

Appendix 17

Pre-Analysis Consensus Template

1. Reason for the transportation conformity regional emissions analysis beginning 08/09/2012

(Check those boxes that apply and provide a brief explanation in the space provided.)

	New Metropolitan Transportation Plan (demographics, horizon year, etc.)
X	Modify existing Metropolitan Transportation Plan (interim year adjustments)
X	New or amended Transportation Improvement Program
	State Implementation Plan (SIP) Requirement
	Newly designated nonattainment
	Other

Explanation: *(please include important dates in your explanation, such as date of needed conformity approval, potential lapse date, etc.)*

290/288 Conformity' Major Project Highlights

2017/2018 Analysis Years

- US 290 Interim Project (Additional main lanes and reversible managed lanes, IH 610 to W of Bauer Rd) – Advance/New to RTP
- SH 288 Interim Project (Reversible managed lanes, S of US 59 to SH 6) – New to RTP
- SH 288 @ TMC (NB Direct Connector) – New to RTP
- IH 610 @ Cambridge (Extend Cambridge to IH 610 EB frontage Road w/ Bell Connector) – New to RTP
- FM 521 Widening (BW 8 to FM 2234) – Restore to RTP
- FM 2234 Widening (Ft. Bend Pkwy to RM 521) - Advance

- FM 521 @ FM 2234 (Grade Separation and Elevated Intersection) – Restore to RTP

2025 Analysis Year

- US 290 Widening (W of Bauer Rd to FM 2920) - Advance

2035 Analysis Year

- US 290 Ultimate (Convert managed lanes to free lanes, IH 610 to W of Bauer) – Delay/New to RTP
- SH 288 Ultimate Managed Lanes (Widen to 4 Bi-directional Managed Lanes, US 59 to SH 99) – Delay
- SH 288 Widening (IH 610 to BW 8) – Restore to RTP
- SH 288 @ IH 610 Interchange – Delay
- SH 288 @ BW 8 Interchange – Delay
- Hempstead Managed Lanes (IH 610 to W of Huffmeister Rd) - Delay

NOTE (for information only) – For MPOs that are required to prepare a Regional Toll Analysis, if you are initiating a conformity process, you should coordinate within your MPO to determine IF an update to the Regional Toll Analysis may be required because of new or revised projects. No documentation as to the status of your Regional Toll Analysis is required as a part of the Conformity documentation.

2. Planning detail

- Metropolitan Transportation Plan/Transportation Improvement Program
(provide name of document and the years covered)

Plan or Programs	Years covered
2013-2016 Transportation Improvement Program	2013-2016
2035 Update Regional Transportation Plan Amendment	2011-2035

- State Implementation Plan

SIP element	Description
Title of applicable SIP(s)	Houston-Galveston-Brazoria Attainment Demonstration and Reasonable Further Progress State Implementation Plan Revisions for the 1997 Eight-Hour Ozone Standard Which MVEB were found adequate by EPA 1/25/11 (effective 2/9/11)
Motor vehicle emissions budgets (<i>list year and pollutant in tons-per-day of all applicable budgets</i>)	<u>RFP SIP</u> 2011 NOx= 135.74 tpd VOC= 75.17 tpd 2014 NOx= 95.26 tpd VOC= 61.84 tpd 2017 NOx= 67.95 tpd VOC= 53.23 tpd 2018 NOx= 60.92 tpd VOC= 51.35 tpd <u>AD SIP</u> 2018 NOx= 49.22 tpd VOC= 45.97 tpd
Transportation Control Measures (<i>list brief title of all applicable SIPs and TCM substitutions, provide the dates of each</i>)	1. 2004 HGB Mid Course Review SIP, Approved Dec. 2004 ID# 2004-42-NR 2. TCM Substitution for HGB 2006
Other	N/A

- Conformity Analysis Years (*fill in all that apply*)

Requirement	Years
Conformity base year	N/A
Attainment year	2018
Last year of maintenance plan (<i>if applicable</i>)	NA
Horizon or Intermediate analysis years	2011, 2014, 2017, 2025
Last year of transportation plan (MTP/RTP)	2035

- Demographics (*provide detail and source of data*)

Data element	Detail and source of data
Population	Use forecast approved by H-GAC board on February 2006. However, the 2009 base year households were recalculated using the 2010 Census data. H-GAC uses a house developed model for regional econometric forecast, and feeds it into the UrbanSim model for local area forecasts.
Employment	H-GAC uses an in house developed model for regional econometric forecast – supplied data as baseline, and feeds this into the UrbanSim model for local area forecasts.

