

Appendix 8

Mobile Input Parameters

MOBILE Input Parameters

All MOBILE6 parameters used in this conformity analysis are listed in this appendix.

Parameters associated with each MOBILE6 command were in general labeled as either EPA default, locality- (or county- or region-) specific, or NOT APPLIED. The tabulated commands where associated input parameters are labeled only as “EPA default” are generally not required as input by the analyst. References to MOBILE6 technical reports (available on the EPA MOBILE website [<http://www.epa.gov/otaq/models/mobile6/m6tech.htm>]) pertaining to particular commands/input parameters are provided in the tables. The procedures used to develop the locality-specific inputs to MOBILE6 are also detailed in this Appendix.

Table 1
MOBILE6 external conditions

| Command | Function/Description | Input Parameter Source/Value |
|---|--|--|
| CALENDAR YEAR | Identifies calendar year for which emissions factors are to be calculated. (Required to run model). | 2011, 2014, 2017, 2018, 2025, 2035 |
| EVALUATION MONTH | Provides option of calculating January 1 or July 1 emissions factors for calendar year of evaluation. | 7 (for July). |
| MIN/MAX TEMPERATURE | Sets minimum and maximum daily temperatures. (Required to run model if the HOURLY TEMPERATURES command is not used.) | NOT APPLIED. (See HOURLY TEMPERATURES.) |
| HOURLY TEMPERATURES | Allows temperatures input for each hour of day. (Required to run model if MIN/ MAX TEMPERATURE command is not used.) | region-specific by episode day (based on local time,ie., central daylight time), provided by TCEQ. See Table 2. |
| ALTITUDE | Specifies high- or low-altitude for modeling area. | NOT APPLIED. (EPA default, low altitude, is assumed). |
| ABSOLUTE HUMIDITY | Used to specify daily average humidity. Affects HC, CO, and NOx emissions for the portion of the fleet that MOBILE6 determines is using air conditioning. | NOT APPLIED. (See RELATIVE HUMIDITY.) |
| <u>Environmental Effects on Air Conditioning:</u> | Commands used to model the extent of vehicle air-conditioning usage. | |
| CLOUD COVER | Defines average percent cloud cover for given day. | NOT APPLIED. (EPA default assumed.) |
| PEAK SUN | Specifies Mid-Day hours with peak sun intensity. | NOT APPLIED. (EPA default assumed.) |
| SUNRISE/SUNSET | Allows user to specify time of sunrise and sunset. | Region-specific values (provided by TCEQ), 7 a.m. and 8 p.m. |
| RELATIVE HUMIDITY | Specifies use of 24 hourly relative humidity values entered by user. MOBILE6 will perform hour-specific calculations with hourly values rather than use daily default absolute humidity value. | region-specific by episode day (based on local time,ie., central daylight time), provided by TCEQ. See Table 2. |
| BAROMETRIC PRES | Specifies use of user input daily average barometric pressure for use with hourly relative humidity to calculate hourly absolute humidity values. | region-specific by episode day (based on local time, ie., central daylight time), provided by TCEQ. See Table 2. |

Table 2

**HGA Episode Day Hourly Climatic Parameters input to POLFAC62_3 for 2011, 2014,
2017, 2018, 2025, 2035**

RFP SIP – all counties, years: 2011, 2014 and 2017

* HGA June through August Ozone Season (2006, 2007 and 2008 (10 maximum ozone day averages))

HOURLY TEMPERATURES: 72.4 76.0 79.6 83.1 85.6 87.8 89.0 90.1 91.2 91.2 91.4 90.9
88.8 85.4 82.7 81.0 80.3 78.8 77.1 75.7 75.2 74.1 72.7 72.5

RELATIVE HUMIDITY : 84.5 78.0 68.9 59.5 52.1 47.3 43.0 40.6 39.3 39.5 40.3 40.2
44.3 51.4 57.7 60.1 62.0 66.6 73.0 77.2 78.7 80.1 83.6 84.4

BAROMETRIC PRES : 29.87

SUNRISE/SUNSET : 7 8

AD SIP – years: 2018, 2025 and 2035

*** Brazoria — Averages From May 15 - September 15, 2005**

HOURLY TEMPERATURES: 75.2 76.7 80.3 83.3 85.3 86.8 87.8 88.4 88.6 88.6 88.1
87.2 85.9 83.7 81.3 79.8 78.7 78.0 77.3 76.7 76.3 76.0 75.7 75.3
RELATIVE HUMIDITY: 89.6 85.1 76.2 68.2 61.7 56.9 53.7 52.0 52.8 52.6 54.1 57.0 61.2
67.9 75.2 80.1 83.3 85.3 86.8 88.2 88.8 89.0 89.3 89.7
BAROMETRIC PRES: 29.91
SUNRISE/SUNSET: 7 8

*** Chambers — Averages From May 15 - September 15, 2005**

HOURLY TEMPERATURES: 81.2 81.3 82.0 83.0 84.1 85.1 86.0 86.7 87.2 87.4 87.3 86.9 86.2
85.2 84.3 84.0 83.7 83.3 83.1 82.8 82.5 82.3 82.0 81.6
RELATIVE HUMIDITY: 86.4 83.6 76.4 69.2 62.8 58.1 54.9 53.5 52.7 52.5 53.9 55.3 58.1
62.8 68.3 72.0 74.8 77.2 79.3 81.1 82.7 84.0 85.0 85.8
BAROMETRIC PRES: 29.92
SUNRISE/SUNSET: 7 8

*** Fort Bend — Averages From May 15 - September 15, 2005**

HOURLY TEMPERATURES: 74.7 77.5 81.2 84.2 86.5 88.5 89.8 90.6 91.0 91.1 90.4 89.4 87.2
84.5 81.7 80.1 78.8 77.6 76.6 75.8 75.4 75.1 74.7 74.6
RELATIVE HUMIDITY: 91.7 86.8 78.1 69.9 62.7 57.2 53.8 51.9 50.1 49.8 51.4 54.0 58.5
65.0 72.6 76.9 81.2 84.6 86.9 88.7 90.2 91.0 91.6 91.7
BAROMETRIC PRES: 29.85
SUNRISE/SUNSET: 7 8

*** Galveston — Averages From May 15 - September 15, 2005**

HOURLY TEMPERATURES: 79.7 80.5 82.2 83.7 84.8 85.9 86.7 87.0 87.4 87.3 87.1 86.5 85.5
84.1 83.2 82.8 82.4 82.1 81.7 81.3 81.1 80.8 80.4 80.1
RELATIVE HUMIDITY: 77.1 75.4 70.9 67.0 64.4 62.5 61.3 61.4 60.9 61.1 61.5 62.7 64.7
67.8 70.6 71.6 72.4 73.1 73.6 74.1 74.5 75.3 75.9 76.4
BAROMETRIC PRES: 29.93
SUNRISE/SUNSET: 7 8

*** Harris — Averages From May 15 - September 15, 2005**

HOURLY TEMPERATURES: 76.7 77.7 80.2 82.7 84.8 86.6 88.0 88.8 89.1 89.1 89.0 88.5 87.4
85.6 83.6 82.3 81.2 80.3 79.5 78.8 78.3 77.8 77.4 77.0
RELATIVE HUMIDITY: 86.9 84.0 76.9 69.6 62.8 57.5 53.7 51.4 50.1 50.1 51.2 53.2 56.6
61.8 67.7 72.0 75.2 78.2 80.7 82.7 84.3 85.3 86.0 86.6
BAROMETRIC PRES: 29.87
SUNRISE/SUNSET: 7 8

*** Liberty — Averages From May 15 - September 15, 2005**

HOURLY TEMPERATURES: 71.7 73.3 77.8 81.8 84.6 87.0 88.6 89.9 90.6 90.7 90.3 89.6 87.8
85.0 81.4 79.2 77.6 76.4 75.3 74.3 73.4 72.8 72.4 72.0
RELATIVE HUMIDITY: 92.2 89.5 80.1 70.0 61.8 55.9 51.7 48.8 47.0 46.9 47.8 49.7 54.8
63.0 73.8 79.4 83.2 85.6 87.9 89.4 91.0 91.5 91.7 91.8
BAROMETRIC PRES: 29.68
SUNRISE/SUNSET: 7 8

*** Montgomery — Averages From May 15 - September 15, 2005**

HOURLY TEMPERATURES: 71.7 73.3 77.8 81.8 84.6 87.0 88.6 89.9 90.6 90.7 90.3 89.6 87.8
85.0 81.4 79.2 77.6 76.4 75.3 74.3 73.4 72.8 72.4 72.0
RELATIVE HUMIDITY: 92.2 89.5 80.1 70.0 61.8 55.9 51.7 48.8 47.0 46.9 47.8 49.7 54.8
63.0 73.8 79.4 83.2 85.6 87.9 89.4 91.0 91.5 91.7 91.8
BAROMETRIC PRES: 29.68
SUNRISE/SUNSET: 7 8

*** Waller — Averages From May 15 - September 15, 2005**

HOURLY TEMPERATURES: 73.1 74.6 78.4 81.8 84.3 86.7 88.5 89.6 90.3 90.7 90.2 89.0 87.6
85.1 82.3 80.4 79.0 77.8 76.6 75.5 74.9 74.3 73.8 73.4
RELATIVE HUMIDITY: 90.3 87.7 79.6 70.8 63.0 56.9 52.2 49.5 47.4 46.7 47.8 50.5 54.2
60.3 67.3 72.4 76.2 80.3 83.6 86.3 87.8 89.0 89.7 90.2
BAROMETRIC PRES: 29.78
SUNRISE/SUNSET: 7 8

Table 3: MOBILE6 Vehicle Fleet Characteristics, input to POLFAC62_3

| Command | Function/Description | Input Parameter Source/Value |
|------------------|--|---|
| REG DIST | Allows the user to supply registration distributions by age for any of the 16 composite (combined gasoline and diesel) vehicle types. | Locality-Specific/EPA default. TTI developed age distributions (for use with all future evaluation years) input using the latest available TxDMV registrations data and MOBILE6 defaults. Mid-year 2011 TxDMV county-level registration data are applied. Input values are shown in Table 4-11. |
| DIESEL FRACTIONS | Permits user to supply locality-specific diesel fractions for 14 of the 16 composite vehicle categories by age. | Locality-Specific/EPA default. TTI developed the evaluation year-specific diesel fractions inputs with the latest available TxDMV registrations data and MOBILE6 defaults. Mid-year 2011 TxDMV HGB eight-county regional gasoline/diesel registrations data is used for HDV; LDV, LDT, Bus fractions are MOBILE6 defaults. The latest diesel fractions (2011 for TxDMV-based fractions and 1996 for MOBILE6 defaults) are assumed for each newer model year up to the future year of evaluation. Input values are shown in Table 12-Table15. |
| MILE ACCUM RATE | Allows the user to supply the annual mileage accumulation rates by vehicle type and age | NOT APPLIED. (EPA defaults assumed) |
| NGV FRACTION | Lets user specify percent of natural gas vehicles (NGV) in the fleet by type and age certified to operate on either compressed or liquefied natural gas. | NOT APPLIED. (The EPA default, zero percent, is assumed.) |
| NGV EF | Permits the user to enter alternate NGV emissions factors for each of the 28 vehicle types, for running and start emissions. | NOT APPLIED. (The EPA default, none, is assumed.) |

**Table 4
Brazoria County Registration Distribution**

REG DIST

* Brazoria County

* Vehicle Age Distributions Calculated from Mid-Year (July) 2011 Registrations data

* LDV, LDT, MC: based on Brazoria County data only

* HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)

* HDV8b: based on statewide aggregate data

* LDV

1 0.04146 0.06000 0.05832 0.08804 0.09172 0.08145 0.07597 0.06563 0.06183 0.06015 0.05419 0.05345 0.04326
0.03468 0.02705 0.02084 0.01901 0.01349 0.01028 0.00781 0.00605 0.00444 0.00332 0.00237 0.01519

* LDT1

2 0.01437 0.02289 0.02505 0.04641 0.05610 0.06385 0.06192 0.06339 0.07566 0.08376 0.07675 0.06646 0.05485
0.04762 0.04324 0.03157 0.03301 0.02970 0.01843 0.01556 0.01290 0.01054 0.01007 0.00729 0.02861

* LDT2

3 0.01437 0.02289 0.02505 0.04641 0.05610 0.06385 0.06192 0.06339 0.07566 0.08376 0.07675 0.06646 0.05485
0.04762 0.04324 0.03157 0.03301 0.02970 0.01843 0.01556 0.01290 0.01054 0.01007 0.00729 0.02861

* LDT3

4 0.04362 0.07349 0.05961 0.10835 0.11270 0.07812 0.06536 0.08172 0.07039 0.06288 0.05647 0.04012 0.04398
0.01546 0.02409 0.01642 0.01299 0.00796 0.00621 0.00496 0.00327 0.00231 0.00172 0.00175 0.00605

* LDT4

5 0.04362 0.07349 0.05961 0.10835 0.11270 0.07812 0.06536 0.08172 0.07039 0.06288 0.05647 0.04012 0.04398
0.01546 0.02409 0.01642 0.01299 0.00796 0.00621 0.00496 0.00327 0.00231 0.00172 0.00175 0.00605

* HDV2b

6 0.11738 0.06115 0.05833 0.16801 0.08797 0.09863 0.09652 0.06265 0.05251 0.04212 0.03909 0.03101 0.02250
0.01103 0.01250 0.00640 0.00761 0.00476 0.00362 0.00294 0.00226 0.00215 0.00158 0.00110 0.00618

* HDV3

7 0.07704 0.03178 0.05422 0.12535 0.08514 0.10041 0.05983 0.05414 0.04503 0.04604 0.05508 0.05476 0.05757
0.01589 0.02937 0.01558 0.02267 0.01667 0.01013 0.00841 0.00639 0.00724 0.00522 0.00428 0.01176

* HDV4

8 0.02120 0.02569 0.02682 0.10567 0.12975 0.08736 0.05637 0.05123 0.04770 0.05653 0.06440 0.06263 0.05283
0.02955 0.04786 0.03405 0.02248 0.01140 0.00739 0.00530 0.00915 0.00915 0.01204 0.00771 0.01574

* HDV5

9 0.06668 0.02512 0.04179 0.11352 0.10733 0.10779 0.07353 0.05092 0.04864 0.04019 0.04385 0.04453 0.04567
0.01439 0.01667 0.02740 0.02215 0.00708 0.00662 0.00662 0.01621 0.01233 0.01416 0.01073 0.03608

* HDV6

10 0.02754 0.03070 0.03732 0.05272 0.11770 0.08441 0.07197 0.05864 0.03998 0.04768 0.06565 0.06842 0.06111
0.04798 0.03860 0.02330 0.03317 0.01471 0.01432 0.00968 0.01106 0.01027 0.00661 0.00464 0.02182

* HDV7

11 0.01689 0.02905 0.02905 0.05542 0.09394 0.06402 0.06461 0.05068 0.05898 0.05187 0.06017 0.07380 0.05750
0.04713 0.04060 0.03497 0.03764 0.02253 0.02015 0.01571 0.01660 0.01512 0.01008 0.00474 0.02875

* HDV8a

12 0.01820 0.01280 0.03132 0.03116 0.07945 0.05739 0.04952 0.03209 0.03425 0.03564 0.04027 0.06526 0.05261
0.04597 0.03533 0.04320 0.06310 0.04890 0.04181 0.03178 0.02854 0.02499 0.02592 0.02283 0.04767

* HDV8b

13 0.01703 0.01426 0.05367 0.06075 0.16502 0.12519 0.09933 0.04926 0.05541 0.03304 0.05675 0.07060 0.05305
0.02863 0.02524 0.02083 0.01909 0.01211 0.01057 0.00380 0.00359 0.00339 0.00400 0.00205 0.01334

* HDBS is MOBILE6 default

* HDBT is MOBILE6 default

* MC

16 0.02949 0.03517 0.08487 0.09774 0.11355 0.10217 0.07822 0.05953 0.07158 0.06465 0.04970 0.03350 0.02824
0.02229 0.01537 0.01592 0.01301 0.01108 0.00761 0.00706 0.00332 0.00401 0.00374 0.00360 0.04458

**Table 5
Chambers County Registration Distribution**

REG DIST

* Chambers County

* Vehicle Age Distributions Calculated from Mid-Year (July) 2011 Registrations data

* LDV, LDT, MC: based on Chambers County data only

* HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)

* HDV8b: based on statewide aggregate data

* LDV

1 0.04360 0.06269 0.06305 0.10322 0.09860 0.09176 0.07765 0.06212 0.05215 0.05564 0.04837 0.04517 0.03790
0.02892 0.02522 0.01938 0.01795 0.01197 0.01040 0.00705 0.00712 0.00549 0.00420 0.00221 0.01817

* LDT1

2 0.00969 0.02071 0.02709 0.05033 0.05789 0.06560 0.06387 0.06852 0.07715 0.08045 0.07715 0.06148 0.05019
0.04807 0.04103 0.02948 0.03373 0.03134 0.01925 0.01567 0.01408 0.01169 0.00876 0.00704 0.02974

* LDT2

3 0.00969 0.02071 0.02709 0.05033 0.05789 0.06560 0.06387 0.06852 0.07715 0.08045 0.07715 0.06148 0.05019
0.04807 0.04103 0.02948 0.03373 0.03134 0.01925 0.01567 0.01408 0.01169 0.00876 0.00704 0.02974

* LDT3

4 0.04813 0.06710 0.07159 0.11264 0.11659 0.08763 0.07021 0.08435 0.06986 0.05624 0.05606 0.03778 0.03968
0.01070 0.01898 0.01277 0.01139 0.00621 0.00535 0.00397 0.00224 0.00190 0.00293 0.00173 0.00397

* LDT4

5 0.04813 0.06710 0.07159 0.11264 0.11659 0.08763 0.07021 0.08435 0.06986 0.05624 0.05606 0.03778 0.03968
0.01070 0.01898 0.01277 0.01139 0.00621 0.00535 0.00397 0.00224 0.00190 0.00293 0.00173 0.00397

* HDV2b

6 0.11738 0.06115 0.05833 0.16801 0.08797 0.09863 0.09652 0.06265 0.05251 0.04212 0.03909 0.03101 0.02250
0.01103 0.01250 0.00640 0.00761 0.00476 0.00362 0.00294 0.00226 0.00215 0.00158 0.00110 0.00618

* HDV3

7 0.07704 0.03178 0.05422 0.12535 0.08514 0.10041 0.05983 0.05414 0.04503 0.04604 0.05508 0.05476 0.05757
0.01589 0.02937 0.01558 0.02267 0.01667 0.01013 0.00841 0.00639 0.00724 0.00522 0.00428 0.01176

* HDV4

8 0.02120 0.02569 0.02682 0.10567 0.12975 0.08736 0.05637 0.05123 0.04770 0.05653 0.06440 0.06263 0.05283
0.02955 0.04786 0.03405 0.02248 0.01140 0.00739 0.00530 0.00915 0.00915 0.01204 0.00771 0.01574

* HDV5

9 0.06668 0.02512 0.04179 0.11352 0.10733 0.10779 0.07353 0.05092 0.04864 0.04019 0.04385 0.04453 0.04567
0.01439 0.01667 0.02740 0.02215 0.00708 0.00662 0.00662 0.01621 0.01233 0.01416 0.01073 0.03608

* HDV6

10 0.02754 0.03070 0.03732 0.05272 0.11770 0.08441 0.07197 0.05864 0.03998 0.04768 0.06565 0.06842 0.06111
0.04798 0.03860 0.02330 0.03317 0.01471 0.01432 0.00968 0.01106 0.01027 0.00661 0.00464 0.02182

* HDV7

11 0.01689 0.02905 0.02905 0.05542 0.09394 0.06402 0.06461 0.05068 0.05898 0.05187 0.06017 0.07380 0.05750
0.04713 0.04060 0.03497 0.03764 0.02253 0.02015 0.01571 0.01660 0.01512 0.01008 0.00474 0.02875

* HDV8a

12 0.01820 0.01280 0.03132 0.03116 0.07945 0.05739 0.04952 0.03209 0.03425 0.03564 0.04027 0.06526 0.05261
0.04597 0.03533 0.04320 0.06310 0.04890 0.04181 0.03178 0.02854 0.02499 0.02592 0.02283 0.04767

* HDV8b

13 0.01703 0.01426 0.05367 0.06075 0.16502 0.12519 0.09933 0.04926 0.05541 0.03304 0.05675 0.07060 0.05305
0.02863 0.02524 0.02083 0.01909 0.01211 0.01057 0.00380 0.00359 0.00339 0.00400 0.00205 0.01334

* HDBS is MOBILE6 default

* HDBT is MOBILE6 default
 * MC
 16 0.01683 0.02871 0.08614 0.09406 0.13071 0.10990 0.08020 0.06832 0.07525 0.06733 0.04554 0.03960 0.04059
 0.02376 0.01089 0.01188 0.00693 0.00891 0.00792 0.00396 0.00495 0.00198 0.00396 0.00297 0.02871

Table 6
Fort Bend County Registration Distributions

REG DIST
 * Fort Bend County
 * Vehicle Age Distributions Calculated from Mid-Year (July) 2011 Registrations data
 * LDV, LDT, MC: based on Fort Bend County data only
 * HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)
 * HDV8b: based on statewide aggregate data
 * LDV
 1 0.04652 0.06596 0.06491 0.09448 0.09616 0.08578 0.07554 0.06767 0.06311 0.05972 0.05335 0.05044 0.03872
 0.03159 0.02435 0.01799 0.01559 0.01036 0.00778 0.00607 0.00456 0.00363 0.00220 0.00176 0.01176
 * LDT1
 2 0.02051 0.03302 0.03097 0.05691 0.06260 0.07006 0.06368 0.06807 0.07875 0.08954 0.07548 0.06329 0.04960
 0.04449 0.03702 0.02522 0.02541 0.02272 0.01469 0.01192 0.00895 0.00835 0.00677 0.00492 0.02706
 * LDT2
 3 0.02051 0.03302 0.03097 0.05691 0.06260 0.07006 0.06368 0.06807 0.07875 0.08954 0.07548 0.06329 0.04960
 0.04449 0.03702 0.02522 0.02541 0.02272 0.01469 0.01192 0.00895 0.00835 0.00677 0.00492 0.02706
 * LDT3
 4 0.04380 0.08599 0.06536 0.11564 0.12987 0.07687 0.06999 0.09410 0.07709 0.06020 0.05063 0.03172 0.03135
 0.01274 0.01659 0.00987 0.00824 0.00479 0.00402 0.00253 0.00175 0.00106 0.00112 0.00093 0.00375
 * LDT4
 5 0.04380 0.08599 0.06536 0.11564 0.12987 0.07687 0.06999 0.09410 0.07709 0.06020 0.05063 0.03172 0.03135
 0.01274 0.01659 0.00987 0.00824 0.00479 0.00402 0.00253 0.00175 0.00106 0.00112 0.00093 0.00375
 * HDV2b
 6 0.11738 0.06115 0.05833 0.16801 0.08797 0.09863 0.09652 0.06265 0.05251 0.04212 0.03909 0.03101 0.02250
 0.01103 0.01250 0.00640 0.00761 0.00476 0.00362 0.00294 0.00226 0.00215 0.00158 0.00110 0.00618
 * HDV3
 7 0.07704 0.03178 0.05422 0.12535 0.08514 0.10041 0.05983 0.05414 0.04503 0.04604 0.05508 0.05476 0.05757
 0.01589 0.02937 0.01558 0.02267 0.01667 0.01013 0.00841 0.00639 0.00724 0.00522 0.00428 0.01176
 * HDV4
 8 0.02120 0.02569 0.02682 0.10567 0.12975 0.08736 0.05637 0.05123 0.04770 0.05653 0.06440 0.06263 0.05283
 0.02955 0.04786 0.03405 0.02248 0.01140 0.00739 0.00530 0.00915 0.00915 0.01204 0.00771 0.01574
 * HDV5
 9 0.06668 0.02512 0.04179 0.11352 0.10733 0.10779 0.07353 0.05092 0.04864 0.04019 0.04385 0.04453 0.04567
 0.01439 0.01667 0.02740 0.02215 0.00708 0.00662 0.00662 0.01621 0.01233 0.01416 0.01073 0.03608
 * HDV6
 10 0.02754 0.03070 0.03732 0.05272 0.11770 0.08441 0.07197 0.05864 0.03998 0.04768 0.06565 0.06842 0.06111
 0.04798 0.03860 0.02330 0.03317 0.01471 0.01432 0.00968 0.01106 0.01027 0.00661 0.00464 0.02182
 * HDV7
 11 0.01689 0.02905 0.02905 0.05542 0.09394 0.06402 0.06461 0.05068 0.05898 0.05187 0.06017 0.07380 0.05750
 0.04713 0.04060 0.03497 0.03764 0.02253 0.02015 0.01571 0.01660 0.01512 0.01008 0.00474 0.02875
 * HDV8a
 12 0.01820 0.01280 0.03132 0.03116 0.07945 0.05739 0.04952 0.03209 0.03425 0.03564 0.04027 0.06526 0.05261
 0.04597 0.03533 0.04320 0.06310 0.04890 0.04181 0.03178 0.02854 0.02499 0.02592 0.02283 0.04767

