8. Traffic data for air quality assessment

8.1 Action 8

Please provide a summary of the key data set outputs from the traffic and transport models that were used as inputs to prepare the air quality assessments (including details of junctions/equations with parameter values and levels of aggregation (spatial/temporal)).

8.1.1 As described in Appendix 6.D – Environmental Traffic Data of the ES (APP-052) and Appendix H to the Applicant's response to the EXA's First Written Questions (FWQ's) on Traffic and Transport [REP1-174]. The air quality and noise assessments use traffic data that is converted into Annual Average Daily Traffic (AADT) and Annual Average Weekly Traffic (AAWT) using data from the traffic and transport model following the process outlined below.

8.1.2 The data input from the traffic model is provided in the following format:

1. Peak hour flow and speeds for AM and PM
2. Average inter peak hour flow and speed

8.1.3 The roads are represented in the traffic model as links and are represented as A_Node to B_Node, with Nodes being the two ends of each link. All the data is provided in this form for each link in the study area in both directions separately. The AADT is calculated for both directions separately and then added to find the 2-way flows.

8.1.4 Expansion factors are used to convert the modelled hourly flows to 18 hr AAWT for Noise assessment and 24hr AADT for Air Quality. The expansion factors for both peak and off-peak periods calculated for the Scheme are set out in Table 1 and 2, below.

8.1.5 The calculations used for the expansion factors are included on Table 4-3 of Appendix 6.D (APP-052).

8.1.6 The Noise and Air quality assessment requires flows from the traffic model for various time periods within the 18hr and 24hr period, as the traffic volume varies throughout the day with the highest flows in the entire day during the morning and evening peak periods. The normal practice for road schemes is to split the total time period into four time periods (AM 6:00-10:00, Inter-peak (IP) 10:00-16:00, PM 16:00-19:00 and Off Peak (OP) 19:00-06:00). For Silvertown Tunnel, to assess the environmental impacts more accurately, the off peak period has been split further into two periods; OP charged (19:00-

22:00) and OP non charged (22:00-06:00). This way time-based emission rates and noise level profiles can be generated which is a more representative approach than a single daily average emission rate or weekly average noise level.

8.1.7 Factors have been calculated using the observed count data as follows:

- Hourly Manual Classified Counts (MCCs) undertaken for 19th to 23rd November 2012 for 118 sites for the period (06:00-22:00hrs).
- Annual (2012) 24 Hour Automatic Traffic Counts (ATCs) for 9 sites.

8.1.8 The average weekday count for the November 2012 MCC data has been used to calculate the factors and the ATC 24hr count has been used to convert the November expanded data to Annual Average Daily Traffic (AADT) and Annual Average Weekday Traffic (AAWT).

8.1.9 The factors for morning and evening peak periods are calculated using the observed count data by finding the proportion of peak hour to peak period flow.

8.1.10 For the off peak period, since there is no model for that period, a proportion of off peak flows to inter peak flows is calculated. Since the off peak period flows are less than the inter peak period flows, this approach estimates slightly higher flow values for the off peak period, which would show a worse case than the actual.

8.1.11 Expansion factors are calculated for light and heavy vehicles separately for all time periods.

8.1.12 The expansion factors are calculated following the guidance provided in DfT's Transport Analysis Guidance unit M1.2.

8.1.13 The reliability of the expansion factors is dependent on the number of the count sites from which they are derived. In case of Silvertown, there are 118 sites. These count sites are spread fairly evenly throughout East and Southeast London. The high number of sites means the average traffic flow values used to calculate the factors are highly typical of the modelled area. Therefore a high degree of reliability maybe put in the expanded average daily flows across the area.

8.1.14 To ensure that the process is robust, advance database tools (Macros/VBA code) were used to make sure the process of expanding the data for the whole model is accurate. Checks have been undertaken to make sure there are no errors in the analysis.

Table 1 – Peak Period Factors

AADT/AAWT	Morning (AM) Peak hour (08:00-09:00hrs) to four-hour AM Peak Period (06:00-10:00hrs)	Average Inter Peak (IP) hour (10:00 to 16:00hrs) to six-hour Inter Peak Period (10:00-16:00hrs)	Evening (PM) Peak hour (17:00-18:00hrs) to three-hour PM peak Period (16:00-19:00hrs)
Cars and LGVs	3.3315	6.0	2.8834
OGVs	3.8923	6.0	3.1360
All Vehicles	3.4087	6.0	2.8988

Table 2 - Off Peak Period Factors

AADT	3hrs Off Peak charged period (19:00-22:00hrs)	8hrs Off Peak non-charged period (22:00-06:00hrs)
Cars and LGVs	2.3366	2.5221
OGVs	1.0467	1.6607
All Vehicles	2.2033	2.1519
AAWT	**3hrs Off Peak charged period (19:00-22:00hrs)**	**2hrs Off Peak non-charged period (22:00-00:00hrs)**
Cars and LGVs	2.3366	0.8422
OGVs	1.0467	0.3620
All Vehicles	2.2033	0.6832