Socio-economic	H-GAC uses the 2009 based year data from a calculation from 2010 census.
Other	N/A

3. Activity detail

- Land-use model used (*describe the model and/or methodology*)
- Travel Demand Model:

Model factor	Detail and methodology
Model validation year	2009
Software	Cube Voyager
Mode split/mode choice	Updated and simplified model with help from Houston METRO
VMT adjustments	H-GAC will adjust the forecasted VMT to TxDOT's HPMS for all roadway facilities and seasonal adjustment factor HPMS Factor = 0.9024855 Seasonal Factor = 1.01385
Counties covered by model	Harris, Galveston, Brazoria, Fort Bend, Montgomery, Liberty, Chambers and Waller
Other	N/A

- Projects (*provide brief description here and attachments as applicable*)

Project element	Describe
Regionally significant definition (§93.122)	See attached document
Capacity changes	Appendix 12 of conformity documentation
CMAQ projects	Appendix 12 of conformity documentation
Non-federal projects	Appendix 12 of conformity documentation
Exempt projects	Appendix 12 of conformity documentation
Other	N/A

4. Emissions detail (mobile emission factor model information)

- MOBILE6 external files for VMT aggregation

County link data parameter	Input and methodology
Summer Weekday: inputs to produce county, hourly, summer weekday virtual link VMT and speeds	TTI's TRANSVMT utility processes the TDM traffic assignment multiplying the link volumes by the HPMS and seasonal factors. Hourly factors are then used to distribute the link VMT to each hour in the day. The TTI speed model is used to estimate the operational time-of-day link speeds for each direction. Input: hourly factors, directional split factors, HPMS, seasonal factor.

Annual	NA
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VMT Distribution Parameter	Input and methodology
VMT by Hour	The hourly VMT fractions are developed as county hourly total VMT divided by county 24-hour total VMT. See Appendix 8
VMT by Speed	Generic input. Same for all counties. Inputs are set up to calculate emission factors by 14 MOBILE6 speed bin scenarios for MOBILE6 Freeway and Arterial road types. See Appendix 8.
VMT by Facility	VMT fractions by MOBILE6 road types combine the four road type emissions factors into the “all road types” emission factors. See Appendix 8.

- Development of emission factors (*insert description*):
H-GAC will use the MOBILE6.2.03 model (released September 2003) to determine emission factors for this conformity analysis. The years calculated will be 2011, 2014, 2017, 2018, 2025 and 2035. The pollutants reported will be CO, NOx and VOC for the 28 EPA’s vehicle class. The speed will be 2.5-65 mph with interpolation done by POLFACT62.

County specific MOBILE6 input files will be provided for review at the H-GAC ftp site.

- Emissions factor post-processing (*insert procedures*)
The emission factor post processes are the following:
 - I/M adjustment for May 1st start day using TTI’s RATEADJ62DK.
 - TxLED and motorcycle rule adjustment using TTI’s RATEADJV62DK
 - VMEPS adjustment by subtracting the VMEPS from the total emissions calculated for the attainment demonstration year (2018).

- Temperature and humidity correction by interpolating the correction factor used in the SIP.
- Emissions controls used for conformity credit