* HDV8b
 13 0.01703 0.01426 0.05367 0.06075 0.16502 0.12519 0.09933 0.04926 0.05541 0.03304 0.05675 0.07060 0.05305
 0.02863 0.02524 0.02083 0.01909 0.01211 0.01057 0.00380 0.00359 0.00339 0.00400 0.00205 0.01334
 * HDBS is MOBILE6 default
 * HDBT is MOBILE6 default
 * MC
 16 0.04337 0.04814 0.10248 0.10106 0.12029 0.10390 0.07938 0.05924 0.06776 0.05640 0.04375 0.03214 0.02865
 0.01949 0.01174 0.01187 0.00878 0.00632 0.00749 0.00310 0.00271 0.00168 0.00219 0.00232 0.03575

Table 7
Galveston County Registration Distribution

REG DIST
 * Galveston County
 * Vehicle Age Distributions Calculated from Mid-Year (July) 2011 Registrations data
 * LDV, LDT, MC: based on Galveston County data only
 * HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)
 * HDV8b: based on statewide aggregate data
 * LDV
 1 0.04357 0.05890 0.06339 0.08852 0.09062 0.08391 0.07597 0.06492 0.06261 0.05963 0.05249 0.05021 0.04170
 0.03350 0.02678 0.02008 0.01875 0.01234 0.01003 0.00749 0.00581 0.00502 0.00356 0.00243 0.01777
 * LDT1
 2 0.01428 0.02917 0.02921 0.05607 0.05867 0.06841 0.06176 0.06568 0.07750 0.08937 0.07676 0.06221 0.05063
 0.04452 0.03953 0.02885 0.02868 0.02500 0.01759 0.01213 0.01104 0.01097 0.00862 0.00584 0.02751
 * LDT2
 3 0.01428 0.02917 0.02921 0.05607 0.05867 0.06841 0.06176 0.06568 0.07750 0.08937 0.07676 0.06221 0.05063
 0.04452 0.03953 0.02885 0.02868 0.02500 0.01759 0.01213 0.01104 0.01097 0.00862 0.00584 0.02751
 * LDT3
 4 0.04633 0.08365 0.06326 0.11878 0.12176 0.07948 0.06538 0.08760 0.07048 0.05615 0.05422 0.03304 0.03811
 0.01347 0.01894 0.01239 0.01046 0.00551 0.00525 0.00350 0.00238 0.00186 0.00164 0.00100 0.00536
 * LDT4
 5 0.04633 0.08365 0.06326 0.11878 0.12176 0.07948 0.06538 0.08760 0.07048 0.05615 0.05422 0.03304 0.03811
 0.01347 0.01894 0.01239 0.01046 0.00551 0.00525 0.00350 0.00238 0.00186 0.00164 0.00100 0.00536
 * HDV2b
 6 0.11738 0.06115 0.05833 0.16801 0.08797 0.09863 0.09652 0.06265 0.05251 0.04212 0.03909 0.03101 0.02250
 0.01103 0.01250 0.00640 0.00761 0.00476 0.00362 0.00294 0.00226 0.00215 0.00158 0.00110 0.00618
 * HDV3
 7 0.07704 0.03178 0.05422 0.12535 0.08514 0.10041 0.05983 0.05414 0.04503 0.04604 0.05508 0.05476 0.05757
 0.01589 0.02937 0.01558 0.02267 0.01667 0.01013 0.00841 0.00639 0.00724 0.00522 0.00428 0.01176
 * HDV4
 8 0.02120 0.02569 0.02682 0.10567 0.12975 0.08736 0.05637 0.05123 0.04770 0.05653 0.06440 0.06263 0.05283
 0.02955 0.04786 0.03405 0.02248 0.01140 0.00739 0.00530 0.00915 0.00915 0.01204 0.00771 0.01574
 * HDV5
 9 0.06668 0.02512 0.04179 0.11352 0.10733 0.10779 0.07353 0.05092 0.04864 0.04019 0.04385 0.04453 0.04567
 0.01439 0.01667 0.02740 0.02215 0.00708 0.00662 0.00662 0.01621 0.01233 0.01416 0.01073 0.03608
 * HDV6
 10 0.02754 0.03070 0.03732 0.05272 0.11770 0.08441 0.07197 0.05864 0.03998 0.04768 0.06565 0.06842 0.06111
 0.04798 0.03860 0.02330 0.03317 0.01471 0.01432 0.00968 0.01106 0.01027 0.00661 0.00464 0.02182
 * HDV7
 11 0.01689 0.02905 0.02905 0.05542 0.09394 0.06402 0.06461 0.05068 0.05898 0.05187 0.06017 0.07380 0.05750

0.04713 0.04060 0.03497 0.03764 0.02253 0.02015 0.01571 0.01660 0.01512 0.01008 0.00474 0.02875
 * HDV8a
 12 0.01820 0.01280 0.03132 0.03116 0.07945 0.05739 0.04952 0.03209 0.03425 0.03564 0.04027 0.06526 0.05261
 0.04597 0.03533 0.04320 0.06310 0.04890 0.04181 0.03178 0.02854 0.02499 0.02592 0.02283 0.04767
 * HDV8b
 13 0.01703 0.01426 0.05367 0.06075 0.16502 0.12519 0.09933 0.04926 0.05541 0.03304 0.05675 0.07060 0.05305
 0.02863 0.02524 0.02083 0.01909 0.01211 0.01057 0.00380 0.00359 0.00339 0.00400 0.00205 0.01334
 * HDBS is MOBILE6 default
 * HDBT is MOBILE6 default
 * MC
 16 0.02524 0.03774 0.10072 0.09857 0.10814 0.09782 0.08002 0.05844 0.07346 0.05945 0.04481 0.03471 0.03042
 0.02083 0.01578 0.01653 0.00972 0.00871 0.00795 0.00467 0.00404 0.00379 0.00467 0.00467 0.04910

Table 8
Harris County Registration Distribution

REG DIST
 * Harris County
 * Vehicle Age Distributions Calculated from Mid-Year (July) 2011 Registrations data
 * LDV, LDT, MC: based on Harris County data only
 * HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)
 * HDV8b: based on statewide aggregate data
 * LDV
 1 0.04718 0.05774 0.05299 0.07801 0.08218 0.07699 0.07196 0.06298 0.06087 0.06148 0.05850 0.05778 0.04662
 0.03918 0.03181 0.02401 0.02150 0.01524 0.01182 0.00900 0.00688 0.00511 0.00348 0.00247 0.01422
 * LDT1
 2 0.01493 0.02397 0.02320 0.04711 0.05403 0.06254 0.06179 0.06456 0.07658 0.08898 0.07975 0.06894 0.05778
 0.05017 0.04436 0.02914 0.02963 0.02636 0.01809 0.01355 0.01070 0.00936 0.00816 0.00584 0.03048
 * LDT2
 3 0.01493 0.02397 0.02320 0.04711 0.05403 0.06254 0.06179 0.06456 0.07658 0.08898 0.07975 0.06894 0.05778
 0.05017 0.04436 0.02914 0.02963 0.02636 0.01809 0.01355 0.01070 0.00936 0.00816 0.00584 0.03048
 * LDT3
 4 0.05102 0.07172 0.05831 0.11192 0.12212 0.07491 0.06899 0.08967 0.07668 0.06108 0.05585 0.03632 0.03883
 0.01519 0.01903 0.01177 0.01080 0.00601 0.00484 0.00333 0.00231 0.00177 0.00159 0.00106 0.00488
 * LDT4
 5 0.05102 0.07172 0.05831 0.11192 0.12212 0.07491 0.06899 0.08967 0.07668 0.06108 0.05585 0.03632 0.03883
 0.01519 0.01903 0.01177 0.01080 0.00601 0.00484 0.00333 0.00231 0.00177 0.00159 0.00106 0.00488
 * HDV2b
 6 0.11738 0.06115 0.05833 0.16801 0.08797 0.09863 0.09652 0.06265 0.05251 0.04212 0.03909 0.03101 0.02250
 0.01103 0.01250 0.00640 0.00761 0.00476 0.00362 0.00294 0.00226 0.00215 0.00158 0.00110 0.00618
 * HDV3
 7 0.07704 0.03178 0.05422 0.12535 0.08514 0.10041 0.05983 0.05414 0.04503 0.04604 0.05508 0.05476 0.05757
 0.01589 0.02937 0.01558 0.02267 0.01667 0.01013 0.00841 0.00639 0.00724 0.00522 0.00428 0.01176
 * HDV4
 8 0.02120 0.02569 0.02682 0.10567 0.12975 0.08736 0.05637 0.05123 0.04770 0.05653 0.06440 0.06263 0.05283
 0.02955 0.04786 0.03405 0.02248 0.01140 0.00739 0.00530 0.00915 0.00915 0.01204 0.00771 0.01574
 * HDV5
 9 0.06668 0.02512 0.04179 0.11352 0.10733 0.10779 0.07353 0.05092 0.04864 0.04019 0.04385 0.04453 0.04567
 0.01439 0.01667 0.02740 0.02215 0.00708 0.00662 0.00662 0.01621 0.01233 0.01416 0.01073 0.03608
 * HDV6

10 0.02754 0.03070 0.03732 0.05272 0.11770 0.08441 0.07197 0.05864 0.03998 0.04768 0.06565 0.06842 0.06111
0.04798 0.03860 0.02330 0.03317 0.01471 0.01432 0.00968 0.01106 0.01027 0.00661 0.00464 0.02182
* HDV7
11 0.01689 0.02905 0.02905 0.05542 0.09394 0.06402 0.06461 0.05068 0.05898 0.05187 0.06017 0.07380 0.05750
0.04713 0.04060 0.03497 0.03764 0.02253 0.02015 0.01571 0.01660 0.01512 0.01008 0.00474 0.02875
* HDV8a
12 0.01820 0.01280 0.03132 0.03116 0.07945 0.05739 0.04952 0.03209 0.03425 0.03564 0.04027 0.06526 0.05261
0.04597 0.03533 0.04320 0.06310 0.04890 0.04181 0.03178 0.02854 0.02499 0.02592 0.02283 0.04767
* HDV8b
13 0.01703 0.01426 0.05367 0.06075 0.16502 0.12519 0.09933 0.04926 0.05541 0.03304 0.05675 0.07060 0.05305
0.02863 0.02524 0.02083 0.01909 0.01211 0.01057 0.00380 0.00359 0.00339 0.00400 0.00205 0.01334
* HDBS is MOBILE6 default
* HDBT is MOBILE6 default
* MC
16 0.03545 0.04201 0.10215 0.09883 0.11748 0.09879 0.07702 0.05565 0.06866 0.05782 0.04470 0.03542 0.02827
0.02085 0.01445 0.01349 0.01124 0.00892 0.00648 0.00496 0.00342 0.00348 0.00334 0.00361 0.04351

Table 9
Liberty County Registration Distributions

REG DIST
* Liberty County
* Vehicle Age Distributions Calculated from Mid-Year (July) 2011 Registrations data
* LDV, LDT, MC: based on Liberty County data only
* HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)
* HDV8b: based on statewide aggregate data
* LDV
1 0.03159 0.04629 0.04598 0.07987 0.08001 0.07428 0.07087 0.05601 0.05452 0.05295 0.05774 0.05689 0.05172
0.04254 0.03871 0.03048 0.02829 0.02113 0.01719 0.01367 0.01172 0.00800 0.00639 0.00505 0.01811
* LDT1
2 0.01160 0.01696 0.02055 0.04337 0.05201 0.05787 0.05333 0.05459 0.06739 0.07585 0.07395 0.06285 0.05339
0.05308 0.05276 0.03499 0.04085 0.03757 0.02332 0.02213 0.01582 0.01481 0.01273 0.01097 0.03726
* LDT2
3 0.01160 0.01696 0.02055 0.04337 0.05201 0.05787 0.05333 0.05459 0.06739 0.07585 0.07395 0.06285 0.05339
0.05308 0.05276 0.03499 0.04085 0.03757 0.02332 0.02213 0.01582 0.01481 0.01273 0.01097 0.03726
* LDT3
4 0.04137 0.05935 0.05193 0.10488 0.10869 0.07846 0.05733 0.07531 0.07228 0.06205 0.06216 0.03991 0.04710
0.02496 0.02956 0.02214 0.01799 0.00967 0.00798 0.00551 0.00450 0.00326 0.00259 0.00169 0.00933
* LDT4
5 0.04137 0.05935 0.05193 0.10488 0.10869 0.07846 0.05733 0.07531 0.07228 0.06205 0.06216 0.03991 0.04710
0.02496 0.02956 0.02214 0.01799 0.00967 0.00798 0.00551 0.00450 0.00326 0.00259 0.00169 0.00933
* HDV2b
6 0.11738 0.06115 0.05833 0.16801 0.08797 0.09863 0.09652 0.06265 0.05251 0.04212 0.03909 0.03101 0.02250
0.01103 0.01250 0.00640 0.00761 0.00476 0.00362 0.00294 0.00226 0.00215 0.00158 0.00110 0.00618
* HDV3
7 0.07704 0.03178 0.05422 0.12535 0.08514 0.10041 0.05983 0.05414 0.04503 0.04604 0.05508 0.05476 0.05757
0.01589 0.02937 0.01558 0.02267 0.01667 0.01013 0.00841 0.00639 0.00724 0.00522 0.00428 0.01176
* HDV4
8 0.02120 0.02569 0.02682 0.10567 0.12975 0.08736 0.05637 0.05123 0.04770 0.05653 0.06440 0.06263 0.05283
0.02955 0.04786 0.03405 0.02248 0.01140 0.00739 0.00530 0.00915 0.00915 0.01204 0.00771 0.01574

* HDV5
9 0.06668 0.02512 0.04179 0.11352 0.10733 0.10779 0.07353 0.05092 0.04864 0.04019 0.04385 0.04453 0.04567
0.01439 0.01667 0.02740 0.02215 0.00708 0.00662 0.00662 0.01621 0.01233 0.01416 0.01073 0.03608

* HDV6
10 0.02754 0.03070 0.03732 0.05272 0.11770 0.08441 0.07197 0.05864 0.03998 0.04768 0.06565 0.06842 0.06111
0.04798 0.03860 0.02330 0.03317 0.01471 0.01432 0.00968 0.01106 0.01027 0.00661 0.00464 0.02182

* HDV7
11 0.01689 0.02905 0.02905 0.05542 0.09394 0.06402 0.06461 0.05068 0.05898 0.05187 0.06017 0.07380 0.05750
0.04713 0.04060 0.03497 0.03764 0.02253 0.02015 0.01571 0.01660 0.01512 0.01008 0.00474 0.02875

* HDV8a
12 0.01820 0.01280 0.03132 0.03116 0.07945 0.05739 0.04952 0.03209 0.03425 0.03564 0.04027 0.06526 0.05261
0.04597 0.03533 0.04320 0.06310 0.04890 0.04181 0.03178 0.02854 0.02499 0.02592 0.02283 0.04767

* HDV8b
13 0.01703 0.01426 0.05367 0.06075 0.16502 0.12519 0.09933 0.04926 0.05541 0.03304 0.05675 0.07060 0.05305
0.02863 0.02524 0.02083 0.01909 0.01211 0.01057 0.00380 0.00359 0.00339 0.00400 0.00205 0.01334

* HDBS is MOBILE6 default
* HDBT is MOBILE6 default
* MC
16 0.02351 0.02952 0.08365 0.09295 0.10771 0.10991 0.08256 0.06124 0.06178 0.06452 0.05741 0.04101 0.03554
0.02515 0.01968 0.01531 0.00984 0.00765 0.00601 0.00383 0.00273 0.00273 0.00492 0.00437 0.04647

Table 10
Montgomery County Registration Distribution

Table 11

REG DIST

* Montgomery County

* Vehicle Age Distributions Calculated from Mid-Year (July) 2011 Registrations data

* LDV, LDT, MC: based on Montgomery County data only

* HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)

* HDV8b: based on statewide aggregate data

* LDV

1 0.04707 0.06698 0.06089 0.09383 0.09223 0.08348 0.07437 0.06627 0.06024 0.05826 0.05205 0.04979
0.04030 0.03231 0.02585 0.01850 0.01713 0.01201 0.00917 0.00730 0.00553 0.00427 0.00341 0.00244 0.01632

* LDT1

2 0.01892 0.02890 0.02916 0.05489 0.05984 0.06441 0.06419 0.06640 0.07931 0.08427 0.07759 0.06024
0.04953 0.04607 0.04095 0.02922 0.02847 0.02498 0.01634 0.01235 0.00993 0.00953 0.00775 0.00519 0.03157

* LDT2

3 0.01892 0.02890 0.02916 0.05489 0.05984 0.06441 0.06419 0.06640 0.07931 0.08427 0.07759 0.06024
0.04953 0.04607 0.04095 0.02922 0.02847 0.02498 0.01634 0.01235 0.00993 0.00953 0.00775 0.00519 0.03157

* LDT3

4 0.05163 0.08357 0.06496 0.11252 0.11944 0.07544 0.06416 0.08425 0.07126 0.05720 0.05491 0.03599
0.03576 0.01423 0.01923 0.01443 0.01149 0.00676 0.00614 0.00420 0.00272 0.00183 0.00160 0.00105 0.00523

* LDT4

5 0.05163 0.08357 0.06496 0.11252 0.11944 0.07544 0.06416 0.08425 0.07126 0.05720 0.05491 0.03599
0.03576 0.01423 0.01923 0.01443 0.01149 0.00676 0.00614 0.00420 0.00272 0.00183 0.00160 0.00105 0.00523

* HDV2b

6 0.11738 0.06115 0.05833 0.16801 0.08797 0.09863 0.09652 0.06265 0.05251 0.04212 0.03909 0.03101
0.02250 0.01103 0.01250 0.00640 0.00761 0.00476 0.00362 0.00294 0.00226 0.00215 0.00158 0.00110 0.00618

* HDV3

7 0.07704 0.03178 0.05422 0.12535 0.08514 0.10041 0.05983 0.05414 0.04503 0.04604 0.05508 0.05476
0.05757 0.01589 0.02937 0.01558 0.02267 0.01667 0.01013 0.00841 0.00639 0.00724 0.00522 0.00428 0.01176

* HDV4

8 0.02120 0.02569 0.02682 0.10567 0.12975 0.08736 0.05637 0.05123 0.04770 0.05653 0.06440 0.06263
0.05283 0.02955 0.04786 0.03405 0.02248 0.01140 0.00739 0.00530 0.00915 0.00915 0.01204 0.00771 0.01574

* HDV5

9 0.06668 0.02512 0.04179 0.11352 0.10733 0.10779 0.07353 0.05092 0.04864 0.04019 0.04385 0.04453
0.04567 0.01439 0.01667 0.02740 0.02215 0.00708 0.00662 0.00662 0.01621 0.01233 0.01416 0.01073 0.03608

* HDV6

10 0.02754 0.03070 0.03732 0.05272 0.11770 0.08441 0.07197 0.05864 0.03998 0.04768 0.06565 0.06842
0.06111 0.04798 0.03860 0.02330 0.03317 0.01471 0.01432 0.00968 0.01106 0.01027 0.00661 0.00464 0.02182

* HDV7

11 0.01689 0.02905 0.02905 0.05542 0.09394 0.06402 0.06461 0.05068 0.05898 0.05187 0.06017 0.07380
0.05750 0.04713 0.04060 0.03497 0.03764 0.02253 0.02015 0.01571 0.01660 0.01512 0.01008 0.00474 0.02875

* HDV8a

12 0.01820 0.01280 0.03132 0.03116 0.07945 0.05739 0.04952 0.03209 0.03425 0.03564 0.04027 0.06526
0.05261 0.04597 0.03533 0.04320 0.06310 0.04890 0.04181 0.03178 0.02854 0.02499 0.02592 0.02283 0.04767

* HDV8b

13 0.01703 0.01426 0.05367 0.06075 0.16502 0.12519 0.09933 0.04926 0.05541 0.03304 0.05675 0.07060
0.05305 0.02863 0.02524 0.02083 0.01909 0.01211 0.01057 0.00380 0.00359 0.00339 0.00400 0.00205 0.01334

* HDBS is MOBILE6 default

* HDBT is MOBILE6 default

* MC

16 0.04045 0.03581 0.08947 0.08728 0.11078 0.10505 0.08209 0.06177 0.07471 0.05667 0.04710 0.03854
0.02897 0.01968 0.01585 0.01531 0.01194 0.00875 0.00820 0.00601 0.00346 0.00337 0.00364 0.00374 0.04136

Waller County Registration Distribution

REG DIST

* Waller County

* Vehicle Age Distributions Calculated from Mid-Year (July) 2011 Registrations data

* LDV, LDT, MC: based on Waller County data only

* HDVs (less HDV8b): based on 8-county nonattainment area aggregate data (Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller)

* HDV8b: based on statewide aggregate data

* LDV

1 0.02329 0.03924 0.04173 0.07225 0.07158 0.07001 0.06896 0.05590 0.05413 0.05905 0.05984 0.06259
0.05472 0.04344 0.03884 0.03313 0.03156 0.02401 0.02047 0.01614 0.01220 0.00879 0.00709 0.00512 0.02592

* LDT1

2 0.00891 0.01681 0.01834 0.04113 0.04635 0.05679 0.05055 0.05883 0.07271 0.08139 0.07679 0.05399
0.05501 0.05437 0.05170 0.03731 0.04075 0.03616 0.02254 0.02114 0.01413 0.01312 0.01235 0.00968 0.04915

* LDT2

3 0.00891 0.01681 0.01834 0.04113 0.04635 0.05679 0.05055 0.05883 0.07271 0.08139 0.07679 0.05399
0.05501 0.05437 0.05170 0.03731 0.04075 0.03616 0.02254 0.02114 0.01413 0.01312 0.01235 0.00968 0.04915

* LDT3

4 0.03068 0.05632 0.04623 0.09285 0.10600 0.07287 0.06843 0.09063 0.06520 0.05975 0.05914 0.04380
0.04824 0.02241 0.03371 0.02160 0.02200 0.01211 0.00969 0.00969 0.00484 0.00484 0.00303 0.00363 0.01231

* LDT4

5 0.03068 0.05632 0.04623 0.09285 0.10600 0.07287 0.06843 0.09063 0.06520 0.05975 0.05914 0.04380
0.04824 0.02241 0.03371 0.02160 0.02200 0.01211 0.00969 0.00969 0.00484 0.00484 0.00303 0.00363 0.01231

* HDV2b

6 0.11738 0.06115 0.05833 0.16801 0.08797 0.09863 0.09652 0.06265 0.05251 0.04212 0.03909 0.03101
0.02250 0.01103 0.01250 0.00640 0.00761 0.00476 0.00362 0.00294 0.00226 0.00215 0.00158 0.00110 0.00618

* HDV3

7 0.07704 0.03178 0.05422 0.12535 0.08514 0.10041 0.05983 0.05414 0.04503 0.04604 0.05508 0.05476
0.05757 0.01589 0.02937 0.01558 0.02267 0.01667 0.01013 0.00841 0.00639 0.00724 0.00522 0.00428 0.01176

* HDV4

8 0.02120 0.02569 0.02682 0.10567 0.12975 0.08736 0.05637 0.05123 0.04770 0.05653 0.06440 0.06263
0.05283 0.02955 0.04786 0.03405 0.02248 0.01140 0.00739 0.00530 0.00915 0.00915 0.01204 0.00771 0.01574

* HDV5

9 0.06668 0.02512 0.04179 0.11352 0.10733 0.10779 0.07353 0.05092 0.04864 0.04019 0.04385 0.04453
0.04567 0.01439 0.01667 0.02740 0.02215 0.00708 0.00662 0.00662 0.01621 0.01233 0.01416 0.01073 0.03608

* HDV6

10 0.02754 0.03070 0.03732 0.05272 0.11770 0.08441 0.07197 0.05864 0.03998 0.04768 0.06565 0.06842
0.06111 0.04798 0.03860 0.02330 0.03317 0.01471 0.01432 0.00968 0.01106 0.01027 0.00661 0.00464 0.02182

* HDV7

11 0.01689 0.02905 0.02905 0.05542 0.09394 0.06402 0.06461 0.05068 0.05898 0.05187 0.06017 0.07380
0.05750 0.04713 0.04060 0.03497 0.03764 0.02253 0.02015 0.01571 0.01660 0.01512 0.01008 0.00474 0.02875