8.1.15 The output provided in the AADT dataset for Air Quality assessment is:

- Morning Peak Period (0600-1000) flows and speed for Lights and Heavy vehicles
- Inter Peak Period (1000-1600) flows and speed for Light and Heavy Vehicles.
- Evening Peak Period (1600-1900) flows and speed for Lights and Heavy vehicles.
- Off Peak Charged Period (1900-2200) flows and speed for Lights and Heavy vehicles.
- Off Peak Non Charged Period (2200-0600) flows and speed for Lights and Heavy vehicles.
- AADT for Light and Heavy vehicles (total for all time periods)
- Average speed for the 24hr period

8.1.16 Similarly for AAWT, the output provided for Noise assessment is:

- Morning Peak Period (0600-1000) flows and speed for Lights and Heavy vehicles
- Inter Peak Period (1000-1600) flows and speed for Light and Heavy Vehicles.
- Evening Peak Period (1600-1900) flows and speed for Lights and Heavy vehicles.
- Off Peak Charged Period (1900-2200) flows and speed for Lights and Heavy vehicles.
- Off Peak Non Charged Period (2200-0000) flows and speed for Lights and Heavy vehicles.
- 18hr AAWT (0600-midnight) for Light and Heavy vehicles (total for all time periods)
- 8hr Night time (2300-0700) flows and speed for Lights and Heavy vehicles
- Average speed for 18hr period

8.1.17 An example of the data output for AADT and AAWT is included in xxx Appendix. The full data set can be made available however is over 6,000 pages in length and has not been included in response to this action point.

8.1.18 The Applicant would like to request further clarification from the ExA Panel on the request to include details of '*junctions/equations with parameter values and levels of aggregation (spatial/temporal*'. It is considered that this clarification may actually be in relation to item 7, in which case a full response on local junction modelling has been provided in X.

9. Noise Anomalies

9.1 Action 9 - Please provide an explanation of the anomalies regarding the interface between the traffic/transport modelling outputs and noise assessments in relation to:-

A) The lack of any text in the ES chapter on noise regarding the assumptions that were made in the noise and vibration assessments in relation to daily/peak flow/off-peak flow vehicle movements that would occur in the operational phase of the development – please provide a summary of the vehicle movement data that was employed; and

9.1.1 As stated in Appendix 6.D – Environmental Traffic Data of the ES [APP-052] and Section 3.2 (page 15) of Appendix H to the Applicants response to the EXA's Questions on Traffic and Transport [REP1-174]. Vol 11, Section 3, Part 7: Annex 4 of the Design Manual for Roads and Bridges *Traffic Forecasts and Speeds* provides details about the procedure for assessing noise impacts, stating that: *'The traffic flow used in the calculations should be that expected between 06.00 hours and midnight on an average weekday in the appropriate year'*. Therefore the noise assessment is based upon the Annual Average Weekday Traffic (AAWT) data. Below is a summary of the AAWT data used in the noise model.

Northbound through the Silvertown and Blackwall Tunnels

- Opening Year 2021 - 10,790 AAWT
- Design Year 2036 - 14,068 AAWT

Southbound through the Silvertown and Blackwall Tunnels

- Opening Year 2021 - 10,654 AAWT
- Design Year 2036 - 13,904 AAWT

9.2 Action 9 –

(B) why, if the noise impacts traffic data is needed for the opening year (2021) and the design year (2036), the noise assessment model has not been run for the design year but instead traffic data was interpolated for 2031 and 2041.

9.2.1 Interpolating traffic data is a standard process and is used in many transport assessments as traffic model forecast years are not available for all the

years in the appraisal period. The approach is standard WebTAG practice, for example:

- In DMRB Volume 12.1.1, Application of traffic appraisal to trunk road schemes, '*12.3.24 Local growth factors must be constrained to Local Authority District level trip end growth with the national forecast adjustment factor applied (see section 12.5). However, the national trip ends models are only run at the (census) years 1981, 1986, 1991 for which there is forecast planning data. Intermediate years should be produced by interpolation between these years'*.

- The DfT's Traffic appraisal software TUBA (Transport Users Benefit Appraisal) uses linear interpolation of traffic model data between modelled years to estimate the benefits in the appraisal period.

9.2.2 For the Silvertown model, assessment is based on the strategic transport modelling for the Scheme which adopts the forecast years of 2021, 2031, and 2041, these forecast years are based around Census years.

9.2.3 The interpolation between these years is regarded as an acceptable representation of the 2036 outcome by the Applicant.

