

Appendix 4.9-A

Air Quality Modeling Documentation

Appendix

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DEP Protocol Letter



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Vanasse Hangen Brustlin, Inc.

May 27, 2009

Ref: 10111.00

Ms. Susan Lyon
Chief, Transportation Management Programs
Bureau of Waste Prevention
Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
Department of Environmental Protection
One Winter Street
Boston, Massachusetts 02108

Re: The South Coast Rail Project
Air Quality Modeling Protocol

Dear Ms. Lyon:

I am writing to request your office's concurrence on the air quality modeling approach for the South Coast Rail Project generally in Norton, Fall River, East Taunton, Easton, Freetown, New Bedford, North Easton, Raynham, and Taunton, Massachusetts.

A Draft Environmental Impact Report (DEIR) is currently being prepared. This DEIR will include a detailed air quality and traffic study. The air quality study will evaluate the regional (mesoscale) impacts of the proposed project and the local (microscale) impacts of the proposed project.

Mesoscale Analysis

The Central Transportation Planning Staff (CTPS) will be providing the mesoscale emissions for each of the alternatives being reviewed and we will extract the areas that cover, at a minimum, all roadway links that are projected to experience an increase of 10% in traffic due to the project and that experience level-of-service (LOS) designation of "D" or lower under existing and/or future conditions.

The air quality study will follow the Massachusetts DEP May 1991 guidelines for preparing mesoscale analyses. This analysis will calculate the VOC, NO_x, PM₁₀, PM_{2.5}, CO and CO₂ emissions from motor vehicle traffic in the project area. The modeling parameters will include lengths of roadway, vehicle speeds, and the average daily traffic volumes. This analysis will evaluate the change in emissions during the ozone season (summer) due to the changes in these parameters for the existing (2008) and future 2030 No-Build, and 2030 Build for each Alternative being reviewed.

101 Walnut Street
Post Office Box 9151
Watertown, Massachusetts 02471-9151
617.924.1770 ■ FAX 617.924.2286
email: info@vhb.com
www.vhb.com

Ms. Susan Lyon
May 27, 2009

Microscale Analysis

The microscale analysis will use the Environmental Protection Agency's (EPA) CAL3QHC computer model and will be based on the procedures outlined in the EPA's "Guideline for Modeling Carbon Monoxide from Roadway Intersections." The microscale analysis will analyze the year 2008 as existing, 2016 as the year of completion and 2030 as the future analysis year. The microscale analysis will include existing and future proposed roadway geometry, traffic signal timings, and peak-hour traffic volumes. This analysis will evaluate the carbon monoxide (CO) concentrations, Particulate Matter (PM₁₀) and PM_{2.5} during the CO season (winter) at sensitive receptor locations.

The air quality study will include a microscale analysis that evaluates the CO, PM₁₀ and PM_{2.5} at nearby intersections. The intersections that will be modeled will be selected based upon an evaluation of the traffic data (Level-of-Service and traffic volumes). In addition to the required highest three traffic volume and worst three level-of-service intersections, one intersection in the vicinity of each proposed station will be assessed for emissions. The emissions from the trains at these study intersections will also be included. The microscale modeling parameters that will be used are included in Exhibit 3.

The emission factors used in the mesoscale and microscale analysis will be obtained from the EPA's MOBILE6.2 emissions model (official update to MOBILE 6 as of May 19, 2004) for use in the air quality study. MOBILE6.2 will be run using input files consistent with the current State Implementation Plan emission factors, which will reflect Massachusetts' specific emission control programs and registration distribution.

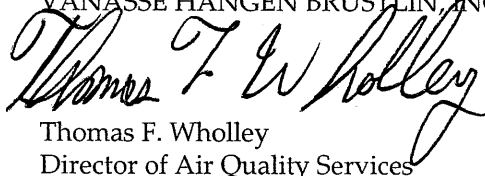
Background Values

The background concentrations for CO, PM₁₀ and PM_{2.5} that will be used for the microscale analysis are based on the most recent three years of monitoring data available (2005 through 2007)¹. The background concentrations for CO will be assumed to be 3.0 ppm for the 1-hour concentrations. A Persistence Factor of 0.70 was calculated for use in determining the 8-hour concentrations from the 1-hour concentrations. A background concentration of 30.7 ug/m³ for the PM₁₀ 24-hour concentrations, 26.7 ug/m³ for the PM_{2.5} 24-hour concentrations and 9.2 ug/m³ for the annual PM_{2.5} concentrations are proposed based on area monitoring sites.

If you have any questions regarding the air quality analysis, please feel free to contact me at (617) 924-1770. Your cooperation in this matter is greatly appreciated.

Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.



Thomas F. Wholley
Director of Air Quality Services

Enclosures



2005 through 2007 Annual Reports on Air Quality in New England, United States Environmental Protection Agency, Region 1, Office of Environmental Measurement and Evaluation, North Chelmsford, MA 01863, Ecosystems Assessment Unit, www.epa.gov/region01/lab/reportsdocuments.html

Table 1

Commands	Description
<p>Mobile 6.2 Input File * MA DEP Input File for Summer Ozone File originally prepared by Craig Woleader * Filename = MA10_SUM.inp *****Header Section ***** MOBILE6 INPUT FILE POLLUTANTS: HC CO NOX CO2 REPORT FILE: MA10_SUM.txt REPLACE</p>	<p>Input File Note Input File Note Input File Note</p>
<p>RUN DATA *****Run Section ***** > *****SUMMER*****</p>	<p>Hydrocarbons, Carbon Monoxide, Nitrogen Oxide Name of Output file</p>
<p>* Pollutant output format EXPRESS HC AS VOC:</p>	<p>Input File Note Echo to Output file</p>
<p>* Mass. specific user inputs -- require external data file REG DIST: MA_REG05.D I/M DESC FILE: 09NEWIM.D</p>	<p>Expresses Hydrocarbons as Volatile Organic Compounds</p>
<p>STAGE II REFUELING: 91 3 84. 84.</p>	<p>Input File Note Massachusetts registration file Massachusetts Enhanced I/M program inputs for 2000+ calendar year.</p>
<p>* Inputs for LEV II 94+ LDG IMP: MA_LEV2.D T2 EXH PHASE-IN: LEV2EXH.D</p>	<p>This Stage II Program started in 1991, was phased in over 3 years and was 84% efficient for LDGVs, LDGTs, and HDGVs</p>
<p>T2 EVAP PHASE-IN: LEV2EVAP.D</p>	<p>Input File Note 94+ LDG IMPLEMENTATION FOR LEV II EXHAUST - LEV II in 2004 w/ ZEV Defines phase-in schedules to be modeled for the Tier 2 exhaust standards Defines phase-in schedules to be modeled for the Tier 2 evaporative emission standards</p>

Mobile 6.2 Input File

T2 CERT: LEV2CERT.D

* Meteorological inputs
 MIN/MAX TEMP: 70.4 93.7

* Fuel Inputs
 FUEL RVP: 6.8

FUEL PROGRAM: 2 N

*****Scenario Section *****
 *****Summer Freeway *****

SCENARIO RECORD: MA Freeway 2.71 mph
 CALENDAR YEAR: 2010
 EVALUATION MONTH: 7
 AVERAGE SPEED: 2.71 Freeway 92.0 0.0 0.0 8.0

NOTE: The scenario records for freeways continue in increments of 1 MPH to a maximum of 60.7 MPH. For arterials, the scenario records begin at a minimum of 2.5 MPH and continue in increments of 1 MPH to a maximum of 65 MPH

Commands	Description
T2 CERT:	Specifies alternative Tier 2 50,000 mile certification standards and used to model effects of California's LEV II program.
MIN/MAX TEMP:	Input File Note Minimum and Maximum temperatures as set forth in the Massachusetts SIP
FUEL RVP:	Input File Note Specifies the fuel Reid Vapor Pressure (RVP) representing the average fuel volatility for the Massachusetts area
FUEL PROGRAM:	Models a reformulated gasoline (RFG) program for a northern region
SCENARIO RECORD: CALENDAR YEAR: EVALUATION MONTH: AVERAGE SPEED:	Input File Note Input File Note Labels the individual scenarios Calendar year of scenario evaluated Specifies July 1 as time period for evaluation Sets an average speed of 2.71 for the Freeway roadway classification (this is the minimum speed input for Freeways) and shows 92% of VMT on freeways and 8% of VMT on freeway ramps

Table 2

Commands	Description
<p>Mobile 6.2 I/M File > Mass. Enhanced I/M program inputs for 2009 calendar year, filename = MA_IM09.D File originally prepared by Craig Woleader, revised 7/6/04. ***** I/M Program #1 ***** >New Annual OBD Exhaust I/M program for Light Duty MY 1996-2007 vehicles <=8,500 lb GVWR * I/M Grace Period Set to 1 (i.e. exempt 1 newest model year) to Reflect New Vehicle Exemption and LEP I/M PROGRAM: 1 2009 2050 1 TRC OBD I/M I/M MODEL YEARS: 1 1996 2007 I/M VEHICLES: 1 22222 11111111 1 I/M STRINGENCY: 1 20.0 I/M COMPLIANCE: 1 96.0 I/M WAIVER RATES: 1 0.0 1.0 I/M GRACE PERIOD: 1 1</p>	<p>Echo to Output file Input File Note Echo to Output file Input File Note This I/M program started in 2009 and ends in 2050 This I/M program tests model years 1996 through 2007 This command calculates I/M benefits for light-duty gasoline vehicles (cars and light-duty trucks) as well as the class HDGV2B This command sets the stringency rate (the expected exhaust inspection failure rate for pre-1981 model year vehicles) at 20 percent. This command sets the compliance (the percentage of vehicles in the fleet that complete the I/M program and receive either a certificate of compliance or waiver) at 96 percent. This command sets the waiver rate at 0.0 percent for pre-1981 model years and 1.0 percent for 1981 and later model years This command sets the age at which vehicles first become subject to I/M testing at 1 year old.</p>
<p>***** I/M Program #2 ***** > New Annual OBD Exhaust I/M program for Light Duty and Medium duty MY 2008 and later vehicles <=14,000 lb GVWR * I/M Grace Period Set to 1 (i.e. exempt 1 newest model year) to Reflect New Vehicle Exemption and LEP I/M PROGRAM: 2 2009 2050 1 TRC OBD I/M I/M MODEL YEARS: 2 2008 2050 I/M VEHICLES: 2 11111 12222222 2</p>	<p>Echo to Output file Input File Note This I/M program started in 2009 and ends in 2050 This I/M program tests model years 2008 through 2050 This command calculates I/M benefits for gasoline buses and heavy-duty gasoline vehicle classes with the exception of the HDGV2B class</p>

Mobile 6.2 I/M File

Commands	Description
<p>I/M STRINGENCY: 2 20.0</p> <p>I/M COMPLIANCE: 2 96.0</p> <p>I/M WAIVER RATES: 2 0.0 1.0</p> <p>I/M GRACE PERIOD: 2 1</p>	<p>This command sets the stringency rate (the expected exhaust inspection failure rate for pre-1981 model year vehicles) at 20 percent.</p> <p>This command sets the compliance (the percentage of vehicles in the fleet that complete the I/M program and receive either a certificate of compliance or waiver) at 96 percent.</p> <p>This command sets the waiver rate at 0.0 percent for pre-1981 model years and 1.0 percent for 1981 and later model years.</p> <p>This command sets the age at which vehicles first become subject to I/M testing at 1 year old.</p>
<p>***** I/M Program #3 *****</p> <p>> New OBD Exhaust I/M program for Light Duty MY 1996-2007 vehicles <=8,500 lb GVWR</p> <p>* I/M Grace Period Set to 1 (i.e. exempt 1 newest model year) to Reflect New Vehicle Exemption and LEP</p> <p>I/M PROGRAM: 3 2009 2050 1 TRC EVAP OBD</p>	<p>Echo to Output file</p> <p>Input File Note</p> <p>This I/M program started in 2009 and ends in 2050, is a biennial program, and is a test only program with an OBD I/M inspection test type</p>
<p>I/M MODEL YEARS: 3 1996 2007</p> <p>I/M VEHICLES: 3 22222 1111111 1</p> <p>I/M STRINGENCY: 3 20.0</p> <p>I/M COMPLIANCE: 3 96.0</p> <p>I/M WAIVER RATES: 3 0.0 1.0</p> <p>I/M GRACE PERIOD: 3 1</p>	<p>This I/M program tests model years 1996 through 2007</p> <p>This command calculates I/M benefits for light-duty gasoline vehicles (cars and light-duty trucks) as well as the class HDGV2B</p> <p>This command sets the stringency rate (the expected exhaust inspection failure rate for pre-1981 model year vehicles) at 20 percent.</p> <p>This command sets the compliance (the percentage of vehicles in the fleet that complete the I/M program and receive either a certificate of compliance or waiver) at 96 percent.</p> <p>This command sets the waiver rate at 0.0 percent for pre-1981 model years and 1.0 percent for 1981 and later model years.</p> <p>This command sets the age at which vehicles first become subject to I/M testing at 1 year old.</p>
<p>***** I/M Program #4 *****</p> <p>> New Annual OBD Evap I/M program MY 2008 and later for all Light Duty vehicles <=14,000 lb GVWR</p>	<p>Echo to Output file</p>

Ms. Susan Lyon
 May 27, 2009

Mobile 6.2 I/M File

* I/M Grace Period Set to 1 (i.e. exempt 5 newest model year) to Reflect New Vehicle Exemption and LEP

I/M PROGRAM: 4 2009 2050 1 TRC EVAP OBD

I/M MODEL YEARS: 4 2008 2050

I/M VEHICLES: 4 22222 11111111 1

I/M STRINGENCY: 4 20.0

I/M COMPLIANCE: 4 96.0

I/M WAIVER RATES: 4 0.0 1.0

I/M GRACE PERIOD: 4 1

Commands	Input File Note	Description
I/M PROGRAM:	This I/M program started in 2009 and ends in 2050	
I/M MODEL YEARS:	This I/M program tests model years 2008 through 2050	
I/M VEHICLES:	This command calculates I/M benefits for light-duty gasoline vehicles (cars and light-duty trucks)	
I/M STRINGENCY:	This command sets the stringency rate (the expected exhaust inspection failure rate for pre-1981 model year vehicles) at 20 percent.	
I/M COMPLIANCE:	This command sets the compliance (the percentage of vehicles in the fleet that complete the I/M program and receive either a certificate of compliance or waiver) at 96 percent.	
I/M WAIVER RATES:	This command sets the waiver rate at 0.0 percent for pre-1981 model years and 1.0 percent for 1981 and later model years	
I/M GRACE PERIOD:	This command sets the age at which vehicles first become subject to I/M testing at 1 year old.	

