

APPENDICES

APPENDIX A

AIR QUALITY ANALYSIS EXEMPT CODES/PROJECTS EXEMPT FROM CONFORMITY

Safety

- E-1 Railroad/highway crossing.
- E-2 Hazard elimination program.
- E-3 Safer non-Federal-aid system roads.
- E-4 Shoulder improvements.
- E-5 Increasing sight distance.
- E-6 Safety improvement program.
- E-7 Traffic control devices and operating assistance other than signalization projects.
- E-8 Railroad/highway crossing warning devices.
- E-9 Guardrails, median barriers, crash cushions.
- E-10 Pavement resurfacing and/or rehabilitation.
- E-11 Pavement marking demonstration.
- E-12 Emergency relief (23 U.S.C. 125).
- E-13 Fencing.
- E-14 Skid treatments.
- E-15 Safety roadside rest areas.
- E-16 Adding medians.
- E-17 Truck climbing lanes outside the urbanized area.
- E-18 Lighting improvements.
- E-19 Widening narrow pavements or reconstructing bridges (no additional travel lanes).
- E-20 Emergency truck pullovers.

Mass Transit

- E-21 Operating assistance to transit agencies.
- E-22 Purchase of support vehicles.
- E-23 Rehabilitation of transit vehicles.
- E-24 Purchase of office, shop and operating equipment for existing facilities.
- E-25 Purchase of operating equipment for vehicles (e.g. radios, fareboxes, lifts, etc.)
- E-26 Construction or renovation of power, signal and communications systems.
- E-27 Construction of small passenger shelters and information kiosks.
- E-28 Reconstruction or renovation of transit buildings and structures.
- E-29 Rehabilitation or reconstruction of track structures, track, and track bed in existing right-of-way.
- E-30 Purchase of new buses and new rail cars to replace existing vehicles or for minor expansions of the fleet.
- E-31 Construction of new bus or rail storage/maintenance facilities.

Air Quality

- E-32 Continuation of ride-sharing and van pooling promotion activities at current levels.
- E-33 Bicycle and pedestrian facilities.

Other

- E-34 Planning and technical studies
- E-35 Grants for training and research programs.
- E-36 Planning activities conducted pursuant to titles 23 and 49 U.S.C.
- E-37 Federal-aid systems revisions.
- E-38 Engineering to assess social, economic and environmental effects of the proposed action or alternatives to that action.
- E-39 Noise attenuation.

TABLE 29: Air Quality Analysis Exempt Codes Projects Exempt from Conformity (con't)

E-40	Advance land acquisitions (23 CFR part 712 or 23 CFR part 771).
E-41	Acquisition of scenic easements.
E-42	Plantings, landscaping, etc.
E-43	Sign removal.
E-44	Directional and informational signs.
E-45	Transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures or facilities).
E-46	Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational or capacity changes.

Projects Exempt from Regional Emissions Analysis

E-51	Intersection channelization projects.
E-52	Intersection signalization projects at individual intersections.
E-53	Intersection reconfiguration projects.
E-54	Changes in vertical and horizontal alignment.
E-55	Truck size and weight inspection stations.
E-56	Bus terminals and transfer points.

Other Exempt Codes

N/E	Project is not exempt.
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Indicates that an exempt project is expected to have a beneficial air quality impact and is included in the regional emissions analysis.

APPENDIX B
OFF-MODEL ADJUSTMENTS

Commuter rail project - Nashua, NH to Lowell, ma (project # 00-12cm)

This project entails the introduction of commuter rail service in the vicinity of the fee turnpike/Daniel Webster exit 1 interchange (South Nashua) in the year 2009, and downtown Nashua in 2025. The commuter rail system will be extended to the vicinity of the Daniel Webster highway/F.E.E. Turnpike Exit 12 interchange in Merrimack by the year 2025¹.

1. Turnpike/Daniel Webster exit 1 station - the distance between the Massachusetts state line and this station is approximately 1 mile. According to the major investment study (mis) for the Nashua passenger rail service, approximately 926 daily riders will use the proposed station. Of these, the number of *diverted* car trips to the south Nashua station would be 475. Diverted trips are the number of cars no longer traveling to Lowell to use the train. Instead, these cars will be driven to the station stop in Nashua. The number of *new* trips to the south Nashua station would be 451. New trips are the number of cars that will no longer travel all the way to Boston. Instead, these cars will be driven to the station stop in Nashua, where the occupants will become 'new' train riders. For both diverted and new trips, the vehicle miles saved per trip are equal to the round trip distance (2 miles) from the proposed south Nashua station location to the New Hampshire/Massachusetts boarder. These vehicles no longer will be driven all the way to the boarder and beyond. The vehicle trips (VMTs) added by commuters traveling to the south Nashua station are accounted for in the NRPC traffic model. The service is scheduled to begin in 2009.

Calculate vehicle trips saved

Based on the MBTA growth rates for commuter rail, the expected ridership increase will be approximately 5% per year. This figure is about the same as the ridership growth rate indicated in the Lowell to Nashua commuter rail extension project draft environmental assessment. To determine the number of vehicle trips saved for each analysis year the following formula was used:

of trips = $(1.05^y \times 926)$

Where 1.05 = 5% growth rate per year

Y = number of years into future from 2007

Number of Trips to South Nashua Commuter Rail Station

Analysis Year	Formula	# of Trips
2007	Given in MIS	926
2009	$(1.05^2 \times 926)$	1,021
2010	$(1.05^3 \times 926)$	1,072
2017	$(1.05^{10} \times 926)$	1,508
2026	$(1.05^{19} \times 926)$	2,340
2035	$(1.05^{28} \times 926)$	3,630

Calculate VMT saved

- It is assumed that the vmt saved when commuters in south nashua drive to the rail station rather than into massachusetts is 2 miles (round trip).
- Vehicle occupancy is assumed to be 1.2 people per car.

¹ Assumptions are taken from Major Investment Study for Nashua Passenger Rail Service, October 1999, NRPC

VMT Saved/South Nashua Commuter Rail Station

Analysis Year	# of Trips	Formula	VMT's Saved
2007	926	$(926 / 1.2) \times 2$	1,543
2009	1,021	$(1,021 / 1.2) \times 2$	1,702
2010	1,072	$(1,072 / 1.2) \times 2$	1,787
2017	1,508	$(1,508 / 1.2) \times 2$	2,514
2026	2,340	$(2,340 / 1.2) \times 2$	3,900
2035	3,630	$(3,630 / 1.2) \times 2$	6,050

Calculate emissions reductions due to VMT saved

- It is assumed that these vehicles average 60.7 mph. Emission factors (Freeway-Light Duty Vehicles) provided by NHDES.
- Emissions reduction is calculated using this formula:

$$\text{Emissions reduced} = (\text{VMT saved} \times \text{emission factor}) / 1000 = \text{kg/ day}$$

Vehicle Emissions Reduced/South Nashua Commuter Rail Station

Analysis Year	Speed	VMT	Emission Factor			Light Duty Vehicle Emissions Reduced		
			HC	CO	NOX	HC Kg/day	CO Kg/day	NOX Kg/day
2009	60.7	1,702	.507	NA	.581	.862	NA	.988
2010	60.7	1,787	NA	16.977	NA	NA	30.330	NA
2017	60.7	2,514	.259	13.394	.230	.651	33.671	.578
2026	60.7	3,900	.171	12.308	.143	.665	47.999	.558
2035	60.7	6,050	.168	12.190	.135	1.017	73.749	.817

2. **NASHUA DOWNTOWN STATION:** the commuter rail line will be extended to downtown Nashua in 2025 (first analysis year will be 2026). The distance between the Massachusetts state line and exit 5 on the Everett turnpike in Nashua is 4.5 miles. It is assumed that there will be 250 riders from the downtown station and that the VMT's saved when commuters no longer travel to the Massachusetts border is 9 miles (round trip). The vehicle trips (VMT's) added by commuters traveling to the downtown station is accounted for in the NRPC traffic model. The distance the train must travel is 7.5 miles (round trip between south Nashua station and downtown station).

Calculate VMT saved:

- It is assumed that 250 passengers will board at the downtown Nashua station in 2026.
- It is assumed that the VMT saved when commuters in south Nashua drive to the rail station rather than into Massachusetts is 9 miles (round trip).
- Vehicle occupancy is assumed to be 1.2 people per car.

VMT Saved/Downtown Nashua Commuter Rail Station

Analysis Year	# of Trips	Formula	VMT's Saved
2026	250	$(250 / 1.2) \times 9$	1,875
2035	388	$(388 / 1.2) \times 9$	2,909

Calculate emissions reductions due to VMT saved

- It is assumed that these vehicles average 60.7 mph. Emission factor (Freeway-Light Duty) provided by NHDES.
- Emissions reduction is calculated using this formula:

$$\text{Emissions reduced} = (\text{VMT saved} \times \text{emission factor}) / 1000$$

Vehicle Emissions Reduced/Downtown Nashua Commuter Rail Station

			Emission Factor			Light Duty Vehicle Emissions Reduced		
Analysis Year	Speed	VMT	HC	CO	NO X	HC Kg/day	CO Kg/day	NOX Kg/day
2026	60.7	1,875	.171	12.308	.143	.320	23.077	.268
2035	60.7	2,909	.168	12.190	.135	.489	35.457	.393

3. **MERRIMACK EXIT 12 STATION** - the distance between the Massachusetts state line and exit 12 on the Everett turnpike in Merrimack is 15 miles. It is assumed that the VMT's saved when commuters in Merrimack travel to the rail station near exit 12 instead of to the Massachusetts boarder is 30 miles (round trip). It is assumed that there will be 250 riders from the Merrimack station. The distance the train must travel is 17.8 miles (round trip between downtown station and Merrimack station). The vehicle trips (VMT's) added by commuters traveling to the Merrimack station is accounted for in the NRPC traffic model.

Calculate VMT saved:

- It is assumed that 250 passengers will board at the Merrimack station in 2025.
- It is assumed that the VMT saved when commuters drive to the Merrimack station rather than into Massachusetts is 30miles (round trip).
- Vehicle occupancy is assumed to be 1.2 people per car.

VMT Saved/Merrimack Commuter Rail Station

Analysis Year	# of Trips	Formula	VMT's Saved
2026	250	$(250 / 1.2) \times 30$	6,250
2035	388	$(388 / 1.2) \times 30$	9,696

Calculate Emissions Reductions Due To VMT Saved:

- It is assumed that these vehicles average 60.7 mph. Emission factor (Freeway-Light Duty) provided by NHDES.
- Emissions reduction is calculated using this formula:

$$\text{Emissions reduced} = (\text{VMT saved} \times \text{emission factor}) / 1000$$

Vehicle Emissions Reduced/Merrimack Commuter Rail Station

			Emission Factor			Light Duty Vehicle Emissions Reduced		
Analysis Year	Speed	VMT	HC	CO	NOX	HC Kg/day	CO Kg/day	NOX Kg/day
2026	60.7	6,250	.171	12.308	.143	1.066	76.923	.894
2035	60.7	9,696	.168	12.190	.135	1.629	118.191	1.310

City of Nashua
Wireless signal coordination
(Project # 04-30cm)

Scope of project: this project will build a traffic management system for the city, interconnecting all 89 traffic signals to a central station, including 30 signals that are currently off line. This would allow the city to expand its closed loop signal network, creating new timing plans for its major corridors with an emphasis on vehicle progression. The city would also look at developing one or more traffic adaptive closed loop systems using advanced video detection. The entire system would be compatible with future ITS technology.

It was assumed that the greatest amount of emissions benefit from this project would result from the inclusion of the 30 intersections that are currently off-line (not coordinated). The assumption is that if these signals were to be coordinated, delay at these intersections would be improved and therefore emissions would be reduced. It was not possible to gather field data from all of those intersections. Instead, link speeds, link distances and traffic volumes in the vicinity of the 30 signalized intersections for the analysis years 2010, 2017, 2026 and 2035 were obtained from the NRPC traffic model. This data was then used in an off-model calculation.

The off-model calculation assumed a 10% increase in link speeds². The results are as follows:

Air Quality Benefits from Signal Coordination

	VOC (KG/DAY)	NOX (KG/DAY)	CO (KG/DAY)
2010	N/A	N/A	+ 1.333
2017	+ 0.150	+ 0.641	+ 0.110
2026	+ 0.836	+ 0.419	- 0.072
2035	+ 0.808	+ 0.427	- 0.089

A positive number means and increase in that pollutant

NHDOT
Inter City Bus Service (Boston Express) 06-28cm

Scope of Project: the NHDOT will initiate commuter bus service from exit 8 and exit 6 in Nashua to Boston-South Station and Logan Airport. This project will include the purchase of 4 commuter coaches, provide 9 round trips each weekday, and make capital improvements to the park and ride lot and welcome center to provide enhanced security, ticketing facilities and other passenger amenities.

Assumptions and notes:

- New busses would meet the heavy duty diesel 2007 emissions certification;
- Passenger assumptions are based on ridership of previous service in this location;
- Average SOV travel speed = 55mph; average bus travel speed = 55mph
- Busses making nine round trips per day between Nashua Park and Rides and Boston:
 - 7 miles from exit 6-8 area to state line;
 - 39 miles from State line to South Station;
 - 4 miles from South Station to Logan Airport;
- Busses stored in Concord - deadhead miles = 3 buses each way @ 30 miles = 180 miles per day;
- Average SOV occupancy = 1.1;
- VMTs added by bus in NH 306;

² Assumptions are based on CMAQ application CM04-30

SOV Trips Reductions:

Year	<u>2007</u>	<u>2009</u>	<u>2010</u>	<u>2017</u>	<u>2026</u>	<u>2035</u>
Annual bus passenger trips	81,865	131,941	131,941	131,941	131,941	131,941
Daily bus passenger trips	224	361	361	361	361	361
SOV trips	204	328	328	328	328	328
Ave trip length in NH	7	7	7	7	7	7
VMTs removed in NH	1,428	2,296	2,296	2,296	2,296	2,296

Light Duty (Freeway) Emission Factors

	<u>VOC</u> <u>(kg/day)</u>	<u>NOX</u> <u>(kg/day)</u>	<u>CO</u> <u>(kg/day)</u>
2009	0.5139691	0.56678	N/A
2010	N/A	N/A	16.46275
2017	0.2607713	0.224048	12.99491
2026	0.1715662	0.139569	11.93329
2035	0.1695662	0.131132	11.82046

Bus (Freeway) Emission Factors

	<u>VOC</u> <u>(kg/day)</u>	<u>NOX</u> <u>(kg/day)</u>	<u>CO</u> <u>(kg/day)</u>
2009	0.206	16.86	N/A
2010	N/A	N/A	1.991
2017	0.159	6.183	0.88
2026	0.157	1.354	0.278
2035	0.157	0.943	0.235

Emissions Reduced/added:

	<u>VOC</u> <u>(KG/DAY)</u>	<u>NOX</u> <u>(KG/DAY)</u>	<u>CO</u> <u>(KG/DAY)</u>
2009 NH Emissions			
Light duty emissions reduced in NH:	1.180	1.301	N/A
Bus emissions added in NH:	<u>0.063</u>	<u>5.159</u>	<u>N/A</u>
Emissions reduced /added (-) :	1.117	-3.858	N/A

	<u>VOC</u> <u>(kg/day)</u>	<u>NOX</u> <u>(kg/day)</u>	<u>CO</u> <u>(kg/day)</u>
2010 NH Emissions			
Light duty emissions reduced in NH:	N/A	N/A	37.798
Bus emissions added in NH:	<u>N/A</u>	<u>N/A</u>	<u>0.609</u>
Emissions reduced / added (-):	N/A	N/A	37.189

	<u>VOC</u> <u>(kg/day)</u>	<u>NOX</u> <u>(kg/day)</u>	<u>CO</u> <u>(kg/day)</u>
2017 NH Emissions			
Light duty emissions reduced in NH:	0.599	0.514	29.836
Bus emissions added in NH:	<u>0.049</u>	<u>1.892</u>	<u>0.269</u>
Emissions reduced / added (-):	0.550	-1.378	29.567

	<u>VOC</u> <u>(kg/day)</u>	<u>NOX</u> <u>(kg/day)</u>	<u>CO</u> <u>(kg/day)</u>
2026 NH emissions			
Light duty emissions reduced in NH:	0.394	0.320	27.399
Bus emissions added in NH:	<u>0.048</u>	<u>0.414</u>	<u>0.085</u>
Emissions reduced / added (-):	0.346	-0.094	27.314

	<u>VOC</u> <u>(kg/day)</u>	<u>NOX</u> <u>(kg/day)</u>	<u>CO</u> <u>(kg/day)</u>
2035 NH emissions			
Light duty emissions reduced in NH:	0.389	0.301	27.140
Bus emissions added in NH:	<u>0.048</u>	<u>0.289</u>	<u>0.072</u>
Emissions reduced / added (-):	0.341	0.013	27.068

Air Quality Benefits from Boston Express Bus Service

	VOC (kg/day)	NOX (kg/day)	CO (kg/day)
2009 NH emissions reduced (-)/added (+)	1.117	-3.858	n/a
2010 NH emissions reduced(-)/added(+)	n/a	n/a	37.189
2017 NH emissions reduced(-)/added(+)	0.550	-1.378	29.567
2026 NH emissions reduced(-)/added(+)	0.346	-0.094	27.314
2035 NH emissions reduced(-)/added(+)	0.341	0.013	27.068

**City of Nashua, NH
Nashua Transit System CMAQ Project
(Project # 06-13CM)**

The objective of this project is to increase the frequency of service (decrease “headways”) on Citybus Routes 2 and 6. This will increase the total vehicle miles (and associated emissions) traveled by bus in the City, but decrease the number of vehicles miles (and associated emissions) traveled in personal vehicles.

The methodology for the calculating air quality benefits is as follows:

- The length of the additional bus routes was to calculate the additional emissions that will result from the additional bus trips.
- The length of single occupancy vehicle trips saved was used to calculate the emissions that will no longer be produced because people will ride the bus and not drive their car.
- The difference between the additional bus emissions and the reduced single occupancy vehicle emissions represents the emissions saved by this project.