Summary of AADT data

A_Node	B_Node	Anode X	Anode Y	Bnode X	Bnode Y	AM (6-10) Lights	AM (6-10) Heavies	AM Speed	IP (10-16) Lights	IP (10-16) Heavies	IP Speed	PM (16-19) Lights	PM (16-19) Heavies	PM Speed	OP Lights 3hr(19-22)	OP Heavies 3hr(19-22)	OP Lights 8hr(22-06)	OP Heavies 8hr(22-06)	OP Speed	AADT	AADT Lights	AADT Heavies	Speed Wtd by Veh-hr	Speed Wtd by Veh	Speed Wtd by Nothing	B_Node_2	A_Node_2	AM (6-10) Lights_2	AM (6-10) Heavies_2	AM Speed_2	IP (10-16) Lights_2	IP (10-16) Heavies_2	IP Speed_2	PM (16-19) Lights_2	PM (16-19) Heavies_2	PM Speed_2	OP Heavies 3hr_2(19-22) 22)	OP Lights 3hr_2(19-22-06) 06)	OP Heavies 8hr_2(22-06) 06)	OP Speed_2	AADT_2	AADT Lights_2	AADT Heavies_2	Speed Wtd by Veh-hr_2	Speed Wtd by Veh_2	Speed Wtd by Nothing_2	1_2_Way	Distance (m)	2-way AADT Lights	2-way AADT Heavies	2-way speed Wtd by Veh-hr	2-way speed Wtd by Veh	2-way speed Wtd by Nothing
10000	10180	532892	180691	532762	180724	1776	316	8	2852	521	9	2158	144	8	1111	91	1189	137	25	10296	9086	1210	13	12	12	10180	10000	1872	233	12	3932	514	9	2222	80	10	1531	90	1649	143	25	12265	11205	1061	15	14	14	2	134	22561	20291	2270	14	13	13
10000	10183	532892	180691	533258	180657	1872	233	25	3937	515	25	2224	80	25	1533	90	1651	143	25	12280	11218	1062	25	25	25	10183	10000	1743	277	20	2650	447	20	2058	124	20	1032	78	1104	117	25	9631	8588	1043	21	21	21	2	370	21910	19806	2104	23	23	23
10001	10003	532362	181559	532404	181679	38	0	25	313	5	25	7	0	25	122	1	145	1	25	631	625	7	25	25	25	10003	10001	582	62	6	1206	69	5	557	8	7	470	12	519	20	25	3503	3333	170	12	11	11	2	127	4134	3958	177	14	14	18
10001	10131	532362	181559	532143	181569	2212	182	21	3553	143	24	1666	39	21	1384	25	1563	50	28	10816	10378	438	24	24	23	10131	10001	1327	137	20	4078	209	20	1486	50	19	1588	36	1722	52	28	10685	10201	484	23	22	22	2	195	21501	20579	922	23	23	23
10001	10188	532362	181559	532410	181563	1355	149	25	3995	228	28	1523	53	25	1556	40	1696	58	28	10653	10126	527	27	27	27	10188	10001	1698	131	18	2578	98	19	1154	34	18	1004	17	1162	37	28	7914	7596	317	22	21	21	2	87	18566	17722	845	25	25	24
10002	10005	532607	181580	532616	181609	144	22	25	349	35	25	64	4	25	136	6	150	9	25	919	843	76	25	25	25	10005	10002	464	29	11	349	30	10	100	5	11	136	5	155	9	25	1283	1205	77	15	14	14	2	30	2201	2048	154	19	19	20
10002	10188	532607	181580	532410	181563	1464	123	25	1886	75	28	997	30	25	735	13	838	29	28	6190	5920	269	27	27	27	10188	10002	877	102	24	2969	155	27	1146	46	24	1156	27	1256	38	28	7771	7404	367	27	27	26	2	156	13960	13324	636	27	27	26
10002	10294	532607	181580	532607	181573	1496	151	25	3620	206	28	1361	58	25	1410	36	1541	52	28	9930	9428	502	27	27	27	10294	10002	1707	131	25	2315	87	28	1143	32	25	902	15	1019	32	28	7383	7086	297	27	27	27	2	70	17313	16514	799	27	27	27
10003	10001	532404	181679	532362	181559	582	62	6	1206	69	5	557	8	7	470	12	519	20	25	3503	3333	170	12	11	11	10001	10003	38	0	25	313	5	25	7	0	25	122	1	145	1	25	631	625	7	25	25	25	2	131	4134	3958	177	14	14	18
10003	10004	532404	181679	532499	181647	38	0	25	313	5	25	7	0	25	122	1	145	1	25	631	625	7	25	25	25	10004	10003	582	62	25	1206	69	25	557	8	25	470	12	519	20	25	3503	3333	170	25	25	25	2	100	4134	3958	177	25	25	25
