initial Queue (PCU)	Average PCU Per Veh	Heavy Vehicles Percentage
1	1	0.0	0.0	90	100	0	0.0	1.10	0
2	1	0.0	0.0	90	100	0	0.0	1.10	0
3	1	0.0	0.0	90	100	0	0.0	1.10	0

Lanes

Arm	Traffic Stream	Lane	Name	Nearside Dest Arm	Straight Dest Arm	Offside Dest Arm	Proportion That Turn	Turning Radius (m)	IsNearside Lane	Width (m)	Gradient (%)	Short Lane Storage (PCU)
1	1	1			3	2	0.09	7	Yes	2.80	0.0	0
2	1	1		1		3	1.00	6	Yes	3.50	0.0	0
3	1	1		2	1		0.04	16	Yes	3.60	0.0	0

Junction Diagram



ARM 3 - Bawdlands



Signals

Signals

Max Cycle Time (s)	120
Fixed Cycle Time (s)	0
Evaluation Cycle Time (s)	0
Start Displacement (s)	1.4
End Displacement (s)	2.9

Phases

Phase	Name	Type	Associated Phase	Phase Min Green (s)	Phase Max Green (s)	Double Green
A	(Name)	Traffic	-	7.0	0.0	No
B	(Name)	Traffic	-	7.0	0.0	No
C	(Name)	Traffic	-	7.0	0.0	No

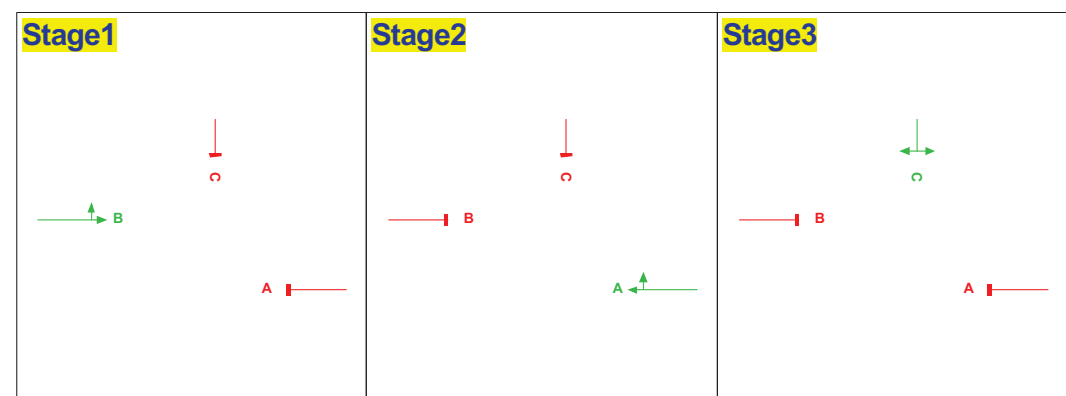
Intergreen Matrix

	To			
		A	B	C
From	A	-	8	8
	B	5	-	5
	C	5	5	-

Stages

Stage	Stage Min Green (s)	Phases In This Stage	Use To Generate Sequences
1	7.0	B	Yes
2	7.0	A	Yes
3	7.0	C	Yes

Stage Diagrams



Sequences

Sequence	Name	Stages In This Sequence
1		1,2,3

Constraints

(No constraints)

Traffic

Note: Traffic flows are only shown for selected demand sets. Resultant flows are the sums of the selected demand sets adjusted by the global traffic scaling factor, and are shown as the arrival rates in the final results tables.

Configuration

Traffic Scaling Factor	1.00
Time Period (min)	60
Time Segment Length (min)	15
Signal Optimiser Flows	Average
PCUs per Heavy Vehicle	2.00

Demand Sets

Name	Selected	Time Start	Time End	Profile Type	Use Relationship	Relationship
2012 AM Base	No	08:00	09:00	FLAT	No	D1
2012 PM Base	No	08:00	09:00	FLAT	No	D1
2017 AM Base	No	08:00	09:00	FLAT	No	D1
2017 PM Base	No	08:00	09:00	FLAT	No	D1
2012 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2012 PM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 PM Base + Dev	Yes	08:00	09:00	FLAT	No	D1

Demand Set8 - 2017 PM Base + Dev

Traffic flows (PCU/hr)

Arm	Traffic Stream	Phase	08:00-09:00
1 - Parsons Lane	1	A	616
2 - Castle View	1	C	106
3 - Bawdlands	1	B	391

Turning Proportions

Arm	Left Movement Percentage	Straight Movement Percentage	Right Movement Percentage
1 - Parsons Lane	-	84	16
2 - Castle View	14	-	86
3 - Bawdlands	50	50	-

Results

Note: Duplicate solutions are not shown.

Sequence1; Objective: CRITICAL CYCLE TIME

Errors and Warnings

Code	Description
W6	The option to optimise for critical cycle time only has been selected.

Summary

Cycle Time (s)	Practical Reserve Capacity (%)	Rate of Delay (PCU)	Weighted Rate of Delay (PCU)	Geometric Delay (PCU-min)
55.0	1.24	13.41	13.41	22.3

- Cycle Time is the minimum cycle time that meets all safety criteria whilst optimising this objective.
- PRC is the lowest value encountered over all streams.
- Rate of delay is the sum of each stream's rate of delay.

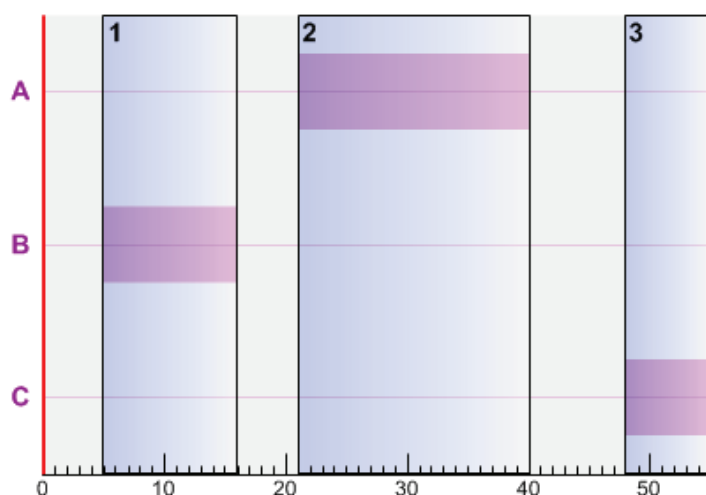
Stage Timings

Stage	Start Time (s)	Duration (s)	End Time (s)
1	5.0	11.0	16.0
2	21.0	19.0	40.0
3	48.0	7.0	0.0