Emission reduction strategy and years covered	Modeling or post-processing approach
I/M programs – 2011, 2014, 2017, 2018, 2025, 2035.	Modeling with MOBILE6 and post processing adjustment for May 1 st start day using TTI’s RATEADJ62DK model.
Texas Low Emission Diesel Fuel (TxLED) - 2011, 2014, 2017, 2018, 2025, 2035.	<p>post processing adjustment using TTI’s RATEADJV62DK model.</p> <p>Adjustment factors provided by TCEQ: ftp://amdaftp.tceq.texas.gov/pub/Mobile_EI/HGB/m62/txled/</p> <p>2011: adjustment factors calculated with 2011 registration distribution</p> <p>2014, 2017, 2018, 2025 and 2035: adjustment factors calculated with 2012 registration distribution</p>
Motorcycle rule adjustment -2011, 2014, 2017, 2018, 2025, 2035	<p>post processing adjustment using TTI’s RATEADJV62DK model.</p> <p>Adjustment factors provided by TTI: ftp://amdaftp.tceq.texas.gov/pub/Mobile_EI/Statewide/m62/2006/Statewide_05-06_Final.pdf</p>
Anti-tampering Program – 2011, 2014, 2017, 2018.	Modeling with MOBILE6
RFG - 2011, 2014, 2017, 2018, 2025,	Modeling with MOBILE6. See table 6 of this document.

2035.	
VMEPS - 2018	Post processing. Just subtracting the VMEPS from the total emissions calculated for the attainment demonstration year (2018).
Temperature and humidity correction - 2018	Post processing. The humidity and temperature correction factor used for this conformity was calculated by interpolating the correction factor used in the SIP.

- MOBILE 6 inputs; *(fill out tables 1 – 7)*

Table 1: MOBILE6 Pollutants and Emission Rates

Command	Function/Description	Input Parameter Source/Value
POLLUTANTS	Defines the basic set of pollutants to report.	NOx, VOC, CO
PARTICULATES	Enables computation of particulate matter (PM) and related emissions factors.	Not Applied
PARTICULATE EF	Specifies location of files that contain the particulate emissions factors when PARTICULATES command is used.	Not Applied
PARTICLE SIZE	Allows user to specify the maximum particulate size cutoff used by MOBILE.	Not Applied
EXPRESS HC AS VOC	One of five possible commands which allow the user to specify the particular HC species (NMHC, NMOG, THC, TOG, VOC) to report in the exhaust emissions output.	Applied
NO REFUELING	Directs MOBILE6 not to calculate refueling emissions factors.	Applied

AIR TOXICS	Enables the computation of air toxic emissions factors (six explicit pollutants) and specifies which to calculate.	Not Applied
ADDITIONAL HAPS	Allows entry of emissions factors or air toxic ratios for calculation of additional user-defined air toxic pollutant emissions factors.	Not Applied
MPG ESTIMATES	Allows entry of alternate fuel economy data by vehicle class and model year.	Not Applied

Table 2: MOBILE6 External Conditions

Command	Function/Description	Input Parameter Source/Value
CALENDAR YEAR	Identifies calendar year for which emissions factors are to be calculated. (Required to run model).	2011, 2014, 2017, 2018, 2025 and 2035
EVALUATION MONTH	Provides option of calculating January 1 or July 1 emissions factors for calendar year of evaluation.	7, July representing summer ozone season
MIN/MAX TEMPERATURE	Sets minimum and maximum daily temperatures. (Required to run model if the HOURLY TEMPERATURES command is not used.)	NA. Hourly temperatures used

<p>HOURLY TEMPERATURES</p>	<p>Allows temperatures input for each hour of day (Required to run model if MIN/ MAX TEMPERATURE command is not used.)</p>	<p>County and hourly specific. Documented on Attainment Demonstration SIP adopted by TCEQ on March 10, 2010 (years 2018, 2025, 2035)</p> <p>Provided by TCEQ ftp://amdaftp.tceq.texas.gov/pub/Mobile_EI/HGB/m62/2018/</p> <p>Documented on RFP SIP adopted by TCEQ on March 10, 2010 (years 2011, 2014, 2017)</p> <p>Provided by TCEQ http://www.tceq.state.tx.us/assets/public/implementation/air/sip/hgb/hgb_sip_2009/09018SIP_APP9_ado.pdf</p>
<p>ALTITUDE</p>	<p>Specifies high- or low-altitude for modeling area.</p>	<p>EPA default. Low.</p>
<p>ABSOLUTE HUMIDITY</p>	<p>Used to specify daily average humidity (directly affects NOx emissions). MOBILE6 also converts absolute humidity to heat index which affects HC and CO emissions for the portion of the fleet that MOBILE6 determines is using air conditioning.</p>	<p>NA</p>