Exhibit 3

MICROSCALE MODELING PARAMETERS

Idle Emission Factor

The Idling Emission Factor was developed using MOBILE 6.2 with the settings as indicated for the microscale free-flow analysis, except with the speed set at 2.5 miles per hour. The resulting gram per vehicle-mile factor was converted to grams per vehicle per hour by multiplying by 2.5 miles per hour.

CAL3QHC Inputs

Averaging Time	60 Minutes
Surface Roughness	175 cm (office)
Settling and Deposition velocity	0 cm/second
Windspeed	1 meter/second
Range of Wind Directions	10° increments from 0° to 360°
Stability Class	Use Class "D"
Mixing Height	1000 meters
Source Height	0.33 meters



PM 2.5 Background Calculation

Data from Annual Reports on Air Quality in New England 2005 through 2007

Year	Arithmetic Mean* (Micrograms/meter3)	24-Hour** (Micrograms/meter3)
2005	10.2	29.5
2006	8.1	24.5
2007	9.2	26.0

* Values represent annual arithmetic mean

** 24-Hour values represent 98th percentile

Annual Background Calculation

(659 Globe Street, Fall River Massachusetts)

Pollutant	Arithmetic Mean (Micrograms/meter3)	Molecular Weight	Background Concentration (Micrograms/meter3)
PM2.5	9.2	---	9.2

* Average value of 2005, 2006, and 2007

24-Hour Background Calculation

(659 Globe Street, Fall River Massachusetts)

Pollutant	24-Hour (Micrograms/meter3)	Molecular Weight	Background Concentration (Micrograms/meter3)
PM2.5	26.7	---	26.7

* Average value of 2005, 2006, and 2007

PM 10 Background Calculation

Data from Annual Reports on Air Quality in New England 2005 through 2007

Year	Arithmetic Mean* (Micrograms/meter3)	24-Hour** (Micrograms/meter3)
2005	18.6	37.0
2006	15.4	31.0
2007	13.7	24.0

* Values represent annual arithmetic mean

** 24-Hour values represent 2nd highest

Background Calculation (Harrison Avenue, Boston Massachusetts)

Pollutant	Arithmetic Mean (Micrograms/meter3)	Molecular Weight	Background Concentration (Micrograms/meter3)
PM10	15.9	---	15.9

* Average value of 2005, 2006, and 2007

24-Hour Background Calculation (Harrison Avenue, Boston Massachusetts)

Pollutant	24-Hour (Micrograms/meter3)	Molecular Weight	Background Concentration (Micrograms/meter3)
PM10	30.7	---	30.7

* Average value of 2005, 2006, and 2007



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MOBILE6.2 Input Files

- Carbon Monoxide (CO)
- Particulate Matter 10 (PM₁₀)
- Particulate Matter 2.5 (PM_{2.5})



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MOBILE6.2 Input Files

- Carbon Monoxide (CO)



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* 2008 Inventory Analysis - Typical Ozone Day for RFP
* Filename 08_RFP.INP created by Craig Woleader 8/2/08
*

***** Header Section *****

MOBILE6 INPUT FILE

*

POLLUTANTS : HC CO NOX CO2
DATABASE OUTPUT :
WITH FIELDNAMES :
AGGREGATED OUTPUT :
SPREADSHEET :
EMISSIONS TABLE : MA08_WIN.tb1 REPLACE
REPORT FILE : MA08_WIN.txt REPLACE

*

RUN DATA

***** Run Section *****

> *** Mass. 2008 with LEV II Program ***

* Pollutant output format
EXPRESS HC AS VOC :

* Mass. specific user inputs -- require external data file
REG DIST : 2005_REG.D
I/M DESC FILE : MA_IM08.D

ANTI-TAMP PROG :
00 84 50 11111 12222222 2 12 096. 22112122

STAGE II REFUELING :
91 3 84. 84.

* Set Diesel Rebuild effects to 10% as per EPA
REBUILD EFFECTS : 0.10

* Inputs for LEV II
94+ LDG IMP : MA_LEV2.D
T2 EXH PHASE-IN : LEV2EXH.D
T2 EVAP PHASE-IN : LEV2EVAP.D
T2 CERT : LEV2CERT.D

* Meteorological inputs
MIN/MAX TEMPERATURE: 22.8 38.3

* Fuel inputs
FUEL RVP : 13.5
FUEL PROGRAM : 2 N

DIESEL FRACTIONS :

0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.002	0.002	0.002
0.002	0.001	0.001	0.001	0.000	0.001	0.001	0.003	0.001	0.002
0.000	0.015	0.009	0.056	0.070					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.003
0.003	0.006	0.013	0.017	0.019					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.003
0.003	0.006	0.013	0.017	0.019					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006
0.005	0.012	0.012	0.017	0.015	0.014	0.016	0.017	0.014	0.018
0.016	0.021	0.048	0.065	0.060					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006
0.005	0.012	0.012	0.017	0.015	0.014	0.016	0.017	0.014	0.018
0.016	0.021	0.048	0.065	0.060					
0.176	0.176	0.176	0.176	0.176	0.170	0.207	0.202	0.206	0.243
0.176	0.285	0.267	0.212	0.255	0.295	0.249	0.251	0.188	0.175
0.182	0.186	0.219	0.184	0.170					
0.385	0.385	0.385	0.385	0.385	0.407	0.433	0.467	0.464	0.480
0.375	0.472	0.480	0.366	0.400	0.344	0.285	0.333	0.314	0.253
0.208	0.197	0.168	0.130	0.106					
0.674	0.674	0.674	0.674	0.674	0.634	0.664	0.719	0.717	0.744
0.715	0.565	0.810	0.803	0.644	0.654	0.605	0.525	0.389	0.356
0.376	0.108	0.136	0.154	0.148					
0.830	0.830	0.830	0.830	0.830	0.845	0.860	0.840	0.819	0.813
0.610	0.686	0.570	0.733	0.607	0.729	0.685	0.725	0.631	0.350
0.305	0.186	0.209	0.343	0.091					
0.884	0.884	0.884	0.884	0.884	0.840	0.887	0.931	0.917	0.914
0.923	0.901	0.908	0.898	0.903	0.876	0.804	0.844	0.782	0.702
0.679	0.554	0.529	0.568	0.628					
0.977	0.977	0.977	0.977	0.977	0.972	0.953	0.993	0.992	0.992
0.990	0.981	0.976	0.975	0.959	0.982	0.965	0.963	0.945	0.902
0.875	0.857	0.791	0.796	0.846					
0.972	0.972	0.972	0.972	0.972	0.955	0.984	0.995	0.992	0.991
0.995	0.993	0.993	0.995	0.992	0.986	0.995	0.981	0.993	0.971
0.982	0.977	0.993	0.987	0.986					
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000					
0.786	0.786	0.786	0.786	0.786	0.917	0.884	0.925	0.968	0.961
0.972	0.985	0.971	0.941	0.905	0.965	0.940	0.907	0.964	0.609
0.880	1.000	0.778	0.500	1.000					

***** Scenario Section PM 2.5 *****

***** Freeway Scenarios *****

SCENARIO RECORD : MA Freeway 2.71 mph (= minimum allowed freeway speed)

CALENDAR YEAR : 2008
EVALUATION MONTH : 1
AVERAGE SPEED : 2.71 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 3 mph
CALENDAR YEAR : 2008
EVALUATION MONTH : 1
AVERAGE SPEED : 3 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 4 mph
CALENDAR YEAR : 2008
EVALUATION MONTH : 1
AVERAGE SPEED : 4 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Freeway speed 65 mph
CALENDAR YEAR : 2008
EVALUATION MONTH : 1
AVERAGE SPEED : 60.7 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** Arterial Scenarios *****

SCENARIO RECORD : MA Arterial 2.5 mph (= minimum allowed arterial speed)
CALENDAR YEAR : 2008
EVALUATION MONTH : 1
AVERAGE SPEED : 2.5 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV

PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 3 mph
CALENDAR YEAR : 2008
EVALUATION MONTH : 1
AVERAGE SPEED : 3 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 4 mph
CALENDAR YEAR : 2008
EVALUATION MONTH : 1
AVERAGE SPEED : 4 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Arterial speed 65 mph
CALENDAR YEAR : 2008
EVALUATION MONTH : 1
AVERAGE SPEED : 65 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** End of This Run *****

END OF RUN

* Massachusetts DEP - MA 2016 WINTER
* Filename MA16_WIN.INP
* revised 8/24/07 with new temperatures and IM program inputs
* revised 4/25/08 to remove 15 year vehicle age exemption from IM program file per Don Cooke
*

***** Header Section *****

MOBILE6 INPUT FILE

*

POLLUTANTS : HC CO NOX CO2
DATABASE OUTPUT :
WITH FIELDNAMES :
AGGREGATED OUTPUT :
SPREADSHEET :
EMISSIONS TABLE : MA16_WIN.tb1 REPLACE
REPORT FILE : MA16_WIN.txt REPLACE
*

RUN DATA

***** Run Section *****

> *** Mass. 2016 with LEV II Program ***

* Pollutant output format
EXPRESS HC AS VOC :

* Mass. specific user inputs -- require external data file
REG DIST : 2005_REG.D
I/M DESC FILE : 09NEWIM.D

STAGE II REFUELING :
91 3 84. 84.

* Set Diesel Rebuild effects to 10% as per EPA
REBUILD EFFECTS : 0.10

* Inputs for LEV II
94+ LDG IMP : MA_LEV2.D
T2 EXH PHASE-IN : LEV2EXH.D
T2 EVAP PHASE-IN : LEV2EVAP.D
T2 CERT : LEV2CERT.D

* Meteorological inputs
MIN/MAX TEMP : 22.8 38.3

* Fuel inputs
FUEL RVP : 13.5
FUEL PROGRAM : 2 N

* 2005 Diesel Sales fractions adjusted for Calendar year 2016
DIESEL FRACTIONS :

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.003	0.003	0.002	0.002	0.002	0.002	0.001
0.001	0.001	0.000	0.001	0.001					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.001
0.001	0.001	0.001	0.001	0.001					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.001
0.001	0.001	0.001	0.001	0.001					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006	0.005	0.012
0.012	0.017	0.015	0.014	0.016					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006	0.005	0.012
0.012	0.017	0.015	0.014	0.016					
0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176
0.176	0.176	0.176	0.170	0.207	0.202	0.206	0.243	0.176	0.285
0.267	0.212	0.255	0.295	0.249					
0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385
0.385	0.385	0.385	0.407	0.433	0.467	0.464	0.480	0.375	0.472
0.480	0.366	0.400	0.344	0.285					
0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674
0.674	0.674	0.674	0.634	0.664	0.719	0.717	0.744	0.715	0.565
0.810	0.803	0.644	0.654	0.605					
0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830
0.830	0.830	0.830	0.845	0.860	0.840	0.819	0.813	0.610	0.686
0.570	0.733	0.607	0.729	0.685					
0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884
0.884	0.884	0.884	0.840	0.887	0.931	0.917	0.914	0.923	0.901
0.908	0.898	0.903	0.876	0.804					
0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977
0.977	0.977	0.977	0.972	0.953	0.993	0.992	0.992	0.990	0.981
0.976	0.975	0.959	0.982	0.965					
0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972
0.972	0.972	0.972	0.955	0.984	0.995	0.992	0.991	0.995	0.993
0.993	0.995	0.992	0.986	0.995					
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000					
0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786
0.786	0.786	0.786	0.917	0.884	0.925	0.968	0.961	0.972	0.985
0.971	0.941	0.905	0.965	0.940					

***** Scenario Section *****

***** Freeway Scenarios *****

SCENARIO RECORD : MA Freeway 2.71 mph (= minimum allowed freeway speed)

CALENDAR YEAR : 2016
EVALUATION MONTH : 1
AVERAGE SPEED : 2.71 Freeway 92.0 0.0 0.0 8.0

SCENARIO RECORD : MA Freeway speed 3 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 1
AVERAGE SPEED : 3 Freeway 92.0 0.0 0.0 8.0

SCENARIO RECORD : MA Freeway speed 4 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 1
AVERAGE SPEED : 4 Freeway 92.0 0.0 0.0 8.0

*****THROUGH*****

SCENARIO RECORD : MA Freeway speed 65 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 1
AVERAGE SPEED : 60.7 Freeway 92.0 0.0 0.0 8.0

***** Arterial Scenarios *****

SCENARIO RECORD : MA Arterial 2.5 mph (= minimum allowed arterial speed)
CALENDAR YEAR : 2016
EVALUATION MONTH : 1
AVERAGE SPEED : 2.5 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : MA Arterial speed 3 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 1
AVERAGE SPEED : 3 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : MA Arterial speed 4 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 1
AVERAGE SPEED : 4 Arterial 0.0 100.0 0.0 0.0

*****THROUGH*****

SCENARIO RECORD : MA Arterial speed 65 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 1
AVERAGE SPEED : 65 Arterial 0.0 100.0 0.0 0.0

***** End of This Run *****

END OF RUN

MA30_WIN.INP

* Massachusetts DEP - MA 2030 WINTER
* Filename MA30_WIN.INP
* revised 8/24/07 with new temperatures and IM inputs
* revised 12/7/07 for PM2.5/10 and CO2 for Anne McGahan
* revised 4/25/08 to remove 15 year vehicle age exemption from IM program file per Don Cooke
*

***** Header Section *****

MOBILE6 INPUT FILE

*

PARTICULATES :
POLLUTANTS : HC CO NOX CO2
DATABASE OUTPUT :
WITH FIELDNAMES :
AGGREGATED OUTPUT :
SPREADSHEET :
EMISSIONS TABLE : MA30_WIN.tb1 REPLACE
REPORT FILE : MA30_WIN.txt REPLACE

*

RUN DATA

***** Run Section *****

> *** Mass. 2030 with LEV II Program ***

* Pollutant output format
EXPRESS HC AS VOC :

* Mass. specific user inputs -- require external data file
REG DIST : 2005_REG.D
I/M DESC FILE : 09NEWIM.D

STAGE II REFUELING :
91 3 84. 84.

