

# CLARKSVILLE AREA METROPOLITAN PLANNING ORGANIZATION

## **Clarksville Area Air Quality Conformity Analysis**

(Tennessee Portion)

Prepared by

The Clarksville Metropolitan Planning Organization

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### GLOSSARY

## CLARKSVILLE AREA TRANSPORTATION CONFORMITY REPORT & ANALYSIS (TENNESSEE PORTION)

#### **1.0 Executive Summary**

This report explains the air quality analysis and methodology used by the Clarksville MPO and their consulting partners to demonstrate transportation conformity with air quality standards/goals established by the Clean Air Act Amendments of 1990 for the purpose of adopting a new Metropolitan Transportation Plan (MTP) and Transportation Improvement Program (TIP). The TIP is a direct subset of the MTP. On November 21, 2005, Montgomery County was redesignated as Attainment with a Maintenance Plan for 8-hour National Ambient Air Quality Standard (NAAQS) ozone standard. On February 24, 2006 Christian County was redesignated as Attainment with a Maintenance Plan for 8-hour ozone standard. For the purposes of transportation conformity implementation, this 2-county maintenance area is divided into the following 3 subareas: Kentucky donut, Kentucky MPO, and Tennessee MPO areas. The KY donut area is the area that is not in the jurisdiction of the Clarksville MPO, and, for which, transportation planning is the responsibility of the Kentucky Transportation Cabinet. Transportation planning for the Kentucky and Tennessee MPO areas is the responsibility of the Clarksville MPO. The requirements for implementing transportation conformity in all three subareas are the same.

Fort Campbell Army military base consists of portions of Montgomery and Christian Counties. The military base is subject to the general conformity rule (58FR63214) and is considered as an external station (i.e., a trip generator) for the purpose of transportation conformity.

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Through interagency consultation, the Clarksville MPO has coordinated the transportation conformity analysis for the Clarksville area using the MOBILE6.2 emissions model, the most recent planning assumptions, and incorporating the projects listed in Appendices B. Motor Vehicles Emissions Budgets (MVEB) have been established in the State Implementation Plans (SIPs) for both the Kentucky and Tennessee portions of the Clarksville-Hopkinsville area as a part of each area's 8-hour Ozone Maintenance Plan. These MVEBs are established at the state level with separate MVEB for Montgomery County, Tennessee and Christian County, Kentucky. On September 22, 2005 USEPA published direct final rulemaking which found adequate and approved the 2016 MVEBs for Montgomery County, Tennessee (70 FR 55559). These MVEBs, which became effective on November 21, 2005, are 9.05 tons per day (TPD) for oxide with nitrogen (NOX), and 3.00 TPD for volatile organic compounds (VOC) for the year 2016. In accordance with the July 1, 2004, Transportation Conformity Rule Revisions, entitled "Transportation Conformity Rule Amendments for the New 8-hour Ozone and PM2.5 National Ambient Air Quality Standards and Miscellaneous Revisions for Existing Areas; Transportation Conformity Rule Amendments Response to Court Decision and Additional Rule Changes" (69 FR 40004), these MVEBs are being used to demonstrate transportation conformity for this area.

A summary of the MVEB results are in the Metropolitan Transportation Plan (MTP) and in Table 1 below for Montgomery County. The MTP complies with the Clean Air Act Amendments of 1990, the Transportation Conformity Regulation (i.e., 40 Code of Federal Regulations Part 93), the Statewide and Metropolitan Planning Regulation, and other applicable federal and state requirements. In addition, this document was prepared consistent with EPA's guidance document entitled "Companion Guidance for

the July 1, 2004, Final Transportation Conformity Rule: Conformity Implementation in Multi-jurisdictional Nonattainment and Maintenance Areas for Existing and New Air Quality Standards." This conformity determination has been developed with full consideration of the latest planning assumptions requirement.

Table 1. Summary of On-Road Mobile Source Emissions for Montgomery County by Year in Tons per Day.

Pollutant	2016	2016	2025	2035
	MVEBs	Tons/Day	Tons/Day	Tons/Day
VOC	3.00	2.57	2.22	2.56
СО	N/a	28.76	30.48	34.75
NOx	9.05	3.80	2.37	2.24

Thus,

- The Clarksville MPO finds no factors in the TIP or MTP that would cause or contribute to a new violation or exacerbate an existing violation in the years before the first analysis year for the Tennessee portion of the nonattainment area.
- The Clarksville MPO finds that no goals, directives, recommendations or projects identified in the TIP or MTP contradicts in a negative manner any specific requirements or commitments of the Tennessee SIP.
- The applicable implementation plans do not contain any Transportation Control Measures; therefore, nothing in the TIP or MTP can interfere with their timely implementation.
- The ozone precursors, VOC and  $NO_{x}$ , emissions in the Tennessee portion of the Clarksville-Hopkinsville area do not exceed the budgets test for 2016, 2025 and

2035. Additionally, as explained in the Conclusion section below, 2010 forecasted emissions from the 2005 conformity analysis confirm that emissions are trending downward. Therefore, the MTP and TIP are in conformance with the Tennessee SIP.

#### 2.0 Background

The Clarksville MPO consists of Montgomery County, Tennessee and a portion of Christian County, Kentucky (see Figure 2-1 on page 2-2 in the Clarksville Area 2035 MTP). The Environmental Protection Agency (EPA) on November 21, 2005, Montgomery County was redesignated as Attainment with a Maintenance Plan for 8hour National Ambient Air Quality Standard (NAAQS) ozone standard. On February 24, 2006 Christian County was redesignated as Attainment with a Maintenance Plan for 8hour ozone standard. The designated area consists of the entire counties of Christian County, Kentucky and Montgomery County, Tennessee. Furthermore, EPA classified the area as "basic" under Subpart 1 of the Clean Air Act Amendments of 1990. For the purposes of transportation conformity implementation, this 2-county nonattainment area is divided into the following 3 subareas: Kentucky donut, Kentucky MPO, and Tennessee MPO areas. The donut area is the area that is not in the jurisdiction of the Clarksville MPO, and, for which, transportation planning is the responsibility of the state departments of transportation (i.e., the Kentucky Transportation Cabinet). Transportation planning for the Kentucky and Tennessee MPO areas is the responsibility of the Clarksville MPO. The requirements for implementing transportation conformity in all three subareas are the same. Fort Campbell Army military base consists of portions of Montgomery and Christian Counties. The military base is subject to the general conformity rule (58FR63214) and is considered as an external station for the purpose of transportation conformity. Transportation conformity requirements are applicable for any roadway funding or approved under Title 23 or 49 through the U.S. Department of Transportation (U.S. DOT). Fort Campbell does not have any of these roadways on base and thus is not directly subject to the transportation

conformity requirements. In order to demonstrate transportation conformity, the mobile emission estimates must be shown to be less than or equal to the required conformity tests (in this case, the 2016 emissions) for the selected analysis years.

### 3.0 Consultation Team and Process

The Clarksville MPO formed an Interagency Consultation (IAC) team including representatives from the US Environmental Protection Agency (EPA) Region 4, Federal Highway Administration (FHWA) Division Offices from both Kentucky and Tennessee, Kentucky Transportation Cabinet (KYTC), Kentucky Division for Air Quality (Ky. DAQ), Tennessee Department of Transportation (TDOT), Tennessee Division of Air Pollution Control (TDAPC), the Clarksville MPO, and members of local governments. The IAC conducted a series of meetings to approve the planning assumptions and develop the conformity analysis. The minutes of those meetings are included in Appendix A of this report. Additionally, the public involvement process as described in Section 3 of the Clarksville Area 2035 MTP was followed.

#### 4.0 Planning Assumptions

The analysis/horizon years for air quality were selected by the consultation partners at the August 1, 2008 and then reconfirmed at the August 10, 2009 Air Quality Conformity Consultation Meeting. It was agreed upon that air quality analysis/horizon years would be 2016, 2025, and 2035. Rationale for the selection is given in the following table:

Analysis Year	Conformity Test	Which Requirement Fulfilled	Analysis or Interpolation
2016	Emissions 2016 budget	Budget Year Also a potential SIP Projection Year §93.106, 118	budgets are available §93.118
2025	Emissions 2016 budget	Intermediate Year (No more than 10 years between analysis years) §93.106, 118	budgets are available §93.118
2035	Emissions 2016 budget	Last Year of MTP §93.106, 118	budgets are available §93.118

Table 2. Rationale for the Selection of Horizon Years.

There is no Inspection/Maintenance program in this area. There are no Transportation Control Measures (TCMs) in the SIP so implementation of the projects in the STIP will not interfere with timely implementation of TCMs. In the event that TCMs are introduced in the SIP later, implementation of those measures will not be impacted. All regionally significant projects, even those that are not federally funded, are included in the regional emissions analysis. These projects are listed in Appendix B of this report and in Section 7.0 of the Clarksville Area 2035 MTP as well as in Appendix I of the 2035 MTP (Documentation Report which is Appendix H). All projects are in the Kentucky and Tennessee Metropolitan Transportation Plans (MTP) and, where appropriate, in the Statewide Transportation Improvement Programs (STIPs). The MTPs, and the STIPs are fiscally constrained and have met the public involvement requirements.

Please refer to Section 6.3 of the Clarksville Area 2035 MTP fiscal constraint analysis. The planning assumptions were agreed upon during the Air Quality IAC Meetings (see minutes of the IAC meetings in Appendix A), held in cooperation with the US Environmental Protection Agency, Federal Highway Administration, Kentucky Transportation Cabinet, Kentucky Division for Air Quality, Tennessee Department of Transportation, Tennessee Division of Air Pollution Control, and the Clarksville MPO. The MOBILE6.2 parameters are detailed in Section 5.0 of this report "Emission Projections for the Clarksville Area Conformity Analysis".

## 5.0 Emission Projections for the Clarksville Area Conformity Analysis (Montgomery County, Tennessee)

#### 5.1 Introduction

Emission estimates have been performed using the MOBILE6.2 emissions model for the Clarksville TN ozone nonattainment /maintenance area to determine the base year emissions for analysis years 2016, 2025, and 2035. MOBILE6.2 input and output results for Montgomery County, Tennessee are shown in Appendix C & D. Emissions of nitrogen oxides (NOx), and volatile organic compounds (VOC's) have been calculated by the Clarksville MPO using estimates of vehicle miles traveled (VMT) within Montgomery County, Tennessee and Christian County, Kentucky and emission factors derived from the USEPA's MOBILE6.2 emissions model. VMT was derived from Travel Demand Modeling (TDM) and benched marked against the 2007 Highway Monitoring System (HPMS) VMT. The TDM was developed by Alliance Transportation Group, October, 2009 and documentation is available from the Clarksville MPO. The following sections describe the MOBILE6.2 inputs used to calculate emission factors for NOx and VOCs. The model inputs include: VMT distribution by vehicle type by road type (Sections 5.2), vehicle age distribution by vehicle type (Section 5.3), average speeds by road type (Section 5.4) and temperature, humidity and fuel RVP inputs for the area (Section 5.5). Vehicle miles of travel estimates and seasonal adjustment factors are discussed in Sections 5.6 and 5.7. MOBILE6.2 emission factors are presented in Section 5.8. Section 5.9 summarizes daily emissions in tons/year; and the conformity conclusions are given in Section 6.0.

#### 5.2 Fractions of Vehicle Miles Traveled (VMT) by Vehicle Type

Different vehicle types have different emission rates. For example, class8b heavy-duty diesel vehicles (gross vehicle weight rating greater than 60,000 pounds) have approximately 10 times higher NO<sub>X</sub> emission factors per mile of travel than light duty gasoline vehicles (i.e., passenger cars). Additionally, emission factors are different for similar vehicles using different fuels (i.e., gasoline or diesel). As such, it is necessary to develop the fraction of total highway vehicle miles traveled (VMT) that is accumulated by each vehicle type (i.e., VMT fractions) in order to estimate emissions accurately. The MOBILE6.2 model incorporates a vehicle classification system that assigns motorcycles, light-duty cars and trucks, and heavy-duty vehicles to one of 28 vehicle classes. While MOBILE6.2 provides default VMT fractions for each of these classes, EPA advises that VMT fractions should be determined from local data where such data is available. However, since local transportation data is not usually available to distinguish, based on fuel, between similar type vehicles, MOBILE6.2 has further defined 16 vehicle classifications determined by the regulations under which the vehicles are for sale (thus grouping like gasoline-fueled vehicles and the corresponding diesel-fueled vehicle into the same class). To complicate things further, most transportation agencies have vehicle classification counts by different "classes" than those used by MOBILE6.2. Thus, the task becomes one of mapping the local data into the 16 MOBILE6.2 classes. In most cases, this task requires supplementing local data with MOBILE6.2 default data to determine the VMT fractions for the required MOBILE6.2 vehicle classes. Montgomery County, Tennessee vehicle classification count data is used to develop the VMT fractions input to MOBILE 6.2 for Montgomery County, Tennessee. The development of these VMT fractions is detailed in Appendix E.

#### 5.3 Vehicle Age Distribution

Emission factors vary by the age of the vehicle. Thus MOBILE6.2 requires vehicle registration distribution by age as the fraction of vehicles by age in the fleet. Area specific registration distributions for Montgomery County were not available. Much of the VMT on Interstate 24 is by vehicles registered in other counties both in Tennessee, Kentucky, and other states. The interagency consultation team agreed to use the national default registration age distribution for all vehicle categories for both Montgomery County and Christian County (see IAC August 1, 2008 minutes in Appendix A). The national default registration age distribution is shown in Table 3. The default MOBILE6 values for the distribution of vehicles by age are for July of any calendar year. There are 16 values indicating 16 combined gasoline/diesel vehicle classes. The 16 vehicle classes were described in the section 5.5. Each distribution includes one value for each year which is the fraction of all vehicles in that class of that age in July. The last age fractions are for all vehicles 25 yrs. of age and older.

Table 3. National Default Registration Age Distribution for 16 vehicle classes.

Age	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8a	HDV8b	HDBS	HDBT	Motorcycles
1	0.0530	0.0581	0.0581	0.0594	0.0594	0.0503	0.0503	0.0388	0.0388	0.0388	0.0388	0.0388	0.0388	0.0393	0.0307	0.1440
2	0.0706	0.0774	0.0774	0.0738	0.0738	0.0916	0.0916	0.0726	0.0726	0.0726	0.0726	0.0726	0.0726	0.0734	0.0614	0.1680
3	0.0706	0.0769	0.0769	0.0688	0.0688	0.0833	0.0833	0.0679	0.0679	0.0679	0.0679	0.0679	0.0679	0.0686	0.0614	0.1350
4	0.0705	0.0760	0.0760	0.0640	0.0640	0.0758	0.0758	0.0635	0.0635	0.0635	0.0635	0.0635	0.0635	0.0641	0.0614	0.1090
5	0.0703	0.0745	0.0745	0.0597	0.0597	0.0690	0.0690	0.0594	0.0594	0.0594	0.0594	0.0594	0.0594	0.0599	0.0614	0.0880
6	0.0698	0.0723	0.0723	0.0556	0.0556	0.0627	0.0627	0.0556	0.0556	0.0556	0.0556	0.0556	0.0556	0.0559	0.0614	0.0700
7	0.0689	0.0693	0.0693	0.0518	0.0518	0.0571	0.0571	0.0520	0.0520	0.0520	0.0520	0.0520	0.0520	0.0522	0.0614	0.0560
8	0.0676	0.0656	0.0656	0.0482	0.0482	0.0519	0.0519	0.0486	0.0486	0.0486	0.0486	0.0486	0.0486	0.0488	0.0614	0.0450
9	0.0655	0.0610	0.0610	0.0449	0.0449	0.0472	0.0472	0.0455	0.0455	0.0455	0.0455	0.0455	0.0455	0.0456	0.0614	0.0360
10	0.0627	0.0557	0.0557	0.0419	0.0419	0.0430	0.0430	0.0425	0.0425	0.0425	0.0425	0.0425	0.0425	0.0426	0.0613	0.0290
11	0.0588	0.0498	0.0498	0.0390	0.0390	0.0391	0.0391	0.0398	0.0398	0.0398	0.0398	0.0398	0.0398	0.0398	0.0611	0.0230
12	0.0539	0.0436	0.0436	0.0363	0.0363	0.0356	0.0356	0.0372	0.0372	0.0372	0.0372	0.0372	0.0372	0.0372	0.0607	0.0970
13	0.0458	0.0372	0.0372	0.0338	0.0338	0.0324	0.0324	0.0348	0.0348	0.0348	0.0348	0.0348	0.0348	0.0347	0.0595	0.0000
14	0.0363	0.0309	0.0309	0.0315	0.0315	0.0294	0.0294	0.0326	0.0326	0.0326	0.0326	0.0326	0.0326	0.0324	0.0568	0.0000
15	0.0288	0.0249	0.0249	0.0294	0.0294	0.0268	0.0268	0.0304	0.0304	0.0304	0.0304	0.0304	0.0304	0.0303	0.0511	0.0000
16	0.0228	0.0195	0.0195	0.0274	0.0274	0.0244	0.0244	0.0285	0.0285	0.0285	0.0285	0.0285	0.0285	0.0283	0.0406	0.0000
17	0.0181	0.0147	0.0147	0.0255	0.0255	0.0222	0.0222	0.0266	0.0266	0.0266	0.0266	0.0266	0.0266	0.0264	0.0254	0.0000
18	0.0144	0.0107	0.0107	0.0237	0.0237	0.0202	0.0202	0.0249	0.0249	0.0249	0.0249	0.0249	0.0249	0.0247	0.0121	0.0000
19	0.0114	0.0085	0.0085	0.0221	0.0221	0.0184	0.0184	0.0233	0.0233	0.0233	0.0233	0.0233	0.0233	0.0231	0.0099	0.0000
20	0.0090	0.0081	0.0081	0.0206	0.0206	0.0167	0.0167	0.0218	0.0218	0.0218	0.0218	0.0218	0.0218	0.0216	0.0081	0.0000
21	0.0072	0.0078	0.0078	0.0192	0.0192	0.0152	0.0152	0.0204	0.0204	0.0204	0.0204	0.0204	0.0204	0.0201	0.0066	0.0000
22	0.0057	0.0075	0.0075	0.0179	0.0179	0.0138	0.0138	0.0191	0.0191	0.0191	0.0191	0.0191	0.0191	0.0188	0.0054	0.0000
23	0.0045	0.0072	0.0072	0.0167	0.0167	0.0126	0.0126	0.0178	0.0178	0.0178	0.0178	0.0178	0.0178	0.0176	0.0044	0.0000
24	0.0036	0.0069	0.0069	0.0156	0.0156	0.0114	0.0114	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167	0.0165	0.0037	0.0000
25	0.0102	0.0359	0.0359	0.0732	0.0732	0.0499	0.0499	0.0797	0.0797	0.0797	0.0797	0.0797	0.0797	0.0781	0.0114	0.0000
total	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

#### 5.4 Average Speed Values

Emission factors vary by vehicle speed. MOBILE6.2 defines "average" speed as the distance traveled (in miles) divided by the travel time (in hours). Thus the "average" speed as used in MOBILE6.2 comprehends all travel delays. Further, MOBILE6.2 defines four sets of driving cycles that must be modeled separately. These are (using the MOBILE6.2 terminology):

Freeway Driving Cycles Arterial/collector Driving Cycles Local roadway Driving Cycles Freeway ramp Driving Cycles

These driving cycles are intended to include all VMT by all highway motor vehicles. For this analysis, speeds were determined from the updated TDM. The average speeds by HPMS functional class determined for Montgomery County from the TDM and used for modeling emissions for Montgomery County are shown in Table 4.

HPMS Road Types	2008 Speed (mph)	2016 Speed (mph)	2025 Speed (mph)	2035 Speed (mph)
Rural Interstate	64.95	67.27	64.73	65.10
Rural Principal Arterial	48.65	46.72	46.09	45.58
Rural Minor Arterial	47.01	45.12	44.33	43.09
Rural Major Collector	41.09	40.37	39.46	38.34
Rural Minor Collector	41.09	40.37	39.46	38.34
Rural Local	24.98	25.00	25.00	25.00
Urban Interstate	64.95	67.27	64.73	65.10
Urban Principal	36.88	36.84	35.93	35.09
Urban Minor Arterial	27.54	26.20	25.18	23.38
Urban Collector	26.86	26.33	24.89	24.43
Urban Local	24.82	24.74	24.68	24.63

Table 4. Speeds Used in the Model

Using the MOBILE6.2 model "AVERAGE SPEED" command and the speed shown in Table 4, each of the HPMS roadways was input into MOBILE6.2 as either freeway, arterial or local. Interstate (freeway) ramp VMT was included in the interstate VMT and modeled using the AVERAGE SPEED command as shown in the example below. Based on August, 2004 Technical Guidance, principal arterial, minor arterial, major collector, minor collector, and rural local roadway types were considered as MOBILE6.2 "Arterial/collector" roadways. For MOBILE6.2 purposes, the HPMS urban local roadway was modeled as "Local" roadway with the MOBILE6.2 default speed of 12.9 mph. Both HPMS rural and urban interstate roadway types were modeled in MOBILE6.2 as "Freeway with ramps included". The model runs were performed using a VMT distribution of 98.5% and 1.5%

respectively, for rural interstate mainline traffic and ramps, and 92.4% and 7.6% for urban interstates and ramps. These percentages were obtained from a 2002 KYTC study on interstate ramp VMT. The national default values used in MOBILE6.2 are 92% and 8% for interstates and ramps respectively, which is very similar to the values used in Kentucky in urban areas. Less VMT on ramps of rural interstates is to be expected. The AVERAGE SPEED command in MOBILE 6.2 for Rural interstates would be as follows:

AVERAGE SPEED : 64.95 Freeway 98.5 0.0 0.0 1.5

Here, 98.5 is the percentage of VMT on the non-ramp portion of the freeway, and 1.5 is the percentage of VMT on freeway ramps.