<u>Environmental Effects on Air Conditioning:</u>	Commands used by MOBILE6 to model the extent of vehicle air-conditioning usage.	EPA default
CLOUD COVER	Defines average percent cloud cover for given day.	EPA default. 0%
PEAK SUN	Specifies Mid-day hours with peak sun intensity.	EPA default.
SUNRISE/SUNSET	Allows user to specify time of sunrise and sunset.	<p>Region specific. Documented on Attainment Demonstration SIP adopted by TCEQ on March 10, 2010 (years 2018, 2025, 2035)</p> <p>Provided by TCEQ ftp://amdaftp.tceq.texas.gov/pub/Mobile_EI/HGB/m62/2018/</p> <p>Documented on RFP SIP adopted by TCEQ on March 10, 2010 (years 2011, 2014, 2017)</p> <p>Provided by TCEQ http://www.tceq.state.tx.us/assets/public/implementation/air/sip/hgb/hgb_sip_2009/09018SIP_APP9_ado.pdf</p>

RELATIVE HUMIDITY	Specifies use of 24 hourly relative humidity values entered by user. MOBILE6 will perform hour-specific calculations with hourly values rather than use single daily default absolute humidity value.	<p>County and hourly specific.</p> <p>Documented on Attainment Demonstration SIP adopted by TCEQ on March 10, 2010 (years 2018, 2025, 2035)</p> <p>Provided by TCEQ ftp://amdaftp.tceq.texas.gov/pub/Mobile_EI/HGB/m62/2018/</p> <p>Documented on RFP SIP adopted by TCEQ on March 10, 2010 (years 2011, 2014, 2017)</p> <p>Provided by TCEQ http://www.tceq.state.tx.us/assets/public/implementation/air/sip/hgb/hgb_sip_2009/09018SIP_APP9_ado.pdf</p>
BAROMETRIC PRES	Specifies use of user input daily average barometric pressure for use with hourly relative humidity to calculate hourly absolute humidity values.	<p>County specific.</p> <p>Documented on Attainment Demonstration SIP adopted by TCEQ on March 10, 2010 (years 2018, 2025, 2035)</p> <p>Provided by TCEQ ftp://amdaftp.tceq.texas.gov/pub/Mobile_EI/HGB/m62/2018/</p> <p>Documented on RFP SIP adopted by TCEQ on March 10, 2010 (years 2011, 2014, 2017)</p> <p>Provided by TCEQ http://www.tceq.state.tx.us/assets/public/implementation/air/sip/hgb/hgb_sip_2009/09018SIP_APP9_ado.pdf</p>

Table 3: MOBILE6 Vehicle Fleet Characteristics

Command	Function/Description	Input Parameter Source/Value
REG DIST	Allows the user to supply registration distributions by age for any of the 16 composite (combined gasoline and diesel) vehicle types.	County specific. Provided by TTI using the July 2011 TxDMV vehicle registration data for calendar year 2011. County specific. Provided by TTI using the July 2012 TxDMV vehicle registration data for all other calendar years.
DIESEL FRACTIONS	Permits user to supply locality-specific diesel fractions for 14 of the 16 composite vehicle categories by age.	Provided by TTI using the July 2011 TxDMV vehicle registration data for calendar year 2011. Provided by TTI using the July 2012 TxDMV vehicle registration data for all other calendar years.
MILE ACCUM RATE	Allows the user to supply the annual mileage accumulation rates by vehicle type and age.	NA
NGV FRACTION	Lets user specify percent of natural gas vehicles (NGV) in the fleet by type and age certified to operate on either compressed or liquefied natural gas.	NA
NGV EF	Permits the user to enter alternate NGV emissions factors for each of the 28 vehicle types, for running and start emissions.	NA