10004	10003	532499	181647	532404	181679	582	62	25	1206	69	25	557	8	25	470	12	519	20	25	3503	3333	170	25	25	25	10003	10004	38	0	25	313	5	25	7	0	25	122	1	145	1	25	631	625	7	25	25	25	2	100	4134	3958	177	25	25	25
10004	10006	532499	181647	532537	181633	38	0	20	313	5	20	7	0	20	122	1	145	1	25	632	625	7	22	22	21	10006	10004	582	62	25	1206	69	25	557	8	25	470	12	519	20	25	3503	3333	170	25	25	25	2	41	4135	3958	177	24	25	23
10005	10002	532616	181609	532607	181580	464	29	11	349	30	10	100	5	11	136	5	155	9	25	1283	1205	77	15	14	14	10002	10005	144	22	25	349	35	25	64	4	25	136	6	150	9	25	919	843	76	25	25	25	2	30	2201	2048	154	19	19	20
10005	10006	532616	181609	532537	181633	144	22	18	349	35	18	64	4	18	136	6	150	9	25	919	843	76	20	20	20	10006	10005	464	29	25	349	30	25	100	5	25	136	5	155	9	25	1283	1205	77	25	25	25	2	83	2201	2048	154	23	23	22
10006	10004	532537	181633	532499	181647	582	62	25	1206	69	25	557	8	25	470	12	519	20	25	3503	3333	170	25	25	25	10004	10006	38	0	20	313	5	20	7	0	20	122	1	145	1	25	632	625	7	22	22	21	2	41	4135	3958	177	24	25	23
10006	10005	532537	181633	532616	181609	464	29	25	349	30	25	100	5	25	136	5	155	9	25	1283	1205	77	25	25	25	10005	10006	144	22	18	349	35	18	64	4	18	136	6	150	9	25	919	843	76	20	20	20	2	83	2201	2048	154	23	23	22
10006	10008	532537	181633	532593	181769	182	22	25	662	39	25	71	4	25	258	7	295	11	25	1550	1467	83	25	25	25	10008	10006	1046	91	19	1555	98	19	657	13	20	606	17	674	29	25	4786	4538	248	21	21	21	1	148	6336	6006	331	22	22	23
10007	10293	531616	181841	531796	181817	468	39	16	1022	36	15	131	2	16	398	6	437	10	16	2550	2457	93	16	16	16	10293	10007	182	22	25	662	39	25	71	4	25	258	7	295	11	25	1550	1467	83	25	25	25	2	148	6336	6006	331	22	22	23
10008	10006	532593	181769	532537	181633	1046	91	19	1555	98	19	657	13	20	606	17	674	29	25	4786	4538	248	21	21	21	10006	10008	182	22	25	662	39	25	71	4	25	258	7	295	11	25	1550	1467	83	25	25	25	2	148	6336	6006	331	22	22	23
10008	10009	532593	181769	532600	181788	182	22	13	662	39	13	71	4	13	258	7	295	11	25	1550	1467	83	17	17	16	10109	10008	1046	91	25	1555	98	25	657	13	25	606	17	674	29	25	4786	4538	248	25	25	25	2	33	6336	6006	331	23	23	20
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10009	10131	532032	181537	532143	181569	1730	201	21	5296	270	23	1779	82	21	2063	47	2216	71	28	13757	13084	672	24	24	23	10131	10009	1707	131	25	2315	87	28	1143	32	25	902	15	1019	32	28	7383	7086	297	27	27	27	1	163	13757	13084	672	24	24	23
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10011	10013	531796	181405	531828	181518	0	28	19	0	43	19	0	23	19	0	8	0	12	19	113	0	113	19	19	19	10013	10011																							1	118	113	0	113	19	19	19
10011	10015	531796	181405	531781	181312	120	1	12	1414	147	16	480	1	16	551	26	589	39	16	3367	3153	214	16	16	15	10015	10011	607	30	4	1524	92	4	502	2	6	594	16	655	17	7	4040	3882	159	5	5	5	2	95	7408	7035	373	10	10	10
10011	10137	531796	181405	531724	181446	1448	199	11	2690	226	15	1296	131	16	1048	39	1135	60	16	8272	7617	656	15	15	15	10137	10011	757	186	6	3234	210	6	1322	132	5	1259	37	1378	53	9	8569	7950	619	7	7	6	2	85	16841	15567	1275	11	11	10
10011	10395	531796	181405	531966	181340	610	237	13	2955	299	17	1017	156	17	1151	52	1248	77	17	7802	6981	821	17	17	16	10395	10011	1309	227	7	3697	414	9	1581	154	8	1440	72	1550	111	11	10554	9576	978	9	9	9	2	195	18357	16558	1799	12	12	12