* HDV8a

12 0.01820 0.01280 0.03132 0.03116 0.07945 0.05739 0.04952 0.03209 0.03425 0.03564 0.04027 0.06526
0.05261 0.04597 0.03533 0.04320 0.06310 0.04890 0.04181 0.03178 0.02854 0.02499 0.02592 0.02283 0.04767

* HDV8b

13 0.01703 0.01426 0.05367 0.06075 0.16502 0.12519 0.09933 0.04926 0.05541 0.03304 0.05675 0.07060
0.05305 0.02863 0.02524 0.02083 0.01909 0.01211 0.01057 0.00380 0.00359 0.00339 0.00400 0.00205 0.01334

* HDBS is MOBILE6 default

* HDBT is MOBILE6 default

* MC

16 0.03218 0.03103 0.07816 0.07241 0.12070 0.10115 0.08391 0.05862 0.07471 0.05057 0.04483 0.04253
0.03218 0.02529 0.01379 0.01609 0.01839 0.00920 0.01149 0.00460 0.00460 0.00575 0.00460 0.00690 0.05632

Table 12: 2011 Houston-Eight-County Region Diesel sales Fraction Estimates

* Statewide Diesel Sales Fractions Estimates - 2011
 * HDV fractions are estimated from TxDOT registration data (Mid-year July 2011)
 * LDV, LDT and Bus fractions are MOBILE6 defaults
 * One record per vehicle type. The order of vehicle types is: LDV, LDT1, LDT2, LDT3, LDT4, HDV2B, HDV3, HDV4, HDV5, HDV6, HDV7, HDV8a, HDV8b, HDBS

DIESEL FRACTIONS :

| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 |
| 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00060 | 0.00010 |
| 0.00030 | 0.00060 | 0.00130 | 0.00040 | 0.00040 | 0.00010 | 0.00270 | | | |
| 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00070 | |
| 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00070 | | |
| 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 |
| 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01150 | 0.01110 |
| 0.01450 | 0.01150 | 0.01290 | 0.00960 | 0.00830 | 0.00720 | 0.00820 | | | |
| 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 |
| 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01150 | 0.01110 |
| 0.01450 | 0.01150 | 0.01290 | 0.00960 | 0.00830 | 0.00720 | 0.00820 | | | |
| 0.79113 | 0.79513 | 0.70756 | 0.73592 | 0.74608 | 0.77289 | 0.79715 | 0.78996 | 0.76881 | |
| 0.74941 | 0.69413 | 0.60979 | 0.62827 | 0.56038 | 0.53611 | 0.48663 | 0.23647 | 0.40837 | |
| 0.37722 | 0.37828 | 0.34007 | 0.32211 | 0.26166 | 0.18266 | 0.10876 | | | |
| 0.77645 | 0.65614 | 0.60783 | 0.73067 | 0.74995 | 0.75996 | 0.68289 | 0.64519 | 0.63139 | |
| 0.63036 | 0.62445 | 0.64845 | 0.60174 | 0.47925 | 0.53061 | 0.51877 | 0.34974 | 0.51820 | |
| 0.50498 | 0.55961 | 0.47185 | 0.51675 | 0.47222 | 0.48750 | 0.12722 | | | |
| 0.72007 | 0.56604 | 0.55947 | 0.77594 | 0.80808 | 0.84000 | 0.82294 | 0.72976 | 0.70505 | |
| 0.74233 | 0.69752 | 0.73490 | 0.67521 | 0.75000 | 0.77714 | 0.68678 | 0.46869 | 0.57627 | |
| 0.62687 | 0.57724 | 0.72671 | 0.56140 | 0.70988 | 0.31452 | 0.13176 | | | |
| 0.80129 | 0.89183 | 0.85411 | 0.92707 | 0.93735 | 0.89825 | 0.89283 | 0.87748 | 0.88079 | |
| 0.86486 | 0.85596 | 0.87500 | 0.83600 | 0.69776 | 0.68030 | 0.77612 | 0.42271 | 0.63536 | |
| 0.68354 | 0.66346 | 0.79018 | 0.63768 | 0.62245 | 0.45055 | 0.21677 | | | |
| 0.91748 | 0.89734 | 0.93271 | 0.93032 | 0.95871 | 0.91391 | 0.92837 | 0.93841 | 0.92147 | |
| 0.89110 | 0.90096 | 0.87882 | 0.84752 | 0.80511 | 0.81370 | 0.79422 | 0.61485 | 0.80197 | |
| 0.76170 | 0.64815 | 0.67887 | 0.72453 | 0.74551 | 0.64353 | 0.38238 | | | |
| 1.00000 | 0.96056 | 0.94540 | 0.92960 | 0.97547 | 0.93545 | 0.96119 | 0.94793 | 0.97709 | |
| 0.93308 | 0.92054 | 0.92495 | 0.91300 | 0.87226 | 0.80189 | 0.81661 | 0.61187 | 0.85238 | |
| 0.88949 | 0.85714 | 0.87050 | 0.87156 | 0.87356 | 0.84906 | 0.64850 | | | |
| 0.98853 | 0.95430 | 0.97629 | 0.97596 | 0.98898 | 0.96745 | 0.97150 | 0.95632 | 0.95385 | |
| 0.94737 | 0.93815 | 0.94596 | 0.94027 | 0.93419 | 0.90198 | 0.91986 | 0.79159 | 0.94026 | |
| 0.94211 | 0.95561 | 0.94216 | 0.92120 | 0.93228 | 0.93006 | 0.83398 | | | |
| 0.98193 | 0.94964 | 0.98088 | 0.99493 | 0.99502 | 0.98934 | 0.99174 | 0.98958 | 0.98333 | |
| 0.97826 | 0.98011 | 0.97674 | 0.96132 | 0.98208 | 0.94309 | 0.93103 | 0.79032 | 0.98305 | |
| 0.95146 | 0.94595 | 0.91429 | 0.93939 | 1.00000 | 1.00000 | 0.86154 | | | |
| 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | |
| 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.88570 | 0.85250 | |
| 0.87950 | 0.99000 | 0.91050 | 0.87600 | 0.77100 | 0.75020 | 0.73450 | | | |

Table 13: 2014 Houston-Eight-County Region Diesel sales Fraction Estimates

Table 14: 2017 Houston-Eight-County Region Diesel sales Fraction Estimates

* Statewide Diesel Sales Fractions Estimates - 2017

* HDV fractions are estimated from TxDOT registration data (Mid-year July 2011)

* LDV, LDT and Bus fractions are MOBILE6 defaults

* One record per vehicle type. The order of vehicle types is: LDV, LDT1, LDT2, LDT3, LDT4, HDV2B, HDV3, HDV4, HDV5, HDV6, HDV7, HDV8a, HDV8b, HDBS

DIESEL FRACTIONS :

| | | | | | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 |
| 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00090 | 0.00060 | 0.00010 | 0.00030 | |
| 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 |
| 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01150 | 0.01110 | 0.01450 | |
| 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 |
| 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01260 | 0.01150 | 0.01110 | 0.01450 | |
| 0.79113 | 0.79113 | 0.79113 | 0.79113 | 0.79113 | 0.79113 | 0.79113 | 0.79113 | 0.79513 | 0.70756 | 0.73592 | 0.74608 | 0.77289 | 0.79715 |
| 0.78996 | 0.76881 | 0.74941 | 0.69413 | 0.60979 | 0.62827 | 0.56038 | 0.53611 | 0.48663 | 0.23647 | 0.40837 | 0.37722 | | |
| 0.77645 | 0.77645 | 0.77645 | 0.77645 | 0.77645 | 0.77645 | 0.77645 | 0.77645 | 0.65614 | 0.60783 | 0.73067 | 0.74995 | 0.75996 | 0.68289 |
| 0.64519 | 0.63139 | 0.63036 | 0.62445 | 0.64845 | 0.60174 | 0.47925 | 0.53061 | 0.51877 | 0.34974 | 0.51820 | 0.50498 | | |
| 0.72007 | 0.72007 | 0.72007 | 0.72007 | 0.72007 | 0.72007 | 0.72007 | 0.72007 | 0.56604 | 0.55947 | 0.77594 | 0.80808 | 0.84000 | 0.82294 |
| 0.72976 | 0.70505 | 0.74233 | 0.69752 | 0.73490 | 0.67521 | 0.75000 | 0.77714 | 0.68678 | 0.46869 | 0.57627 | 0.62687 | | |
| 0.80129 | 0.80129 | 0.80129 | 0.80129 | 0.80129 | 0.80129 | 0.80129 | 0.80129 | 0.89183 | 0.85411 | 0.92707 | 0.93735 | 0.89825 | 0.89283 |
| 0.87748 | 0.88079 | 0.86486 | 0.85596 | 0.87500 | 0.83600 | 0.69776 | 0.68030 | 0.77612 | 0.42271 | 0.63536 | 0.68354 | | |
| 0.91748 | 0.91748 | 0.91748 | 0.91748 | 0.91748 | 0.91748 | 0.91748 | 0.91748 | 0.89734 | 0.93271 | 0.93032 | 0.95871 | 0.91391 | 0.92837 |
| 0.93841 | 0.92147 | 0.89110 | 0.90096 | 0.87882 | 0.84752 | 0.80511 | 0.81370 | 0.79422 | 0.61485 | 0.80197 | 0.76170 | | |
| 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 0.96056 | 0.94540 | 0.92960 | 0.97547 | 0.93545 | 0.96119 |
| 0.94793 | 0.97709 | 0.93308 | 0.92054 | 0.92495 | 0.91300 | 0.87226 | 0.80189 | 0.81661 | 0.61187 | 0.85238 | 0.88949 | | |
| 0.98853 | 0.98853 | 0.98853 | 0.98853 | 0.98853 | 0.98853 | 0.98853 | 0.98853 | 0.95430 | 0.97629 | 0.97596 | 0.98898 | 0.96745 | 0.97150 |
| 0.95632 | 0.95385 | 0.94737 | 0.93815 | 0.94596 | 0.94027 | 0.93419 | 0.90198 | 0.91986 | 0.79159 | 0.94026 | 0.94211 | | |
| 0.98193 | 0.98193 | 0.98193 | 0.98193 | 0.98193 | 0.98193 | 0.98193 | 0.98193 | 0.94964 | 0.98088 | 0.99493 | 0.99502 | 0.98934 | 0.99174 |
| 0.98958 | 0.98333 | 0.97826 | 0.98011 | 0.97674 | 0.96132 | 0.98208 | 0.94309 | 0.93103 | 0.79032 | 0.98305 | 0.95146 | | |
| 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 |
| 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.95850 | 0.88570 | 0.85250 | 0.87950 | |

Table 18: MOBILE6 Activity, input to POLFAC62_3

| Command | Function/Description | Input Parameter Source/Value |
|---------------------|---|--|
| VMT FRACTIONS | Used in MOBILE6 to weight the emissions of various vehicle types into average rates for groupings of vehicle classes. | APPLIED. Calculated by TTI, August 27, 2010. |
| VMT BY FACILITY | VMT fractions by MOBILE6 road type combine the four road type emissions factors into the “all road types” emissions factors. | APPLIED. See Appendix 10. |
| VMT BY HOUR | Allows VMT fractions allocation by hour-of-day; applied in conversion of grams per hour (g/hr) to g/mi, as well as in weighting of hourly g/mi rates to obtain daily emissions factors. | The hourly VMT fractions are developed as county hourly total VMT divided by county 24-hour total VMT. See Table 17-20. |
| SPEED VMT | Allows user to allocate VMT by average speed (14 pre-selected: 2.5 and 5 through 65 at 5 mph increments) for arterials and freeways for each hour of the day. | Generic input. Same for all counties. Inputs are set up to calculate emissions factors by 14 MOBILE6 speed bin speed scenarios for MOBILE6 Freeway and Arterial road types. See Appendix 10. |
| AVERAGE SPEED | Allows a single average speed for combined freeways and arterials for the entire day. | NOT APPLIED. |
| STARTS PER DAY | Lets user specify the average number of engine starts per vehicle per day by vehicle types for weekend days and weekdays. | NOT APPLIED (EPA weekday defaults are applied) |
| START DIST | Allows user to allocate engine starts by hour of the day for weekend days and weekdays | NOT APPLIED (EPA weekday defaults are applied). |
| SOAK DISTRIBUTION | Allows use of alternate vehicle soak duration distributions for weekend days and weekdays. | NOT APPLIED (EPA weekday defaults assumed) |
| HOT SOAK ACTIVITY | Allows users to specify a hot soak duration distribution for each of 14 daily time periods for weekend days and for weekdays. | NOT APPLIED (EPA weekday defaults assumed) |
| DIURN SOAK ACTIVITY | Allows user set diurnal soak time distributions for each of 18 daily time periods. | NOT APPLIED. (EPA defaults assumed) |
| WE DA TRI LEN DI | Specifies alternate fractions of VMT that occur during trips of various durations at each hour of the average weekday. | Locality-Specific. Latest HGB regional TDM-based weekday distributions Developed by H-GAC (see Tables 21-27). |
| WE EN TRI LEN DI | Specifies hourly alternate fractions of VMT for trips of various lengths for weekend days. | NOT APPLIED |
| WE VEH US | Directs MOBILE6 to use weekend activity data for calculating emissions factors. | NOT APPLIED. |

Table 19
VMT by Hour for 2011

| Brazoria | Chambers | Ft. Bend | Galveston | Harris | Liberty | Montgomery | Waller |
|-----------------|-----------------|-----------------|------------------|---------------|----------------|-------------------|---------------|
| 0.072016 | 0.052706 | 0.0682960. | 0.069117 | 0.071557 | 0.061194 | 0.067705 | 0.053489 |
| 0.083375 | 0.061020 | 079069 | 0.080019 | 0.082844 | 0.070846 | 0.078384 | 0.061926 |
| 0.070933 | 0.051914 | 0.067269 | 0.068077 | 0.070481 | 0.060273 | 0.066687 | 0.052684 |
| 0.044438 | 0.053829 | 0.045399 | 0.044902 | 0.045052 | 0.048084 | 0.045294 | 0.052605 |
| 0.042937 | 0.052012 | 0.043866 | 0.043385 | 0.043531 | 0.046460 | 0.043765 | 0.050829 |
| 0.044949 | 0.054448 | 0.045921 | 0.045418 | 0.045570 | 0.048637 | 0.045815 | 0.053210 |
| 0.046550 | 0.056388 | 0.047557 | 0.047036 | 0.047194 | 0.050370 | 0.047448 | 0.055106 |
| 0.047646 | 0.057716 | 0.048677 | 0.048144 | 0.048305 | 0.051556 | 0.048565 | 0.056403 |
| 0.050603 | 0.061297 | 0.051697 | 0.051131 | 0.051303 | 0.054755 | 0.051578 | 0.059903 |
| 0.079811 | 0.069265 | 0.077923 | 0.080273 | 0.079679 | 0.074244 | 0.077301 | 0.070154 |
| 0.087737 | 0.076144 | 0.085661 | 0.088245 | 0.087592 | 0.081617 | 0.084978 | 0.077122 |
| 0.092594 | 0.080359 | 0.090403 | 0.093130 | 0.092441 | 0.086135 | 0.089683 | 0.081391 |
| 0.076432 | 0.066333 | 0.074624 | 0.076875 | 0.076306 | 0.071101 | 0.074029 | 0.067185 |
| 0.033813 | 0.043660 | 0.036700 | 0.034715 | 0.033426 | 0.041158 | 0.037784 | 0.043962 |
| 0.026427 | 0.034123 | 0.028683 | 0.027132 | 0.026124 | 0.032167 | 0.029530 | 0.034358 |
| 0.022596 | 0.029176 | 0.024525 | 0.023199 | 0.022337 | 0.027504 | 0.025250 | 0.029378 |
| 0.017517 | 0.022618 | 0.019013 | 0.017984 | 0.017316 | 0.021322 | 0.019574 | 0.022774 |
| 0.011814 | 0.015255 | 0.012822 | 0.012130 | 0.011678 | 0.014380 | 0.013202 | 0.015358 |
| 0.006723 | 0.008681 | 0.007297 | 0.006902 | 0.006646 | 0.008183 | 0.007512 | 0.008741 |
| 0.004503 | 0.005815 | 0.004888 | 0.004623 | 0.004451 | 0.005481 | 0.005032 | 0.005855 |
| 0.004186 | 0.005405 | 0.004543 | 0.004298 | 0.004138 | 0.005095 | 0.004678 | 0.005442 |
| 0.004009 | 0.005177 | 0.004352 | 0.004116 | 0.003963 | 0.004880 | 0.004480 | 0.005213 |
| 0.006992 | 0.009029 | 0.007589 | 0.007179 | 0.006912 | 0.008511 | 0.007814 | 0.009091 |
| 0.021399 | 0.027630 | 0.023226 | 0.021970 | 0.021154 | 0.026047 | 0.023912 | 0.027821 |

Table 20
VMT by Hour for 2014

| Brazoria | Chambers | Ft. Bend | Galveston | Harris | Liberty | Montgomery | Waller |
|-----------------|-----------------|-----------------|------------------|---------------|----------------|-------------------|---------------|
| 0.072438 | 0.052877 | 0.068878 | 0.069410 | 0.071548 | 0.061495 | 0.067585 | 0.053719 |
| 0.083864 | 0.061217 | 0.079743 | 0.080358 | 0.082833 | 0.071195 | 0.078246 | 0.062193 |
| 0.071349 | 0.052082 | 0.067843 | 0.068366 | 0.070472 | 0.060571 | 0.066569 | 0.052911 |
| 0.044089 | 0.053743 | 0.044985 | 0.044761 | 0.044999 | 0.047934 | 0.045264 | 0.052409 |
| 0.042600 | 0.051928 | 0.043466 | 0.043250 | 0.043480 | 0.046316 | 0.043735 | 0.050639 |
| 0.044595 | 0.054361 | 0.045502 | 0.045276 | 0.045517 | 0.048485 | 0.045784 | 0.053011 |
| 0.046184 | 0.056298 | 0.047123 | 0.046889 | 0.047139 | 0.050213 | 0.047416 | 0.054900 |
| 0.047272 | 0.057624 | 0.048233 | 0.047993 | 0.048249 | 0.051395 | 0.048532 | 0.056193 |
| 0.050205 | 0.061199 | 0.051226 | 0.050971 | 0.051243 | 0.054585 | 0.051544 | 0.059680 |
| 0.079926 | 0.069316 | 0.078220 | 0.080315 | 0.079642 | 0.074235 | 0.077364 | 0.070368 |
| 0.087863 | 0.076200 | 0.085988 | 0.088291 | 0.087552 | 0.081608 | 0.085047 | 0.077357 |
| 0.092727 | 0.080418 | 0.090748 | 0.093179 | 0.092398 | 0.086125 | 0.089755 | 0.081639 |
| 0.076542 | 0.066382 | 0.074909 | 0.076915 | 0.076271 | 0.071093 | 0.074089 | 0.067389 |
| 0.033890 | 0.043615 | 0.036594 | 0.034668 | 0.033534 | 0.041162 | 0.037848 | 0.043876 |
| 0.026487 | 0.034087 | 0.028600 | 0.027095 | 0.026208 | 0.032170 | 0.029580 | 0.034291 |
| 0.022647 | 0.029146 | 0.024454 | 0.023167 | 0.022409 | 0.027507 | 0.025292 | 0.029321 |
| 0.017557 | 0.022595 | 0.018958 | 0.017960 | 0.017372 | 0.021324 | 0.019607 | 0.022730 |
| 0.011843 | 0.015240 | 0.012787 | 0.012114 | 0.011717 | 0.014382 | 0.013225 | 0.015332 |
| 0.006738 | 0.008672 | 0.007276 | 0.006893 | 0.006667 | 0.008184 | 0.007525 | 0.008724 |
| 0.004513 | 0.005808 | 0.004873 | 0.004617 | 0.004466 | 0.005482 | 0.005040 | 0.005843 |
| 0.004196 | 0.005399 | 0.004530 | 0.004292 | 0.004151 | 0.005096 | 0.004686 | 0.005432 |
| 0.004019 | 0.005172 | 0.004339 | 0.004111 | 0.003976 | 0.004881 | 0.004488 | 0.005203 |
| 0.007008 | 0.009019 | 0.007567 | 0.007169 | 0.006935 | 0.008512 | 0.007827 | 0.009073 |

| | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.021448 | 0.027602 | 0.023158 | 0.021940 | 0.021222 | 0.026050 | 0.023952 | 0.027767 |
|----------|----------|----------|----------|----------|----------|----------|----------|

Table 21
VMT by Hour for 2017

| Brazoria | Chambers | Ft. Bend | Galveston | Harris | Liberty | Montgomery | Waller |
|-----------------|-----------------|-----------------|------------------|---------------|----------------|-------------------|---------------|
| 0.072319 | 0.052997 | 0.068675 | 0.069561 | 0.071446 | 0.061303 | 0.067724 | 0.053745 |
| 0.083726 | 0.061356 | 0.079508 | 0.080533 | 0.082716 | 0.070973 | 0.078407 | 0.062223 |
| 0.071232 | 0.052200 | 0.067643 | 0.068515 | 0.070372 | 0.060381 | 0.066706 | 0.052937 |
| 0.043744 | 0.053701 | 0.044963 | 0.044643 | 0.044903 | 0.047837 | 0.045100 | 0.052317 |
| 0.042266 | 0.051888 | 0.043445 | 0.043135 | 0.043387 | 0.046221 | 0.043577 | 0.050550 |
| 0.044246 | 0.054318 | 0.045480 | 0.045156 | 0.045419 | 0.048386 | 0.045618 | 0.052918 |
| 0.045823 | 0.056254 | 0.047101 | 0.046765 | 0.047038 | 0.050111 | 0.047244 | 0.054804 |
| 0.046902 | 0.057578 | 0.048209 | 0.047866 | 0.048145 | 0.051291 | 0.048356 | 0.056094 |
| 0.049812 | 0.061151 | 0.051201 | 0.050837 | 0.051133 | 0.054473 | 0.051357 | 0.059575 |
| 0.080375 | 0.069329 | 0.078329 | 0.080388 | 0.079741 | 0.074404 | 0.077503 | 0.070408 |
| 0.088357 | 0.076215 | 0.086108 | 0.088371 | 0.087660 | 0.081793 | 0.085200 | 0.077400 |
| 0.093248 | 0.080433 | 0.090875 | 0.093263 | 0.092512 | 0.086321 | 0.089916 | 0.081685 |
| 0.076973 | 0.066394 | 0.075013 | 0.076985 | 0.076365 | 0.071254 | 0.074222 | 0.067427 |
| 0.034024 | 0.043579 | 0.036660 | 0.034659 | 0.033641 | 0.041268 | 0.037849 | 0.043945 |
| 0.026591 | 0.034059 | 0.028652 | 0.027088 | 0.026292 | 0.032253 | 0.029580 | 0.034345 |
| 0.022737 | 0.029122 | 0.024499 | 0.023161 | 0.022481 | 0.027578 | 0.025293 | 0.029367 |
| 0.017626 | 0.022576 | 0.018992 | 0.017955 | 0.017428 | 0.021379 | 0.019608 | 0.022766 |
| 0.011889 | 0.015229 | 0.012808 | 0.012110 | 0.011751 | 0.014420 | 0.013220 | 0.015355 |
| 0.006765 | 0.008664 | 0.007289 | 0.006891 | 0.006689 | 0.008205 | 0.007525 | 0.008737 |
| 0.004531 | 0.005804 | 0.004882 | 0.004616 | 0.004480 | 0.005496 | 0.005041 | 0.005852 |
| 0.004212 | 0.005395 | 0.004539 | 0.004291 | 0.004165 | 0.005109 | 0.004686 | 0.005440 |
| 0.004034 | 0.005167 | 0.004347 | 0.004110 | 0.003989 | 0.004893 | 0.004488 | 0.005211 |
| 0.007036 | 0.009012 | 0.007581 | 0.007167 | 0.006957 | 0.008534 | 0.007827 | 0.009088 |
| 0.021532 | 0.027579 | 0.023201 | 0.021934 | 0.021290 | 0.026117 | 0.023953 | 0.027811 |