#### 5.5 Temperatures, Absolute Humidity and Fuel Reid Vapor Pressure (RVP)

The MOBILE6.2 model requires inputs of minimum and maximum ambient temperature for the day, absolute humidity of the atmosphere, and fuel Reid vapor pressure (RVP) for the fuel used in the area. Due to the availability of local data, different minimum and maximum daily temperatures were used for Montgomery County and Christian County. The minimum and maximum daily temperatures used in the model for Montgomery County Tennessee were 69 and 94 F, respectively. These values were calculated by Marc Corrigan of the Tennessee Division of Air Pollution Control based on the temperatures measured in Clarksville on the 10 highest 8-hour average ozone days in the area occurring during the ozone seasons for the years 2000, 2001 and 2002. Similar temperatures (67 and 94 F) were determined by the Kentucky Division of Air Pollution Control for use in Christian County using data from a weather station located in Princeton, Kentucky. The Kentucky methodology was based on EPA guidance titled, "Attachment E - Temperature". For the humidity, the MOBILE6.2 default value of 75 gr/lb was used for all runs. A 1992 National Institute for Petroleum and Energy (NIPER) study indicated that the RVP for Kentucky should be 8.6 psi. EPA has concurred. Per interagency consultation agreement (see IAC minutes in Appendix A), an RVP value of 8.6 psi was used for both Montgomery and Christian County. An RVP of 9.0 psi is the maximum vapor pressure that can be delivered by gasoline marketers during July in both counties (per USEPA regulations).

#### 5.6 Vehicle Miles of Travel

Vehicle miles of travel (VMT) were determined for the base year 2008 from the TDM and benched marked against the 2007 HPMS (Highway Performance Monitoring System) data from Tennessee Department of Transportation (TDOT). Travel Demand Modeling (TDM) was performed for the Clarksville MPO by Alliance Transportation Group. The TDM included the road network for all applicable portions of Montgomery County, and was used to project VMT growth from the base year 2008 to future years 2016, 2025 and 2035. The growth rate of VMT by facility type was used to adjust the base year HPMS VMT to future years. TDM documentation is available from the Clarksville MPO. Table 5 shows the base year and future year VMT for both urban and rural portions of Montgomery County by facility type.

Road Type	2008 VMT	2016 VMT	2025 VMT	2035 VMT
Rural Principal Arterial	248,942	305,298	34,147	396,584
Rural Minor Arterial	280,510	340,988	409,914	455,452
Rural Interstates	321,558	369,618	421,238	493,020
Rural Major Collectors	134,596	196,920	262,648	346,780
Rural Minor Collectors	161,005	235,558	314,181	414,821
Rural Local	184,698	97,733	76,091	71,616
Urban Principal Arterials	1,206,330	1,503,778	1,738,164	1,925,798
Urban Minor Arterials	386,156	429,113	535,126	582,085
Urban Interstates	430,824	495,215	564,376	660,550
Urban Collectors	237,519	292,330	396,510	611,391
Urban Local	206,822	384,007	516,376	631,078
Total	3,798,960	4,650,560	5,218,871	6,589,176

Table 5. Base Year and Future Year Daily Vehicle Miles of Travel (VMT) Projections for Montgomery County, Tennessee.

#### 5.7 Seasonal Adjustment Factors

The VMT projections given in Table 5 are annual average daily values. Traffic volumes vary by day of the week, month of the year and by different road types. Adjustment factors have been developed by TDOT to account for the variability of traffic volume on Tennessee roads by day of the week, month and road type. These factors were used to adjust annual average daily VMT to average daily VMT for July, in order to more correctly estimate emissions during the ozone season (primarily summer months). The adjustment factors used were the average for all days for July. The annual average VMT is divided by the adjustment factors to correct for July traffic. The adjustment factors used for Montgomery County, Tennessee were: 0.886 for rural interstates, 0.953 for other rural roads, and 1.006 for all urban roads.

#### 5.8 MOBILE6.2 Emission Factors for Montgomery County

The MOBILE6.2 model was run using the inputs described in sections 5.2 through 5.8 to predict emission factors for VOC, CO and NOx, in grams per mile for the composite vehicle fleet by road type for the 2008 base year and for the analysis years 2016, 2025, and 2035. The emission factors for each road type are shown separately for each analysis year in Tables 6 through 9 for Montgomery County, Tennessee.

Road Type	VOC grams/mile	CO grams/mile	NOx grams/mile
Rural Principal Arterial	0.890	9.846	1.277
Rural Minor Arterial	0.898	9.712	1.259
Rural Interstates	0.685	8.743	6.474
Rural Major Collectors	0.936	9.297	1.128
Rural Minor Collectors	0.936	9.297	1.128
Rural Local	1.094	9.054	1.158
Urban Principal Arterials	0.960	8.965	1.145
Urban Minor Arterials	1.055	8.894	1.171
Urban Interstates	0.738	9.536	5.021
Urban Collectors	1.068	8.977	1.111
Urban Local	1.507	9.517	1.15

Table 6. Montgomery Co. Emission Factors in grams/mile for 2008 by Road Type.

Road Type	VOC grams/mile	CO grams/mile	NOx grams/mile
Rural Principal Arterial	0.524	6.625	0.594
Rural Minor Arterial	0.528	6.530	0.587
Rural Interstates	0.412	5.649	2.265
Rural Major Collectors	0.544	6.328	0.549
Rural Minor Collectors	0.544	6.328	0.549
Rural Local	0.624	6.265	0.568
Urban Principal Arterials	0.554	6.147	0.553
Urban Minor Arterials	0.614	6.199	0.573
Urban Interstates	0.441	6.264	1.802
Urban Collectors	0.615	6.237	0.552
Urban Local	0.858	7.055	0.567

Table 7. Montgomery Co. Emission Factors in grams/mile for 2016 by Road Type.

Table 8. Montgomery Co. Emission Factors in grams/mile for 2025 by Road Type.

Road Type	VOC grams/mile	CO grams/mile	NOx grams/mile
Rural Principal Arterial	0.365	5.818	0.368
Rural Minor Arterial	0.369	5.731	0.365
Rural Interstates	0.296	4.913	0.848
Rural Major Collectors	0.381	5.549	0.352
Rural Minor Collectors	0.381	5.549	0.352
Rural Local	0.443	5.556	0.368
Urban Principal Arterials	0.39	5.385	0.351
Urban Minor Arterials	0.442	5.532	0.37
Urban Interstates	0.314	5.481	0.720
Urban Collectors	0.445	5.589	0.366
Urban Local	0.637	6.376	0.364

Road Type	VOC grams/mile	CO grams/mile	NOx grams/mile
Rural Principal Arterial	0.352	5.661	0.316
Rural Minor Arterial	0.358	5.549	0.313
Rural Interstates	0.285	4.778	0.528
Rural Major Collectors	0.370	5.38	0.305
Rural Minor Collectors	0.370	5.38	0.305
Rural Local	0.428	5.433	0.322
Urban Principal Arterials	0.379	5.222	0.304
Urban Minor Arterials	0.440	5.518	0.329
Urban Interstates	0.302	5.341	0.475
Urban Collectors	0.433	5.493	0.324
Urban Local	0.619	6.247	0.317

Table 9. Montgomery Co. Emission Factors in grams/mile for 2035 by Road Type.

#### 5.9 Daily Emissions in Tons Per Day for Montgomery County

Emission factors shown in Tables 6 through 9 were multiplied times the seasonally adjusted VMT for each facility type to obtain the total emissions per day of each pollutant by facility type for each analysis year. The sum of the emissions for all facility types yields the tons per day of each pollutant from on-road mobile sources for all of Montgomery County. A summary of the tons per day of each pollutant is shown in Table 1 (in Executive Summary) for Montgomery County, Tennessee.

#### 6.0 Conclusions

Table 1 summarized the on-road mobile source emissions by years and Tables 5-9 by road types which indicates that emissions are expected to less than the MVEB even with expected new projects and VMT growth. This is largely due to more stringent emission standards for new cars and trucks. As new vehicles with low emissions replace older vehicles with higher emissions, air quality should improve. For Montgomery County, Tennessee, for both years 2025 and 2035 emissions of VOC and NOx are expected to decrease significantly below the 2016 MVEB. Additionally, the 2010 estimated emissions (VOC of 3.677 tons per day and NOx of 8.535 tons per day) as determined in the 2005 conformity analysis were significantly lower than the 2002 base year emissions demonstrating a downward trend that continues through 2030. Current planning assumptions have not changed significantly and forecasted growth and VMT are consistent with that forecast for the 2005 analysis. Therefore, this analysis demonstrates conformity with the USEPA's "Budget Emissions Test" for 2016 in that transportation-related emissions are projected to be less than the 2016 mobile source emissions levels and demonstrates conformity for 2016, 2025, and 2035 since the emissions are projected to be less than the MVEB. Monitoring data now shows attainment for the 1997 ozone NAAQS in the Clarksville area. Thus, since future year emissions are estimated to be less than the MVEB, transportation improvements contained in the MTP should not interfere with future attainment or maintenance of the NAAQS for ozone.

## APPENDIX A

## IAC MINUTES



### CLARKSVILLE URBANIZED AREA METROPOLITAN PLANNING ORGANIZATION

Stan Williams MPO Director stanwilliams@cityofclarksville.com 329 MAIN STREET CLARKSVILLE, TN 37040 PHONE: (931)645-7448 Jill Hall Transportation Planner jhall@cityofclarksville.com

August 1, 2008

RE: 2008 Conformity IAC Meeting Minutes

KYTC, Planning
KYTC, Planning
KY, DAQ
KYTC Region 2
KYTC Region 2
KYTC, Planning
KYTC, Planning
FHWA-KY
EPA Region 4
TDOT, Planning
TDOT, Planning
TDOT, Planning
TDEC, AQ
Clarksville MPO
Clarksville MPO

Mr. Williams welcomed everyone on the call and asked for introductions by state. He then asked Mr. Mayes to coordinate and run the IAC meeting. Mr. Mayes introduced two new members to the IAC: Dianna Smith, EPA Region 4 and Amy Thomas, KYTC MPO Engineer.

Mr. Mayes began going through the agenda starting with Roles and Responsibility. He added that the IAC role is to approve the conformity and the project list of the model. Mr. Mayes agreed to do the Kentucky portion of the budget under Designation Status. He stated that there will be two separate conformities, one for each state. Once these were complete the Clarksville MPO will combine them into one. The final conformity must be consistent on mobile parameters. Mr. Williams said that no one has been selected yet to do the conformity for the Tennessee side.

IAC Meeting Minutes August 1, 2008 Page 2

Mr. Mayes continued with the Conformity Test. Kentucky's first analysis year is 2016 and the last year of the LRTP is 2035. The 2025 was arbitrarily selected between the two required years. Mark Corrigan said that the Tennessee's first analysis year is also 2016.

Under the Modeling section Mr. Mayes said he would be responsible for the Emissions Model for the KY portion. The Travel Demand Model for both KY and TN will be conducted by the consultant selected for the LRTP. The selected consultant will be responsible for the Tennessee portions of the Emission Model. The military base is exempt from these models. Mr. Mayes stated that the IAC will need to be involved as appropriate with the model and demand list.

Review of MOBILE 6.2 inputs:

- 1. The min and max daily temperatures for Christian County were used for redesignation model and recommended by Mr. Mayes. Joe Forgacs agreed. Mark Corrigan said that the min (69 F) and max (94 F) were the temperatures for the Tennessee portion and is in the respective SIP. Everyone was in agreement to use these numbers for the input.
- 2. Everyone was in agreement to use the humidity default value of 75g/lb for KY and TN.
- 3. Everyone agreed to use the RVP of 8.6 psi for KY and TN.
- Mr. Mayes recommended to use the Average Speed command. KY has been continually updating the 2002 model and have speeds up to 2006 data. Mr. Williams asked to defer this until a consultant has been selected and can also review.
- 5. The 2002 Montgomery County, Tennessee VMT fraction data was used in the SIP maintenance plan development. Mr. Mayes recommends the use of the 2002 VMT fraction data. KY does not have any more recent data. Mr. Corrigan said it was the most current data for TN and recommends its use also. Mr. Mayes felt the 2002 data would be better than the national default data. Ms. Smith said that if the 2002 data is the most current, it would be acceptable. Everyone was in agreement to use the 2002 Montgomery County, Tennessee VMT fraction data.
- 6. Ramp %s were used as determined by a 2002 KYTC study where urban and rural freeways were considered. Mr. Mayes recommends the ramp % from the 2002 KYTC study. Mr. Williams and Mr. Corrigan were in agreement with Mr. Mayes. Ms. Smith said she would run it by headquarters and get back with us on their decision.
- 7. Mr. Mayes recommends that the national default registration be used for age distribution for all vehicles. The national default had been used for the SIP development. Mr. Corrigan agrees with Mr. Mayes recommendation.

IAC Meeting Minutes August 1, 2008 Page 3

8. Mr. Jones asked about alternatives. Mr. Mayes responded to get local age distribution data and supplement with national default for interstate traffic. This is a much more complicated process with little change in the results. Ms. Dupont recommended the use of the national default registration. Everyone was in agreement to use the national default registration for age distribution for all vehicle categories.

Nothing additional was added to the Fort Campbell section in the agenda handout. Mr. Williams accepted responsibility for the Additional Planning Assumptions section in the agenda. Under the Projects section of the agenda, Deborah Fleming asked to be added to the email list. She is the TDOT representative for Clarksville. Everyone agreed to have her added to the list. Mr. Mayes stated that the same procedure should be followed – to begin with the email process and have IAC calls when needed.

Under the Mobile 6.2 and Conformity Report section of the agenda, Mrs. Midgett said that it will be the Clarksville MPO's responsibility to identify the party to run the Mobile 6.2 and to prepare the conformity report for Montgomery County.

Under the Lead Agency and Distribution of Report it was agreed that the lead agency is the FHWA-TN division. Bernadette Dupont said that KY division will provide a letter of support for the TN division.

In review of the timeline Mr. Mayes asked about the MPO's required time for public participation. Mr. Williams answered it was 14 days. Correction was made in the schedule from 14 days to 30 days for the LRTP and conformity report public review. All state and federal agencies agreed to diligently try to reduce their 30 day review periods in order to prevent a lapse. A discussion followed by Mr. Mayes that this is not a conformity lapse but a plan expiration. This means the TIP in place can continue forward with any project. The last conformity was signed by Bobby Blackmon with FHWA on February 4, 2008 and therefore good until February 4, 2012. It was suggested by Lynn Soporowski that additional TIP projects and /or amendments to the TIP be made by December 2008 to insure their approval before the plan expires.

Mr. Hamilton brought up freight planning. Mr. Mayes acknowledged it was not on the agenda but thought it should be discussed. The TN modeling group have released a report that is based on freight planning. They predict that truck traffic will double by 2030. Mr. Corrigan suggested that maybe freight experts could work with the consultant. Ms. Soporowski commented that the increase in truck traffic will increase the VMT by 25% by 2030. Mr. Hamilton stated that the freight model does rely on historical trends and needs to be addressed and discussed further.

IAC Meeting Minutes August 1, 2008 Page 4

Ms. Dupont asked if the 2005-2007 data would designate the Clarksville Area as nonattainment. Mr. Corrigan responded and said it was very possible for the PM2.5 data and would show the area is not attaining the daily PM2.5 NAAQS, and that TDEC was waiting to hear back from EPA concerning supplemental information sent to them. Ms. Smith stated that on August 20, 2008 EPA will send out letters with their recommendation.

No further comments made and IAC call was ended.



### CLARKSVILLE URBANIZED AREA METROPOLITAN PLANNING ORGANIZATION

Stan Williams MPO Director stanwilliams@cityofclarksville.com 329 MAIN STREET CLARKSVILLE, TN 37040 PHONE: (931)645-7448 Jill Hall Transportation Planner jhall@cityofclarksville.com

August 10, 2009 @ 10:00/9:00 am EDST/CDST

Re: Conformity IAC Conference Call Minutes

#### Attendees:

KY-FHWA
KY-FHWA
<b>KYEPC-AQ</b> Division
KYTC-Plan. Div.
TDOT-Plan Div.
TDOT-Plan Div.
TN-FHWA
TDEC-AQ Div.
EPA-Reg.4
FTA, Atlanta
CUAMPO
CUAMPO

Mr. Williams asked Mr. Mayes to begin the discussion after the introductions were made. Mr. Mayes referred to the August 1, 2008 IAC meeting minutes about the transportation conformity and pointed to the Mobile 6.2 inputs. Mr. Mayes asked Mr. Forgacs and Mr. Corrigan if the parameters for the Mobile 6.2 were still acceptable to them. Both Mr. Forgacs and Mr. Corrigan said it was ok with them. Ms. Dupont asked Mr. Mayes for a summary of said inputs. Mr. Mayes agreed and referred to the August 1, 2008 minutes that included: min. and max. temp., humidity, RVP, VMT fraction data, ramp %s, age of vehicles. Mr. Corrigan again agreed with the inputs and defaults for Mobil 6.2.

Ms. Fleming asked what the starting base year was. Mr. Williams stated the starting base year was 2008 with 2016, 2025, 2035 being the horizon years. Mr. Williams asked the members to once again review said minutes and email any comments to him asap. He further indicated that the only comments received thus far were from Ms. Dupont.

August 10, 2009 IAC minutes Page 2

Mr. Williams stated that item 6 on the agenda - Fort Campbell traffic counts are covered as external stations as listed in the minutes. Item 8 - Projects was summarized by Mr. Williams informing the members that he and the consultants had met with staff from both of the Regional Planning Commissions as well as the City of Oak Grove concerning project lists. He then referred to the E+C list (projects completed since last plan and/or under development), Projects From the 2030 LRTP (to be carried forward), and Other Projects " " . In addition, he affirmed that TDOT, Local Programming Office had disclosed that were no future project(s) currently planned for Clarksville/Montgomery County. Thus, he was only waiting to hear back from Ms. Thomas to see if KYTC was proposing a/any new project(s). Ms. Fleming explained that she had talked with Ms. Thomas last week and they preferred the submission of a future project(s) be on hold until financial plan is complete. Mr. Williams denoted that he was not surprised that TDOT did not submit such given the fact the lengthy time period it takes to get a project to completion. In addition, given the current funding situation were probably doing good to maintain existing facilities. Ms. Fleming even indicated the possibility of projects having to be removed.

Ms. Fleming reminded everyone that the TIP must be financially constraint. Mr. Mayes asked who is responsible for the financial plan. Ms. Fleming responded that the consultant and the MPO were responsible. If they are unable to make the figures work then the concerns should be brought to the IAC for discussion. Ms. Midgett stated that the DOTs provide financial information on the projected cost of state projects to the MPO. Mr. Williams affirmed that once the financial plan was finished it would be brought to the IAC for review.

Ms. Dupont asked about transit projects since none were submitted in the email regarding the IAC call. Mr. Williams explained that the transit projects are forth coming, that currently only the highway project list was submitted for review. The bike/pedestrian project list would come about after the public meetings to afford the local cycling and walking groups' opportunity for public input.

Ms. Dupont asked what E+C was abbreviated for. Mr. Williams answered that it was for projects that were existing and committed. Mr. Corrigan asked at what point a project becomes committed. Mr. Williams responded that for a project to be committed the funds must be obligated, the project be in the TIP and a phase has been started.

Mr. Corrigan asked what the horizon year was for three projects in the ROW phase on the TN E+C list (projects 18, 19, 20). Mr. Williams did not have the horizon year listed in this specific table but stated he would have that information for the next call. Mr. Corrigan then asked if these projects will be modeled in their horizon year.

August 10, 2009 IAC minutes Page 3

Mr. Williams explained that that all projects are modeled in the specific horizon year based on their estimated completion of construction phase. Ms. Dupont asked that an additional column be added to the E+C List that indicated whether the project was modeled or not by either a "yes" or "no" response. Mr. Corrigan disclosed that he wanted to discuss K-06, K-07 and K08 projects on the "To Be Carried Forward" List that have an AQ exempt status during the next call. Ms. Smith asked that project K-13 be included that said discussion.

Ms. Fleming referred to agenda item 7 – Planning Assumptions and asked if the goals and objectives sent to the members are from the MTP update or from the current SAFETEA LU compliant plan. Mr. Williams replied that these are the current SAFETA LU goals. He informed the members of the upcoming stakeholders and public meetings to be held on September 3, 2009. Depending on the input received during said meetings, the goals and objectives could be modified.

The next item to be reviewed was #9 - Conformity Report. Mr. Mayes said it will be done similar to the last one. Mr. Williams said the current Conformity Report is on the website. Mr. Corrigan asked who would be doing the Conformity Report for the TN side. Mr. Williams stated that the MPO will produce the Conformity Report for the TN side and work with Mr. Mayes to complete the Final Conformity Report.

Mr. Williams asked that anyone that discovers they are not receiving the emails with associated information/attachments, to please call him so he can inform the IT department. Ms. Fleming and Mr. Corrigan had indicated such.

Mr. Mayes directed the conversation to the planning assumptions. He felt the planning assumptions had been a missing step in the process and were important inputs. Mr. Williams again reminded the members that he and the consultant would continue to address such.

Ms. Fleming had a question with the last page on the employment and population handout under the column "remaining to be allocated". Mr. Williams explained this column represented the difference of the base year to the future year. Ms. Fleming requested the column be renamed to be more descriptive (i.e. projected increase).