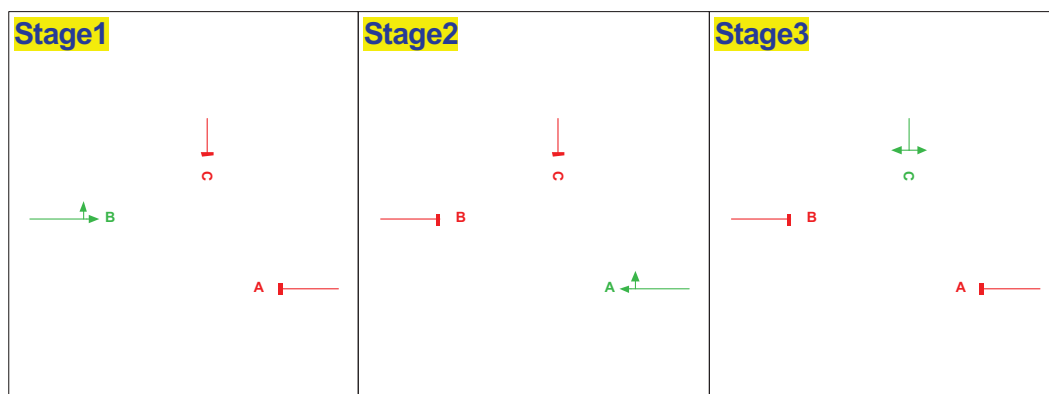
Phase Timings

Phase	Start Time (s)	Duration (s)	End Time (s)	Filter Arrow Time (s)	Indicative Arrow Start (s)	Indicative Arrow Duration (s)	Start Time (s) (2nd green)	Duration (s) (2nd green)	End Time (s) (2nd green)
A	21	19.0	40						
B	5	11.0	16						
C	48	7.0	0						

Phase Timings Diagram



Final Stage Sequence



Traffic Stream Details

Arm	Traffic Stream	Arrival Rate (PCU/hr)	Controlling Phase	Effective Green (s)	Average Delay (s)	Rate of Delay (PCU)	Degree of Saturation (%)	Practical Reserve Capacity (%)	Queue at End of Green (PCU)	Queue at End of Red (PCU)	Uniform Queue (PCU)	Geometric Delay (PCU-min)
1	1	616	A	20.50	40.33	6.90	88.90	1.24	5.00	11.73	6.73	13.20
2	1	106	C	8.50	28.56	0.84	43.63	106.27	0.23	1.63	1.40	2.90
3	1	391	B	12.50	52.23	5.67	87.42	2.95	4.00	9.01	5.01	6.20

OSCADY PRO		
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File: A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Oscady Pro\Shawbridge Street Signals\Shawbridge Street Waterloo Road.osc
Report generation date: 07/10/2012 13:00:18

Summary

Data Errors and Warnings

Severity	Area	Description
Info	Opposition	100% of the traffic on Arm2, Traffic Stream 1 opposes another traffic stream.
Info	Opposition	Arm3 Traffic Stream 1: proportion of traffic making opposed movement has been calculated as 0.25.

File Description

Title	(untitled)
Date	06/10/2012
Location	
Driving Side	Left
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Status	(new file)
Description	

Run Options

Run Evaluation Set	No
Evaluation Only	No
Optimise Critical Cycle TimeOnly	No
Use Horizontal Queues	Yes
Favour Continuous Green	No
Phase Timings Fuzziness (s)	0.5
Integer Phase Timings	Yes
Phase Snapping Distance (s)	0
Automatic Lane Turning Props	Yes
Automatic Vehicle Props	No

Geometry

Arms

Arm	Name	Exit Width (m)	Approach Speed (kph)	Exit Speed (kph)	Speed Limit (kph)	Stagger Distance (m)
1	Shawbridge Street	50.0	10	10	80	0
2	Waterloo Road N	50.0	10	10	80	0
3	Waterloo Road S	50.0	10	10	80	0

Traffic Streams

Arm	Traffic Stream	Type	Name	Sat Flow (PCU/hr)	Estimate Sat Flow	Sat Flow 2 (PCU/hr)	Green Phase	Arrow Phase
1	1	Traffic		1864	Yes	0	C	-
2	1	Traffic		1864	Yes	0	A	-
3	1	Traffic		1932	Yes	0	B	-
(Ped)	1	Pedestrian		10000	Yes	0	D	-

Arm	Traffic Stream	Relative Start Displacement (s)	Relative End Displacement (s)	Max Deg Sat (%)	Delay Weight (%)	Max Queue (PCU)	Initial Queue (PCU)	Average PCU Per Veh	Heavy Vehicles Percentage
1	1	0.0	0.0	90	100	0	0.0	1.10	0
2	1	0.0	0.0	90	100	0	0.0	1.10	0
3	1	0.0	0.0	90	100	0	0.0	1.10	0
(Ped)	1	0.0	0.0	90	100	0	0.0	-	0

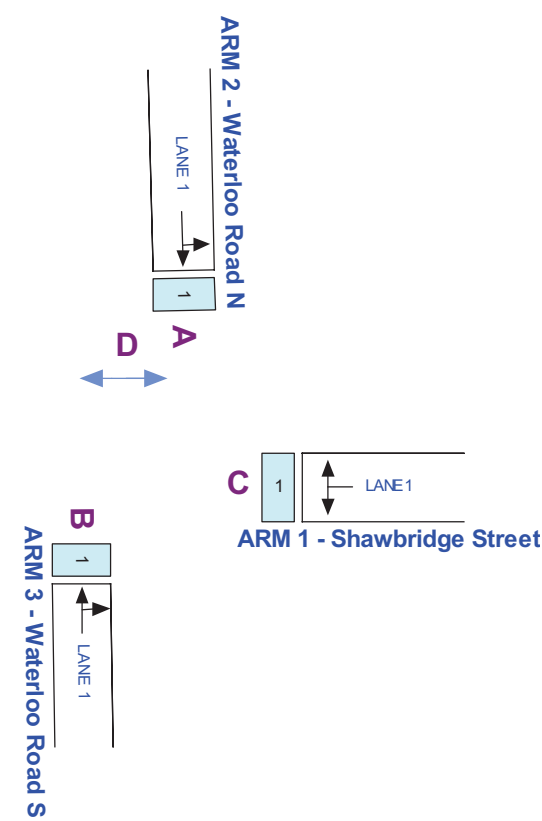
Opposition

Arm	Traffic Stream	Is Opposed	Opposing Arm	Opposing Traffic Stream	IsOpposed By Nearside Turners	IsOpposed By Straight Aheads	IsOpposed By Offside Turners	Stored Vehicles (PCU)	Clearance Time (s)	Unopposed Displacement (s)	Intergreen From Opposing (s)	Intergreen To Opposing (s)
3	1	Yes	2	1	Yes	Yes	No	1	3	3	1	1

Lanes

Arm	Traffic Stream	Lane	Name	Nearside Dest Arm	Straight Dest Arm	Offside Dest Arm	Proportion That Turn	Turning Radius (m)	IsNearside Lane	Width (m)	Gradient (%)	Short Lane Storage (PCU)
1	1	1		3		2	1.00	15	Yes	4.35	0.0	0
2	1	1		1	3		0.39	8	Yes	3.85	0.0	0
3	1	1			2	1	0.25	15	Yes	3.65	0.0	0

Junction Diagram



Signals

Signals

Max Cycle Time (s)	120
Fixed Cycle Time (s)	0
Evaluation Cycle Time (s)	0
Start Displacement (s)	1.4
End Displacement (s)	2.9

Phases

Phase	Name	Type	Associated Phase	Phase Min Green (s)	Phase Max Green (s)	Double Green
A	(Name)	Traffic	-	7.0	0.0	No
B	(Name)	Traffic	-	7.0	0.0	No
C	(Name)	Traffic	-	7.0	0.0	No
D	(Name)	Pedestrian	-	5.0	0.0	No