Table 4: MOBILE6 Activity

Command	Function/Description	Input Parameter Source/Value
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Command	Function/Description	Input Parameter Source/Value
VMT FRACTIONS	Used in MOBILE6 to weight the emissions of various vehicle types into average rates for groupings of vehicle classes.	NOT APPLIED. (Produces aggregate results not applicable to this analysis.)
VMT BY FACILITY	VMT fractions by MOBILE6 road type combine the four road type emissions factors into the “all road types” emissions factors.	NOT APPLIED. (Produces aggregate results not applicable to this analysis.)
VMT BY HOUR	Allows VMT fractions allocation by hour-of-day; applied in conversion of grams per hour (g/hr) to g/mi, as well as in weighting of hourly g/mi rates to obtain daily emissions factors.	Locality-specific. H-GAC will use county, analysis year, and period day type specific VMT fractions consistent with the hourly link VMT EI input data.
SPEED VMT	Allows user to allocate VMT by average speed (14 pre-selected: 2.5 and 5 through 65 at 5 mph increments) for arterials and freeways for each hour of the day.	Inputs will be set up to calculate freeway and arterial emissions factors for each of the 14 MOBILE6 speed bin average speeds (i.e., 2.5 and 5 through 65 at 5 mph increments).
AVERAGE SPEED	Allows a single average speed for combined freeways and arterials for the entire day.	NOT APPLIED.
STARTS PER DAY	Lets user specify the average number of engine starts per vehicle per day by vehicle types for weekend days and weekdays.	NOT APPLIED. (MOBILE6 weekday and weekend defaults will be assumed.)
START DIST	Allows user to allocate engine starts by hour of the day for weekend days and weekdays.	NOT APPLIED. (MOBILE6 weekday and weekend defaults will be assumed.)
SOAK DISTRIBUTION	Allows use of alternate vehicle soak duration distributions for weekend days and weekdays.	NOT APPLIED. (MOBILE6 weekday and weekend defaults will be assumed.)

Command	Function/Description	Input Parameter Source/Value
HOT SOAK ACTIVITY	Allows users to specify a hot soak duration distribution for each of 14 daily time periods for weekend days and for weekdays.	NOT APPLIED. (MOBILE6 weekday and weekend defaults will be assumed.)
DIURN SOAK ACTIVITY	Allows user set diurnal soak time distributions for each of 18 daily time periods.	NOT APPLIED. (The MOBILE6 defaults will be assumed.)
WE DA TRI LEN DI	Specifies alternate fractions of VMT that occur during trips of various durations at each hour of the average weekday.	HGB region and analysis year-specific. H-GAC will use weekday distributions..
WE EN TRI LEN DI	Specifies hourly alternate fractions of VMT for trips of various lengths for weekend days.	NA
WE VEH US	Directs MOBILE6 to use weekend activity data for calculating emissions factors.	NA

Table 5: MOBILE6 State Programs

Command	Function/Description	Input Parameter Source/Value
STAGE II REFUELING	Allows modeling of at-the-pump refueling emissions.	NOT APPLIED. Accounted for as an area source category.
ANTI-TAMP PROG	Allows user to model impacts of an ATP.	Will apply for all I/M program counties. See details in Table 8.

Various I/M Commands Available	Allows I/M effects modeling via several required/optional commands, applicability dependent on I/M scenario to be modeled.	County specific, by program design, per current SIP and prior consultation with TCEQ. See detailed descriptions in Table 9.
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Table 6: MOBILE6 Fuels

Command	Function/Description	Input Parameter Source/Value
FUEL PROGRAM	Allows one of four options: 1) Conventional Gas (CG) East Tier2 sulfur phase-in schedule (includes Texas), 2) Reformulated Gasoline (RFG), 3) Conventional Gasoline West, 4) Gasoline sulfur content after 1999.	Will apply Option 4 and associated average and maximum sulfur values (30 and 80 ppm, respectively) per MOBILE6 User's Guide, Summer RFG parameter table (EPA, August 2003).
SULFUR CONTENT	For alternate conventional gasoline sulfur content for calendar years through 1999.	NOT APPLIED.
DIESEL SULFUR	Allows use of average diesel fuel sulfur level. Required if PARTICULATES is used. No affect on HC, CO, NOx, air toxics, except if calculated as ratio to PM.	Apply EPA default (11 ppm for June 2010 and later analyses).
OXYGENATED FUELS	Allows oxygenated gasoline exhaust effects modeling for gasoline vehicle types, for non-AIR TOXICS modeling.	Will apply defaults per MOBILE6 User's Guide, Summer RFG parameter table: 100% ether market share, 2.1% by weight ether oxygen content, no RVP waiver.