SUPPORTING DATA AND CALCULATIONS

Emissions *added* due to increased number of bus runs:

Route #'s	# of runs per day	Average length of route (mi.)	Added weekday fleet miles	Average speed of bus (mph)	Bus emission factors (gr/mile) ⁽¹⁾			Emissions added by additional bus runs (kg/day)		
					VOC	Nox	CO	Voc	Nox	CO
2009	24	14.5	348	14	0.55	14.85	n/a	0.19	5.17	n/a
2010	24	14.5	348	14	n/a	n/a	5.24	n/a	n/a	1.82
2012	24	14.5	348	14			n/a	0.00	0.00	n/a
2017	24	14.5	348	14	0.43	5.43	2.32	0.15	1.89	0.81
2026	24	14.5	348	14	0.42	1.19	0.73	0.15	0.42	0.25
2035	24	14.5	348	14	0.42	0.833	0.619	0.15	0.29	0.22

EMISSIONS **SUBTRACTED** DUE TO REDUCTION IN SINGLE OCCUPANCY VEHICLE (SOV) TRIPS:

Route #'s	# of SOV trips saved per day	Average trip length saved (mi.)	Total SOV miles saved/day	Average speed of SOV	SOV emission factors (gr/mi) ⁽²⁾			Emissions reduced by eliminating SOV trips (kg/day)		
					VOC	NOX	CO	VOC	NOX	CO
2009	119	4.91	584	25	0.61	0.56	N/A	0.35	0.33	N/A
2010	179	4.91	879	25	N/A	N/A	14.42	N/A	N/A	12.670
2012	179	4.91	879	25	N/A	N/A	N/A	N/A	N/A	N/A
2017	179	4.91	879	25	0.30	0.22	11.43	0.27	0.19	10.046
2026	179	4.91	879	25	0.21	0.14	10.50	0.18	0.12	9.224
2035	179	4.91	879	25	0.21	0.13	10.39	0.18	0.11	9.129

NET IMPACT OF DECREASED HEADWAYS EQUALS THE DIFFERENCE BETWEEN EMISSIONS ADDED BY INCREASED BUS TRIPS AND EMISSIONS REDUCED BY ELIMINATION OF SINGLE OCCUPANCY VEHICLE TRIPS:

	VOC (kg/day)	Nox (kg/day)	CO (kg/day)
2009	0.163	-4.841	n/a
2010	n/a	n/a	10.847
2012	n/a	n/a	n/a
2017	0.118	-1.697	9.240
2026	0.036	-0.295	8.970
2035	0.035	-0.176	8.914

Negative # means that there is an increase in the pollutant

NOTES:

- 1 NH DES Bus Emission Factors July 2008
- 2 Light duty emission factors provided by NH DES July, 2008.
All emission factors are in grams per mile.
Last updated 07-01-08 by
NHDES

APPENDIX C
MOBILE 6.2 EMISSIONS MODEL INPUTS

THE FOLLOWING TABLE SHOWS ALL MOBILE6.2 MODEL INPUTS USED BY DES IN DEVELOPMENT OF THE MOTOR VEHICLE EMISSION FACTORS. MOBILE6.2 DEFAULT VALUES WERE USED FOR ANY COMMANDS NOT LISTED.

Command	Value
NEW HAMPSHIRE	
NO REFUELING	
94+ LDG IMP	NLEVNE.D
MIN/MAX TEMP	Summer 62. / 92. Winter 30 /30
FUEL RVP	Summer 6.8 Winter 12.9
2009 VMT FRACTIONS	0.4846 0.0692 0.2304 0.0774 0.0356 0.0298 0.0030 0.0024 0.0018 0.0067 0.0079 0.0085 0.0305 0.0015 0.0008 0.0099
2010 VMT FRACTIONS	0.4710 0.0714 0.2375 0.0798 0.0367 0.0300 0.0030 0.0025 0.0018 0.0067 0.0079 0.0086 0.0307 0.0016 0.0008 0.0100
2017 VMT FRACTIONS	0.4038 0.0820 0.2731 0.0918 0.0422 0.0312 0.0032 0.0026 0.0019 0.0070 0.0083 0.0089 0.0319 0.0016 0.0008 0.0097
2020 + VMT FRACTIONS	0.3861 0.0847 0.2819 0.0948 0.0436 0.0317 0.0032 0.0026 0.0020 0.0071 0.0084 0.0091 0.0325 0.0016 0.0008 0.0099
2010 2017 2026 2035 I/M PROGRAM	I/M PROGRAM : 1 2006 2050 1 TRC OBD I/M (and Program 2-EVAP OBD) I/M MODEL YEARS : 1 2002 2050 I/M VEHICLES : 1 22222 11111111 1 I/M STRINGENCY : 1 50.0 I/M COMPLIANCE : 1 96.0 I/M WAIVER RATES : 1 0.0 0.0 I/M PROGRAM : 3 2007 2050 1 TRC OBD I/M and Program 4-EVAP OBD) I/M MODEL YEARS : 3 1996 2001 I/M VEHICLES : 3 22222 11111111 1 I/M STRINGENCY : 3 50.0 I/M COMPLIANCE : 3 96.0 I/M WAIVER RATES : 3 0.0 0.0

Command	Value
2009 ANTI-TAMP PROG	99 89 95 22222 11111111 1 11 096. 22111222 In 2009 ATP applies to model year 1989, 1990, 1991, 1992, 1993, 1994 and 1995.
2010 ANTI-TAMP PROG	99 90 95 22222 11111111 1 11 096. 22111222 In 2010 ATP applies to model year 1990, 1991, 1992, 1993, 1994 and 1995.
FUEL PROGRAM	2 N (for RFG)
SEASON	1 for summer, 2 for winter
EVALUATION MONTH	7 for July, 1 for January
ALTITUDE	1
AVERAGE SPEED	100% Arterial Roadway 65 mph to 2.5 mph 92 % Freeway with 8 % Ramp 60.7 mph to 3.0 mph

APPENDIX D
MOBILE 6.2 EMISSIONS FACTORS

2010 CO Arterial - "ALL "

VehSpeed	CO gr/mile	RoadType	Year
2.5	32.851	Arterial	2010
3	29.387	Arterial	2010
4	25.057	Arterial	2010
5	22.459	Arterial	2010
6	20.735	Arterial	2010
7	19.503	Arterial	2010
8	18.579	Arterial	2010
9	17.860	Arterial	2010
10	17.285	Arterial	2010
11	16.834	Arterial	2010
12	16.458	Arterial	2010
13	16.140	Arterial	2010
14	15.867	Arterial	2010
15	15.631	Arterial	2010
16	15.416	Arterial	2010
17	15.227	Arterial	2010
18	15.059	Arterial	2010
19	14.908	Arterial	2010
20	14.773	Arterial	2010
21	14.658	Arterial	2010
22	14.554	Arterial	2010
23	14.459	Arterial	2010
24	14.372	Arterial	2010
25	14.292	Arterial	2010
26	14.242	Arterial	2010
27	14.196	Arterial	2010
28	14.153	Arterial	2010
29	14.113	Arterial	2010
30	14.076	Arterial	2010
31	14.079	Arterial	2010
32	14.082	Arterial	2010
33	14.084	Arterial	2010
34	14.087	Arterial	2010
35	14.089	Arterial	2010
36	14.167	Arterial	2010
37	14.241	Arterial	2010
38	14.311	Arterial	2010
39	14.378	Arterial	2010
40	14.441	Arterial	2010
41	14.523	Arterial	2010
42	14.600	Arterial	2010

VehSpeed	CO gr/mile	RoadType	Year
43	14.674	Arterial	2010
44	14.745	Arterial	2010
45	14.813	Arterial	2010
46	14.897	Arterial	2010
47	14.978	Arterial	2010
48	15.056	Arterial	2010
49	15.130	Arterial	2010
50	15.202	Arterial	2010
51	15.290	Arterial	2010
52	15.374	Arterial	2010
53	15.455	Arterial	2010
54	15.533	Arterial	2010
55	15.609	Arterial	2010
56	15.713	Arterial	2010
57	15.813	Arterial	2010
58	15.910	Arterial	2010
59	16.003	Arterial	2010
60	16.094	Arterial	2010
61	16.203	Arterial	2010
62	16.308	Arterial	2010
63	16.410	Arterial	2010
64	16.509	Arterial	2010
65	16.605	Arterial	2010

1-Jul-08

2010 CO Freeway - "ALL"

VehSpeed	CO gr/mile	RoadType	Year
3	29.767	Freeway	2010
4	25.437	Freeway	2010
5	22.839	Freeway	2010
6	20.999	Freeway	2010
7	19.630	Freeway	2010
8	18.603	Freeway	2010
9	17.805	Freeway	2010
10	17.166	Freeway	2010
11	16.661	Freeway	2010
12	16.264	Freeway	2010
13	15.928	Freeway	2010
14	15.640	Freeway	2010
15	15.390	Freeway	2010
16	15.201	Freeway	2010
17	15.103	Freeway	2010
18	15.016	Freeway	2010
19	14.938	Freeway	2010
20	14.868	Freeway	2010
21	14.804	Freeway	2010
22	14.745	Freeway	2010
23	14.692	Freeway	2010
24	14.642	Freeway	2010
25	14.597	Freeway	2010
26	14.555	Freeway	2010
27	14.517	Freeway	2010
28	14.482	Freeway	2010
29	14.448	Freeway	2010
30	14.418	Freeway	2010
31	14.411	Freeway	2010
32	14.416	Freeway	2010
33	14.420	Freeway	2010
34	14.424	Freeway	2010
35	14.430	Freeway	2010
36	14.508	Freeway	2010
37	14.582	Freeway	2010
38	14.652	Freeway	2010
39	14.719	Freeway	2010
40	14.793	Freeway	2010
41	14.875	Freeway	2010
42	14.952	Freeway	2010

VehSpeed	CO gr/mile	RoadType	Year
43	15.026	Freeway	2010
44	15.098	Freeway	2010
45	15.187	Freeway	2010
46	15.271	Freeway	2010
47	15.352	Freeway	2010
48	15.430	Freeway	2010
49	15.519	Freeway	2010
50	15.611	Freeway	2010
51	15.698	Freeway	2010
52	15.783	Freeway	2010
53	15.880	Freeway	2010
54	15.992	Freeway	2010
55	16.100	Freeway	2010
56	16.204	Freeway	2010
57	16.312	Freeway	2010
58	16.433	Freeway	2010
59	16.549	Freeway	2010
60	16.662	Freeway	2010
60.7	16.739	Freeway	2010

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2017 CO Arterial - "ALL"

VehSpeed	CO gr/mile	RoadType	Year
2.5	23.494	Arterial	2017
3	21.235	Arterial	2017
4	18.411	Arterial	2017
5	16.716	Arterial	2017
6	15.549	Arterial	2017
7	14.715	Arterial	2017
8	14.090	Arterial	2017
9	13.604	Arterial	2017
10	13.215	Arterial	2017
11	12.896	Arterial	2017
12	12.631	Arterial	2017
13	12.407	Arterial	2017
14	12.214	Arterial	2017
15	12.047	Arterial	2017
16	11.896	Arterial	2017
17	11.763	Arterial	2017
18	11.644	Arterial	2017
19	11.538	Arterial	2017
20	11.443	Arterial	2017
21	11.360	Arterial	2017
22	11.285	Arterial	2017
23	11.216	Arterial	2017
24	11.153	Arterial	2017
25	11.095	Arterial	2017
26	11.063	Arterial	2017
27	11.033	Arterial	2017
28	11.005	Arterial	2017
29	10.979	Arterial	2017
30	10.955	Arterial	2017
31	10.957	Arterial	2017
32	10.959	Arterial	2017
33	10.961	Arterial	2017
34	10.963	Arterial	2017
35	10.965	Arterial	2017
36	11.025	Arterial	2017
37	11.083	Arterial	2017
38	11.138	Arterial	2017
39	11.190	Arterial	2017
40	11.239	Arterial	2017
41	11.302	Arterial	2017
42	11.363	Arterial	2017

VehSpeed	CO gr/mile	RoadType	Year
43	11.420	Arterial	2017
44	11.475	Arterial	2017
45	11.528	Arterial	2017
46	11.594	Arterial	2017
47	11.657	Arterial	2017
48	11.717	Arterial	2017
49	11.776	Arterial	2017
50	11.831	Arterial	2017
51	11.900	Arterial	2017
52	11.965	Arterial	2017
53	12.029	Arterial	2017
54	12.090	Arterial	2017
55	12.148	Arterial	2017
56	12.232	Arterial	2017
57	12.312	Arterial	2017
58	12.390	Arterial	2017
59	12.465	Arterial	2017
60	12.538	Arterial	2017
61	12.625	Arterial	2017
62	12.710	Arterial	2017
63	12.791	Arterial	2017
64	12.871	Arterial	2017
65	12.947	Arterial	2017

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2017 CO FREEWAY - "ALL"

VehSpeed	CO gr/mile	RoadType	Year
3	21.445	Freeway	2017
4	18.621	Freeway	2017
5	16.927	Freeway	2017
6	15.692	Freeway	2017
7	14.757	Freeway	2017
8	14.056	Freeway	2017
9	13.511	Freeway	2017
10	13.075	Freeway	2017
11	12.725	Freeway	2017
12	12.444	Freeway	2017
13	12.206	Freeway	2017
14	12.003	Freeway	2017
15	11.826	Freeway	2017
16	11.694	Freeway	2017
17	11.627	Freeway	2017
18	11.569	Freeway	2017
19	11.516	Freeway	2017
20	11.469	Freeway	2017
21	11.426	Freeway	2017
22	11.386	Freeway	2017
23	11.350	Freeway	2017
24	11.316	Freeway	2017
25	11.286	Freeway	2017
26	11.258	Freeway	2017
27	11.232	Freeway	2017
28	11.208	Freeway	2017
29	11.186	Freeway	2017
30	11.165	Freeway	2017
31	11.161	Freeway	2017
32	11.163	Freeway	2017
33	11.166	Freeway	2017
34	11.169	Freeway	2017
35	11.173	Freeway	2017
36	11.234	Freeway	2017
37	11.292	Freeway	2017
38	11.346	Freeway	2017
39	11.398	Freeway	2017
40	11.456	Freeway	2017
41	11.519	Freeway	2017
42	11.580	Freeway	2017

VehSpeed	CO gr/mile	RoadType	Year
43	11.637	Freeway	2017
44	11.693	Freeway	2017
45	11.762	Freeway	2017
46	11.828	Freeway	2017
47	11.891	Freeway	2017
48	11.952	Freeway	2017
49	12.022	Freeway	2017
50	12.093	Freeway	2017
51	12.161	Freeway	2017
52	12.227	Freeway	2017
53	12.304	Freeway	2017
54	12.394	Freeway	2017
55	12.481	Freeway	2017
56	12.564	Freeway	2017
57	12.651	Freeway	2017
58	12.748	Freeway	2017
59	12.841	Freeway	2017
60	12.931	Freeway	2017
60.7	12.993	Freeway	2017

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2026 CO Arterial - "ALL"

VehSpeed	CO gr/mile	RoadType	Year
2.5	20.670	Arterial	2026
3	18.720	Arterial	2026
4	16.283	Arterial	2026
5	14.820	Arterial	2026
6	13.804	Arterial	2026
7	13.078	Arterial	2026
8	12.533	Arterial	2026
9	12.110	Arterial	2026
10	11.771	Arterial	2026
11	11.492	Arterial	2026
12	11.260	Arterial	2026
13	11.063	Arterial	2026
14	10.895	Arterial	2026
15	10.749	Arterial	2026
16	10.617	Arterial	2026
17	10.500	Arterial	2026
18	10.396	Arterial	2026
19	10.303	Arterial	2026
20	10.220	Arterial	2026
21	10.146	Arterial	2026
22	10.080	Arterial	2026
23	10.019	Arterial	2026
24	9.963	Arterial	2026
25	9.912	Arterial	2026
26	9.884	Arterial	2026
27	9.859	Arterial	2026
28	9.835	Arterial	2026
29	9.813	Arterial	2026
30	9.793	Arterial	2026
31	9.794	Arterial	2026
32	9.796	Arterial	2026
33	9.797	Arterial	2026
34	9.799	Arterial	2026
35	9.800	Arterial	2026
36	9.855	Arterial	2026
37	9.907	Arterial	2026
38	9.956	Arterial	2026
39	10.003	Arterial	2026
40	10.047	Arterial	2026
41	10.104	Arterial	2026
42	10.159	Arterial	2026

VehSpeed	CO gr/mile	RoadType	Year
43	10.211	Arterial	2026
44	10.261	Arterial	2026
45	10.308	Arterial	2026
46	10.368	Arterial	2026
47	10.425	Arterial	2026
48	10.480	Arterial	2026
49	10.533	Arterial	2026
50	10.583	Arterial	2026
51	10.645	Arterial	2026
52	10.705	Arterial	2026
53	10.762	Arterial	2026
54	10.818	Arterial	2026
55	10.871	Arterial	2026
56	10.948	Arterial	2026
57	11.023	Arterial	2026
58	11.094	Arterial	2026
59	11.164	Arterial	2026
60	11.231	Arterial	2026
61	11.312	Arterial	2026
62	11.390	Arterial	2026
63	11.466	Arterial	2026
64	11.539	Arterial	2026
65	11.610	Arterial	2026

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2026 CO FREEWAY - "ALL"

VehSpeed	CO gr/mile	RoadType	Year
3	18.896	Freeway	2026
4	16.459	Freeway	2026
5	14.996	Freeway	2026
6	13.923	Freeway	2026
7	13.108	Freeway	2026
8	12.497	Freeway	2026
9	12.021	Freeway	2026
10	11.641	Freeway	2026
11	11.335	Freeway	2026
12	11.089	Freeway	2026
13	10.881	Freeway	2026
14	10.703	Freeway	2026
15	10.548	Freeway	2026
16	10.432	Freeway	2026
17	10.375	Freeway	2026
18	10.324	Freeway	2026
19	10.278	Freeway	2026
20	10.237	Freeway	2026
21	10.200	Freeway	2026
22	10.165	Freeway	2026
23	10.134	Freeway	2026
24	10.105	Freeway	2026
25	10.078	Freeway	2026
26	10.054	Freeway	2026
27	10.031	Freeway	2026
28	10.011	Freeway	2026
29	9.991	Freeway	2026
30	9.973	Freeway	2026
31	9.969	Freeway	2026
32	9.971	Freeway	2026
33	9.973	Freeway	2026
34	9.975	Freeway	2026
35	9.979	Freeway	2026
36	10.034	Freeway	2026
37	10.086	Freeway	2026
38	10.135	Freeway	2026
39	10.182	Freeway	2026
40	10.234	Freeway	2026
41	10.291	Freeway	2026
42	10.346	Freeway	2026