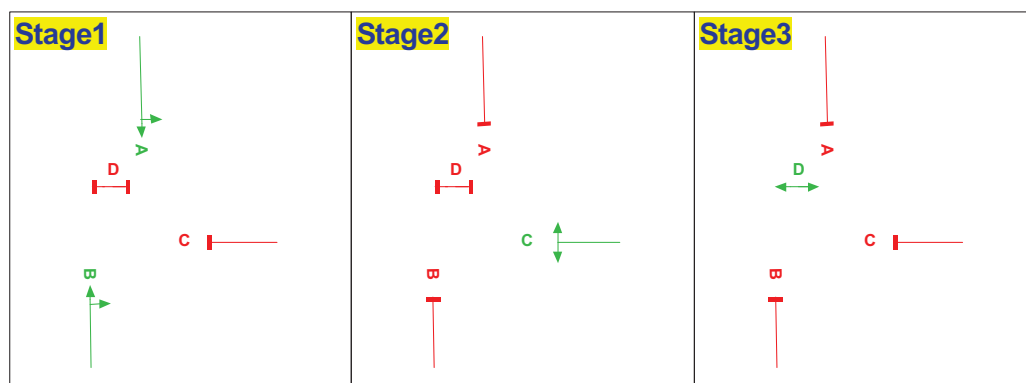
Intergreen Matrix

	To				
		A	B	C	D
	A	-	-	5	5
	B		-	5	5
	C	5	5	-	5
	D	8	8	8	-

Stages

Stage	Stage Min Green (s)	Phases In This Stage	Use To Generate Sequences
1	7.0	A,B	Yes
2	7.0	C	Yes
3	5.0	D	Yes

Stage Diagrams



Sequences

Sequence	Name	Stages In This Sequence
1		1,2,3

Constraints

(No constraints)

Traffic

Note: Traffic flows are only shown for selected demand sets. Resultant flows are the sums of the selected demand sets adjusted by the global traffic scaling factor, and are shown as the arrival rates in the final results tables.

Configuration

Traffic Scaling Factor	1.00
Time Period (min)	60
Time Segment Length (min)	15
Signal Optimiser Flows	Average
PCUs per Heavy Vehicle	2.00

Demand Sets

Name	Selected	Time Start	Time End	Profile Type	Use Relationship	Relationship
2017 AM Base + Dev	Yes	08:00	09:00	FLAT	No	D1
2017 PM Base + Dev	No	17:00	18:00	FLAT	No	D1

Demand Set1 - 2017 AM Base + Dev**Traffic flows (PCU/hr)**

Arm	Traffic Stream	Phase	08:00-09:00
1 - Shawbridge Street	1	C	412
2 - Waterloo Road N	1	A	793
3 - Waterloo Road S	1	B	416
Pedestrians	1	D	10

Turning Proportions

Arm	Left Movement Percentage	Straight Movement Percentage	Right Movement Percentage
1 - Shawbridge Street	19	-	81
2 - Waterloo Road N	39	61	-
3 - Waterloo Road S	-	75	25

Results

Note: Duplicate solutions are not shown.

Sequence1; Objective: CRITICAL CYCLE TIME

Summary

Cycle Time (s)	Practical Reserve Capacity (%)	Rate of Delay (PCU)	Weighted Rate of Delay (PCU)	Geometric Delay (PCU-min)
102.0	1.80	21.62	21.62	52.7

- Cycle Time is the minimum cycle time that meets all safety criteria whilst optimising this objective.
- PRC is the lowest value encountered over all streams.
- Rate of delay is the sum of each stream's rate of delay.

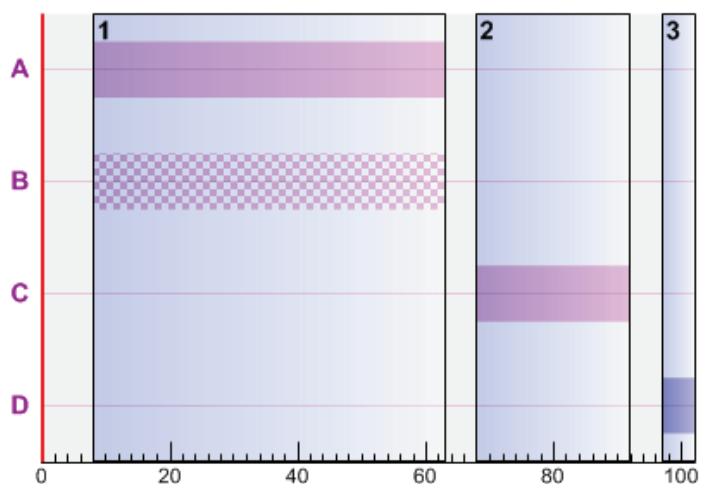
Stage Timings

Stage	Start Time (s)	Duration (s)	End Time (s)
1	8.0	55.0	63.0
2	68.0	24.0	92.0
3	97.0	5.0	0.0

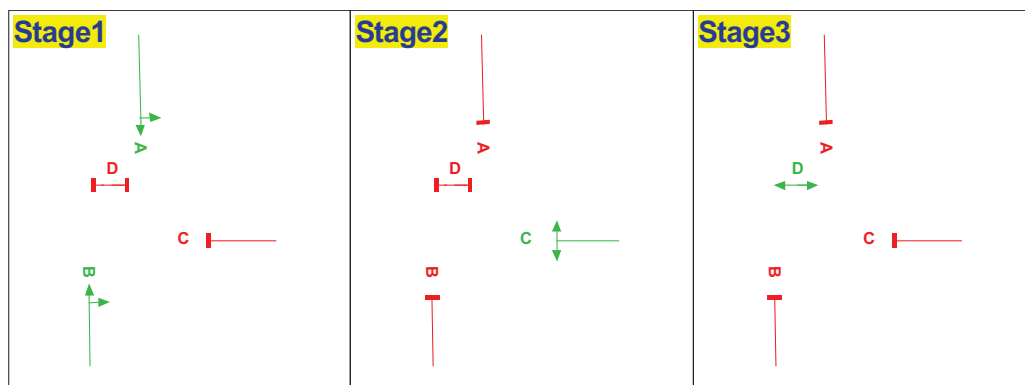
Phase Timings

Phase	Start Time (s)	Duration (s)	End Time (s)	Filter Arrow Time (s)	Indicative Arrow Start (s)	Indicative Arrow Duration (s)	Start Time (s) (2nd green)	Duration (s) (2nd green)	End Time (s) (2nd green)
A	8	55.0	63						
B	8	55.0	63						
C	68	24.0	92						
D	97	5.0	0						

Phase Timings Diagram



Final Stage Sequence



Traffic Stream Details

Arm	Traffic Stream	Arrival Rate (PCU/hr)	Controlling Phase	Effective Green (s)	Average Delay (s)	Rate of Delay (PCU)	Degree of Saturation (%)	Practical Reserve Capacity (%)	Queue at End of Green (PCU)	Queue at End of Red (PCU)	Uniform Queue (PCU)	Geometric Delay (PCU-min)
1	1	412	C	25.50	69.73	7.98	88.41	1.80	4.42	13.97	9.54	6.70
2	1	793	A	56.50	25.12	5.53	76.80	17.18	1.97	13.88	11.91	42.50
3	1	416	B	21.61	78.52	9.07	87.27	3.13	3.99	14.12	10.13	3.50
Ped	1	10	D	6.50	44.81	0.12	1.57	9999.00	0.00	0.27	0.27	0.00

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File: A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Oscady Pro\Shawbridge Street Signals\Shawbridge Street Waterloo Road.osc
Report generation date: 07/10/2012 13:01:14

Summary

Data Errors and Warnings

Severity	Area	Description
Info	Opposition	100% of the traffic on Arm2, Traffic Stream 1 opposes another traffic stream.
Info	Opposition	Arm3 Traffic Stream 1: proportion of traffic making opposed movement has been calculated as 0.23.