Mr. Williams gave an update on the revised MTP update schedule. Currently the base year model is moving along on the TN side – plan to be completed by August 21, 2009. The next step in the model is to go into the horizon years. He feels confident that the model portion of will be completed by August 31. The first scheduled public meetings will be held on September 3, 2009 in Clarksville and Oak Grove.

IAC Meeting Minutes August 10, 2009 Page 4

The first draft for review is estimated to be completed by October 22, 2009. The draft will be submitted by individual chapters/sections as they come available for review. Ms. Midgett requested that the new revised schedule be resent to the IAC. Mr. Williams apologized for not including said schedule in the previous email.

Mr. Corrigan had several questions/comments that he would like to discuss at the next IAC call. They were as follows:

- 1. Old plan verse new plan: Christian Co population showed a decrease in the old plan and now shows growth?
- 2. Montgomery Co rate of growth is slower for the new plan than the old plan, although a large industry is relocating to Montgomery Co.
- 3. It appears one table takes into account the population of Ft. Campbell while another table does not include the employment of Ft. Campbell.

Ms. Midgett asked that the consultant participate in the next IAC call to answer Mr. Corrigan's and any other question. Mr. Williams indicated that he didn't know of said availability but noted that if questions were supplied before hand, he would ensure answers were provided.

Agenda item 11 - Lead agency and distribution of the conformity report were discussed. It was once agreed upon that the lead agency is the FHWA-TN division. They will work in conjunction with the FHWA-KY division. Mr. Mayes is the contact for the KY side and the MPO for the TN side for conformity related issues.

Mr. Williams stated he would like to do the next IAC call the week of August 17-21 and asked for dates and times. After a several possibilities, he noted that an email would be sent out confirming such. He thanked all the members for their efforts, especially agencies/offices with multiple staff members participating. But acknowledged that it is not always practical (due to scheduling conflicts), but if at least one staff member can call in, the agenda items can be reviewed, discussed and decisions made.

The IAC call was completed.



#### CLARKSVILLE URBANIZED AREA METROPOLITAN PLANNING ORGANIZATION

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October 2, 2009 @ 10:00/9:00 pm EDST/CDST

Re: 2035 MTP Documentation Report - IAC Conference Call Minutes

Attendees:

1. Deborah Flemin	g TDOT-Planning Division
2. Marc Corrigan	TDEC
3. Britta Stein	TN-FHWA
4. Dianna Smith	EPA Region 4
5. David Whitwort	h KY-FHWA
6. Bernadette Dupo	ont KY-FHWA
7. JR Ham	<b>KYTC-Planning Division</b>
8. Amy Thomas	<b>KYTC-Planning Division</b>
9. Jesse Mayes	<b>KYTC-Planning Division</b>
10. Joe Forgacs	<b>KYTC-Air Quality</b>
11. Scott Thomson	KYTC-Modeling
12. Preston Elliott	<b>RPM</b> Consultants
13. Stan Williams	CUAMPO
14. Jill Hall	CUAMPO

Mr. Williams conducted a roll call and welcomed all participants. He asked that everyone move to the 2035 MTP Documentation Report on the agenda. He said the planning assumptions would be discussed through the documentation report. Mr. Williams asked that everyone to open the document report and would go through the report page by page on the call. Mr. Mayes stated that he was unable to open the report. Mr. Elliott said he had resent the document report in a lower version to those at the KYTC. Ms. Thomas said she was able to open it and also had sent it to everyone in the KYTC and that they had a hard copy in front of them for the call.

Mr. Williams stated that the only comment from the last IAC call was from Ms. Fleming. She had sent an email wanting to see more information added to paragraph 2.2 on the

stakeholders meetings. Ms. Fleming clarified she wanted the stakeholders list individually and what input was given. Mr. Elliott asked everyone to go to Appendix B and that the information Ms. Fleming had asked for had been incorporated into the document under Appendix B. Mr. Elliott said this report would become a technical document to the report. Ms. Fleming stated that she did not have this information when she sent out the email. Mr. Elliott agreed that Appendix B was not part of the attachment from the last IAC call. He stated in the MTP that this information will not be in an Appendix.

Ms. Dupont asked if the MTP would have stakeholder consultation. Mr. Elliott said yes it will be in the MTP. He gave example of the TVA letter that had been sent stating that TVA will review the draft MTP.

Mr. Williams then turned the call over to Mr. Elliott to discuss the data and the modeling in the report. Mr. Elliott referenced the Appendix F for the data information. He explained that the KYTC asked to use the State Data Center instead of the Woods and Poole for the population projections as the control totals for the Christian County portion. The Data Center's 2035 projection was significantly (24,287) higher for 2035. Mr. Thomson was in agreement with using the larger population numbers from the State Data Center.

Mr. Williams then moved to the revenue portion of the document report and referred to Mr. Elliott. Mr. Elliott stated the TN and KY revenues were separate. He had worked closely with TDOT, KYTC and local Transit on the revenue assumptions. He stated the revenue forecast was with a 3% annual growth rate broken out by horizon year. Mr. Williams stated that Ms. Dupont had wanted to see sub totals and grand totals broken out for Operation and Maintenance and in bucket funding. Mr. Elliott said this was shown in Appendix G under the financial and revenue assumptions.

Mr. Williams asked to move forward with an update on the modeling. Mr. Elliott stated that there were two calibrated models (TN and KY). He stated that external growth rates were developed for each model for the external locations. He stated that he had been coordinating with TDOT and KYTC and that Bob Rock with TDOT had concurred with the approach. Mr. Elliott asked Mr. Thomson if he had any comments on the approach for the Christian County model. Mr. Thomson had left the call, but others within KYTC had gone to get Mr. Thomson for concurrence with the modeling portion.

Mr. Elliott said that they were using a 2% annual growth rate at the interstate and a 1% annual growth rate at external stations that were non-interstate. He stated the state line needed to use the same number of 2% for annual growth rate for both TN and KY (but ultimately end with an absolute number for consistency). He stated that this approach was a good comparison as the population growth rate also was 2% annually as well. Mr. Elliott said that Alliance will run the model by horizon year once concurrence on the growth rates were concurred upon by KYTC.

Mr. Elliott moved on to discuss Appendix H – Project Improvement Assumptions. Mr. Elliott reviewed each of the tables in Appendix H with everyone. He discussed the TN

table that covered the funding buckets for horizon years and that the funds were subtracted out of the allocations. The subtracted funds were by horizon year and compared to the revenue assumptions. There was one project on the TN side (T-15 SR-374) that was removed from the table to make it fiscally constraint. Mr. Elliott did the same with the KY side pertaining to funding buckets. Mr. Elliott noticed that he did not show fiscal constraint component for Transit. He stated this was in a prior table and would correct it so it was reflected here also.

Mr. Williams thanked Ms. Thomas for getting the revenue forecast to the MPO, since the first forecast was high. Ms. Thomas said she had run it four different ways and liked the numbers submitted. Ms. Thomas wanted an HSIP funding added to the bucket list. Ms. Fleming said that TDOT doesn't require that buckets be listed in the MTP, but there should be wording put into the plan where the bucket use could be referred back too. Mr. Elliott asked if Ms. Thomas agreed with TDOT on this bucket issue. She, Ms. Dupont and JR all agreed that it only needs to be referenced in the plan.

Mr. Elliott asked if the project list should include projects in Christian County that are outside the MPO planning area. Mr. Williams stated that he did not want to include them in the project list. Mr. Mayes said for historical purposes the project list in the conformity report need to have all projects in and outside the MPO area included. He agreed that they did not need to be in the MTP. Ms. Fleming agreed with Mr. Mayes. She added that all of Montgomery County was now part of the MPO planning area and would not pose a problem for TN. Mr. Williams stated that it was done as Mr. Mayes said for the last plan and conformity.

Mr. Thomson returned to the conference call. Mr. Elliott referred him to Appendix F and in reference to the growth rates at the external stations. Mr. Thomson said he was fine with the 2% growth rate for both Counties along the interstate. He wanted the state line rate to be the same for TN and KY. Mr. Elliott told him they were and was at 2%. Mr. Thomson was fine with that figure. Mr. Thomson wanted external stations in rural areas to have 0% as a flat rate since many of the rural stations have a negative growth rate. Mr. Elliott agreed with Mr. Thomson to use those rates and to the use of rates for the positive growth rate locations.

Mr. Williams asked everyone to review the document report so there could be a concurrence. Ms. Fleming stated she liked having all the information in one document. Ms. Thomas said she was pleased with the document report. Mr. Elliott stated that Alliance will run the various horizon year model runs and will have the outputs next week. Mr. Williams said he would be taking the document report for review and approval by the Executive Board and TCC on October 22, 2009. Mr. Elliott said he will begin work on the draft MTP. Mr. Williams reminded him to submit chapters at a time to TDOT and KYTC for review as they were completed. He agreed to do so.

Mr. Mayes asked if the conformity would be a stand alone report. Mr. Williams said yes, it would be. Mr. Ham asked if Mr. Williams was ok with the document report to get approval

by the Executive Board. Mr. Williams said yes, he had heard concurrence on the document report during the call and there would be no other IAC calls before October 22<sup>nd</sup>. Mr. Ham stated that there were no page numbers on the report. Mr. Elliott will add the page numbers to the report. Mr. Ham and Ms. Thomas said the report then was fine and good to go. Ms. Thomas stated she will not be able to attend the October 22<sup>nd</sup> meeting, Mr. Ham would be there. Ms. Fleming said she was pleased with the progress. Ms. Dupont said she liked the format of the report. Ms. Stein stated all was good.

Ms. Dupont stated what she wanted to see in the Revenue Forecasts Tables a total cost by base and horizon year with a grand total. Include operation and maintenance as well as any buckets. In the Project list include a grand total. Ms. Fleming asked if there was a scheduled MPO meeting for October 14, 2009. Mr. Williams said there had been a tentative one but due to lack of business, it will need to be cancelled. He stated that he would email the Executive Board and the TCC of the cancellation after the call.

There was no more business to discuss and the call was ended.



## CLARKSVILLE URBANIZED AREA METROPOLITAN PLANNING ORGANIZATION

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Jill Hall Transportation Planner jhall@cityofclarksville.com

December 16, 2009 @ 3:00/2:00 pm EDST/CDST

Re: Conformity IAC Conference Call Minutes

## Attendees:

TDOT-Planning Division
TN-FHWA
EPA Region 4
KY-FHWA
KY-FHWA
KYTC – Planning Division
KYTC – Plan. Div.
KYTC – Plan. Div.
TDEC-AQ Division
KYEPC-AQ Division
TDOT-Env. Plan.
CUAMPO
CUAMPO

Mr. Williams conducted roll call and welcomed all participants. He began with the second item on the agenda the MTP update. The MTP was on the current schedule and was sent to KYTC and TDOT on November 6, 2009 for their review. Both KYTC and TDOT provided comments. Mr. Williams made the revisions and resubmitted the revised plan back to KYTC and TDOT on December 4, 2009. He hopes to get the Draft MTP ready by January 4, 2010 to send to FHWA and FTA to begin their 30 day review. Mr. Williams asked KYTC and TDOT how he should submit the draft to them either electronically or hard copy. Ms. Fleming stated that TDOT will take it electronically and Ms. Thomas said electronically was fine for KYTC. Mr. Williams asked what he should supply to TDOT and KYTC to be submitted to the Federal agencies. Ms. Fleming said the MPO should submit the Draft MTP directly to the Federal agencies on the TN side. Ms. Stein asked for three hard copies sent to FHWA and one hard copy to be sent to FTA. Ms. Smith said EPA will need to receive 1 hard copy also.

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Ms. Dupont stated that for the Draft MTP they would accept it electronically but that they would need three hard copies for the Final MTP.

Mr. Williams asked to move to the next item on the agenda the Conformity Reports for TN and KY. He stated that the document was available for review on the CUAMPO website. Mr. Corrigan asked if the Draft MTP was on the web also. Mr. Williams responded that it was not at this time and would go on the website after the review was completed by TDOT and KYTC.

Ms. Bernadette asked if the KY and TN Conformity Reports would be combined into one report. Mr. Mayes stated that was a question for the group. The past conformity was done separately because of separate budgets. He said he was fine with combining the two and it could be done easily. Ms. Smith with EPA said she would check to see if they could be combined and would get back with us.

Mr. Williams began to summarize the different content in the Conformity Report and the planning assumptions. He reminded the IAC that the minutes to the IAC calls were listed in the Appendix. Ms. Dupont asked about the differences between the TN and KY Conformity Reports. Mr. Mayes said the differences were from the adjustment factors used for KY and TN. They each have different factors. The adjustment factors for KY are by functional class and month. Mr. Mayes stated he would include a table with the adjustment factors for KY and Mr. Williams said he would do the same for the TN side. Mr. Corrigan question the base years used in a table. Mr. Williams reviewed the table and said they were from the past MTP plan and would make the corrections. The base years for this MTP are: 2008, 2016, 2025 and 2035. He also said he and Mr. Mayes would work on the tables to make sure they fit on the pages and were still legible.

Mr. Williams asked that everyone continue with the review and to submit comments no later than December 30, 2009 so revisions could be made. Mr. Williams plans to provide the Federal agencies the Draft MTP and Conformity Reports on January 4, 2010 to keep everything on schedule. Ms. Dupont asked if the fiscal constraint would be included. Mr. Williams stated yes. He asked if no one objects for the IAC and Federal Agencies to review the documents at the same time. No one objected. Mr. Corrigan asked if the MTP would be adopted before the grace period ended. Mr. Williams said yes and would send out to the IAC the revised schedule. He again asked for everyone to please review and submit their comments. To avoid repetition he asked that everyone be Cc on all email comments. Everyone agreed.

With no further business the call ended.

# APPENDIX B

PROJECT LIST

Modeled in Air Quality Estimated Federal Travel (E)xempt Current Future Anticipated Year of Functional Project Length Type of Demand (N)on-Number Number Time Funding Expenditure Classification Number Roadway From То (Miles) Improvement\* Model\*' Exempt of Lanes of Lanes Frame Source Cost TN-L-STP/TN-SR-48 (Trenton Rd) SR-236 (Tiny Town Rd) Urban Collector Widening - PED T-01 Needmore Rd 5.1 Yes Ν 2 4 2035 \$30,529,057 Local T-02 SR-48 (College St) US-41A (Riverside Dr) Second St 0.3 Minor Arterial Widening - PED Yes Ν 2 4 2035 TN-S-STP \$2.925.753 8th St 3.5 \$20,951,314 T-03 New Roadway Needmore Rd Local New Road - PED Yes Ν 0 4 2035 TN-Local US-79 T-04 SR-13 (Kraft St) US-41A (Riverside Dr) 1.7 Principal Arterial Widening - PED Yes Ν 2 5 2016 TN-S-STP \$12,213,529 (Wilma Rudolph Blvd) SR-48 (Trenton Rd) US-79 (Wilma Rudolph Blvd) 1-24 5 2025 TN-S-STP \$28.877.380 T-05 Minor Arterial Widening - PED Yes Ν 2 5 TN-IM/NHS/S I-24 Ν T-06 KY/TN State Line SR-374 Extension 16 Interstate Widening Yes 4 6 2035 \$148,972,389 STP \$4,428,323 T-07 Pembroke Rd KY/TN State Line 0.7 Minor Arterial Widening - PED Yes Ν 2 5 2025 TN-L-STP SR-236 (Tiny Town Rd) TN-S-STP T-08 US-79 (Wilma Rudolph Blvd) SR-13 (Kraft St) Dunbar Cave Rd 1.6 Principal Arterial Widening - PED Yes Ν 5 7 2016 \$12,219,679 US-79 (Wilma Rudolph Blvd) Dunbar Cave Road SR-48 (Trenton Rd) 1.0 Ν 5 7 2025 TN-NHS \$8.328.722 T-11 Principal Arterial Widening - PED Yes SR-374 T-12 US-79 (Wilma Rudolph Blvd) SR-48 (Trenton Rd) 0.8 Principal Arterial Widening - PED Yes Ν 5 7 2025 TN-NHS \$6.662.978 (101st Air. Div. Pkwy) T-13 SR-237 (Rossview Rd) Rollow Ln SR-374 (Warfield Blvd) 3.4 Minor Arterial Widening - PED Yes Ν 5 TN-S-STP \$21,508,999 2 2025 Excell Rd Extension T-14 SR-12 Ν 0 2035 SR-374 Extension 1.6 New Road - PED Yes 4 TN-Local \$11,545,191 Local (New Roadway) 2.5 2025 TN-Local \$13,190,437 T-16 New Roadway US-79 (Wilma Rudolph Blvd) SR-48 (Trenton Rd) Local New Road - PED Yes Ν 0 4 Hugh Hunter/Needmore Rd TN-L-STP/TN-T-17 SR-236 (Tiny Town Rd) **KY/TN State Line** 20 Urban Collector New Road - PED Yes Ν 0 3 2035 \$11,972,179 Extension (New Roadway) Local US-79 (Wilma Rudolph Whitfield Rd/Old Trenton Rd Ν T-18 Needmore Rd 2.4 Urban Collector Widening - PED Yes 2 4 2025 TN-L-STP \$13.670.821 Blvd) Reconstruct -Highland Circle/Glendale T-19 US-41A (Ashland City Rd) Golf Club Lane 0.6 Urban Collector Add Center Turn Е 2 3 2025 TN-Local \$2.569.627 Yes Rd/new alignment Lane Memorial Dr SR-112 (Madison St) SR-374 (Richview Rd) 2.2 Widening - PED Yes HPP/TN-Local \$10.809.856 T-20 Minor Arterial Ν 3 5 2016 Reconstruct Memorial Dr T-21 SR-374 (Richview Rd) SR-76 1.9 Urban Collector Add Center Turn Yes Ε 2 3 2016 TN-L-STP \$6,540,213 Lane - PED Jack Miller Blvd Extension 2 T-22 Tobacco Rd Peachers Mill Rd. Urban Collector New Road - PED Yes Ν 0 3 2025 TN-Local \$6,772,343 (New Roadway) US-41A Bypass T-23 US-41A/SR-112 SR-13 5.5 Principle Arterial Widening - PED Yes Ν 2/3 5 2025 TN-S-STP \$42,763,481 (Ashland City Rd) T-29 Gate 1 - Fort Campbell Widening - PED Yes Ν DAR \$2,182,806 Lafayette Rd Walnut Grove Rd 0.4 Minor Arterial 2 5 2016 T-30 Oakland Rd US-79/SR--13 Oakland Rd 0.5 Urban Collector Realignment Yes Е 2 2 2016 TN-L-STP \$1.258.421 T-31 SR-237/Rossview Rd Е TN-L STP \$2,395,808 Dunbar Cave Rd Cardinal Ln 0.7 Urban Collector Realignment Yes 2 3 2016 Reconstruct-Add SR-76 Е 2 3 \$965,365 T-32 Sango Rd 0.25 Yes 2016 TN-CMAQ Sango Rd Urban Collector Turn Lane - PED \$424,254,673 Total

Table 7-22035 Planned Streets & Highways Improvements - Tennessee

\* PED = Includes sidewalks, PED-P = Pedestrian Accommodation Prior to Project; \*\* Roadway facilities are to be modeled in the MPO travel demand model according to the number of capacity lanes per horizon year

Table 7-3 2035 Planned Streets & Highways Improvements - Kentucky

Project Number	Roadway	From	То	Length (Miles)	Federal Functional Classification	Type of Improvement*	Modeled in Travel Demand Model**	Air Quality (E)xempt (N)on- Exempt	Current Number of Lanes	Future Number of Lanes	Time Frame	Anticipated Funding Source	Estimated Year of Expenditure Cost
K-02	Hugh Hunter\Gritton Church Rd	KY -911 (Thompsonville Ln)	TN State Line	1.9	Local	Reconstruction - PED	Yes	E	2	2	2035	KY-SP	\$ 10,560,000
K-04	I-24	US-41A (Fort Campbell Blvd)	TN State Line	7.8	Interstate	Widening	Yes	Ν	4	6	2035	KY-NHS	\$ 37,300,000
K-05	Gate 4 Extension - Fort Campbell	US-41A (Fort Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	1.2	Urban Collector	New Road - PED	Yes	Ν	0	2	2025	KY-STP/NHS	\$ 8,500,000
K-06	KY-400 (State Line Rd)	US-41A (Fort Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	1.4	Urban Collector	Reconstruct - Add Center Turn Lane - PED-P	Yes	E	2	3	2025	KY-STP	\$ 10,500,000
K-07	KY-115 (Pembroke-Oak Grove Rd)	TN State Line	1-24	2.9	Urban Minor Arterial	Reconstruct - Add Center Turn Lane - PED-P	Yes	E	2	3	2025	KY-STP	\$ 18,300,000
K-08	KY-115 (Pembroke Rd)	I-24	Barkers Mill Rd (Planning Boundary)	1.9	Rural Minor Arterial	Reconstruct - Add Center Turn Lane	Yes	E	2	3	2025	KY-NHS	\$ 6,000,000
K-10	KY-117 (New Roadway)	US-41A (Ft. Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	3.0	Urban Collector	New Road - PED	Yes	Ν	0	5	2035	KY-STP	\$ 8,600,000
K-11	Gate 5 Extension - Fort Campbell	US-41A (Fort Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	1.5	Urban Collector	New Road - PED	Yes	Ν	0	2	2035	KY-STP	\$ 11,800,000
K-12	Oatts-Riggins Rd (New Roadway)	KY-400 (State Line Rd)	KY 911 (Thompsonville Ln)	1.5	Urban Collector	New Road - PED	Yes	Ν	0	3	2025	KY-NHS	\$ 6,400,000
K-13	KY-1453 (Elmo Rd) Rehabilitation	US-41A (Ft. Campbell Blvd)	KY-115 (Pembroke-Oak Grove Rd)	4.1	Local	Reconstruct - Add Center Turn Lane	Yes	E	2	3	2035	KY-SP	\$ 9,500,000
K-14	KY-109 (Bradshaw Rd) Rehabilitation	KY-1453 (Elmo Rd)	Salem-Bradshaw Rd (Planning Boundary)	1	Rural Minor Collector	Reconstruct - Add Center Turn Lane	Yes	E	2	3	2035	KY-NHS	\$ 3,000,000
	udes sidewalks, PED-P = Pede	-										Total	\$130,460,000