Table 22
VMT by Hour for 2018

| Brazoria | Chambers | Ft. Bend | Galveston | Harris | Liberty | Montgomery | Waller |
|-----------------|-----------------|-----------------|------------------|---------------|----------------|-------------------|---------------|
| 0.072525 | 0.053058 | 0.068866 | 0.069676 | 0.071501 | 0.061377 | 0.067999 | 0.053948 |
| 0.083965 | 0.061428 | 0.079728 | 0.080666 | 0.082780 | 0.071058 | 0.078724 | 0.062458 |
| 0.071434 | 0.052260 | 0.067830 | 0.068628 | 0.070426 | 0.060454 | 0.066976 | 0.053137 |
| 0.043695 | 0.053670 | 0.044853 | 0.044589 | 0.044849 | 0.047806 | 0.044969 | 0.052238 |
| 0.042219 | 0.051857 | 0.043339 | 0.043083 | 0.043335 | 0.046191 | 0.043450 | 0.050474 |
| 0.044197 | 0.054286 | 0.045369 | 0.045102 | 0.045365 | 0.048355 | 0.045486 | 0.052838 |
| 0.045772 | 0.056221 | 0.046985 | 0.046709 | 0.046981 | 0.050078 | 0.047106 | 0.054721 |
| 0.046850 | 0.057545 | 0.048092 | 0.047809 | 0.048088 | 0.051257 | 0.048216 | 0.056009 |
| 0.049757 | 0.061116 | 0.051076 | 0.050775 | 0.051072 | 0.054438 | 0.051208 | 0.059485 |
| 0.080388 | 0.069351 | 0.078333 | 0.080359 | 0.079754 | 0.074381 | 0.077543 | 0.070445 |
| 0.088371 | 0.076239 | 0.086113 | 0.088340 | 0.087675 | 0.081768 | 0.085244 | 0.077441 |
| 0.093263 | 0.080459 | 0.090880 | 0.093230 | 0.092528 | 0.086294 | 0.089962 | 0.081728 |
| 0.076985 | 0.066415 | 0.075017 | 0.076957 | 0.076378 | 0.071232 | 0.074260 | 0.067463 |
| 0.033940 | 0.043560 | 0.036675 | 0.034679 | 0.033663 | 0.041281 | 0.037803 | 0.043881 |
| 0.026526 | 0.034044 | 0.028663 | 0.027104 | 0.026309 | 0.032263 | 0.029545 | 0.034295 |
| 0.022681 | 0.029109 | 0.024508 | 0.023175 | 0.022495 | 0.027586 | 0.025262 | 0.029324 |
| 0.017583 | 0.022566 | 0.018999 | 0.017966 | 0.017439 | 0.021386 | 0.019584 | 0.022733 |
| 0.011857 | 0.015221 | 0.012815 | 0.012116 | 0.011762 | 0.014421 | 0.013208 | 0.015333 |
| 0.006748 | 0.008661 | 0.007292 | 0.006895 | 0.006693 | 0.008208 | 0.007516 | 0.008725 |
| 0.004520 | 0.005801 | 0.004884 | 0.004618 | 0.004483 | 0.005498 | 0.005034 | 0.005844 |
| 0.004202 | 0.005393 | 0.004540 | 0.004293 | 0.004167 | 0.005111 | 0.004680 | 0.005432 |

| | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.004024 | 0.005165 | 0.004349 | 0.004112 | 0.003992 | 0.004895 | 0.004483 | 0.005203 |
| 0.007019 | 0.009008 | 0.007584 | 0.007172 | 0.006961 | 0.008537 | 0.007818 | 0.009075 |
| 0.021479 | 0.027567 | 0.023210 | 0.021947 | 0.021304 | 0.026125 | 0.023924 | 0.027770 |

Table 23
VMT by Hour for 2025

| Brazoria | Chambers | Ft. Bend | Galveston | Harris | Liberty | Montgomery | Waller |
|-----------------|-----------------|-----------------|------------------|---------------|----------------|-------------------|---------------|
| 0.073151 | 0.053628 | 0.068814 | 0.069798 | 0.071553 | 0.061997 | 0.068678 | 0.054393 |
| 0.084689 | 0.062088 | 0.079668 | 0.080808 | 0.082839 | 0.071777 | 0.079511 | 0.062973 |
| 0.072051 | 0.052822 | 0.067779 | 0.068748 | 0.070477 | 0.061065 | 0.067646 | 0.053576 |
| 0.043284 | 0.053444 | 0.044783 | 0.044647 | 0.044562 | 0.047848 | 0.044526 | 0.051938 |
| 0.041823 | 0.051639 | 0.043271 | 0.043140 | 0.043057 | 0.046233 | 0.043022 | 0.050184 |
| 0.043782 | 0.054058 | 0.045298 | 0.045161 | 0.045074 | 0.048398 | 0.045038 | 0.052534 |
| 0.045342 | 0.055985 | 0.046912 | 0.046770 | 0.046680 | 0.050123 | 0.046643 | 0.054407 |
| 0.046410 | 0.057303 | 0.048016 | 0.047871 | 0.047779 | 0.051303 | 0.047741 | 0.055688 |
| 0.049289 | 0.060859 | 0.050996 | 0.050842 | 0.050744 | 0.054487 | 0.050703 | 0.059143 |
| 0.080475 | 0.069722 | 0.078510 | 0.080357 | 0.079794 | 0.074008 | 0.077862 | 0.070515 |
| 0.088468 | 0.076646 | 0.086307 | 0.088337 | 0.087719 | 0.081358 | 0.085595 | 0.077518 |
| 0.093365 | 0.080889 | 0.091085 | 0.093227 | 0.092574 | 0.085862 | 0.090333 | 0.081809 |
| 0.077069 | 0.066770 | 0.075187 | 0.076955 | 0.076416 | 0.070875 | 0.074566 | 0.067530 |
| 0.033987 | 0.043149 | 0.036644 | 0.034523 | 0.033972 | 0.041144 | 0.037651 | 0.043919 |
| 0.026563 | 0.033723 | 0.028639 | 0.026981 | 0.026551 | 0.032156 | 0.029426 | 0.034325 |
| 0.022712 | 0.028834 | 0.024488 | 0.023070 | 0.022702 | 0.027495 | 0.025160 | 0.029349 |
| 0.017607 | 0.022353 | 0.018984 | 0.017885 | 0.017599 | 0.021315 | 0.019505 | 0.022752 |
| 0.011875 | 0.015075 | 0.012803 | 0.012063 | 0.011872 | 0.014378 | 0.013156 | 0.015345 |
| 0.006757 | 0.008579 | 0.007286 | 0.006864 | 0.006754 | 0.008180 | 0.007486 | 0.008732 |
| 0.004526 | 0.005746 | 0.004880 | 0.004598 | 0.004524 | 0.005479 | 0.005014 | 0.005849 |
| 0.004208 | 0.005342 | 0.004537 | 0.004274 | 0.004206 | 0.005094 | 0.004661 | 0.005437 |
| 0.004030 | 0.005116 | 0.004345 | 0.004094 | 0.004028 | 0.004879 | 0.004464 | 0.005208 |
| 0.007028 | 0.008923 | 0.007578 | 0.007139 | 0.007025 | 0.008508 | 0.007786 | 0.009082 |
| 0.021509 | 0.027307 | 0.023190 | 0.021848 | 0.021499 | 0.026038 | 0.023827 | 0.027794 |

Table 24
VMT by Hour for 2035

| Brazoria | Chambers | Ft. Bend | Galveston | Harris | Liberty | Montgomery | Waller |
|-----------------|-----------------|-----------------|------------------|---------------|----------------|-------------------|---------------|
| 0.073771 | 0.055521 | 0.069776 | 0.070040 | 0.071673 | 0.065344 | 0.070139 | 0.055687 |
| 0.085407 | 0.064279 | 0.080783 | 0.081088 | 0.082978 | 0.075651 | 0.081202 | 0.064470 |
| 0.072661 | 0.054687 | 0.068727 | 0.068987 | 0.070595 | 0.064361 | 0.069084 | 0.054849 |
| 0.042930 | 0.052622 | 0.044193 | 0.044631 | 0.044138 | 0.046429 | 0.043520 | 0.051218 |
| 0.041481 | 0.050845 | 0.042701 | 0.043124 | 0.042648 | 0.044861 | 0.042050 | 0.049488 |
| 0.043424 | 0.053227 | 0.044701 | 0.045144 | 0.044646 | 0.046963 | 0.044020 | 0.051806 |
| 0.044971 | 0.055124 | 0.046294 | 0.046753 | 0.046237 | 0.048636 | 0.045589 | 0.053652 |
| 0.046030 | 0.056422 | 0.047384 | 0.047854 | 0.047325 | 0.049781 | 0.046662 | 0.054916 |
| 0.048886 | 0.059923 | 0.050324 | 0.050823 | 0.050262 | 0.052870 | 0.049558 | 0.058323 |
| 0.080506 | 0.070320 | 0.078778 | 0.080415 | 0.079972 | 0.074562 | 0.078258 | 0.070928 |
| 0.088501 | 0.077304 | 0.086602 | 0.088401 | 0.087915 | 0.081967 | 0.086030 | 0.077973 |
| 0.093400 | 0.081583 | 0.091396 | 0.093295 | 0.092781 | 0.086504 | 0.090792 | 0.082289 |
| 0.077098 | 0.067343 | 0.075443 | 0.077011 | 0.076587 | 0.071406 | 0.074945 | 0.067926 |
| 0.034015 | 0.042441 | 0.036544 | 0.034332 | 0.034292 | 0.040299 | 0.037654 | 0.043640 |
| 0.026584 | 0.033169 | 0.028561 | 0.026832 | 0.026801 | 0.031496 | 0.029428 | 0.034107 |
| 0.022731 | 0.028361 | 0.024421 | 0.022942 | 0.022916 | 0.026930 | 0.025163 | 0.029163 |
| 0.017622 | 0.021987 | 0.018932 | 0.017786 | 0.017765 | 0.020877 | 0.019507 | 0.022608 |

| | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|
| 0.011884 | 0.014830 | 0.012766 | 0.011996 | 0.011980 | 0.014080 | 0.013155 | 0.015247 |
| 0.006763 | 0.008438 | 0.007266 | 0.006826 | 0.006818 | 0.008012 | 0.007486 | 0.008677 |
| 0.004530 | 0.005652 | 0.004867 | 0.004572 | 0.004567 | 0.005367 | 0.005015 | 0.005812 |
| 0.004211 | 0.005254 | 0.004524 | 0.004250 | 0.004245 | 0.004989 | 0.004662 | 0.005403 |
| 0.004033 | 0.005032 | 0.004333 | 0.004071 | 0.004066 | 0.004778 | 0.004465 | 0.005175 |
| 0.007034 | 0.008777 | 0.007557 | 0.007100 | 0.007091 | 0.008334 | 0.007787 | 0.009025 |
| 0.021527 | 0.026859 | 0.023127 | 0.021727 | 0.021702 | 0.025503 | 0.023829 | 0.027618 |

TABLE 25
2011 HGA Percent of VMT by Trip Length, Hourly input to POLFAC62_3

| Hour | Trip Length Ranges (minutes) | | | | | |
|-----------------------|------------------------------|-------|-------|-------|-------|-------|
| | < 10 | 11-20 | 21-30 | 31-40 | 41-50 | >51 |
| 6 a.m. | 11.9 | 25.56 | 24.37 | 16.99 | 9.74 | 11.44 |
| 7 a.m. | 11.9 | 25.56 | 24.37 | 16.99 | 9.74 | 11.44 |
| 8 a.m. | 11.9 | 25.56 | 24.37 | 16.99 | 9.74 | 11.44 |
| 9 a.m. | 14.75 | 29.1 | 23.9 | 13.95 | 7.2 | 11.09 |
| 10 a.m. | 14.75 | 29.1 | 23.9 | 13.95 | 7.2 | 11.09 |
| 11 a.m. | 14.75 | 29.1 | 23.9 | 13.95 | 7.2 | 11.09 |
| 12 a.m. | 14.75 | 29.1 | 23.9 | 13.95 | 7.2 | 11.09 |
| 1 p.m. | 14.75 | 29.1 | 23.9 | 13.95 | 7.2 | 11.09 |
| 2 p.m. | 14.75 | 29.1 | 23.9 | 13.95 | 7.2 | 11.09 |
| 3 p.m. | 13.79 | 27.98 | 24.29 | 15.38 | 8.26 | 10.3 |
| 4 p.m. | 13.79 | 27.98 | 24.29 | 15.38 | 8.26 | 10.3 |
| 5 p.m. | 13.79 | 27.98 | 24.29 | 15.38 | 8.26 | 10.3 |
| 6 p.m. | 13.79 | 27.98 | 24.29 | 15.38 | 8.26 | 10.3 |
| 7 p.m. through 5 a.m. | 14.21 | 29.07 | 24.06 | 14.16 | 7.46 | 11.05 |

TABLE 26
2014 HGA Percent of VMT by Trip Length, Hourly input to POLFAC62_3

| Hour | Trip Length Ranges (minutes) | | | | | |
|---------|------------------------------|-------|-------|-------|-------|-------|
| | < 10 | 11-20 | 21-30 | 31-40 | 41-50 | >51 |
| 6 a.m. | 11.29 | 24.53 | 24.36 | 17.65 | 10.27 | 11.9 |
| 7 a.m. | 11.29 | 24.53 | 24.36 | 17.65 | 10.27 | 11.9 |
| 8 a.m. | 11.29 | 24.53 | 24.36 | 17.65 | 10.27 | 11.9 |
| 9 a.m. | 14.23 | 28.37 | 24.02 | 14.5 | 7.57 | 11.3 |
| 10 a.m. | 14.23 | 28.37 | 24.02 | 14.5 | 7.57 | 11.3 |
| 11 a.m. | 14.23 | 28.37 | 24.02 | 14.5 | 7.57 | 11.3 |
| 12 a.m. | 14.23 | 28.37 | 24.02 | 14.5 | 7.57 | 11.3 |
| 1 p.m. | 14.23 | 28.37 | 24.02 | 14.5 | 7.57 | 11.3 |
| 2 p.m. | 14.23 | 28.37 | 24.02 | 14.5 | 7.57 | 11.3 |
| 3 p.m. | 12.93 | 26.95 | 24.74 | 16.19 | 8.68 | 10.51 |

| | | | | | | |
|-----------------------|-------|-------|-------|-------|------|-------|
| 4 p.m. | 12.93 | 26.95 | 24.74 | 16.19 | 8.68 | 10.51 |
| 5 p.m. | 12.93 | 26.95 | 24.74 | 16.19 | 8.68 | 10.51 |
| 6 p.m. | 12.93 | 26.95 | 24.74 | 16.19 | 8.68 | 10.51 |
| 7 p.m. through 5 a.m. | 13.82 | 28.16 | 24.12 | 14.7 | 7.91 | 11.29 |

TABLE 27
2017 HGA Percent of VMT by Trip Length, Hourly input to POLFAC62_3

| Hour | <i>Trip Length Ranges (minutes)</i> | | | | | |
|-----------------------|-------------------------------------|-------|-------|-------|-------|-------|
| | < 10 | 11-20 | 21-30 | 31-40 | 41-50 | >51 |
| 6 a.m. | 11.03 | 24.18 | 24.65 | 17.92 | 10.4 | 11.82 |
| 7 a.m. | 11.03 | 24.18 | 24.65 | 17.92 | 10.4 | 11.82 |
| 8 a.m. | 11.03 | 24.18 | 24.65 | 17.92 | 10.4 | 11.82 |
| 9 a.m. | 14.02 | 28.17 | 24.34 | 14.68 | 7.63 | 11.16 |
| 10 a.m. | 14.02 | 28.17 | 24.34 | 14.68 | 7.63 | 11.16 |
| 11 a.m. | 14.02 | 28.17 | 24.34 | 14.68 | 7.63 | 11.16 |
| 12 a.m. | 14.02 | 28.17 | 24.34 | 14.68 | 7.63 | 11.16 |
| 1 p.m. | 14.02 | 28.17 | 24.34 | 14.68 | 7.63 | 11.16 |
| 2 p.m. | 14.02 | 28.17 | 24.34 | 14.68 | 7.63 | 11.16 |
| 3 p.m. | 12.68 | 26.77 | 25.16 | 16.36 | 8.71 | 10.32 |
| 4 p.m. | 12.68 | 26.77 | 25.16 | 16.36 | 8.71 | 10.32 |
| 5 p.m. | 12.68 | 26.77 | 25.16 | 16.36 | 8.71 | 10.32 |
| 6 p.m. | 12.68 | 26.77 | 25.16 | 16.36 | 8.71 | 10.32 |
| 7 p.m. through 5 a.m. | 13.58 | 27.76 | 24.4 | 15.05 | 8.07 | 11.15 |

TABLE 28
2018 HGA Percent of VMT by Trip Length, Hourly input to POLFAC62_3

| Hour | <i>Trip Length Ranges (minutes)</i> | | | | | |
|-----------------------|-------------------------------------|-------|-------|-------|-------|-------|
| | < 10 | 11-20 | 21-30 | 31-40 | 41-50 | >51 |
| 6 a.m. | 11.55 | 24.98 | 24.36 | 17.52 | 10.11 | 11.48 |
| 7 a.m. | 11.55 | 24.98 | 24.36 | 17.52 | 10.11 | 11.48 |
| 8 a.m. | 11.55 | 24.98 | 24.36 | 17.52 | 10.11 | 11.48 |
| 9 a.m. | 14.31 | 28.54 | 24.02 | 14.46 | 7.53 | 11.13 |
| 10 a.m. | 14.31 | 28.54 | 24.02 | 14.46 | 7.53 | 11.13 |
| 11 a.m. | 14.31 | 28.54 | 24.02 | 14.46 | 7.53 | 11.13 |
| 12 a.m. | 14.31 | 28.54 | 24.02 | 14.46 | 7.53 | 11.13 |
| 1 p.m. | 14.31 | 28.54 | 24.02 | 14.46 | 7.53 | 11.13 |
| 2 p.m. | 14.31 | 28.54 | 24.02 | 14.46 | 7.53 | 11.13 |
| 3 p.m. | 13.24 | 27.25 | 24.4 | 16.07 | 8.71 | 10.33 |
| 4 p.m. | 13.24 | 27.25 | 24.4 | 16.07 | 8.71 | 10.33 |
| 5 p.m. | 13.24 | 27.25 | 24.4 | 16.07 | 8.71 | 10.33 |
| 6 p.m. | 13.24 | 27.25 | 24.4 | 16.07 | 8.71 | 10.33 |
| 7 p.m. through 5 a.m. | 13.72 | 28.34 | 24.37 | 14.84 | 7.86 | 10.87 |

TABLE 29
2025 HGA Percent of VMT by Trip Length, Hourly input to POLFAC62_3

| Hour | <i>Trip Length Ranges (minutes)</i> | | | | | |
|-----------------------|-------------------------------------|-------|-------|-------|-------|-------|
| | < 10 | 11-20 | 21-30 | 31-40 | 41-50 | >51 |
| 6 a.m. | 10.54 | 23.46 | 24.31 | 18.4 | 10.99 | 12.3 |
| 7 a.m. | 10.54 | 23.46 | 24.31 | 18.4 | 10.99 | 12.3 |
| 8 a.m. | 10.54 | 23.46 | 24.31 | 18.4 | 10.99 | 12.3 |
| 9 a.m. | 13.52 | 27.73 | 24.46 | 15.08 | 7.9 | 11.31 |
| 10 a.m. | 13.52 | 27.73 | 24.46 | 15.08 | 7.9 | 11.31 |
| 11 a.m. | 13.52 | 27.73 | 24.46 | 15.08 | 7.9 | 11.31 |
| 12 a.m. | 13.52 | 27.73 | 24.46 | 15.08 | 7.9 | 11.31 |
| 1 p.m. | 13.52 | 27.73 | 24.46 | 15.08 | 7.9 | 11.31 |
| 2 p.m. | 13.52 | 27.73 | 24.46 | 15.08 | 7.9 | 11.31 |
| 3 p.m. | 12.04 | 25.97 | 24.98 | 16.93 | 9.32 | 10.75 |
| 4 p.m. | 12.04 | 25.97 | 24.98 | 16.93 | 9.32 | 10.75 |
| 5 p.m. | 12.04 | 25.97 | 24.98 | 16.93 | 9.32 | 10.75 |
| 6 p.m. | 12.04 | 25.97 | 24.98 | 16.93 | 9.32 | 10.75 |
| 7 p.m. through 5 a.m. | 12.92 | 26.96 | 24.48 | 15.7 | 8.57 | 11.38 |

TABLE 30
2035 HGA Percent of VMT by Trip Length, Hourly input to POLFAC62_3

| Hour | <i>Trip Length Ranges (minutes)</i> | | | | | |
|-----------------------|-------------------------------------|-------|-------|-------|-------|-------|
| | < 10 | 11-20 | 21-30 | 31-40 | 41-50 | >51 |
| 6 a.m. | 11.3 | 24.46 | 23.82 | 17.56 | 10.59 | 12.26 |
| 7 a.m. | 11.3 | 24.46 | 23.82 | 17.56 | 10.59 | 12.26 |
| 8 a.m. | 11.3 | 24.46 | 23.82 | 17.56 | 10.59 | 12.26 |
| 9 a.m. | 14.32 | 28.55 | 24.02 | 14.45 | 7.6 | 11.07 |
| 10 a.m. | 14.32 | 28.55 | 24.02 | 14.45 | 7.6 | 11.07 |
| 11 a.m. | 14.32 | 28.55 | 24.02 | 14.45 | 7.6 | 11.07 |
| 12 a.m. | 14.32 | 28.55 | 24.02 | 14.45 | 7.6 | 11.07 |
| 1 p.m. | 14.32 | 28.55 | 24.02 | 14.45 | 7.6 | 11.07 |
| 2 p.m. | 14.32 | 28.55 | 24.02 | 14.45 | 7.6 | 11.07 |
| 3 p.m. | 12.91 | 26.64 | 24.13 | 16.28 | 9.16 | 10.89 |
| 4 p.m. | 12.91 | 26.64 | 24.13 | 16.28 | 9.16 | 10.89 |
| 5 p.m. | 12.91 | 26.64 | 24.13 | 16.28 | 9.16 | 10.89 |
| 6 p.m. | 12.91 | 26.64 | 24.13 | 16.28 | 9.16 | 10.89 |
| 7 p.m. through 5 a.m. | 13.16 | 27.37 | 24.45 | 15.45 | 8.36 | 11.21 |

**Table 31
MOBILE6 State Programs**

| Command | Function Description | Input Parameter Source/Value |
|--|--|--|
| STAGE II REFUELING | Allows modeling of at-the-pump refueling emissions. | NOT APPLIED. Accounted for as an area source category. |
| ANTI-TAMP PROG | Allows user to model impacts of an ATP. | Locality-Specific. Program design by county. Applied to Harris and urban counties. Rural counties: no ATP. See Table 38. |
| <u>I/M Commands:</u> I/M PROGRAM I/M MODEL YEARS I/M VEHICLES I/M STRINGENCY I/M COMPLIANCE I/M WAIVER RATES I/M CUTPOINTS I/M EXEMPTION AGE I/M GRACE PERIOD NO I/M TTC CREDITS I/M EFFECTIVENESS I/M DESC FILE | Required for exhaust/evaporative I/M programs. Required for exhaust/evaporative I/M programs. Required for exhaust/evaporative I/M programs. Required for exhaust. Do not use for evaporative. Required for exhaust. Optional for evaporative. Required for exhaust. Optional for evaporative. Optional for exhaust (but required for IM240). Do not use with evaporative. Optional for both exhaust and evaporative. Optional for both exhaust and evaporative. Optional for exhaust. Do not use with evaporative. Optional for exhaust. Do not use with evaporative. Optional for both. | Locality Specific. Program design by county. Applied to Harris and urban counties. See Tables 26-37. No I/M program for rural counties. |

***Please note:**

- 1) MOBILE6 can only model one ATP program per run;
- 2) MOBILE6 assumes a January 1st start for I/M and ATP start year;

All evaluations require emissions factor post-processing to account for the full effects of the two-part ATP. All evaluations also required emissions factor post-processing to account for the effects of the May 1st I/M start dates (or in the case of Harris county, the May 1st I/M test type switch). For the Urban counties, it is assumed that the ATP start dates coincide with the exhaust I/M program start dates for those counties.

Two-Part ATP Post-processing

To model the full effects of the two-part ATP (as described in Table 26) for each affected county, emission factors from three runs were combined as follows:

$$EF_{ATP1} + EF_{ATP2} - EF_{NO\ ATP} = EF_{FINAL}$$

Where:

EF_{ATP1} = emissions factor with ATP1 credits

EF_{ATP2} = emissions factor with ATP2 credits

EF_{NO ATP} = emissions factor with no ATP credits

EF_{FINAL} = emissions factor with including estimated credits for both ATP1 and ATP2.

The calculation is performed for each county and evaluation. The calculation is performed for a second set of runs, which is required to develop emissions factor input for the May 1st post-processing step (see EF_{Start year +1} definition). The resulting emissions factors after this step include the full effects of the two-part ATP.