* Set Diesel Rebuild effects to 10% as per EPA
REBUILD EFFECTS : 0.10

* Inputs for LEV II
94+ LDG IMP : MA_LEV2.D
T2 EXH PHASE-IN : LEV2EXH.D
T2 EVAP PHASE-IN : LEV2EVAP.D
T2 CERT : LEV2CERT.D

* Meteorological inputs
MIN/MAX TEMP : 22.8 38.3

* Fuel inputs
FUEL RVP : 13.5

FUEL PROGRAM : 2 N

* 2005 Diesel Sales Fractions adjusted for Calendar Year 2030

DIESEL FRACTIONS :

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005					
0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176
0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176
0.176	0.176	0.176	0.176	0.176					
0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385
0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385
0.385	0.385	0.385	0.385	0.385					
0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674
0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674
0.674	0.674	0.674	0.674	0.674					
0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830
0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830
0.830	0.830	0.830	0.830	0.830					
0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884
0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884
0.884	0.884	0.884	0.884	0.884					
0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977
0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977
0.977	0.977	0.977	0.977	0.977					
0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972
0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972
0.972	0.972	0.972	0.972	0.972					
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000					
0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786
0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786
0.786	0.786	0.786	0.786	0.786					

***** Scenario Section PM 2.5 *****

***** Freeway Scenarios *****

SCENARIO RECORD : MA Freeway 2.71 mph (= minimum allowed freeway speed)
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 2.71 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 3 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 3 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 4 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 4 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

****THROUGH****

SCENARIO RECORD : MA Freeway speed 61 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 60.7 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 62 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 60.7 Freeway 92.0 0.0 0.0 8.0

PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** Arterial Scenarios *****

SCENARIO RECORD : MA Arterial 2.5 mph (= minimum allowed arterial speed)
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 2.5 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 3 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 3 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 4 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 4 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

****THROUGH****

SCENARIO RECORD : MA Arterial speed 65 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 65 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** Scenario Section PM 10 *****

***** Freeway Scenarios *****

SCENARIO RECORD : MA Freeway 2.71 mph (= minimum allowed freeway speed)
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 2.71 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 3 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 3 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 4 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 4 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

****THROUGH****

SCENARIO RECORD : MA Freeway speed 65 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 60.7 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

***** Arterial Scenarios *****

SCENARIO RECORD : MA Arterial 2.5 mph (= minimum allowed arterial speed)
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 2.5 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV

PARTICLE SIZE : 10
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 3 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 3 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 4 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 4 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

****THROUGH****

SCENARIO RECORD : MA Arterial speed 65 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 1
AVERAGE SPEED : 65 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

***** End of This Run *****
END OF RUN



Technical Report
Air Quality
Draft

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Technical Report
Air Quality
Draft

MOBILE6.2 Input Files

- Particulate Matter 10 (PM₁₀)



Technical Report
Air Quality
Draft

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* 2008 Inventory Analysis - Typical Ozone Day for RFP
* Filename 08_RFP.INP created by Craig Woleader 8/2/08
*

***** Header Section *****

MOBILE6 INPUT FILE

*

PARTICULATES :
POLLUTANTS : HC CO NOX CO2
DATABASE OUTPUT :
WITH FIELDNAMES :
AGGREGATED OUTPUT :
SPREADSHEET :
EMISSIONS TABLE : MA08_SUM.tb1 REPLACE
REPORT FILE :MA08_SUM.txt REPLACE
*

RUN DATA

***** Run Section *****

> *** Mass. 2008 with LEV II Program ***

* Pollutant output format
EXPRESS HC AS VOC :

* Mass. specific user inputs -- require external data file
REG DIST : 2005_REG.D
I/M DESC FILE : MA_IM08.D

ANTI-TAMP PROG :
00 84 50 11111 12222222 2 12 096. 22112122

STAGE II REFUELING :
91 3 84. 84.

* Set Diesel Rebuild effects to 10% as per EPA
REBUILD EFFECTS : 0.10

* Inputs for LEV II
94+ LDG IMP : MA_LEV2.D
T2 EXH PHASE-IN : LEV2EXH.D
T2 EVAP PHASE-IN : LEV2EVAP.D
T2 CERT : LEV2CERT.D

* Meteorological inputs

MIN/MAX TEMPERATURE: 70.4 93.7

* Fuel inputs

FUEL RVP : 6.8

FUEL PROGRAM : 2 N

DIESEL FRACTIONS :

0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.002	0.002	0.002
0.002	0.001	0.001	0.001	0.000	0.001	0.001	0.003	0.001	0.002
0.000	0.015	0.009	0.056	0.070					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.003
0.003	0.006	0.013	0.017	0.019					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.003
0.003	0.006	0.013	0.017	0.019					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006
0.005	0.012	0.012	0.017	0.015	0.014	0.016	0.017	0.014	0.018
0.016	0.021	0.048	0.065	0.060					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006
0.005	0.012	0.012	0.017	0.015	0.014	0.016	0.017	0.014	0.018
0.016	0.021	0.048	0.065	0.060					
0.176	0.176	0.176	0.176	0.176	0.170	0.207	0.202	0.206	0.243
0.176	0.285	0.267	0.212	0.255	0.295	0.249	0.251	0.188	0.175
0.182	0.186	0.219	0.184	0.170					
0.385	0.385	0.385	0.385	0.385	0.407	0.433	0.467	0.464	0.480
0.375	0.472	0.480	0.366	0.400	0.344	0.285	0.333	0.314	0.253
0.208	0.197	0.168	0.130	0.106					
0.674	0.674	0.674	0.674	0.674	0.634	0.664	0.719	0.717	0.744
0.715	0.565	0.810	0.803	0.644	0.654	0.605	0.525	0.389	0.356
0.376	0.108	0.136	0.154	0.148					
0.830	0.830	0.830	0.830	0.830	0.845	0.860	0.840	0.819	0.813
0.610	0.686	0.570	0.733	0.607	0.729	0.685	0.725	0.631	0.350
0.305	0.186	0.209	0.343	0.091					
0.884	0.884	0.884	0.884	0.884	0.840	0.887	0.931	0.917	0.914
0.923	0.901	0.908	0.898	0.903	0.876	0.804	0.844	0.782	0.702
0.679	0.554	0.529	0.568	0.628					
0.977	0.977	0.977	0.977	0.977	0.972	0.953	0.993	0.992	0.992
0.990	0.981	0.976	0.975	0.959	0.982	0.965	0.963	0.945	0.902
0.875	0.857	0.791	0.796	0.846					
0.972	0.972	0.972	0.972	0.972	0.955	0.984	0.995	0.992	0.991
0.995	0.993	0.993	0.995	0.992	0.986	0.995	0.981	0.993	0.971

0.982	0.977	0.993	0.987	0.986						
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000						
0.786	0.786	0.786	0.786	0.786	0.917	0.884	0.925	0.968	0.961	
0.972	0.985	0.971	0.941	0.905	0.965	0.940	0.907	0.964	0.609	
0.880	1.000	0.778	0.500	1.000						

***** Scenario Section PM 2.5 *****

***** Freeway Scenarios *****

SCENARIO RECORD : MA Freeway 2.71 mph (= minimum allowed freeway speed)

CALENDAR YEAR : 2008
 EVALUATION MONTH : 7
 AVERAGE SPEED : 2.71 Freeway 92.0 0.0 0.0 8.0
 PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
 PMDDR2.CSV
 PARTICLE SIZE : 2.5
 DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 3 mph
 CALENDAR YEAR : 2008
 EVALUATION MONTH : 7
 AVERAGE SPEED : 3 Freeway 92.0 0.0 0.0 8.0
 PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
 PMDDR2.CSV
 PARTICLE SIZE : 2.5
 DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 4 mph
 CALENDAR YEAR : 2008
 EVALUATION MONTH : 7
 AVERAGE SPEED : 4 Freeway 92.0 0.0 0.0 8.0
 PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
 PMDDR2.CSV
 PARTICLE SIZE : 2.5
 DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Freeway speed 65 mph
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
AVERAGE SPEED : 60.7 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** Arterial Scenarios *****

SCENARIO RECORD : MA Arterial 2.5 mph (= minimum allowed arterial speed)
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
AVERAGE SPEED : 2.5 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 3 mph
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
AVERAGE SPEED : 3 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 4 mph
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
AVERAGE SPEED : 4 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Arterial speed 65 mph

CALENDAR YEAR : 2008

EVALUATION MONTH : 7

AVERAGE SPEED : 65 Arterial 0.0 100.0 0.0 0.0

PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV

PARTICLE SIZE : 2.5

DIESEL SULFUR : 15

***** End of This Run *****

END OF RUN

* Massachusetts DEP - MA 2016
* Filename MA16_SUM.INP
* revised 8/24/07 with new temperatures and IM inputs
* revised 12/7/07 to add PM2.5/10 and CO2 for Anne McGahan
* revised 4/25/08 to remove 15 year vehicle age exemption from IM program file per Don Cooke
*

***** Header Section *****

MOBILE6 INPUT FILE

*

PARTICULATES :
POLLUTANTS : HC CO NOX CO2
DATABASE OUTPUT :
WITH FIELDNAMES :
AGGREGATED OUTPUT :
SPREADSHEET :
EMISSIONS TABLE : MA16_SUM.tb1 REPLACE
REPORT FILE : MA16_SUM.txt REPLACE

*

RUN DATA

***** Run Section *****

> *** Mass. 2016 with LEV II Program ***

* Pollutant output format

EXPRESS HC AS VOC :

* Mass. specific user inputs -- require external data file

REG DIST : 2005_REG.D

I/M DESC FILE : 09NEWIM.D

STAGE II REFUELING :

91 3 84. 84.

* Set Diesel Rebuild effects to 10% as per EPA

REBUILD EFFECTS : 0.10

* Inputs for LEV II

94+ LDG IMP : MA_LEV2.D

T2 EXH PHASE-IN : LEV2EXH.D

T2 EVAP PHASE-IN : LEV2EVAP.D

T2 CERT : LEV2CERT.D

* Meteorological inputs

MIN/MAX TEMP : 70.4 93.7

* Fuel inputs

FUEL RVP : 6.8

FUEL PROGRAM : 2 N

* 2005 Diesel Sales Fractions adjusted for Calendar Year 2016

DIESEL FRACTIONS :

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.003	0.003	0.002	0.002	0.002	0.002	0.001
0.001	0.001	0.000	0.001	0.001					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.001
0.001	0.001	0.001	0.001	0.001					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.001
0.001	0.001	0.001	0.001	0.001					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006	0.005	0.012
0.012	0.017	0.015	0.014	0.016					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006	0.005	0.012
0.012	0.017	0.015	0.014	0.016					
0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176
0.176	0.176	0.176	0.170	0.207	0.202	0.206	0.243	0.176	0.285
0.267	0.212	0.255	0.295	0.249					
0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385
0.385	0.385	0.385	0.407	0.433	0.467	0.464	0.480	0.375	0.472
0.480	0.366	0.400	0.344	0.285					
0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674
0.674	0.674	0.674	0.634	0.664	0.719	0.717	0.744	0.715	0.565
0.810	0.803	0.644	0.654	0.605					
0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830
0.830	0.830	0.830	0.845	0.860	0.840	0.819	0.813	0.610	0.686
0.570	0.733	0.607	0.729	0.685					
0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884
0.884	0.884	0.884	0.840	0.887	0.931	0.917	0.914	0.923	0.901
0.908	0.898	0.903	0.876	0.804					
0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977
0.977	0.977	0.977	0.972	0.953	0.993	0.992	0.992	0.990	0.981
0.976	0.975	0.959	0.982	0.965					
0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972
0.972	0.972	0.972	0.955	0.984	0.995	0.992	0.991	0.995	0.993
0.993	0.995	0.992	0.986	0.995					
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000					
0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786
0.786	0.786	0.786	0.917	0.884	0.925	0.968	0.961	0.972	0.985
0.971	0.941	0.905	0.965	0.940					

***** Freeway Scenarios *****

SCENARIO RECORD : MA Freeway 2.71 mph (= minimum allowed freeway speed)

CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 2.71 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 3 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 3 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 4 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 4 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Freeway speed 65 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 60.7 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** Arterial Scenarios *****

SCENARIO RECORD : MA Arterial 2.5 mph (= minimum allowed arterial speed)
CALENDAR YEAR : 2016
EVALUATION MONTH : 7

AVERAGE SPEED : 2.5 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 3 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 3 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 4 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 4 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Arterial speed 65 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 65 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** End of This Run *****

END OF RUN

MA30_SUM.INP

* Massachusetts DEP - MA 2030
* Filename MA30_SUM.INP
* revised 8/24/07 with new temperatures and IM inputs
* revised 12/7/07 to add PM2.5/10 and CO2 for Anne McGahan
* revised 4/25/08 to remove 15 year vehicle age exemption from IM program file per Don Cooke
*

***** Header Section *****

MOBILE6 INPUT FILE

*

PARTICULATES :
POLLUTANTS : HC CO NOX CO2
DATABASE OUTPUT :
WITH FIELDNAMES :
AGGREGATED OUTPUT :
SPREADSHEET :
EMISSIONS TABLE : MA30_SUM.tb1 REPLACE
REPORT FILE : MA30_SUM.txt REPLACE
*

RUN DATA

***** Run Section *****

> *** Mass. 2030 with LEV II Program ***

* Pollutant output format
EXPRESS HC AS VOC :

* Mass. specific user inputs -- require external data file
REG DIST : 2005_REG.D
I/M DESC FILE : 09NEWIM.D

STAGE II REFUELING :
91 3 84. 84.