# APPENDIX C

MOBILE 6.2 INPUT FILES

\* Filename: Z:\Planning\Clarksville 2035 LRTP\Tasks\Mobile 6 model\Mobile6\Run\CL2009AQ\MNT\_CNTY\MNTCNTR1.IN \* This input file is a MOBILE6.2 run for the 2009 8-hour ozone conformity analysis for \* MONTGOMERY COUNTY TN, A subset of the MPO study area. \* ANALYSIS YEAR Settings ARE FROM A PREVIOUS KYTC RUN FOR CHRISTIAN COUNTY Modified to reflect \* Current Base Year and Milestone Years \* According to the EPA document, "Technical Guidance on the Use of MOBILE6.2 for Emission \* Inventory Preparation" (August 2004), Kentucky has amended the standard MOBILE6.2 input \* file to reflect three modifications relating to highway mobile source emission calculations. \* The modifications are: \* (1) Do not include Ramp as a single Road Classification entry (This run keeps this amendment. Ramps are combined with Freeways) \* (2) for Rural Local, change Local in the Average Speed line to Arterial and use KYTC's actual Rural Local speed and not 12.9 mph (This run maintains this change using modeled speeds for rural local based on HCM) \* (3) replace the Diesel Sulfur value of 500 ppm with a state-specific value provided on an EPA web link. (This Clarksville run maintains this change) \* \* Kentucky uses a RVP value of 8.6 psi per the NIPER 1992 study and EPA quidance \* This analysis uses VMT fractions developed by TDOT for Montgomery County, TN \* Clarksville MIN/MAX temperatures of 69.0 and 94.0 respectively were based on IAC minutes from meeting 08-10-08 \* Speeds were determined for MONTGOMERY COUNTY, TN from the travel demand model \* Ramp %s were used as determined by a 2002 KYTC study Header Section MOBILE6 INPUT FILE : CL2009AQ\MNT\_CNTY\MNTCNTR2.IN REPORT FILE : CL2009AQ\MNT\_CNTY\MNTCNTR2.OUT RUN DATA Run Section FUEL RVP : 8.6 MIN/MAX TEMP : 69.0 94.0 Scenario Section SCENARIO RECORD : Montgomery County, TN Rural Interstate 64.95 mph - CY2008 CALENDAR YEAR : 2008

EVALUATION MONTH : 7 AVERAGE SPEED : 64.95 Freeway 98.5 0.0 0.0 1.5 VMT FRACTIONS : 0.3283 0.0498 0.1660 0.0505 0.0242 0.0270 0.0050 0.0039 0.0030 0.0111 0.0132 0.0680 0.2420 0.0026 0.0012 0.0042 SCENARIO RECORD : Montgomery County, TN Rural Principal Arterial 48.65 mph - CY2008 CALENDAR YEAR : 2008 EVALUATION MONTH : 7 AVERAGE SPEED : 48.65 Arterial VMT FRACTIONS 0.4768 0.0723 0.2411 0.0733 0.0352 0.0392 0.0038 0.0029 0.0022 0.0084 0.0099 0.0057 0.0203 0.0019 0.0009 0.0061 SCENARIO RECORD : Montgomery County, TN Rural Minor Arterial 47.01 mph - CY2008 CALENDAR YEAR : 2008 EVALUATION MONTH : 7 AVERAGE SPEED : 47.01 Arterial VMT FRACTIONS : 0.4768 0.0723 0.2411 0.0733 0.0352 0.0392 0.0038 0.0029 0.0022 0.0084 0.0099 0.0057 0.0203 0.0019 0.0009 0.0061 SCENARIO RECORD : Montgomery County, TN Rural Major Collector 41.09 mph - CY2008 CALENDAR YEAR : 2008 EVALUATION MONTH : 7 AVERAGE SPEED : 41.09 Arterial VMT FRACTIONS 0.4798 0.0728 0.2426 0.0737 0.0354 0.0395 0.0049 0.0038 0.0029 0.0109 0.0128 0.0024 0.0086 0.0025 0.0012 0.0062 SCENARIO RECORD : Montgomery County, TN Rural Minor Collector 41.09 mph - CY2008 CALENDAR YEAR : 2008 EVALUATION MONTH : 7 AVERAGE SPEED : 41.09 Arterial VMT FRACTIONS 0.4798 0.0728 0.2426 0.0737 0.0354 0.0395 0.0049 0.0038 0.0029 0.0109 0.0128 0.0024 0.0086 0.0025 0.0012 0.0062 SCENARIO RECORD : Montgomery County, TN Rural Local 24.98 mph Default - CY2008 : 2008 CALENDAR YEAR EVALUATION MONTH : 7 AVERAGE SPEED : 24.98 Arterial VMT FRACTIONS 0.4798 0.0728 0.2426 0.0737 0.0354 0.0395 0.0049 0.0038 0.0029 0.0109 0.0128 0.0024 0.0086 0.0025 0.0012 0.0062

\* Although the above facilities are designated 'Rural Local' in the model, based on IAC guidance

\* they are treated here as 'Arterial/Collector roadways and the actual modeled speed is used. SCENARIO RECORD : Montgomery County, TN Urban Interstate 64.95 mph - CY2008 CALENDAR YEAR : 2008 EVALUATION MONTH : 7 AVERAGE SPEED : 64.95 Freeway 92.4 0.0 0.0 7.6 VMT FRACTIONS 0.3697 0.0561 0.1869 0.0568 0.0273 0.0304 0.0040 0.0031 0.0024 0.0089 0.0106 0.0517 0.1843 0.0020 0.0010 0.0048 SCENARIO RECORD : Montgomery County, TN Urban Principal Arterial 36.88 mph - CY2008 CALENDAR YEAR : 2008 EVALUATION MONTH : 7 AVERAGE SPEED : 36.88 Arterial : VMT FRACTIONS 0.4798 0.0728 0.2426 0.0737 0.0354 0.0395 0.0036 0.0028 0.0022 0.0081 0.0096 0.0046 0.0164 0.0018 0.0009 0.0062 SCENARIO RECORD : Montgomery County, TN Urban Minor Arterial 27.54 mph - CY2008 CALENDAR YEAR : 2008 EVALUATION MONTH : 7 AVERAGE SPEED : 27.54 Arterial VMT FRACTIONS 0.4798 0.0728 0.2426 0.0737 0.0354 0.0395 0.0036 0.0028 0.0022 0.0081 0.0096 0.0046 0.0164 0.0018 0.0009 0.0062 SCENARIO RECORD : Montgomery County, TN Urban Collector 26.86 mph - CY2008 CALENDAR YEAR : 2008 EVALUATION MONTH : 7 AVERAGE SPEED : 26.86 Arterial VMT FRACTIONS : 0.4833 0.0733 0.2444 0.0743 0.0357 0.0398 0.0040 0.0031 0.0024 0.0089 0.0106 0.0024 0.0086 0.0020 0.0010 0.0062 SCENARIO RECORD : Montgomery County, TN Urban Local 24.82 mph Default - CY2008 CALENDAR YEAR : 2008 EVALUATION MONTH : 7 AVERAGE SPEED : 24.82 Local VMT FRACTIONS : 0.4833 0.0733 0.2444 0.0743 0.0357 0.0398 0.0040 0.0031 0.0024 0.0089 0.0106 0.0024 0.0086 0.0020 0.0010 0.0062 \* Although a specific local speed is available, for the above facilities, the 'Local' \* facility type means that MOBILE6 will apply the default average speed of 12.9 mph.

SCENARIO RECORD : Montgomery County, TN Rural Interstate 67.27 mph - CY2016 CALENDAR YEAR : 2016 EVALUATION MONTH : 7 AVERAGE SPEED : 67.27 Freeway 98.5 0.0 0.0 1.5 VMT FRACTIONS : 0.2129 0.0696 0.2318 0.0704 0.0339 0.0278 0.0049 0.0041 0.0031 0.0111 0.0131 0.0680 0.2420 0.0025 0.0012 0.0036 SCENARIO RECORD : Montgomery County, TN Rural Principal Arterial 46.72 mph - CY2016 CALENDAR YEAR : 2016 : 7 EVALUATION MONTH AVERAGE SPEED : 46.72 Arterial VMT FRACTIONS : 0.3092 0.1011 0.3366 0.1022 0.0492 0.0403 0.0037 0.0031 0.0023 0.0084 0.0098 0.0057 0.0203 0.0019 0.0009 0.0053 SCENARIO RECORD : Montgomery County, TN Rural Minor Arterial 45.12 mph - CY2016 CALENDAR YEAR : 2016 EVALUATION MONTH : 7 AVERAGE SPEED : 45.12 Arterial VMT FRACTIONS 0.3092 0.1011 0.3366 0.1022 0.0492 0.0403 0.0037 0.0031 0.0023 0.0084 0.0098 0.0057 0.0203 0.0019 0.0009 0.0053 SCENARIO RECORD : Montgomery County, TN Rural Major Collector 40.37 mph - CY2016 CALENDAR YEAR : 2016 EVALUATION MONTH : 7 AVERAGE SPEED : 40.37 Arterial : VMT FRACTIONS 0.3112 0.1017 0.3388 0.1029 0.0495 0.0406 0.0047 0.0040 0.0030 0.0109 0.0128 0.0024 0.0086 0.0024 0.0012 0.0053 SCENARIO RECORD : Montgomery County, TN Rural Minor Collector 40.37 mph - CY2016 CALENDAR YEAR : 2016 : 7 EVALUATION MONTH AVERAGE SPEED : 40.37 Arterial VMT FRACTIONS : 0.3112 0.1017 0.3388 0.1029 0.0495 0.0406 0.0047 0.0040 0.0030 0.0109 0.0128 0.0024 0.0086 0.0024 0.0012 0.0053 SCENARIO RECORD : Montgomery County, TN Rural Local 25.00 mph - CY2016 CALENDAR YEAR : 2016 EVALUATION MONTH : 7 AVERAGE SPEED : 25.00 Arterial VMT FRACTIONS : VMT FRACTIONS 0.3112 0.1017 0.3388 0.1029 0.0495 0.0406 0.0047 0.0040 0.0030 0.0109 0.0128 0.0024 0.0086 0.0024 0.0012 0.0053

\* Although the above facilities are designated 'Rural Local' in the model, based on IAC guidance \* they are treated here as 'Arterial/Collector roadways and the actual modeled speed is used. SCENARIO RECORD : Montgomery County, TN Urban Interstate 67.27 mph - CY2016 CALENDAR YEAR : 2016 EVALUATION MONTH : 7 : 67.27 Freeway 92.4 0.0 0.0 7.6 AVERAGE SPEED VMT FRACTIONS 0.2398 0.0784 0.2610 0.0793 0.0381 0.0312 0.0039 0.0033 0.0025 0.0089 0.0105 0.0517 0.1843 0.0020 0.0010 0.0041 SCENARIO RECORD : Montgomery County, TN Urban Principal Arterial 36.84 mph - CY2016 CALENDAR YEAR : 2016 EVALUATION MONTH : 7 AVERAGE SPEED : 36.84 Arterial VMT FRACTIONS 0.3112 0.1017 0.3388 0.1029 0.0495 0.0406 0.0035 0.0030 0.0022 0.0081 0.0095 0.0046 0.0164 0.0018 0.0009 0.0053 SCENARIO RECORD : Montgomery County, TN Urban Minor Arterial 26.20 mph - CY2016 CALENDAR YEAR : 2016 EVALUATION MONTH : 7 AVERAGE SPEED : 26.20 Arterial VMT FRACTIONS : 0.3112 0.1017 0.3388 0.1029 0.0495 0.0406 0.0035 0.0030 0.0022 0.0081 0.0095 0.0046 0.0164 0.0018 0.0009 0.0053 SCENARIO RECORD : Montgomery County, TN Urban Collector 26.33 mph - CY2016 CALENDAR YEAR : 2016 EVALUATION MONTH : 7 AVERAGE SPEED : 26.33 Arterial VMT FRACTIONS 0.3135 0.1025 0.3412 0.1036 0.0499 0.0408 0.0039 0.0033 0.0025 0.0089 0.0105 0.0024 0.0086 0.0020 0.0010 0.0054 SCENARIO RECORD : Montgomery County, TN Urban Local 24.74 mph Default - CY2016 CALENDAR YEAR : 2016 EVALUATION MONTH : 7 AVERAGE SPEED : 24.74 Local VMT FRACTIONS : 0.3135 0.1025 0.3412 0.1036 0.0499 0.0408 0.0039 0.0033 0.0025 0.0089 0.0105 0.0024 0.0086 0.0020 0.0010 0.0054 \* Although a specific local speed is available, for the above facilities, the 'Local' \* facility type means that MOBILE6 will apply the default average speed of 12.9 mph.

SCENARIO RECORD : Montgomery County, TN Rural Interstate 64.73 mph - CY2025 CALENDAR YEAR : 2025 EVALUATION MONTH : 7 AVERAGE SPEED : 64.73 Freeway 98.5 0.0 0.0 1.5 VMT FRACTIONS : 0.19816 0.07211 0.24006 0.07290 0.03509 0.02810 0.00487 0.00411 0.00309 0.01114 0.01309 0.06794 0.24206 0.00249 0.00121 0.00358 SCENARIO RECORD : Montgomery County, TN Rural Principal Arterial 46.09 mph - CY2025 CALENDAR YEAR : 2025 EVALUATION MONTH : 7 AVERAGE SPEED : 46.09 Arterial VMT FRACTIONS : 0.28776 0.10473 0.34864 0.10588 0.05096 0.04081 0.00366 0.00308 0.00232 0.00836 0.00982 0.00570 0.02030 0.00187 0.00091 0.00520 SCENARIO RECORD : Montgomery County, TN Rural Minor Arterial 44.33 mph - CY2025 CALENDAR YEAR : 2025 EVALUATION MONTH : 7 AVERAGE SPEED : 44.33 Arterial VMT FRACTIONS 0.28776 0.10473 0.34864 0.10588 0.05096 0.04081 0.00366 0.00308 0.00232 0.00836 0.00982 0.00570 0.02030 0.00187 0.00091 0.00520 SCENARIO RECORD : Montgomery County, TN Rural Major Collector 39.46 mph - CY2025 CALENDAR YEAR : 2025 EVALUATION MONTH : 7 AVERAGE SPEED : 39.46 Arterial VMT FRACTIONS : 0.28961 0.10539 0.35085 0.10655 0.05129 0.04107 0.00475 0.00400 0.00302 0.01086 0.01276 0.00241 0.00859 0.00243 0.00118 0.00524 SCENARIO RECORD : Montgomery County, TN Rural Minor Collector 39.46 mph - CY2025 CALENDAR YEAR : 2025 EVALUATION MONTH : 7 AVERAGE SPEED : 39.46 Arterial VMT FRACTIONS 0.28961 0.10539 0.35085 0.10655 0.05129 0.04107 0.00475 0.00400 0.00302 0.01086 0.01276 0.00241 0.00859 0.00243 0.00118 0.00524 SCENARIO RECORD : Montgomery County, TN Rural Local 25.00 mph Default - CY2025 CALENDAR YEAR : 2025 EVALUATION MONTH : 7 : 25.00 Arterial AVERAGE SPEED VMT FRACTIONS 0.28961 0.10539 0.35085 0.10655 0.05129 0.04107 0.00475 0.00400 0.00302 0.01086 0.01276 0.00241 0.00859 0.00243 0.00118 0.00524

\* Although the above facilities are designated 'Rural Local' in the model, based on IAC guidance \* they are treated here as 'Arterial/Collector roadways and the actual modeled speed is used. SCENARIO RECORD : Montgomery County, TN Urban Interstate 64.73 mph - CY2025 CALENDAR YEAR : 2025 EVALUATION MONTH : 7 AVERAGE SPEED : 64.73 Freeway 92.4 0.0 0.0 7.6 VMT FRACTIONS : 0.22316 0.08121 0.27035 0.08210 0.03952 0.03164 0.00390 0.00328 0.00247 0.00891 0.01047 0.05172 0.18428 0.00199 0.00097 0.00403 SCENARIO RECORD : Montgomery County, TN Urban Principal Arterial 35.93 mph - CY2025 CALENDAR YEAR : 2025 EVALUATION MONTH : 7 AVERAGE SPEED : 35.93 Arterial VMT FRACTIONS 0.28960 0.10539 0.35086 0.10655 0.05129 0.04107 0.00353 0.00298 0.00224 0.00808 0.00949 0.00460 0.01640 0.00180 0.00088 0.00524 SCENARIO RECORD : Montgomery County, TN Urban Minor Arterial 25.18 mph - CY2025 : 2025 CALENDAR YEAR EVALUATION MONTH : 7 AVERAGE SPEED : 25.18 Arterial VMT FRACTIONS 0.28960 0.10539 0.35086 0.10655 0.05129 0.04107 0.00353 0.00298 0.00224 0.00808 0.00949 0.00460 0.01640 0.00180 0.00088 0.00524 Urban Collector SCENARIO RECORD : Montgomery County, TN 24.89 mph - CY2025 CALENDAR YEAR : 2025 EVALUATION MONTH : 7 AVERAGE SPEED : 24.89 Arterial VMT FRACTIONS 0.29175 0.10617 0.35344 0.10734 0.05167 0.04137 0.00390 0.00328 0.00247 0.00891 0.01047 0.00241 0.00859 0.00199 0.00097 0.00527 SCENARIO RECORD : Montgomery County, TN Urban Local 24.68 mph Default - CY2025 : 2025 CALENDAR YEAR EVALUATION MONTH : 7 AVERAGE SPEED : 24.68 Local VMT FRACTIONS 0.29175 0.10617 0.35344 0.10734 0.05167 0.04137 0.00390 0.00328 0.00247 0.00891 0.01047 0.00241 0.00859 0.00199 0.00097 0.00527

\* Although a specific local speed is available, for the above facilities, the 'Local'

\* facility type means that MOBILE6 will apply the default average speed of 12.9 mph. SCENARIO RECORD : Montgomery County, TN Rural Interstate 65.10 mph - CY2035 CALENDAR YEAR : 2035 EVALUATION MONTH : 7 AVERAGE SPEED : 65.10 Freeway 98.5 0.0 0.0 1.5 VMT FRACTIONS 0.19816 0.07211 0.24006 0.07290 0.03509 0.02810 0.00487 0.00411 0.00309 0.01114 0.01309 0.06794 0.24206 0.00249 0.00121 0.00358 SCENARIO RECORD : Montgomery County, TN Rural Principal Arterial 45.58 mph - CY2035 CALENDAR YEAR : 2035 EVALUATION MONTH : 7 AVERAGE SPEED : 45.58 Arterial : VMT FRACTIONS 0.28777 0.10473 0.34863 0.10588 0.05096 0.04081 0.00366 0.00308 0.00232 0.00836 0.00982 0.00570 0.02030 0.00187 0.00091 0.00520 SCENARIO RECORD : Montgomery County, TN Rural Minor Arterial 43.09 mph - CY2035 CALENDAR YEAR : 2035 EVALUATION MONTH : 7 AVERAGE SPEED : 43.09 Arterial VMT FRACTIONS 0.28777 0.10473 0.34863 0.10588 0.05096 0.04081 0.00366 0.00308 0.00232 0.00836 0.00982 0.00570 0.02030 0.00187 0.00091 0.00520 SCENARIO RECORD : Montgomery County, TN Rural Major Collector 38.34 mph - CY2035 CALENDAR YEAR : 2035 EVALUATION MONTH : 7 AVERAGE SPEED : 38.34 Arterial VMT FRACTIONS : 0.28960 0.10539 0.35086 0.10655 0.05129 0.04107 0.00475 0.00400 0.00302 0.01086 0.01276 0.00241 0.00859 0.00243 0.00118 0.00524 SCENARIO RECORD : Montgomery County, TN Rural Minor Collector 38.34 mph - CY2035 CALENDAR YEAR : 2035 EVALUATION MONTH : 7 AVERAGE SPEED : 38.34 Arterial VMT FRACTIONS 0.28960 0.10539 0.35086 0.10655 0.05129 0.04107 0.00475 0.00400 0.00302 0.01086 0.01276 0.00241 0.00859 0.00243 0.00118 0.00524 SCENARIO RECORD : Montgomery County, TN Rural Local 25.00 mph Default - CY2035 CALENDAR YEAR : 2035 EVALUATION MONTH : 7 AVERAGE SPEED : 25.00 Arterial VMT FRACTIONS :

0.28960 0.10539 0.35086 0.10655 0.05129 0.04107 0.00475 0.00400 0.00302 0.01086 0.01276 0.00241 0.00859 0.00243 0.00118 0.00524 \* Although the above facilities are designated 'Rural Local' in the model, based on IAC guidance \* they are treated here as 'Arterial/Collector roadways and the actual modeled speed is used. SCENARIO RECORD : Christian Urban Interstate 65.10 mph -CY2035 CALENDAR YEAR : 2035 EVALUATION MONTH : 7 AVERAGE SPEED : 65.10 Freeway 92.4 0.0 0.0 7.6 VMT FRACTIONS : 0.22316 0.08121 0.27035 0.08210 0.03952 0.03164 0.00390 0.00328 0.00247 0.00891 0.01047 0.05172 0.18428 0.00199 0.00097 0.00403 SCENARIO RECORD : Montgomery County, TN Urban Principal Arterial 35.09 mph - CY2035 CALENDAR YEAR : 2035 EVALUATION MONTH : 7 AVERAGE SPEED : 35.09 Arterial VMT FRACTIONS 0.28960 0.10539 0.35086 0.10655 0.05129 0.04107 0.00353 0.00298 0.00224 0.00808 0.00949 0.00460 0.01640 0.00180 0.00088 0.00524 SCENARIO RECORD : Montgomery County, TN Urban Minor Arterial 23.38 mph - CY2035 CALENDAR YEAR : 2035 EVALUATION MONTH : 7 AVERAGE SPEED : 23.38 Arterial VMT FRACTIONS 0.28960 0.10539 0.35086 0.10655 0.05129 0.04107 0.00353 0.00298 0.00224 0.00808 0.00949 0.00460 0.01640 0.00180 0.00088 0.00524 SCENARIO RECORD : Montgomery County, TN Urban Collector 24.43 mph - CY2035 CALENDAR YEAR : 2035 : 7 EVALUATION MONTH AVERAGE SPEED : 24.43 Arterial VMT FRACTIONS 0.29175 0.10617 0.35344 0.10734 0.05167 0.04137 0.00390 0.00328 0.00247 0.00891 0.01047 0.00241 0.00859 0.00199 0.00097 0.00527 : Montgomery County, TN SCENARIO RECORD Urban Local 24.63 mph Default - CY2035 CALENDAR YEAR : 2035 EVALUATION MONTH : 7 AVERAGE SPEED : 24.63 Local VMT FRACTIONS : 0.29175 0.10617 0.35344 0.10734 0.05167 0.04137 0.00390 0.00328 0.00247 0.00891 0.01047 0.00241 0.00859 0.00199 0.00097 0.00527

\* Although a specific local speed is available, for the above facilities, the 'Local' \* facility type means that MOBILE6 will apply the default average speed of 12.9 mph.