FUEL RVP	Allows user to specify fuel RVP for area being modeled (required to run model).	Will apply default value per MOBILE6 User's Guide, Summer RFG parameter table: 6.8 psi.
SEASON	Identifies season for RFG calculation regardless of month modeled.	NOT APPLIED.
Air Toxics Commands	Only for modeling AIR TOXICS.	NOT APPLIED.

Table 7: MOBILE6 Alternative Emissions Regulations and Control Measures

Command	Function/Description	Input Parameter Source/Value
NO CLEAN AIR ACT	Models vehicle emissions as if the Federal Clean Air Act Amendments of 1990 had not been implemented.	NA
<u>HDDV NOx Off-Cycle Emissions Effects:</u>		
NO DEFEAT DEVICE	Turns off the effects of the HDD vehicle NOx off-cycle emissions effects (defeat device emissions).	NA
NO NOX PULL AHEAD	Turns off HDD NOx emissions reduction effects of Pull-Ahead program.	NA
NO REBUILD	Turns off HDD NOx emissions reduction effects of Rebuild program.	NA
REBUILD EFFECTS	Allows user change Rebuild program effectiveness rate.	EPA default 90%
<u>Tier 2 Emission Standards and Fuel Requirements:</u>	Allow the overriding of the default Tier 2 emissions standards and fuel requirements settings.	
NO TIER2	Disables Tier 2 requirements.	NA
T2 EXH PHASE-IN	Allows alternate Tier 2 exhaust standard phase-in schedules.	NA
T2 EVAP PHASE-IN	Allows alternate Tier 2 evaporative standard phase-in schedules.	NA
T2 CERT	Allows user to specify alternate Tier 2 50,000-mile certification standards.	NA

94+ LDG IMPLEMENTATION	Allows use of alternate 1994 and later fleet penetration fractions for LDGVs under the Tier 1, NLEV (or California LEV 1), and Tier 2 emissions standard programs.	NA
NO 2007 HDDV RULE	Disables 2007 HDV emissions standards.	NA

Table 8: MOBILE6 ATP Descriptive Inputs by Analysis Year

Counties (<i>list counties</i>): Brazoria, Fort Bend, Galveston, Harris, Montgomery		
ATP start year (YY): 84 Harris		
03 Urban (Brazoria, Fort Bend, Galveston, Montgomery)		
Analysis Year	MOBILE6 ATP (ANTI-TAMP PROG*) parameters (use separate line for each ATP)	
2011	Harris	ATP: 84 87 09 22222 222222222 2 11 096. 22112222
	Urban	ATP: 03 87 09 22222 222222222 2 11 096. 22112222
2014	Harris	ATP: 84 90 12 22222 222222222 2 11 096. 22112222
	Urban	ATP: 03 90 12 22222 222222222 2 11 096. 22112222
2017	Harris	ATP: 84 93 15 22222 222222222 2 11 096. 22112222
	Urban	ATP: 03 93 15 22222 222222222 2 11 096. 22112222
2018	Harris	ATP: 84 94 16 22222 222222222 2 11 096. 22112222
	Urban	ATP: 03 94 16 22222 222222222 2 11 096. 22112222

- Note1: The first number is the last two digits of the calendar year in which the anti-tampering program began or will begin. The calendar year input can range from 1960 to 2050. The second number is the earliest model year to be covered by the program. This input is the last two digits of the model year. The model year range can be from 1960 to 2050. The third number is the last two digits of the final model year covered by the program. The model year range can be from 1960 to 2050. Following these first three numbers, there are 14 individual vehicle ATP coverage toggle fields that contain either a value of 1 or 2. A value of 1 indicates that the particular vehicle type is NOT subject to an ATP inspection, and a 2 indicates that the particular vehicle type is subject to the inspection. The next entry must be the number '1'. The next data parameter is the ATP inspection frequency. A value must be either '1' (annual frequency) or '2' (biennial - every other year frequency). The next data parameter is the program compliance rate. This value must be from 0 percent to 100 percent, inclusive. The last eight data parameters are the toggles indicating which inspections the ATP will conduct. The value must be either 1 (no) or 2 (yes). The values correspond to component inspections in the following order:
 - Air pump system disablement.
 - Catalyst removal.
 - Fuel inlet restrictor disablement (requiring catalyst replacement).
 - Tailpipe lead deposit test (requiring catalyst replacement).
 - EGR disablement.
 - Evaporative system disablement.