There are two different procedures for emissions factor post-processing due to I/M:

1) Harris county May 1st 2002 I/M test type switch; and 2) urban counties May 1st I/M start date. In each procedure, ratio calculations are performed on two sets of emission factors and the results are summed to achieve one set of emission factors with the desired I/M program effects. Each procedure is described in the next two sub-sections below.

May 1st I/M Post-Processing-Harris 2002 Control Strategy Evaluations

Modeling the May 1st program effects for Harris County for the 2002 analysis year: to model the 2002 Harris County emission factors, post-processing is required to account for the proportions of the vehicles in I/M subject fleets assumed to have been tested by the evaluation data (July 1, 2002) under each of the two I/M test types (pre-May TSI I/M test type and May 1st ASM-2 and OBD I/M test types). The assumption is that for annual cycle I/M programs with a test type change within one year of the evaluation date, the proportion of vehicles in the subject fleet that have been tested by the evaluation date under the new test is equal to the ratio of the number of years in the I/M program cycle, or 12 months. Conversely, the proportion of the subject fleet tested under the old program by the evaluation date is 1.0 minus the proportion of the subject fleet tested under the new program. For the 2002 Harris County analysis, the number of months for the test type change to the evaluation date is two months (i.e. May 1st test type switch to the July 1st evaluation date). Thus, the proportions used are: 1) 2/12 or 0.1667, under the new test, and 2) 10/12 or 0.8333 under the old test. After first performing post-processing to account for the full effects of the two-part ATP (as described in Step 1 above), the resulting emissions factors (one set with new I/M test benefit and one with old I/M tests benefit) are combined using these proportions.

May 1st I/M Post-Processing- Urban counties

In order to model the effects of May 1st program start date for urban counties, ratio calculations were performed on the emission factors from the first adjustment step. There are two MOBILE6 emissions factor sets required for this calculation: 1) the actual start year and 2) one year after actual start year. The emissions factors from these two sets are combined as:

$$EF_{FINAL} = \{((N - 1) \cdot 12 + 8) \times EF_{Act. Start Year} + 4 \times EF_{Start Year + 1}\} / (12 \times N)$$

Where:

N = evaluation year – start year

EF_{Act. Start Year} = emissions factor with actual exhaust I/M and ATP start year

EF_{Start Year + 1} = emissions factor with an exhaust I/M and ATP start one year later

EF_{FINAL} = emissions factor with the estimated May 1 start date of the actual I/M start year

Table 32
2011 Exhaust and Evaporative I/M setups for Harris County

| |
|---|
| * 2011 Exhaust and Evaporative I/M setups for Harris County |
| > Exhaust I/M: 2011; 2500/IDLE (all HDG) |
| I/M PROGRAM : 1 1997 2050 1 TRC 2500/IDLE |
| I/M MODEL YEARS : 1 1987 2009 |
| I/M VEHICLES : 1 11111 22222222 2 |
| I/M STRINGENCY : 1 20 |
| I/M COMPLIANCE : 1 96 |
| I/M WAIVER RATES : 1 3 3 |
| > Exhaust I/M: 2011; ASM 2525/5015 PHASE-IN (LDG 95-) |
| I/M PROGRAM : 2 1997 2050 1 TRC ASM 2525/5015 PHASE-IN |
| I/M MODEL YEARS : 2 1987 1995 |
| I/M VEHICLES : 2 22222 11111111 1 |
| I/M STRINGENCY : 2 20 |
| I/M COMPLIANCE : 2 96 |
| I/M WAIVER RATES : 2 3 3 |
| > Exhaust I/M: 2011; OBD I/M (LDG 96+) |
| I/M PROGRAM : 3 1997 2050 1 TRC OBD I/M |
| I/M MODEL YEARS : 3 1996 2009 |
| I/M VEHICLES : 3 22222 11111111 1 |
| I/M STRINGENCY : 3 20 |
| I/M COMPLIANCE : 3 96 |
| I/M WAIVER RATES : 3 3 3 |
| I/M EFFECTIVENESS : 1 1 1 |
| > Evaporative I/M: 2011: GC (all HDG) |
| I/M PROGRAM : 4 1997 2050 1 TRC GC |
| I/M MODEL YEARS : 4 1987 2009 |
| I/M VEHICLES : 4 11111 22222222 2 |
| I/M COMPLIANCE : 4 96 |
| I/M WAIVER RATES : 4 3 3 |
| > Evaporative I/M: 2011: GC (LDG 95-) |
| I/M PROGRAM : 5 1997 2050 1 TRC GC |
| I/M MODEL YEARS : 5 1987 1995 |
| I/M VEHICLES : 5 22222 11111111 1 |
| I/M COMPLIANCE : 5 96 |
| I/M WAIVER RATES : 5 3 3 |
| > Evaporative I/M: 2011: EVAP OBD & GC (LDG 96+) |
| I/M PROGRAM : 6 1997 2050 1 TRC EVAP OBD & GC |
| I/M MODEL YEARS : 6 1996 2009 |
| I/M VEHICLES : 6 22222 11111111 1 |
| I/M COMPLIANCE : 6 96 |
| I/M WAIVER RATES : 6 3 3 |

Table 33
2011 Exhaust and Evaporative I/M setups for HGA Urban Counties: Brazoria, Fort Bend, Galveston, Montgomery

| |
|--|
| <p>* 2011 Exhaust and Evaporative I/M setups for * HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery</p> <p>> Exhaust I/M: 2011 eval; 2003 start; 2500/IDLE (all HDG) I/M PROGRAM : 1 2003 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 1987 2009 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2011 eval; 2003 start; ASM 2525/5015 PHASE-IN (LDG 95-) I/M PROGRAM : 2 2003 2050 1 TRC ASM 2525/5015 PHASE-IN I/M MODEL YEARS : 2 1987 1995 I/M VEHICLES : 2 22222 11111111 1 I/M STRINGENCY : 2 20 I/M COMPLIANCE : 2 96 I/M WAIVER RATES : 2 3 3</p> <p>> Exhaust I/M: 2011 eval; 2003 start; OBD I/M (LDG 96+) I/M PROGRAM : 3 2003 2050 1 TRC OBD I/M I/M MODEL YEARS : 3 1996 2009 I/M VEHICLES : 3 22222 11111111 1 I/M STRINGENCY : 3 20 I/M COMPLIANCE : 3 96 I/M WAIVER RATES : 3 3 3</p> <p>I/M EFFECTIVENESS : 1 1 1</p> <p>> Evaporative I/M: 2011 eval; 2000 start; GC (all HDG) I/M PROGRAM : 4 2000 2050 1 TRC GC I/M MODEL YEARS : 4 1987 2009 I/M VEHICLES : 4 11111 22222222 2 I/M COMPLIANCE : 4 96 I/M WAIVER RATES : 4 3 3</p> <p>> Evaporative I/M: 2011 eval; 2000 start; GC (LDG 95-) I/M PROGRAM : 5 2000 2050 1 TRC GC I/M MODEL YEARS : 5 1987 1995 I/M VEHICLES : 5 22222 11111111 1 I/M COMPLIANCE : 5 96 I/M WAIVER RATES : 5 3 3</p> <p>> Evaporative I/M: 2011 eval; 2000 start; EVAP OBD & GC (LDG 96+) I/M PROGRAM : 6 2000 2050 1 TRC EVAP OBD & GC I/M MODEL YEARS : 6 1996 2009 I/M VEHICLES : 6 22222 11111111 1 I/M COMPLIANCE : 6 96 I/M WAIVER RATES : 6 3 3</p> |
|--|

Table 34
2011 Exhaust and Evaporative I/M setups for HGA Urban County Ratio Calculation to
get May 1 start (actual Urban County start year is 2003)

| |
|--|
| <p>* 2011 Exhaust and Evaporative I/M setups for * HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery * (actual Urban County start year is 2003)</p> <p>> Exhaust I/M: 2011 eval; 2004 start; 2500/IDLE (all HDG) I/M PROGRAM : 1 2004 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 1987 2009 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2011 eval; 2004 start; ASM 2525/5015 PHASE-IN (LDG 95-) I/M PROGRAM : 2 2004 2050 1 TRC ASM 2525/5015 PHASE-IN I/M MODEL YEARS : 2 1987 1995 I/M VEHICLES : 2 22222 11111111 1 I/M STRINGENCY : 2 20 I/M COMPLIANCE : 2 96 I/M WAIVER RATES : 2 3 3</p> <p>> Exhaust I/M: 2011 eval; 2004 start; OBD I/M (LDG 96+) I/M PROGRAM : 3 2004 2050 1 TRC OBD I/M I/M MODEL YEARS : 3 1996 2009 I/M VEHICLES : 3 22222 11111111 1 I/M STRINGENCY : 3 20 I/M COMPLIANCE : 3 96 I/M WAIVER RATES : 3 3 3</p> <p>I/M EFFECTIVENESS : 1 1 1</p> <p>> Evaporative I/M: 2011 eval; 2000 start; GC (all HDG) I/M PROGRAM : 4 2000 2050 1 TRC GC I/M MODEL YEARS : 4 1987 2009 I/M VEHICLES : 4 11111 22222222 2 I/M COMPLIANCE : 4 96 I/M WAIVER RATES : 4 3 3</p> <p>> Evaporative I/M: 2011 eval; 2000 start; GC (LDG 95-) I/M PROGRAM : 5 2000 2050 1 TRC GC I/M MODEL YEARS : 5 1987 1995 I/M VEHICLES : 5 22222 11111111 1 I/M COMPLIANCE : 5 96 I/M WAIVER RATES : 5 3 3</p> <p>> Evaporative I/M: 2011 eval; 2000 start; EVAP OBD & GC (LDG 96+) I/M PROGRAM : 6 2000 2050 1 TRC EVAP OBD & GC I/M MODEL YEARS : 6 1996 2009 I/M VEHICLES : 6 22222 11111111 1 I/M COMPLIANCE : 6 96 I/M WAIVER RATES : 6 3 3</p> |
|--|

Table 35
2014 Exhaust and Evaporative I/M setups for Harris County

* 2014 Exhaust and Evaporative I/M setups for Harris County

> Exhaust I/M: 2014; 2500/IDLE (all HDG)

I/M PROGRAM : 1 1997 2050 1 TRC 2500/IDLE

I/M MODEL YEARS : 1 1987 2012

I/M VEHICLES : 1 11111 22222222 2

I/M STRINGENCY : 1 20

I/M COMPLIANCE : 1 96

I/M WAIVER RATES : 1 3 3

> Exhaust I/M: 2014; ASM 2525/5015 PHASE-IN (LDG 95-)

I/M PROGRAM : 2 1997 2050 1 TRC ASM 2525/5015 PHASE-IN

I/M MODEL YEARS : 2 1987 1995

I/M VEHICLES : 2 22222 11111111 1

I/M STRINGENCY : 2 20

I/M COMPLIANCE : 2 96

I/M WAIVER RATES : 2 3 3

> Exhaust I/M: 2014; OBD I/M (LDG 96+)

I/M PROGRAM : 3 1997 2050 1 TRC OBD I/M

I/M MODEL YEARS : 3 1996 2012

I/M VEHICLES : 3 22222 11111111 1

I/M STRINGENCY : 3 20

I/M COMPLIANCE : 3 96

I/M WAIVER RATES : 3 3 3

I/M EFFECTIVENESS : 1 1 1

> Evaporative I/M: 2014: GC (all HDG)

I/M PROGRAM : 4 1997 2050 1 TRC GC

I/M MODEL YEARS : 4 1987 2012

I/M VEHICLES : 4 11111 22222222 2

I/M COMPLIANCE : 4 96

I/M WAIVER RATES : 4 3 3

> Evaporative I/M: 2014: GC (LDG 95-)

I/M PROGRAM : 5 1997 2050 1 TRC GC

I/M MODEL YEARS : 5 1987 1995

I/M VEHICLES : 5 22222 11111111 1

I/M COMPLIANCE : 5 96

I/M WAIVER RATES : 5 3 3

> Evaporative I/M: 2014: EVAP OBD & GC (LDG 96+)

I/M PROGRAM : 6 1997 2050 1 TRC EVAP OBD & GC

I/M MODEL YEARS : 6 1996 2012

I/M VEHICLES : 6 22222 11111111 1

I/M COMPLIANCE : 6 96

I/M WAIVER RATES : 6 3 3

Table 36
2014 Exhaust and Evaporative I/M setups for HGA Urban Counties: Brazoria, Fort Bend, Galveston, Montgomery

* 2014 Exhaust and Evaporative I/M setups for

* HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery

> Exhaust I/M: 2014 eval; 2003 start; 2500/IDLE (all HDG)

I/M PROGRAM : 1 2003 2050 1 TRC 2500/IDLE

I/M MODEL YEARS : 1 1987 2012

I/M VEHICLES : 1 11111 22222222 2

I/M STRINGENCY : 1 20

I/M COMPLIANCE : 1 96

I/M WAIVER RATES : 1 3 3

> Exhaust I/M: 2014 eval; 2003 start; ASM 2525/5015 PHASE-IN (LDG 95-)

I/M PROGRAM : 2 2003 2050 1 TRC ASM 2525/5015 PHASE-IN

I/M MODEL YEARS : 2 1987 1995

I/M VEHICLES : 2 22222 11111111 1

I/M STRINGENCY : 2 20

I/M COMPLIANCE : 2 96

I/M WAIVER RATES : 2 3 3

> Exhaust I/M: 2014 eval; 2003 start; OBD I/M (LDG 96+)

I/M PROGRAM : 3 2003 2050 1 TRC OBD I/M

I/M MODEL YEARS : 3 1996 2012

I/M VEHICLES : 3 22222 11111111 1

I/M STRINGENCY : 3 20

I/M COMPLIANCE : 3 96

I/M WAIVER RATES : 3 3 3

I/M EFFECTIVENESS : 1 1 1

> Evaporative I/M: 2014 eval; 2000 start; GC (all HDG)

I/M PROGRAM : 4 2000 2050 1 TRC GC

I/M MODEL YEARS : 4 1987 2012

I/M VEHICLES : 4 11111 22222222 2

I/M COMPLIANCE : 4 96

I/M WAIVER RATES : 4 3 3

> Evaporative I/M: 2014 eval; 2000 start; GC (LDG 95-)

I/M PROGRAM : 5 2000 2050 1 TRC GC

I/M MODEL YEARS : 5 1987 1995

I/M VEHICLES : 5 22222 11111111 1

I/M COMPLIANCE : 5 96

I/M WAIVER RATES : 5 3 3

> Evaporative I/M: 2014 eval; 2000 start; EVAP OBD & GC (LDG 96+)

I/M PROGRAM : 6 2000 2050 1 TRC EVAP OBD & GC

I/M MODEL YEARS : 6 1996 2012

I/M VEHICLES : 6 22222 11111111 1

I/M COMPLIANCE : 6 96

I/M WAIVER RATES : 6 3 3

Table 37
2014 Exhaust and Evaporative I/M setups for HGA Urban County Ratio Calculation to get May 1 start (actual Urban County start year is 2003)

* 2014 Exhaust and Evaporative I/M setups for
 * HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery
 * (actual Urban County start year is 2003)

> Exhaust I/M: 2014 eval; 2004 start; 2500/IDLE (all HDG)
 I/M PROGRAM : 1 2004 2050 1 TRC 2500/IDLE
 I/M MODEL YEARS : 1 1987 2012
 I/M VEHICLES : 1 11111 22222222 2
 I/M STRINGENCY : 1 20
 I/M COMPLIANCE : 1 96
 I/M WAIVER RATES : 1 3 3

> Exhaust I/M: 2014 eval; 2004 start; ASM 2525/5015 PHASE-IN (LDG 95-)
 I/M PROGRAM : 2 2004 2050 1 TRC ASM 2525/5015 PHASE-IN
 I/M MODEL YEARS : 2 1987 1995
 I/M VEHICLES : 2 22222 11111111 1
 I/M STRINGENCY : 2 20
 I/M COMPLIANCE : 2 96
 I/M WAIVER RATES : 2 3 3

> Exhaust I/M: 2014 eval; 2004 start; OBD I/M (LDG 96+)
 I/M PROGRAM : 3 2004 2050 1 TRC OBD I/M
 I/M MODEL YEARS : 3 1996 2012
 I/M VEHICLES : 3 22222 11111111 1
 I/M STRINGENCY : 3 20
 I/M COMPLIANCE : 3 96
 I/M WAIVER RATES : 3 3 3

I/M EFFECTIVENESS : 1 1 1

> Evaporative I/M: 2014 eval; 2000 start; GC (all HDG)
 I/M PROGRAM : 4 2000 2050 1 TRC GC
 I/M MODEL YEARS : 4 1987 2012
 I/M VEHICLES : 4 11111 22222222 2
 I/M COMPLIANCE : 4 96
 I/M WAIVER RATES : 4 3 3

> Evaporative I/M: 2014 eval; 2000 start; GC (LDG 95-)
 I/M PROGRAM : 5 2000 2050 1 TRC GC
 I/M MODEL YEARS : 5 1987 1995
 I/M VEHICLES : 5 22222 11111111 1
 I/M COMPLIANCE : 5 96
 I/M WAIVER RATES : 5 3 3

> Evaporative I/M: 2014 eval; 2000 start; EVAP OBD & GC (LDG 96+)
 I/M PROGRAM : 6 2000 2050 1 TRC EVAP OBD & GC
 I/M MODEL YEARS : 6 1996 2012
 I/M VEHICLES : 6 22222 11111111 1
 I/M COMPLIANCE : 6 96
 I/M WAIVER RATES : 6 3 3

Table 38
2017 Exhaust and Evaporative I/M setups for Harris County

* 2017 Exhaust and Evaporative I/M setups for Harris County

> Exhaust I/M: 2017; 2500/IDLE (all HDG)

I/M PROGRAM : 1 1997 2050 1 TRC 2500/IDLE
 I/M MODEL YEARS : 1 1987 2015
 I/M VEHICLES : 1 11111 22222222 2
 I/M STRINGENCY : 1 20
 I/M COMPLIANCE : 1 96
 I/M WAIVER RATES : 1 3 3

> Exhaust I/M: 2017; ASM 2525/5015 PHASE-IN (LDG 95-)

I/M PROGRAM : 2 1997 2050 1 TRC ASM 2525/5015 PHASE-IN
 I/M MODEL YEARS : 2 1987 1995
 I/M VEHICLES : 2 22222 11111111 1
 I/M STRINGENCY : 2 20
 I/M COMPLIANCE : 2 96
 I/M WAIVER RATES : 2 3 3

> Exhaust I/M: 2017; OBD I/M (LDG 96+)

I/M PROGRAM : 3 1997 2050 1 TRC OBD I/M
 I/M MODEL YEARS : 3 1996 2015
 I/M VEHICLES : 3 22222 11111111 1
 I/M STRINGENCY : 3 20
 I/M COMPLIANCE : 3 96
 I/M WAIVER RATES : 3 3 3

I/M EFFECTIVENESS : 1 1 1

> Evaporative I/M: 2017: GC (all HDG)

I/M PROGRAM : 4 1997 2050 1 TRC GC
 I/M MODEL YEARS : 4 1987 2015
 I/M VEHICLES : 4 11111 22222222 2
 I/M COMPLIANCE : 4 96
 I/M WAIVER RATES : 4 3 3

> Evaporative I/M: 2017: GC (LDG 95-)

I/M PROGRAM : 5 1997 2050 1 TRC GC
 I/M MODEL YEARS : 5 1987 1995
 I/M VEHICLES : 5 22222 11111111 1
 I/M COMPLIANCE : 5 96
 I/M WAIVER RATES : 5 3 3

> Evaporative I/M: 2017: EVAP OBD & GC (LDG 96+)

I/M PROGRAM : 6 1997 2050 1 TRC EVAP OBD & GC
 I/M MODEL YEARS : 6 1996 2015
 I/M VEHICLES : 6 22222 11111111 1
 I/M COMPLIANCE : 6 96
 I/M WAIVER RATES : 6 3 3

Table 39
2017 Exhaust and Evaporative I/M setups for HGA Urban Counties: Brazoria, Fort Bend, Galveston, Montgomery

* 2017 Exhaust and Evaporative I/M setups for

* HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery

> Exhaust I/M: 2017 eval; 2003 start; 2500/IDLE (all HDG)

I/M PROGRAM : 1 2003 2050 1 TRC 2500/IDLE

I/M MODEL YEARS : 1 1987 2015

I/M VEHICLES : 1 11111 22222222 2

I/M STRINGENCY : 1 20

I/M COMPLIANCE : 1 96

I/M WAIVER RATES : 1 3 3

> Exhaust I/M: 2017 eval; 2003 start; ASM 2525/5015 PHASE-IN (LDG 95-)

I/M PROGRAM : 2 2003 2050 1 TRC ASM 2525/5015 PHASE-IN

I/M MODEL YEARS : 2 1987 1995

I/M VEHICLES : 2 22222 11111111 1

I/M STRINGENCY : 2 20

I/M COMPLIANCE : 2 96

I/M WAIVER RATES : 2 3 3

> Exhaust I/M: 2017 eval; 2003 start; OBD I/M (LDG 96+)

I/M PROGRAM : 3 2003 2050 1 TRC OBD I/M

I/M MODEL YEARS : 3 1996 2015

I/M VEHICLES : 3 22222 11111111 1

I/M STRINGENCY : 3 20

I/M COMPLIANCE : 3 96

I/M WAIVER RATES : 3 3 3

I/M EFFECTIVENESS : 1 1 1

> Evaporative I/M: 2017 eval; 2000 start; GC (all HDG)

I/M PROGRAM : 4 2000 2050 1 TRC GC

I/M MODEL YEARS : 4 1987 2015

I/M VEHICLES : 4 11111 22222222 2

I/M COMPLIANCE : 4 96

I/M WAIVER RATES : 4 3 3

> Evaporative I/M: 2017 eval; 2000 start; GC (LDG 95-)

I/M PROGRAM : 5 2000 2050 1 TRC GC

I/M MODEL YEARS : 5 1987 1995

I/M VEHICLES : 5 22222 11111111 1

I/M COMPLIANCE : 5 96

I/M WAIVER RATES : 5 3 3

> Evaporative I/M: 2017 eval; 2000 start; EVAP OBD & GC (LDG 96+)

I/M PROGRAM : 6 2000 2050 1 TRC EVAP OBD & GC

I/M MODEL YEARS : 6 1996 2015

I/M VEHICLES : 6 22222 11111111 1

I/M COMPLIANCE : 6 96

I/M WAIVER RATES : 6 3 3

Table 40

2017 Exhaust and Evaporative I/M setups for HGA Urban County Ratio Calculation to get May 1 start (actual Urban County start year is 2003)

* 2017 Exhaust and Evaporative I/M setups for

* HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery

* (actual Urban County start year is 2003)

> Exhaust I/M: 2017 eval; 2004 start; 2500/IDLE (all HDG)

I/M PROGRAM : 1 2004 2050 1 TRC 2500/IDLE

I/M MODEL YEARS : 1 1987 2015

I/M VEHICLES : 1 11111 22222222 2

I/M STRINGENCY : 1 20

I/M COMPLIANCE : 1 96

I/M WAIVER RATES : 1 3 3

> Exhaust I/M: 2017 eval; 2004 start; ASM 2525/5015 PHASE-IN (LDG 95-)

I/M PROGRAM : 2 2004 2050 1 TRC ASM 2525/5015 PHASE-IN

I/M MODEL YEARS : 2 1987 1995

I/M VEHICLES : 2 22222 11111111 1

I/M STRINGENCY : 2 20

I/M COMPLIANCE : 2 96

I/M WAIVER RATES : 2 3 3

> Exhaust I/M: 2017 eval; 2004 start; OBD I/M (LDG 96+)

I/M PROGRAM : 3 2004 2050 1 TRC OBD I/M

I/M MODEL YEARS : 3 1996 2015

I/M VEHICLES : 3 22222 11111111 1

I/M STRINGENCY : 3 20

I/M COMPLIANCE : 3 96

I/M WAIVER RATES : 3 3 3

I/M EFFECTIVENESS : 1 1 1

> Evaporative I/M: 2017 eval; 2000 start; GC (all HDG)

I/M PROGRAM : 4 2000 2050 1 TRC GC

I/M MODEL YEARS : 4 1987 2015

I/M VEHICLES : 4 11111 22222222 2

I/M COMPLIANCE : 4 96

I/M WAIVER RATES : 4 3 3

> Evaporative I/M: 2017 eval; 2000 start; GC (LDG 95-)

I/M PROGRAM : 5 2000 2050 1 TRC GC

I/M MODEL YEARS : 5 1987 1995

I/M VEHICLES : 5 22222 11111111 1

I/M COMPLIANCE : 5 96

I/M WAIVER RATES : 5 3 3

> Evaporative I/M: 2017 eval; 2000 start; EVAP OBD & GC (LDG 96+)