* Set Diesel Rebuild effects to 10% as per EPA
REBUILD EFFECTS : 0.10

* Inputs for LEV II
94+ LDG IMP : MA_LEV2.D
T2 EXH PHASE-IN : LEV2EXH.D
T2 EVAP PHASE-IN : LEV2EVAP.D
T2 CERT : LEV2CERT.D

* Meteorological inputs
MIN/MAX TEMP : 70.4 93.7

* Fuel inputs
FUEL RVP : 6.8

FUEL PROGRAM : 2 N

* 2005 Diesel Sales Fractions adjusted for Calendar Year 2030

DIESEL FRACTIONS :

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005					
0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176
0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176
0.176	0.176	0.176	0.176	0.176					
0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385
0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385
0.385	0.385	0.385	0.385	0.385					
0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674
0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674
0.674	0.674	0.674	0.674	0.674					
0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830
0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830
0.830	0.830	0.830	0.830	0.830					
0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884
0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884
0.884	0.884	0.884	0.884	0.884					
0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977
0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977
0.977	0.977	0.977	0.977	0.977					
0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972
0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972
0.972	0.972	0.972	0.972	0.972					
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000					
0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786
0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786
0.786	0.786	0.786	0.786	0.786					

***** Scenario Section PM 2.5 *****

***** Freeway Scenarios *****

SCENARIO RECORD : MA Freeway 2.71 mph (= minimum allowed freeway speed)

CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 2.71 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 3 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 3 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 4 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 4 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Freeway speed 65 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 60.7 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** Arterial Scenarios *****

SCENARIO RECORD : MA Arterial 2.5 mph (= minimum allowed arterial speed)
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 2.5 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 3 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 3 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 4 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 4 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Arterial speed 65 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 65 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** Scenario Section PM 10 *****

***** Freeway Scenarios *****

SCENARIO RECORD : MA Freeway 2.71 mph (= minimum allowed freeway speed)

CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 2.71 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 3 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 3 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 4 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 4 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Freeway speed 65 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 60.7 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

***** Arterial Scenarios *****

SCENARIO RECORD : MA Arterial 2.5 mph (= minimum allowed arterial speed)
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 2.5 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV

PARTICLE SIZE : 10
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 3 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 3 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 4 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 4 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Arterial speed 65 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 65 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

***** End of This Run *****
END OF RUN



Technical Report
Air Quality
Draft

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Technical Report
Air Quality
Draft

MOBILE6.2 Input Files

- Particulate Matter 2.5 (PM_{2.5})



Technical Report
Air Quality
Draft

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* 2008 Inventory Analysis - Typical Ozone Day for RFP
* Filename 08_RFP.INP created by Craig Woleader 8/2/08
*

***** Header Section *****

MOBILE6 INPUT FILE

*

PARTICULATES :
POLLUTANTS : HC CO NOX CO2
DATABASE OUTPUT :
WITH FIELDNAMES :
AGGREGATED OUTPUT :
SPREADSHEET :
EMISSIONS TABLE : MA08_SUM.tb1 REPLACE
REPORT FILE :MA08_SUM.txt REPLACE
*

RUN DATA

***** Run Section *****

> *** Mass. 2008 with LEV II Program ***

* Pollutant output format
EXPRESS HC AS VOC :

* Mass. specific user inputs -- require external data file
REG DIST : 2005_REG.D
I/M DESC FILE : MA_IM08.D

ANTI-TAMP PROG :
00 84 50 11111 12222222 2 12 096. 22112122

STAGE II REFUELING :
91 3 84. 84.

* Set Diesel Rebuild effects to 10% as per EPA
REBUILD EFFECTS : 0.10

* Inputs for LEV II
94+ LDG IMP : MA_LEV2.D
T2 EXH PHASE-IN : LEV2EXH.D
T2 EVAP PHASE-IN : LEV2EVAP.D
T2 CERT : LEV2CERT.D

* Meteorological inputs

MIN/MAX TEMPERATURE: 70.4 93.7

* Fuel inputs

FUEL RVP : 6.8

FUEL PROGRAM : 2 N

DIESEL FRACTIONS :

0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.002	0.002	0.002
0.002	0.001	0.001	0.001	0.000	0.001	0.001	0.003	0.001	0.002
0.000	0.015	0.009	0.056	0.070					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.003
0.003	0.006	0.013	0.017	0.019					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.003
0.003	0.006	0.013	0.017	0.019					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006
0.005	0.012	0.012	0.017	0.015	0.014	0.016	0.017	0.014	0.018
0.016	0.021	0.048	0.065	0.060					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006
0.005	0.012	0.012	0.017	0.015	0.014	0.016	0.017	0.014	0.018
0.016	0.021	0.048	0.065	0.060					
0.176	0.176	0.176	0.176	0.176	0.170	0.207	0.202	0.206	0.243
0.176	0.285	0.267	0.212	0.255	0.295	0.249	0.251	0.188	0.175
0.182	0.186	0.219	0.184	0.170					
0.385	0.385	0.385	0.385	0.385	0.407	0.433	0.467	0.464	0.480
0.375	0.472	0.480	0.366	0.400	0.344	0.285	0.333	0.314	0.253
0.208	0.197	0.168	0.130	0.106					
0.674	0.674	0.674	0.674	0.674	0.634	0.664	0.719	0.717	0.744
0.715	0.565	0.810	0.803	0.644	0.654	0.605	0.525	0.389	0.356
0.376	0.108	0.136	0.154	0.148					
0.830	0.830	0.830	0.830	0.830	0.845	0.860	0.840	0.819	0.813
0.610	0.686	0.570	0.733	0.607	0.729	0.685	0.725	0.631	0.350
0.305	0.186	0.209	0.343	0.091					
0.884	0.884	0.884	0.884	0.884	0.840	0.887	0.931	0.917	0.914
0.923	0.901	0.908	0.898	0.903	0.876	0.804	0.844	0.782	0.702
0.679	0.554	0.529	0.568	0.628					
0.977	0.977	0.977	0.977	0.977	0.972	0.953	0.993	0.992	0.992
0.990	0.981	0.976	0.975	0.959	0.982	0.965	0.963	0.945	0.902
0.875	0.857	0.791	0.796	0.846					
0.972	0.972	0.972	0.972	0.972	0.955	0.984	0.995	0.992	0.991
0.995	0.993	0.993	0.995	0.992	0.986	0.995	0.981	0.993	0.971

0.982	0.977	0.993	0.987	0.986						
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000						
0.786	0.786	0.786	0.786	0.786	0.917	0.884	0.925	0.968	0.961	
0.972	0.985	0.971	0.941	0.905	0.965	0.940	0.907	0.964	0.609	
0.880	1.000	0.778	0.500	1.000						

***** Scenario Section PM 2.5 *****

***** Freeway Scenarios *****

SCENARIO RECORD : MA Freeway 2.71 mph (= minimum allowed freeway speed)

CALENDAR YEAR : 2008
 EVALUATION MONTH : 7
 AVERAGE SPEED : 2.71 Freeway 92.0 0.0 0.0 8.0
 PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
 PMDDR2.CSV
 PARTICLE SIZE : 2.5
 DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 3 mph
 CALENDAR YEAR : 2008
 EVALUATION MONTH : 7
 AVERAGE SPEED : 3 Freeway 92.0 0.0 0.0 8.0
 PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
 PMDDR2.CSV
 PARTICLE SIZE : 2.5
 DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 4 mph
 CALENDAR YEAR : 2008
 EVALUATION MONTH : 7
 AVERAGE SPEED : 4 Freeway 92.0 0.0 0.0 8.0
 PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
 PMDDR2.CSV
 PARTICLE SIZE : 2.5
 DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Freeway speed 65 mph
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
AVERAGE SPEED : 60.7 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** Arterial Scenarios *****

SCENARIO RECORD : MA Arterial 2.5 mph (= minimum allowed arterial speed)
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
AVERAGE SPEED : 2.5 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 3 mph
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
AVERAGE SPEED : 3 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 4 mph
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
AVERAGE SPEED : 4 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Arterial speed 65 mph

CALENDAR YEAR : 2008

EVALUATION MONTH : 7

AVERAGE SPEED : 65 Arterial 0.0 100.0 0.0 0.0

PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV

PARTICLE SIZE : 2.5

DIESEL SULFUR : 15

***** End of This Run *****

END OF RUN

* Massachusetts DEP - MA 2016
* Filename MA16_SUM.INP
* revised 8/24/07 with new temperatures and IM inputs
* revised 12/7/07 to add PM2.5/10 and CO2 for Anne McGahan
* revised 4/25/08 to remove 15 year vehicle age exemption from IM program file per Don Cooke
*

***** Header Section *****

MOBILE6 INPUT FILE

*

PARTICULATES :
POLLUTANTS : HC CO NOX CO2
DATABASE OUTPUT :
WITH FIELDNAMES :
AGGREGATED OUTPUT :
SPREADSHEET :
EMISSIONS TABLE : MA16_SUM.tb1 REPLACE
REPORT FILE : MA16_SUM.txt REPLACE

*

RUN DATA

***** Run Section *****

> *** Mass. 2016 with LEV II Program ***

* Pollutant output format
EXPRESS HC AS VOC :

* Mass. specific user inputs -- require external data file
REG DIST : 2005_REG.D
I/M DESC FILE : 09NEWIM.D

STAGE II REFUELING :
91 3 84. 84.

* Set Diesel Rebuild effects to 10% as per EPA
REBUILD EFFECTS : 0.10

* Inputs for LEV II
94+ LDG IMP : MA_LEV2.D
T2 EXH PHASE-IN : LEV2EXH.D
T2 EVAP PHASE-IN : LEV2EVAP.D
T2 CERT : LEV2CERT.D

* Meteorological inputs
MIN/MAX TEMP : 70.4 93.7

* Fuel inputs
FUEL RVP : 6.8
FUEL PROGRAM : 2 N

* 2005 Diesel Sales Fractions adjusted for Calendar Year 2016

DIESEL FRACTIONS :

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.003	0.003	0.002	0.002	0.002	0.002	0.001
0.001	0.001	0.000	0.001	0.001					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.001
0.001	0.001	0.001	0.001	0.001					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.001
0.001	0.001	0.001	0.001	0.001					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006	0.005	0.012
0.012	0.017	0.015	0.014	0.016					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.006	0.005	0.012
0.012	0.017	0.015	0.014	0.016					
0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176
0.176	0.176	0.176	0.170	0.207	0.202	0.206	0.243	0.176	0.285
0.267	0.212	0.255	0.295	0.249					
0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385
0.385	0.385	0.385	0.407	0.433	0.467	0.464	0.480	0.375	0.472
0.480	0.366	0.400	0.344	0.285					
0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674
0.674	0.674	0.674	0.634	0.664	0.719	0.717	0.744	0.715	0.565
0.810	0.803	0.644	0.654	0.605					
0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830
0.830	0.830	0.830	0.845	0.860	0.840	0.819	0.813	0.610	0.686
0.570	0.733	0.607	0.729	0.685					
0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884
0.884	0.884	0.884	0.840	0.887	0.931	0.917	0.914	0.923	0.901
0.908	0.898	0.903	0.876	0.804					
0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977
0.977	0.977	0.977	0.972	0.953	0.993	0.992	0.992	0.990	0.981
0.976	0.975	0.959	0.982	0.965					
0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972
0.972	0.972	0.972	0.955	0.984	0.995	0.992	0.991	0.995	0.993
0.993	0.995	0.992	0.986	0.995					
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000					
0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786
0.786	0.786	0.786	0.917	0.884	0.925	0.968	0.961	0.972	0.985
0.971	0.941	0.905	0.965	0.940					

***** Scenario Section PM 2.5 *****

***** Freeway Scenarios *****

SCENARIO RECORD : MA Freeway 2.71 mph (= minimum allowed freeway speed)

CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 2.71 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 3 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 3 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 4 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 4 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Freeway speed 65 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 60.7 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** Arterial Scenarios *****

SCENARIO RECORD : MA Arterial 2.5 mph (= minimum allowed arterial speed)
CALENDAR YEAR : 2016
EVALUATION MONTH : 7

AVERAGE SPEED : 2.5 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 3 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 3 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 4 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 4 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Arterial speed 65 mph
CALENDAR YEAR : 2016
EVALUATION MONTH : 7
AVERAGE SPEED : 65 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** End of This Run *****

END OF RUN

MA30_SUM.INP

* Massachusetts DEP - MA 2030
* Filename MA30_SUM.INP
* revised 8/24/07 with new temperatures and IM inputs
* revised 12/7/07 to add PM2.5/10 and CO2 for Anne McGahan
* revised 4/25/08 to remove 15 year vehicle age exemption from IM program file per Don Cooke
*

***** Header Section *****

MOBILE6 INPUT FILE

*

PARTICULATES :
POLLUTANTS : HC CO NOX CO2
DATABASE OUTPUT :
WITH FIELDNAMES :
AGGREGATED OUTPUT :
SPREADSHEET :
EMISSIONS TABLE : MA30_SUM.tb1 REPLACE
REPORT FILE : MA30_SUM.txt REPLACE
*

RUN DATA

***** Run Section *****

> *** Mass. 2030 with LEV II Program ***

* Pollutant output format
EXPRESS HC AS VOC :

* Mass. specific user inputs -- require external data file
REG DIST : 2005_REG.D
I/M DESC FILE : 09NEWIM.D

STAGE II REFUELING :
91 3 84. 84.