VehSpeed	CO gr/mile	RoadType	Year
43	10.398	Freeway	2026
44	10.449	Freeway	2026
45	10.511	Freeway	2026
46	10.571	Freeway	2026
47	10.628	Freeway	2026
48	10.683	Freeway	2026
49	10.746	Freeway	2026
50	10.810	Freeway	2026
51	10.872	Freeway	2026
52	10.932	Freeway	2026
53	11.003	Freeway	2026
54	11.086	Freeway	2026
55	11.166	Freeway	2026
56	11.243	Freeway	2026
57	11.324	Freeway	2026
58	11.413	Freeway	2026
59	11.500	Freeway	2026
60	11.583	Freeway	2026
60.7	11.640	Freeway	2026

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2035 CO Arterial - "ALL"

VehSpeed	CO gr/mile	RoadType	Year
2.5	20.296	Arterial	2035
3	18.378	Arterial	2035
4	15.981	Arterial	2035
5	14.543	Arterial	2035
6	13.544	Arterial	2035
7	12.830	Arterial	2035
8	12.295	Arterial	2035
9	11.878	Arterial	2035
10	11.545	Arterial	2035
11	11.272	Arterial	2035
12	11.044	Arterial	2035
13	10.851	Arterial	2035
14	10.685	Arterial	2035
15	10.542	Arterial	2035
16	10.412	Arterial	2035
17	10.298	Arterial	2035
18	10.196	Arterial	2035
19	10.105	Arterial	2035
20	10.023	Arterial	2035
21	9.951	Arterial	2035
22	9.885	Arterial	2035
23	9.825	Arterial	2035
24	9.771	Arterial	2035
25	9.720	Arterial	2035
26	9.694	Arterial	2035
27	9.669	Arterial	2035
28	9.646	Arterial	2035
29	9.624	Arterial	2035
30	9.604	Arterial	2035
31	9.606	Arterial	2035
32	9.607	Arterial	2035
33	9.609	Arterial	2035
34	9.610	Arterial	2035
35	9.611	Arterial	2035
36	9.666	Arterial	2035
37	9.717	Arterial	2035
38	9.766	Arterial	2035
39	9.812	Arterial	2035
40	9.856	Arterial	2035
41	9.913	Arterial	2035
42	9.967	Arterial	2035

VehSpeed	CO gr/mile	RoadType	Year
43	10.018	Arterial	2035
44	10.067	Arterial	2035
45	10.114	Arterial	2035
46	10.173	Arterial	2035
47	10.230	Arterial	2035
48	10.284	Arterial	2035
49	10.336	Arterial	2035
50	10.386	Arterial	2035
51	10.447	Arterial	2035
52	10.506	Arterial	2035
53	10.562	Arterial	2035
54	10.617	Arterial	2035
55	10.670	Arterial	2035
56	10.746	Arterial	2035
57	10.820	Arterial	2035
58	10.891	Arterial	2035
59	10.959	Arterial	2035
60	11.026	Arterial	2035
61	11.106	Arterial	2035
62	11.183	Arterial	2035
63	11.258	Arterial	2035
64	11.331	Arterial	2035
65	11.401	Arterial	2035

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2035 CO FREEWAY - "ALL"

VehSpeed	CO gr/mile	RoadType	Year
3	18.552	Freeway	2035
4	16.155	Freeway	2035
5	14.716	Freeway	2035
6	13.661	Freeway	2035
7	12.859	Freeway	2035
8	12.258	Freeway	2035
9	11.790	Freeway	2035
10	11.416	Freeway	2035
11	11.116	Freeway	2035
12	10.874	Freeway	2035
13	10.670	Freeway	2035
14	10.495	Freeway	2035
15	10.343	Freeway	2035
16	10.229	Freeway	2035
17	10.173	Freeway	2035
18	10.123	Freeway	2035
19	10.079	Freeway	2035
20	10.039	Freeway	2035
21	10.002	Freeway	2035
22	9.969	Freeway	2035
23	9.938	Freeway	2035
24	9.910	Freeway	2035
25	9.884	Freeway	2035
26	9.860	Freeway	2035
27	9.838	Freeway	2035
28	9.818	Freeway	2035
29	9.799	Freeway	2035
30	9.782	Freeway	2035
31	9.778	Freeway	2035
32	9.780	Freeway	2035
33	9.782	Freeway	2035
34	9.784	Freeway	2035
35	9.788	Freeway	2035
36	9.842	Freeway	2035
37	9.893	Freeway	2035
38	9.942	Freeway	2035
39	9.988	Freeway	2035
40	10.040	Freeway	2035
41	10.097	Freeway	2035
42	10.151	Freeway	2035

VehSpeed	CO gr/mile	RoadType	Year
43	10.202	Freeway	2035
44	10.252	Freeway	2035
45	10.314	Freeway	2035
46	10.373	Freeway	2035
47	10.429	Freeway	2035
48	10.483	Freeway	2035
49	10.546	Freeway	2035
50	10.609	Freeway	2035
51	10.671	Freeway	2035
52	10.730	Freeway	2035
53	10.800	Freeway	2035
54	10.882	Freeway	2035
55	10.961	Freeway	2035
56	11.037	Freeway	2035
57	11.117	Freeway	2035
58	11.205	Freeway	2035
59	11.291	Freeway	2035
60	11.373	Freeway	2035
60.7	11.430	Freeway	2035

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**2009 NOx and VOC Arterial -
"ALL"**

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
2.5	4.389	1.960	Arterial	2009
3	3.514	1.884	Arterial	2009
4	2.422	1.790	Arterial	2009
5	1.766	1.733	Arterial	2009
6	1.524	1.632	Arterial	2009
7	1.351	1.560	Arterial	2009
8	1.222	1.506	Arterial	2009
9	1.121	1.463	Arterial	2009
10	1.040	1.430	Arterial	2009
11	0.987	1.377	Arterial	2009
12	0.943	1.333	Arterial	2009
13	0.905	1.296	Arterial	2009
14	0.873	1.265	Arterial	2009
15	0.845	1.237	Arterial	2009
16	0.818	1.210	Arterial	2009
17	0.795	1.185	Arterial	2009
18	0.774	1.164	Arterial	2009
19	0.755	1.145	Arterial	2009
20	0.738	1.127	Arterial	2009
21	0.724	1.111	Arterial	2009
22	0.711	1.097	Arterial	2009
23	0.699	1.084	Arterial	2009
24	0.688	1.072	Arterial	2009
25	0.678	1.061	Arterial	2009
26	0.669	1.052	Arterial	2009
27	0.660	1.043	Arterial	2009
28	0.653	1.035	Arterial	2009
29	0.646	1.028	Arterial	2009
30	0.639	1.022	Arterial	2009
31	0.632	1.019	Arterial	2009
32	0.626	1.016	Arterial	2009
33	0.620	1.013	Arterial	2009
34	0.615	1.011	Arterial	2009
35	0.609	1.009	Arterial	2009
36	0.606	1.013	Arterial	2009
37	0.602	1.017	Arterial	2009
38	0.598	1.021	Arterial	2009
39	0.595	1.025	Arterial	2009
40	0.592	1.029	Arterial	2009
41	0.589	1.037	Arterial	2009
42	0.586	1.045	Arterial	2009

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.583	1.052	Arterial	2009
44	0.580	1.059	Arterial	2009
45	0.578	1.066	Arterial	2009
46	0.575	1.079	Arterial	2009
47	0.572	1.090	Arterial	2009
48	0.570	1.102	Arterial	2009
49	0.567	1.112	Arterial	2009
50	0.565	1.123	Arterial	2009
51	0.563	1.140	Arterial	2009
52	0.560	1.157	Arterial	2009
53	0.558	1.173	Arterial	2009
54	0.556	1.188	Arterial	2009
55	0.554	1.203	Arterial	2009
56	0.553	1.227	Arterial	2009
57	0.552	1.251	Arterial	2009
58	0.551	1.273	Arterial	2009
59	0.550	1.295	Arterial	2009
60	0.549	1.316	Arterial	2009
61	0.548	1.349	Arterial	2009
62	0.548	1.382	Arterial	2009
63	0.547	1.413	Arterial	2009
64	0.546	1.444	Arterial	2009
65	0.546	1.474	Arterial	2009

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2009 NOx and VOC FREEWAY - "ALL"

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
3	3.605	1.895	Freeway	2009
4	2.513	1.800	Freeway	2009
5	1.857	1.744	Freeway	2009
6	1.529	1.647	Freeway	2009
7	1.349	1.549	Freeway	2009
8	1.214	1.476	Freeway	2009
9	1.109	1.419	Freeway	2009
10	1.025	1.373	Freeway	2009
11	0.961	1.328	Freeway	2009
12	0.916	1.278	Freeway	2009
13	0.877	1.236	Freeway	2009
14	0.844	1.200	Freeway	2009
15	0.815	1.169	Freeway	2009
16	0.791	1.146	Freeway	2009
17	0.771	1.136	Freeway	2009
18	0.754	1.127	Freeway	2009
19	0.739	1.118	Freeway	2009
20	0.725	1.111	Freeway	2009
21	0.713	1.104	Freeway	2009
22	0.702	1.098	Freeway	2009
23	0.692	1.092	Freeway	2009
24	0.683	1.087	Freeway	2009
25	0.675	1.082	Freeway	2009
26	0.668	1.078	Freeway	2009
27	0.660	1.074	Freeway	2009
28	0.654	1.071	Freeway	2009
29	0.647	1.069	Freeway	2009
30	0.641	1.066	Freeway	2009
31	0.635	1.065	Freeway	2009
32	0.629	1.064	Freeway	2009
33	0.624	1.063	Freeway	2009
34	0.618	1.063	Freeway	2009
35	0.613	1.062	Freeway	2009
36	0.609	1.066	Freeway	2009
37	0.606	1.071	Freeway	2009
38	0.602	1.075	Freeway	2009
39	0.599	1.078	Freeway	2009
40	0.596	1.084	Freeway	2009
41	0.593	1.093	Freeway	2009
42	0.590	1.101	Freeway	2009

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.587	1.108	Freeway	2009
44	0.584	1.116	Freeway	2009
45	0.581	1.128	Freeway	2009
46	0.578	1.141	Freeway	2009
47	0.576	1.152	Freeway	2009
48	0.573	1.164	Freeway	2009
49	0.571	1.180	Freeway	2009
50	0.568	1.198	Freeway	2009
51	0.566	1.216	Freeway	2009
52	0.564	1.232	Freeway	2009
53	0.562	1.254	Freeway	2009
54	0.561	1.279	Freeway	2009
55	0.560	1.305	Freeway	2009
56	0.559	1.329	Freeway	2009
57	0.558	1.357	Freeway	2009
58	0.557	1.394	Freeway	2009
59	0.556	1.430	Freeway	2009
60	0.556	1.465	Freeway	2009
60.7	0.555	1.488	Freeway	2009

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**2017 NOx and VOC Arterial -
"ALL"**

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
2.5	2.244	0.776	Arterial	2017
3	1.810	0.746	Arterial	2017
4	1.267	0.708	Arterial	2017
5	0.941	0.686	Arterial	2017
6	0.817	0.645	Arterial	2017
7	0.728	0.617	Arterial	2017
8	0.662	0.595	Arterial	2017
9	0.610	0.578	Arterial	2017
10	0.568	0.565	Arterial	2017
11	0.540	0.544	Arterial	2017
12	0.516	0.527	Arterial	2017
13	0.495	0.512	Arterial	2017
14	0.478	0.500	Arterial	2017
15	0.463	0.489	Arterial	2017
16	0.448	0.478	Arterial	2017
17	0.435	0.469	Arterial	2017
18	0.423	0.461	Arterial	2017
19	0.413	0.453	Arterial	2017
20	0.403	0.446	Arterial	2017
21	0.395	0.440	Arterial	2017
22	0.388	0.435	Arterial	2017
23	0.382	0.430	Arterial	2017
24	0.376	0.425	Arterial	2017
25	0.370	0.421	Arterial	2017
26	0.365	0.417	Arterial	2017
27	0.361	0.414	Arterial	2017
28	0.356	0.411	Arterial	2017
29	0.352	0.408	Arterial	2017
30	0.348	0.406	Arterial	2017
31	0.345	0.405	Arterial	2017
32	0.342	0.403	Arterial	2017
33	0.338	0.402	Arterial	2017
34	0.336	0.401	Arterial	2017
35	0.333	0.400	Arterial	2017
36	0.331	0.402	Arterial	2017
37	0.329	0.404	Arterial	2017
38	0.327	0.405	Arterial	2017
39	0.325	0.407	Arterial	2017
40	0.323	0.408	Arterial	2017
41	0.322	0.411	Arterial	2017
42	0.320	0.414	Arterial	2017

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.319	0.417	Arterial	2017
44	0.318	0.420	Arterial	2017
45	0.316	0.422	Arterial	2017
46	0.315	0.427	Arterial	2017
47	0.314	0.431	Arterial	2017
48	0.313	0.435	Arterial	2017
49	0.312	0.439	Arterial	2017
50	0.310	0.443	Arterial	2017
51	0.310	0.449	Arterial	2017
52	0.309	0.456	Arterial	2017
53	0.308	0.461	Arterial	2017
54	0.307	0.467	Arterial	2017
55	0.306	0.472	Arterial	2017
56	0.306	0.481	Arterial	2017
57	0.306	0.489	Arterial	2017
58	0.306	0.497	Arterial	2017
59	0.306	0.505	Arterial	2017
60	0.307	0.513	Arterial	2017
61	0.307	0.524	Arterial	2017
62	0.307	0.536	Arterial	2017
63	0.307	0.547	Arterial	2017
64	0.308	0.558	Arterial	2017
65	0.308	0.568	Arterial	2017

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2017 NOx and VOC FREEWAY - "ALL"

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
3	1.852	0.748	Freeway	2017
4	1.309	0.710	Freeway	2017
5	0.983	0.688	Freeway	2017
6	0.817	0.648	Freeway	2017
7	0.724	0.608	Freeway	2017
8	0.654	0.578	Freeway	2017
9	0.600	0.555	Freeway	2017
10	0.557	0.536	Freeway	2017
11	0.523	0.517	Freeway	2017
12	0.498	0.497	Freeway	2017
13	0.477	0.481	Freeway	2017
14	0.459	0.466	Freeway	2017
15	0.444	0.454	Freeway	2017
16	0.431	0.445	Freeway	2017
17	0.420	0.442	Freeway	2017
18	0.410	0.439	Freeway	2017
19	0.401	0.436	Freeway	2017
20	0.394	0.434	Freeway	2017
21	0.387	0.432	Freeway	2017
22	0.381	0.430	Freeway	2017
23	0.376	0.428	Freeway	2017
24	0.371	0.426	Freeway	2017
25	0.367	0.425	Freeway	2017
26	0.363	0.424	Freeway	2017
27	0.359	0.423	Freeway	2017
28	0.355	0.422	Freeway	2017
29	0.352	0.421	Freeway	2017
30	0.348	0.420	Freeway	2017
31	0.345	0.420	Freeway	2017
32	0.342	0.420	Freeway	2017
33	0.339	0.419	Freeway	2017
34	0.337	0.419	Freeway	2017
35	0.334	0.419	Freeway	2017
36	0.332	0.421	Freeway	2017
37	0.330	0.422	Freeway	2017
38	0.328	0.424	Freeway	2017
39	0.326	0.425	Freeway	2017
40	0.325	0.428	Freeway	2017
41	0.323	0.431	Freeway	2017
42	0.322	0.434	Freeway	2017

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.320	0.437	Freeway	2017
44	0.319	0.439	Freeway	2017
45	0.318	0.444	Freeway	2017
46	0.316	0.449	Freeway	2017
47	0.315	0.453	Freeway	2017
48	0.314	0.457	Freeway	2017
49	0.313	0.463	Freeway	2017
50	0.312	0.470	Freeway	2017
51	0.311	0.476	Freeway	2017
52	0.310	0.482	Freeway	2017
53	0.310	0.490	Freeway	2017
54	0.310	0.499	Freeway	2017
55	0.310	0.508	Freeway	2017
56	0.310	0.517	Freeway	2017
57	0.310	0.527	Freeway	2017
58	0.310	0.540	Freeway	2017
59	0.311	0.552	Freeway	2017
60	0.311	0.565	Freeway	2017
60.7	0.311	0.573	Freeway	2017

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**2026 NOx and VOC Arterial -
"ALL"**

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
2.5	1.790	0.422	Arterial	2026
3	1.434	0.405	Arterial	2026
4	0.988	0.383	Arterial	2026
5	0.721	0.369	Arterial	2026
6	0.619	0.346	Arterial	2026
7	0.547	0.329	Arterial	2026
8	0.492	0.316	Arterial	2026
9	0.450	0.307	Arterial	2026
10	0.416	0.299	Arterial	2026
11	0.392	0.287	Arterial	2026
12	0.373	0.277	Arterial	2026
13	0.356	0.269	Arterial	2026
14	0.342	0.261	Arterial	2026
15	0.330	0.255	Arterial	2026
16	0.317	0.249	Arterial	2026
17	0.306	0.244	Arterial	2026
18	0.297	0.240	Arterial	2026
19	0.288	0.236	Arterial	2026
20	0.280	0.232	Arterial	2026
21	0.274	0.229	Arterial	2026
22	0.268	0.225	Arterial	2026
23	0.262	0.223	Arterial	2026
24	0.258	0.220	Arterial	2026
25	0.253	0.218	Arterial	2026
26	0.249	0.216	Arterial	2026
27	0.245	0.214	Arterial	2026
28	0.241	0.212	Arterial	2026
29	0.238	0.211	Arterial	2026
30	0.235	0.209	Arterial	2026
31	0.232	0.209	Arterial	2026
32	0.229	0.208	Arterial	2026
33	0.227	0.207	Arterial	2026
34	0.224	0.206	Arterial	2026
35	0.222	0.206	Arterial	2026
36	0.220	0.207	Arterial	2026
37	0.219	0.208	Arterial	2026
38	0.217	0.208	Arterial	2026
39	0.216	0.209	Arterial	2026
40	0.214	0.210	Arterial	2026
41	0.213	0.211	Arterial	2026
42	0.212	0.213	Arterial	2026