# APPENDIX D

MOBILE 6.2 OUTPUT FILES

\* Montgomery County, TN Rural Interstate 64.95 mph -

CY2008

\* File 1, Run 1, Scenario 1.

M515 Warning:

The combined freeway and ramp average speed entered cannot be greater than 64.2 miles per hour.

The average speed will be reset to this value.

M582 Warning:

The user supplied freeway average speed of 64.2 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all

vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

- Calendar Year: 2008
  - Month: July
  - Altitude: Low
- Minimum Temperature: 69.0 (F)
- Maximum Temperature: 94.0 (F)
- Absolute Humidity: 75. grains/lb
  - Nominal Fuel RVP: 8.6 psi
    - Weathered RVP: 8.1 psi
- Fuel Sulfur Content: 30. ppm
  - Exhaust I/M Program: No
    - Evap I/M Program: No
      - ATP Program: No
    - Reformulated Gas: No

	Vehicle Typ	pe:	LDGV	LDGT12	LDG	Г34	LDGT
HDGV	LDDV	LDDT	HD	DV	MC 2	All Veh	
	GVI	VR:		<6000	>60	000	(All)
	VMT Distr	ibution:	0.3	280 0	.2158	0.0736	5
0.0283	0.0003	0.0011	0.3	487 0	.0042	1.0000	)

Composite Emission Factors (g/mi):

 Composite VOC :
 0.761
 0.819
 1.351
 0.954

 1.188
 0.224
 0.423
 0.324
 2.84
 0.685

 Composite CO :
 10.83
 12.19
 16.49
 13.29

 14.85
 0.991
 0.842
 2.343
 25.95
 8.743

 Composite NOX :
 0.704
 0.896
 1.275
 0.992

 3.668
 1.094
 1.503
 16.759
 1.62
 6.474

M583 Warning:

The user supplied arterial average speed of 48.7 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

Calendar Year: 2008 Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Typ	be:	LDGV	LDGT	12 L	DGT34	LDGT
HDGV	LDDV	LDDT	HD	DV	MC	All Ve	eh
	GVI	VR:		<60	00	>6000	(All)
							_
	VMT Distr	bution:	0.4	763	0.3134	0.10	169
0.0357	0.0005	0.0016	0.0	595	0.0061	1.00	000
							_
	Comp	osite En	mission	Factor	rs (g/mi	):	
Cc	omposite VOC	:	0.818	0.8	71	1.451	1.018
1.141	0.233	0.441	0.2	87	2.25	0.89	90
C	omposite CO	:	9.35	10.	73	14.70	11.74
8.77	0.874	0.744	1.3	51	10.23	9.84	6

Composite NOX : 0.673 0.847 1.218 0.941 3.171 0.663 0.909 7.367 1.21 1.277

\* Montgomery County, TN Rural Minor Arterial 47.01

mph - CY2008

\* File 1, Run 1, Scenario 3.

M583 Warning:

The user supplied arterial average speed of 47.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

Calendar Year: 2008 Month: July Altitude: Low Minimum Temperature: 69.0 (F) Maximum Temperature: 94.0 (F) Absolute Humidity: 75. grains/lb Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Typ	e:	LDGV	LDGT12	LDGT34	LDGT
HDGV	LDDV	LDDT	HDDV	MC	All Veh	1
	GVW	R:		<6000	>6000	(All)
	VMT Distri	bution:	0.476	3 0.313	4 0.106	59
0.0357	0.0005	0.0016	0.059	5 0.006	1 1.000	00
	Compo	osite En	mission Fa	ctors (g/m	ni):	
С	composite VOC	:	0.826	0.877	1.462	1.026
1.156	0.236	0.447	0.293	2.25	0.898	3
(	Composite CO	:	9.21	10.58	14.52	11.59
8.68	0.876	0.745	1.354	10.34	9.712	2
С	composite NOX	:	0.670	0.842	1.213	0.937
3.135	0.643	0.882	7.151	1.19	1.259	)

\* Montgomery County, TN Rural Major Collector 41.09

mph - CY2008

\* File 1, Run 1, Scenario 4.

M583 Warning:

The user supplied arterial average speed of 41.1 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

Calendar Year: 2008 Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh GVWR: <6000 >6000 (All) ----- ---- ---- ------- ----- ----- -----VMT Distribution: 0.4793 0.3154 0.1075 0.0377 0.0005 0.0016 0.0518 0.0062 1.0000 \_\_\_\_\_ \_\_\_\_\_ Composite Emission Factors (g/mi): Composite VOC : 0.859 0.902 1.506 1.055 1.264 0.248 0.471 0.294 2.30 0.936 Composite CO : 8.68 10.05 13.88 11.03 9.00 0.894 0.761 1.188 11.08 9.297 Composite NOX : 0.661 0.826 1.196 0.920 3.045 0.591 0.810 5.766 1.14 1.128 \_\_\_\_\_ \_\_\_\_\_ \* Montgomery County, TN Rural Minor Collector 41.09 mph - CY2008 \* File 1, Run 1, Scenario 5. 

#### M583 Warning:

The user supplied arterial average speed of 41.1 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

Calendar Year: 2008

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Typ	e:	LDGV	LDGT12	LD	GT34		LDGT
HDGV	LDDV	LDDT	HDD	V	MC	All V	7eh	

	GVV	IR:		<6000	>6000	(All)
	VMT Distri	bution	0.479	3 0.315	64 0.107	5
0.0377	0.0005	0.0016	0.051	8 0.006	52 1.000	0
	a			. , ,	• • •	
	Comp	osite E	mission Fa	ctors (g/	mı):	
Co	mposite VOC	:	0.859	0.902	1.506	1.055
1.264	0.248	0.471	0.294	2.30	0.936	5
Co	omposite CO	:	8.68	10.05	13.88	11.03
9.00	0.894	0.761	1.188	11.08	9.297	,
Co	mposite NOX	:	0.661	0.826	1.196	0.920
3.045	0.591	0.810	5.766	1.14	1.128	5

\* Montgomery County, TN

### - CY2008

\* File 1, Run 1, Scenario 6.

### M583 Warning:

The user supplied arterial average speed of 25.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

Rural Local 24.98 mph Default

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

Calendar Year: 2008

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Ty	pe:	LDGV	LDGT12	LDG	Г34	LDGT
HDGV	LDDV	LDDT	HDD	V	MC 2	All Veh	
	GV	WR:		<6000	>6	000	(All)
				··			
	VMT Distr	ibution:	0.47	93 0.	3154	0.107	5
0.0377	0.0005	0.0016	0.05	18 0.	0062	1.0000	0

 Composite Emission Factors (g/mi):

 Composite VOC :
 1.010
 1.022
 1.713
 1.197

 1.653
 0.320
 0.613
 0.445
 2.68
 1.094

 Composite CO :
 8.18
 9.51
 13.27
 10.46

 13.47
 1.139
 0.965
 1.856
 16.78
 9.054

 Composite NOX :
 0.711
 0.862
 1.249
 0.961

 2.679
 0.598
 0.820
 5.839
 1.01
 1.158

\_\_\_\_\_

#### CY2008

\* File 1, Run 1, Scenario 7.

#### M515 Warning:

The combined freeway and ramp average speed entered cannot be greater than 60.9 miles per hour.

The average speed will be reset to this value.

### M582 Warning:

The user supplied freeway average speed of 60.9 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

Calendar Year: 2008

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Ty	pe:	LDGV	LDGT12	LDGI	34	LDGT
HDGV	LDDV	LDDT	HDD	V	MC A	ll Veh	
	GVI	WR:		<6000	>60	000	(All)
	VMT Distr	ibution:	0.36	93 0.	2430	0.0829	9
0.0294	0.0004	0.0012	0.26	90 0.	0048	1.0000	)

 Composite Emission Factors (g/mi):

 Composite VOC :
 0.774
 0.830
 1.371
 0.968

 1.139
 0.227
 0.429
 0.330
 2.81
 0.738

 Composite CO :
 10.94
 12.25
 16.53
 13.34

 13.81
 0.988
 0.839
 2.313
 25.12
 9.536

 Composite NOX :
 0.708
 0.900
 1.282
 0.997

 3.544
 1.062
 1.458
 16.063
 1.59
 5.021

\_\_\_\_\_

M583 Warning:

The user supplied arterial average speed of 36.9 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

- Calendar Year: 2008
  - Month: July

Altitude: Low

- Minimum Temperature: 69.0 (F)
- Maximum Temperature: 94.0 (F)
- Absolute Humidity: 75. grains/lb
  - Nominal Fuel RVP: 8.6 psi
    - Weathered RVP: 8.1 psi
- Fuel Sulfur Content: 30. ppm
  - Exhaust I/M Program: No
    - Evap I/M Program: No
      - ATP Program: No
    - Reformulated Gas: No

	Vehicle Typ	e:	LDGV LI	GT12 L	DGT34	LDGT
HDGV	LDDV	LDDT	HDDV	MC	All Ve	h
	GVW	IR:	<	6000	>6000	(All)
	VMT Distri	bution:	0.4793	0.3154	0.10	75
0.0358	0.0005	0.0016	0.0537	0.0062	1.00	00
	Comp	osite Em	ission Fac	tors (g/mi	_):	
Cc	omposite VOC	:	0.886	0.921	1.539	1.078
1.278	0.261	0.496	0.343	2.36	0.96	0

 Composite CO :
 8.32
 9.69
 13.43
 10.64

 9.12
 0.927
 0.788
 1.465
 12.01
 8.965

 Composite NOX :
 0.656
 0.817
 1.187
 0.912

 2.905
 0.574
 0.787
 6.180
 1.12
 1.145

\* Montgomery County, TN

mph - CY2008

\* File 1, Run 1, Scenario 9.

M583 Warning:

The user supplied arterial average speed of 27.5 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

Urban Minor Arterial 27.54

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

Calendar Year: 2008 Month: July Altitude: Low Minimum Temperature: 69.0 (F) Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Typ	e:	LDGV	LDGT12	LDGT34	LDGT
HDGV	LDDV	LDDT	HDDV		MC All	Veh
	GVW	R:		<6000	>6000	(All)
	VMT Distri	bution:	0.479	3 0.3	154 0	.1075
0.0358	0.0005	0.0016	0.053	7 0.0	062 1	.0000
	Compo	osite En	nission Fa	actors (g	g/mi):	
Co	omposite VOC	:	0.976	0.994	1.665	5 1.165
1.499	0.303	0.580	0.439	2.	59 1	.055
C	composite CO	:	8.10	9.44	13.16	10.39

11.72 1.074 0.911 1.924 15.42 8.894 Composite NOX : 0.691 0.844 1.223 0.940 2.698 0.585 0.801 6.292 1.04 1.171

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\* Montgomery County, TN

Urban Collector 26.86 mph -

CY2008

\* File 1, Run 1, Scenario 10.

M583 Warning:

The user supplied arterial average speed of 26.9 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

Calendar Year: 2008

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Typ	be:	LDGV	LDGT1	2 LI	OGT34	LDGT			
HDGV	LDDV	LDDT	HDI	DV	MC	All V	eh			
	GVV	IR:		<600		>6000	(All)			
							-			
	VMT Distri	bution:	0.48	828	0.3177	0.1	084			
0.0366	0.0005	0.0016	0.04	462	0.0062	1.0	000			
							-			
Composite Emission Factors (g/mi):										
Co	omposite VOC	:	0.984	1.00	1	1.677	1.173			
1.538	0.307	0.588	0.42	18	2.61	1.0	68			
С	omposite CO	:	8.12	9.4	5 3	13.19	10.41			
12.16	1.090	0.924	1.7	41	15.76	8.9	77			
Co	omposite NOX	:	0.696	0.84	8	1.230	0.945			
2.695	0.588	0.806	5.7	50	1.04	1.1	11			
							-			
*	# # # # # #	# # # #	# # # #	# # # #	# # #	# # #	# #			

\* Montgomery County, TN Urban Local 24.82 mph Default

- CY2008

\* File 1, Run 1, Scenario 11.

M585 Warning:

100% of VMT has been assigned to the local roadway

type for all hours of the day for all vehicle types

with an average speed of 12.9 mph.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

Calendar Year: 2008

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT LDDV LDDT HDDV MC All Veh HDGV <6000 >6000 (All) GVWR: \_\_\_\_\_ \_\_\_\_ \_\_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_ ----- ----- -----VMT Distribution: 0.4828 0.3177 0.1084 0.0366 0.0005 0.0016 0.0462 0.0062 1.0000 \_\_\_\_\_ \_\_\_\_\_ Composite Emission Factors (g/mi): Composite VOC : 1.415 1.355 2.246 1.582 2.565 0.443 0.857 0.706 3.48 1.507 Composite CO : 7.62 9.62 13.67 10.65 25.88 1.759 1.482 3.583 29.38 9.517 Composite NOX : 0.688 0.818 1.188 0.912 2.379 0.763 1.047 7.239 0.89 1.150 \_\_\_\_\_ \_\_\_\_\_ \* Montgomery County, TN Rural Interstate 67.27 mph -CY2016 \* File 1, Run 1, Scenario 12. M 96 Warning: 67.3 speed reduced to 65 mph maximum

### M515 Warning:

The combined freeway and ramp average speed entered cannot be greater than 64.2 miles per hour. The average speed will be reset to this value.

M582 Warning:

The user supplied freeway average speed of 64.2 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all

vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2016

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Typ	e:	LDGV	LDGT12	LDGT34	LDGT				
HDGV	LDDV	LDDT	HDDV	MC	C All Veh	1				
	GVW	IR:		<6000	>6000	(All)				
	VMT Distri	bution:	0.212	7 0.301	14 0.102	28				
0.0286	0.0002	0.0015	0.349	2 0.003	36 1.000	00				
Composite Emission Factors (g/mi):										
C	composite VOC	:	0.374	0.478	0.840	0.570				
0.626	0.066	0.214	0.211	2.83	3 0.412	2				
(	Composite CO	:	7.12	8.08	10.88	8.79				
8.59	0.619	0.495	0.694	25.95	5 5.649	)				
C	composite NOX	:	0.347	0.457	0.807	0.546				
1.196	0.192	0.598	5.524	1.62	2 2.265	5				
*	* # # # # # #	# # # #	+ # # # #	# # # # #	# # # # #	#				
* Monte	gomery County	r, TN		Rural I	Principal A	rterial				
	46.72 mph - CY2016									

\* File 1, Run 1, Scenario 13.

M583 Warning:

The user supplied arterial average speed of 46.7 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2016

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No Evap I/M Program: No

ATP Program: No

#### Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh <6000 >6000 (All) GVWR: ----- ----- ------- ----- ----- -----VMT Distribution: 0.3089 0.4377 0.1492 0.0364 0.0003 0.0022 0.0600 0.0053 1.0000 \_\_\_\_\_ \_\_\_\_\_ Composite Emission Factors (g/mi): Composite VOC : 0.402 0.504 0.897 0.604 0.597 0.070 0.226 0.191 2.24 0.524 Composite CO : 6.09 6.98 9.47 7.61 5.32 0.542 0.437 0.424 10.36 6.625 Composite NOX : 0.331 0.430 0.770 0.516 1.029 0.112 0.350 2.409 1.19 0.594 \_\_\_\_\_ \_\_\_\_\_ \* Montgomery County, TN Rural Minor Arterial 45.12 mph - CY2016 \* File 1, Run 1, Scenario 14. M583 Warning:

The user supplied arterial average speed of 45.1 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2016

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Typ	e:	LDGV L	DGT12	LDO	GT34	LDGT
HDGV	LDDV	LDDT	HDDV		MC	All '	Veh
	GVW	R:		<6000	>	6000	(All)
						-	
	VMT Distri	bution:	0.3089	0.	4377	0.	1492
0.0364	0.0003	0.0022	0.0600	0.	0053	1.	0000
	Compo	osite Em	ission Fac	ctors	(g/mi)	:	
Co	omposite VOC	:	0.406	0.507	0	.903	0.608
0.604	0.071	0.229	0.195	2	.25	0.	528
C	omposite CO	:	5.99	6.88		9.34	7.50
5.26	0.543	0.437	0.425	10	.47	6.	530
Co	omposite NOX	:	0.329	0.428	0	.767	0.514
1.016	0.109	0.339	2.332	1	.16	0.	587
*	# # # # # #	# # # #	# # # # #	+ # # +	# # #	# # #	: # #
* Montgor	mery County,	TN		Rural	Major	Coll	ector 40.37
		mph ·	- CY2016				
	* 1	File 1,	Run 1, Sce	enario	15.		
*	# # # # # #	# # # #	# # # # #	* # # *	# # #	# # #	: # #
		М	583 Warnir	ng:			
	The us	er suppl	lied arter	ial av	erage	speed	d of 40.4
	will be	used fo	r all hour	rs of t	che da	y. 1	00% of VMT

has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2016

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle T	ype:	LDGV	LDGT12	LI	OGT34	LDGT
HDGV	LDDV	LDDT	HD	DV	MC	All Veh	
	G	vwr:		<6000	>	6000	(All)

	VMT Distr	ibution:	0.3109	0.4405	0.1502	
0.0382	0.0003	0.0022	0.0524	0.0053	1.0000	

-----

Composite Emission Factors (g/mi):

Cc	omposite VOC	:	0.420	0.516	0.921	0.619
0.653	0.074	0.240	0.193	2.30	0.544	
C	omposite CO	:	5.73	6.60	8.99	7.21
5.43	0.557	0.448	0.394	11.20	6.328	
Co	omposite NOX	:	0.326	0.421	0.759	0.507
0.992	0.103	0.320	1.980	1.14	0.549	

mph - CY2016

\* File 1, Run 1, Scenario 16.

# M583 Warning:

The user supplied arterial average speed of 40.4 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types. M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2016

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Typ	e: L	JDGV 1	LDGT12	LDGT34	LDGT
HDGV	LDDV	LDDT	HDDV	:	MC All	Veh
	GVW	'R:		<6000	>6000	(All)

VMT Distribution: 0.3109 0.4405 0.1502 0.0382 0.0003 0.0022 0.0524 0.0053 1.0000

Co	omposite VOC	:	0.420	0.516	0.921	0.619
0.653	0.074	0.240	0.193	2.30	0.544	
С	omposite CO	:	5.73	6.60	8.99	7.21
5.43	0.557	0.448	0.394	11.20	6.328	
Co	omposite NOX	:	0.326	0.421	0.759	0.507
0.992	0.103	0.320	1.980	1.14	0.549	

------

\* Montgomery County, TN

Rural Local 25.00 mph -

### CY2016

\* File 1, Run 1, Scenario 17.

## M583 Warning:

The user supplied arterial average speed of 25.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2016

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Ty	pe:	LDGV	LDGT12	LDG	Т34	LDGT
HDGV	LDDV	LDDT	HDDV	J	MC .	All Veh	
	GV	WR:		<6000	>6	000	(All)
	VMT Distr	ibution:	0.310	0.	.4405	0.150	2
0.0382	0.0003	0.0022	0.052	24 0.	.0053	1.000	0

 Composite Emission Factors (g/mi):

 Composite VOC :
 0.495
 0.578
 1.031
 0.693

 0.810
 0.096
 0.307
 0.288
 2.67
 0.624

 Composite CO :
 5.54
 6.37
 8.67
 6.96

 8.10
 0.717
 0.569
 0.610
 16.77
 6.265

 Composite NOX :
 0.352
 0.440
 0.792
 0.530

 0.878
 0.105
 0.327
 2.024
 1.01
 0.568

\_\_\_\_\_

\* Montgomery County, TN Urban Interstate 67.27 mph -

### CY2016

\* File 1, Run 1, Scenario 18.

M 96 Warning:

67.3 speed reduced to 65 mph maximum

M515 Warning:

The combined freeway and ramp average speed entered cannot be greater than 60.9 miles per hour.