10012	10137	531696	181516	531724	181446	364	9	14	1080	6	14	485	2	14	420	1	465	2	14	2834	2815	19	14	14	14	10137	10012	2158	60	15	3855	120	15	1311	24	16	1501	21	1638	33	17	10722	10464	259	16	16	16	2	85	13557	13279	278	15	15	15
10012	10396	531696	181516	531666	181529	1124	46	5	2954	112	3	1115	9	4	1151	20	1247	31	8	7809	7591	218	5	5	5	10396	10012																							1	33	7809	7591	218	5	5	5
10013	10012	531828	181518	531696	181516	931	39	13	2739	63	11	1140	9	12	1067	11	1151	17	15	7166	7027	139	13	13	13	10012	10013																							1	136	7166	7027	139	13	13	13
10014	10015	531761	181559	531781	181312	607	30	10	1524	92	11	502	2	13	594	16	655	17	14	4040	3882	159	12	12	12	10015	10014																							1	154	4040	3882	159	12	12	12
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10014	10211	531761	181159	531834	181144	781	269	13	611	362	17	755	210	17	238	63	265	97	17	3652	2651	1001	16	16	16	10211	10014	76	216	11	3	324	15	42	174	15	1	56	1	86	15	980	123	857	14	14	14	2	75	4632	2774	1857	16	15	15
10015	10011	531781	181312	531796	181405	607	30	4	1524	92	4	502	2	6	594	16	655	17	7	4040	3882	159	5	5	5	10011	10015	120	1	12	1414	147	16	480	1	16	551	26	589	39	16	3367	3153	214	16	16	15	2	96	7408	7035	373	10	10	10
10015	10016	531781	181312	531697	181172	120	1	10	1414	147	13	480	1	14	551	26	589	39	14	3367	3153	214	13	13	13	10016	10015																							1	197	3367	3153	214	13	13	13
10016	10014	531697	181172	531761	181159	1312	299	10	2133	454	15	1215	213	14	830	79	919	114	16	7568	6410	1158	14	14	14	10014	10016	0	216	12	0	323	16	0	174	16	0	56	0	86	16	856	0	856	15	15	15	2	65	8423	6410	2014	14	14	14
10016	10151	531697	181172	531633	181174	93	216	3	1381	470	4	442	174	3	538	82	574	125	6	4096	3028	1068	5	5	4	10151	10016	1285	298	11	2099	454	15	1177	213	14	818	79	905	114	16	7441	6284	1157	15	14	14	2	64	11536	9311	2225	11	11	9
10017	10018	532573	181942	532541	181817	703	72	19	953	67	19	497	14	20	371	12	384	18	25	3089	2907	182	21	21	21	10018	10017	245	23	17	562	40	17	117	5	18	219	7	250	11	25	1478	1392	85	20	20	19	2	129	4567	4300	267	21	20	20
10017	10204	532573	181942	532437	181956	680	170	30	1777	110	33	858	27	30	692	19	749	29	36	5113	4756	356	33	33	32	16204	10017	1315	90	30	2377	129	33	705	27	30	926	23	1012	35	36	6638	6334	304	33	33	32	2	131	11750	11090	660	33	33	32
10017	18205	532573	181942	532617	181933	1558	113	26	2933	170	28	821	32	26	1142	30	1259	46	36	8103	7714	389	30	30	29	18205	10017	1382	242	25	2725	177	28	1354	41	25	1061	31	1131	48	36	8190	7652	538	30	29	29	2	47	16294	15366	927	30	29	29
10018	10017	532541	181817	532573	181942	245	23	17	562	40	17	117	5	18	219	7	250	11	25	1478	1392	85	20	20	19	10017	10018	703	72	19	953	67	19	497	14	20	371	12	384	18	25	3089	2907	182	21	21	21	2	129	4567	4300	267	21	20	20
10018	10109	532541	181817	532600	181798	1274	134	16	2206	173	17	871	21	17	859	30	952	51	25	6571	6161	409	19	19	19	10109	10018	286	24	17	757	43	17	237	5	19	295	7	336	12	25	2003	1912	91	20	20	20	2	60	8573	8073	500	20	19	19
10018	10270	532541	181817	532442	181921	22	0	25	43	0	25	1	0	25	17	0	21	0	25	105	104	1	25	25	25	10270	10018	383	53	24	937	97	24	259	11	24	365	17	436	31	25	2588	2379	209	24	24	24	2	180	2693	2483	210	24	24	25