Note2: in MOBILE6 ATP has no effect on 1996 and later model years (so the ATP strings for 2025 and 2035 analysis years don't matter).

Table 9: MOBILE6 I/M Descriptive Inputs for Subject Counties

Counties:	Harris and Urban Counties (Brazoria, Fort Bend, Galveston, Montgomery)		
MOBILE6 inputs:			
I/M GRACE PERIOD:	2		
I/M EXEMPTION AGE:	25		
I/M STRINGENCY:	20 (applied to only I/M program 1,2 and 3)		
I/M COMPLIANCE:	96		
I/M WAIVER RATES:	3 3		
I/M EFFECTIVENESS:	1 1 1		
I/M Program	I/M Model Years	I/M Vehicles	
1 YYYY 2050 1 TRC 2500/IDLE	1987-2050	11111 22222222 2	
2 YYYY 2050 1 TRC ASM 2525/5015 PHASE IN	1987-1995	22222 11111111 1	
3 YYYY 2050 1 TRC OBD I/M	1996-2050	22222 11111111 1	
4 YYYY 2050 1 TRC GC	1987-2050:	11111 22222222 2	
5 YYYY 2050 1 TRC GC	1987-2050	22222 11111111 1	
6 YYYY 2050 1 TRC EVAP OBD & GC	1996-2050	22222 11111111 1	

The start year field, “YYYY”, varies by county grouping and by I/M program emission type as follows:

- 1, 2, and 3 are exhaust programs for the county/start year: Harris, 1997; Urban, 2003;
- 4, 5, and 6 are evaporative programs for the county/start year: Harris, 1997; Urban, 2000.

Table 10: MOBILE6 Emissions Factor Post-Processing to be performed by County and Year

Strategy and Post-Processing Result	Analysis Year	Counties	MOBILE6 Limit
I/M Program	2011, 2014, 2017, 2018, 2025, 2035	Harris, Brazoria, Fort Bend, Galveston, Montgomery	
Texas Low Emission Diesel Fuel (TxLED)	2011, 2014, 2017, 2018, 2025, 2035	Harris, Brazoria, Fort Bend, Galveston, Montgomery, Liberty, Chambers, Waller	
Motorcycle rule	2011, 2014, 2017, 2018, 2025, 2035	Harris, Brazoria, Fort Bend, Galveston, Montgomery, Liberty, Chambers, Waller	
Anti-Tampering Program	2011, 2014, 2017, 2018	Harris, Brazoria, Fort Bend, Galveston, Montgomery	

Regionally Significant Projects Definition

Regionally Significant Roadway Projects

Non-exempt projects on regionally significant roadways will be treated as regionally significant project if they meet one or more of the following criteria:

- a) Proposed roads that will likely meet federal criteria for all-arterial or higher functional classification;
- b) Upgrade to arterial or higher functional classification;
- c) An added capacity project being constructed on new alignments as a bypass to a principal arterial/interstate;
- d) Addition of through traffic lanes of 1 mile or more on roads that are functionally classified as an arterial or higher as defined in the travel model;
- e) New interchanges on roads that are functionally classified as an arterial or higher, that represent new connections; and/or
- f) Adding or extending freeway auxiliary/weaving lanes from one interchange to a point beyond the next interchange.

Regionally significant roads are identified as: interstate/toll roads, other urban freeways or expressways, rural principal arterials, and urban minor arterial roads or streets. As traffic conditions change in the future, the MPO's in consultation with the interagency consultation group, will consider regional significant all future roadway facilities that carry an average of 11,000 vehicles per day for a 2 lane facility and 20,000 vehicles per day for a 4 lane or greater facility between logical termini.

Regionally Significant Transit Projects

Any fixed guideway transit service including light rail, commuter rail, or portions of bus rapid transit that involve exclusive right-of-way (including barrier separated HOV lanes) shall be considered regionally significant.

Other Projects

The regional significance of non-exempt projects not addressed in the above statements will be decided on a case-by-case basis through the interagency consultation process. The consultation will occur before taking the plan to TPC (either plan or TIP revision), and prior to the environmental determination.