File Description

Title	(untitled)
Date	06/10/2012
Location	
Driving Side	Left
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Status	(new file)
Description	

Run Options

Run Evaluation Set	No
Evaluation Only	No
Optimise Critical Cycle TimeOnly	No
Use Horizontal Queues	Yes
Favour Continuous Green	No
Phase Timings Fuzziness (s)	0.5
Integer Phase Timings	Yes
Phase Snapping Distance (s)	0
Automatic Lane Turning Props	Yes
Automatic Vehicle Props	No

Geometry

Arms

Arm	Name	Exit Width (m)	Approach Speed (kph)	Exit Speed (kph)	Speed Limit (kph)	Stagger Distance (m)
1	Shawbridge Street	50.0	10	10	80	0
2	Waterloo Road N	50.0	10	10	80	0
3	Waterloo Road S	50.0	10	10	80	0

Traffic Streams

Arm	Traffic Stream	Type	Name	Sat Flow (PCU/hr)	Estimate Sat Flow	Sat Flow 2 (PCU/hr)	Green Phase	Arrow Phase
1	1	Traffic		1864	Yes	0	C	-
2	1	Traffic		1864	Yes	0	A	-
3	1	Traffic		1932	Yes	0	B	-
(Ped)	1	Pedestrian		10000	Yes	0	D	-

Arm	Traffic Stream	Relative Start Displacement (s)	Relative End Displacement (s)	Max Deg Sat (%)	Delay Weight (%)	Max Queue (PCU)	Initial Queue (PCU)	Average PCU Per Veh	Heavy Vehicles Percentage
1	1	0.0	0.0	90	100	0	0.0	1.10	0
2	1	0.0	0.0	90	100	0	0.0	1.10	0
3	1	0.0	0.0	90	100	0	0.0	1.10	0
(Ped)	1	0.0	0.0	90	100	0	0.0	-	0

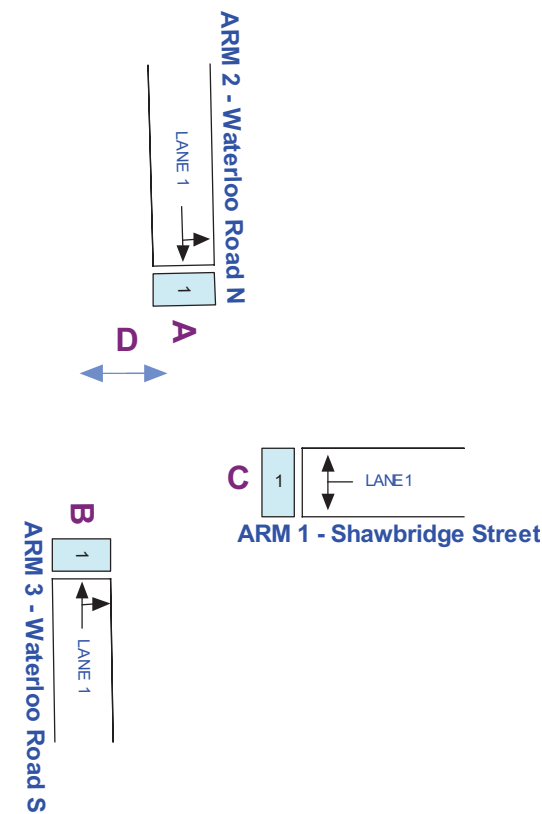
Opposition

Arm	Traffic Stream	Is Opposed	Opposing Arm	Opposing Traffic Stream	IsOpposed By Nearside Turners	IsOpposed By Straight Aheads	IsOpposed By Offside Turners	Stored Vehicles (PCU)	Clearance Time (s)	Unopposed Displacement (s)	Intergreen From Opposing (s)	Intergreen To Opposing (s)
3	1	Yes	2	1	Yes	Yes	No	1	3	3	1	1

Lanes

Arm	Traffic Stream	Lane	Name	Nearside Dest Arm	Straight Dest Arm	Offside Dest Arm	Proportion That Turn	Turning Radius (m)	IsNearside Lane	Width (m)	Gradient (%)	Short Lane Storage (PCU)
1	1	1		3		2	1.00	15	Yes	4.35	0.0	0
2	1	1		1	3		0.39	8	Yes	3.85	0.0	0
3	1	1			2	1	0.25	15	Yes	3.65	0.0	0

Junction Diagram



Signals

Signals

Max Cycle Time (s)	120
Fixed Cycle Time (s)	0
Evaluation Cycle Time (s)	0
Start Displacement (s)	1.4
End Displacement (s)	2.9

Phases

Phase	Name	Type	Associated Phase	Phase Min Green (s)	Phase Max Green (s)	Double Green
A	(Name)	Traffic	-	7.0	0.0	No
B	(Name)	Traffic	-	7.0	0.0	No
C	(Name)	Traffic	-	7.0	0.0	No
D	(Name)	Pedestrian	-	5.0	0.0	No

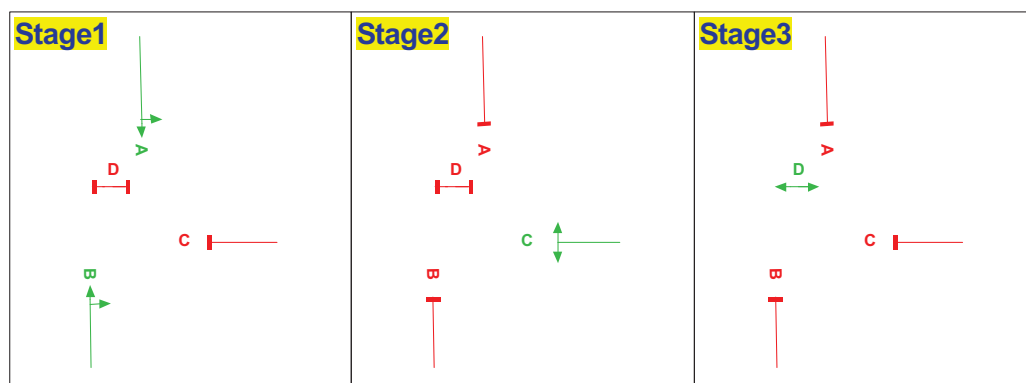
Intergreen Matrix

	To				
	A	B	C	D	
	A	-	5	5	
	B		-	5	5
	C	5	5	-	5
	D	8	8	8	-

Stages

Stage	Stage Min Green (s)	Phases In This Stage	Use To Generate Sequences
1	7.0	A,B	Yes
2	7.0	C	Yes
3	5.0	D	Yes

Stage Diagrams



Sequences

Sequence	Name	Stages In This Sequence
1		1,2,3

Constraints

(No constraints)

Traffic

Note: Traffic flows are only shown for selected demand sets. Resultant flows are the sums of the selected demand sets adjusted by the global traffic scaling factor, and are shown as the arrival rates in the final results tables.