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.211	0.214	Arterial	2026
44	0.209	0.216	Arterial	2026
45	0.208	0.217	Arterial	2026
46	0.207	0.219	Arterial	2026
47	0.206	0.221	Arterial	2026
48	0.205	0.223	Arterial	2026
49	0.205	0.225	Arterial	2026
50	0.204	0.226	Arterial	2026
51	0.203	0.229	Arterial	2026
52	0.202	0.232	Arterial	2026
53	0.202	0.235	Arterial	2026
54	0.201	0.237	Arterial	2026
55	0.201	0.240	Arterial	2026
56	0.201	0.243	Arterial	2026
57	0.201	0.247	Arterial	2026
58	0.201	0.250	Arterial	2026
59	0.202	0.254	Arterial	2026
60	0.202	0.257	Arterial	2026
61	0.202	0.262	Arterial	2026
62	0.203	0.267	Arterial	2026
63	0.203	0.271	Arterial	2026
64	0.203	0.276	Arterial	2026
65	0.204	0.280	Arterial	2026

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2026 NOx and VOC FREEWAY - "ALL"

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
3	1.468	0.397	Freeway	2026
4	1.022	0.375	Freeway	2026
5	0.755	0.362	Freeway	2026
6	0.619	0.338	Freeway	2026
7	0.543	0.313	Freeway	2026
8	0.486	0.295	Freeway	2026
9	0.442	0.281	Freeway	2026
10	0.407	0.269	Freeway	2026
11	0.379	0.258	Freeway	2026
12	0.359	0.246	Freeway	2026
13	0.342	0.237	Freeway	2026
14	0.327	0.228	Freeway	2026
15	0.315	0.221	Freeway	2026
16	0.304	0.216	Freeway	2026
17	0.294	0.215	Freeway	2026
18	0.286	0.214	Freeway	2026
19	0.279	0.213	Freeway	2026
20	0.272	0.213	Freeway	2026
21	0.267	0.212	Freeway	2026
22	0.262	0.211	Freeway	2026
23	0.258	0.211	Freeway	2026
24	0.254	0.210	Freeway	2026
25	0.250	0.210	Freeway	2026
26	0.247	0.210	Freeway	2026
27	0.243	0.209	Freeway	2026
28	0.240	0.209	Freeway	2026
29	0.237	0.209	Freeway	2026
30	0.235	0.209	Freeway	2026
31	0.232	0.208	Freeway	2026
32	0.230	0.208	Freeway	2026
33	0.227	0.208	Freeway	2026
34	0.225	0.208	Freeway	2026
35	0.223	0.208	Freeway	2026
36	0.221	0.209	Freeway	2026
37	0.220	0.210	Freeway	2026
38	0.218	0.210	Freeway	2026
39	0.217	0.211	Freeway	2026
40	0.215	0.212	Freeway	2026
41	0.214	0.214	Freeway	2026
42	0.213	0.215	Freeway	2026

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.211	0.217	Freeway	2026
44	0.210	0.218	Freeway	2026
45	0.209	0.220	Freeway	2026
46	0.208	0.222	Freeway	2026
47	0.207	0.224	Freeway	2026
48	0.206	0.226	Freeway	2026
49	0.206	0.229	Freeway	2026
50	0.205	0.232	Freeway	2026
51	0.204	0.235	Freeway	2026
52	0.204	0.238	Freeway	2026
53	0.203	0.241	Freeway	2026
54	0.204	0.245	Freeway	2026
55	0.204	0.249	Freeway	2026
56	0.204	0.252	Freeway	2026
57	0.204	0.257	Freeway	2026
58	0.205	0.262	Freeway	2026
59	0.205	0.267	Freeway	2026
60	0.206	0.272	Freeway	2026
60.7	0.206	0.276	Freeway	2026

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**2035 NOx and VOC Arterial -
"ALL"**

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
2.5	1.771	0.353	Arterial	2035
3	1.416	0.337	Arterial	2035
4	0.972	0.318	Arterial	2035
5	0.706	0.307	Arterial	2035
6	0.606	0.286	Arterial	2035
7	0.534	0.272	Arterial	2035
8	0.480	0.261	Arterial	2035
9	0.438	0.253	Arterial	2035
10	0.405	0.246	Arterial	2035
11	0.382	0.236	Arterial	2035
12	0.363	0.227	Arterial	2035
13	0.347	0.220	Arterial	2035
14	0.333	0.214	Arterial	2035
15	0.321	0.209	Arterial	2035
16	0.309	0.204	Arterial	2035
17	0.298	0.200	Arterial	2035
18	0.288	0.196	Arterial	2035
19	0.280	0.192	Arterial	2035
20	0.272	0.189	Arterial	2035
21	0.266	0.187	Arterial	2035
22	0.260	0.184	Arterial	2035
23	0.255	0.182	Arterial	2035
24	0.250	0.180	Arterial	2035
25	0.246	0.178	Arterial	2035
26	0.242	0.176	Arterial	2035
27	0.238	0.175	Arterial	2035
28	0.234	0.173	Arterial	2035
29	0.231	0.172	Arterial	2035
30	0.228	0.170	Arterial	2035
31	0.225	0.170	Arterial	2035
32	0.222	0.169	Arterial	2035
33	0.220	0.168	Arterial	2035
34	0.218	0.168	Arterial	2035
35	0.215	0.167	Arterial	2035
36	0.214	0.168	Arterial	2035
37	0.212	0.169	Arterial	2035
38	0.211	0.169	Arterial	2035
39	0.209	0.170	Arterial	2035
40	0.208	0.170	Arterial	2035
41	0.206	0.172	Arterial	2035
42	0.205	0.173	Arterial	2035

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.204	0.174	Arterial	2035
44	0.203	0.175	Arterial	2035
45	0.202	0.176	Arterial	2035
46	0.201	0.177	Arterial	2035
47	0.200	0.178	Arterial	2035
48	0.199	0.180	Arterial	2035
49	0.198	0.181	Arterial	2035
50	0.197	0.182	Arterial	2035
51	0.197	0.184	Arterial	2035
52	0.196	0.186	Arterial	2035
53	0.195	0.188	Arterial	2035
54	0.195	0.190	Arterial	2035
55	0.194	0.192	Arterial	2035
56	0.195	0.194	Arterial	2035
57	0.195	0.197	Arterial	2035
58	0.195	0.199	Arterial	2035
59	0.195	0.201	Arterial	2035
60	0.195	0.203	Arterial	2035
61	0.196	0.206	Arterial	2035
62	0.196	0.209	Arterial	2035
63	0.197	0.212	Arterial	2035
64	0.197	0.215	Arterial	2035
65	0.197	0.218	Arterial	2035

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2035 NOx and VOC FREEWAY - "ALL"

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
3	1.450	0.331	Freeway	2035
4	1.007	0.312	Freeway	2035
5	0.741	0.301	Freeway	2035
6	0.606	0.279	Freeway	2035
7	0.531	0.258	Freeway	2035
8	0.475	0.241	Freeway	2035
9	0.431	0.229	Freeway	2035
10	0.396	0.218	Freeway	2035
11	0.369	0.209	Freeway	2035
12	0.350	0.199	Freeway	2035
13	0.333	0.190	Freeway	2035
14	0.319	0.183	Freeway	2035
15	0.306	0.176	Freeway	2035
16	0.295	0.172	Freeway	2035
17	0.286	0.172	Freeway	2035
18	0.278	0.172	Freeway	2035
19	0.271	0.171	Freeway	2035
20	0.265	0.171	Freeway	2035
21	0.259	0.171	Freeway	2035
22	0.255	0.171	Freeway	2035
23	0.250	0.170	Freeway	2035
24	0.247	0.170	Freeway	2035
25	0.243	0.170	Freeway	2035
26	0.240	0.170	Freeway	2035
27	0.236	0.170	Freeway	2035
28	0.233	0.170	Freeway	2035
29	0.230	0.170	Freeway	2035
30	0.228	0.170	Freeway	2035
31	0.225	0.169	Freeway	2035
32	0.223	0.169	Freeway	2035
33	0.220	0.169	Freeway	2035
34	0.218	0.169	Freeway	2035
35	0.216	0.169	Freeway	2035
36	0.215	0.170	Freeway	2035
37	0.213	0.170	Freeway	2035
38	0.211	0.171	Freeway	2035
39	0.210	0.172	Freeway	2035
40	0.209	0.173	Freeway	2035
41	0.207	0.174	Freeway	2035
42	0.206	0.175	Freeway	2035

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.205	0.176	Freeway	2035
44	0.204	0.177	Freeway	2035
45	0.203	0.178	Freeway	2035
46	0.202	0.180	Freeway	2035
47	0.201	0.181	Freeway	2035
48	0.200	0.183	Freeway	2035
49	0.199	0.185	Freeway	2035
50	0.198	0.187	Freeway	2035
51	0.198	0.189	Freeway	2035
52	0.197	0.191	Freeway	2035
53	0.197	0.193	Freeway	2035
54	0.197	0.196	Freeway	2035
55	0.197	0.198	Freeway	2035
56	0.198	0.201	Freeway	2035
57	0.198	0.203	Freeway	2035
58	0.199	0.207	Freeway	2035
59	0.199	0.210	Freeway	2035
60	0.199	0.214	Freeway	2035
60.7	0.200	0.216	Freeway	2035

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LIGHT DUTY VEHICLES

2010 CO Arterial - "LDV"

VehSpeed	CO gr/mile	RoadType	Year
2.5	30.986	Arterial	2010
3	27.731	Arterial	2010
4	23.655	Arterial	2010
5	21.206	Arterial	2010
6	19.710	Arterial	2010
7	18.646	Arterial	2010
8	17.840	Arterial	2010
9	17.215	Arterial	2010
10	16.723	Arterial	2010
11	16.365	Arterial	2010
12	16.067	Arterial	2010
13	15.819	Arterial	2010
14	15.601	Arterial	2010
15	15.417	Arterial	2010
16	15.253	Arterial	2010
17	15.115	Arterial	2010
18	14.981	Arterial	2010
19	14.867	Arterial	2010
20	14.767	Arterial	2010
21	14.683	Arterial	2010
22	14.609	Arterial	2010
23	14.535	Arterial	2010
24	14.475	Arterial	2010
25	14.415	Arterial	2010
26	14.385	Arterial	2010
27	14.361	Arterial	2010
28	14.335	Arterial	2010
29	14.311	Arterial	2010
30	14.291	Arterial	2010
31	14.305	Arterial	2010
32	14.325	Arterial	2010
33	14.335	Arterial	2010
34	14.349	Arterial	2010
35	14.365	Arterial	2010
36	14.453	Arterial	2010
37	14.537	Arterial	2010
38	14.621	Arterial	2010
39	14.695	Arterial	2010
40	14.769	Arterial	2010
41	14.859	Arterial	2010
42	14.943	Arterial	2010

VehSpeed	CO gr/mile	RoadType	Year
43	15.027	Arterial	2010
44	15.101	Arterial	2010
45	15.175	Arterial	2010
46	15.269	Arterial	2010
47	15.353	Arterial	2010
48	15.427	Arterial	2010
49	15.511	Arterial	2010
50	15.585	Arterial	2010
51	15.669	Arterial	2010
52	15.753	Arterial	2010
53	15.837	Arterial	2010
54	15.917	Arterial	2010
55	15.991	Arterial	2010
56	16.075	Arterial	2010
57	16.159	Arterial	2010
58	16.243	Arterial	2010
59	16.320	Arterial	2010
60	16.400	Arterial	2010
61	16.484	Arterial	2010
62	16.568	Arterial	2010
63	16.652	Arterial	2010
64	16.726	Arterial	2010
65	16.800	Arterial	2010

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2010 CO FREEWAY - "LDV"

VehSpeed	CO gr/mile	RoadType	Year
3	28.225	Freeway	2010
4	24.150	Freeway	2010
5	21.706	Freeway	2010
6	20.034	Freeway	2010
7	18.823	Freeway	2010
8	17.913	Freeway	2010
9	17.207	Freeway	2010
10	16.645	Freeway	2010
11	16.213	Freeway	2010
12	15.895	Freeway	2010
13	15.623	Freeway	2010
14	15.395	Freeway	2010
15	15.191	Freeway	2010
16	15.057	Freeway	2010
17	15.003	Freeway	2010
18	14.963	Freeway	2010
19	14.923	Freeway	2010
20	14.883	Freeway	2010
21	14.853	Freeway	2010
22	14.830	Freeway	2010
23	14.800	Freeway	2010
24	14.780	Freeway	2010
25	14.753	Freeway	2010
26	14.733	Freeway	2010
27	14.720	Freeway	2010
28	14.700	Freeway	2010
29	14.680	Freeway	2010
30	14.666	Freeway	2010
31	14.676	Freeway	2010
32	14.690	Freeway	2010
33	14.710	Freeway	2010
34	14.723	Freeway	2010
35	14.743	Freeway	2010
36	14.827	Freeway	2010
37	14.917	Freeway	2010
38	14.995	Freeway	2010
39	15.075	Freeway	2010
40	15.159	Freeway	2010
41	15.247	Freeway	2010
42	15.331	Freeway	2010

VehSpeed	CO gr/mile	RoadType	Year
43	15.411	Freeway	2010
44	15.489	Freeway	2010
45	15.583	Freeway	2010
46	15.673	Freeway	2010
47	15.757	Freeway	2010
48	15.835	Freeway	2010
49	15.929	Freeway	2010
50	16.019	Freeway	2010
51	16.107	Freeway	2010
52	16.191	Freeway	2010
53	16.281	Freeway	2010
54	16.375	Freeway	2010
55	16.463	Freeway	2010
56	16.553	Freeway	2010
57	16.641	Freeway	2010
58	16.735	Freeway	2010
59	16.829	Freeway	2010
60	16.919	Freeway	2010
60.7	16.977	Freeway	2010

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2017 CO Arterial - "LDV"

VehSpeed	CO gr/mile	RoadType	Year
2.5	22.415	Arterial	2017
3	20.287	Arterial	2017
4	17.619	Arterial	2017
5	16.020	Arterial	2017
6	15.022	Arterial	2017
7	14.313	Arterial	2017
8	13.779	Arterial	2017
9	13.360	Arterial	2017
10	13.030	Arterial	2017
11	12.781	Arterial	2017
12	12.582	Arterial	2017
13	12.407	Arterial	2017
14	12.257	Arterial	2017
15	12.133	Arterial	2017
16	12.018	Arterial	2017
17	11.923	Arterial	2017
18	11.829	Arterial	2017
19	11.754	Arterial	2017
20	11.684	Arterial	2017
21	11.619	Arterial	2017
22	11.569	Arterial	2017
23	11.519	Arterial	2017
24	11.475	Arterial	2017
25	11.430	Arterial	2017
26	11.415	Arterial	2017
27	11.400	Arterial	2017
28	11.390	Arterial	2017
29	11.370	Arterial	2017
30	11.360	Arterial	2017
31	11.370	Arterial	2017
32	11.385	Arterial	2017
33	11.395	Arterial	2017
34	11.405	Arterial	2017
35	11.415	Arterial	2017
36	11.489	Arterial	2017
37	11.554	Arterial	2017
38	11.619	Arterial	2017
39	11.679	Arterial	2017
40	11.733	Arterial	2017
41	11.808	Arterial	2017
42	11.873	Arterial	2017

VehSpeed	CO gr/mile	RoadType	Year
43	11.933	Arterial	2017
44	11.997	Arterial	2017
45	12.052	Arterial	2017
46	12.122	Arterial	2017
47	12.187	Arterial	2017
48	12.252	Arterial	2017
49	12.312	Arterial	2017
50	12.371	Arterial	2017
51	12.441	Arterial	2017
52	12.506	Arterial	2017
53	12.570	Arterial	2017
54	12.630	Arterial	2017
55	12.685	Arterial	2017
56	12.760	Arterial	2017
57	12.824	Arterial	2017
58	12.884	Arterial	2017
59	12.949	Arterial	2017
60	13.009	Arterial	2017
61	13.074	Arterial	2017
62	13.138	Arterial	2017
63	13.203	Arterial	2017
64	13.268	Arterial	2017
65	13.328	Arterial	2017

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2017 CO FREEWAY - "LDV"

VehSpeed	CO gr/mile	RoadType	Year
3	20.578	Freeway	2017
4	17.915	Freeway	2017
5	16.316	Freeway	2017
6	15.203	Freeway	2017
7	14.384	Freeway	2017
8	13.770	Freeway	2017
9	13.291	Freeway	2017
10	12.907	Freeway	2017
11	12.617	Freeway	2017
12	12.398	Freeway	2017
13	12.209	Freeway	2017
14	12.044	Freeway	2017
15	11.909	Freeway	2017
16	11.815	Freeway	2017
17	11.785	Freeway	2017
18	11.760	Freeway	2017
19	11.740	Freeway	2017
20	11.720	Freeway	2017
21	11.700	Freeway	2017
22	11.685	Freeway	2017
23	11.665	Freeway	2017
24	11.655	Freeway	2017
25	11.645	Freeway	2017
26	11.631	Freeway	2017
27	11.615	Freeway	2017
28	11.611	Freeway	2017
29	11.601	Freeway	2017
30	11.591	Freeway	2017
31	11.595	Freeway	2017
32	11.611	Freeway	2017
33	11.625	Freeway	2017
34	11.635	Freeway	2017
35	11.645	Freeway	2017
36	11.720	Freeway	2017
37	11.785	Freeway	2017
38	11.849	Freeway	2017
39	11.909	Freeway	2017
40	11.974	Freeway	2017
41	12.039	Freeway	2017
42	12.109	Freeway	2017