The average speed will be reset to this value.

## M582 Warning:

The user supplied freeway average speed of 60.9 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways

and freeway ramps for all hours of the day and all

vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2016

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Ty	pe:	LDGV	LDGT12	LI	GT34	LDGT
HDGV	LDDV	LDDT	HD	DV	MC	All Veh	
	GV	WR:		<6000	>	6000	(All)

	VMT Distr	ibution:	0.2396	0.3394	0.1157	
0.0298	0.0002	0.0017	0.2695	0.0041	1.0000	

-----

Composite Emission Factors (g/mi):

Cor	mposite VOC	:	0.380	0.483	0.850	0.576
0.595	0.067	0.217	0.215	2.80	0.441	
Cc	omposite CO	:	7.17	8.10	10.90	8.81
8.27	0.617	0.493	0.685	25.12	6.264	
Coi	mposite NOX	:	0.348	0.458	0.811	0.548
1.161	0.186	0.580	5.294	1.59	1.802	

will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types. M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2016

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Typ	e: L	JDGV I	LDGT12	LDGT34	LDGT
HDGV	LDDV	LDDT	HDDV		MC All	Veh
	GVW	R:		<6000	>6000	(All)

-----

\* Montgomery County, TN Urban Minor Arterial 26.20

mph - CY2016

\* File 1, Run 1, Scenario 20.

M583 Warning:

The user supplied arterial average speed of 26.2 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2016

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Ty	pe:	LDGV	LDGT12	LDG'	Г34	LDGT
HDGV	LDDV	LDDT	HDDV	J	MC	All Veh	
	GV	WR:		<6000	>6	000	(All)
	VMT Distr	ibution:	0.310	0.	4405	0.150	2
0.0364	0.0003	0.0022	0.054	42 0.	0053	1.000	0

 Composite Emission Factors (g/mi):

 Composite VOC :
 0.486
 0.570
 1.018
 0.684

 0.763
 0.094
 0.299
 0.297
 2.63
 0.614

 Composite CO :
 5.50
 6.34
 8.63
 6.92

 7.61
 0.695
 0.553
 0.639
 16.10
 6.199

 Composite NOX :
 0.347
 0.435
 0.785
 0.524

 0.877
 0.104
 0.323
 2.165
 1.03
 0.573

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### CY2016

\* File 1, Run 1, Scenario 21.

### M583 Warning:

The user supplied arterial average speed of 26.3 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

- Calendar Year: 2016
  - Month: July
  - Altitude: Low
- Minimum Temperature: 69.0 (F)
- Maximum Temperature: 94.0 (F)
- Absolute Humidity: 75. grains/lb
  - Nominal Fuel RVP: 8.6 psi
    - Weathered RVP: 8.1 psi
- Fuel Sulfur Content: 30. ppm
  - Exhaust I/M Program: No
    - Evap I/M Program: No
      - ATP Program: No
    - Reformulated Gas: No

	Vehicle Typ	pe:	LDGV	LDGT12	2 LDG	Т34	LDGT
HDGV	LDDV	LDDT	HD	DV	MC	All Veh	
	GVI	VR:		<6000	) >6	000	(All)
	VMT Distr	ibution:	0.3	132 0	.4437	0.151	3
0.0372	0.0003	0.0022	0.0	467 C	0.0054	1.000	0

Composite Emission Factors (g/mi):

 Composite VOC :
 0.485
 0.569
 1.017
 0.683

 0.769
 0.093
 0.298
 0.276
 2.62
 0.615

 Composite CO :
 5.50
 6.34
 8.63
 6.92

 7.60
 0.693
 0.551
 0.579
 16.03
 6.237

 Composite NOX :
 0.346
 0.435
 0.784
 0.524

 0.882
 0.104
 0.323
 1.995
 1.03
 0.552

\* Montgomery County, TN

- CY2016

\* File 1, Run 1, Scenario 22.

M585 Warning:

Urban Local 24.74 mph Default

type for all hours of the day for all vehicle types

with an average speed of 12.9 mph.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2016

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Typ	e:	LDGV	LDGT12	LDGT34	LDGT
HDGV	LDDV	LDDT	HDD	V	MC All	Veh
	GVW	R:		<6000	>6000	(All)
	VMT Distri	bution:	0.31	.32 0.	4437 0	.1513
0.0372	0.0003	0.0022	0.04	67 0.	0054 1	.0000
	Compo	osite En	mission 1	Factors (	g/mi):	
С	omposite VOC	:	0.716	0.775	1.345	0.920
1.207	0.136	0.426	0.45	8 3	.47 0	.858
(	Composite CO	:	5.85	6.82	9.22	7.43
15.85	1.129	0.882	1.10	68 29	.38 7	7.055

 Composite NOX :
 0.354
 0.427
 0.757
 0.511

 0.782
 0.134
 0.417
 2.504
 0.89
 0.567

\* Montgomery County, TN

### CY2025

\* File 1, Run 1, Scenario 23.

## M515 Warning:

The combined freeway and ramp average speed entered cannot be greater than 64.2 miles per hour. The average speed will be reset to this value.

Rural Interstate 64.73 mph -

## M582 Warning:

The user supplied freeway average speed of 64.2 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all

vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

- Calendar Year: 2025
  - Month: July

Altitude: Low

- Minimum Temperature: 69.0 (F)
- Maximum Temperature: 94.0 (F)
- Absolute Humidity: 75. grains/lb
  - Nominal Fuel RVP: 8.6 psi
    - Weathered RVP: 8.1 psi
- Fuel Sulfur Content: 30. ppm
  - Exhaust I/M Program: No
    - Evap I/M Program: No
      - ATP Program: No
    - Reformulated Gas: No

	Vehicle Typ	e:	LDGV LDG'	r12 LDG	IJA LDO	ĴΤ
HDGV	LDDV	LDDT	HDDV	MC	All Veh	
	GVV	IR:	<6	000 >6	000 (All	L)
	VMT Distri	bution:	0.1980	0.3122	0.1064	
0.0288	0.0002	0.0016	0.3493	0.0036	1.0000	
	Comp	osite Emi	ssion Facto	ors (g/mi):		
Cc	omposite VOC	: (	).265 0.	337 0.	511 0.3	81
0.368	0.037	0.119	0.182	2.83	0.296	

 Composite CO :
 6.28
 7.25
 9.09
 7.72

 8.22
 0.546
 0.359
 0.310
 25.95
 4.913

 Composite NOX :
 0.240
 0.351
 0.584
 0.410

 0.422
 0.051
 0.290
 1.746
 1.62
 0.848

\* Montgomery County, TN Rural Principal Arterial

46.09 mph - CY2025

\* File 1, Run 1, Scenario 24.

M583 Warning:

The user supplied arterial average speed of 46.1 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2025

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Typ	be:	LDGV	LDGT12	LI	OGT34	LDGT
HDGV	LDDV	LDDT	HD	DV	MC	All V	eh
	GVV	VR:		<6000	>	×6000	(All)
	VMT Distri	bution:	0.2	875 0	.4534	0.1	546
0.0369	0.0003	0.0023	0.0	600 0	.0052	1.0	000
	Comp	osite En	mission	Factors	(g/mi	):	
Cc	omposite VOC	:	0.290	0.358	3	0.549	0.406
0.344	0.040	0.126	0.1	65	2.25	0.3	65
C	omposite CO	:	5.35	6.21		7.85	6.63
5.04	0.478	0.314	0.1	93 1	0.40	5.8	18

Composite NOX : 0.230 0.328 0.552 0.385 0.360 0.029 0.168 0.798 1.18 0.368

\* Montgomery County, TN Rural Minor Arterial 44.33

mph - CY2025

\* File 1, Run 1, Scenario 25.

M583 Warning:

The user supplied arterial average speed of 44.3 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2025

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Typ	e:	LDGV	LDGT12	LDGT3	4 LDGT
HDGV	LDDV	LDDT	HDD	J	MC Al	l Veh
	GVW	R:		<6000	>600	0 (All)
	VMT Distri	bution:	0.28	75 0.	4534	0.1546
0.0369	0.0003	0.0023	0.060	0.0	0052	1.0000
	Compo	osite Er	mission F	actors (	g/mi):	
Cc	omposite VOC	:	0.294	0.361	0.55	0.410
0.350	0.041	0.128	0.169	9 2	.26	0.369
C	omposite CO	:	5.26	6.11	7.7	3 6.52
5.02	0.480	0.315	0.194	4 10	.57	5.731

 Composite NOX :
 0.229
 0.326
 0.550
 0.383

 0.356
 0.028
 0.163
 0.773
 1.16
 0.365

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\* Montgomery County, TN

Rural Major Collector 39.46

mph - CY2025

\* File 1, Run 1, Scenario 26.

M583 Warning:

The user supplied arterial average speed of 39.5 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2025 Month: July Altitude: Low Minimum Temperature: 69.0 (F) Maximum Temperature: 94.0 (F) Absolute Humidity: 75. grains/lb Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Typ	be:	LDGV	LDGT12	LDGT	34	LDGT
HDGV	LDDV	LDDT	HDDV		MC A	ll Veh	
	GVI	IR:		<6000	>60	00	(All)
	VMT Distri	bution:	0.289	3 0.4	562	0.1556	i
0.0386	0.0003	0.0023	0.052	4 0.0	052	1.0000	I
	Comp	osite En	nission Fa	actors (g	g/mi):		
Co	omposite VOC	:	0.307	0.369	0.5	66	0.419
0.388	0.043	0.135	0.167	2.	31	0.381	

 Composite CO
 :
 5.03
 5.85
 7.42
 6.25

 5.23
 0.495
 0.325
 0.183
 11.39
 5.549

 Composite NOX
 :
 0.227
 0.321
 0.543
 0.377

 0.347
 0.027
 0.154
 0.674
 1.14
 0.352

mph - CY2025

\* File 1, Run 1, Scenario 27.

M583 Warning:

The user supplied arterial average speed of 39.5 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2025

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Typ	e:	LDGV	LDGT12	LDC	GT34	LDGT
HDGV	LDDV	LDDT	HDDV		MC	All Veh	
	GVW	IR:		<6000	>6	5000	(All)
	 VMT Distri		0 289			0 1556	
0.0386	0.0003						
	Comp	osite Em	ission Fa	actors (	g/mi)	:	
Co	mposite VOC	:	0.307	0.369	0	.566	0.419
0.388	0.043	0.135	0.167	2	.31	0.381	
Co	omposite CO	:	5.03	5.85	7	7.42	6.25
5.23	0.495	0.325	0.183	11	.39	5.549	
Co	mposite NOX	:	0.227	0.321	0	.543	0.377
0.347	0.027	0.154	0.674	1	.14	0.352	
*	# # # # # #	# # # #	: # # # #	# # # #	# #	# # # #	#
Montgome	ry County, '	ΓN		Rural L	ocal	25 00 mp	h Defa

53

- CY2025

\* File 1, Run 1, Scenario 28.

M583 Warning:

The user supplied arterial average speed of 25.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2025

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No Evap I/M Program: No

ATP Program: No

#### Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh <6000 >6000 (All) GVWR: ----- ----- ------- ----- ----- -----VMT Distribution: 0.2893 0.4562 0.1556 0.0386 0.0003 0.0023 0.0524 0.0052 1.0000 \_\_\_\_\_ \_\_\_\_\_ Composite Emission Factors (g/mi): Composite VOC : 0.368 0.418 0.640 0.475 0.492 0.056 0.172 0.245 2.67 0.443 Composite CO : 4.92 5.71 7.24 6.10 7.72 0.635 0.416 0.279 16.77 5.556 Composite NOX : 0.248 0.337 0.569 0.396 0.309 0.027 0.159 0.694 1.01 0.368 \_\_\_\_\_ \_\_\_\_\_ Urban Interstate 64.73 mph -\* Montgomery County, TN CY2025 \* File 1, Run 1, Scenario 29. M515 Warning:

The combined freeway and ramp average speed entered cannot be greater than 60.9 miles per hour. The average speed will be reset to this value.

## M582 Warning:

The user supplied freeway average speed of 60.9 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all

vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2025

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh GVWR: <6000 >6000 (All) ----- ---- ---- --------- ----- -----\_\_\_ VMT Distribution: 0.2230 0.3516 0.1199 0.0301 0.0002 0.0018 0.2695 0.0040 1.0000 \_\_\_\_\_ \_\_\_\_\_ Composite Emission Factors (g/mi): Composite VOC : 0.269 0.341 0.518 0.386 0.343 0.038 0.120 0.185 2.80 0.314 Composite CO : 6.32 7.27 9.11 7.74 7.89 0.545 0.358 0.307 25.12 5.481 Composite NOX : 0.241 0.352 0.587 0.412 0.409 0.049 0.281 1.679 1.59 0.720 \_\_\_\_\_ \_\_\_\_\_

#### M583 Warning:

The user supplied arterial average speed of 35.9 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2025

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT LDDV LDDT HDDV MC All Veh HDGV GVWR: <6000 >6000 (All) \_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_ \_\_\_ \_\_\_\_\_ ----- ----- -----\_\_\_ VMT Distribution: 0.2893 0.4563 0.1556 0.0369 0.0003 0.0023 0.0542 0.0052 1.0000 \_\_\_\_\_ \_\_\_\_\_ Composite Emission Factors (g/mi): Composite VOC : 0.317 0.375 0.576 0.426 0.386 0.045 0.141 0.194 2.37 0.390 Composite CO : 4.86 5.66 7.19 6.05 5.43 0.514 0.337 0.214 12.26 5.385 Composite NOX : 0.226 0.318 0.540 0.374 0.334 0.026 0.151 0.701 1.12 0.351 \_\_\_\_\_ \_\_\_\_\_ \* Montgomery County, TN Urban Minor Arterial 25.18 mph - CY2025 \* File 1, Run 1, Scenario 31. M583 Warning: The user supplied arterial average speed of 25.2

will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2025

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Type:		LDGV LDGT12		LD	LDGT	
HDGV	LDDV	LDDT	HDI	V	MC	All Veh	

	GVWR:			<6000	>6000	(All)
	VMT Distri	bution:	0.2893	0.456	3 0.155	5
0.0369	0.0003	0.0023	3 0.0542	0.0052	2 1.000	0
	Comp	osite E	mission Fa	ctors (q/m		
Co	mposite VOC					0.473
0.470	0.056	0.171	0.263	2.66	0.442	
Co	omposite CO	:	4.92	5.70	7.23	6.09
7.54	0.632	0.414	0.303	16.66	5.532	
Co	mposite NOX	:	0.247	0.336	0.568	0.395
0.306	0.027	0.158	0.734	1.01	0.370	

\* Montgomery County, TN

### CY2025

\* File 1, Run 1, Scenario 32.

## M583 Warning:

The user supplied arterial average speed of 24.9 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

Urban Collector 24.89 mph -

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2025

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh GVWR: <6000 >6000 (All)

VMT Distribution: 0.2915 0.4596 0.1567 0.0376 0.0003 0.0023 0.0467 0.0053 1.0000 \_\_\_\_\_ \_\_\_\_\_ Composite Emission Factors (g/mi): Composite VOC : 0.369 0.419 0.641 0.475 0.479 0.056 0.172 0.246 2.67 0.445 Composite CO : 4.93 5.71 7.25 6.10 7.67 0.637 0.418 0.281 16.83 5.589 Composite NOX : 0.248 0.337 0.569 0.396 0.306 0.028 0.159 0.691 1.01 0.366 \_\_\_\_\_ Urban Local 24.68 mph Default \* Montgomery County, TN - CY2025 \* File 1, Run 1, Scenario 33. M585 Warning:

100% of VMT has been assigned to the local roadway

type for all hours of the day for all vehicle types

with an average speed of 12.9 mph.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

### M 48 Warning:

there are no sales for vehicle class LDDT12

```
Calendar Year: 2025
```

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Typ	be:	LDGV	LDGT12	LDG	Г34	LDGT
HDGV	LDDV	LDDT	HDI	VV	MC 2	All Veh	
	GVV	VR:		<6000	>60	000	(All)
	VMT Distri	bution:	0.29	015 0	.4596	0.156	7
0.0376	0.0003	0.0023	0.04	67 0	.0053	1.0000	C

Composite Emission Factors (g/mi):

 Composite VOC :
 0.562
 0.589
 0.869
 0.660

 0.775
 0.080
 0.241
 0.389
 3.47
 0.637

 Composite CO :
 5.37
 6.17
 7.82
 6.59

 15.09
 1.004
 0.659
 0.534
 29.38
 6.376

 Composite NOX :
 0.252
 0.326
 0.538
 0.380

 0.275
 0.035
 0.202
 0.881
 0.89
 0.364

## CY2035

\* File 1, Run 1, Scenario 34.

M 96 Warning:

65.1 speed reduced to 65 mph maximum

M515 Warning:

The combined freeway and ramp average speed entered cannot be greater than 64.2 miles per hour.

The average speed will be reset to this value.

#### M582 Warning:

The user supplied freeway average speed of 64.2 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2035

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh GVWR: <6000 >6000 (All) VMT Distribution: 0.1980 0.3122 0.1064 0.0288 0.0002 0.0016 0.3493 0.0036 1.0000

Composite Emission Factors (g/mi):

C	Composite VOC	:	0.261	0.333	0.459	0.365
0.336	0.035	0.080	0.173	2.83	0.285	
	Composite CO	:	6.23	7.15	8.56	7.51
8.11	0.537	0.314	0.210	25.95	4.778	
C	Composite NOX	:	0.232	0.338	0.497	0.378
0.210	0.045	0.198	0.890	1.62	0.528	

\* Montgomery County, TN Rural Principal Arterial

45.58 mph - CY2035

\* File 1, Run 1, Scenario 35.

M583 Warning:

The user supplied arterial average speed of 45.6 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2035

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Ty	pe:	LDGV	LDGT12	LDG	Т34	LDGT
HDGV	LDDV	LDDT	HDDV	J	MC	All Veh	
	GV	WR:		<6000	>6	000	(All)
	VMT Distr	ibution:	0.28	75 0.	4534	0.154	б
0.0369	0.0003	0.0023	0.060	0.00	.0052	1.000	0

 Composite Emission Factors (g/mi):

 Composite VOC :
 0.287
 0.354
 0.495
 0.390

 0.313
 0.038
 0.086
 0.158
 2.25
 0.352

 Composite CO :
 5.28
 6.09
 7.35
 6.41

 4.94
 0.470
 0.272
 0.129
 10.43
 5.661

 Composite NOX :
 0.222
 0.315
 0.466
 0.353

 0.179
 0.025
 0.112
 0.406
 1.17
 0.316

\_\_\_\_\_

\* File 1, Run 1, Scenario 36.

M583 Warning:

The user supplied arterial average speed of 43.1 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

- Calendar Year: 2035
  - Month: July
  - Altitude: Low
- Minimum Temperature: 69.0 (F)
- Maximum Temperature: 94.0 (F)
- Absolute Humidity: 75. grains/lb
  - Nominal Fuel RVP: 8.6 psi
    - Weathered RVP: 8.1 psi
- Fuel Sulfur Content: 30. ppm
  - Exhaust I/M Program: No
    - Evap I/M Program: No
      - ATP Program: No
    - Reformulated Gas: No

	Vehicle Typ	be:	LDGV	LDGT12	2 LDC	GT34	LDGT	
HDGV	LDDV	LDDT	HD	DV	MC	All Veh	1	
	GVV	VR:		<6000	0 >6	5000	(All)	
								-
	VMT Distri	bution:	0.2	875 (	0.4534	0.154	6	
0.0369	0.0003	0.0023	0.0	600 (	0.0052	1.000	00	
								-

Composite Emission Factors (g/mi):

 Composite VOC :
 0.293
 0.358
 0.501
 0.394

 0.322
 0.039
 0.089
 0.164
 2.27
 0.358

 Composite CO :
 5.16
 5.96
 7.20
 6.28

 4.96
 0.475
 0.275
 0.132
 10.76
 5.549

 Composite NOX :
 0.221
 0.312
 0.463
 0.350

 0.176
 0.024
 0.108
 0.392
 1.15
 0.313

\* File 1, Run 1, Scenario 37.

M583 Warning:

The user supplied arterial average speed of 38.3 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2035

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Typ	e:	LDGV	LDGT12	LDG	<b>C</b> 34	LDGT
HDGV	LDDV	LDDT	HDDV	I	MC A	All Veh	
	GVV	IR:		<6000	>60	000	(All)
	VMT Distri	bution:	0.289	93 0.	4562	0.155	6
0.0386	0.0003	0.0023	0.052	24 0.	0052	1.000	0
	Comp	osite Er	mission F	actors	(g/mi):		
Cc	omposite VOC	:	0.306	0.366	0.	513	0.403
0.359	0.041	0.094	0.162	2 2	2.33	0.370	

 Composite CO :
 4.94
 5.71
 6.91
 6.02

 5.24
 0.492
 0.286
 0.123
 11.65
 5.380

 Composite NOX :
 0.220
 0.307
 0.457
 0.345

 0.172
 0.023
 0.103
 0.339
 1.13
 0.305

\* Montgomery County, TN

Rural Minor Collector 38.34

mph - CY2035

\* File 1, Run 1, Scenario 38.