Configuration

Traffic Scaling Factor	1.00
Time Period (min)	60
Time Segment Length (min)	15
Signal Optimiser Flows	Average
PCUs per Heavy Vehicle	2.00

Demand Sets

Name	Selected	Time Start	Time End	Profile Type	Use Relationship	Relationship
2017 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 PM Base + Dev	Yes	17:00	18:00	FLAT	No	D1

Demand Set2 - 2017 PM Base + Dev**Traffic flows (PCU/hr)**

Arm	Traffic Stream	Phase	17:00-18:00
1 - Shawbridge Street	1	C	399
2 - Waterloo Road N	1	A	903
3 - Waterloo Road S	1	B	413
Pedestrians	1	D	10

Turning Proportions

Arm	Left Movement Percentage	Straight Movement Percentage	Right Movement Percentage
1 - Shawbridge Street	33	-	67
2 - Waterloo Road N	39	61	-
3 - Waterloo Road S	-	77	23

Results

Note: Duplicate solutions are not shown.

Sequence1; Objective: CRITICAL CYCLE TIME

Summary

Cycle Time (s)	Practical Reserve Capacity (%)	Rate of Delay (PCU)	Weighted Rate of Delay (PCU)	Geometric Delay (PCU-min)
111.0	0.38	24.67	24.67	51.6

- Cycle Time is the minimum cycle time that meets all safety criteria whilst optimising this objective.
- PRC is the lowest value encountered over all streams.
- Rate of delay is the sum of each stream's rate of delay.

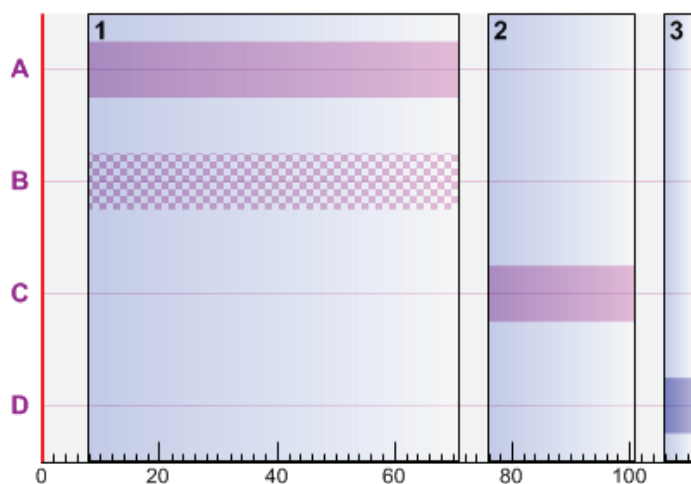
Stage Timings

Stage	Start Time (s)	Duration (s)	End Time (s)
1	8.0	63.0	71.0
2	76.0	25.0	101.0
3	106.0	5.0	0.0

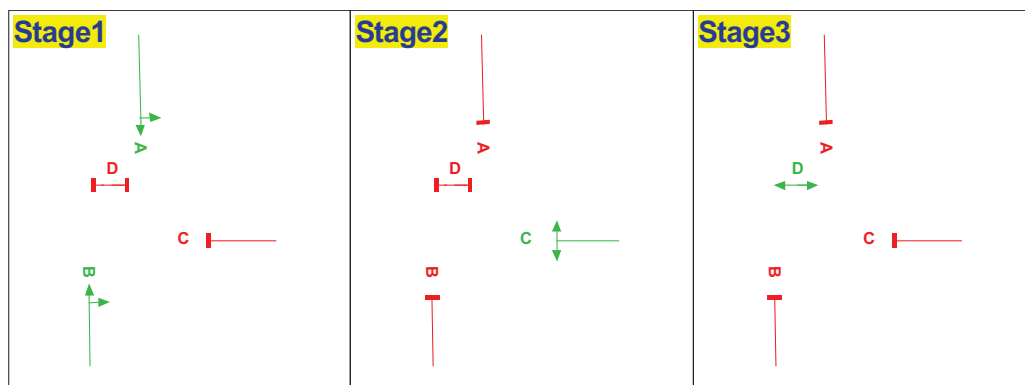
Phase Timings

Phase	Start Time (s)	Duration (s)	End Time (s)	Filter Arrow Time (s)	Indicative Arrow Start (s)	Indicative Arrow Duration (s)	Start Time (s) (2nd green)	Duration (s) (2nd green)	End Time (s) (2nd green)
A	8	63.0	71						
B	8	63.0	71						
C	76	25.0	101						
D	106	5.0	0						

Phase Timings Diagram



Final Stage Sequence



Traffic Stream Details

Arm	Traffic Stream	Arrival Rate (PCU/hr)	Controlling Phase	Effective Green (s)	Average Delay (s)	Rate of Delay (PCU)	Degree of Saturation (%)	Practical Reserve Capacity (%)	Queue at End of Green (PCU)	Queue at End of Red (PCU)	Uniform Queue (PCU)	Geometric Delay (PCU-min)
1	1	399	C	26.50	78.51	8.70	89.66	0.38	4.96	15.14	10.18	6.10
2	1	903	A	64.50	29.45	7.39	83.37	7.95	3.30	17.53	14.23	42.00
3	1	413	B	19.51	82.29	9.44	86.81	3.68	3.83	15.27	11.44	3.50
Ped	1	10	D	6.50	49.30	0.14	1.71	9999.00	0.00	0.29	0.29	0.00

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File: A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Oscady Pro\Shawbridge Street Signals\Shawbridge Street Waterloo Road No Peds.osc
Report generation date: 08/10/2012 09:17:37

Summary

Data Errors and Warnings

Severity	Area	Description
Info	Opposition	100% of the traffic on Arm2, Traffic Stream 1 opposes another traffic stream.
Info	Opposition	Arm3 Traffic Stream 1: proportion of traffic making opposed movement has been calculated as 0.25.

File Description

Title	(untitled)
Date	06/10/2012
Location	
Driving Side	Left
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Status	(new file)
Description	

Run Options

Run Evaluation Set	No
Evaluation Only	No
Optimise Critical Cycle TimeOnly	No
Use Horizontal Queues	Yes
Favour Continuous Green	No
Phase Timings Fuzziness (s)	0.5
Integer Phase Timings	Yes
Phase Snapping Distance (s)	0
Automatic Lane Turning Props	Yes
Automatic Vehicle Props	No

Geometry

Arms

Arm	Name	Exit Width (m)	Approach Speed (kph)	Exit Speed (kph)	Speed Limit (kph)	Stagger Distance (m)
1	Shawbridge Street	50.0	10	10	80	0
2	Waterloo Road N	50.0	10	10	80	0
3	Waterloo Road S	50.0	10	10	80	0

Traffic Streams

Arm	Traffic Stream	Type	Name	Sat Flow (PCU/hr)	Estimate Sat Flow	Sat Flow 2 (PCU/hr)	Green Phase	Arrow Phase
1	1	Traffic		1864	Yes	0	C	-
2	1	Traffic		1864	Yes	0	A	-
3	1	Traffic		1932	Yes	0	B	-

Arm	Traffic Stream	Relative Start Displacement (s)	Relative End Displacement (s)	Max Deg Sat (%)	Delay Weight (%)	Max Queue (PCU)	Initial Queue (PCU)	Average PCU Per Veh	Heavy Vehicles Percentage
1	1	0.0	0.0	90	100	0	0.0	1.10	0
2	1	0.0	0.0	90	100	0	0.0	1.10	0
3	1	0.0	0.0	90	100	0	0.0	1.10	0