VehSpeed	CO gr/mile	RoadType	Year
43	12.173	Freeway	2017
44	12.233	Freeway	2017
45	12.303	Freeway	2017
46	12.377	Freeway	2017
47	12.442	Freeway	2017
48	12.502	Freeway	2017
49	12.577	Freeway	2017
50	12.646	Freeway	2017
51	12.716	Freeway	2017
52	12.781	Freeway	2017
53	12.851	Freeway	2017
54	12.926	Freeway	2017
55	12.995	Freeway	2017
56	13.065	Freeway	2017
57	13.130	Freeway	2017
58	13.204	Freeway	2017
59	13.279	Freeway	2017
60	13.349	Freeway	2017
60.7	13.394	Freeway	2017

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2026 CO Arterial - "LDV"

VehSpeed	CO gr/mile	RoadType	Year
2.5	20.191	Arterial	2026
3	18.306	Arterial	2026
4	15.957	Arterial	2026
5	14.547	Arterial	2026
6	13.668	Arterial	2026
7	13.038	Arterial	2026
8	12.568	Arterial	2026
9	12.198	Arterial	2026
10	11.909	Arterial	2026
11	11.694	Arterial	2026
12	11.514	Arterial	2026
13	11.359	Arterial	2026
14	11.224	Arterial	2026
15	11.119	Arterial	2026
16	11.015	Arterial	2026
17	10.930	Arterial	2026
18	10.850	Arterial	2026
19	10.785	Arterial	2026
20	10.720	Arterial	2026
21	10.665	Arterial	2026
22	10.620	Arterial	2026
23	10.570	Arterial	2026
24	10.530	Arterial	2026
25	10.495	Arterial	2026
26	10.480	Arterial	2026
27	10.465	Arterial	2026
28	10.455	Arterial	2026
29	10.445	Arterial	2026
30	10.435	Arterial	2026
31	10.445	Arterial	2026
32	10.455	Arterial	2026
33	10.470	Arterial	2026
34	10.480	Arterial	2026
35	10.490	Arterial	2026
36	10.555	Arterial	2026
37	10.615	Arterial	2026
38	10.670	Arterial	2026
39	10.730	Arterial	2026
40	10.785	Arterial	2026
41	10.849	Arterial	2026
42	10.904	Arterial	2026

VehSpeed	CO gr/mile	RoadType	Year
43	10.964	Arterial	2026
44	11.019	Arterial	2026
45	11.074	Arterial	2026
46	11.139	Arterial	2026
47	11.199	Arterial	2026
48	11.259	Arterial	2026
49	11.314	Arterial	2026
50	11.369	Arterial	2026
51	11.434	Arterial	2026
52	11.494	Arterial	2026
53	11.548	Arterial	2026
54	11.608	Arterial	2026
55	11.663	Arterial	2026
56	11.728	Arterial	2026
57	11.788	Arterial	2026
58	11.848	Arterial	2026
59	11.903	Arterial	2026
60	11.958	Arterial	2026
61	12.023	Arterial	2026
62	12.078	Arterial	2026
63	12.143	Arterial	2026
64	12.197	Arterial	2026
65	12.247	Arterial	2026

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2026 CO FREEWAY - "LDV"

VehSpeed	CO gr/mile	RoadType	Year
3	18.567	Freeway	2026
4	16.217	Freeway	2026
5	14.807	Freeway	2026
6	13.823	Freeway	2026
7	13.093	Freeway	2026
8	12.554	Freeway	2026
9	12.129	Freeway	2026
10	11.794	Freeway	2026
11	11.529	Freeway	2026
12	11.339	Freeway	2026
13	11.170	Freeway	2026
14	11.030	Freeway	2026
15	10.905	Freeway	2026
16	10.820	Freeway	2026
17	10.800	Freeway	2026
18	10.775	Freeway	2026
19	10.755	Freeway	2026
20	10.745	Freeway	2026
21	10.725	Freeway	2026
22	10.715	Freeway	2026
23	10.700	Freeway	2026
24	10.690	Freeway	2026
25	10.680	Freeway	2026
26	10.670	Freeway	2026
27	10.660	Freeway	2026
28	10.650	Freeway	2026
29	10.645	Freeway	2026
30	10.640	Freeway	2026
31	10.640	Freeway	2026
32	10.655	Freeway	2026
33	10.665	Freeway	2026
34	10.675	Freeway	2026
35	10.685	Freeway	2026
36	10.755	Freeway	2026
37	10.815	Freeway	2026
38	10.875	Freeway	2026
39	10.930	Freeway	2026
40	10.990	Freeway	2026
41	11.055	Freeway	2026
42	11.119	Freeway	2026

VehSpeed	CO gr/mile	RoadType	Year
43	11.174	Freeway	2026
44	11.234	Freeway	2026
45	11.299	Freeway	2026
46	11.364	Freeway	2026
47	11.424	Freeway	2026
48	11.479	Freeway	2026
49	11.544	Freeway	2026
50	11.614	Freeway	2026
51	11.679	Freeway	2026
52	11.734	Freeway	2026
53	11.798	Freeway	2026
54	11.868	Freeway	2026
55	11.933	Freeway	2026
56	11.998	Freeway	2026
57	12.063	Freeway	2026
58	12.133	Freeway	2026
59	12.198	Freeway	2026
60	12.263	Freeway	2026
60.7	12.308	Freeway	2026

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2035 CO Arterial - "LDV"

VehSpeed	CO gr/mile	RoadType	Year
2.5	20.009	Arterial	2035
3	18.144	Arterial	2035
4	15.809	Arterial	2035
5	14.410	Arterial	2035
6	13.535	Arterial	2035
7	12.915	Arterial	2035
8	12.446	Arterial	2035
9	12.081	Arterial	2035
10	11.791	Arterial	2035
11	11.576	Arterial	2035
12	11.396	Arterial	2035
13	11.241	Arterial	2035
14	11.117	Arterial	2035
15	11.002	Arterial	2035
16	10.907	Arterial	2035
17	10.817	Arterial	2035
18	10.742	Arterial	2035
19	10.672	Arterial	2035
20	10.607	Arterial	2035
21	10.557	Arterial	2035
22	10.507	Arterial	2035
23	10.462	Arterial	2035
24	10.422	Arterial	2035
25	10.387	Arterial	2035
26	10.372	Arterial	2035
27	10.362	Arterial	2035
28	10.347	Arterial	2035
29	10.337	Arterial	2035
30	10.327	Arterial	2035
31	10.342	Arterial	2035
32	10.352	Arterial	2035
33	10.362	Arterial	2035
34	10.372	Arterial	2035
35	10.382	Arterial	2035
36	10.447	Arterial	2035
37	10.507	Arterial	2035
38	10.567	Arterial	2035
39	10.617	Arterial	2035
40	10.672	Arterial	2035
41	10.737	Arterial	2035
42	10.797	Arterial	2035

VehSpeed	CO gr/mile	RoadType	Year
43	10.857	Arterial	2035
44	10.911	Arterial	2035
45	10.966	Arterial	2035
46	11.031	Arterial	2035
47	11.091	Arterial	2035
48	11.146	Arterial	2035
49	11.206	Arterial	2035
50	11.261	Arterial	2035
51	11.321	Arterial	2035
52	11.381	Arterial	2035
53	11.441	Arterial	2035
54	11.496	Arterial	2035
55	11.550	Arterial	2035
56	11.610	Arterial	2035
57	11.675	Arterial	2035
58	11.730	Arterial	2035
59	11.790	Arterial	2035
60	11.845	Arterial	2035
61	11.905	Arterial	2035
62	11.970	Arterial	2035
63	12.025	Arterial	2035
64	12.080	Arterial	2035
65	12.140	Arterial	2035

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2035 CO FREEWAY - "LDV"

VehSpeed	CO gr/mile	RoadType	Year
3	18.404	Freeway	2035
4	16.070	Freeway	2035
5	14.670	Freeway	2035
6	13.690	Freeway	2035
7	12.971	Freeway	2035
8	12.431	Freeway	2035
9	12.011	Freeway	2035
10	11.676	Freeway	2035
11	11.417	Freeway	2035
12	11.222	Freeway	2035
13	11.057	Freeway	2035
14	10.917	Freeway	2035
15	10.797	Freeway	2035
16	10.712	Freeway	2035
17	10.687	Freeway	2035
18	10.667	Freeway	2035
19	10.647	Freeway	2035
20	10.632	Freeway	2035
21	10.617	Freeway	2035
22	10.607	Freeway	2035
23	10.597	Freeway	2035
24	10.577	Freeway	2035
25	10.573	Freeway	2035
26	10.563	Freeway	2035
27	10.553	Freeway	2035
28	10.543	Freeway	2035
29	10.537	Freeway	2035
30	10.533	Freeway	2035
31	10.537	Freeway	2035
32	10.547	Freeway	2035
33	10.557	Freeway	2035
34	10.567	Freeway	2035
35	10.582	Freeway	2035
36	10.642	Freeway	2035
37	10.707	Freeway	2035
38	10.767	Freeway	2035
39	10.822	Freeway	2035
40	10.877	Freeway	2035
41	10.947	Freeway	2035
42	11.002	Freeway	2035

VehSpeed	CO gr/mile	RoadType	Year
43	11.067	Freeway	2035
44	11.121	Freeway	2035
45	11.186	Freeway	2035
46	11.246	Freeway	2035
47	11.311	Freeway	2035
48	11.371	Freeway	2035
49	11.436	Freeway	2035
50	11.501	Freeway	2035
51	11.561	Freeway	2035
52	11.626	Freeway	2035
53	11.691	Freeway	2035
54	11.756	Freeway	2035
55	11.820	Freeway	2035
56	11.880	Freeway	2035
57	11.945	Freeway	2035
58	12.015	Freeway	2035
59	12.080	Freeway	2035
60	12.145	Freeway	2035
60.7	12.190	Freeway	2035

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**2009 NOx and VOC Arterial -
"LDV"**

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
2.5	4.182	1.128	Arterial	2009
3	3.318	1.076	Arterial	2009
4	2.236	1.011	Arterial	2009
5	1.588	0.972	Arterial	2009
6	1.363	0.907	Arterial	2009
7	1.202	0.861	Arterial	2009
8	1.082	0.825	Arterial	2009
9	0.988	0.799	Arterial	2009
10	0.913	0.777	Arterial	2009
11	0.867	0.744	Arterial	2009
12	0.829	0.716	Arterial	2009
13	0.797	0.693	Arterial	2009
14	0.769	0.674	Arterial	2009
15	0.746	0.657	Arterial	2009
16	0.724	0.642	Arterial	2009
17	0.703	0.628	Arterial	2009
18	0.686	0.616	Arterial	2009
19	0.670	0.605	Arterial	2009
20	0.655	0.596	Arterial	2009
21	0.644	0.587	Arterial	2009
22	0.634	0.579	Arterial	2009
23	0.624	0.571	Arterial	2009
24	0.615	0.564	Arterial	2009
25	0.607	0.558	Arterial	2009
26	0.600	0.552	Arterial	2009
27	0.593	0.546	Arterial	2009
28	0.587	0.541	Arterial	2009
29	0.582	0.537	Arterial	2009
30	0.577	0.532	Arterial	2009
31	0.571	0.529	Arterial	2009
32	0.567	0.527	Arterial	2009
33	0.562	0.524	Arterial	2009
34	0.558	0.521	Arterial	2009
35	0.553	0.519	Arterial	2009
36	0.551	0.520	Arterial	2009
37	0.548	0.522	Arterial	2009
38	0.546	0.523	Arterial	2009
39	0.543	0.524	Arterial	2009
40	0.541	0.525	Arterial	2009
41	0.538	0.528	Arterial	2009
42	0.536	0.530	Arterial	2009

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.534	0.532	Arterial	2009
44	0.532	0.534	Arterial	2009
45	0.530	0.535	Arterial	2009
46	0.527	0.537	Arterial	2009
47	0.525	0.540	Arterial	2009
48	0.523	0.542	Arterial	2009
49	0.521	0.543	Arterial	2009
50	0.519	0.545	Arterial	2009
51	0.518	0.548	Arterial	2009
52	0.516	0.550	Arterial	2009
53	0.514	0.552	Arterial	2009
54	0.512	0.554	Arterial	2009
55	0.510	0.556	Arterial	2009
56	0.508	0.558	Arterial	2009
57	0.507	0.560	Arterial	2009
58	0.506	0.563	Arterial	2009
59	0.505	0.565	Arterial	2009
60	0.503	0.567	Arterial	2009
61	0.502	0.569	Arterial	2009
62	0.501	0.571	Arterial	2009
63	0.499	0.573	Arterial	2009
64	0.498	0.576	Arterial	2009
65	0.497	0.578	Arterial	2009

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2009 NOx and VOC FREEWAY - "LDV"

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
3	3.416	1.058	Freeway	2009
4	2.335	0.993	Freeway	2009
5	1.687	0.954	Freeway	2009
6	1.371	0.883	Freeway	2009
7	1.203	0.809	Freeway	2009
8	1.077	0.754	Freeway	2009
9	0.978	0.711	Freeway	2009
10	0.900	0.677	Freeway	2009
11	0.842	0.644	Freeway	2009
12	0.803	0.611	Freeway	2009
13	0.769	0.583	Freeway	2009
14	0.741	0.559	Freeway	2009
15	0.716	0.538	Freeway	2009
16	0.695	0.525	Freeway	2009
17	0.680	0.526	Freeway	2009
18	0.667	0.527	Freeway	2009
19	0.654	0.528	Freeway	2009
20	0.643	0.529	Freeway	2009
21	0.633	0.529	Freeway	2009
22	0.625	0.529	Freeway	2009
23	0.618	0.530	Freeway	2009
24	0.611	0.530	Freeway	2009
25	0.605	0.530	Freeway	2009
26	0.599	0.530	Freeway	2009
27	0.594	0.530	Freeway	2009
28	0.588	0.530	Freeway	2009
29	0.583	0.530	Freeway	2009
30	0.579	0.530	Freeway	2009
31	0.574	0.530	Freeway	2009
32	0.570	0.529	Freeway	2009
33	0.566	0.528	Freeway	2009
34	0.562	0.527	Freeway	2009
35	0.558	0.527	Freeway	2009
36	0.555	0.528	Freeway	2009
37	0.552	0.529	Freeway	2009
38	0.550	0.531	Freeway	2009
39	0.547	0.532	Freeway	2009
40	0.545	0.534	Freeway	2009
41	0.542	0.536	Freeway	2009
42	0.540	0.539	Freeway	2009

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.538	0.540	Freeway	2009
44	0.536	0.542	Freeway	2009
45	0.534	0.544	Freeway	2009
46	0.531	0.547	Freeway	2009
47	0.529	0.548	Freeway	2009
48	0.527	0.550	Freeway	2009
49	0.525	0.553	Freeway	2009
50	0.523	0.555	Freeway	2009
51	0.521	0.558	Freeway	2009
52	0.519	0.560	Freeway	2009
53	0.517	0.562	Freeway	2009
54	0.516	0.564	Freeway	2009
55	0.514	0.567	Freeway	2009
56	0.512	0.569	Freeway	2009
57	0.511	0.572	Freeway	2009
58	0.510	0.574	Freeway	2009
59	0.509	0.576	Freeway	2009
60	0.508	0.579	Freeway	2009
60.7	0.507	0.581	Freeway	2009

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**2017 NOx and VOC Arterial -
"LDV"**

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
2.5	2.018	0.450	Arterial	2017
3	1.606	0.429	Arterial	2017
4	1.091	0.404	Arterial	2017
5	0.783	0.388	Arterial	2017
6	0.675	0.362	Arterial	2017
7	0.597	0.343	Arterial	2017
8	0.539	0.328	Arterial	2017
9	0.494	0.318	Arterial	2017
10	0.458	0.309	Arterial	2017
11	0.435	0.296	Arterial	2017
12	0.416	0.284	Arterial	2017
13	0.400	0.275	Arterial	2017
14	0.387	0.267	Arterial	2017
15	0.374	0.260	Arterial	2017
16	0.363	0.254	Arterial	2017
17	0.352	0.248	Arterial	2017
18	0.343	0.243	Arterial	2017
19	0.334	0.239	Arterial	2017
20	0.327	0.235	Arterial	2017
21	0.321	0.232	Arterial	2017
22	0.316	0.228	Arterial	2017
23	0.311	0.225	Arterial	2017
24	0.307	0.223	Arterial	2017
25	0.303	0.220	Arterial	2017
26	0.300	0.218	Arterial	2017
27	0.296	0.215	Arterial	2017
28	0.293	0.213	Arterial	2017
29	0.290	0.211	Arterial	2017
30	0.287	0.209	Arterial	2017
31	0.285	0.208	Arterial	2017
32	0.282	0.207	Arterial	2017
33	0.280	0.206	Arterial	2017
34	0.278	0.205	Arterial	2017
35	0.276	0.204	Arterial	2017
36	0.275	0.205	Arterial	2017
37	0.274	0.205	Arterial	2017
38	0.273	0.206	Arterial	2017
39	0.272	0.207	Arterial	2017
40	0.271	0.207	Arterial	2017
41	0.269	0.208	Arterial	2017
42	0.268	0.209	Arterial	2017

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.267	0.210	Arterial	2017
44	0.267	0.211	Arterial	2017
45	0.266	0.212	Arterial	2017
46	0.265	0.213	Arterial	2017
47	0.264	0.213	Arterial	2017
48	0.263	0.214	Arterial	2017
49	0.262	0.215	Arterial	2017
50	0.262	0.216	Arterial	2017
51	0.261	0.217	Arterial	2017
52	0.260	0.218	Arterial	2017
53	0.260	0.219	Arterial	2017
54	0.259	0.220	Arterial	2017
55	0.259	0.221	Arterial	2017
56	0.259	0.222	Arterial	2017
57	0.258	0.223	Arterial	2017
58	0.258	0.223	Arterial	2017
59	0.257	0.225	Arterial	2017
60	0.257	0.226	Arterial	2017
61	0.257	0.227	Arterial	2017
62	0.256	0.227	Arterial	2017
63	0.256	0.228	Arterial	2017
64	0.256	0.229	Arterial	2017
65	0.256	0.230	Arterial	2017