I/M PROGRAM : 6 2000 2050 1 TRC EVAP OBD & GC

I/M MODEL YEARS : 6 1996 2015

I/M VEHICLES : 6 22222 11111111 1

I/M COMPLIANCE : 6 96

I/M WAIVER RATES : 6 3 3

Table 41
2018 Exhaust and Evaporative I/M setups for Harris County

* 2018 Exhaust and Evaporative I/M setups for Harris County

> Exhaust I/M: 2018; 2500/IDLE (all HDG)

I/M PROGRAM : 1 1997 2050 1 TRC 2500/IDLE
 I/M MODEL YEARS : 1 1987 2016
 I/M VEHICLES : 1 11111 22222222 2
 I/M STRINGENCY : 1 20
 I/M COMPLIANCE : 1 96
 I/M WAIVER RATES : 1 3 3

> Exhaust I/M: 2018; ASM 2525/5015 PHASE-IN (LDG 95-)

I/M PROGRAM : 2 1997 2050 1 TRC ASM 2525/5015 PHASE-IN
 I/M MODEL YEARS : 2 1987 1995
 I/M VEHICLES : 2 22222 11111111 1
 I/M STRINGENCY : 2 20
 I/M COMPLIANCE : 2 96
 I/M WAIVER RATES : 2 3 3

> Exhaust I/M: 2018; OBD I/M (LDG 96+)

I/M PROGRAM : 3 1997 2050 1 TRC OBD I/M
 I/M MODEL YEARS : 3 1996 2016
 I/M VEHICLES : 3 22222 11111111 1
 I/M STRINGENCY : 3 20
 I/M COMPLIANCE : 3 96
 I/M WAIVER RATES : 3 3 3

I/M EFFECTIVENESS : 1 1 1

> Evaporative I/M: 2018: GC (all HDG)

I/M PROGRAM : 4 1997 2050 1 TRC GC
 I/M MODEL YEARS : 4 1987 2016
 I/M VEHICLES : 4 11111 22222222 2
 I/M COMPLIANCE : 4 96
 I/M WAIVER RATES : 4 3 3

> Evaporative I/M: 2018: GC (LDG 95-)

I/M PROGRAM : 5 1997 2050 1 TRC GC
 I/M MODEL YEARS : 5 1987 1995
 I/M VEHICLES : 5 22222 11111111 1
 I/M COMPLIANCE : 5 96
 I/M WAIVER RATES : 5 3 3

> Evaporative I/M: 2018: EVAP OBD & GC (LDG 96+)

I/M PROGRAM : 6 1997 2050 1 TRC EVAP OBD & GC
 I/M MODEL YEARS : 6 1996 2016
 I/M VEHICLES : 6 22222 11111111 1
 I/M COMPLIANCE : 6 96
 I/M WAIVER RATES : 6 3 3

Table 42
2018 Exhaust and Evaporative I/M setups for HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery

| |
|--|
| <p>* 2018 Exhaust and Evaporative I/M setups for * HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery</p> <p>> Exhaust I/M: 2018 eval; 2003 start; 2500/IDLE (all HDG) I/M PROGRAM : 1 2003 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 1987 2016 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2018 eval; 2003 start; ASM 2525/5015 PHASE-IN (LDG 95-) I/M PROGRAM : 2 2003 2050 1 TRC ASM 2525/5015 PHASE-IN I/M MODEL YEARS : 2 1987 1995 I/M VEHICLES : 2 22222 11111111 1 I/M STRINGENCY : 2 20 I/M COMPLIANCE : 2 96 I/M WAIVER RATES : 2 3 3</p> <p>> Exhaust I/M: 2018 eval; 2003 start; OBD I/M (LDG 96+) I/M PROGRAM : 3 2003 2050 1 TRC OBD I/M I/M MODEL YEARS : 3 1996 2016 I/M VEHICLES : 3 22222 11111111 1 I/M STRINGENCY : 3 20 I/M COMPLIANCE : 3 96 I/M WAIVER RATES : 3 3 3</p> <p>I/M EFFECTIVENESS : 1 1 1</p> <p>> Evaporative I/M: 2018 eval; 2000 start; GC (all HDG) I/M PROGRAM : 4 2000 2050 1 TRC GC I/M MODEL YEARS : 4 1987 2016 I/M VEHICLES : 4 11111 22222222 2 I/M COMPLIANCE : 4 96 I/M WAIVER RATES : 4 3 3</p> <p>> Evaporative I/M: 2018 eval; 2000 start; GC (LDG 95-) I/M PROGRAM : 5 2000 2050 1 TRC GC I/M MODEL YEARS : 5 1987 1995 I/M VEHICLES : 5 22222 11111111 1 I/M COMPLIANCE : 5 96 I/M WAIVER RATES : 5 3 3</p> <p>> Evaporative I/M: 2018 eval; 2000 start; EVAP OBD & GC (LDG 96+) I/M PROGRAM : 6 2000 2050 1 TRC EVAP OBD & GC I/M MODEL YEARS : 6 1996 2016 I/M VEHICLES : 6 22222 11111111 1 I/M COMPLIANCE : 6 96 I/M WAIVER RATES : 6 3 3</p> |
|--|

Table 43
2018 Exhaust and Evaporative I/M setups for HGA Urban County Ratio Calculation to
get May 1 start (actual Urban County start year is 2003)

| |
|--|
| <p>* 2018 Exhaust and Evaporative I/M setups for * HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery * (actual Urban County start year is 2003)</p> <p>> Exhaust I/M: 2018 eval; 2004 start; 2500/IDLE (all HDG) I/M PROGRAM : 1 2004 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 1987 2016 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2018 eval; 2004 start; ASM 2525/5015 PHASE-IN (LDG 95-) I/M PROGRAM : 2 2004 2050 1 TRC ASM 2525/5015 PHASE-IN I/M MODEL YEARS : 2 1987 1995 I/M VEHICLES : 2 22222 11111111 1 I/M STRINGENCY : 2 20 I/M COMPLIANCE : 2 96 I/M WAIVER RATES : 2 3 3</p> <p>> Exhaust I/M: 2018 eval; 2004 start; OBD I/M (LDG 96+) I/M PROGRAM : 3 2004 2050 1 TRC OBD I/M I/M MODEL YEARS : 3 1996 2016 I/M VEHICLES : 3 22222 11111111 1 I/M STRINGENCY : 3 20 I/M COMPLIANCE : 3 96 I/M WAIVER RATES : 3 3 3</p> <p>I/M EFFECTIVENESS : 1 1 1</p> <p>> Evaporative I/M: 2018 eval; 2000 start; GC (all HDG) I/M PROGRAM : 4 2000 2050 1 TRC GC I/M MODEL YEARS : 4 1987 2016 I/M VEHICLES : 4 11111 22222222 2 I/M COMPLIANCE : 4 96 I/M WAIVER RATES : 4 3 3</p> <p>> Evaporative I/M: 2018 eval; 2000 start; GC (LDG 95-) I/M PROGRAM : 5 2000 2050 1 TRC GC I/M MODEL YEARS : 5 1987 1995 I/M VEHICLES : 5 22222 11111111 1 I/M COMPLIANCE : 5 96 I/M WAIVER RATES : 5 3 3</p> <p>> Evaporative I/M: 2018 eval; 2000 start; EVAP OBD & GC (LDG 96+) I/M PROGRAM : 6 2000 2050 1 TRC EVAP OBD & GC I/M MODEL YEARS : 6 1996 2016 I/M VEHICLES : 6 22222 11111111 1 I/M COMPLIANCE : 6 96 I/M WAIVER RATES : 6 3 3</p> |
|--|

Table 44
2025 Exhaust and Evaporative I/M setups for Harris County

* 2025 Exhaust and Evaporative I/M setups for Harris County

> Exhaust I/M: 2025; 2500/IDLE (all HDG)

I/M PROGRAM : 1 1997 2050 1 TRC 2500/IDLE
 I/M MODEL YEARS : 1 2001 2023
 I/M VEHICLES : 1 11111 22222222 2
 I/M STRINGENCY : 1 20
 I/M COMPLIANCE : 1 96
 I/M WAIVER RATES : 1 3 3

> Exhaust I/M: 2025; OBD I/M (LDG 96+)

I/M PROGRAM : 2 1997 2050 1 TRC OBD I/M
 I/M MODEL YEARS : 2 2001 2023
 I/M VEHICLES : 2 22222 11111111 1
 I/M STRINGENCY : 2 20
 I/M COMPLIANCE : 2 96
 I/M WAIVER RATES : 2 3 3

I/M EFFECTIVENESS : 1 1 1

> Evaporative I/M: 2025: GC (all HDG)

I/M PROGRAM : 3 1997 2050 1 TRC GC
 I/M MODEL YEARS : 3 2001 2023
 I/M VEHICLES : 3 11111 22222222 2
 I/M COMPLIANCE : 3 96
 I/M WAIVER RATES : 3 3 3

> Evaporative I/M: 2025: EVAP OBD & GC (LDG 96+)

I/M PROGRAM : 4 1997 2050 1 TRC EVAP OBD & GC
 I/M MODEL YEARS : 4 2001 2023
 I/M VEHICLES : 4 22222 11111111 1
 I/M COMPLIANCE : 4 96
 I/M WAIVER RATES : 4 3 3

Table 45
2025 Exhaust and Evaporative I/M setups for HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery

| |
|---|
| <p>* 2025 Exhaust and Evaporative I/M setups for * HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery</p> <p>> Exhaust I/M: 2025 eval; 2003 start; 2500/IDLE (all HDG) I/M PROGRAM : 1 2003 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 2001 2023 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2025 eval; 2003 start; OBD I/M (LDG 96+) I/M PROGRAM : 2 2003 2050 1 TRC OBD I/M I/M MODEL YEARS : 2 2001 2023 I/M VEHICLES : 2 22222 11111111 1 I/M STRINGENCY : 2 20 I/M COMPLIANCE : 2 96 I/M WAIVER RATES : 2 3 3</p> <p>I/M EFFECTIVENESS : 1 1 1</p> <p>> Evaporative I/M: 2025 eval; 2000 start; GC (all HDG) I/M PROGRAM : 3 2000 2050 1 TRC GC I/M MODEL YEARS : 3 2001 2023 I/M VEHICLES : 3 11111 22222222 2 I/M COMPLIANCE : 3 96 I/M WAIVER RATES : 3 3 3</p> <p>> Evaporative I/M: 2025 eval; 2000 start; EVAP OBD & GC (LDG 96+) I/M PROGRAM : 4 2000 2050 1 TRC EVAP OBD & GC I/M MODEL YEARS : 4 2001 2023 I/M VEHICLES : 4 22222 11111111 1 I/M COMPLIANCE : 4 96 I/M WAIVER RATES : 4 3 3</p> |
|---|

Table 46
2025 Exhaust and Evaporative I/M setups for HGA Urban County Ratio Calculation to get May 1 start (actual Urban County start year is 2003)

| |
|--|
| <p>* 2025 Exhaust and Evaporative I/M setups for * HGA Urban County Ratio Calculation to get May 1 start * (actual Urban County start year is 2003)</p> <p>> Exhaust I/M: 2025 eval; 2004 start; 2500/IDLE (all HDG) I/M PROGRAM : 1 2004 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 2001 2023 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2025 eval; 2004 start; OBD I/M (LDG 96+)</p> |
|--|

I/M PROGRAM : 2 2004 2050 1 TRC OBD I/M
I/M MODEL YEARS : 2 2001 2023
I/M VEHICLES : 2 22222 11111111 1
I/M STRINGENCY : 2 20
I/M COMPLIANCE : 2 96
I/M WAIVER RATES : 2 3 3

I/M EFFECTIVENESS : 1 1 1

> Evaporative I/M: 2025 eval; 2000 start; GC (all HDG)

I/M PROGRAM : 3 2000 2050 1 TRC GC
I/M MODEL YEARS : 3 2001 2023
I/M VEHICLES : 3 11111 22222222 2
I/M COMPLIANCE : 3 96
I/M WAIVER RATES : 3 3 3

> Evaporative I/M: 2025 eval; 2000 start; EVAP OBD & GC (LDG 96+)

I/M PROGRAM : 4 2000 2050 1 TRC EVAP OBD & GC
I/M MODEL YEARS : 4 2001 2023
I/M VEHICLES : 4 22222 11111111 1
I/M COMPLIANCE : 4 96
I/M WAIVER RATES : 4 3 3

Table 47
2035 Exhaust and Evaporative I/M setups for Harris County

* 2035 Exhaust and Evaporative I/M setups for Harris County

> Exhaust I/M: 2035; 2500/IDLE (all HDG)

I/M PROGRAM : 1 1997 2050 1 TRC 2500/IDLE
I/M MODEL YEARS : 1 2011 2033
I/M VEHICLES : 1 11111 22222222 2
I/M STRINGENCY : 1 20
I/M COMPLIANCE : 1 96
I/M WAIVER RATES : 1 3 3

> Exhaust I/M: 2035; OBD I/M (LDG 96+)

I/M PROGRAM : 2 1997 2050 1 TRC OBD I/M
I/M MODEL YEARS : 2 2011 2033
I/M VEHICLES : 2 22222 11111111 1
I/M STRINGENCY : 2 20
I/M COMPLIANCE : 2 96
I/M WAIVER RATES : 2 3 3

I/M EFFECTIVENESS : 1 1 1

> Evaporative I/M: 2035: GC (all HDG)

I/M PROGRAM : 3 1997 2050 1 TRC GC
I/M MODEL YEARS : 3 2011 2033
I/M VEHICLES : 3 11111 22222222 2
I/M COMPLIANCE : 3 96
I/M WAIVER RATES : 3 3 3

> Evaporative I/M: 2035: EVAP OBD & GC (LDG 96+)

I/M PROGRAM : 4 1997 2050 1 TRC EVAP OBD & GC

| | |
|------------------|----------------------|
| I/M MODEL YEARS | : 4 2011 2033 |
| I/M VEHICLES | : 4 22222 11111111 1 |
| I/M COMPLIANCE | : 4 96 |
| I/M WAIVER RATES | : 4 3 3 |

Table 48
2035 Exhaust and Evaporative I/M setups for HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery

| | |
|--|-----------------------------------|
| * 2035 Exhaust and Evaporative I/M setups for | |
| * HGA Urban County Group: Brazoria, Fort Bend, Galveston, Montgomery | |
| > Exhaust I/M: 2035 eval; 2003 start; 2500/IDLE (all HDG) | |
| I/M PROGRAM | : 1 2003 2050 1 TRC 2500/IDLE |
| I/M MODEL YEARS | : 1 2011 2033 |
| I/M VEHICLES | : 1 11111 22222222 2 |
| I/M STRINGENCY | : 1 20 |
| I/M COMPLIANCE | : 1 96 |
| I/M WAIVER RATES | : 1 3 3 |
| | |
| > Exhaust I/M: 2035 eval; 2003 start; OBD I/M (LDG 96+) | |
| I/M PROGRAM | : 2 2003 2050 1 TRC OBD I/M |
| I/M MODEL YEARS | : 2 2011 2033 |
| I/M VEHICLES | : 2 22222 11111111 1 |
| I/M STRINGENCY | : 2 20 |
| I/M COMPLIANCE | : 2 96 |
| I/M WAIVER RATES | : 2 3 3 |
| | |
| I/M EFFECTIVENESS : 1 1 1 | |
| | |
| > Evaporative I/M: 2035 eval; 2000 start; GC (all HDG) | |
| I/M PROGRAM | : 3 2000 2050 1 TRC GC |
| I/M MODEL YEARS | : 3 2011 2033 |
| I/M VEHICLES | : 3 11111 22222222 2 |
| I/M COMPLIANCE | : 3 96 |
| I/M WAIVER RATES | : 3 3 3 |
| | |
| > Evaporative I/M: 2035 eval; 2000 start; EVAP OBD & GC (LDG 96+) | |
| I/M PROGRAM | : 4 2000 2050 1 TRC EVAP OBD & GC |
| I/M MODEL YEARS | : 4 2011 2033 |
| I/M VEHICLES | : 4 22222 11111111 1 |
| I/M COMPLIANCE | : 4 96 |
| I/M WAIVER RATES | : 4 3 3 |

Table 49
2035 Exhaust and Evaporative I/M setups for HGA Urban County Ratio Calculation to get May 1 start (actual Urban County start year is 2003)

| |
|--|
| <p>* 2035 Exhaust and Evaporative I/M setups for * HGA Urban County Ratio Calculation to get May 1 start * (actual Urban County start year is 2003)</p> <p>> Exhaust I/M: 2035 eval; 2004 start; 2500/IDLE (all HDG) I/M PROGRAM : 1 2004 2050 1 TRC 2500/IDLE I/M MODEL YEARS : 1 2011 2033 I/M VEHICLES : 1 11111 22222222 2 I/M STRINGENCY : 1 20 I/M COMPLIANCE : 1 96 I/M WAIVER RATES : 1 3 3</p> <p>> Exhaust I/M: 2035 eval; 2004 start; OBD I/M (LDG 96+) I/M PROGRAM : 2 2004 2050 1 TRC OBD I/M I/M MODEL YEARS : 2 2011 2033 I/M VEHICLES : 2 22222 11111111 1 I/M STRINGENCY : 2 20 I/M COMPLIANCE : 2 96 I/M WAIVER RATES : 2 3 3</p> <p>I/M EFFECTIVENESS : 1 1 1</p> <p>> Evaporative I/M: 2035 eval; 2000 start; GC (all HDG) I/M PROGRAM : 3 2000 2050 1 TRC GC I/M MODEL YEARS : 3 2011 2033 I/M VEHICLES : 3 11111 22222222 2 I/M COMPLIANCE : 3 96 I/M WAIVER RATES : 3 3 3</p> <p>> Evaporative I/M: 2035 eval; 2000 start; EVAP OBD & GC (LDG 96+) I/M PROGRAM : 4 2000 2050 1 TRC EVAP OBD & GC I/M MODEL YEARS : 4 2011 2033 I/M VEHICLES : 4 22222 11111111 1 I/M COMPLIANCE : 4 96 I/M WAIVER RATES : 4 3 3</p> |
|--|

Table 50
HGA Counties ATP: 2011, 2014, 2017, 2018, 2025, 2035
MOBILE6 Command and Data Parameter Values

| |
|---|
| <p>2011-ATP inputs: Harris County: ATP2: 84 87 09 22222 22222222 2 11 096. 22112222 Urban Counties: ATP2: 03 87 09 22222 22222222 2 11 096. 22112222</p> |
| <p>2014-ATP inputs: Harris County: ATP2: 84 90 12 22222 22222222 2 11 096. 22112222 Urban Counties: ATP2: 03 90 12 22222 22222222 2 11 096. 22112222</p> |
| <p>2017-ATP inputs: Harris County: ATP2: 84 93 15 22222 22222222 2 11 096. 22112222 Urban Counties: ATP2: 03 93 15 22222 22222222 2 11 096. 22112222</p> |
| <p>2018-ATP inputs: Harris County: ATP2: 84 94 16 22222 22222222 2 11 096. 22112222 Urban Counties: ATP2: 03 94 16 22222 22222222 2 11 096. 22112222</p> |
| <p>2025-ATP inputs: Harris County: ATP2: 84 01 23 22222 22222222 2 11 096. 22112222 Urban Counties: ATP2: 03 01 23 22222 22222222 2 11 096. 22112222</p> |
| <p>2035-ATP inputs: Harris County: ATP2: 84 11 33 22222 22222222 2 11 096. 22112222 Urban Counties: ATP2: 03 11 33 22222 22222222 2 11 096. 22112222</p> |

Table 51
Mobile6 Fuels

| Command | Function/Description | Input Parameter Source/Value |
|----------------|---|--|
| FUEL PROGRAM | Allows specification of one of four options: 1) Conventional Gasoline East Tier2 sulfur phase-in schedule (includes Texas); 2) RFG; 3) Conventional Gasoline West Tier2 sulfur geographical phase-in area schedule; or 4) Sulfur content for gasoline after 1999. | Option 4: applied to control strategy analyses; sulfur content values from MOBILE6 RFG summer program default. |
| SULFUR CONTENT | Allows alternate sulfur content for conventional | NOT APPLIED. (MOBILE6 |

| | | |
|------------------|---|---------------------------------|
| | gasoline through calendar year 1999. | default assumed.) |
| DIESEL SULFUR | Allows alternate diesel sulfur levels for all calendar years, for PARTICULATES. No affect on HC, CO, NOx, air toxics (except if calculated as ratio to PM). | NOT APPLIED. |
| OXYGENATED FUELS | Allows modeling of oxygenated gasoline effects on exhaust for all gasoline-fueled vehicle types. Not for use with AIR TOXICS command. | Used MOBILE6 RFG summer values. |
| FUEL RVP | Allows user to specify fuel RVP for area being modeled (required to run model). | Applied: 6.8 psi. |
| SEASON | Identifies effective season for RFG calculation regardless of month modeled. | NOT APPLIED. |
| GAS AROMATIC% | Only when AIR TOXICS command is used. | NOT APPLIED. |
| GAS OLEFIN% | Only when AIR TOXICS command is used. | NOT APPLIED. |
| GAS BENZENE% | Only when AIR TOXICS command is used. | NOT APPLIED. |
| E200 | Only when AIR TOXICS command is used. | NOT APPLIED. |
| E300 | Only when AIR TOXICS command is used. | NOT APPLIED. |
| OXYGENATE | Only when AIR TOXICS command is used. | NOT APPLIED. |
| RVP OXY WAIVER | Only when AIR TOXICS command is used. | NOT APPLIED. |

Table 52
MOBILE6 Alternative Emissions Regulations and Control Measures

| Command | Function/Description | Input Parameter Source/Value |
|--|---|--|
| NO CLEAN AIR ACT | Models vehicle emissions as if the Federal Clean Air Act Amendments of 1990 had not been implemented. | NOT APPLIED |
| <u>HDDV NOx Off Cycle Emissions Effects:</u> NO DEFEAT DEVICE | Turns off effects of HDD vehicle NOx offcycle emissions effects (defeat device emissions). | NOT APPLIED. |
| NO NOX PULL AHEAD | Turns off HDD NOx emissions reduction effects of pull- ahead program. | NOT APPLIED. |
| NO REBUILD | Turns off HDD NOx emissions reduction effects of rebuild program. | NOT APPLIED. |
| REBUILD EFFECTS | Allows user change rebuild program effectiveness rate. | Applied. MOBILE6 default (0.90) was assumed for affected analyses. |
| <u>Tier 2 Emission Standards</u> | Allow the overriding of the default Tier 2 | NOT APPLIED. |

| | | |
|---|--|--------------|
| <u>and Fuel Requirements:</u> NO TIER2 T2 EXH PHASE-IN T2 EVAP PHASE-IN T2 CERT | emissions standards and fuel requirements settings. Disables Tier 2 requirements. Allows alternate Tier 2 exhaust standard phase-in schedules. Allows alternate Tier 2 evaporative standard phase-in schedules. Allows user to specify alternate Tier 2 50,000-mile certification standards. | |
| 94+ LDG IMPLEMENTATION | Allows use of alternate 1994 and later fleet penetration fractions for LDGVs under the Tier 1, NLEV (or California LEV 1), and Tier 2 emissions standard programs. | NOT APPLIED. |
| NO 2007 HDDV RULE | Disables 2007 HDV emissions standards. | NOT APPLIED. |

Table 53
Composite Vehicle Classes and Data Sources for Vehicle Age Distributions (REG DIST Command)

| Number | Abbreviation | Description | Source of Distributions |
|---------------|---------------------|------------------------------|--|
| 1 | LDV | Light-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 2 | LDT1 | Light-Duty Trucks 1 | TxDMV July 2011 HGA County Registrations |
| 3 | LDT2 | Light-Duty Trucks 2 | TxDMV July 2011 HGA County Registrations |
| 4 | LDT3 | Light-Duty Trucks 3 | TxDMV July 2011 HGA County Registrations |
| 5 | LDT4 | Light-Duty Trucks 4 | TxDMV July 2011 HGA County Registrations |
| 6 | HDV2B | Class 2b Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 7 | HDV3 | Class 3 Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 8 | HDV4 | Class 4 Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 9 | HDV5 | Class 5 Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 10 | HDV6 | Class 6 Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 11 | HDV7 | Class 7 Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 12 | HDV8A | Class 8a Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 13 | HDV8B | Class 8b Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |

| | | | |
|-----------|------|-------------------------|--|
| 14 | HDBS | School Buses | MOBILE6 Defaults |
| 15 | HDBT | Transit and Urban Buses | MOBILE6 Defaults |
| 16 | MC | Motorcycles | TxDMV July 2011 HGA County Registrations |

These 2011 registrations have been used for 2011, 2014, 2017, 2018, 2025 and 2035 future years.