* Set Diesel Rebuild effects to 10% as per EPA
REBUILD EFFECTS : 0.10

* Inputs for LEV II
94+ LDG IMP : MA_LEV2.D
T2 EXH PHASE-IN : LEV2EXH.D
T2 EVAP PHASE-IN : LEV2EVAP.D
T2 CERT : LEV2CERT.D

* Meteorological inputs
MIN/MAX TEMP : 70.4 93.7

* Fuel inputs
FUEL RVP : 6.8

FUEL PROGRAM : 2 N

* 2005 Diesel Sales Fractions adjusted for Calendar Year 2030

DIESEL FRACTIONS :

0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001					
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
0.001	0.001	0.001	0.001	0.001					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005					
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.005	0.005	0.005	0.005	0.005					
0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176
0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176
0.176	0.176	0.176	0.176	0.176					
0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385
0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385	0.385
0.385	0.385	0.385	0.385	0.385					
0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674
0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674	0.674
0.674	0.674	0.674	0.674	0.674					
0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830
0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830	0.830
0.830	0.830	0.830	0.830	0.830					
0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884
0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884
0.884	0.884	0.884	0.884	0.884					
0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977
0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.977
0.977	0.977	0.977	0.977	0.977					
0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972
0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972
0.972	0.972	0.972	0.972	0.972					
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1.000	1.000	1.000	1.000	1.000					
0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786
0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786	0.786
0.786	0.786	0.786	0.786	0.786					

***** Scenario Section PM 2.5 *****

***** Freeway Scenarios *****

SCENARIO RECORD : MA Freeway 2.71 mph (= minimum allowed freeway speed)

CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 2.71 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 3 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 3 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 4 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 4 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Freeway speed 65 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 60.7 Freeway 92.0 0.0 0.0 8.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** Arterial Scenarios *****

SCENARIO RECORD : MA Arterial 2.5 mph (= minimum allowed arterial speed)
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 2.5 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 3 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 3 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 4 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 4 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Arterial speed 65 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 65 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 2.5
DIESEL SULFUR : 15

***** Scenario Section PM 10 *****

***** Freeway Scenarios *****

SCENARIO RECORD : MA Freeway 2.71 mph (= minimum allowed freeway speed)

CALENDAR YEAR : 2030

EVALUATION MONTH : 7

AVERAGE SPEED : 2.71 Freeway 92.0 0.0 0.0 8.0

PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV

PARTICLE SIZE : 10

DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 3 mph

CALENDAR YEAR : 2030

EVALUATION MONTH : 7

AVERAGE SPEED : 3 Freeway 92.0 0.0 0.0 8.0

PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV

PARTICLE SIZE : 10

DIESEL SULFUR : 15

SCENARIO RECORD : MA Freeway speed 4 mph

CALENDAR YEAR : 2030

EVALUATION MONTH : 7

AVERAGE SPEED : 4 Freeway 92.0 0.0 0.0 8.0

PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV

PARTICLE SIZE : 10

DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Freeway speed 65 mph

CALENDAR YEAR : 2030

EVALUATION MONTH : 7

AVERAGE SPEED : 60.7 Freeway 92.0 0.0 0.0 8.0

PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV

PARTICLE SIZE : 10

DIESEL SULFUR : 15

***** Arterial Scenarios *****

SCENARIO RECORD : MA Arterial 2.5 mph (= minimum allowed arterial speed)

CALENDAR YEAR : 2030

EVALUATION MONTH : 7

AVERAGE SPEED : 2.5 Arterial 0.0 100.0 0.0 0.0

PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV

PARTICLE SIZE : 10
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 3 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 3 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

SCENARIO RECORD : MA Arterial speed 4 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 4 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

*****THROUGH*****

SCENARIO RECORD : MA Arterial speed 65 mph
CALENDAR YEAR : 2030
EVALUATION MONTH : 7
AVERAGE SPEED : 65 Arterial 0.0 100.0 0.0 0.0
PARTICULATE EF : PMGZML.CSV PMGDR1.CSV PMGDR2.CSV PMDZML.CSV PMDDR1.CSV
PMDDR2.CSV
PARTICLE SIZE : 10
DIESEL SULFUR : 15

***** End of This Run *****
END OF RUN



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Technical Report
Air Quality
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MOBILE6.2 Output Files

- Carbon Monoxide (CO)
- Particulate Matter 10 (PM₁₀)
- Particulate Matter 2.5 (PM_{2.5})



Technical Report
Air Quality
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Technical Report
Air Quality
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MOBILE6.2 Output Files

- Carbon Monoxide (CO)



Technical Report
Air Quality
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Converting Date: 9/18/2009

Mobile Output File: C:\Run-new\MA08_WIN.TXT

Excel File: C:\Run-new\MA08_WIN.TXT

Mobile Emission Rate

Speed	Type	VOC	CO	NOx
2.7	Freeway	3.0100	27.8800	2.4400
2.7	Freeway	3.0100	27.8800	2.4400
3	Freeway	2.6800	26.2800	2.3900
3	Freeway	2.6800	26.2800	2.3900
4	Freeway	1.9000	22.5600	2.2900
4	Freeway	1.9000	22.5600	2.2900
5	Freeway	1.4300	20.3300	2.2300
5	Freeway	1.4300	20.3300	2.2300
6	Freeway	1.1900	18.7200	2.1200
6	Freeway	1.1900	18.7200	2.1200
7	Freeway	1.0500	17.5100	2.0000
7	Freeway	1.0500	17.5100	2.0000
8	Freeway	0.9400	16.6000	1.9200
8	Freeway	0.9400	16.6000	1.9200
9	Freeway	0.8600	15.8900	1.8500
9	Freeway	0.8600	15.8900	1.8500
10	Freeway	0.8000	15.3300	1.8000
10	Freeway	0.8000	15.3300	1.8000
11	Freeway	0.7500	14.8700	1.7500
11	Freeway	0.7500	14.8700	1.7500
12	Freeway	0.7100	14.5000	1.6900
12	Freeway	0.7100	14.5000	1.6900
13	Freeway	0.6700	14.1900	1.6400
13	Freeway	0.6700	14.1900	1.6400
14	Freeway	0.6500	13.9200	1.5900
14	Freeway	0.6500	13.9200	1.5900
15	Freeway	0.6200	13.6900	1.5600
15	Freeway	0.6200	13.6900	1.5600
16	Freeway	0.6000	13.5100	1.5300
16	Freeway	0.6000	13.5100	1.5300
17	Freeway	0.5900	13.4100	1.5100
17	Freeway	0.5900	13.4100	1.5100
18	Freeway	0.5700	13.3200	1.5000
18	Freeway	0.5700	13.3200	1.5000
19	Freeway	0.5600	13.2400	1.4900
19	Freeway	0.5600	13.2400	1.4900
20	Freeway	0.5500	13.1700	1.4800
20	Freeway	0.5500	13.1700	1.4800

21 Freeway	0.5400	13.1000	1.4700
21 Freeway	0.5400	13.1000	1.4700
22 Freeway	0.5300	13.0400	1.4600
22 Freeway	0.5300	13.0400	1.4600
23 Freeway	0.5300	12.9900	1.4500
23 Freeway	0.5300	12.9900	1.4500
24 Freeway	0.5200	12.9400	1.4400
24 Freeway	0.5200	12.9400	1.4400
25 Freeway	0.5100	12.8900	1.4400
25 Freeway	0.5100	12.8900	1.4400
26 Freeway	0.5100	12.8500	1.4300
26 Freeway	0.5100	12.8500	1.4300
27 Freeway	0.5000	12.8100	1.4300
27 Freeway	0.5000	12.8100	1.4300
28 Freeway	0.4900	12.7700	1.4200
28 Freeway	0.4900	12.7700	1.4200
29 Freeway	0.4900	12.7400	1.4200
29 Freeway	0.4900	12.7400	1.4200
30 Freeway	0.4800	12.7100	1.4200
30 Freeway	0.4800	12.7100	1.4200
31 Freeway	0.4800	12.7000	1.4200
31 Freeway	0.4800	12.7000	1.4200
32 Freeway	0.4700	12.7000	1.4200
32 Freeway	0.4700	12.7000	1.4200
33 Freeway	0.4700	12.7100	1.4200
33 Freeway	0.4700	12.7100	1.4200
34 Freeway	0.4700	12.7100	1.4200
34 Freeway	0.4700	12.7100	1.4200
35 Freeway	0.4600	12.7200	1.4200
35 Freeway	0.4600	12.7200	1.4200
36 Freeway	0.4600	12.7900	1.4200
36 Freeway	0.4600	12.7900	1.4200
37 Freeway	0.4600	12.8600	1.4300
37 Freeway	0.4600	12.8600	1.4300
38 Freeway	0.4500	12.9200	1.4400
38 Freeway	0.4500	12.9200	1.4400
39 Freeway	0.4500	12.9800	1.4400
39 Freeway	0.4500	12.9800	1.4400
40 Freeway	0.4500	13.0500	1.4500
40 Freeway	0.4500	13.0500	1.4500
41 Freeway	0.4500	13.1300	1.4600
41 Freeway	0.4500	13.1300	1.4600
42 Freeway	0.4500	13.2000	1.4800
42 Freeway	0.4500	13.2000	1.4800
43 Freeway	0.4400	13.2700	1.4900
43 Freeway	0.4400	13.2700	1.4900
44 Freeway	0.4400	13.3400	1.5000

44 Freeway	0.4400	13.3400	1.5000
45 Freeway	0.4400	13.4200	1.5200
45 Freeway	0.4400	13.4200	1.5200
46 Freeway	0.4400	13.5100	1.5400
46 Freeway	0.4400	13.5100	1.5400
47 Freeway	0.4400	13.5800	1.5600
47 Freeway	0.4400	13.5800	1.5600
48 Freeway	0.4400	13.6600	1.5700
48 Freeway	0.4400	13.6600	1.5700
49 Freeway	0.4300	13.7400	1.6000
49 Freeway	0.4300	13.7400	1.6000
50 Freeway	0.4300	13.8300	1.6200
50 Freeway	0.4300	13.8300	1.6200
51 Freeway	0.4300	13.9100	1.6500
51 Freeway	0.4300	13.9100	1.6500
52 Freeway	0.4300	14.0000	1.6800
52 Freeway	0.4300	14.0000	1.6800
53 Freeway	0.4300	14.0900	1.7100
53 Freeway	0.4300	14.0900	1.7100
54 Freeway	0.4300	14.1900	1.7500
54 Freeway	0.4300	14.1900	1.7500
55 Freeway	0.4300	14.2900	1.7800
55 Freeway	0.4300	14.2900	1.7800
56 Freeway	0.4200	14.3800	1.8200
56 Freeway	0.4200	14.3800	1.8200
57 Freeway	0.4200	14.4800	1.8600
57 Freeway	0.4200	14.4800	1.8600
58 Freeway	0.4200	14.5900	1.9200
58 Freeway	0.4200	14.5900	1.9200
59 Freeway	0.4200	14.7000	1.9700
59 Freeway	0.4200	14.7000	1.9700
60 Freeway	0.4200	14.8100	2.0300
60 Freeway	0.4200	14.8100	2.0300
60.7 Freeway	0.4200	14.8800	2.0600
60.7 Freeway	0.4200	14.8800	2.0600
60.7 Freeway	0.4200	14.8800	2.0600
60.7 Freeway	0.4200	14.8800	2.0600
60.7 Freeway	0.4200	14.8800	2.0600
60.7 Freeway	0.4200	14.8800	2.0600
60.7 Freeway	0.4200	14.8800	2.0600
60.7 Freeway	0.4200	14.8800	2.0600
60.7 Freeway	0.4200	14.8800	2.0600
60.7 Freeway	0.4200	14.8800	2.0600
2.5 Arterial	3.2400	28.8900	2.4100
2.5 Arterial	3.2400	28.8900	2.4100
3 Arterial	2.6200	25.9200	2.3300
3 Arterial	2.6200	25.9200	2.3300

4 Arterial	1.8400	22.2000	2.2300
4 Arterial	1.8400	22.2000	2.2300
5 Arterial	1.3700	19.9700	2.1700
5 Arterial	1.3700	19.9700	2.1700
6 Arterial	1.1900	18.4400	2.0500
6 Arterial	1.1900	18.4400	2.0500
7 Arterial	1.0600	17.3400	1.9600
7 Arterial	1.0600	17.3400	1.9600
8 Arterial	0.9600	16.5200	1.9000
8 Arterial	0.9600	16.5200	1.9000
9 Arterial	0.8800	15.8900	1.8500
9 Arterial	0.8800	15.8900	1.8500
10 Arterial	0.8200	15.3800	1.8100
10 Arterial	0.8200	15.3800	1.8100
11 Arterial	0.7700	14.9500	1.7500
11 Arterial	0.7700	14.9500	1.7500
12 Arterial	0.7400	14.6000	1.6900
12 Arterial	0.7400	14.6000	1.6900
13 Arterial	0.7100	14.3000	1.6500
13 Arterial	0.7100	14.3000	1.6500
14 Arterial	0.6800	14.0500	1.6100
14 Arterial	0.6800	14.0500	1.6100
15 Arterial	0.6600	13.8300	1.5800
15 Arterial	0.6600	13.8300	1.5800
16 Arterial	0.6300	13.6200	1.5400
16 Arterial	0.6300	13.6200	1.5400
17 Arterial	0.6100	13.4400	1.5100
17 Arterial	0.6100	13.4400	1.5100
18 Arterial	0.6000	13.2800	1.4900
18 Arterial	0.6000	13.2800	1.4900
19 Arterial	0.5800	13.1400	1.4600
19 Arterial	0.5800	13.1400	1.4600
20 Arterial	0.5700	13.0100	1.4400
20 Arterial	0.5700	13.0100	1.4400
21 Arterial	0.5600	12.9000	1.4200
21 Arterial	0.5600	12.9000	1.4200
22 Arterial	0.5400	12.8000	1.4000
22 Arterial	0.5400	12.8000	1.4000
23 Arterial	0.5300	12.7100	1.3900
23 Arterial	0.5300	12.7100	1.3900
24 Arterial	0.5200	12.6200	1.3700
24 Arterial	0.5200	12.6200	1.3700
25 Arterial	0.5100	12.5400	1.3600
25 Arterial	0.5100	12.5400	1.3600
26 Arterial	0.5100	12.5000	1.3500
26 Arterial	0.5100	12.5000	1.3500
27 Arterial	0.5000	12.4500	1.3400

27 Arterial	0.5000	12.4500	1.3400
28 Arterial	0.4900	12.4100	1.3300
28 Arterial	0.4900	12.4100	1.3300
29 Arterial	0.4900	12.3700	1.3200
29 Arterial	0.4900	12.3700	1.3200
30 Arterial	0.4800	12.3400	1.3100
30 Arterial	0.4800	12.3400	1.3100
31 Arterial	0.4800	12.3400	1.3100
31 Arterial	0.4800	12.3400	1.3100
32 Arterial	0.4700	12.3400	1.3100
32 Arterial	0.4700	12.3400	1.3100
33 Arterial	0.4700	12.3400	1.3100
33 Arterial	0.4700	12.3400	1.3100
34 Arterial	0.4600	12.3500	1.3000
34 Arterial	0.4600	12.3500	1.3000
35 Arterial	0.4600	12.3500	1.3000
35 Arterial	0.4600	12.3500	1.3000
36 Arterial	0.4500	12.4200	1.3100
36 Arterial	0.4500	12.4200	1.3100
37 Arterial	0.4500	12.4900	1.3200
37 Arterial	0.4500	12.4900	1.3200
38 Arterial	0.4500	12.5500	1.3200
38 Arterial	0.4500	12.5500	1.3200
39 Arterial	0.4500	12.6200	1.3300
39 Arterial	0.4500	12.6200	1.3300
40 Arterial	0.4400	12.6700	1.3300
40 Arterial	0.4400	12.6700	1.3300
41 Arterial	0.4400	12.7500	1.3500
41 Arterial	0.4400	12.7500	1.3500
42 Arterial	0.4400	12.8200	1.3600
42 Arterial	0.4400	12.8200	1.3600
43 Arterial	0.4400	12.8900	1.3700
43 Arterial	0.4400	12.8900	1.3700
44 Arterial	0.4400	12.9600	1.3800
44 Arterial	0.4400	12.9600	1.3800
45 Arterial	0.4400	13.0200	1.3900
45 Arterial	0.4400	13.0200	1.3900
46 Arterial	0.4300	13.1000	1.4100
46 Arterial	0.4300	13.1000	1.4100
47 Arterial	0.4300	13.1800	1.4300
47 Arterial	0.4300	13.1800	1.4300
48 Arterial	0.4300	13.2600	1.4400
48 Arterial	0.4300	13.2600	1.4400
49 Arterial	0.4300	13.3300	1.4600
49 Arterial	0.4300	13.3300	1.4600
50 Arterial	0.4300	13.3900	1.4800
50 Arterial	0.4300	13.3900	1.4800