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2017 NOx and VOC FREEWAY - "LDV"

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
3	1.651	0.421	Freeway	2017
4	1.137	0.396	Freeway	2017
5	0.828	0.380	Freeway	2017
6	0.676	0.351	Freeway	2017
7	0.595	0.321	Freeway	2017
8	0.534	0.298	Freeway	2017
9	0.486	0.281	Freeway	2017
10	0.448	0.267	Freeway	2017
11	0.420	0.253	Freeway	2017
12	0.400	0.240	Freeway	2017
13	0.383	0.229	Freeway	2017
14	0.368	0.219	Freeway	2017
15	0.356	0.210	Freeway	2017
16	0.345	0.205	Freeway	2017
17	0.337	0.205	Freeway	2017
18	0.330	0.206	Freeway	2017
19	0.324	0.206	Freeway	2017
20	0.318	0.206	Freeway	2017
21	0.313	0.207	Freeway	2017
22	0.309	0.207	Freeway	2017
23	0.306	0.207	Freeway	2017
24	0.302	0.207	Freeway	2017
25	0.299	0.207	Freeway	2017
26	0.297	0.208	Freeway	2017
27	0.294	0.208	Freeway	2017
28	0.292	0.207	Freeway	2017
29	0.289	0.207	Freeway	2017
30	0.287	0.208	Freeway	2017
31	0.285	0.208	Freeway	2017
32	0.283	0.207	Freeway	2017
33	0.281	0.207	Freeway	2017
34	0.279	0.206	Freeway	2017
35	0.277	0.206	Freeway	2017
36	0.276	0.207	Freeway	2017
37	0.275	0.208	Freeway	2017
38	0.274	0.209	Freeway	2017
39	0.273	0.209	Freeway	2017
40	0.272	0.210	Freeway	2017
41	0.271	0.211	Freeway	2017
42	0.269	0.212	Freeway	2017

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.269	0.213	Freeway	2017
44	0.268	0.214	Freeway	2017
45	0.267	0.214	Freeway	2017
46	0.266	0.215	Freeway	2017
47	0.265	0.216	Freeway	2017
48	0.264	0.218	Freeway	2017
49	0.264	0.218	Freeway	2017
50	0.263	0.219	Freeway	2017
51	0.262	0.220	Freeway	2017
52	0.262	0.221	Freeway	2017
53	0.261	0.223	Freeway	2017
54	0.261	0.223	Freeway	2017
55	0.261	0.224	Freeway	2017
56	0.260	0.225	Freeway	2017
57	0.260	0.227	Freeway	2017
58	0.260	0.228	Freeway	2017
59	0.259	0.229	Freeway	2017
60	0.259	0.229	Freeway	2017
60.7	0.259	0.230	Freeway	2017

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**2026 NOx and VOC Arterial -
"LDV"**

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
2.5	1.665	0.296	Arterial	2026
3	1.314	0.282	Arterial	2026
4	0.875	0.265	Arterial	2026
5	0.612	0.254	Arterial	2026
6	0.521	0.236	Arterial	2026
7	0.455	0.222	Arterial	2026
8	0.407	0.212	Arterial	2026
9	0.369	0.205	Arterial	2026
10	0.338	0.199	Arterial	2026
11	0.319	0.190	Arterial	2026
12	0.303	0.182	Arterial	2026
13	0.290	0.176	Arterial	2026
14	0.278	0.170	Arterial	2026
15	0.269	0.165	Arterial	2026
16	0.258	0.161	Arterial	2026
17	0.249	0.157	Arterial	2026
18	0.241	0.154	Arterial	2026
19	0.234	0.151	Arterial	2026
20	0.228	0.148	Arterial	2026
21	0.223	0.145	Arterial	2026
22	0.219	0.143	Arterial	2026
23	0.215	0.141	Arterial	2026
24	0.211	0.139	Arterial	2026
25	0.208	0.137	Arterial	2026
26	0.205	0.135	Arterial	2026
27	0.202	0.134	Arterial	2026
28	0.200	0.133	Arterial	2026
29	0.197	0.131	Arterial	2026
30	0.195	0.130	Arterial	2026
31	0.193	0.129	Arterial	2026
32	0.191	0.128	Arterial	2026
33	0.189	0.127	Arterial	2026
34	0.187	0.126	Arterial	2026
35	0.185	0.126	Arterial	2026
36	0.184	0.127	Arterial	2026
37	0.183	0.127	Arterial	2026
38	0.182	0.127	Arterial	2026
39	0.181	0.128	Arterial	2026
40	0.180	0.128	Arterial	2026
41	0.179	0.129	Arterial	2026
42	0.179	0.130	Arterial	2026

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.178	0.130	Arterial	2026
44	0.177	0.131	Arterial	2026
45	0.176	0.131	Arterial	2026
46	0.175	0.132	Arterial	2026
47	0.175	0.132	Arterial	2026
48	0.174	0.133	Arterial	2026
49	0.173	0.134	Arterial	2026
50	0.173	0.134	Arterial	2026
51	0.172	0.135	Arterial	2026
52	0.172	0.135	Arterial	2026
53	0.171	0.136	Arterial	2026
54	0.171	0.137	Arterial	2026
55	0.171	0.137	Arterial	2026
56	0.170	0.138	Arterial	2026
57	0.170	0.139	Arterial	2026
58	0.169	0.139	Arterial	2026
59	0.169	0.140	Arterial	2026
60	0.169	0.140	Arterial	2026
61	0.169	0.141	Arterial	2026
62	0.169	0.142	Arterial	2026
63	0.169	0.142	Arterial	2026
64	0.169	0.143	Arterial	2026
65	0.169	0.143	Arterial	2026

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2026 NOx and VOC FREEWAY - "LDV"

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
3	1.353	0.277	Freeway	2026
4	0.914	0.259	Freeway	2026
5	0.651	0.248	Freeway	2026
6	0.522	0.228	Freeway	2026
7	0.454	0.207	Freeway	2026
8	0.402	0.191	Freeway	2026
9	0.362	0.179	Freeway	2026
10	0.330	0.170	Freeway	2026
11	0.306	0.160	Freeway	2026
12	0.290	0.151	Freeway	2026
13	0.276	0.143	Freeway	2026
14	0.264	0.136	Freeway	2026
15	0.254	0.130	Freeway	2026
16	0.244	0.127	Freeway	2026
17	0.237	0.127	Freeway	2026
18	0.231	0.127	Freeway	2026
19	0.225	0.128	Freeway	2026
20	0.220	0.128	Freeway	2026
21	0.216	0.128	Freeway	2026
22	0.213	0.128	Freeway	2026
23	0.210	0.129	Freeway	2026
24	0.208	0.129	Freeway	2026
25	0.205	0.129	Freeway	2026
26	0.203	0.128	Freeway	2026
27	0.200	0.129	Freeway	2026
28	0.198	0.129	Freeway	2026
29	0.196	0.129	Freeway	2026
30	0.194	0.129	Freeway	2026
31	0.193	0.128	Freeway	2026
32	0.191	0.128	Freeway	2026
33	0.189	0.128	Freeway	2026
34	0.188	0.128	Freeway	2026
35	0.186	0.128	Freeway	2026
36	0.185	0.128	Freeway	2026
37	0.184	0.128	Freeway	2026
38	0.183	0.129	Freeway	2026
39	0.182	0.130	Freeway	2026
40	0.181	0.130	Freeway	2026
41	0.180	0.131	Freeway	2026
42	0.180	0.131	Freeway	2026

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.179	0.132	Freeway	2026
44	0.178	0.133	Freeway	2026
45	0.177	0.133	Freeway	2026
46	0.176	0.134	Freeway	2026
47	0.176	0.134	Freeway	2026
48	0.175	0.135	Freeway	2026
49	0.174	0.136	Freeway	2026
50	0.174	0.136	Freeway	2026
51	0.173	0.137	Freeway	2026
52	0.173	0.138	Freeway	2026
53	0.172	0.138	Freeway	2026
54	0.172	0.139	Freeway	2026
55	0.172	0.140	Freeway	2026
56	0.172	0.140	Freeway	2026
57	0.171	0.141	Freeway	2026
58	0.171	0.142	Freeway	2026
59	0.171	0.143	Freeway	2026
60	0.171	0.143	Freeway	2026
60.7	0.171	0.143	Freeway	2026

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**2035 NOx and VOC Arterial -
"LDV"**

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
2.5	1.660	0.283	Arterial	2035
3	1.309	0.269	Arterial	2035
4	0.871	0.252	Arterial	2035
5	0.608	0.242	Arterial	2035
6	0.517	0.224	Arterial	2035
7	0.452	0.211	Arterial	2035
8	0.404	0.202	Arterial	2035
9	0.366	0.194	Arterial	2035
10	0.335	0.189	Arterial	2035
11	0.316	0.180	Arterial	2035
12	0.301	0.172	Arterial	2035
13	0.287	0.166	Arterial	2035
14	0.276	0.161	Arterial	2035
15	0.266	0.156	Arterial	2035
16	0.256	0.152	Arterial	2035
17	0.247	0.148	Arterial	2035
18	0.239	0.145	Arterial	2035
19	0.232	0.142	Arterial	2035
20	0.226	0.140	Arterial	2035
21	0.221	0.137	Arterial	2035
22	0.217	0.135	Arterial	2035
23	0.213	0.133	Arterial	2035
24	0.209	0.131	Arterial	2035
25	0.206	0.129	Arterial	2035
26	0.203	0.128	Arterial	2035
27	0.200	0.126	Arterial	2035
28	0.197	0.125	Arterial	2035
29	0.195	0.123	Arterial	2035
30	0.193	0.122	Arterial	2035
31	0.190	0.121	Arterial	2035
32	0.188	0.120	Arterial	2035
33	0.186	0.120	Arterial	2035
34	0.185	0.119	Arterial	2035
35	0.183	0.118	Arterial	2035
36	0.182	0.119	Arterial	2035
37	0.181	0.119	Arterial	2035
38	0.180	0.119	Arterial	2035
39	0.179	0.120	Arterial	2035
40	0.178	0.121	Arterial	2035
41	0.177	0.121	Arterial	2035
42	0.177	0.121	Arterial	2035

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.175	0.122	Arterial	2035
44	0.174	0.123	Arterial	2035
45	0.174	0.123	Arterial	2035
46	0.173	0.124	Arterial	2035
47	0.173	0.124	Arterial	2035
48	0.172	0.125	Arterial	2035
49	0.171	0.126	Arterial	2035
50	0.170	0.126	Arterial	2035
51	0.170	0.127	Arterial	2035
52	0.169	0.127	Arterial	2035
53	0.169	0.128	Arterial	2035
54	0.169	0.128	Arterial	2035
55	0.168	0.129	Arterial	2035
56	0.168	0.130	Arterial	2035
57	0.167	0.130	Arterial	2035
58	0.167	0.131	Arterial	2035
59	0.167	0.131	Arterial	2035
60	0.167	0.132	Arterial	2035
61	0.167	0.133	Arterial	2035
62	0.167	0.133	Arterial	2035
63	0.166	0.134	Arterial	2035
64	0.166	0.134	Arterial	2035
65	0.166	0.135	Arterial	2035

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2035 NOx and VOC FREEWAY - "LDV"

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
3	1.348	0.264	Freeway	2035
4	0.909	0.246	Freeway	2035
5	0.647	0.236	Freeway	2035
6	0.519	0.217	Freeway	2035
7	0.451	0.197	Freeway	2035
8	0.399	0.181	Freeway	2035
9	0.359	0.170	Freeway	2035
10	0.328	0.160	Freeway	2035
11	0.304	0.151	Freeway	2035
12	0.288	0.143	Freeway	2035
13	0.273	0.135	Freeway	2035
14	0.261	0.129	Freeway	2035
15	0.251	0.122	Freeway	2035
16	0.242	0.119	Freeway	2035
17	0.235	0.120	Freeway	2035
18	0.229	0.120	Freeway	2035
19	0.223	0.120	Freeway	2035
20	0.218	0.120	Freeway	2035
21	0.214	0.121	Freeway	2035
22	0.211	0.121	Freeway	2035
23	0.208	0.121	Freeway	2035
24	0.205	0.121	Freeway	2035
25	0.203	0.121	Freeway	2035
26	0.200	0.121	Freeway	2035
27	0.198	0.121	Freeway	2035
28	0.196	0.121	Freeway	2035
29	0.194	0.121	Freeway	2035
30	0.192	0.121	Freeway	2035
31	0.190	0.121	Freeway	2035
32	0.189	0.121	Freeway	2035
33	0.187	0.120	Freeway	2035
34	0.185	0.120	Freeway	2035
35	0.184	0.120	Freeway	2035
36	0.183	0.120	Freeway	2035
37	0.182	0.121	Freeway	2035
38	0.181	0.121	Freeway	2035
39	0.180	0.122	Freeway	2035
40	0.179	0.122	Freeway	2035
41	0.178	0.123	Freeway	2035
42	0.177	0.123	Freeway	2035

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.176	0.124	Freeway	2035
44	0.175	0.124	Freeway	2035
45	0.175	0.125	Freeway	2035
46	0.174	0.126	Freeway	2035
47	0.173	0.126	Freeway	2035
48	0.173	0.127	Freeway	2035
49	0.172	0.127	Freeway	2035
50	0.171	0.128	Freeway	2035
51	0.171	0.129	Freeway	2035
52	0.170	0.129	Freeway	2035
53	0.170	0.130	Freeway	2035
54	0.170	0.131	Freeway	2035
55	0.170	0.131	Freeway	2035
56	0.169	0.132	Freeway	2035
57	0.169	0.133	Freeway	2035
58	0.168	0.134	Freeway	2035
59	0.168	0.134	Freeway	2035
60	0.168	0.135	Freeway	2035
60.7	0.168	0.135	Freeway	2035

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BUS EMISSION FACTORS

2010 CO Arterial - "BUS"

VehSpeed	CO gr/mile	RoadType	Year
2.5	12.216	Arterial	2010
3	11.468	Arterial	2010
4	10.533	Arterial	2010
5	9.973	Arterial	2010
6	8.940	Arterial	2010
7	8.203	Arterial	2010
8	7.650	Arterial	2010
9	7.220	Arterial	2010
10	6.876	Arterial	2010
11	6.354	Arterial	2010
12	5.919	Arterial	2010
13	5.551	Arterial	2010
14	5.236	Arterial	2010
15	4.962	Arterial	2010
16	4.658	Arterial	2010
17	4.391	Arterial	2010
18	4.152	Arterial	2010
19	3.939	Arterial	2010
20	3.747	Arterial	2010
21	3.560	Arterial	2010
22	3.390	Arterial	2010
23	3.235	Arterial	2010
24	3.093	Arterial	2010
25	2.962	Arterial	2010
26	2.844	Arterial	2010
27	2.734	Arterial	2010
28	2.633	Arterial	2010
29	2.538	Arterial	2010
30	2.450	Arterial	2010
31	2.376	Arterial	2010
32	2.306	Arterial	2010
33	2.241	Arterial	2010
34	2.179	Arterial	2010
35	2.121	Arterial	2010
36	2.077	Arterial	2010
37	2.035	Arterial	2010
38	1.995	Arterial	2010
39	1.957	Arterial	2010
40	1.921	Arterial	2010
41	1.900	Arterial	2010
42	1.879	Arterial	2010

VehSpeed	CO gr/mile	RoadType	Year
43	1.859	Arterial	2010
44	1.840	Arterial	2010
45	1.822	Arterial	2010
46	1.819	Arterial	2010
47	1.816	Arterial	2010
48	1.813	Arterial	2010
49	1.810	Arterial	2010
50	1.808	Arterial	2010
51	1.823	Arterial	2010
52	1.837	Arterial	2010
53	1.851	Arterial	2010
54	1.864	Arterial	2010
55	1.877	Arterial	2010
56	1.912	Arterial	2010
57	1.946	Arterial	2010
58	1.978	Arterial	2010
59	2.010	Arterial	2010
60	2.040	Arterial	2010
61	2.100	Arterial	2010
62	2.158	Arterial	2010
63	2.214	Arterial	2010
64	2.268	Arterial	2010
65	2.321	Arterial	2010

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2010 CO FREEWAY - "BUS"

VehSpeed	CO gr/mile	RoadType	Year
3	10.995	Freeway	2010
4	10.061	Freeway	2010
5	9.500	Freeway	2010
6	8.738	Freeway	2010
7	8.001	Freeway	2010
8	7.448	Freeway	2010
9	7.018	Freeway	2010
10	6.674	Freeway	2010
11	6.302	Freeway	2010
12	5.867	Freeway	2010
13	5.499	Freeway	2010
14	5.183	Freeway	2010
15	4.910	Freeway	2010
16	4.653	Freeway	2010
17	4.385	Freeway	2010
18	4.147	Freeway	2010
19	3.934	Freeway	2010
20	3.742	Freeway	2010
21	3.565	Freeway	2010
22	3.395	Freeway	2010
23	3.239	Freeway	2010
24	3.097	Freeway	2010
25	2.966	Freeway	2010
26	2.846	Freeway	2010
27	2.737	Freeway	2010
28	2.635	Freeway	2010
29	2.541	Freeway	2010
30	2.453	Freeway	2010
31	2.376	Freeway	2010
32	2.306	Freeway	2010
33	2.240	Freeway	2010
34	2.179	Freeway	2010
35	2.121	Freeway	2010
36	2.077	Freeway	2010
37	2.035	Freeway	2010
38	1.995	Freeway	2010
39	1.957	Freeway	2010
40	1.928	Freeway	2010
41	1.906	Freeway	2010
42	1.885	Freeway	2010