Summary of AAWT Data

A_Node	B_Node	Anode X	Anode Y	Bnode X	Bnode Y	AM (6-10) Lights	AM (6-10) Heavies	AM Speed	IP (10-16) Lights	IP (10-16) Heavies	IP Speed	PM (16-19) Lights	PM (16-19) Heavies	PM Speed	OP Lights 3hr (19-22)	OP Heavies 3hr (19-22)	OP Lights 2hr (22-00)	OP Heavies 2h (22-00)	OP Speed	8hr Night flows Lights (23-07)	8hr Night flows Heavies (23-07)	Night Speed	18hr AAWT	18hr AAWT Lights	18hr AAWT Heavies	Speed Wtd by Veh-hr	Speed Wtd by Veh	Speed Wtd by Nothing
10000	10180	532892	180691	532762	180724	1845	381	8	2962	627	9	2242	174	8	1153	109	412	37	25	1512	258	25	9942	8614	1328	10	11	12
10000	10183	532892	180691	533258	180657	1944	281	25	4089	620	25	2310	96	25	1592	108	573	39	25	1997	246	25	11652	10508	1144	25	25	25
10001	10003	532362	181559	532404	181679	40	0	25	325	6	25	7	0	25	127	1	50	0	25	153	2	25	556	549	7	25	25	25
10001	10131	532362	181559	532143	181569	2298	219	21	3690	172	24	1731	46	21	1437	30	542	14	28	1966	111	28	10178	9697	481	23	23	23
10001	10188	532362	181559	532410	181563	1408	179	25	4149	275	28	1582	63	25	1616	48	588	16	28	1952	113	28	9924	9343	581	27	27	27
10002	10005	532607	181580	532616	181609	149	26	25	362	42	25	66	5	25	141	7	52	3	25	177	18	25	854	771	83	25	25	25
10002	10188	532607	181580	532410	181563	1521	147	25	1959	90	28	1036	36	25	763	16	291	8	28	1102	69	28	5866	5569	297	27	27	27
10002	10294	532607	181580	532607	181573	1554	182	25	3760	247	28	1413	69	25	1464	43	534	14	28	1820	106	28	9281	8725	556	27	27	27
10003	10001	532404	181679	532362	181559	604	75	6	1252	83	5	578	10	7	488	14	180	5	25	626	41	25	3289	3102	186	8	10	11
10003	10004	532404	181679	532499	181647	40	0	25	325	6	25	7	0	25	127	1	50	0	25	153	2	25	556	549	7	25	25	25
10004	10003	532499	181647	532404	181679	604	75	25	1252	83	25	578	10	25	488	14	180	5	25	626	41	25	3289	3102	186	25	25	25
10004	10006	532499	181647	532537	181633	40	0	20	325	6	20	7	0	20	127	1	50	0	25	153	2	25	556	549	7	21	21	21
10005	10002	532616	181609	532607	181580	482	35	11	363	36	10	104	6	11	141	6	54	2	25	238	19	25	1229	1144	85	12	13	14
10005	10006	532616	181609	532537	181633	149	26	18	362	42	18	66	5	18	141	7	52	3	25	177	18	25	854	771	83	19	20	20
10006	10004	532537	181633	532499	181647	604	75	25	1252	83	25	578	10	25	488	14	180	5	25	626	41	25	3289	3102	186	25	25	25
10006	10005	532537	181633	532616	181609	482	35	25	363	36	25	104	6	25	141	6	54	2	25	238	19	25	1229	1144	85	25	25	25
10006	10008	532537	181633	532593	181769	189	26	25	688	48	25	73	5	25	268	8	102	3	25	330	19	25	1410	1320	90	25	25	25
10007	10293	531616	181841	531796	181817	486	47	16	1061	43	15	136	2	16	413	8	152	3	16	524	23	16	2352	2249	103	16	16	16
10008	10006	532593	181769	532537	181633	1087	110	19	1615	118	19	683	15	20	629	21	234	8	25	864	60	25	4518	4247	271	20	21	21
10008	10109	532593	181769	532600	181798	189	26	13	688	48	13	73	5	13	268	8	102	3	25	330	19	25	1410	1320	90	15	16	16
10009	10010	532032	181537	531952	181625	109	0	13	620	13	17	201	0	17	242	2	92	1	17	286	4	17	1280	1264	16	17	17	16
10009	10131	532032	181537	532143	181569	1797	242	21	5501	325	23	1848	99	21	2142	57	769	19	28	2544	143	28	12799	12056	743	23	23	23
10010	10009	531952	181625	532032	181537	394	12	8	901	8	11	150	5	11	351	1	126	0	11	435	5	11	1949	1922	27	10	10	10
10011	10013	531796	181405	531828	181518	0	34	19	0	52	19	0	27	19	0	9	0	3	19	0	22	19	126	0	126	19	19	19
10011	10015	531796	181405	531781	181312	125	2	12	1468	177	16	499	1	16	572	31	204	11	16	617	51	16	3089	2868	221	16	16	15
10011	10137	531796	181405	531724	181446	1504	240	11	2794	272	15	1346	157	16	1088	47	394	16	16	1401	129	16	7857	7125	732	14	15	15
10011	10395	531796	181405	531966	181340	634	286	13	3069	360	17	1056	187	17	1195	63	433	21	17	1370	160	17	7304	6387	917	17	16	16
10012	10137	531696	181516	531724	181446	379	10	14	1121	8	14	504	2	14	437	1	161	0	14	534	4	14	2623	2602	22	14	14	14
10012	10396	531696	181516	531666	181529	1167	55	5	3068	135	3	1158	11	4	1195	23	432	8	8	1458	52	8	7254	7021	233	4	5	5
10013	10012	531828	181518	531696	181516	967	47	13	2844	76	11	1184	10	12	1108	13	399	5	15	1327	32	15	6653	6502	152	12	13	13
10014	10015	531761	181159	531781	181312	630	37	10	1583	111	11	521	3	13	617	19	227	5	14	768	30	14	3753	3578	175	12	12	12
10014	10016	531761	181159	531697	181172	0	260	12	0	389	16	0	209	16	0	68	0	23	16	0	167	16	949	0	949	15	15	15
10014	10211	531761	181159	531834	181144	811	323	13	635	435	17	784	253	17	247	76	92	26	17	404	194	17	3684	2570	1114	16	16	16
10015	10011	531781	181312	531796	181405	630	37	4	1583	111	4	521	3	6	617	19	227	5	7	768	30	7	3753	3578	175	5	5	5
10015	10016	531781	181312	531697	181172	125	2	10	1468	177	13	499	1	14	572	31	204	11	14	617	51	14	3089	2868	221	13	13	13
10016	10014	531697	181172	531761	181159	1363	359	10	2215	546	15	1262	256	14	863	95	319	31	16	1158	224	16	7308	6021	1288	14	14	14
10016	10151	531697	181172	531633	181174	96	260	3	1434	566	4	459	210	3	558	99	199	34	6	598	218	6	3916	2747	1169	4	4	4
10017	10018	532573	181942	532541	181817	730	87	19	989	80	19	516	16	20	385	14	133	5	25	510	42	25	2956	2754	202	20	20	21
10017	16204	532573	181942	532437	181956	706	205	30	1846	132	33	891	33	30	719	23	260	8	36	876	81	36	4823	4422	401	32	32	32
10017	18205	532573	181942	532617	181933	1618	135	26	3046	204	28	853	38	26	1186	36	437	12	36	1545	88	36	7566	7141	426	28	29	29
10018	10017	532541	181817	532573	181942	255	27	17	583	48	17	122	5	18	227	8	87	3	25	295	20	25	1366	1273	92	18	19	19
10018	10109	532541	181817	532600	181798	1323	161	16	2291	208	17	904	25	17	892	36	330	14	25	1184	101	25	6185	5741	445	18	18	19
10018	10270	532541	181817	532442	181921	23	0	25	44	0	25	1	0	25	17	0	7	0	25	25	0	25	94	94	1	25	25	25