51 Arterial	0.4300	13.4800	1.5000
51 Arterial	0.4300	13.4800	1.5000
52 Arterial	0.4200	13.5600	1.5300
52 Arterial	0.4200	13.5600	1.5300
53 Arterial	0.4200	13.6400	1.5500
53 Arterial	0.4200	13.6400	1.5500
54 Arterial	0.4200	13.7100	1.5800
54 Arterial	0.4200	13.7100	1.5800
55 Arterial	0.4200	13.7900	1.6000
55 Arterial	0.4200	13.7900	1.6000
56 Arterial	0.4200	13.8800	1.6300
56 Arterial	0.4200	13.8800	1.6300
57 Arterial	0.4200	13.9700	1.6700
57 Arterial	0.4200	13.9700	1.6700
58 Arterial	0.4200	14.0600	1.7000
58 Arterial	0.4200	14.0600	1.7000
59 Arterial	0.4200	14.1500	1.7400
59 Arterial	0.4200	14.1500	1.7400
60 Arterial	0.4100	14.2300	1.7700
60 Arterial	0.4100	14.2300	1.7700
61 Arterial	0.4100	14.3300	1.8200
61 Arterial	0.4100	14.3300	1.8200
62 Arterial	0.4100	14.4300	1.8700
62 Arterial	0.4100	14.4300	1.8700
63 Arterial	0.4100	14.5200	1.9100
63 Arterial	0.4100	14.5200	1.9100
64 Arterial	0.4100	14.6200	1.9600
64 Arterial	0.4100	14.6200	1.9600
65 Arterial	0.4100	14.7000	2.0000
65 Arterial	0.4100	14.7000	2.0000

Converting Date: 9/11/2009

Mobile Output File: C:\Run-new\MA16_WIN.TXT

Excel File: C:\Run-new\MA16_WIN.TXT

Mobile Emission Rate

Speed	Type	VOC	CO	NOx
2.7	Freeway	1.4100	19.1800	0.7600
3	Freeway	1.2600	18.1400	0.7400
4	Freeway	0.9000	15.7300	0.7100
5	Freeway	0.6800	14.2800	0.6900
6	Freeway	0.5700	13.2200	0.6600
7	Freeway	0.5000	12.4100	0.6200
8	Freeway	0.4500	11.8000	0.5900
9	Freeway	0.4100	11.3300	0.5700
10	Freeway	0.3800	10.9500	0.5600
11	Freeway	0.3600	10.6500	0.5400
12	Freeway	0.3400	10.4000	0.5200
13	Freeway	0.3200	10.1900	0.5100
14	Freeway	0.3100	10.0100	0.4900
15	Freeway	0.3000	9.8500	0.4800
16	Freeway	0.2900	9.7300	0.4700
17	Freeway	0.2800	9.6800	0.4700
18	Freeway	0.2800	9.6200	0.4600
19	Freeway	0.2700	9.5800	0.4600
20	Freeway	0.2700	9.5300	0.4600
21	Freeway	0.2600	9.5000	0.4600
22	Freeway	0.2600	9.4600	0.4500
23	Freeway	0.2500	9.4300	0.4500
24	Freeway	0.2500	9.4000	0.4500
25	Freeway	0.2500	9.3700	0.4500
26	Freeway	0.2400	9.3400	0.4500
27	Freeway	0.2400	9.3200	0.4400
28	Freeway	0.2400	9.3000	0.4400
29	Freeway	0.2400	9.2800	0.4400
30	Freeway	0.2300	9.2600	0.4400
31	Freeway	0.2300	9.2600	0.4400
32	Freeway	0.2300	9.2600	0.4400
33	Freeway	0.2300	9.2600	0.4400
34	Freeway	0.2300	9.2600	0.4400
35	Freeway	0.2200	9.2700	0.4400
36	Freeway	0.2200	9.3200	0.4400
37	Freeway	0.2200	9.3700	0.4500
38	Freeway	0.2200	9.4200	0.4500
39	Freeway	0.2200	9.4700	0.4500
40	Freeway	0.2200	9.5200	0.4500

41 Freeway	0.2200	9.5800	0.4600
42 Freeway	0.2200	9.6300	0.4600
43 Freeway	0.2200	9.6900	0.4600
44 Freeway	0.2200	9.7400	0.4700
45 Freeway	0.2100	9.8000	0.4700
46 Freeway	0.2100	9.8600	0.4800
47 Freeway	0.2100	9.9100	0.4800
48 Freeway	0.2100	9.9700	0.4900
49 Freeway	0.2100	10.0300	0.4900
50 Freeway	0.2100	10.1000	0.5000
51 Freeway	0.2100	10.1600	0.5100
52 Freeway	0.2100	10.2200	0.5200
53 Freeway	0.2100	10.2800	0.5300
54 Freeway	0.2100	10.3600	0.5400
55 Freeway	0.2100	10.4300	0.5500
56 Freeway	0.2100	10.5000	0.5600
57 Freeway	0.2100	10.5800	0.5700
58 Freeway	0.2100	10.6600	0.5900
59 Freeway	0.2100	10.7400	0.6000
60 Freeway	0.2100	10.8100	0.6200
60.7 Freeway	0.2100	10.8700	0.6300
60.7 Freeway	0.2100	10.8700	0.6300
60.7 Freeway	0.2100	10.8700	0.6300
60.7 Freeway	0.2100	10.8700	0.6300
60.7 Freeway	0.2100	10.8700	0.6300
2.5 Arterial	1.5200	19.8900	0.7500
3 Arterial	1.2300	17.9600	0.7200
4 Arterial	0.8700	15.5500	0.6900
5 Arterial	0.6600	14.1000	0.6700
6 Arterial	0.5700	13.0900	0.6400
7 Arterial	0.5100	12.3700	0.6100
8 Arterial	0.4600	11.8400	0.5900
9 Arterial	0.4300	11.4200	0.5700
10 Arterial	0.4000	11.0800	0.5600
11 Arterial	0.3800	10.8000	0.5400
12 Arterial	0.3600	10.5600	0.5300
13 Arterial	0.3400	10.3700	0.5100
14 Arterial	0.3300	10.2000	0.5000
15 Arterial	0.3200	10.0500	0.4900
16 Arterial	0.3100	9.9100	0.4800
17 Arterial	0.3000	9.7900	0.4700
18 Arterial	0.2900	9.6900	0.4600
19 Arterial	0.2800	9.5900	0.4600
20 Arterial	0.2800	9.5100	0.4500
21 Arterial	0.2700	9.4300	0.4400
22 Arterial	0.2600	9.3600	0.4400
23 Arterial	0.2600	9.3000	0.4300

24 Arterial	0.2500	9.2500	0.4300
25 Arterial	0.2500	9.1900	0.4200
26 Arterial	0.2500	9.1600	0.4200
27 Arterial	0.2400	9.1400	0.4200
28 Arterial	0.2400	9.1100	0.4100
29 Arterial	0.2400	9.0900	0.4100
30 Arterial	0.2300	9.0700	0.4100
31 Arterial	0.2300	9.0700	0.4100
32 Arterial	0.2300	9.0700	0.4100
33 Arterial	0.2300	9.0700	0.4100
34 Arterial	0.2200	9.0700	0.4100
35 Arterial	0.2200	9.0800	0.4100
36 Arterial	0.2200	9.1300	0.4100
37 Arterial	0.2200	9.1800	0.4100
38 Arterial	0.2200	9.2300	0.4100
39 Arterial	0.2200	9.2800	0.4100
40 Arterial	0.2200	9.3200	0.4200
41 Arterial	0.2200	9.3800	0.4200
42 Arterial	0.2200	9.4300	0.4200
43 Arterial	0.2100	9.4900	0.4300
44 Arterial	0.2100	9.5400	0.4300
45 Arterial	0.2100	9.5800	0.4300
46 Arterial	0.2100	9.6400	0.4400
47 Arterial	0.2100	9.7000	0.4400
48 Arterial	0.2100	9.7500	0.4500
49 Arterial	0.2100	9.8100	0.4500
50 Arterial	0.2100	9.8600	0.4600
51 Arterial	0.2100	9.9200	0.4700
52 Arterial	0.2100	9.9800	0.4700
53 Arterial	0.2100	10.0300	0.4800
54 Arterial	0.2100	10.0900	0.4900
55 Arterial	0.2100	10.1400	0.4900
56 Arterial	0.2100	10.2100	0.5000
57 Arterial	0.2100	10.2800	0.5100
58 Arterial	0.2100	10.3400	0.5200
59 Arterial	0.2100	10.4100	0.5300
60 Arterial	0.2100	10.4700	0.5400
61 Arterial	0.2100	10.5400	0.5600
62 Arterial	0.2100	10.6100	0.5700
63 Arterial	0.2100	10.6800	0.5900
64 Arterial	0.2100	10.7500	0.6000
65 Arterial	0.2100	10.8200	0.6100

Mobile Output File: C:\Run\MA30_WIN.TXT

Excel File: C:\Run\MA30_WIN.TXT

Mobile Emission Rate

Speed	Type	VOC	CO	NOx
2.7	Freeway	1.2000	19.2700	0.3000
2.7	Freeway	1.2000	19.2700	0.3000
3	Freeway	1.0600	18.2000	0.2900
3	Freeway	1.0600	18.2000	0.2900
4	Freeway	0.7500	15.6800	0.2800
4	Freeway	0.7500	15.6800	0.2800
5	Freeway	0.5600	14.1700	0.2700
5	Freeway	0.5600	14.1700	0.2700
6	Freeway	0.4600	13.0800	0.2500
6	Freeway	0.4600	13.0800	0.2500
7	Freeway	0.4000	12.2600	0.2400
7	Freeway	0.4000	12.2600	0.2400
8	Freeway	0.3600	11.6400	0.2200
8	Freeway	0.3600	11.6400	0.2200
9	Freeway	0.3300	11.1700	0.2100
9	Freeway	0.3300	11.1700	0.2100
10	Freeway	0.3000	10.7800	0.2000
10	Freeway	0.3000	10.7800	0.2000
11	Freeway	0.2800	10.4800	0.2000
11	Freeway	0.2800	10.4800	0.2000
12	Freeway	0.2700	10.2300	0.1900
12	Freeway	0.2700	10.2300	0.1900
13	Freeway	0.2600	10.0300	0.1800
13	Freeway	0.2600	10.0300	0.1800
14	Freeway	0.2400	9.8500	0.1700
14	Freeway	0.2400	9.8500	0.1700
15	Freeway	0.2300	9.7000	0.1700
15	Freeway	0.2300	9.7000	0.1700
16	Freeway	0.2300	9.5800	0.1600
16	Freeway	0.2300	9.5800	0.1600
17	Freeway	0.2200	9.5200	0.1600
17	Freeway	0.2200	9.5200	0.1600
18	Freeway	0.2200	9.4700	0.1600
18	Freeway	0.2200	9.4700	0.1600
19	Freeway	0.2100	9.4200	0.1600
19	Freeway	0.2100	9.4200	0.1600
20	Freeway	0.2100	9.3800	0.1600
20	Freeway	0.2100	9.3800	0.1600
21	Freeway	0.2000	9.3400	0.1600

21 Freeway	0.2000	9.3400	0.1600
22 Freeway	0.2000	9.3100	0.1600
22 Freeway	0.2000	9.3100	0.1600
23 Freeway	0.2000	9.2800	0.1600
23 Freeway	0.2000	9.2800	0.1600
24 Freeway	0.1900	9.2500	0.1600
24 Freeway	0.1900	9.2500	0.1600
25 Freeway	0.1900	9.2200	0.1600
25 Freeway	0.1900	9.2200	0.1600
26 Freeway	0.1900	9.1900	0.1600
26 Freeway	0.1900	9.1900	0.1600
27 Freeway	0.1900	9.1700	0.1600
27 Freeway	0.1900	9.1700	0.1600
28 Freeway	0.1800	9.1500	0.1600
28 Freeway	0.1800	9.1500	0.1600
29 Freeway	0.1800	9.1300	0.1600
29 Freeway	0.1800	9.1300	0.1600
30 Freeway	0.1800	9.1100	0.1600
30 Freeway	0.1800	9.1100	0.1600
31 Freeway	0.1800	9.1100	0.1600
31 Freeway	0.1800	9.1100	0.1600
32 Freeway	0.1800	9.1200	0.1600
32 Freeway	0.1800	9.1200	0.1600
33 Freeway	0.1700	9.1200	0.1600
33 Freeway	0.1700	9.1200	0.1600
34 Freeway	0.1700	9.1300	0.1600
34 Freeway	0.1700	9.1300	0.1600
35 Freeway	0.1700	9.1300	0.1600
35 Freeway	0.1700	9.1300	0.1600
36 Freeway	0.1700	9.1900	0.1600
36 Freeway	0.1700	9.1900	0.1600
37 Freeway	0.1700	9.2400	0.1600
37 Freeway	0.1700	9.2400	0.1600
38 Freeway	0.1700	9.2900	0.1600
38 Freeway	0.1700	9.2900	0.1600
39 Freeway	0.1700	9.3400	0.1700
39 Freeway	0.1700	9.3400	0.1700
40 Freeway	0.1700	9.3900	0.1700
40 Freeway	0.1700	9.3900	0.1700
41 Freeway	0.1700	9.4500	0.1700
41 Freeway	0.1700	9.4500	0.1700
42 Freeway	0.1700	9.5000	0.1700
42 Freeway	0.1700	9.5000	0.1700
43 Freeway	0.1700	9.5500	0.1700
43 Freeway	0.1700	9.5500	0.1700
44 Freeway	0.1600	9.6000	0.1700
44 Freeway	0.1600	9.6000	0.1700