VehSpeed	CO gr/mile	RoadType	Year
43	1.865	Freeway	2010
44	1.847	Freeway	2010
45	1.844	Freeway	2010
46	1.841	Freeway	2010
47	1.838	Freeway	2010
48	1.835	Freeway	2010
49	1.846	Freeway	2010
50	1.862	Freeway	2010
51	1.877	Freeway	2010
52	1.891	Freeway	2010
53	1.917	Freeway	2010
54	1.954	Freeway	2010
55	1.991	Freeway	2010
56	2.026	Freeway	2010
57	2.071	Freeway	2010
58	2.137	Freeway	2010
59	2.201	Freeway	2010
60	2.262	Freeway	2010
60.7	2.304	Freeway	2010

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2017 CO Arterial - "BUS"

VehSpeed	CO gr/mile	RoadType	Year
2.5	5.401	Arterial	2017
3	5.070	Arterial	2017
4	4.657	Arterial	2017
5	4.409	Arterial	2017
6	3.953	Arterial	2017
7	3.627	Arterial	2017
8	3.382	Arterial	2017
9	3.192	Arterial	2017
10	3.040	Arterial	2017
11	2.809	Arterial	2017
12	2.617	Arterial	2017
13	2.454	Arterial	2017
14	2.315	Arterial	2017
15	2.194	Arterial	2017
16	2.060	Arterial	2017
17	1.941	Arterial	2017
18	1.836	Arterial	2017
19	1.742	Arterial	2017
20	1.657	Arterial	2017
21	1.574	Arterial	2017
22	1.499	Arterial	2017
23	1.430	Arterial	2017
24	1.367	Arterial	2017
25	1.309	Arterial	2017
26	1.257	Arterial	2017
27	1.209	Arterial	2017
28	1.164	Arterial	2017
29	1.122	Arterial	2017
30	1.083	Arterial	2017
31	1.050	Arterial	2017
32	1.020	Arterial	2017
33	0.991	Arterial	2017
34	0.963	Arterial	2017
35	0.938	Arterial	2017
36	0.918	Arterial	2017
37	0.900	Arterial	2017
38	0.882	Arterial	2017
39	0.865	Arterial	2017
40	0.849	Arterial	2017
41	0.840	Arterial	2017
42	0.831	Arterial	2017

VehSpeed	CO gr/mile	RoadType	Year
43	0.822	Arterial	2017
44	0.813	Arterial	2017
45	0.805	Arterial	2017
46	0.804	Arterial	2017
47	0.803	Arterial	2017
48	0.802	Arterial	2017
49	0.800	Arterial	2017
50	0.799	Arterial	2017
51	0.806	Arterial	2017
52	0.812	Arterial	2017
53	0.818	Arterial	2017
54	0.824	Arterial	2017
55	0.830	Arterial	2017
56	0.845	Arterial	2017
57	0.860	Arterial	2017
58	0.875	Arterial	2017
59	0.889	Arterial	2017
60	0.902	Arterial	2017
61	0.928	Arterial	2017
62	0.954	Arterial	2017
63	0.979	Arterial	2017
64	1.003	Arterial	2017
65	1.026	Arterial	2017

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2017 CO FREEWAY - "BUS"

VehSpeed	CO gr/mile	RoadType	Year
3	4.861	Freeway	2017
4	4.448	Freeway	2017
5	4.200	Freeway	2017
6	3.863	Freeway	2017
7	3.537	Freeway	2017
8	3.293	Freeway	2017
9	3.103	Freeway	2017
10	2.951	Freeway	2017
11	2.786	Freeway	2017
12	2.594	Freeway	2017
13	2.431	Freeway	2017
14	2.292	Freeway	2017
15	2.171	Freeway	2017
16	2.057	Freeway	2017
17	1.939	Freeway	2017
18	1.833	Freeway	2017
19	1.739	Freeway	2017
20	1.654	Freeway	2017
21	1.576	Freeway	2017
22	1.501	Freeway	2017
23	1.432	Freeway	2017
24	1.369	Freeway	2017
25	1.311	Freeway	2017
26	1.258	Freeway	2017
27	1.210	Freeway	2017
28	1.165	Freeway	2017
29	1.123	Freeway	2017
30	1.084	Freeway	2017
31	1.050	Freeway	2017
32	1.019	Freeway	2017
33	0.991	Freeway	2017
34	0.963	Freeway	2017
35	0.938	Freeway	2017
36	0.918	Freeway	2017
37	0.900	Freeway	2017
38	0.882	Freeway	2017
39	0.865	Freeway	2017
40	0.852	Freeway	2017
41	0.843	Freeway	2017
42	0.833	Freeway	2017

VehSpeed	CO gr/mile	RoadType	Year
43	0.825	Freeway	2017
44	0.817	Freeway	2017
45	0.815	Freeway	2017
46	0.814	Freeway	2017
47	0.813	Freeway	2017
48	0.811	Freeway	2017
49	0.816	Freeway	2017
50	0.823	Freeway	2017
51	0.830	Freeway	2017
52	0.836	Freeway	2017
53	0.847	Freeway	2017
54	0.864	Freeway	2017
55	0.880	Freeway	2017
56	0.896	Freeway	2017
57	0.915	Freeway	2017
58	0.945	Freeway	2017
59	0.973	Freeway	2017
60	1.000	Freeway	2017
60.7	1.019	Freeway	2017

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2026 CO Arterial - "BUS"

VehSpeed	CO gr/mile	RoadType	Year
2.5	1.703	Arterial	2026
3	1.599	Arterial	2026
4	1.469	Arterial	2026
5	1.390	Arterial	2026
6	1.246	Arterial	2026
7	1.144	Arterial	2026
8	1.067	Arterial	2026
9	1.007	Arterial	2026
10	0.959	Arterial	2026
11	0.886	Arterial	2026
12	0.825	Arterial	2026
13	0.774	Arterial	2026
14	0.730	Arterial	2026
15	0.692	Arterial	2026
16	0.649	Arterial	2026
17	0.612	Arterial	2026
18	0.579	Arterial	2026
19	0.549	Arterial	2026
20	0.522	Arterial	2026
21	0.496	Arterial	2026
22	0.473	Arterial	2026
23	0.451	Arterial	2026
24	0.431	Arterial	2026
25	0.413	Arterial	2026
26	0.396	Arterial	2026
27	0.381	Arterial	2026
28	0.367	Arterial	2026
29	0.354	Arterial	2026
30	0.342	Arterial	2026
31	0.331	Arterial	2026
32	0.321	Arterial	2026
33	0.312	Arterial	2026
34	0.304	Arterial	2026
35	0.296	Arterial	2026
36	0.290	Arterial	2026
37	0.284	Arterial	2026
38	0.278	Arterial	2026
39	0.273	Arterial	2026
40	0.268	Arterial	2026
41	0.265	Arterial	2026
42	0.262	Arterial	2026

VehSpeed	CO gr/mile	RoadType	Year
43	0.259	Arterial	2026
44	0.257	Arterial	2026
45	0.254	Arterial	2026
46	0.254	Arterial	2026
47	0.253	Arterial	2026
48	0.253	Arterial	2026
49	0.252	Arterial	2026
50	0.252	Arterial	2026
51	0.254	Arterial	2026
52	0.256	Arterial	2026
53	0.258	Arterial	2026
54	0.260	Arterial	2026
55	0.262	Arterial	2026
56	0.267	Arterial	2026
57	0.271	Arterial	2026
58	0.276	Arterial	2026
59	0.280	Arterial	2026
60	0.284	Arterial	2026
61	0.293	Arterial	2026
62	0.301	Arterial	2026
63	0.309	Arterial	2026
64	0.316	Arterial	2026
65	0.324	Arterial	2026

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2026 CO FREEWAY - "BUS"

VehSpeed	CO gr/mile	RoadType	Year
3	1.533	Freeway	2026
4	1.403	Freeway	2026
5	1.324	Freeway	2026
6	1.218	Freeway	2026
7	1.115	Freeway	2026
8	1.038	Freeway	2026
9	0.978	Freeway	2026
10	0.930	Freeway	2026
11	0.879	Freeway	2026
12	0.818	Freeway	2026
13	0.767	Freeway	2026
14	0.723	Freeway	2026
15	0.685	Freeway	2026
16	0.649	Freeway	2026
17	0.611	Freeway	2026
18	0.578	Freeway	2026
19	0.548	Freeway	2026
20	0.522	Freeway	2026
21	0.497	Freeway	2026
22	0.473	Freeway	2026
23	0.452	Freeway	2026
24	0.432	Freeway	2026
25	0.414	Freeway	2026
26	0.397	Freeway	2026
27	0.382	Freeway	2026
28	0.367	Freeway	2026
29	0.354	Freeway	2026
30	0.342	Freeway	2026
31	0.331	Freeway	2026
32	0.321	Freeway	2026
33	0.312	Freeway	2026
34	0.304	Freeway	2026
35	0.296	Freeway	2026
36	0.290	Freeway	2026
37	0.284	Freeway	2026
38	0.278	Freeway	2026
39	0.273	Freeway	2026
40	0.269	Freeway	2026
41	0.266	Freeway	2026
42	0.263	Freeway	2026

VehSpeed	CO gr/mile	RoadType	Year
43	0.260	Freeway	2026
44	0.258	Freeway	2026
45	0.257	Freeway	2026
46	0.257	Freeway	2026
47	0.256	Freeway	2026
48	0.256	Freeway	2026
49	0.257	Freeway	2026
50	0.260	Freeway	2026
51	0.262	Freeway	2026
52	0.264	Freeway	2026
53	0.267	Freeway	2026
54	0.272	Freeway	2026
55	0.278	Freeway	2026
56	0.282	Freeway	2026
57	0.289	Freeway	2026
58	0.298	Freeway	2026
59	0.307	Freeway	2026
60	0.315	Freeway	2026
60.7	0.321	Freeway	2026

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2035 CO Arterial - "BUS"

VehSpeed	CO gr/mile	RoadType	Year
2.5	1.444	Arterial	2035
3	1.356	Arterial	2035
4	1.245	Arterial	2035
5	1.179	Arterial	2035
6	1.057	Arterial	2035
7	0.970	Arterial	2035
8	0.904	Arterial	2035
9	0.854	Arterial	2035
10	0.813	Arterial	2035
11	0.751	Arterial	2035
12	0.700	Arterial	2035
13	0.656	Arterial	2035
14	0.619	Arterial	2035
15	0.587	Arterial	2035
16	0.551	Arterial	2035
17	0.519	Arterial	2035
18	0.491	Arterial	2035
19	0.466	Arterial	2035
20	0.443	Arterial	2035
21	0.421	Arterial	2035
22	0.401	Arterial	2035
23	0.382	Arterial	2035
24	0.366	Arterial	2035
25	0.350	Arterial	2035
26	0.336	Arterial	2035
27	0.323	Arterial	2035
28	0.311	Arterial	2035
29	0.300	Arterial	2035
30	0.290	Arterial	2035
31	0.281	Arterial	2035
32	0.273	Arterial	2035
33	0.265	Arterial	2035
34	0.258	Arterial	2035
35	0.251	Arterial	2035
36	0.246	Arterial	2035
37	0.241	Arterial	2035
38	0.236	Arterial	2035
39	0.231	Arterial	2035
40	0.227	Arterial	2035
41	0.225	Arterial	2035
42	0.222	Arterial	2035

VehSpeed	CO gr/mile	RoadType	Year
43	0.220	Arterial	2035
44	0.218	Arterial	2035
45	0.215	Arterial	2035
46	0.215	Arterial	2035
47	0.215	Arterial	2035
48	0.214	Arterial	2035
49	0.214	Arterial	2035
50	0.214	Arterial	2035
51	0.215	Arterial	2035
52	0.217	Arterial	2035
53	0.219	Arterial	2035
54	0.220	Arterial	2035
55	0.222	Arterial	2035
56	0.226	Arterial	2035
57	0.230	Arterial	2035
58	0.234	Arterial	2035
59	0.238	Arterial	2035
60	0.241	Arterial	2035
61	0.248	Arterial	2035
62	0.255	Arterial	2035
63	0.262	Arterial	2035
64	0.268	Arterial	2035
65	0.274	Arterial	2035

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2035 CO FREEWAY - "BUS"

VehSpeed	CO gr/mile	RoadType	Year
3	1.300	Freeway	2035
4	1.189	Freeway	2035
5	1.123	Freeway	2035
6	1.033	Freeway	2035
7	0.946	Freeway	2035
8	0.881	Freeway	2035
9	0.830	Freeway	2035
10	0.789	Freeway	2035
11	0.745	Freeway	2035
12	0.694	Freeway	2035
13	0.650	Freeway	2035
14	0.613	Freeway	2035
15	0.580	Freeway	2035
16	0.550	Freeway	2035
17	0.518	Freeway	2035
18	0.490	Freeway	2035
19	0.465	Freeway	2035
20	0.442	Freeway	2035
21	0.421	Freeway	2035
22	0.401	Freeway	2035
23	0.383	Freeway	2035
24	0.366	Freeway	2035
25	0.351	Freeway	2035
26	0.337	Freeway	2035
27	0.324	Freeway	2035
28	0.312	Freeway	2035
29	0.300	Freeway	2035
30	0.290	Freeway	2035
31	0.281	Freeway	2035
32	0.273	Freeway	2035
33	0.265	Freeway	2035
34	0.258	Freeway	2035
35	0.251	Freeway	2035
36	0.246	Freeway	2035
37	0.241	Freeway	2035
38	0.236	Freeway	2035
39	0.231	Freeway	2035
40	0.228	Freeway	2035
41	0.225	Freeway	2035
42	0.223	Freeway	2035

VehSpeed	CO gr/mile	RoadType	Year
43	0.221	Freeway	2035
44	0.218	Freeway	2035
45	0.218	Freeway	2035
46	0.218	Freeway	2035
47	0.217	Freeway	2035
48	0.217	Freeway	2035
49	0.218	Freeway	2035
50	0.220	Freeway	2035
51	0.222	Freeway	2035
52	0.224	Freeway	2035
53	0.227	Freeway	2035
54	0.231	Freeway	2035
55	0.235	Freeway	2035
56	0.239	Freeway	2035
57	0.245	Freeway	2035
58	0.253	Freeway	2035
59	0.260	Freeway	2035
60	0.267	Freeway	2035
60.7	0.272	Freeway	2035

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**2009 NOx and VOC Arterial -
"BUS"**

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
2.5	0.961	22.780	Arterial	2009
3	0.922	22.002	Arterial	2009
4	0.873	21.030	Arterial	2009
5	0.844	20.447	Arterial	2009
6	0.784	19.270	Arterial	2009
7	0.740	18.429	Arterial	2009
8	0.708	17.798	Arterial	2009
9	0.683	17.308	Arterial	2009
10	0.663	16.916	Arterial	2009
11	0.627	16.257	Arterial	2009
12	0.597	15.709	Arterial	2009
13	0.572	15.245	Arterial	2009
14	0.551	14.847	Arterial	2009
15	0.532	14.502	Arterial	2009
16	0.508	14.098	Arterial	2009
17	0.487	13.742	Arterial	2009
18	0.468	13.425	Arterial	2009
19	0.451	13.141	Arterial	2009
20	0.436	12.886	Arterial	2009
21	0.420	12.644	Arterial	2009
22	0.404	12.425	Arterial	2009
23	0.390	12.224	Arterial	2009
24	0.378	12.040	Arterial	2009
25	0.366	11.871	Arterial	2009
26	0.354	11.748	Arterial	2009
27	0.343	11.635	Arterial	2009
28	0.332	11.529	Arterial	2009
29	0.323	11.431	Arterial	2009
30	0.314	11.339	Arterial	2009
31	0.305	11.315	Arterial	2009
32	0.297	11.292	Arterial	2009
33	0.289	11.271	Arterial	2009
34	0.282	11.251	Arterial	2009
35	0.275	11.232	Arterial	2009
36	0.269	11.300	Arterial	2009
37	0.263	11.365	Arterial	2009
38	0.257	11.426	Arterial	2009
39	0.251	11.483	Arterial	2009
40	0.246	11.538	Arterial	2009
41	0.242	11.704	Arterial	2009
42	0.237	11.861	Arterial	2009

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.233	12.011	Arterial	2009
44	0.229	12.154	Arterial	2009
45	0.226	12.291	Arterial	2009
46	0.222	12.570	Arterial	2009
47	0.219	12.838	Arterial	2009
48	0.217	13.094	Arterial	2009
49	0.214	13.339	Arterial	2009
50	0.211	13.575	Arterial	2009
51	0.209	13.999	Arterial	2009
52	0.207	14.407	Arterial	2009
53	0.205	14.800	Arterial	2009
54	0.204	15.178	Arterial	2009
55	0.202	15.542	Arterial	2009
56	0.201	16.163	Arterial	2009
57	0.200	16.763	Arterial	2009
58	0.199	17.342	Arterial	2009
59	0.198	17.901	Arterial	2009
60	0.198	18.441	Arterial	2009
61	0.198	19.343	Arterial	2009
62	0.198	20.216	Arterial	2009
63	0.198	21.060	Arterial	2009
64	0.198	21.879	Arterial	2009
65	0.198	22.672	Arterial	2009

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2009 NOx and VOC FREEWAY - "BUS"

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
3	0.884	21.447	Freeway	2009
4	0.836	20.474	Freeway	2009
5	0.807	19.891	Freeway	2009
6	0.763	19.038	Freeway	2009
7	0.720	18.197	Freeway	2009
8	0.688	17.566	Freeway	2009
9	0.662	17.076	Freeway	2009
10	0.642	16.684	Freeway	2009
11	0.619	16.237	Freeway	2009
12	0.589	15.688	Freeway	2009
13	0.564	15.224	Freeway	2009
14	0.542	14.826	Freeway	2009
15	0.523	14.481	Freeway	2009
16	0.505	14.151	Freeway	2009
17	0.484	13.795	Freeway	2009
18	0.465	13.478	Freeway	2009
19	0.448	13.195	Freeway	2009
20	0.433	12.939	Freeway	2009
21	0.419	12.705	Freeway	2009
22	0.403	12.486	Freeway	2009
23	0.390	12.285	Freeway	2009
24	0.377	12.101	Freeway	2009
25	0.365	11.932	Freeway	2009
26	0.354	11.790	Freeway	2009
27	0.343	11.676	Freeway	2009
28	0.332	11.571	Freeway	2009
29	0.323	11.472	Freeway	2009
30	0.314	11.381	Freeway	2009
31	0.305	11.336	Freeway	2009
32	0.297	11.314	Freeway	2009
33	0.289	11.292	Freeway	2009
34	0.282	11.272	Freeway	2009
35	0.275	11.256	Freeway	2009
36	0.269	11.324	Freeway	2009
37	0.263	11.389	Freeway	2009
38	0.257	11.450	Freeway	2009
39	0.251	11.508	Freeway	2009
40	0.246	11.620	Freeway	2009
41	0.242	11.786	Freeway	2009
42	0.238	11.943	Freeway	2009