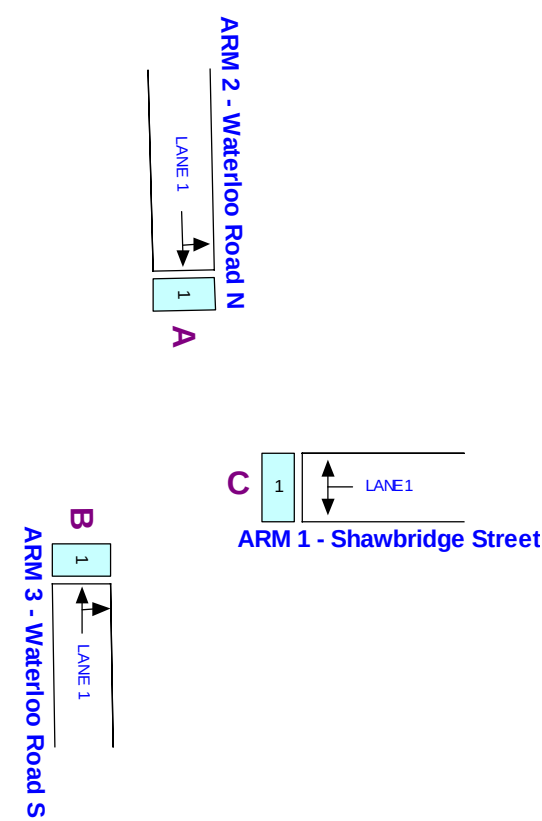
Opposition

Arm	Traffic Stream	Is Opposed	Opposing Arm	Opposing Traffic Stream	IsOpposed By Nearside Turners	IsOpposed By Straight Aheads	IsOpposed By Offside Turners	Stored Vehicles (PCU)	Clearance Time (s)	Unopposed Displacement (s)	Intergreen From Opposing (s)	Intergreen To Opposing (s)
3	1	Yes	2	1	Yes	Yes	No	1	3	3	1	1

Lanes

Arm	Traffic Stream	Lane	Name	Nearside Dest Arm	Straight Dest Arm	Offside Dest Arm	Proportion That Turn	Turning Radius (m)	IsNearside Lane	Width (m)	Gradient (%)	Short Lane Storage (PCU)
1	1	1		3		2	1.00	15	Yes	4.35	0.0	0
2	1	1		1	3		0.39	8	Yes	3.85	0.0	0
3	1	1			2	1	0.25	15	Yes	3.65	0.0	0

Junction Diagram



Signals

Signals

Max Cycle Time (s)	120
Fixed Cycle Time (s)	0
Evaluation Cycle Time (s)	0
Start Displacement (s)	1.4
End Displacement (s)	2.9

Phases

Phase	Name	Type	Associated Phase	Phase Min Green (s)	Phase Max Green (s)	Double Green
A	(Name)	Traffic	-	7.0	0.0	No
B	(Name)	Traffic	-	7.0	0.0	No
C	(Name)	Traffic	-	7.0	0.0	No

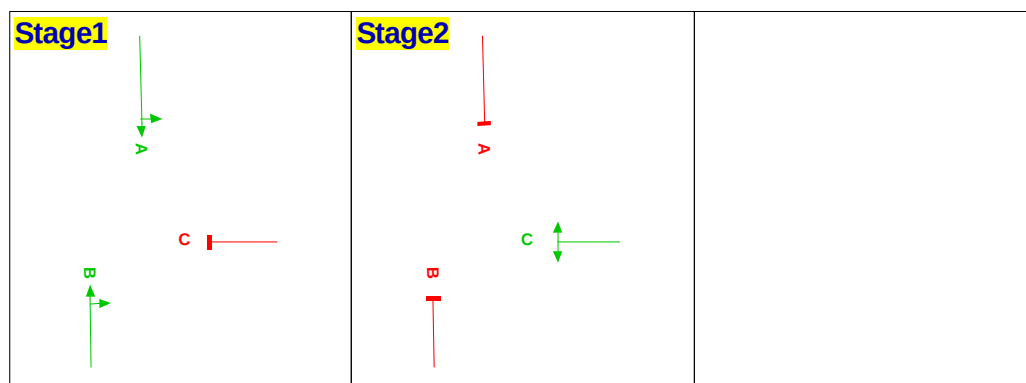
Intergreen Matrix

	To		
	A	B	C
From	A	-	5
	B	-	5
	C	5	5

Stages

Stage	Stage Min Green (s)	Phases In This Stage	Use To Generate Sequences
1	7.0	A,B	Yes
2	7.0	C	Yes

Stage Diagrams



Sequences

Sequence	Name	Stages In This Sequence
1		1,2

Constraints

(No constraints)

Traffic

Note: Traffic flows are only shown for selected demand sets. Resultant flows are the sums of the selected demand sets adjusted by the global traffic scaling factor, and are shown as the arrival rates in the final results tables.

Configuration

Traffic Scaling Factor	1.00
Time Period (min)	60
Time Segment Length (min)	15
Signal Optimiser Flows	Average
PCUs per Heavy Vehicle	2.00

Demand Sets

Name	Selected	Time Start	Time End	Profile Type	Use Relationship	Relationship
2017 AM Base + Dev	Yes	08:00	09:00	FLAT	No	D1
2017 PM Base + Dev	No	17:00	18:00	FLAT	No	D1

Demand Set1 - 2017 AM Base + Dev

Traffic flows (PCU/hr)

Arm	Traffic Stream	Phase	08:00-09:00
1 - Shawbridge Street	1	C	412
2 - Waterloo Road N	1	A	793
3 - Waterloo Road S	1	B	416

Turning Proportions

Arm	Left Movement Percentage	Straight Movement Percentage	Right Movement Percentage
1 - Shawbridge Street	19	-	81
2 - Waterloo Road N	39	61	-
3 - Waterloo Road S	-	75	25

Results

Note: Duplicate solutions are not shown.

Sequence1; Objective: CRITICAL CYCLE TIME

Summary

Cycle Time (s)	Practical Reserve Capacity (%)	Rate of Delay (PCU)	Weighted Rate of Delay (PCU)	Geometric Delay (PCU-min)
34.0	0.93	13.50	13.50	50.0

- Cycle Time is the minimum cycle time that meets all safety criteria whilst optimising this objective.
- PRC is the lowest value encountered over all streams.
- Rate of delay is the sum of each stream's rate of delay.