A_Node	B_Node	B_Node_2	A_Node_2	AM (6-10) Lights_2	AM (6-10) Heavies_2	AM Speed_2	IP (10-16) Lights_2	IP (10-16) Heavies_2	IP Speed_2	PM (16-19) Lights_2	PM (16-19) Heavies_2	PM Speed_2	OP Lights 3hr_2 (19-22)	OP Heavies 3hr_2(19-22)	OP Lights 2hr_2(22-00)	OP Heavies 2hr_2(22-00)	OP Speed_2	8hr Night flows Lights_2 (23-07)	8hr Night flows Heavies_2(23-07)	Night Speed_2	18hr AAWT_2	18hr AAWT Lights_2	18hr AAWT Heavies_2	Speed Wtd by Veh-hr_2	Speed Wtd by Veh_2	Speed Wtd by Nothing_2	1_2_Way	Distance (m)	2-way 18hr AAWT	2-way 18hr AAWT-Lights	2-way 18hr AAWT-Heavies	2-way Night-Lights	2-way Night-Heavies	2-way Night-Speed	2-way speed Wtd by Veh-hr	2-way speed Wtd by Veh	2-way speed Wtd by Nothing
10000	10180	10180	10000	1944	281	12	4083	619	9	2307	96	10	1590	108	572	39	25	1994	245	25	11639	10496	1143	12	13	14	2	134	21581	19110	2471	3506	504	25	12	12	13
10000	10183	10183	10000	1810	334	20	2753	537	20	2138	149	20	1072	94	383	32	25	1420	222	25	9301	8155	1146	20	21	21	2	370	20953	18663	2290	3416	468	25	27	23	23
10001	10003	10003	10001	604	75	6	1252	83	5	578	10	7	488	14	180	5	25	626	41	25	3289	3102	186	8	10	11	2	127	3845	3651	193	780	43	25	12	12	18
10001	10131	10131	10001	1378	165	20	4235	252	20	1543	60	19	1649	44	597	14	28	1974	102	28	9938	9403	535	21	22	22	2	195	20115	19100	1016	3940	213	28	25	23	23
10001	10188	10188	10001	1764	158	18	2677	118	19	1198	40	18	1043	21	403	10	28	1471	82	28	7432	7085	347	20	20	21	2	87	17356	16428	928	3423	194	28	29	24	24
10002	10005	10005	10002	482	35	11	363	36	10	104	6	11	141	6	54	2	25	238	19	25	1229	1144	85	12	13	14	2	30	2083	1915	168	415	37	25	20	18	20
10002	10188	10188	10002	910	123	24	3083	186	27	1191	55	24	1201	32	436	10	28	1424	75	28	7227	6820	407	27	27	26	2	156	13093	12389	704	2526	143	28	30	27	26
10002	10294	10294	10002	1773	158	25	2405	104	28	1187	38	25	936	18	353	9	28	1327	75	28	6982	6654	328	27	27	27	2	70	16263	15380	884	3147	181	28	33	27	27
10003	10001	10001	10003	40	0	25	325	6	25	7	0	25	127	1	50	0	25	153	2	25	556	549	7	25	25	25	2	131	3845	3651	193	780	43	25	14	12	18
10003	10004	10004	10003	604	75	25	1252	83	25	578	10	25	488	14	180	5	25	626	41	25	3289	3102	186	25	25	25	2	100	3845	3651	193	779	43	25	27	25	25
10004	10003	10003	10004	40	0	25	325	6	25	7	0	25	127	1	50	0	25	153	2	25	556	549	7	25	25	25	2	100	3845	3651	193	779	43	25	33	25	25
10004	10006	10006	10004	604	75	25	1252	83	25	578	10	25	488	14	180	5	25	626	41	25	3289	3102	186	25	25	25	2	41	3845	3651	193	780	43	25	26	24	23
10005	10002	10002	10005	149	26	25	362	42	25	66	5	25	141	7	52	3	25	177	18	25	854	771	83	25	25	25	2	30	2083	1915	168	415	37	25	20	18	20
10005	10006	10006	10005	482	35	25	363	36	25	104	6	25	141	6	54	2	25	238	19	25	1229	1144	85	25	25	25	2	83	2083	1915	168	415	37	25	26	23	22
10006	10004	10004	10006	40	0	20	325	6	20	7	0	20	127	1	50	0	25	153	2	25	556	549	7	21	21	21	2	41	3845	3651	193	780	43	25	32	24	23
10006	10005	10005	10006	149	26	18	362	42	18	66	5	18	141	7	52	3	25	177	18	25	854	771	83	19	20	20	2	83	2083	1915	168	415	37	25	26	23	22
10006	10008	10008	10006	1087	110	19	1615	118	19	683	15	20	629	21	234	8	25	864	60	25	4518	4247	271	20	21	21	2	148	5928	5567	361	1194	80	25	23	22	23
10007	10293	10293	10007																								1	190	2352	2249	103	524	23	16	23	16	16