M583 Warning:

The user supplied arterial average speed of 38.3 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2035

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Typ	be:	LDGV	LDGT	12 LI	OGT34	LDGT
HDGV	LDDV	LDDT	HD	DV	MC	All Ve	eh
	GVI	VR:		<60	00 :	>6000	(All)
							-
	VMT Distri	bution:	0.2	893	0.4562	0.15	556
0.0386	0.0003	0.0023	0.0	524	0.0052	1.00	000
							-
	Comp	osite En	mission	Factor	rs (g/mi	):	
Cc	omposite VOC	:	0.306	0.3	866	0.513	0.403
0.359	0.041	0.094	0.1	62	2.33	0.37	70
C	omposite CO	:	4.94	5.	71	6.91	6.02
5.24	0.492	0.286	0.1	23	11.65	5.38	30

 Composite NOX :
 0.220
 0.307
 0.457
 0.345

 0.172
 0.023
 0.103
 0.339
 1.13
 0.305

\* Montgomery County, TN Rural Local 25.00 mph Default

### - CY2035

\* File 1, Run 1, Scenario 39.

M583 Warning:

The user supplied arterial average speed of 25.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2035

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Typ	e:	LDGV	LDGT12	LDGT34	LDGT
HDGV	LDDV	LDDT	HDDV	7 MC	C All Ve	h
	GVŴ	'R:		<6000	>6000	(All)
						-
	VMT Distri	bution:	0.289	0.456	52 0.15	56
0.0386	0.0003	0.0023	0.052	24 0.005	52 1.00	00
						-
	Compo	osite En	mission F	actors (g/	mi):	
C	omposite VOC	:	0.365	0.414	0.579	0.456
0.449	0.053	0.122	0.232	2.67	0.42	8
(	Composite CO	:	4.88	5.63	6.81	5.93
7.60	0.625	0.367	0.184	16.75	5.43	3
C	omposite NOX	:	0.240	0.324	0.481	0.364

0.154 0.024 0.107 0.351 1.01 0.322

-----

M 96 Warning:

65.1 speed reduced to 65 mph maximum

M515 Warning:

The combined freeway and ramp average speed entered cannot be greater than 60.9 miles per hour.

The average speed will be reset to this value.

M582 Warning:

The user supplied freeway average speed of 60.9 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all

vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2035

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Typ	pe:	LDGV	LDGT12	LDC	GT34	LDGT
HDGV	LDDV	LDDT	HDD	V	MC	All Ve	h
	GVI	VR:		<6000	>6	5000	(All)
							_
	VMT Distri	bution:	0.22	30 0.	.3516	0.11	.99
0.0301	0.0002	0.0018	0.26	95 0.	.0040	1.00	000
							_
	Comp	osite Er	mission H	Factors	(g/mi)	:	
Co	omposite VOC	:	0.265	0.337	0	.465	0.369
0.311	0.036	0.081	0.17	6 2	2.80	0.30	2

 Composite CO :
 6.27
 7.18
 8.58
 7.53

 7.77
 0.536
 0.313
 0.208
 25.12
 5.341

 Composite NOX :
 0.233
 0.339
 0.500
 0.380

 0.204
 0.043
 0.192
 0.857
 1.59
 0.475

\* Montgomery County, TN Urban Principal Arterial

35.09 mph - CY2035

\* File 1, Run 1, Scenario 41.

M583 Warning:

The user supplied arterial average speed of 35.1 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2035

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

	Vehicle Typ	pe:	LDGV	LDGT1	2 LI	OGT34	LDGT
HDGV	LDDV	LDDT	HD	DV	MC	All Ve	eh
	GVI	VR:		<600	0 >	>6000	(All)
							-
	VMT Distr	ibution:	0.2	893	0.4563	0.15	556
0.0369	0.0003	0.0023	0.0	542	0.0052	1.00	000
							-
	Comp	osite En	mission	Factors	s (g/mi	):	
Cc	omposite VOC	:	0.316	0.37	73	0.522	0.411
0.355	0.043	0.099	0.1	88	2.39	0.3	79
C	omposite CO	:	4.78	5.5	3	6.70	5.83
5.42	0.510	0.297	0.1	46	12.50	5.22	22

 Composite NOX :
 0.219
 0.305
 0.454
 0.343

 0.165
 0.023
 0.102
 0.358
 1.11
 0.304

\* Montgomery County, TN Urban Minor Arterial 23.38

mph - CY2035

\* File 1, Run 1, Scenario 42.

M583 Warning:

The user supplied arterial average speed of 23.4 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2035

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Typ	e:	LDGV	LDGT12	LDGT34	LDGT
HDGV	LDDV	LDDT	HDDV	I	MC All	Veh
	GVW	R:		<6000	>6000	(All)
	VMT Distri	bution:	0.289	93 0.4	563 0.	1556
0.0369	0.0003	0.0023	0.054	12 0.0	052 1.	0000
	Compo	osite En	mission F	actors (g	g/mi):	
Co	omposite VOC	:	0.375	0.424	0.594	0.467
0.445	0.055	0.127	0.265	5 2.	73 0.	440
C	Composite CO	:	4.96	5.71	6.91	6.01
8.04	0.654	0.386	0.219	9 17.	70 5.	518
Co	omposite NOX	:	0.245	0.329	0.489	0.370

0.150 0.025 0.110 0.386 1.00 0.329

\_\_\_\_\_

\* Montgomery County, TN

Urban Collector 24.43 mph -

CY2035

\* File 1, Run 1, Scenario 43.

M583 Warning:

The user supplied arterial average speed of 24.4 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2035 Month: July Altitude: Low Minimum Temperature: 69.0 (F) Maximum Temperature: 94.0 (F) Absolute Humidity: 75. grains/lb Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Typ	ehicle Type:		LDGT12 I	LDGT34	LDGT						
HDGV	LDDV	LDDT	HDDV	MC	All Veł	1						
	GVW	'R:		<6000	>6000	(All)						
	VMT Distri	bution:	0.2915	0.4596	96 0.1567							
0.0376	0.0003	0.0023	0.0467	0.0053	3 1.000							
Composite Emission Factors (g/mi):												
Composite VOC : 0.368 0.417 0.584 0.												
0.440 0.054		0.123	0.237	2.69	0.433	3						
C	composite CO	:	4.91	5.66	6.85	5.96						
7.70	0.635	0.373	0.190	17.08	5.493	3						
Co	omposite NOX	:	0.242	0.325	0.483	0.366						

0.152 0.024 0.108 0.354 1.01 0.324

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\* Montgomery County, TN Urban Local 24.63 mph Default

- CY2035

\* File 1, Run 1, Scenario 44.

M585 Warning:

100% of VMT has been assigned to the local roadway

type for all hours of the day for all vehicle types

with an average speed of 12.9 mph.

M615 Comment:

User supplied VMT mix.

M 48 Warning:

there are no sales for vehicle class HDGV8b

M 48 Warning:

there are no sales for vehicle class LDDT12

Calendar Year: 2035

Month: July

Altitude: Low

Minimum Temperature: 69.0 (F)

Maximum Temperature: 94.0 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 8.6 psi

Weathered RVP: 8.1 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

	Vehicle Typ	e:	LDGV I	LDGT12	LDGT34	LDGT						
HDGV	LDDV	LDDV LDDT		MC	All V	7eh						
	GVW	R:		<6000	>6000	(All)						
	VMT Distri	bution:	0.2915	5 0.459	596 0.1567							
0.0376	0.0003	0.0023	0.0467	0.005	3 1.0	0000						
Composite Emission Factors (g/mi):												
Co	omposite VOC	:	0.558	0.584	0.798	0.639						
0.709	0.076	0.175	0.370	3.47	0.6	519						
C	composite CO	:	5.34	6.10	7.39	6.42						
14.85	0.990	0.593	0.355	29.38	6.	247						
Co	omposite NOX	:	0.245	0.312	0.450	0.347						
0.137	0.031	0.137	0.453	0.89	0.3	317						

# APPENDIX E

**VMT FRACTIONS** 

Year		Roadway Type	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	Total
2008	Rural	Interstate	0.3283	0.0498	0.1660	0.0505	0.0242	0.0270	0.0050	0.0039	0.0030	0.0111	0.0132	0.0680	0.2420	0.0026	0.0012	0.0042	1.0000
		Arterials	0.4768	0.0723	0.2411	0.0733	0.0352	0.0392	0.0038	0.0029	0.0022	0.0084	0.0099	0.0057	0.0203	0.0019	0.0009	0.0061	1.0000
		Coll.& Local	0.4798	0.0728	0.2426	0.0737	0.0354	0.0395	0.0049	0.0038	0.0029	0.0109	0.0128	0.0024	0.0086	0.0025	0.0012	0.0062	1.0000
	Urban	Interstate	0.3697	0.0561	0.1869	0.0568	0.0273	0.0304	0.0040	0.0031	0.0024	0.0089	0.0106	0.0517	0.1843	0.0020	0.0010	0.0048	1.0000
		Fwy&Expwy																	
		Arterials	0.4798	0.0728	0.2426	0.0737	0.0354	0.0395	0.0036	0.0028	0.0022	0.0081	0.0096	0.0046	0.0164	0.0018	0.0009	0.0062	1.0000
		Coll.& Local	0.4833	0.0733	0.2444	0.0743	0.0357	0.0398	0.0040	0.0031	0.0024	0.0089	0.0106	0.0024	0.0086	0.0020	0.0010	0.0062	1.0000
2016	Rural	Interstate	0.2129	0.0696	0.2318	0.0704	0.0339	0.0278	0.0049	0.0041	0.0031	0.0111	0.0131	0.0680	0.2420	0.0025	0.0012	0.0036	1.0000
		Arterials	0.3092	0.1011	0.3366	0.1022	0.0492	0.0403	0.0037	0.0031	0.0023	0.0084	0.0098	0.0057	0.0203	0.0019	0.0009	0.0053	1.0000
		Coll.& Local	0.3112	0.1017	0.3388	0.1029	0.0495	0.0406	0.0047	0.0040	0.0030	0.0109	0.0128	0.0024	0.0086	0.0024	0.0012	0.0053	1.0000
	Urban	Interstate	0.2398	0.0784	0.2610	0.0793	0.0381	0.0312	0.0039	0.0033	0.0025	0.0089	0.0105	0.0517	0.1843	0.0020	0.0010	0.0041	1.0000
		Fwy&Expwy																	
		Arterials	0.3112	0.1017	0.3388	0.1029	0.0495	0.0406	0.0035	0.0030	0.0022	0.0081	0.0095	0.0046	0.0164	0.0018	0.0009	0.0053	1.0000
		Coll.& Local	0.3135	0.1025	0.3412	0.1036	0.0499	0.0408	0.0039	0.0033	0.0025	0.0089	0.0105	0.0024	0.0086	0.0020	0.0010	0.0054	1.0000
2025	Rural	Interstate	0.19816	0.07211	0.24006	0.07290	0.03509	0.02810	0.00487	0.00411	0.00309	0.01114	0.01309	0.06794	0.24206	0.00249	0.00121	0.00358	1.00000
		Arterials	0.28776	0.10473	0.34864	0.10588	0.05096	0.04081	0.00366	0.00308	0.00232	0.00836	0.00982	0.00570	0.02030	0.00187	0.00091	0.00520	1.00000
		Coll.& Local	0.28961	0.10539	0.35085	0.10655	0.05129	0.04107	0.00475	0.00400	0.00302	0.01086	0.01276	0.00241	0.00859	0.00243	0.00118	0.00524	1.00000
	Urban	Interstate	0.22316	0.08121	0.27035	0.08210	0.03952	0.03164	0.00390	0.00328	0.00247	0.00891	0.01047	0.05172	0.18428	0.00199	0.00097	0.00403	1.00000
		Fwy&Expwy																	
		Arterials	0.28960	0.10539	0.35086	0.10655	0.05129	0.04107	0.00353	0.00298	0.00224	80800.0	0.00949	0.00460	0.01640	0.00180	0.00088	0.00524	1.00000
		Coll.& Local	0.29175	0.10617	0.35344	0.10734	0.05167	0.04137	0.00390	0.00328	0.00247	0.00891	0.01047	0.00241	0.00859	0.00199	0.00097	0.00527	1.00000
2035	Rural	Interstate	0.19816	0.07211	0.24006	0.07290	0.03509	0.02810	0.00487	0.00411	0.00309	0.01114	0.01309	0.06794	0.24206	0.00249	0.00121	0.00358	1.00000
		Arterials	0.28777	0.10473	0.34863	0.10588	0.05096	0.04081	0.00366	0.00308	0.00232	0.00836	0.00982	0.00570	0.02030	0.00187	0.00091	0.00520	1.00000
		Coll.& Local	0.28960	0.10539	0.35086	0.10655	0.05129	0.04107	0.00475	0.00400	0.00302	0.01086	0.01276	0.00241	0.00859	0.00243	0.00118	0.00524	1.00000
	Urban	Interstate	0.22316	0.08121	0.27035	0.08210	0.03952	0.03164	0.00390	0.00328	0.00247	0.00891	0.01047	0.05172	0.18428	0.00199	0.00097	0.00403	1.00000
		Fwy&Expwy																	0.00000
		Arterials	0.28960	0.10539	0.35086	0.10655	0.05129	0.04107	0.00353	0.00298	0.00224	0.00808	0.00949	0.00460	0.01640	0.00180	0.00088	0.00524	1.00000
		Coll.& Local	0.29175	0.10617	0.35344	0.10734	0.05167	0.04137	0.00390	0.00328	0.00247	0.00891	0.01047	0.00241	0.00859	0.00199	0.00097	0.00527	1.00000

Table 9. The VMT Fractions by 16 Vehicle Categories for 7 Roadway Types for Montgomery County

## APPENDIX F

## LEGAL NOTICES OF PUBLIC COMMENT PERIOD

# PUBLIC MEETING AND COMMENT ANNOUNCEMENT

The Clarksville Metropolitan Planning Organization (MPO), which is responsible for long range transportation planning for the cities of Clarksville, Oak Grove, Montgomery County and portions of Christian county, will be holding an **Executive Board meeting on Wednesday**, **February 17, 2010, at 11:00 AM at the Regional Planning Commission Office – Lower level, 329 Main Street, Clarksville.** The purpose of the meeting is to endorse the draft Metropolitan Transportation Plan (MTP) and the draft Air Quality Conformity Determination Report for public review.

**The public comment period for the draft MTP and the draft Air Quality Conformity Determination Report will run from February 19th, 2010 until March 4th, 2010**. These documents will be available at the website: http://www.cuampo.com/specialPrograms.html and hard copies will be located at the Regional Planning Commission Office, the Clarksville and Fort Campbell Public Library, Oak Grove City Hall and all Community Centers. The MTP serves as a blueprint for transportation investments on streets and highways, public transportation, sidewalks and bike paths, as well as for airports, railroads, and waterways in the Clarksville region.

Anyone having questions or comments concerning the meeting or MTP should contact Stan Williams at 931-645-7448 or email: stanwilliams@cityofclarksville.com and/or attend this meeting. In accordance with the "Americans with Disabilities Act", if you have a disability, for which the MPO needs to provide accommodations, please notify us of your requirements by February 10, 2010. This request does not have to be in writing. It is the policy of the MPO to ensure compliance with Title VI of the Civil Rights Act of 1964; 49 CFR part 26; No person shall be excluded from participation in or be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal funds on the grounds of Race, Color, Sex or National Origin.

## PÚBLICA REUNIÓN PÚBLICA Y PERÍODO DE COMENTARIOS

La Clarksville Metropolitano Planificación Organización (MPO) eso es responsable para la planificación de transporte para las ciudades de Clarksville y Oak Grove y porciones de Hopkinsville y Montgomery y Christian Counties, será la celebración de una Reunión de la **Junta Ejecutiva en Miércoles**, **17 de febrero 2010, a las 11:00 AM en la Comisión Regional de la Oficina de Planificación – Bajar nivel, 329 Main Street, Clarksville**. El propósito de la reunión es aprobar el proyecto de Plan de Transporte Metropolitano (MTP) y el proyecto de Aire Informe de del Calidad Determinación de la conformidad para la revisión pública. **El período de comentarios públicos el el plan de mediano borrador y de el borrador la calidad del aire la conformidad informe del se 19 febrero 2010 hasta el de marzo 4, 2010**. El documentos estará disponible en el sitio web:

(http://www.cuampo.com/specialPrograms.html) y copias en papel se encuentra en la Comisión Regional la Oficina de Planificación, la Clarksville y la Biblioteca Pública de Fort Campbell, Oak Grove City Hall y todos los Centros de la Comunidad. El plan servirá como modelo para inversiones de transporte en calles y carreteras, transporte público, aceras y carriles bici, así como de aeropuertos, ferrocarriles y vías fluviales en la región de Clarksville. Cualquier persona con preguntas o comentarios acerca de la reunión o el plan deben ponerse en contacto Stan Williams en el 931-645-7448 o por correo electrónico: stanwilliams@cityofclarksville.com o asistir a esta reunión. Bajo la Ley de Estadounidenses con Discapacidades, si usted tiene una discapacidad, para el cual el MPO es proporcionar alojamiento, por favor notifique lo MPO de estas necesidades por de febrero 10 de 2010. Es la política del MPO para asegurar el cumplimiento con el Título VI del Acta de Derechos Civiles de 1964, 49 CFR 26; Ninguna persona podrá ser excluida de participar o se le negarán beneficios de, o ser sujeto a discriminación bajo cualquier programa o actividad que eso recibe fondos federales por motivos de raza, color, sexo u origen nacional.

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		424,182	401,934	9,246 22,248		
The Clarksville Urbanized Area Metropolitan Planning Organization (UIAMPO) Executive Board will be meeting on Wednesday, Pebruary 1 2010 beginning at 11:00 a.m. Said meeting will be at the Clarksville- Montgomery County Regional Planning Commission Chambers (RPC)- lower level 329 Main St., Clarksville, TN. Buyeness includes: To start t buyblic comment period which begins January 29, 2010 and ceases on Pebruary 11, 2010 to review and adopt the Clarksville FY2008-FY2035 Draft Metropolitan Transportation Plan (Main to the federal rescissa Determination; to amend the UPWP 20 feeting Study and a Downtown	7,473 1,340	899,473 254,340	899,473 254,340			
Montgomery County Regional Planning Commissions includes: To start t lower level 329 Main St., Clarksville, TN. Business includes: To start t	he ,220	22,280,925	21,307,722	973,203		
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Teléfono: (212) 840-2450

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Atlanta, Georgia 30341 Teléfono: (678) 336-7010 / (678) 260-8616 Chile

Dirección: 800 Brickel Ave., Suite 1230, Miami, Florida,

Telefano: (305) 373-8623 / (305) 373-8624

Incluye sempezar el comentario de el periodo publico el cual comenzara en Enero 29, del 2010, y termina el 11 de Febereo del 2010 y asi revisar y adoptar el bosquejo de el Clarksville, FY 2008-2035 del plan de de transportacion Metropolitana, (MPT) Metropolitan, Transportation, Plan; Y la determinacion de comformidad de el bosquejo; Y ;enmendar el (UPWP)2010, de el reflejo de la recision federal, de PL Funding, y la agregacion, de la justificación, sobre el estudio de el flujo de trafico de el centro de la cuada, incluyendo, la tarea de trabajo de zona vehicular, de peatones, y estacionamientos.

Dicho ducumento estara' disponible para la revision publica, durante las hora de oficinas, en el (RPC) tambien disponible, en el siguiente website www.cuampo. com/specialprograms.html.

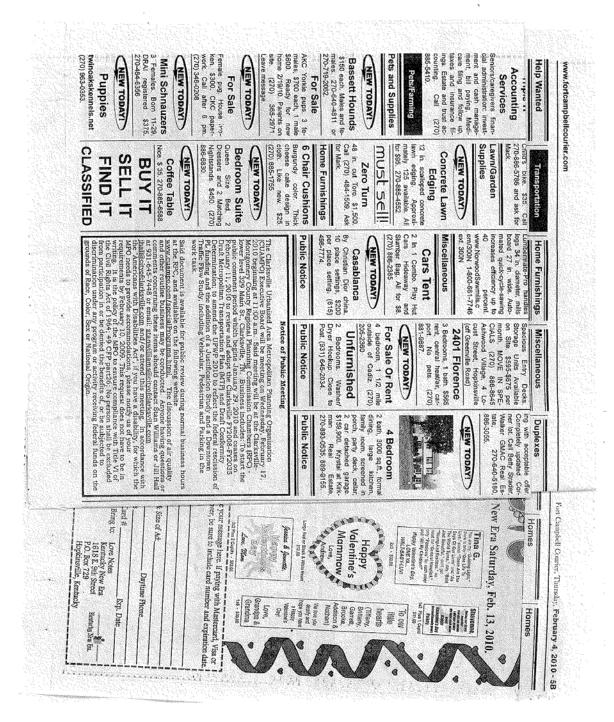
Tambier; sera para discutir, sobre la calidad de el aire y otros negocios de rutina, que podran ser conducidos.

Quien quiera que tenga que hacer preguntas o comentarios, sobre estos artículos, puede ponerse en contacto con Stan, Williams, o bien con Jill Hall, en el 931-645-7848 o en el correo electronico; stanwilliams@cityofclarksville.com j hall@cityofclarksville.com o bien puede atender a esta reunion.

De acuerdo a "AMERICAN WITH DISABILITIES ACT"si tienes discapacidad, por elcual MPO necesita proveer acomodo por favor, notifiquenos, de el requerimiento, el 10 de Febrero 2010.