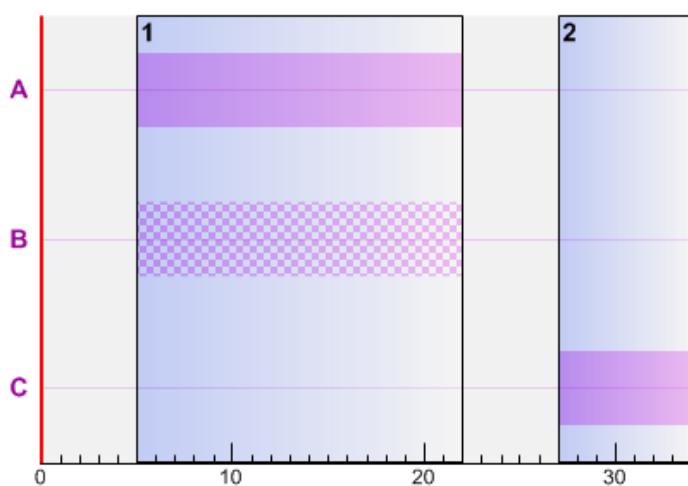
Stage Timings

Stage	Start Time (s)	Duration (s)	End Time (s)
1	5.0	17.0	22.0
2	27.0	7.0	0.0

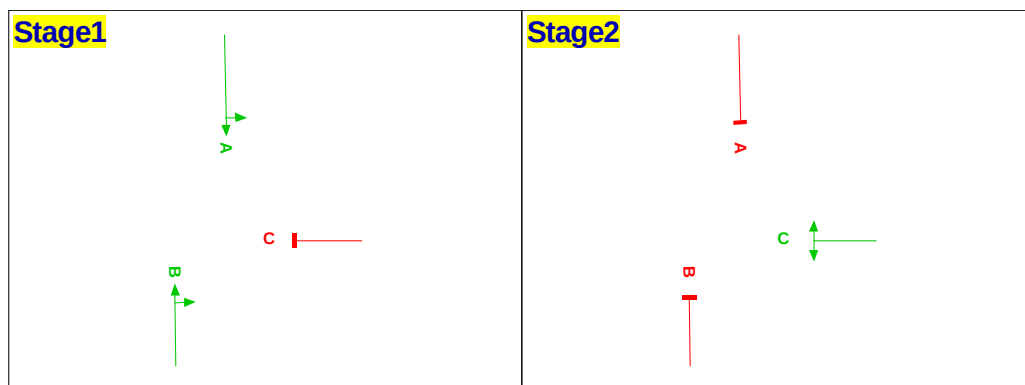
Phase Timings

Phase	Start Time (s)	Duration (s)	End Time (s)	Filter Arrow Time (s)	Indicative Arrow Start (s)	Indicative Arrow Duration (s)	Start Time (s) (2nd green)	Duration (s) (2nd green)	End Time (s) (2nd green)
A	5	17.0	22						
B	5	17.0	22						
C	27	7.0	0						

Phase Timings Diagram



Final Stage Sequence



Traffic Stream Details

Arm	Traffic Stream	Arrival Rate (PCU/hr)	Controlling Phase	Effective Green (s)	Average Delay (s)	Rate of Delay (PCU)	Degree of Saturation (%)	Practical Reserve Capacity (%)	Queue at End of Green (PCU)	Queue at End of Red (PCU)	Uniform Queue (PCU)	Geometric Delay (PCU-min)
1	1	412	C	8.50	45.18	5.17	88.41	1.80	4.42	7.60	3.18	6.70
2	1	793	A	18.50	14.34	3.16	78.19	15.11	2.17	6.23	4.06	39.80
3	1	416	B	4.86	48.95	5.66	89.17	0.93	4.77	8.44	3.67	3.50

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File: A:\Project_008_02 Clitheroe DTPC\Post Appeal 250912\Oscady Pro\Shawbridge Street Signals\Shawbridge Street Waterloo Road No Peds.osc
Report generation date: 08/10/2012 09:20:33

Summary

Data Errors and Warnings

Severity	Area	Description
Info	Opposition	100% of the traffic on Arm2, Traffic Stream 1 opposes another traffic stream.
Info	Opposition	Arm3 Traffic Stream 1: proportion of traffic making opposed movement has been calculated as 0.23.

File Description

Title	(untitled)
Date	06/10/2012
Location	
Driving Side	Left
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Status	(new file)
Description	

Run Options

Run Evaluation Set	No
Evaluation Only	No
Optimise Critical Cycle TimeOnly	No
Use Horizontal Queues	Yes
Favour Continuous Green	No
Phase Timings Fuzziness (s)	0.5
Integer Phase Timings	Yes
Phase Snapping Distance (s)	0
Automatic Lane Turning Props	Yes
Automatic Vehicle Props	No

Geometry

Arms

Arm	Name	Exit Width (m)	Approach Speed (kph)	Exit Speed (kph)	Speed Limit (kph)	Stagger Distance (m)
1	Shawbridge Street	50.0	10	10	80	0
2	Waterloo Road N	50.0	10	10	80	0
3	Waterloo Road S	50.0	10	10	80	0

Traffic Streams

Arm	Traffic Stream	Type	Name	Sat Flow (PCU/hr)	Estimate Sat Flow	Sat Flow 2 (PCU/hr)	Green Phase	Arrow Phase
1	1	Traffic		1864	Yes	0	C	-
2	1	Traffic		1864	Yes	0	A	-
3	1	Traffic		1932	Yes	0	B	-

Arm	Traffic Stream	Relative Start Displacement (s)	Relative End Displacement (s)	Max Deg Sat (%)	Delay Weight (%)	Max Queue (PCU)	Initial Queue (PCU)	Average PCU Per Veh	Heavy Vehicles Percentage
1	1	0.0	0.0	90	100	0	0.0	1.10	0
2	1	0.0	0.0	90	100	0	0.0	1.10	0
3	1	0.0	0.0	90	100	0	0.0	1.10	0

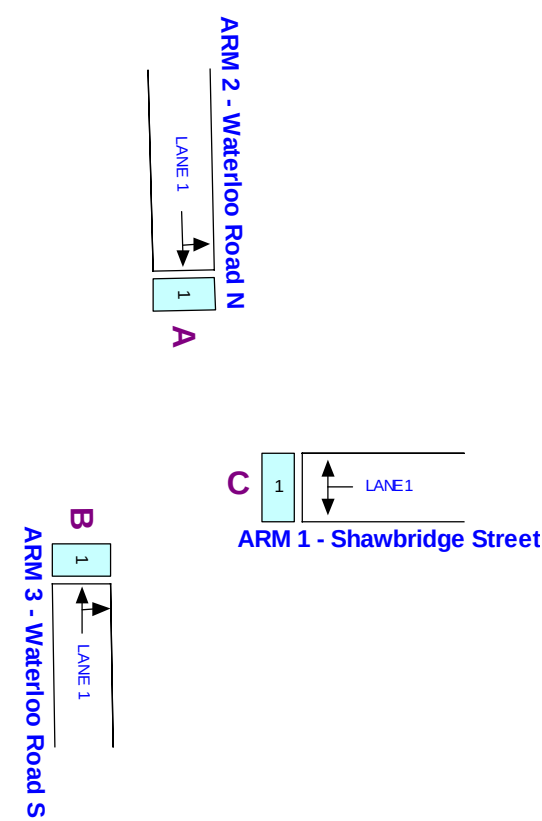
Opposition

Arm	Traffic Stream	Is Opposed	Opposing Arm	Opposing Traffic Stream	Is Opposed By Nearside Turners	Is Opposed By Straight Aheads	Is Opposed By Offside Turners	Stored Vehicles (PCU)	Clearance Time (s)	Unopposed Displacement (s)	Intergreen From Opposing (s)	Intergreen To Opposing (s)
3	1	Yes	2	1	Yes	Yes	No	1	3	3	1	1

Lanes

Arm	Traffic Stream	Lane	Name	Nearside Dest Arm	Straight Dest Arm	Offside Dest Arm	Proportion That Turn	Turning Radius (m)	Is Nearside Lane	Width (m)	Gradient (%)	Short Lane Storage (PCU)
1	1	1		3		2	1.00	15	Yes	4.35	0.0	0
2	1	1		1	3		0.39	8	Yes	3.85	0.0	0
3	1	1			2	1	0.25	15	Yes	3.65	0.0	0

Junction Diagram



Signals

Signals

Max Cycle Time (s)	120
Fixed Cycle Time (s)	0
Evaluation Cycle Time (s)	0
Start Displacement (s)	1.4
End Displacement (s)	2.9