45 Freeway	0.1600	9.6700	0.1700
45 Freeway	0.1600	9.6700	0.1700
46 Freeway	0.1600	9.7300	0.1800
46 Freeway	0.1600	9.7300	0.1800
47 Freeway	0.1600	9.7800	0.1800
47 Freeway	0.1600	9.7800	0.1800
48 Freeway	0.1600	9.8400	0.1800
48 Freeway	0.1600	9.8400	0.1800
49 Freeway	0.1600	9.9000	0.1800
49 Freeway	0.1600	9.9000	0.1800
50 Freeway	0.1600	9.9600	0.1800
50 Freeway	0.1600	9.9600	0.1800
51 Freeway	0.1600	10.0300	0.1900
51 Freeway	0.1600	10.0300	0.1900
52 Freeway	0.1600	10.0900	0.1900
52 Freeway	0.1600	10.0900	0.1900
53 Freeway	0.1600	10.1500	0.1900
53 Freeway	0.1600	10.1500	0.1900
54 Freeway	0.1600	10.2300	0.1900
54 Freeway	0.1600	10.2300	0.1900
55 Freeway	0.1600	10.3000	0.2000
55 Freeway	0.1600	10.3000	0.2000
56 Freeway	0.1600	10.3700	0.2000
56 Freeway	0.1600	10.3700	0.2000
57 Freeway	0.1600	10.4400	0.2000
57 Freeway	0.1600	10.4400	0.2000
58 Freeway	0.1600	10.5200	0.2100
58 Freeway	0.1600	10.5200	0.2100
59 Freeway	0.1600	10.6000	0.2100
59 Freeway	0.1600	10.6000	0.2100
60 Freeway	0.1600	10.6700	0.2200
60 Freeway	0.1600	10.6700	0.2200
60.7 Freeway	0.1600	10.7200	0.2200
60.7 Freeway	0.1600	10.7200	0.2200
60.7 Freeway	0.1600	10.7200	0.2200
60.7 Freeway	0.1600	10.7200	0.2200
60.7 Freeway	0.1600	10.7200	0.2200
60.7 Freeway	0.1600	10.7200	0.2200
60.7 Freeway	0.1600	10.7200	0.2200
60.7 Freeway	0.1600	10.7200	0.2200
60.7 Freeway	0.1600	10.7200	0.2200
60.7 Freeway	0.1600	10.7200	0.2200
2.5 Arterial	1.2900	20.0400	0.3100
2.5 Arterial	1.2900	20.0400	0.3100
3 Arterial	1.0400	18.0300	0.3000
3 Arterial	1.0400	18.0300	0.3000
4 Arterial	0.7300	15.5100	0.2800

4 Arterial	0.7300	15.5100	0.2800
5 Arterial	0.5400	14.0000	0.2700
5 Arterial	0.5400	14.0000	0.2700
6 Arterial	0.4600	12.9700	0.2600
6 Arterial	0.4600	12.9700	0.2600
7 Arterial	0.4100	12.2400	0.2500
7 Arterial	0.4100	12.2400	0.2500
8 Arterial	0.3700	11.6900	0.2400
8 Arterial	0.3700	11.6900	0.2400
9 Arterial	0.3400	11.2700	0.2300
9 Arterial	0.3400	11.2700	0.2300
10 Arterial	0.3100	10.9200	0.2300
10 Arterial	0.3100	10.9200	0.2300
11 Arterial	0.3000	10.6500	0.2200
11 Arterial	0.3000	10.6500	0.2200
12 Arterial	0.2800	10.4100	0.2100
12 Arterial	0.2800	10.4100	0.2100
13 Arterial	0.2700	10.2200	0.2000
13 Arterial	0.2700	10.2200	0.2000
14 Arterial	0.2600	10.0500	0.2000
14 Arterial	0.2600	10.0500	0.2000
15 Arterial	0.2500	9.9000	0.1900
15 Arterial	0.2500	9.9000	0.1900
16 Arterial	0.2400	9.7700	0.1900
16 Arterial	0.2400	9.7700	0.1900
17 Arterial	0.2300	9.6500	0.1900
17 Arterial	0.2300	9.6500	0.1900
18 Arterial	0.2300	9.5500	0.1800
18 Arterial	0.2300	9.5500	0.1800
19 Arterial	0.2200	9.4600	0.1800
19 Arterial	0.2200	9.4600	0.1800
20 Arterial	0.2100	9.3700	0.1800
20 Arterial	0.2100	9.3700	0.1800
21 Arterial	0.2100	9.3000	0.1700
21 Arterial	0.2100	9.3000	0.1700
22 Arterial	0.2100	9.2400	0.1700
22 Arterial	0.2100	9.2400	0.1700
23 Arterial	0.2000	9.1800	0.1700
23 Arterial	0.2000	9.1800	0.1700
24 Arterial	0.2000	9.1200	0.1700
24 Arterial	0.2000	9.1200	0.1700
25 Arterial	0.1900	9.0700	0.1700
25 Arterial	0.1900	9.0700	0.1700
26 Arterial	0.1900	9.0500	0.1700
26 Arterial	0.1900	9.0500	0.1700
27 Arterial	0.1900	9.0200	0.1600
27 Arterial	0.1900	9.0200	0.1600

28 Arterial	0.1800	9.0000	0.1600
28 Arterial	0.1800	9.0000	0.1600
29 Arterial	0.1800	8.9700	0.1600
29 Arterial	0.1800	8.9700	0.1600
30 Arterial	0.1800	8.9500	0.1600
30 Arterial	0.1800	8.9500	0.1600
31 Arterial	0.1800	8.9600	0.1600
31 Arterial	0.1800	8.9600	0.1600
32 Arterial	0.1800	8.9600	0.1600
32 Arterial	0.1800	8.9600	0.1600
33 Arterial	0.1700	8.9700	0.1600
33 Arterial	0.1700	8.9700	0.1600
34 Arterial	0.1700	8.9700	0.1600
34 Arterial	0.1700	8.9700	0.1600
35 Arterial	0.1700	8.9700	0.1600
35 Arterial	0.1700	8.9700	0.1600
36 Arterial	0.1700	9.0300	0.1600
36 Arterial	0.1700	9.0300	0.1600
37 Arterial	0.1700	9.0800	0.1600
37 Arterial	0.1700	9.0800	0.1600
38 Arterial	0.1700	9.1300	0.1600
38 Arterial	0.1700	9.1300	0.1600
39 Arterial	0.1700	9.1800	0.1600
39 Arterial	0.1700	9.1800	0.1600
40 Arterial	0.1700	9.2200	0.1600
40 Arterial	0.1700	9.2200	0.1600
41 Arterial	0.1700	9.2800	0.1600
41 Arterial	0.1700	9.2800	0.1600
42 Arterial	0.1600	9.3400	0.1700
42 Arterial	0.1600	9.3400	0.1700
43 Arterial	0.1600	9.3900	0.1700
43 Arterial	0.1600	9.3900	0.1700
44 Arterial	0.1600	9.4400	0.1700
44 Arterial	0.1600	9.4400	0.1700
45 Arterial	0.1600	9.4900	0.1700
45 Arterial	0.1600	9.4900	0.1700
46 Arterial	0.1600	9.5500	0.1700
46 Arterial	0.1600	9.5500	0.1700
47 Arterial	0.1600	9.6000	0.1700
47 Arterial	0.1600	9.6000	0.1700
48 Arterial	0.1600	9.6600	0.1700
48 Arterial	0.1600	9.6600	0.1700
49 Arterial	0.1600	9.7100	0.1800
49 Arterial	0.1600	9.7100	0.1800
50 Arterial	0.1600	9.7600	0.1800
50 Arterial	0.1600	9.7600	0.1800
51 Arterial	0.1600	9.8200	0.1800

51 Arterial	0.1600	9.8200	0.1800
52 Arterial	0.1600	9.8800	0.1800
52 Arterial	0.1600	9.8800	0.1800
53 Arterial	0.1600	9.9400	0.1800
53 Arterial	0.1600	9.9400	0.1800
54 Arterial	0.1600	9.9900	0.1900
54 Arterial	0.1600	9.9900	0.1900
55 Arterial	0.1600	10.0500	0.1900
55 Arterial	0.1600	10.0500	0.1900
56 Arterial	0.1600	10.1100	0.1900
56 Arterial	0.1600	10.1100	0.1900
57 Arterial	0.1600	10.1800	0.1900
57 Arterial	0.1600	10.1800	0.1900
58 Arterial	0.1600	10.2500	0.2000
58 Arterial	0.1600	10.2500	0.2000
59 Arterial	0.1600	10.3100	0.2000
59 Arterial	0.1600	10.3100	0.2000
60 Arterial	0.1600	10.3700	0.2000
60 Arterial	0.1600	10.3700	0.2000
61 Arterial	0.1600	10.4400	0.2100
61 Arterial	0.1600	10.4400	0.2100
62 Arterial	0.1600	10.5100	0.2100
62 Arterial	0.1600	10.5100	0.2100
63 Arterial	0.1600	10.5800	0.2100
63 Arterial	0.1600	10.5800	0.2100
64 Arterial	0.1600	10.6500	0.2200
64 Arterial	0.1600	10.6500	0.2200
65 Arterial	0.1600	10.7100	0.2200
65 Arterial	0.1600	10.7100	0.2200



Technical Report
Air Quality
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Technical Report
Air Quality
Draft

MOBILE6.2 Output Files

- Particulate Matter 10 (PM₁₀)



Technical Report
Air Quality
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2008 PM₁₀ Output File – Freeway

* #####
* MA Freeway 2.71 mph (= minimum allowed freeway speed)

* File 1, Run 1, Scenario 129.
* #####

Calendar Year: 2008
Month: July
Gasoline Fuel Sulfur Content: 30. Ppm
Diesel Fuel Sulfur Content: 15. Ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All
Veh										
GVWR:	<6000	>6000	(All)							
VMT Distribution:	0.3513	0.3732	0.1467		0.0366	0.0005	0.0014	0.0862	0.0040	1.0000

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0040	0.0039	0.0039	0.0039	0.0425	-----	-----	-----	0.0205	0.0051
ECARBON:	-----	-----	-----	-----	0.1077	0.0277	0.1313	-----	0.0114	
OCARBON:	-----	-----	-----	-----	0.0304	0.0399	0.0655	-----	0.0057	
SO4:	0.0005	0.0006	0.0006	0.0006	0.0012	0.0002	0.0003	0.0009	0.0002	0.0006
Total Exhaust PM:	0.0045	0.0045	0.0045	0.0045	0.0438	0.1382	0.0679	0.1976	0.0207	0.0228
Brake:	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125
Tire:	0.0080	0.0080	0.0080	0.0080	0.0085	0.0080	0.0080	0.0247	0.0040	0.0094
Total PM:	0.0250	0.0251	0.0251	0.0251	0.0648	0.1588	0.0884	0.2349	0.0372	0.0448
SO2:	0.0067	0.0087	0.0115	0.0095	0.0164	0.0030	0.0052	0.0131	0.0033	0.0091
NH3:	0.1015	0.1015	0.1015	0.1015	0.0451	0.0068	0.0068	0.0270	0.0113	0.0925

* #####
* MA Freeway speed 3 mph
* File 1, Run 1, Scenario 130.
* #####

Calendar Year: 2008
Month: July
Gasoline Fuel Sulfur Content: 30. Ppm

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
 GASPM: 0.0040 0.0039 0.0039 0.0039 0.0425 ----- 0.0205 0.0051
 ECARBON: ----- 0.1077 0.0277 0.1313 ----- 0.0114
 OCARBON: ----- 0.0304 0.0399 0.0655 ----- 0.0057
 SO4: 0.0005 0.0006 0.0006 0.0006 0.0012 0.0002 0.0003 0.0009 0.0002 0.0006
 Total Exhaust PM: 0.0045 0.0045 0.0045 0.0045 0.0438 0.1382 0.0679 0.1976 0.0207
 0.0228
 Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125
 0.0125
 Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0080 0.0080 0.0247 0.0040 0.0094
 Total PM: 0.0250 0.0251 0.0251 0.0251 0.0648 0.1588 0.0884 0.2349 0.0372
 0.0448
 SO2: 0.0067 0.0087 0.0115 0.0095 0.0164 0.0030 0.0052 0.0131 0.0033 0.0091
 NH3: 0.1015 0.1015 0.1015 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
 0.0925

THROUGH

* #####
 * MA Freeway speed 65 mph
 * File 1, Run 1, Scenario 192.
 * #####

Calendar Year: 2008
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 10.00 Microns
 Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All
Veh										
GVWR:	<6000	>6000	(All)							
VMT Distribution:	0.3513	0.3732	0.1467		0.0366	0.0005	0.0014	0.0862	0.0040	

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
 GASPM: 0.0041 0.0040 0.0040 0.0040 0.0423 ----- 0.0205 0.0052
 ECARBON: ----- 0.1077 0.0277 0.1313 ----- 0.0114
 OCARBON: ----- 0.0304 0.0399 0.0655 ----- 0.0057
 SO4: 0.0002 0.0004 0.0004 0.0004 0.0017 0.0002 0.0003 0.0009 0.0001 0.0004
 Total Exhaust PM: 0.0043 0.0045 0.0045 0.0045 0.0441 0.1382 0.0679 0.1976 0.0206
 0.0228

Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125
0.0125

Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0080 0.0080 0.0247 0.0040 0.0094

Total PM: 0.0249 0.0250 0.0250 0.0250 0.0651 0.1588 0.0884 0.2349 0.0371
0.0447

SO2: 0.0068 0.0088 0.0115 0.0096 0.0163 0.0030 0.0052 0.0131 0.0033 0.0091

NH3: 0.1015 0.1015 0.1015 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0925

2008 PM₁₀ Output File – Arterial

* #####
* MA Arterial 2.5 mph (= minimum allowed arterial speed)
* File 1, Run 1, Scenario 193.
* #####

Calendar Year: 2008
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Veh

GVWR: <6000 >6000 (All)