Esta peticion no tiene que ser por escrito. Es una poliza de MPO

Brent Ezell (270) 604-3995 or Andrea Walkins (270) 887-3256 or (270) March 27, 2010. Doors open at 4:30 P.M. Dinner served at 6:00 P.M.; Auv Wats Senior Citizens Building, 1402 West 7th Street, Hopkinsville, Ky 42240. SINCLE Ticket S45. COUPLES Ticket S45. Couple Away For More Information or For Tickets Contact Section B, Page 6 TAUVIAL TIN 11th Annual Federation 270-887-3250 advertise right day Banquet columns Turkey in these is the Every Call: Day 6 benefits, training STATE WIA program. American Heavy Equip-mont Training Sold discument is available for public revew during normal business hours at the RPC, and available on the following. The discussion of air quality wave cuanness cound special/regenual-burn, etc. Avayone having questions and other routine business may be should contact San Williams or Jill Hall or S31-645-7448 or email: annual strength the discussion of the question and S31-645-7448 or email: annual attend that meeting. In accordance with halleschreckarksell.cc.un. I you have a disability for which the the American's with Discontantiations, please order us of your requirements by Petruck (10, 2000; This request does not have to be in requirements by Petruck (10, 2000; This request does not have to be in requirements by Petruck (10, 2000; This request does not have to be in requirements by Petruck (10, 2000; This request does not have to be in requirements by Petruck (10, 2000; This request does not have to be in requirements by Petruck (10, 2000; This request does not have to be in requirements by Petruck (10, 2000; reserving heleral hunds on the discrimination under an program or activity reserving federal hunds on the grounds of Ruee, Color, Sax of National Origin. Driver Trainees Neededi No CDL - No problemi Earn up to \$900/week. Company endorsed CDL Training, Job assistance Financial assistance 866-280-5836 Koldula Help Wanted 888-780-5539 The Clarksville Urbanized Area Metropolitan Planning Organization (CUAMPO) Executive Board will be meeting on Wednesday, Pebruary 17, 2010 beginning at 11:00 am. Said meeting will be at the Ciarksville-Montgomery County Regional Planning Commission Chambers (RPC) Montgomery 10, 2010 on review and adopt to Austro the Conformity Draft Metropolitan Transportation Plan MTP) and Draft Conformity Determination; to amend the UPW 2010 to reflect the federal resiston of Determination; to amend the UPW 2010 to reflect the federal resiston of Determination; to amend the UPW 2010 to reflect the federal resiston of Determination; to amend the UPW 2010 to reflect the federal resiston of Determination; to amend the UPW 2010 to reflect the federal resiston of Determination; to amend the UPW 2010 to reflect the federal resiston of Determination; to amend the UPW 2010 to reflect the federal resiston of Determination; to amend the UPW 2010 to reflect the federal resiston of Determination; to amend the UPW 2010 to reflect the federal resiston of Determination; to amend the UPW 2010 to reflect the federal resiston of Determination; to amend the UPW 2010 to reflect the federal resiston of Determination; to amend the UPW 2010 to reflect the federal resiston of Determination; to amend the UPW 2010 to reflect the federal resiston of Determination; to amend the UPW 2010 to reflect the federal resiston of Determination Study and a Downsown Public Notice **BIH Trucking** DIN LASE Company Employment Notice of Public Meeting Public Notice Interested applicants should mail photography. Experience in page B skills in newspaper writing and design with Adobe Photoshop michele.carlton1@us.army.mil and Adobe Indesign, a plus. current resume and clips to: Ideal candidate should have Michele Carlton Vowell Oak Grove, KY 42262 Fort Campbell Courier Managing Editor P.O. Box 540 Concerne of **Public Notice** Toll Free: 877-4NB one: Fax: 270-887-3 Email: class WWW.clig u answered yes to the above questions, VewEra.com is looking for YOU! We have a su feel at home on the world wide web? su comfortable in today's "www world"? "offers: lanning, organizational and ecations skills Q **C** nurture customer relationships y assessing potential in your territory and plans to grow business and meet sales goals. vill also work with newspaper account es to develop sales leads and sell additional osition for an account representative to sell g across all of our web portals. You will be Creative, outgoing and energetic? otczak@kentuckynewera.com tince -401K one year of outside sales experience Itbinit your resume' online to: idates will possess: sing through a team selling approach. legree in marketing or multimedia sales experience preferred BER SALES REP erience in making sales presentations ector of Sales and Marketing lent experience) Hopkinsville, KY 42241 Or via snail mail to: THE Eagle POST **Connecting Oak Grove, Fort** Attn: Cyber Sales Unlimited earnings potential PO Box 729 www.theeaglepost.us Wednesday, Feb. 3, 2010 -4. so ÷ - 2 31 13.75 8189.4 法管理



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Friday, February 19, 2010 The Leaf-Chronicle www.theleafchronicle.com

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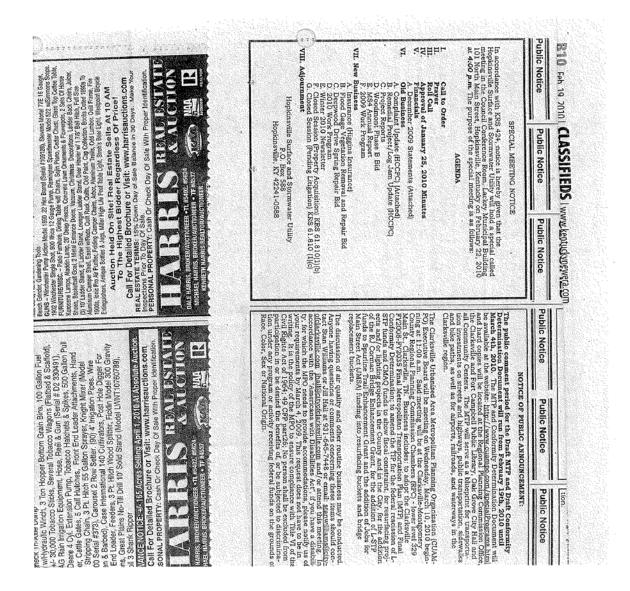
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El Departamento de Transporte de Tennessee (TDOT), igualdad de la Comunidad. El plan de mediano plazo servirá como modelo par y acción afirmativa del empleador, puede tratar de retener a las empre de consultoría, empresas de la encuesta, tasadores, adquisición y r empresas, y la coordinación de servicios públicos o empresas de in empresas, y la coordinación de servicios públicos o empresas de in empresas, y la coordinación de servicios públicos o empresas de in empresas, y la coordinación de servicios públicos o empresas de in empresas varios servicios nonfesionales durante los 12 próximos pla la Junta Ejecutiva se reunirá el Miércoles, 10 de marzo 2010 comier	El Departamento de Transporte de Tennessee (TDOT), igualdad de la Comunidad. El plan de mediano plazo servirá como modelo para inversiones de trans- acción afirmativa del empleador, puede tratar de retener a las empre porte en calles y carreteras, transporte público, aceras y carriles bici, así como de aeropuer- aconsultoría, empresas de la encuesta, tasadores, adquisición y n tos, ferrocarriles y vías fluviales en la región de Clarksville. Proceso y varios servicios profesionales durante los 12 próximos plat la Junta Ejecutiva se reunirá el Miércoles, 10 de marzo 2010 comienza a las 11:00 am dijo
determinación de la necesidad de un consultor, el Departamento ( la determinación de la necesidad de un consultor, el Departamento ( de interés de las empresas precalificadas por la publicidad adecua medios de comunicación públicos. Interesado certificada desfavorec	que la reunion será en el Clarksville-Montgomery County Regional Planning Commission Chambers (RPC) - nivel inferior principal 329 St., Clarksville, TN. Business incluye: aprobar el ejercicio 2008 Clarksville-FY2035 final del Plan de Transporte Metropolitano (MTP) y la
terprise (DBE) a las empresas, así como otras minorías y / o las em se les anima a responder a todos los anuncios de TDOT. Para obten se los anima a responder a todos los anuncios de TDOT. Para obten	determinación de la contormidad definitiva, a modificar la punta para la rescisión tederal de la L-STP y los fondos de fondos de CMAQ para mostrar restricciones financieras, los proyec- tos para el rejuvenecimiento y la iluminación proyectos en el Condado y en la ciudad, por la restricción de la ciudad.
Sobre la certificación poes, por lavor, porgeno on concerno (615) 74 Civiles Programa de Desarrollo de Pequeños Negocios en (615) 74 instrucciones para la certificación DBE se puede encontrar en la sig http://www.tdot.state.tn.us/civil%2Drights/smallbusiness/	adición de la Puente RJ Corman Enhancement Grant, para la adición de L-STP fondos para Spurline Trall Enhancement Grant y la adición de Empleos para Main Street Ley (JMSA) de financiación en cubos y rejuvenecimiento cubos de reemplazo del puente. La discusión de la calidad del aire y otros asuntos de rutina pueden llevarse a cabo. Cu-
Las empresas interesadas en la precalificación con el Departant deberá presentar los formularios de precalificación adecuada al Sr.	alquier persona con preguntas o comentarios sobre esos puntos deben ponerse en contacto Stan Williams o Jill Hall en 931-645-7448 o correo electrónico: jhall@cityofclarksville.com
tente de Ingeniería Civil Director de la División de Diseño, Suite Building, 505 Deaderick Street, Nashville, Tennessee 37243-1402.	stanwilliams@cityofclarksville.com y / o asistir a esta reunión. De acuerdo con el "Americans with Disabilities Act", si usted tiene una discapacidad, para lo cual el MOP tiene que propor- cionar alojamiento, por favor notifiquelo de sus necesidades al 4 de marzo de 2009. Esta
Los procedimientos de precalificación, forma de precalificaciór Política de Contratación de Ingeniería y Servicios Técnicos" se eno www.tdot.state.tn.us/consultantinfo.htm. Para asistencia con ( ficación, por favor llame al (615) 741-4460.	solicitud no tiene que ser por escrito. Es la política del MOP para asegurar el cumplimiento con el Título VI del Acta de Derechos Civiles de 1964, 49 PPC part26; Ninguna persona podrá ser excluida de participar o se le negarán beneficios de, o ser sujeto a discriminación bajo cualquier programa o actividad que reciben fondos federales por motivos de raza, color, sexo u origen nacional.

Trad Darf Conformity and Darf Conformity and Conformity of the Conformity of Conformation Office, and Anticological Configuration of Constant Conformation and Anticological Conference of Conformation Clock of Conformation Clock of Conformation Clock of Conformation of Conformation o	r quality and observating the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the presence of the	Activity Registres Act of Weilding Act of Your requirements and activity of the dependence of the RA activity of the precontance with the activity of the dependence of the RA activity of the process of the RA activity of the sector and the the RA activity of the process of the RA activity of the process of the RA activity of the process of the RA activity of the sector and the the RA activity of the process of the RA activity of the process of the RA activity of the process of the RA activity of the sector activity of the RA activity of the Clarksvalle regions of and base of the RA activity of the RA activity of the process of the RA activity of the RA activity of the act device of the RA activity of the RA activity of the act device of the RA activity of the RA activity of the act device of the RA activity of the RA activity of the act device of the RA activity of the RA activity of the activity of the RA activity of the RA activity of the activity of the RA activity of the activity of	BUY IT combinations combinations 3355 or waitybryan@hot mail.com Vert Hopkinsville Hopkinsville	shorida allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocations allocation
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# APPENDIX G

COMMENTS AND CONCURRENCE



#### CLARKSVILLE URBANIZED AREA METROPOLITAN PLANNING ORGANIZATION

Stan Williams MPO Director stanwilliams@cityofclarksville.com 329 MAIN STREET CLARKSVILLE, TN 37040 PHONE: (931)645-7448 Jill Hall Transportation Planner jhall@cityofclarksville.com

March 5, 2010

Representatives of the FHWA, FTA and EPA

Re: Final Clarksville Area Air Quality Conformity Analysis

The following is a summary of the comments received on the Draft Clarksville Area Air Quality Conformity Analysis.

Ms. Dianna Smith:

- Make sure your FY2008-2011 TIP is a direct subset of the MTP. The Conformity Determination Report must have that statement (93.122(a) (add as a bullet in the executive summary).
- Table 2(in both reports) should reflect the requirement to use budgets comes from 93.118. Where you have 93.119(g)(1) use 93.106.
- In the KY report there are a few instances where I saw "MVBE" replace with "MVEB"

Mr. Marc Corrigan:

- 1. Some of the fonts are too small and the text does not fill the page.
- 2. Page 1, third line from bottom, remove TDOT they do not have responsibility for the KY donut portion.
- 3. Page 3, add CO for 2035. Add MVEBs to this table.
- 4. As per 40 CFR 93.118(b)(2)(i), discuss qualitatively how there will not be any violations of the NAAQS by contributions from motor vehicles in the years from 2010 to 2016 (years before the MVEB). Consider mentioning factors like:
  - a. Previous CDR results for this interim time period (decreasing emissions?)
  - b. The emissions are significantly below MVEB
  - c. AQ is in attainment for the 1997 ozone NAAQS

March 5, 2010 Page 2

- Growth (population) and VMT are in-line with the previous CDR which showed emissions (2010?) were below MVEB.
- e. Other factors (or suggestions from other IAC participants (especially EPA)
- 5. Page 10, 4<sup>th</sup> line, remove "to", and "count data available".
- Page 11, first line remove "previous", consider rewriting the last sentence to read: "The last age fractions are for all vehicles 25+ years of age and older."
- 7. Page 13, change Table 5 to Table 4.
- Page 14, first paragraph, revise sentence beginning "Rural interstates..." to read "The AVERAGE SPEED command in MOBILE6.2 for rural interstates would be as follows:"
- 9. Page 23, revise reference to Table 10, and specify in first sentence that "emissions of VOC and NOx are expected to remain below the MVEB" (the statement that they decrease substantially may not be correct since they begin to increase in 2035...). The references to the % decrease do not seem to match results, please check these. Last line, correct "MVBE", replace "applicable" with "transportation improvements contained in this MTP

All of the comments were addressed, the documents edited/revised and there were no additional comments received. The members of the IAC gave concurrence on both the Tennessee and Kentucky documents.

Sincerely,

& Stan Hellioms

J Stan Williams Transportation Planning Director

### GLOSSARY

#### 1-Hour Ozone NAAQS

The 1-hour ozone national ambient air quality standard codified at 40 CFR 50.9.

#### 8-Hour Ozone NAAQS

The 8-hour ozone national ambient air quality standard codified at 40 CFR 50.10.

#### Area source

Small stationary and non-transportation pollution sources that are too small and/or numerous to be included as point sources but may collectively contribute significantly to air pollution (i.e. dry cleaners).

#### Attainment area

An area considered to have air quality that meets or exceeds the U.S. Environmental Protection Agency (EPA) health standards used in the Clean Air Act. An area may be an attainment area for one pollutant and a nonattainment area for others. Nonattainment areas are areas considered not to have met these standards for designated pollutants.

#### Carbon monoxide (CO)

A colorless, odorless, tasteless gas formed in large part by incomplete combustion of fuel. Human activities (i.e. transportation or industrial processes) are largely the source for CO contamination in ambient air.

#### Conformity

Process to assess the compliance of any transportation plan, program, or project with air quality implementation plans. The conformity process is defined by the Clean Air Act and regulated by the conformity rule.

#### Congestion Management and Air Quality Improvement Program (CMAQ)

A categorical funding program under the Federal-aid Highway Program. Directs funding to projects that contribute to meeting or maintaining National air quality standards in nonattainment and maintenance areas. CMAQ funds generally may not be used for projects that result in the construction of new capacity available to SOVs (single-occupant vehicles).

#### **Emissions inventory**

A complete list of sources and amounts of pollutant emissions within a specific area and time interval.

#### **Environmental Protection Agency (EPA)**

EPA is the Federal regulatory agency responsible for administering and the enforcement of Federal environmental laws including the Clean Air Act, the Clean Water Act, the Endangered Species Act, and others.

#### Federal Highway Administration (FHWA)

An agency of the U.S. Department of Transportation that funds highway planning and programs.

#### Federal Transit Administration (FTA)

An agency of the U.S. Department of Transportation that funds transit planning and programs.

#### High Occupancy Vehicles (HOVs)

Generally applied to vehicles carrying three or more people; freeways, expressways and other large volume roads may have lanes designated for use by carpools, vanpools, and buses. The term HOV is also sometimes used to refer to high-occupancy vehicle lanes themselves.

#### Highway

Term applies to roads, streets, and parkways, and also includes rights-of-way, bridges, railroad crossings, tunnels, drainage structures, signs, guardrails, and protective structures in connection with highways.

#### Hydrocarbons (HC)

Colorless gaseous compounds originating from evaporation and the incomplete combustion of fossil fuels.

#### Inspection and Maintenance Program (I/M)

An emissions testing and inspection program implemented to ensure that the catalytic or other emissions control devices on in-use vehicles are properly maintained over time.

#### Land use

Refers to the manner in which portions of land or the structures on them are used (i.e., commercial, residential, retail, industrial, etc.).

#### Maintenance area

Means any geographic region of the United States previously designated nonattainment pursuant to the CAA Amendments of 1990 and subsequently redesignated to attainment subject to the requirement to develop a maintenance plan under section 175A of the CAA, as amended.

#### Metropolitan Planning Organization (MPO)

The organizational entity designated by law with lead responsibility for developing transportation plans and programs for urbanized areas of 50,000 or more in population. MPOs are established by agreement of the Governor and units of general-purpose local government, which together represent 75 percent of the affected population of an urbanized area.

#### **Mobile sources**

Mobile sources include motor vehicles, aircraft, seagoing vessels, and other transportation modes. The mobile source related pollutants are carbon monoxide (CO), hydrocarbons (HC) or volatile organic compounds (VOCs), nitrogen oxides (NOx), and small particulate matter (PM-10).

### Mode

A form of transportation such as an automobile, bus or bicycle.

#### **Motor Vehicle Emissions Budget**

is that portion of the total allowable emissions defined in the submitted or approved control strategy implementation plan revision or maintenance plan for a certain date for the purpose of meeting reasonable further progress milestones or demonstrating attainment or maintenance of the NAAQS, for any criteria pollutant or its precursors, allocated to highway and transit vehicle use and emissions.

#### National Ambient Air Quality Standards (NAAQS)

Federal standards that set allowable concentrations and exposure limits for various pollutants. The EPA develops the standards in response to a requirement of the CAA.

#### National Environmental Policy Act (NEPA)

The National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.). It is the major legislation that requires federal actions to address potential environmental impacts.

#### Nitrogen Oxides (NOx)

A group of highly reactive gases that contain nitrogen and oxygen in varying amounts. Many of the nitrogen oxides are colorless and odorless. NOx is formed when the oxygen and nitrogen in the air react with each other during combustion. The primary sources of nitrogen oxides are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuels.

#### Nonattainment area

A geographic region of the United States that the EPA has designated as not meeting the NAAQS.

#### **Oxygenated gasoline**

Gasoline enriched with oxygen bearing liquids to reduce CO production by permitting more complete combustion.

#### Ozone (O3)

Ozone is a colorless gas with a sweet odor. Ozone is not a direct emission from transportation sources. It is a secondary pollutant formed when HC and NOx combine in the presence of sunlight. Ozone is associated with smog or haze conditions. Although the ozone in the upper atmosphere protects us from harmful ultraviolet rays, ground-level ozone produces an unhealthy environment in which to live. Ozone is created by human and natural sources.

#### Particulate Matter (PM), (PM-10), (PM-2.5)

Any material that exists as solid or liquid in the atmosphere. Particulate matter may be in the form of fly ash, soot, dust, fog, fumes, etc. Small particulate matter is too small to be filtered by the nose and lungs. PM-10, is particulate matter that is less than 10 microns in size. PM-2.5 is particulate matter that is less than 2.5 microns in size. A micron is one millionth of a meter.

#### **Parts per million (ppm)**

A measure of air pollutant concentrations.

#### **Public participation**

The active and meaningful involvement of the public in the development of transportation plans and programs.

#### **Reformulated gasoline (RFG)**

Gasoline specifically developed to reduce undesirable combustion products.

#### **State Implementation Plan (SIP)**

A plan mandated by the CAA and developed by the State that contains procedures to monitor, control, maintain, and enforce compliance with the NAAQS.

#### **Stationary source**

Relatively large, fixed sources of emissions (i.e. chemical process industries, petroleum refining and petrochemical operations, or wood processing).

#### Telecommuting

The substitution, either partially or completely, or transportation to a conventional office through the use of computer and telecommunications technologies (e.g., telephones, personal computers, modems, facsimile machines, electronic mail).

#### Transit

Generally refers to passenger service provided to the general public along established routes with fixed or variable schedules at published fares. Related terms include: public transit, mass transit, public transportation, urban transit and paratransit.

#### **Transportation Control Measures (TCMs)**

Any measure that is specifically identified and committed to in the applicable implementation plan that is either one of the types listed in section 108 of the CAA, or any other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Notwithstanding the first sentence of this definition, vehicle technology-based, fuel-based, and maintenance-based measures which control the emissions from vehicles under fixed traffic conditions are not TCMs for the purposes of transportation conformity.

#### **Transportation Improvement Program (TIP)**

Also known as a transportation program, a TIP is a program of transportation projects drawn from, or consistent with, the transportation plan and developed pursuant to Title 23, U.S.C. (United States Code) and the Federal Transit Act. This document is prepared by metropolitan planning organizations listing projects to be funded with FHWA/FTA funds for the next one- to three-year period.

#### **Transportation plan**

This is a long-range plan that identifies facilities that should function as an integrated transportation system, and developed pursuant to Title 23, U.S.C. (United States Code) and the Federal Transit Act. It gives emphasis to those facilities that serve important national and regional transportation functions, and includes a financial plan that demonstrates how the long-range plan can be implemented.

#### **U.S. Department of Transportation (DOT)**

The principal, direct, Federal-funding agency for transportation facilities and programs. Includes the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Federal Railroad Administration (FRA), and others.

#### Vehicle Miles Traveled (VMT)

The sum of distances traveled by all motor vehicles in a specified region.

#### Volatile Organic Compounds (VOCs)

VOCs come from vehicle exhaust, paint thinners, solvents, and other petroleum-based products. A number of exhaust VOCs are also toxic, with the potential to cause cancer.