Phases

Phase	Name	Type	Associated Phase	Phase Min Green (s)	Phase Max Green (s)	Double Green
A	(Name)	Traffic	-	7.0	0.0	No
B	(Name)	Traffic	-	7.0	0.0	No
C	(Name)	Traffic	-	7.0	0.0	No

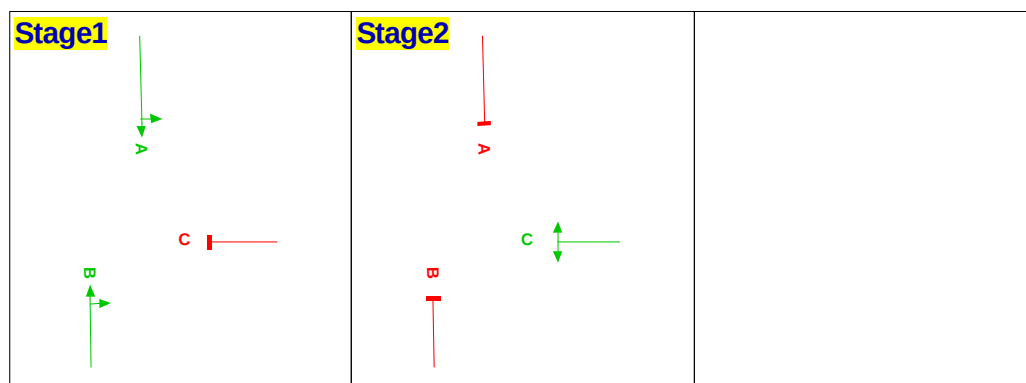
Intergreen Matrix

	To		
	A	B	C
From	A	-	5
	B	-	5
	C	5	5

Stages

Stage	Stage Min Green (s)	Phases In This Stage	Use To Generate Sequences
1	7.0	A,B	Yes
2	7.0	C	Yes

Stage Diagrams



Sequences

Sequence	Name	Stages In This Sequence
1		1,2

Constraints

(No constraints)

Traffic

Note: Traffic flows are only shown for selected demand sets. Resultant flows are the sums of the selected demand sets adjusted by the global traffic scaling factor, and are shown as the arrival rates in the final results tables.

Configuration

Traffic Scaling Factor	1.00
Time Period (min)	60
Time Segment Length (min)	15
Signal Optimiser Flows	Average
PCUs per Heavy Vehicle	2.00

Demand Sets

Name	Selected	Time Start	Time End	Profile Type	Use Relationship	Relationship
2017 AM Base + Dev	No	08:00	09:00	FLAT	No	D1
2017 PM Base + Dev	Yes	17:00	18:00	FLAT	No	D1

Demand Set2 - 2017 PM Base + Dev

Traffic flows (PCU/hr)

Arm	Traffic Stream	Phase	17:00-18:00
1 - Shawbridge Street	1	C	399
2 - Waterloo Road N	1	A	903
3 - Waterloo Road S	1	B	413

Turning Proportions

Arm	Left Movement Percentage	Straight Movement Percentage	Right Movement Percentage
1 - Shawbridge Street	33	-	67
2 - Waterloo Road N	39	61	-
3 - Waterloo Road S	-	77	23

Results

Note: Duplicate solutions are not shown.

Sequence1; Objective: CRITICAL CYCLE TIME

Summary

Cycle Time (s)	Practical Reserve Capacity (%)	Rate of Delay (PCU)	Weighted Rate of Delay (PCU)	Geometric Delay (PCU-min)
42.0	5.11	13.34	13.34	53.5

- Cycle Time is the minimum cycle time that meets all safety criteria whilst optimising this objective.
- PRC is the lowest value encountered over all streams.
- Rate of delay is the sum of each stream's rate of delay.

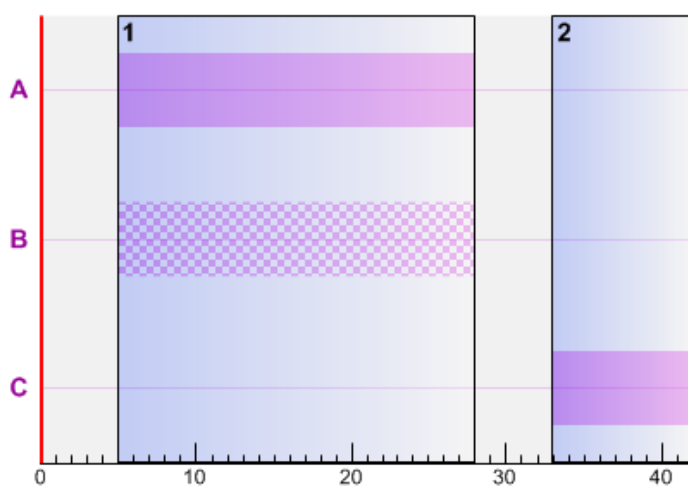
Stage Timings

Stage	Start Time (s)	Duration (s)	End Time (s)
1	5.0	23.0	28.0
2	33.0	9.0	0.0

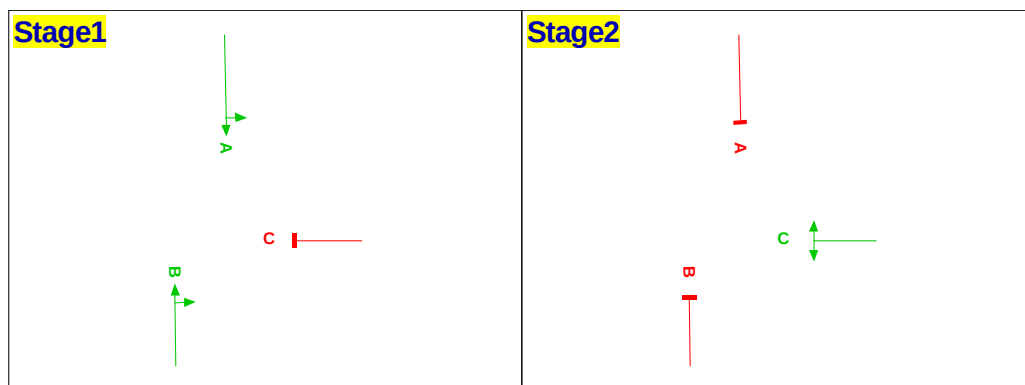
Phase Timings

Phase	Start Time (s)	Duration (s)	End Time (s)	Filter Arrow Time (s)	Indicative Arrow Start (s)	Indicative Arrow Duration (s)	Start Time (s) (2nd green)	Duration (s) (2nd green)	End Time (s) (2nd green)
A	5	23.0	28						
B	5	23.0	28						
C	33	9.0	0						

Phase Timings Diagram



Final Stage Sequence



Traffic Stream Details

Arm	Traffic Stream	Arrival Rate (PCU/hr)	Controlling Phase	Effective Green (s)	Average Delay (s)	Rate of Delay (PCU)	Degree of Saturation (%)	Practical Reserve Capacity (%)	Queue at End of Green (PCU)	Queue at End of Red (PCU)	Uniform Queue (PCU)	Geometric Delay (PCU-min)
1	1	399	C	10.50	42.07	4.66	85.62	5.11	3.44	7.23	3.79	7.20
2	1	903	A	24.50	17.37	4.36	83.05	8.37	3.21	8.57	5.36	42.80
3	1	413	B	5.93	39.37	4.52	82.21	9.47	2.63	7.14	4.51	3.50