Table 54
Source of Diesel Fractions for Composite Vehicle Types (DIESEL FRACTIONS Command)

| Number¹ | Abbreviation | Description | Source of Fractions |
|---------------------------|---------------------|------------------------------|--|
| 1 | LDV | Light-Duty Vehicles | EPA MOBILE6 Evaluation Year Default |
| 2 | LDT1 | Light-Duty Trucks 1 | EPA MOBILE6 Evaluation Year Default |
| 3 | LDT2 | Light-Duty Trucks 2 | EPA MOBILE6 Evaluation Year Default |
| 4 | LDT3 | Light-Duty Trucks 3 | EPA MOBILE6 Evaluation Year Default |
| 5 | LDT4 | Light-Duty Trucks 4 | EPA MOBILE6 Evaluation Year Default |
| 6 | HDV2B | Class 2b Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 7 | HDV3 | Class 3 Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 8 | HDV4 | Class 4 Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 9 | HDV5 | Class 5 Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 10 | HDV6 | Class 6 Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 11 | HDV7 | Class 7 Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 12 | HDV8A | Class 8a Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 13 | HDV8B | Class 8b Heavy-Duty Vehicles | TxDMV July 2011 HGA County Registrations |
| 14 | HDBS | School Buses | EPA MOBILE6 Evaluation Year Default |

¹. MOBILE6 input sequence.

Table 55
HGAC TDM Functional Classification Groupings
for Application of VMT Mix and MOBILE6 Drive Cycle Emissions Factors

| MOBILE6 Drive Cycle | TDM Functional Classification | VMT Mix |
|----------------------------|---------------------------------------|----------------|
| Freeway | Urban Interstate | Freeway |
| | Urban Other Freeway | |
| | Rural Interstate | |
| | Rural Other Freeway | |
| | Toll Roads | |
| Ramp | Ramps (Freeway, Toll Roads, Frontage) | |
| Arterial | Urban Principal Arterial | Arterial |
| | Urban Other Arterial | |
| | Rural Principal Arterial | |
| | Rural Other Arterial | |
| | Urban Collector | Collector |
| | Rural Major Collector | |
| | Rural Collector | |
| | Local (Centroid Connector) | |
| | Local (Intrazonal) | |

Table 56
HGA 2011 Weekday VMT Mix by Time Period and Roadway Functional Classification Group

| Obs | TP | FC | P_LDGV | P_LDGT1 | P_LDGT2 | P_LDGT3 | P_LDGT4 | P_HDGV2b | P_HDGV_3 | P_HDGV_4 | P_HDGV_5 |
|-----|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1 | AM_Peak | Art | 0.6167599 | 0.0467546 | 0.155649 | 0.0690279 | 0.0317422 | 0.0077713 | 0.001923 | 0.0005995 | 0.0002376 |
| 2 | AM_Peak | Col | 0.5246588 | 0.050564 | 0.168331 | 0.0790183 | 0.0363362 | 0.01171 | 0.0028977 | 0.0009034 | 0.0003579 |
| 3 | AM_Peak | Fwy | 0.6449379 | 0.0451884 | 0.150435 | 0.0650549 | 0.0299152 | 0.0065495 | 0.0016207 | 0.0005053 | 0.0002002 |
| 4 | Mid_Day | Art | 0.5822838 | 0.0445766 | 0.148398 | 0.0658601 | 0.0302855 | 0.0122868 | 0.0030404 | 0.0009479 | 0.0003756 |
| 5 | Mid_Day | Col | 0.5044379 | 0.0484002 | 0.161127 | 0.0756755 | 0.0347991 | 0.0162398 | 0.0040186 | 0.0012528 | 0.0004964 |
| 6 | Mid_Day | Fwy | 0.6183015 | 0.043333 | 0.144258 | 0.0623923 | 0.0286908 | 0.010006 | 0.002476 | 0.0007719 | 0.0003059 |
| 7 | Ovr_Nite | Art | 0.6127223 | 0.046398 | 0.154462 | 0.0683119 | 0.0314129 | 0.0068492 | 0.0016949 | 0.0005284 | 0.0002094 |
| 8 | Ovr_Nite | Col | 0.5542147 | 0.0537309 | 0.178873 | 0.0837785 | 0.0385252 | 0.0069201 | 0.0017124 | 0.0005339 | 0.0002115 |
| 9 | Ovr_Nite | Fwy | 0.6335446 | 0.0442989 | 0.147474 | 0.0635828 | 0.0292383 | 0.0057029 | 0.0014112 | 0.00044 | 0.0001743 |
| 10 | PM_Peak | Art | 0.6179442 | 0.0474234 | 0.157876 | 0.0701682 | 0.0322666 | 0.0074844 | 0.001852 | 0.0005774 | 0.0002288 |
| 11 | PM_Peak | Col | 0.5494324 | 0.0531435 | 0.176918 | 0.0830054 | 0.0381697 | 0.0089631 | 0.0022179 | 0.0006915 | 0.000274 |
| 12 | PM_Peak | Fwy | 0.6478705 | 0.0453929 | 0.151116 | 0.065475 | 0.0301084 | 0.0057638 | 0.0014263 | 0.0004447 | 0.0001762 |
| Obs | P_HDGV_6 | P_HDGV_7 | P_HDGV8a | P_HDGV8b | P_LDDV | P_LDDT12 | P_HDDV2b | P_HDDV_3 | P_HDDV_4 | P_HDDV_5 | |
| 1 | 0.0004525 | 0.0001357 | 0.0001697 | 0.0000226 | 0.00055 | 0.0000009 | 0.0161024 | 0.0041621 | 0.002081 | 0.0018422 | |
| 2 | 0.0006818 | 0.0002045 | 0.0002557 | 0.0000341 | 0.000468 | 0.000001 | 0.0298547 | 0.0077167 | 0.0038583 | 0.0034156 | |
| 3 | 0.0003813 | 0.0001144 | 0.000143 | 0.0000191 | 0.000575 | 0.0000009 | 0.0114838 | 0.0029683 | 0.0014841 | 0.0013138 | |
| 4 | 0.0007154 | 0.0002146 | 0.0002683 | 0.0000358 | 0.00052 | 0.0000009 | 0.0249019 | 0.0064365 | 0.0032183 | 0.0028489 | |
| 5 | 0.0009455 | 0.0002837 | 0.0003546 | 0.0000473 | 0.00045 | 0.0000009 | 0.0412101 | 0.0106518 | 0.0053259 | 0.0047147 | |
| 6 | 0.0005826 | 0.0001748 | 0.0002185 | 0.0000291 | 0.000552 | 0.0000009 | 0.0174172 | 0.0045019 | 0.0022509 | 0.0019926 | |
| 7 | 0.0003988 | 0.0001196 | 0.0001495 | 0.0000199 | 0.000547 | 0.0000009 | 0.0138604 | 0.0035826 | 0.0017913 | 0.0015857 | |
| 8 | 0.0004029 | 0.0001209 | 0.0001511 | 0.0000201 | 0.000495 | 0.0000011 | 0.0176332 | 0.0045577 | 0.0022789 | 0.0020174 | |
| 9 | 0.000332 | 0.0000996 | 0.0001245 | 0.0000166 | 0.000565 | 0.0000009 | 0.0098558 | 0.0025475 | 0.0012737 | 0.0011276 | |
| 10 | 0.0004358 | 0.0001307 | 0.0001634 | 0.0000218 | 0.000551 | 0.0000009 | 0.0154035 | 0.0039814 | 0.0019907 | 0.0017623 | |
| 11 | 0.0005219 | 0.0001566 | 0.0001957 | 0.0000261 | 0.00049 | 0.000001 | 0.0231738 | 0.0059898 | 0.0029949 | 0.0026512 | |

| | | | | | | | | | | | |
|-----|----|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|
| | 12 | 0.0003356 | 0.0001007 | 0.0001258 | 0.0000168 | 0.000578 | 0.0000009 | 0.010112 | 0.0026137 | 0.0013068 | 0.0011569 |
| Obs | | P_HDDV_6 | P_HDDV_7 | P_HDDV8a | P_HDDV8b | P_MC | P_HDGB | P_HDDBT | P_HDDBS | P_LDDT34 | |
| | 1 | 0.0044691 | 0.0018081 | 0.0036503 | 0.0272125 | 0.001 | 0.0002425 | 0.0015869 | 0.0030373 | 0.0010089 | |
| | 2 | 0.0082859 | 0.0033523 | 0.0067679 | 0.0481422 | 0.001 | 0.0005028 | 0.0032911 | 0.006299 | 0.0010911 | |
| | 3 | 0.0031872 | 0.0012895 | 0.0026033 | 0.0238495 | 0.001 | 0.0002094 | 0.0013709 | 0.0026239 | 0.0009751 | |
| | 4 | 0.0069113 | 0.0027962 | 0.0056451 | 0.0534038 | 0.001 | 0.000103 | 0.000674 | 0.00129 | 0.0009619 | |
| | 5 | 0.0114376 | 0.0046274 | 0.0093421 | 0.0580394 | 0.001 | 0.0002031 | 0.0013294 | 0.0025444 | 0.0010444 | |
| | 6 | 0.004834 | 0.0019557 | 0.0039484 | 0.0467136 | 0.001 | 0.0001174 | 0.0007688 | 0.0014714 | 0.000935 | |
| | 7 | 0.0038469 | 0.0015564 | 0.0031421 | 0.0427186 | 0.001 | 0.0001042 | 0.0006817 | 0.0013048 | 0.0010012 | |
| | 8 | 0.004894 | 0.00198 | 0.0039974 | 0.0365587 | 0.001 | 0.0002108 | 0.0013801 | 0.0026414 | 0.0011594 | |
| | 9 | 0.0027354 | 0.0011067 | 0.0022343 | 0.0472925 | 0.001 | 0.0001427 | 0.0009343 | 0.0017881 | 0.0009559 | |
| | 10 | 0.0042751 | 0.0017296 | 0.0034919 | 0.0245462 | 0.001 | 0.0001829 | 0.0011972 | 0.0022913 | 0.0010233 | |
| | 11 | 0.0064317 | 0.0026021 | 0.0052534 | 0.026069 | 0.001 | 0.0004225 | 0.0027653 | 0.0052926 | 0.0011467 | |
| | 12 | 0.0028065 | 0.0011355 | 0.0022923 | 0.0240838 | 0.001 | 0.0001784 | 0.0011679 | 0.0022353 | 0.0009795 | |

Friday August 27, 2010

Table 57

HGA 2014 Weekday VMT Mix by Time Period and Roadway Functional Classification Group

| Obs | TP | FC | P_LDGV | P_LDGT1 | P_LDGT2 | P_LDGT3 | P_LDGT4 | P_HDGV2b | P_HDGV_3 | P_HDGV_4 | P_HDGV_5 |
|-----|----------|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1 | AM_Peak | Art | 0.616759 | 0.046761 | 0.155671 | 0.069027 | 0.031743 | 0.007771 | 0.001923 | 0.0006 | 0.000238 |
| 2 | AM_Peak | Col | 0.524658 | 0.050571 | 0.168354 | 0.079017 | 0.036337 | 0.01171 | 0.002898 | 0.000903 | 0.000358 |
| 3 | AM_Peak | Fwy | 0.644937 | 0.045195 | 0.150456 | 0.065054 | 0.029916 | 0.00655 | 0.001621 | 0.000505 | 0.0002 |
| 4 | Mid_Day | Art | 0.582283 | 0.044583 | 0.148419 | 0.065859 | 0.030286 | 0.012287 | 0.00304 | 0.000948 | 0.000376 |
| 5 | Mid_Day | Col | 0.504437 | 0.048407 | 0.161149 | 0.075675 | 0.0348 | 0.01624 | 0.004019 | 0.001253 | 0.000496 |
| 6 | Mid_Day | Fwy | 0.618301 | 0.043339 | 0.144278 | 0.062391 | 0.028692 | 0.010006 | 0.002476 | 0.000772 | 0.000306 |
| 7 | Ovr_Nite | Art | 0.612721 | 0.046404 | 0.154483 | 0.068311 | 0.031414 | 0.006849 | 0.001695 | 0.000528 | 0.000209 |
| 8 | Ovr_Nite | Col | 0.554214 | 0.053738 | 0.178898 | 0.083777 | 0.038526 | 0.00692 | 0.001712 | 0.000534 | 0.000212 |
| 9 | Ovr_Nite | Fwy | 0.633544 | 0.044305 | 0.147494 | 0.063582 | 0.029239 | 0.005703 | 0.001411 | 0.00044 | 0.000174 |
| 10 | PM_Peak | Art | 0.617943 | 0.04743 | 0.157897 | 0.070167 | 0.032268 | 0.007484 | 0.001852 | 0.000577 | 0.000229 |
| 11 | PM_Peak | Col | 0.549432 | 0.053151 | 0.176942 | 0.083004 | 0.038171 | 0.008963 | 0.002218 | 0.000692 | 0.000274 |
| 12 | PM_Peak | Fwy | 0.647869 | 0.045399 | 0.151137 | 0.065474 | 0.030109 | 0.005764 | 0.001426 | 0.000445 | 0.000176 |

| Obs | P_HDGV_6 | P_HDGV_7 | P_HDGV8a | P_HDGV8b | P_LDDV | P_LDDT12 | P_HDDV2b | P_HDDV_3 | P_HDDV_4 | P_HDDV_5 |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1 | 0.000453 | 0.000136 | 0.00017 | 2.26E-05 | 0.000551 | 0 | 0.016102 | 0.004162 | 0.002081 | 0.001842 |
| 2 | 0.000682 | 0.000205 | 0.000256 | 3.41E-05 | 0.000469 | 0 | 0.029855 | 0.007717 | 0.003858 | 0.003416 |
| 3 | 0.000381 | 0.000114 | 0.000143 | 1.91E-05 | 0.000576 | 0 | 0.011484 | 0.002968 | 0.001484 | 0.001314 |
| 4 | 0.000715 | 0.000215 | 0.000268 | 3.58E-05 | 0.000521 | 0 | 0.024902 | 0.006437 | 0.003218 | 0.002849 |
| 5 | 0.000946 | 0.000284 | 0.000355 | 4.73E-05 | 0.000451 | 0 | 0.04121 | 0.010652 | 0.005326 | 0.004715 |
| 6 | 0.000583 | 0.000175 | 0.000219 | 2.91E-05 | 0.000553 | 0 | 0.017417 | 0.004502 | 0.002251 | 0.001993 |
| 7 | 0.000399 | 0.00012 | 0.00015 | 1.99E-05 | 0.000548 | 0 | 0.01386 | 0.003583 | 0.001791 | 0.001586 |
| 8 | 0.000403 | 0.000121 | 0.000151 | 2.01E-05 | 0.000496 | 0 | 0.017633 | 0.004558 | 0.002279 | 0.002017 |
| 9 | 0.000332 | 9.96E-05 | 0.000125 | 1.66E-05 | 0.000566 | 0 | 0.009856 | 0.002548 | 0.001274 | 0.001128 |
| 10 | 0.000436 | 0.000131 | 0.000163 | 2.18E-05 | 0.000552 | 0 | 0.015404 | 0.003981 | 0.001991 | 0.001762 |
| 11 | 0.000522 | 0.000157 | 0.000196 | 2.61E-05 | 0.000491 | 0 | 0.023174 | 0.00599 | 0.002995 | 0.002651 |
| 12 | 0.000336 | 0.000101 | 0.000126 | 1.68E-05 | 0.000579 | 0 | 0.010112 | 0.002614 | 0.001307 | 0.001157 |

| Obs | P_HDDV_6 | P_HDDV_7 | P_HDDV8a | P_HDDV8b | P_MC | P_HDGB | P_HDDBT | P_HDDBS | P_LDDT34 |
|-----|----------|----------|----------|----------|-------|----------|----------|----------|----------|
| 1 | 0.004469 | 0.001808 | 0.00365 | 0.027213 | 0.001 | 0.000175 | 0.001585 | 0.003107 | 0.000982 |
| 2 | 0.008286 | 0.003352 | 0.006768 | 0.048142 | 0.001 | 0.000363 | 0.003286 | 0.006443 | 0.001062 |
| 3 | 0.003187 | 0.00129 | 0.002603 | 0.02385 | 0.001 | 0.000151 | 0.001369 | 0.002684 | 0.000949 |
| 4 | 0.006911 | 0.002796 | 0.005645 | 0.053404 | 0.001 | 7.44E-05 | 0.000673 | 0.00132 | 0.000936 |
| 5 | 0.011438 | 0.004627 | 0.009342 | 0.058039 | 0.001 | 0.000147 | 0.001328 | 0.002603 | 0.001016 |
| 6 | 0.004834 | 0.001956 | 0.003948 | 0.046714 | 0.001 | 8.49E-05 | 0.000768 | 0.001505 | 0.00091 |
| 7 | 0.003847 | 0.001556 | 0.003142 | 0.042719 | 0.001 | 7.52E-05 | 0.000681 | 0.001335 | 0.000974 |
| 8 | 0.004894 | 0.00198 | 0.003997 | 0.036559 | 0.001 | 0.000152 | 0.001378 | 0.002702 | 0.001128 |
| 9 | 0.002735 | 0.001107 | 0.002234 | 0.047293 | 0.001 | 0.000103 | 0.000933 | 0.001829 | 0.00093 |
| 10 | 0.004275 | 0.00173 | 0.003492 | 0.024546 | 0.001 | 0.000132 | 0.001196 | 0.002344 | 0.000996 |
| 11 | 0.006432 | 0.002602 | 0.005253 | 0.026069 | 0.001 | 0.000305 | 0.002761 | 0.005414 | 0.001116 |
| 12 | 0.002807 | 0.001136 | 0.002292 | 0.024084 | 0.001 | 0.000129 | 0.001166 | 0.002287 | 0.000953 |

Table 58
HGA 2017 Weekday VMT Mix by Time Period and Roadway Functional Classification Group

| Obs | TP | FC | P_LDGV | P_LDGT1 | P_LDGT2 | P_LDGT3 | P_LDGT4 | P_HDGV2b | P_HDGV_3 | P_HDGV_4 | P_HDGV_5 |
|-----|----------|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1 | AM_Peak | Art | 0.616761 | 0.046751 | 0.155632 | 0.069028 | 0.031743 | 0.007771 | 0.001923 | 0.0006 | 0.000238 |
| 2 | AM_Peak | Col | 0.52466 | 0.05056 | 0.168312 | 0.079018 | 0.036338 | 0.01171 | 0.002898 | 0.000903 | 0.000358 |
| 3 | AM_Peak | Fwy | 0.644939 | 0.045185 | 0.150418 | 0.065055 | 0.029916 | 0.00655 | 0.001621 | 0.000505 | 0.0002 |
| 4 | Mid_Day | Art | 0.582285 | 0.044573 | 0.148382 | 0.06586 | 0.030287 | 0.012287 | 0.00304 | 0.000948 | 0.000376 |
| 5 | Mid_Day | Col | 0.504439 | 0.048397 | 0.161109 | 0.075675 | 0.0348 | 0.01624 | 0.004019 | 0.001253 | 0.000496 |
| 6 | Mid_Day | Fwy | 0.618302 | 0.04333 | 0.144242 | 0.062392 | 0.028692 | 0.010006 | 0.002476 | 0.000772 | 0.000306 |
| 7 | Ovr_Nite | Art | 0.612723 | 0.046395 | 0.154445 | 0.068312 | 0.031414 | 0.006849 | 0.001695 | 0.000528 | 0.000209 |
| 8 | Ovr_Nite | Col | 0.554216 | 0.053727 | 0.178854 | 0.083778 | 0.038527 | 0.00692 | 0.001712 | 0.000534 | 0.000212 |
| 9 | Ovr_Nite | Fwy | 0.633545 | 0.044296 | 0.147457 | 0.063582 | 0.029239 | 0.005703 | 0.001411 | 0.00044 | 0.000174 |
| 10 | PM_Peak | Art | 0.617945 | 0.04742 | 0.157858 | 0.070168 | 0.032268 | 0.007485 | 0.001852 | 0.000577 | 0.000229 |
| 11 | PM_Peak | Col | 0.549434 | 0.05314 | 0.176899 | 0.083005 | 0.038171 | 0.008963 | 0.002218 | 0.000692 | 0.000274 |

| | | | | | | | | | | | | |
|-----|----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 12 | PM_Peak | Fwy | 0.647872 | 0.04539 | 0.151099 | 0.065475 | 0.030109 | 0.005764 | 0.001426 | 0.000445 | 0.000176 |
| Obs | | P_HDGV_6 | P_HDGV_7 | P_HDGV8a | P_HDGV8b | P_LDDV | P_LDDT12 | P_HDDV2b | P_HDDV_3 | P_HDDV_4 | P_HDDV_5 | |
| | 1 | 0.000453 | 0.000136 | 0.00017 | 2.26E-05 | 0.000554 | 0 | 0.016103 | 0.004162 | 0.002081 | 0.001842 | |
| | 2 | 0.000682 | 0.000205 | 0.000256 | 3.41E-05 | 0.000471 | 0 | 0.029855 | 0.007717 | 0.003858 | 0.003416 | |
| | 3 | 0.000381 | 0.000114 | 0.000143 | 1.91E-05 | 0.000579 | 0 | 0.011484 | 0.002968 | 0.001484 | 0.001314 | |
| | 4 | 0.000715 | 0.000215 | 0.000268 | 3.58E-05 | 0.000523 | 0 | 0.024902 | 0.006437 | 0.003218 | 0.002849 | |
| | 5 | 0.000946 | 0.000284 | 0.000355 | 4.73E-05 | 0.000453 | 0 | 0.04121 | 0.010652 | 0.005326 | 0.004715 | |
| | 6 | 0.000583 | 0.000175 | 0.000219 | 2.91E-05 | 0.000555 | 0 | 0.017417 | 0.004502 | 0.002251 | 0.001993 | |
| | 7 | 0.000399 | 0.00012 | 0.00015 | 1.99E-05 | 0.00055 | 0 | 0.013861 | 0.003583 | 0.001791 | 0.001586 | |
| | 8 | 0.000403 | 0.000121 | 0.000151 | 2.01E-05 | 0.000498 | 0 | 0.017633 | 0.004558 | 0.002279 | 0.002017 | |
| | 9 | 0.000332 | 9.96E-05 | 0.000125 | 1.66E-05 | 0.000569 | 0 | 0.009856 | 0.002548 | 0.001274 | 0.001128 | |
| | 10 | 0.000436 | 0.000131 | 0.000163 | 2.18E-05 | 0.000555 | 0 | 0.015404 | 0.003982 | 0.001991 | 0.001762 | |
| | 11 | 0.000522 | 0.000157 | 0.000196 | 2.61E-05 | 0.000493 | 0 | 0.023174 | 0.00599 | 0.002995 | 0.002651 | |
| | 12 | 0.000336 | 0.000101 | 0.000126 | 1.68E-05 | 0.000582 | 0 | 0.010112 | 0.002614 | 0.001307 | 0.001157 | |
| Obs | | P_HDDV_6 | P_HDDV_7 | P_HDDV8a | P_HDDV8b | P_MC | P_HDGB | P_HDDBT | P_HDDBS | P_LDDT34 | | |
| | 1 | 0.004469 | 0.001808 | 0.00365 | 0.027213 | 0.001 | 0.000167 | 0.00158 | 0.00312 | 0.001025 | | |
| | 2 | 0.008286 | 0.003352 | 0.006768 | 0.048143 | 0.001 | 0.000346 | 0.003277 | 0.006471 | 0.001108 | | |
| | 3 | 0.003187 | 0.00129 | 0.002603 | 0.02385 | 0.001 | 0.000144 | 0.001365 | 0.002696 | 0.00099 | | |
| | 4 | 0.006911 | 0.002796 | 0.005645 | 0.053404 | 0.001 | 7.08E-05 | 0.000671 | 0.001325 | 0.000977 | | |
| | 5 | 0.011438 | 0.004627 | 0.009342 | 0.05804 | 0.001 | 0.00014 | 0.001324 | 0.002614 | 0.001061 | | |
| | 6 | 0.004834 | 0.001956 | 0.003948 | 0.046714 | 0.001 | 8.07E-05 | 0.000765 | 0.001512 | 0.00095 | | |
| | 7 | 0.003847 | 0.001556 | 0.003142 | 0.042719 | 0.001 | 7.16E-05 | 0.000679 | 0.00134 | 0.001017 | | |
| | 8 | 0.004894 | 0.00198 | 0.003997 | 0.036559 | 0.001 | 0.000145 | 0.001374 | 0.002714 | 0.001178 | | |
| | 9 | 0.002735 | 0.001107 | 0.002234 | 0.047293 | 0.001 | 9.81E-05 | 0.00093 | 0.001837 | 0.000971 | | |
| | 10 | 0.004275 | 0.00173 | 0.003492 | 0.024546 | 0.001 | 0.000126 | 0.001192 | 0.002354 | 0.001039 | | |
| | 11 | 0.006432 | 0.002602 | 0.005253 | 0.026069 | 0.001 | 0.00029 | 0.002753 | 0.005437 | 0.001165 | | |