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.233	12.093	Freeway	2009
44	0.229	12.245	Freeway	2009
45	0.226	12.537	Freeway	2009
46	0.223	12.816	Freeway	2009
47	0.220	13.083	Freeway	2009
48	0.217	13.340	Freeway	2009
49	0.215	13.738	Freeway	2009
50	0.213	14.180	Freeway	2009
51	0.211	14.604	Freeway	2009
52	0.209	15.012	Freeway	2009
53	0.208	15.547	Freeway	2009
54	0.207	16.216	Freeway	2009
55	0.206	16.860	Freeway	2009
56	0.205	17.481	Freeway	2009
57	0.204	18.222	Freeway	2009
58	0.204	19.220	Freeway	2009
59	0.204	20.184	Freeway	2009
60	0.204	21.117	Freeway	2009
60.7	0.204	21.751	Freeway	2009

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**2017 NOx and VOC Arterial -
"BUS"**

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
2.5	0.741	8.370	Arterial	2017
3	0.711	8.082	Arterial	2017
4	0.674	7.722	Arterial	2017
5	0.651	7.506	Arterial	2017
6	0.605	7.070	Arterial	2017
7	0.571	6.758	Arterial	2017
8	0.546	6.525	Arterial	2017
9	0.527	6.343	Arterial	2017
10	0.511	6.198	Arterial	2017
11	0.484	5.954	Arterial	2017
12	0.461	5.751	Arterial	2017
13	0.441	5.579	Arterial	2017
14	0.425	5.431	Arterial	2017
15	0.410	5.304	Arterial	2017
16	0.392	5.154	Arterial	2017
17	0.376	5.022	Arterial	2017
18	0.361	4.904	Arterial	2017
19	0.348	4.799	Arterial	2017
20	0.337	4.705	Arterial	2017
21	0.324	4.615	Arterial	2017
22	0.312	4.534	Arterial	2017
23	0.301	4.460	Arterial	2017
24	0.291	4.391	Arterial	2017
25	0.282	4.329	Arterial	2017
26	0.273	4.283	Arterial	2017
27	0.264	4.241	Arterial	2017
28	0.256	4.202	Arterial	2017
29	0.249	4.166	Arterial	2017
30	0.242	4.132	Arterial	2017
31	0.235	4.123	Arterial	2017
32	0.229	4.114	Arterial	2017
33	0.223	4.107	Arterial	2017
34	0.217	4.099	Arterial	2017
35	0.212	4.092	Arterial	2017
36	0.207	4.117	Arterial	2017
37	0.203	4.141	Arterial	2017
38	0.198	4.164	Arterial	2017
39	0.194	4.185	Arterial	2017
40	0.190	4.206	Arterial	2017
41	0.186	4.267	Arterial	2017
42	0.183	4.325	Arterial	2017

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.180	4.381	Arterial	2017
44	0.177	4.434	Arterial	2017
45	0.174	4.484	Arterial	2017
46	0.172	4.588	Arterial	2017
47	0.169	4.687	Arterial	2017
48	0.167	4.782	Arterial	2017
49	0.165	4.873	Arterial	2017
50	0.163	4.960	Arterial	2017
51	0.161	5.117	Arterial	2017
52	0.160	5.268	Arterial	2017
53	0.158	5.414	Arterial	2017
54	0.157	5.554	Arterial	2017
55	0.156	5.689	Arterial	2017
56	0.155	5.919	Arterial	2017
57	0.154	6.141	Arterial	2017
58	0.154	6.356	Arterial	2017
59	0.153	6.563	Arterial	2017
60	0.152	6.763	Arterial	2017
61	0.152	7.097	Arterial	2017
62	0.152	7.420	Arterial	2017
63	0.152	7.733	Arterial	2017
64	0.152	8.036	Arterial	2017
65	0.152	8.330	Arterial	2017

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2017 NOx and VOC FREEWAY - "BUS"

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
3	0.682	7.882	Freeway	2017
4	0.645	7.522	Freeway	2017
5	0.622	7.305	Freeway	2017
6	0.589	6.989	Freeway	2017
7	0.555	6.678	Freeway	2017
8	0.530	6.444	Freeway	2017
9	0.511	6.263	Freeway	2017
10	0.495	6.117	Freeway	2017
11	0.477	5.952	Freeway	2017
12	0.454	5.748	Freeway	2017
13	0.435	5.576	Freeway	2017
14	0.418	5.429	Freeway	2017
15	0.404	5.301	Freeway	2017
16	0.390	5.179	Freeway	2017
17	0.373	5.047	Freeway	2017
18	0.359	4.930	Freeway	2017
19	0.346	4.825	Freeway	2017
20	0.334	4.730	Freeway	2017
21	0.323	4.643	Freeway	2017
22	0.311	4.562	Freeway	2017
23	0.301	4.488	Freeway	2017
24	0.291	4.420	Freeway	2017
25	0.282	4.357	Freeway	2017
26	0.273	4.304	Freeway	2017
27	0.264	4.262	Freeway	2017
28	0.256	4.223	Freeway	2017
29	0.249	4.187	Freeway	2017
30	0.242	4.153	Freeway	2017
31	0.235	4.136	Freeway	2017
32	0.229	4.128	Freeway	2017
33	0.223	4.120	Freeway	2017
34	0.217	4.113	Freeway	2017
35	0.212	4.107	Freeway	2017
36	0.207	4.132	Freeway	2017
37	0.203	4.156	Freeway	2017
38	0.198	4.178	Freeway	2017
39	0.194	4.200	Freeway	2017
40	0.190	4.241	Freeway	2017
41	0.187	4.303	Freeway	2017
42	0.183	4.361	Freeway	2017

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.180	4.417	Freeway	2017
44	0.177	4.473	Freeway	2017
45	0.175	4.581	Freeway	2017
46	0.172	4.685	Freeway	2017
47	0.170	4.784	Freeway	2017
48	0.168	4.878	Freeway	2017
49	0.166	5.026	Freeway	2017
50	0.164	5.190	Freeway	2017
51	0.163	5.347	Freeway	2017
52	0.161	5.498	Freeway	2017
53	0.160	5.696	Freeway	2017
54	0.159	5.944	Freeway	2017
55	0.159	6.183	Freeway	2017
56	0.158	6.413	Freeway	2017
57	0.157	6.687	Freeway	2017
58	0.157	7.057	Freeway	2017
59	0.157	7.414	Freeway	2017
60	0.157	7.760	Freeway	2017
60.7	0.157	7.995	Freeway	2017

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**2026 NOx and VOC Arterial -
"BUS"**

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
2.5	0.732	1.827	Arterial	2026
3	0.703	1.765	Arterial	2026
4	0.666	1.687	Arterial	2026
5	0.643	1.641	Arterial	2026
6	0.597	1.547	Arterial	2026
7	0.564	1.480	Arterial	2026
8	0.540	1.429	Arterial	2026
9	0.521	1.390	Arterial	2026
10	0.505	1.359	Arterial	2026
11	0.478	1.306	Arterial	2026
12	0.455	1.263	Arterial	2026
13	0.436	1.226	Arterial	2026
14	0.420	1.194	Arterial	2026
15	0.405	1.166	Arterial	2026
16	0.387	1.134	Arterial	2026
17	0.371	1.106	Arterial	2026
18	0.357	1.080	Arterial	2026
19	0.344	1.058	Arterial	2026
20	0.333	1.037	Arterial	2026
21	0.320	1.018	Arterial	2026
22	0.308	1.000	Arterial	2026
23	0.298	0.984	Arterial	2026
24	0.288	0.970	Arterial	2026
25	0.279	0.956	Arterial	2026
26	0.270	0.946	Arterial	2026
27	0.261	0.937	Arterial	2026
28	0.253	0.929	Arterial	2026
29	0.246	0.921	Arterial	2026
30	0.239	0.914	Arterial	2026
31	0.232	0.912	Arterial	2026
32	0.226	0.910	Arterial	2026
33	0.220	0.908	Arterial	2026
34	0.215	0.907	Arterial	2026
35	0.210	0.905	Arterial	2026
36	0.205	0.911	Arterial	2026
37	0.200	0.916	Arterial	2026
38	0.196	0.921	Arterial	2026
39	0.192	0.925	Arterial	2026
40	0.188	0.930	Arterial	2026
41	0.184	0.943	Arterial	2026
42	0.181	0.955	Arterial	2026

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.178	0.967	Arterial	2026
44	0.175	0.979	Arterial	2026
45	0.172	0.990	Arterial	2026
46	0.170	1.012	Arterial	2026
47	0.167	1.033	Arterial	2026
48	0.165	1.054	Arterial	2026
49	0.163	1.073	Arterial	2026
50	0.161	1.092	Arterial	2026
51	0.159	1.126	Arterial	2026
52	0.158	1.159	Arterial	2026
53	0.157	1.190	Arterial	2026
54	0.155	1.220	Arterial	2026
55	0.154	1.249	Arterial	2026
56	0.153	1.299	Arterial	2026
57	0.153	1.347	Arterial	2026
58	0.152	1.393	Arterial	2026
59	0.151	1.438	Arterial	2026
60	0.151	1.481	Arterial	2026
61	0.151	1.553	Arterial	2026
62	0.151	1.622	Arterial	2026
63	0.151	1.690	Arterial	2026
64	0.151	1.755	Arterial	2026
65	0.151	1.818	Arterial	2026

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2026 NOx and VOC FREEWAY - "BUS"

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
3	0.674	1.720	Freeway	2026
4	0.637	1.642	Freeway	2026
5	0.615	1.596	Freeway	2026
6	0.582	1.528	Freeway	2026
7	0.549	1.461	Freeway	2026
8	0.524	1.410	Freeway	2026
9	0.505	1.371	Freeway	2026
10	0.490	1.340	Freeway	2026
11	0.471	1.304	Freeway	2026
12	0.449	1.260	Freeway	2026
13	0.430	1.223	Freeway	2026
14	0.413	1.191	Freeway	2026
15	0.399	1.164	Freeway	2026
16	0.385	1.138	Freeway	2026
17	0.369	1.109	Freeway	2026
18	0.355	1.084	Freeway	2026
19	0.342	1.061	Freeway	2026
20	0.330	1.041	Freeway	2026
21	0.319	1.022	Freeway	2026
22	0.308	1.005	Freeway	2026
23	0.297	0.989	Freeway	2026
24	0.287	0.974	Freeway	2026
25	0.278	0.960	Freeway	2026
26	0.270	0.949	Freeway	2026
27	0.261	0.940	Freeway	2026
28	0.253	0.932	Freeway	2026
29	0.246	0.924	Freeway	2026
30	0.239	0.916	Freeway	2026
31	0.232	0.913	Freeway	2026
32	0.226	0.911	Freeway	2026
33	0.220	0.909	Freeway	2026
34	0.215	0.908	Freeway	2026
35	0.210	0.906	Freeway	2026
36	0.205	0.912	Freeway	2026
37	0.200	0.917	Freeway	2026
38	0.196	0.922	Freeway	2026
39	0.192	0.927	Freeway	2026
40	0.188	0.936	Freeway	2026
41	0.184	0.949	Freeway	2026
42	0.181	0.961	Freeway	2026

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.178	0.973	Freeway	2026
44	0.175	0.985	Freeway	2026
45	0.172	1.009	Freeway	2026
46	0.170	1.031	Freeway	2026
47	0.168	1.052	Freeway	2026
48	0.166	1.073	Freeway	2026
49	0.164	1.105	Freeway	2026
50	0.162	1.140	Freeway	2026
51	0.161	1.174	Freeway	2026
52	0.159	1.206	Freeway	2026
53	0.158	1.249	Freeway	2026
54	0.157	1.302	Freeway	2026
55	0.157	1.354	Freeway	2026
56	0.156	1.403	Freeway	2026
57	0.156	1.463	Freeway	2026
58	0.156	1.542	Freeway	2026
59	0.156	1.619	Freeway	2026
60	0.156	1.694	Freeway	2026
60.7	0.156	1.744	Freeway	2026

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**2035 NOx and VOC Arterial -
"BUS"**

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
2.5	0.733	1.270	Arterial	2035
3	0.703	1.227	Arterial	2035
4	0.666	1.174	Arterial	2035
5	0.644	1.141	Arterial	2035
6	0.598	1.077	Arterial	2035
7	0.565	1.030	Arterial	2035
8	0.540	0.996	Arterial	2035
9	0.521	0.969	Arterial	2035
10	0.505	0.947	Arterial	2035
11	0.478	0.911	Arterial	2035
12	0.455	0.881	Arterial	2035
13	0.436	0.855	Arterial	2035
14	0.420	0.833	Arterial	2035
15	0.406	0.814	Arterial	2035
16	0.387	0.792	Arterial	2035
17	0.371	0.772	Arterial	2035
18	0.357	0.755	Arterial	2035
19	0.344	0.739	Arterial	2035
20	0.333	0.725	Arterial	2035
21	0.320	0.712	Arterial	2035
22	0.308	0.700	Arterial	2035
23	0.298	0.689	Arterial	2035
24	0.288	0.678	Arterial	2035
25	0.279	0.669	Arterial	2035
26	0.270	0.662	Arterial	2035
27	0.261	0.656	Arterial	2035
28	0.253	0.650	Arterial	2035
29	0.246	0.645	Arterial	2035
30	0.239	0.640	Arterial	2035
31	0.233	0.639	Arterial	2035
32	0.226	0.637	Arterial	2035
33	0.220	0.636	Arterial	2035
34	0.215	0.635	Arterial	2035
35	0.210	0.634	Arterial	2035
36	0.205	0.638	Arterial	2035
37	0.200	0.641	Arterial	2035
38	0.196	0.645	Arterial	2035
39	0.192	0.648	Arterial	2035
40	0.188	0.651	Arterial	2035
41	0.184	0.660	Arterial	2035
42	0.181	0.669	Arterial	2035

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.178	0.677	Arterial	2035
44	0.175	0.685	Arterial	2035
45	0.172	0.692	Arterial	2035
46	0.170	0.708	Arterial	2035
47	0.167	0.722	Arterial	2035
48	0.165	0.736	Arterial	2035
49	0.163	0.750	Arterial	2035
50	0.161	0.763	Arterial	2035
51	0.159	0.786	Arterial	2035
52	0.158	0.809	Arterial	2035
53	0.157	0.830	Arterial	2035
54	0.155	0.851	Arterial	2035
55	0.154	0.871	Arterial	2035
56	0.153	0.906	Arterial	2035
57	0.153	0.939	Arterial	2035
58	0.152	0.970	Arterial	2035
59	0.151	1.001	Arterial	2035
60	0.151	1.031	Arterial	2035
61	0.151	1.081	Arterial	2035
62	0.151	1.129	Arterial	2035
63	0.151	1.175	Arterial	2035
64	0.151	1.220	Arterial	2035
65	0.151	1.264	Arterial	2035

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2035 NOx and VOC FREEWAY - "BUS"

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
3	0.674	1.195	Freeway	2035
4	0.637	1.142	Freeway	2035
5	0.615	1.110	Freeway	2035
6	0.582	1.063	Freeway	2035
7	0.549	1.016	Freeway	2035
8	0.524	0.982	Freeway	2035
9	0.505	0.955	Freeway	2035
10	0.490	0.933	Freeway	2035
11	0.472	0.908	Freeway	2035
12	0.449	0.878	Freeway	2035
13	0.430	0.853	Freeway	2035
14	0.413	0.831	Freeway	2035
15	0.399	0.812	Freeway	2035
16	0.385	0.794	Freeway	2035
17	0.369	0.774	Freeway	2035
18	0.355	0.756	Freeway	2035
19	0.342	0.741	Freeway	2035
20	0.330	0.727	Freeway	2035
21	0.319	0.714	Freeway	2035
22	0.308	0.702	Freeway	2035
23	0.297	0.691	Freeway	2035
24	0.287	0.681	Freeway	2035
25	0.278	0.671	Freeway	2035
26	0.270	0.663	Freeway	2035
27	0.261	0.657	Freeway	2035
28	0.253	0.651	Freeway	2035
29	0.246	0.646	Freeway	2035
30	0.239	0.641	Freeway	2035
31	0.233	0.638	Freeway	2035
32	0.226	0.637	Freeway	2035
33	0.220	0.636	Freeway	2035
34	0.215	0.635	Freeway	2035
35	0.210	0.634	Freeway	2035
36	0.205	0.638	Freeway	2035
37	0.200	0.641	Freeway	2035
38	0.196	0.645	Freeway	2035
39	0.192	0.648	Freeway	2035
40	0.188	0.654	Freeway	2035
41	0.184	0.663	Freeway	2035
42	0.181	0.672	Freeway	2035

Veh Speed	VOC gr/mile	NOx gr/mile	Road Type	Year
43	0.178	0.680	Freeway	2035
44	0.175	0.689	Freeway	2035
45	0.173	0.705	Freeway	2035
46	0.170	0.720	Freeway	2035
47	0.168	0.735	Freeway	2035
48	0.166	0.749	Freeway	2035
49	0.164	0.771	Freeway	2035
50	0.162	0.795	Freeway	2035
51	0.161	0.818	Freeway	2035
52	0.159	0.841	Freeway	2035
53	0.158	0.870	Freeway	2035
54	0.158	0.907	Freeway	2035
55	0.157	0.943	Freeway	2035
56	0.156	0.977	Freeway	2035
57	0.156	1.018	Freeway	2035
58	0.156	1.073	Freeway	2035
59	0.156	1.126	Freeway	2035
60	0.156	1.177	Freeway	2035
60.7	0.156	1.212	Freeway	2035

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