10008	10006	10006	10008	189	26	25	688	48	25	73	5	25	268	8	102	3	25	330	19	25	1410	1320	90	25	25	25	2	148	5928	5567	361	1194	80	25	27	22	23
10008	10109	10109	10008	1087	110	25	1615	118	25	683	15	25	629	21	234	8	25	864	60	25	4518	4247	271	25	25	25	2	33	5928	5567	361	1194	80	25	24	23	20
10009	10010	10010	10009	394	12	8	901	8	11	150	5	11	351	1	126	0	11	435	5	11	1949	1922	27	10	10	10	2	50	3229	3186	42	721	8	14	15	13	13
10009	10131	10131	10009																								1	163	12799	12056	743	2544	143	28	33	23	23
10010	10009	10009	10010	109	0	13	620	13	17	201	0	17	242	2	92	1	17	286	4	17	1280	1264	16	17	17	16	2	50	3229	3186	42	721	8	14	16	13	13
10011	10013	10013	10011																								1	118	126	0	126	0	22	19	26	19	19
10011	10015	10015	10011	630	37	4	1583	111	4	521	3	6	617	19	227	5	7	768	30	7	3753	3578	175	5	5	5	2	95	6842	6446	396	1386	81	12	12	10	10
10011	10137	10137	10011	787	224	6	3359	253	6	1373	159	5	1308	44	478	15	9	1527	117	9	7999	7304	695	6	6	6	2	85	15856	14429	1428	2928	246	13	12	10	10
10011	10395	10395	10011	1359	274	7	3839	498	9	1642	185	8	1495	87	538	30	11	1796	201	11	9948	8874	1074	9	9	9	2	195	17251	15261	1990	3166	362	14	14	12	12
10012	10137	10137	10012	2242	72	15	4004	145	15	1362	29	16	1559	25	568	9	17	2032	59	17	10014	9734	280	15	15	16	2	85	12638	12336	302	2567	63	16	16	15	15
10012	10396	10396	10012																								1	33	7254	7021	233	1458	52	8	6	5	5
10013	10012	10012	10013																								1	136	6653	6502	152	1327	32	15	17	13	13
10014	10015	10015	10014																								1	154	3753	3578	175	768	30	14	17	12	12
10014	10016	10016	10014	1363	359	10	2215	546	15	1262	256	14	863	95	319	31	16	1158	224	16	7308	6021	1288	14	14	14	2	65	8258	6021	2237	1158	391	16	14	14	14
10014	10211	10211	10014	79	260	11	3	390	15	43	209	15	1	68	0	23	15	14	167	15	1078	127	951	14	14	14	2	75	4762	2697	2065	418	361	16	18	15	15
10015	10011	10011	10015	125	2	12	1468	177	16	499	1	16	572	31	204	11	16	617	51	16	3089	2868	221	16	16	15	2	96	6842	6446	396	1386	81	12	12	10	10
10015	10016	10016	10015																								1	197	3089	2868	221	617	51	14	20	13	13
10016	10014	10014	10016	0	260	12	0	389	16	0	209	16	0	68	0	23	16	0	167	16	949	0	949	15	15	15	2	65	8258	6021	2237	1158	391	16	18	14	14
10016	10151	10151	10016	1334	358	11	2180	546	15	1223	256	14	849	95	314	31	16	1139	224	16	7186	5900	1286	14	14	14	2	64	11102	8647	2455	1736	441	11	12	11	9
10017	10018	10018	10017	255	27	17	583	48	17	122	5	18	227	8	87	3	25	295	20	25	1366	1273	92	18	19	19	2	129	4322	4027	295	805	62	25	23	20	20
10017	16204	16204	10017	1365	108	30	2469	156	33	732	33	30	961	27	351	9	36	1252	68	36	6212	5878	333	32	32	32	2	131	11035	10300	735	2128	149	36	37	32	32
10017	18205	18205	10017	1435	291	25	2830	212	28	1406	49	25	1102	37	392	13	36	1384	123	36	7768	7165	603	28	28	29	2	47	15334	14305	1029	2930	211	36	33	29	29
10018	10017	10017	10018	730	87	19	989	80	19	516	16	20	385	14	133	5	25	510	42	25	2956	2754	202	20	20	21	2	129	4322	4027	295	805	62	25	21	20	20
10018	10109	10109	10018	297	29	17	787	51	17	247	6	19	306	9	117	3	25	390	21	25	1852	1753	99	18	19	20	2	60	8037	7493	543	1575	122	25	23	19	19
10018	10270	10270	10018	398	64	24	973	117	24	269	13	24	379	20	151	8	25	508	53	25	2393	2170	223	24	24	24	2	180	2487	2263	224	533	54	25	24	24	25