12 0.002807 0.001136 0.002292 0.024084 0.001 0.000123 0.001163 0.002296 0.000995

Table 59

HGA 2018 Weekday VMT Mix by Time Period and Roadway Functional Classification Group

| Obs | TP | FC | P_LDGV | P_LDGT1 | P_LDGT2 | P_LDGT3 | P_LDGT4 | P_HDGV2b | P_HDGV_3 | P_HDGV_4 | P_HDGV_5 |
|-----|----------|-----|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|
| 1 | AM_Peak | Art | 0.6167561 | 0.0467531 | 0.1556403 | 0.069027 | 0.0317433 | 0.0077713 | 0.001923 | 0.0005995 | 0.0002376 |
| 2 | AM_Peak | Col | 0.5246556 | 0.0505624 | 0.1683213 | 0.079017 | 0.0363375 | 0.01171 | 0.0028977 | 0.0009034 | 0.0003579 |
| 3 | AM_Peak | Fwy | 0.644934 | 0.045187 | 0.1504265 | 0.065054 | 0.0299163 | 0.0065495 | 0.0016207 | 0.0005053 | 0.0002002 |
| 4 | Mid_Day | Art | 0.5822803 | 0.0445751 | 0.1483898 | 0.065859 | 0.0302865 | 0.0122868 | 0.0030404 | 0.0009479 | 0.0003756 |
| 5 | Mid_Day | Col | 0.5044349 | 0.0483986 | 0.1611182 | 0.075674 | 0.0348003 | 0.0162398 | 0.0040186 | 0.0012528 | 0.0004964 |
| 6 | Mid_Day | Fwy | 0.6182978 | 0.0433316 | 0.1442501 | 0.062391 | 0.0286918 | 0.010006 | 0.002476 | 0.0007719 | 0.0003059 |
| 7 | Ovr_Nite | Art | 0.6127185 | 0.0463965 | 0.1544532 | 0.068311 | 0.031414 | 0.0068492 | 0.0016949 | 0.0005284 | 0.0002094 |
| 8 | Ovr_Nite | Col | 0.5542113 | 0.0537292 | 0.1788634 | 0.083777 | 0.0385265 | 0.0069201 | 0.0017124 | 0.0005339 | 0.0002115 |
| 9 | Ovr_Nite | Fwy | 0.6335407 | 0.0442975 | 0.1474655 | 0.063582 | 0.0292393 | 0.0057029 | 0.0014112 | 0.00044 | 0.0001743 |
| 10 | PM_Peak | Art | 0.6179404 | 0.0474219 | 0.1578667 | 0.070167 | 0.0322677 | 0.0074844 | 0.001852 | 0.0005774 | 0.0002288 |
| 11 | PM_Peak | Col | 0.549429 | 0.0531418 | 0.176908 | 0.083004 | 0.038171 | 0.0089631 | 0.0022179 | 0.0006915 | 0.000274 |
| 12 | PM_Peak | Fwy | 0.6478665 | 0.0453915 | 0.1511074 | 0.065474 | 0.0301094 | 0.0057638 | 0.0014263 | 0.0004447 | 0.0001762 |

| Obs | P_HDGV_6 | P_HDGV_7 | P_HDGV8a | P_HDGV8b | P_LDDV | P_LDDT12 | P_HDDV2b | P_HDDV_3 | P_HDDV_4 | P_HDDV_5 |
|-----|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|
| 1 | 0.0004525 | 0.0001357 | 0.0001697 | 0.0000226 | 0.0005541 | 0 | 0.0161024 | 0.0041621 | 0.002081 | 0.0018422 |
| 2 | 0.0006818 | 0.0002045 | 0.0002557 | 0.0000341 | 0.0004715 | 0 | 0.0298547 | 0.0077167 | 0.0038583 | 0.0034156 |
| 3 | 0.0003813 | 0.0001144 | 0.000143 | 0.0000191 | 0.0005793 | 0 | 0.0114838 | 0.0029683 | 0.0014841 | 0.0013138 |
| 4 | 0.0007154 | 0.0002146 | 0.0002683 | 0.0000358 | 0.0005231 | 0 | 0.0249019 | 0.0064365 | 0.0032183 | 0.0028489 |
| 5 | 0.0009455 | 0.0002837 | 0.0003546 | 0.0000473 | 0.0004533 | 0 | 0.0412101 | 0.0106518 | 0.0053259 | 0.0047147 |
| 6 | 0.0005826 | 0.0001748 | 0.0002185 | 0.0000291 | 0.0005555 | 0 | 0.0174172 | 0.0045019 | 0.0022509 | 0.0019926 |
| 7 | 0.0003988 | 0.0001196 | 0.0001495 | 0.0000199 | 0.0005504 | 0 | 0.0138604 | 0.0035826 | 0.0017913 | 0.0015857 |
| 8 | 0.0004029 | 0.0001209 | 0.0001511 | 0.0000201 | 0.000498 | 0 | 0.0176332 | 0.0045577 | 0.0022789 | 0.0020174 |
| 9 | 0.000332 | 0.0000996 | 0.0001245 | 0.0000166 | 0.0005691 | 0 | 0.0098558 | 0.0025475 | 0.0012737 | 0.0011276 |
| 10 | 0.0004358 | 0.0001307 | 0.0001634 | 0.0000218 | 0.0005551 | 0 | 0.0154035 | 0.0039814 | 0.0019907 | 0.0017623 |

| | | | | | | | | | | |
|----|-----------|-----------|-----------|-----------|-----------|---|-----------|-----------|-----------|-----------|
| 11 | 0.0005219 | 0.0001566 | 0.0001957 | 0.0000261 | 0.0004937 | 0 | 0.0231738 | 0.0059898 | 0.0029949 | 0.0026512 |
| 12 | 0.0003356 | 0.0001007 | 0.0001258 | 0.0000168 | 0.000582 | 0 | 0.010112 | 0.0026137 | 0.0013068 | 0.0011569 |

| Obs | P_HDDV_6 | P_HDDV_7 | P_HDDV8a | P_HDDV8b | P_MC | P_HDGB | P_HDDBT | P_HDDBS | P_LDDT34 |
|-----|-----------|-----------|-----------|-----------|-------|----------|-----------|-----------|-----------|
| 1 | 0.0044691 | 0.0018081 | 0.0036503 | 0.0272125 | 0.001 | 0.000167 | 0.0015859 | 0.0031136 | 0.0010199 |
| 2 | 0.0082859 | 0.0033523 | 0.0067679 | 0.0481422 | 0.001 | 0.000347 | 0.0032889 | 0.0064571 | 0.001103 |
| 3 | 0.0031872 | 0.0012895 | 0.0026033 | 0.0238495 | 0.001 | 0.000145 | 0.00137 | 0.0026897 | 0.0009858 |
| 4 | 0.0069113 | 0.0027962 | 0.0056451 | 0.0534038 | 0.001 | 0.000071 | 0.0006735 | 0.0013223 | 0.0009724 |
| 5 | 0.0114376 | 0.0046274 | 0.0093421 | 0.0580394 | 0.001 | 0.00014 | 0.0013285 | 0.0026083 | 0.0010558 |
| 6 | 0.004834 | 0.0019557 | 0.0039484 | 0.0467136 | 0.001 | 0.000081 | 0.0007683 | 0.0015083 | 0.0009453 |
| 7 | 0.0038469 | 0.0015564 | 0.0031421 | 0.0427186 | 0.001 | 7.19E-05 | 0.0006813 | 0.0013375 | 0.0010122 |
| 8 | 0.004894 | 0.00198 | 0.0039974 | 0.0365587 | 0.001 | 0.000146 | 0.0013792 | 0.0027077 | 0.0011721 |
| 9 | 0.0027354 | 0.0011067 | 0.0022343 | 0.0472925 | 0.001 | 9.85E-05 | 0.0009336 | 0.001833 | 0.0009664 |
| 10 | 0.0042751 | 0.0017296 | 0.0034919 | 0.0245462 | 0.001 | 0.000126 | 0.0011964 | 0.0023488 | 0.0010345 |
| 11 | 0.0064317 | 0.0026021 | 0.0052534 | 0.026069 | 0.001 | 0.000292 | 0.0027634 | 0.0054254 | 0.0011593 |
| 12 | 0.0028065 | 0.0011355 | 0.0022923 | 0.0240838 | 0.001 | 0.000123 | 0.0011671 | 0.0022914 | 0.0009902 |

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Table 60
HGA 2025 Weekday VMT Mix by Time Period and Roadway Functional Classification Group

| Obs | TP | FC | P_LDGV | P_LDGT1 | P_LDGT2 | P_LDGT3 | P_LDGT4 | P_HDGV2b | P_HDGV_3 | P_HDGV_4 | P_HDGV_5 |
|-----|----------|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1 | AM_Peak | Art | 0.6167538 | 0.0467525 | 0.1556381 | 0.0690268 | 0.0317433 | 0.0077713 | 0.001923 | 0.0005995 | 0.0002376 |
| 2 | AM_Peak | Col | 0.5246536 | 0.0505618 | 0.1683189 | 0.079017 | 0.0363375 | 0.011171 | 0.0028977 | 0.0009034 | 0.0003579 |
| 3 | AM_Peak | Fwy | 0.6449315 | 0.0451864 | 0.1504244 | 0.0650539 | 0.0299163 | 0.0065495 | 0.0016207 | 0.0005053 | 0.0002002 |
| 4 | Mid_Day | Art | 0.582278 | 0.0445746 | 0.1483877 | 0.065859 | 0.0302866 | 0.0122868 | 0.0030404 | 0.0009479 | 0.0003756 |
| 5 | Mid_Day | Col | 0.5044329 | 0.048398 | 0.1611159 | 0.0756743 | 0.0348003 | 0.0162398 | 0.0040186 | 0.0012528 | 0.0004964 |
| 6 | Mid_Day | Fwy | 0.6182954 | 0.0433311 | 0.144248 | 0.0623913 | 0.0286919 | 0.010006 | 0.002476 | 0.0007719 | 0.0003059 |
| 7 | Ovr_Nite | Art | 0.6127162 | 0.046396 | 0.154451 | 0.0683107 | 0.031414 | 0.0068492 | 0.0016949 | 0.0005284 | 0.0002094 |
| 8 | Ovr_Nite | Col | 0.5542092 | 0.0537285 | 0.1788609 | 0.0837771 | 0.0385266 | 0.0069201 | 0.0017124 | 0.0005339 | 0.0002115 |
| 9 | Ovr_Nite | Fwy | 0.6335383 | 0.0442969 | 0.1474634 | 0.0635817 | 0.0292393 | 0.0057029 | 0.0014112 | 0.00044 | 0.0001743 |
| 10 | PM_Peak | Art | 0.6179381 | 0.0474213 | 0.1578644 | 0.0701671 | 0.0322677 | 0.0074844 | 0.001852 | 0.0005774 | 0.0002288 |
| 11 | PM_Peak | Col | 0.5494269 | 0.0531411 | 0.1769055 | 0.083004 | 0.038171 | 0.0089631 | 0.0022179 | 0.0006915 | 0.000274 |
| 12 | PM_Peak | Fwy | 0.6478641 | 0.0453909 | 0.1511053 | 0.0654739 | 0.0301095 | 0.0057638 | 0.0014263 | 0.0004447 | 0.0001762 |

| Obs | P_HDGV_6 | P_HDGV_7 | P_HDGV8a | P_HDGV8b | P_LDDV | P_LDDT12 | P_HDDV2b | P_HDDV_3 | P_HDDV_4 | P_HDDV_5 |
|-----|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|
| 1 | 0.0004525 | 0.0001357 | 0.0001697 | 0.0000226 | 0.0005564 | 0 | 0.0161024 | 0.0041621 | 0.002081 | 0.0018422 |
| 2 | 0.0006818 | 0.0002045 | 0.0002557 | 0.0000341 | 0.0004735 | 0 | 0.0298547 | 0.0077167 | 0.0038583 | 0.0034156 |
| 3 | 0.0003813 | 0.0001144 | 0.000143 | 0.0000191 | 0.0005818 | 0 | 0.0114838 | 0.0029683 | 0.0014841 | 0.0013138 |
| 4 | 0.0007154 | 0.0002146 | 0.0002683 | 0.0000358 | 0.0005254 | 0 | 0.0249019 | 0.0064365 | 0.0032183 | 0.0028489 |
| 5 | 0.0009455 | 0.0002837 | 0.0003546 | 0.0000473 | 0.0004552 | 0 | 0.0412101 | 0.0106518 | 0.0053259 | 0.0047147 |
| 6 | 0.0005826 | 0.0001748 | 0.0002185 | 0.0000291 | 0.0005578 | 0 | 0.0174172 | 0.0045019 | 0.0022509 | 0.0019926 |
| 7 | 0.0003988 | 0.0001196 | 0.0001495 | 0.0000199 | 0.0005528 | 0 | 0.0138604 | 0.0035826 | 0.0017913 | 0.0015857 |
| 8 | 0.0004029 | 0.0001209 | 0.0001511 | 0.0000201 | 0.0005001 | 0 | 0.0176332 | 0.0045577 | 0.0022789 | 0.0020174 |
| 9 | 0.000332 | 0.0000996 | 0.0001245 | 0.0000166 | 0.0005715 | 0 | 0.0098558 | 0.0025475 | 0.0012737 | 0.0011276 |
| 10 | 0.0004358 | 0.0001307 | 0.0001634 | 0.0000218 | 0.0005575 | 0 | 0.0154035 | 0.0039814 | 0.0019907 | 0.0017623 |
| 11 | 0.0005219 | 0.0001566 | 0.0001957 | 0.0000261 | 0.0004958 | 0 | 0.0231738 | 0.0059898 | 0.0029949 | 0.0026512 |
| 12 | 0.0003356 | 0.0001007 | 0.0001258 | 0.0000168 | 0.0005844 | 0 | 0.010112 | 0.0026137 | 0.0013068 | 0.0011569 |

| Obs | P_HDDV_6 | P_HDDV_7 | P_HDDV8a | P_HDDV8b | P_MC | P_HDGB | P_HDDBT | P_HDDBS | P_LDDT34 |
|-----|-----------|-----------|-----------|-----------|-------|-----------|-----------|-----------|-----------|
| 1 | 0.0044691 | 0.0018081 | 0.0036503 | 0.0272125 | 0.001 | 0.0001363 | 0.0015831 | 0.0031474 | 0.0010227 |
| 2 | 0.0082859 | 0.0033523 | 0.0067679 | 0.0481422 | 0.001 | 0.0002827 | 0.003283 | 0.0065271 | 0.001106 |
| 3 | 0.0031872 | 0.0012895 | 0.0026033 | 0.0238495 | 0.001 | 0.0001178 | 0.0013676 | 0.0027189 | 0.0009885 |
| 4 | 0.0069113 | 0.0027962 | 0.0056451 | 0.0534038 | 0.001 | 0.0000579 | 0.0006723 | 0.0013367 | 0.0009751 |
| 5 | 0.0114376 | 0.0046274 | 0.0093421 | 0.0580394 | 0.001 | 0.0001142 | 0.0013262 | 0.0026366 | 0.0010587 |
| 6 | 0.004834 | 0.0019557 | 0.0039484 | 0.0467136 | 0.001 | 0.000066 | 0.0007669 | 0.0015247 | 0.0009479 |
| 7 | 0.0038469 | 0.0015564 | 0.0031421 | 0.0427186 | 0.001 | 0.0000586 | 0.0006801 | 0.001352 | 0.0010149 |
| 8 | 0.004894 | 0.00198 | 0.0039974 | 0.0365587 | 0.001 | 0.0001185 | 0.0013767 | 0.0027371 | 0.0011753 |
| 9 | 0.0027354 | 0.0011067 | 0.0022343 | 0.0472925 | 0.001 | 0.0000803 | 0.000932 | 0.0018529 | 0.000969 |
| 10 | 0.0042751 | 0.0017296 | 0.0034919 | 0.0245462 | 0.001 | 0.0001028 | 0.0011943 | 0.0023743 | 0.0010374 |
| 11 | 0.0064317 | 0.0026021 | 0.0052534 | 0.026069 | 0.001 | 0.0002375 | 0.0027585 | 0.0054843 | 0.0011625 |
| 12 | 0.0028065 | 0.0011355 | 0.0022923 | 0.0240838 | 0.001 | 0.0001003 | 0.001165 | 0.0023162 | 0.0009929 |

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Table 61
HGA 2035 Weekday VMT Mix by Time Period and Roadway Functional Classification Group

| Obs | TP | FC | P_LDGV | P_LDGT1 | P_LDGT2 | P_LDGT3 | P_LDGT4 | P_HDGV2b | P_HDGV_3 | P_HDGV_4 | P_HDGV_5 |
|-----|---------|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1 | AM_Peak | Art | 0.6167538 | 0.0467525 | 0.1556381 | 0.0690268 | 0.0317433 | 0.0077713 | 0.001923 | 0.0005995 | 0.0002376 |
| 2 | AM_Peak | Col | 0.5246536 | 0.0505618 | 0.1683189 | 0.079017 | 0.0363375 | 0.01171 | 0.0028977 | 0.0009034 | 0.0003579 |

| | | | | | | | | | | | |
|----|----------|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 3 | AM_Peak | Fwy | 0.6449315 | 0.0451864 | 0.1504244 | 0.0650539 | 0.0299163 | 0.0065495 | 0.0016207 | 0.0005053 | 0.0002002 |
| 4 | Mid_Day | Art | 0.582278 | 0.0445746 | 0.1483877 | 0.065859 | 0.0302866 | 0.0122868 | 0.0030404 | 0.0009479 | 0.0003756 |
| 5 | Mid_Day | Col | 0.5044329 | 0.048398 | 0.1611159 | 0.0756743 | 0.0348003 | 0.0162398 | 0.0040186 | 0.0012528 | 0.0004964 |
| 6 | Mid_Day | Fwy | 0.6182954 | 0.0433311 | 0.144248 | 0.0623913 | 0.0286919 | 0.010006 | 0.002476 | 0.0007719 | 0.0003059 |
| 7 | Ovr_Nite | Art | 0.6127162 | 0.046396 | 0.154451 | 0.0683107 | 0.031414 | 0.0068492 | 0.0016949 | 0.0005284 | 0.0002094 |
| 8 | Ovr_Nite | Col | 0.5542092 | 0.0537285 | 0.1788609 | 0.0837771 | 0.0385266 | 0.0069201 | 0.0017124 | 0.0005339 | 0.0002115 |
| 9 | Ovr_Nite | Fwy | 0.6335383 | 0.0442969 | 0.1474634 | 0.0635817 | 0.0292393 | 0.0057029 | 0.0014112 | 0.00044 | 0.0001743 |
| 10 | PM_Peak | Art | 0.6179381 | 0.0474213 | 0.1578644 | 0.0701671 | 0.0322677 | 0.0074844 | 0.001852 | 0.0005774 | 0.0002288 |
| 11 | PM_Peak | Col | 0.5494269 | 0.0531411 | 0.1769055 | 0.083004 | 0.038171 | 0.0089631 | 0.0022179 | 0.0006915 | 0.000274 |
| 12 | PM_Peak | Fwy | 0.6478641 | 0.0453909 | 0.1511053 | 0.0654739 | 0.0301095 | 0.0057638 | 0.0014263 | 0.0004447 | 0.0001762 |

| Obs | P_HDGV_6 | P_HDGV_7 | P_HDGV8a | P_HDGV8b | P_LDDV | P_LDDT12 | P_HDDV2b | P_HDDV_3 | P_HDDV_4 | P_HDDV_5 |
|-----|-----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|
| 1 | 0.0004525 | 0.0001357 | 0.0001697 | 0.0000226 | 0.0005564 | 0 | 0.0161024 | 0.0041621 | 0.002081 | 0.0018422 |
| 2 | 0.0006818 | 0.0002045 | 0.0002557 | 0.0000341 | 0.0004735 | 0 | 0.0298547 | 0.0077167 | 0.0038583 | 0.0034156 |
| 3 | 0.0003813 | 0.0001144 | 0.000143 | 0.0000191 | 0.0005818 | 0 | 0.0114838 | 0.0029683 | 0.0014841 | 0.0013138 |
| 4 | 0.0007154 | 0.0002146 | 0.0002683 | 0.0000358 | 0.0005254 | 0 | 0.0249019 | 0.0064365 | 0.0032183 | 0.0028489 |
| 5 | 0.0009455 | 0.0002837 | 0.0003546 | 0.0000473 | 0.0004552 | 0 | 0.0412101 | 0.0106518 | 0.0053259 | 0.0047147 |
| 6 | 0.0005826 | 0.0001748 | 0.0002185 | 0.0000291 | 0.0005578 | 0 | 0.0174172 | 0.0045019 | 0.0022509 | 0.0019926 |
| 7 | 0.0003988 | 0.0001196 | 0.0001495 | 0.0000199 | 0.0005528 | 0 | 0.0138604 | 0.0035826 | 0.0017913 | 0.0015857 |
| 8 | 0.0004029 | 0.0001209 | 0.0001511 | 0.0000201 | 0.0005001 | 0 | 0.0176332 | 0.0045577 | 0.0022789 | 0.0020174 |
| 9 | 0.000332 | 0.0000996 | 0.0001245 | 0.0000166 | 0.0005715 | 0 | 0.0098558 | 0.0025475 | 0.0012737 | 0.0011276 |
| 10 | 0.0004358 | 0.0001307 | 0.0001634 | 0.0000218 | 0.0005575 | 0 | 0.0154035 | 0.0039814 | 0.0019907 | 0.0017623 |
| 11 | 0.0005219 | 0.0001566 | 0.0001957 | 0.0000261 | 0.0004958 | 0 | 0.0231738 | 0.0059898 | 0.0029949 | 0.0026512 |
| 12 | 0.0003356 | 0.0001007 | 0.0001258 | 0.0000168 | 0.0005844 | 0 | 0.010112 | 0.0026137 | 0.0013068 | 0.0011569 |

| Obs | P_HDDV_6 | P_HDDV_7 | P_HDDV8a | P_HDDV8b | P_MC | P_HDGB | P_HDDBT | P_HDDBS | P_LDDT34 |
|-----|-----------|-----------|-----------|-----------|-------|-----------|-----------|-----------|-----------|
| 1 | 0.0044691 | 0.0018081 | 0.0036503 | 0.0272125 | 0.001 | 0.0001363 | 0.0015831 | 0.0031474 | 0.0010227 |
| 2 | 0.0082859 | 0.0033523 | 0.0067679 | 0.0481422 | 0.001 | 0.0002827 | 0.003283 | 0.0065271 | 0.001106 |

| | | | | | | | | | |
|----|-----------|-----------|-----------|-----------|-------|-----------|-----------|-----------|-----------|
| 3 | 0.0031872 | 0.0012895 | 0.0026033 | 0.0238495 | 0.001 | 0.0001178 | 0.0013676 | 0.0027189 | 0.0009885 |
| 4 | 0.0069113 | 0.0027962 | 0.0056451 | 0.0534038 | 0.001 | 0.0000579 | 0.0006723 | 0.0013367 | 0.0009751 |
| 5 | 0.0114376 | 0.0046274 | 0.0093421 | 0.0580394 | 0.001 | 0.0001142 | 0.0013262 | 0.0026366 | 0.0010587 |
| 6 | 0.004834 | 0.0019557 | 0.0039484 | 0.0467136 | 0.001 | 0.000066 | 0.0007669 | 0.0015247 | 0.0009479 |
| 7 | 0.0038469 | 0.0015564 | 0.0031421 | 0.0427186 | 0.001 | 0.0000586 | 0.0006801 | 0.001352 | 0.0010149 |
| 8 | 0.004894 | 0.00198 | 0.0039974 | 0.0365587 | 0.001 | 0.0001185 | 0.0013767 | 0.0027371 | 0.0011753 |
| 9 | 0.0027354 | 0.0011067 | 0.0022343 | 0.0472925 | 0.001 | 0.0000803 | 0.000932 | 0.0018529 | 0.000969 |
| 10 | 0.0042751 | 0.0017296 | 0.0034919 | 0.0245462 | 0.001 | 0.0001028 | 0.0011943 | 0.0023743 | 0.0010374 |
| 11 | 0.0064317 | 0.0026021 | 0.0052534 | 0.026069 | 0.001 | 0.0002375 | 0.0027585 | 0.0054843 | 0.0011625 |
| 12 | 0.0028065 | 0.0011355 | 0.0022923 | 0.0240838 | 0.001 | 0.0001003 | 0.001165 | 0.0023162 | 0.0009929 |