VMT Distribution: 0.3513 0.3732 0.1467 0.0366 0.0005 0.0014 0.0862 0.0040
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0040 0.0039 0.0039 0.0039 0.0425 ----- 0.0205 0.0051
ECARBON: ----- 0.1077 0.0277 0.1313 ----- 0.0114
OCARBON: ----- 0.0304 0.0399 0.0655 ----- 0.0057
SO4: 0.0005 0.0006 0.0006 0.0006 0.0012 0.0002 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0045 0.0045 0.0045 0.0045 0.0437 0.1382 0.0679 0.1976 0.0207
0.0228
Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125
0.0125
Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0080 0.0080 0.0247 0.0040 0.0094
Total PM: 0.0250 0.0251 0.0251 0.0251 0.0648 0.1588 0.0884 0.2349 0.0372
0.0448
SO2: 0.0067 0.0087 0.0115 0.0095 0.0164 0.0030 0.0052 0.0131 0.0033 0.0090
NH3: 0.1015 0.1015 0.1015 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0925

* #####
* MA Arterial speed 3 mph
* File 1, Run 1, Scenario 194.
* #####

Calendar Year: 2008
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm

Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All
---------------	------	--------	--------	------	------	------	------	------	----	-----

Veh

GVWR:	<6000	>6000	(All)							
-------	-------	-------	-------	--	--	--	--	--	--	--

VMT Distribution:	0.3513	0.3732	0.1467		0.0366	0.0005	0.0014	0.0862	0.0040	
-------------------	--------	--------	--------	--	--------	--------	--------	--------	--------	--

1.0000

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0040	0.0039	0.0039	0.0039	0.0425	-----	-----	-----	0.0205	0.0051
ECARBON:	-----	-----	-----	-----	0.1077	0.0277	0.1313	-----	0.0114	
OCARBON:	-----	-----	-----	-----	0.0304	0.0399	0.0655	-----	0.0057	
SO4:	0.0005	0.0006	0.0006	0.0006	0.0012	0.0002	0.0003	0.0009	0.0002	0.0006
Total Exhaust PM:	0.0045	0.0045	0.0045	0.0045	0.0437	0.1382	0.0679	0.1976	0.0207	

0.0228

Brake:	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

0.0125

Tire:	0.0080	0.0080	0.0080	0.0080	0.0085	0.0080	0.0080	0.0247	0.0040	0.0094
-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

Total PM:	0.0250	0.0251	0.0251	0.0251	0.0648	0.1588	0.0884	0.2349	0.0372	
-----------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--

0.0448

SO2:	0.0067	0.0087	0.0115	0.0095	0.0164	0.0030	0.0052	0.0131	0.0033	0.0090
NH3:	0.1015	0.1015	0.1015	0.1015	0.0451	0.0068	0.0068	0.0270	0.0113	

0.0925

* #####
* MA Arterial speed 4 mph
* File 1, Run 1, Scenario 195.
* #####

Calendar Year: 2008
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All
---------------	------	--------	--------	------	------	------	------	------	----	-----

Veh

GVWR:	<6000	>6000	(All)							
-------	-------	-------	-------	--	--	--	--	--	--	--

VMT Distribution:	0.3513	0.3732	0.1467		0.0366	0.0005	0.0014	0.0862	0.0040	
-------------------	--------	--------	--------	--	--------	--------	--------	--------	--------	--

1.0000

Composite Emission Factors (g/mi):

Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0080 0.0080 0.0247 0.0040 0.0094
Total PM: 0.0249 0.0250 0.0250 0.0250 0.0651 0.1588 0.0884 0.2349 0.0371
0.0447
SO2: 0.0068 0.0088 0.0115 0.0096 0.0163 0.0030 0.0052 0.0131 0.0033 0.0091
NH3: 0.1015 0.1015 0.1015 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0925

2016 PM₁₀ Output File - Freeway

* #####

* MA Freeway 2.71 mph (= minimum allowed freeway speed)

* File 1, Run 1, Scenario 129.

* #####

Calendar Year: 2016

Month: July

Gasoline Fuel Sulfur Content: 30. ppm

Diesel Fuel Sulfur Content: 15. ppm

Particle Size Cutoff: 10.00 Microns

Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All
Veh										

GVWR:	<6000	>6000	(All)
-------	-------	-------	-------

VMT Distribution:	0.2778	0.4263	0.1677		0.0370	0.0001	0.0015	0.0858	0.0037
-------------------	--------	--------	--------	--	--------	--------	--------	--------	--------

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
GASPM:	0.0038	0.0036	0.0036	0.0036	0.0137				0.0205	0.0038
ECARBON:					0.0748	0.0058	0.0285		0.0025	
OCARBON:					0.0211	0.0083	0.0145		0.0013	
SO4:	0.0005	0.0006	0.0006	0.0006	0.0014	0.0002	0.0003	0.0009	0.0002	0.0006
Total Exhaust PM:	0.0042	0.0042	0.0042	0.0042	0.0151	0.0960	0.0143	0.0439	0.0207	0.0081
Brake:	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125
Tire:	0.0080	0.0080	0.0080	0.0080	0.0085	0.0080	0.0080	0.0248	0.0040	0.0094
Total PM:	0.0248	0.0248	0.0248	0.0248	0.0362	0.1166	0.0349	0.0813	0.0372	0.0301
SO2:	0.0066	0.0087	0.0115	0.0095	0.0163	0.0029	0.0052	0.0130	0.0033	0.0092
NH3:	0.1006	0.1014	0.1017	0.1015	0.0451	0.0068	0.0068	0.0270	0.0113	0.0923

* #####

* MA Freeway speed 3 mph

* File 1, Run 1, Scenario 130.

* #####

Calendar Year: 2016

Month: July

Gasoline Fuel Sulfur Content: 30. ppm

Diesel Fuel Sulfur Content: 15. ppm

Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Veh

GVWR: <6000 >6000 (All)

VMT Distribution: 0.2778 0.4263 0.1677 0.0370 0.0001 0.0015 0.0858 0.0037
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0038 0.0036 0.0036 0.0036 0.0137 ----- 0.0205 0.0038
ECARBON: ----- 0.0748 0.0058 0.0285 ----- 0.0025
OCARBON: ----- 0.0211 0.0083 0.0145 ----- 0.0013
SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0002 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0151 0.0960 0.0143 0.0439 0.0207
0.0081
Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125
0.0125
Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0080 0.0080 0.0248 0.0040 0.0094
Total PM: 0.0248 0.0248 0.0248 0.0248 0.0362 0.1166 0.0349 0.0813 0.0372
0.0301
SO2: 0.0066 0.0087 0.0115 0.0095 0.0163 0.0029 0.0052 0.0130 0.0033 0.0092
NH3: 0.1006 0.1014 0.1017 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0923

* #####
* MA Freeway speed 4 mph
* File 1, Run 1, Scenario 131.
* #####

Calendar Year: 2016
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Veh

GVWR: <6000 >6000 (All)

VMT Distribution: 0.2778 0.4263 0.1677 0.0370 0.0001 0.0015 0.0858 0.0037
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
 GASPM: 0.0038 0.0036 0.0036 0.0036 0.0137 ----- 0.0205 0.0038
 ECARBON: ----- 0.0748 0.0058 0.0285 ----- 0.0025
 OCARBON: ----- 0.0211 0.0083 0.0145 ----- 0.0013
 SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0002 0.0003 0.0009 0.0002 0.0006
 Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0151 0.0960 0.0143 0.0439 0.0207
 0.0081
 Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125
 0.0125
 Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0080 0.0080 0.0248 0.0040 0.0094
 Total PM: 0.0248 0.0248 0.0248 0.0248 0.0362 0.1166 0.0349 0.0813 0.0372
 0.0301
 SO2: 0.0066 0.0087 0.0115 0.0095 0.0163 0.0029 0.0052 0.0130 0.0033 0.0092
 NH3: 0.1006 0.1014 0.1017 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
 0.0923

 THROUGH

* #####
 * MA Freeway speed 65 mph
 * File 1, Run 1, Scenario 192.
 * #####

Calendar Year: 2016
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 10.00 Microns
 Reformulated Gas: Yes

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV
 MC All Veh

GVWR: <6000 >6000 (All)

VMT Distribution: 0.2778 0.4263 0.1677 0.0370 0.0001 0.0015 0.0858
 0.0037 1.0000

 Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000
 0.0000
 GASPM: 0.0040 0.0038 0.0038 0.0038 0.0131 ----- 0.0205
 0.0039
 ECARBON: ----- 0.0748 0.0058 0.0285 ----- 0.0025
 OCARBON: ----- 0.0211 0.0083 0.0145 ----- 0.0013
 SO4: 0.0002 0.0004 0.0004 0.0004 0.0020 0.0002 0.0003 0.0009 0.0001
 0.0005
 Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0152 0.0960 0.0143 0.0439
 0.0206 0.0081

0.0125	Brake:	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125
0.0094	Tire:	0.0080	0.0080	0.0080	0.0080	0.0085	0.0080	0.0080	0.0248	0.0040
0.0371	Total PM:	0.0247	0.0248	0.0248	0.0248	0.0362	0.1166	0.0349	0.0813	
0.0093	SO2:	0.0067	0.0088	0.0115	0.0096	0.0161	0.0029	0.0052	0.0130	0.0033
0.0923	NH3:	0.1006	0.1014	0.1017	0.1015	0.0451	0.0068	0.0068	0.0270	0.0113

2016 PM₁₀ Output File – Arterial

* #####
* MA Arterial 2.5 mph (= minimum allowed arterial speed)
* File 1, Run 1, Scenario 193.
* #####

Calendar Year: 2016
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Veh

GVWR: <6000 >6000 (All)

VMT Distribution: 0.2778 0.4263 0.1677 0.0370 0.0001 0.0015 0.0858 0.0037
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0037 0.0036 0.0036 0.0036 0.0138 ----- 0.0205 0.0038
ECARBON: ----- 0.0748 0.0058 0.0285 ----- 0.0025
OCARBON: ----- 0.0211 0.0083 0.0145 ----- 0.0013
SO4: 0.0005 0.0006 0.0006 0.0006 0.0013 0.0002 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0151 0.0960 0.0143 0.0439 0.0207
0.0081
Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125 0.0125
0.0125
Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0080 0.0080 0.0248 0.0040 0.0094
Total PM: 0.0248 0.0248 0.0248 0.0248 0.0362 0.1166 0.0349 0.0813 0.0372
0.0301
SO2: 0.0066 0.0087 0.0115 0.0095 0.0163 0.0029 0.0052 0.0130 0.0033 0.0092
NH3: 0.1006 0.1014 0.1017 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0923

* #####
* MA Arterial speed 3 mph
* File 1, Run 1, Scenario 194.
* #####

Calendar Year: 2016
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm

Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All
Veh										
GVWR:	<6000	>6000	(All)							
VMT Distribution:	0.2778	0.4263	0.1677		0.0370	0.0001	0.0015	0.0858	0.0037	1.0000

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0037	0.0036	0.0036	0.0036	0.0138	-----	-----	-----	0.0205	0.0038
ECARBON:	-----	-----	-----	-----	0.0748	0.0058	0.0285	-----	0.0025	
OCARBON:	-----	-----	-----	-----	0.0211	0.0083	0.0145	-----	0.0013	
SO4:	0.0005	0.0006	0.0006	0.0006	0.0013	0.0002	0.0003	0.0009	0.0002	0.0006
Total Exhaust PM:	0.0042	0.0042	0.0042	0.0042	0.0151	0.0960	0.0143	0.0439	0.0207	0.0081
Brake:	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125
Tire:	0.0080	0.0080	0.0080	0.0080	0.0085	0.0080	0.0080	0.0248	0.0040	0.0094
Total PM:	0.0248	0.0248	0.0248	0.0248	0.0362	0.1166	0.0349	0.0813	0.0372	0.0301
SO2:	0.0066	0.0087	0.0115	0.0095	0.0163	0.0029	0.0052	0.0130	0.0033	0.0092
NH3:	0.1006	0.1014	0.1017	0.1015	0.0451	0.0068	0.0068	0.0270	0.0113	0.0923

* #####
* MA Arterial speed 4 mph
* File 1, Run 1, Scenario 195.
* #####

Calendar Year: 2016
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All
Veh										
GVWR:	<6000	>6000	(All)							
VMT Distribution:	0.2778	0.4263	0.1677		0.0370	0.0001	0.0015	0.0858	0.0037	1.0000

Composite Emission Factors (g/mi):

Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0080 0.0080 0.0248 0.0040 0.0094
Total PM: 0.0247 0.0248 0.0248 0.0248 0.0362 0.1166 0.0349 0.0813 0.0371
0.0301
SO2: 0.0067 0.0088 0.0115 0.0096 0.0161 0.0029 0.0052 0.0130 0.0033 0.0093
NH3: 0.1006 0.1014 0.1017 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0923

MA30_SUM.PM

* MOBILE6.2.03 (24-Sep-2003) *
* Input file: MA30_SUM.INP (file 1, run 1). *

* #####
* MA Freeway 2.71 mph (= minimum allowed freeway speed)
* File 1, Run 1, Scenario 1.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0034 0.0033 0.0033 0.0033 0.0080 ----- 0.0142 0.0033
ECARBON: ----- 0.0000 0.0034 0.0083 ----- 0.0007
OCARBON: ----- 0.0000 0.0049 0.0043 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0094 0.0000 0.0086 0.0135 0.0144
0.0050
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0000 0.0053 0.0053 0.0053 0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0000 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0112 0.0112 0.0113 0.0112 0.0169 0.0000 0.0159 0.0250 0.0207 0.0127
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* #####
* MA Freeway speed 3 mph
* File 1, Run 1, Scenario 2.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm

Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

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

VMT Distribution:	0.2607	0.4379	0.1723		0.0375	0.0000	0.0015	0.0864	0.0036	
	1.0000									

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0034	0.0033	0.0033	0.0033	0.0080	-----	-----	-----	0.0142	0.0033
ECARBON:	-----	-----	-----	-----	0.0000	0.0034	0.0083	-----	0.0007	
OCARBON:	-----	-----	-----	-----	0.0000	0.0049	0.0043	-----	0.0004	
SO4:	0.0005	0.0006	0.0006	0.0006	0.0014	0.0000	0.0003	0.0009	0.0002	0.0006
Total Exhaust PM:	0.0039	0.0039	0.0039	0.0039	0.0094	0.0000	0.0086	0.0135	0.0144	0.0050
0.0050										
Brake:	0.0053	0.0053	0.0053	0.0053	0.0053	0.0000	0.0053	0.0053	0.0053	0.0053
Tire:	0.0020	0.0020	0.0020	0.0020	0.0021	0.0000	0.0020	0.0062	0.0010	0.0024
Total PM:	0.0112	0.0112	0.0113	0.0112	0.0169	0.0000	0.0159	0.0250	0.0207	0.0127
SO2:	0.0064	0.0087	0.0115	0.0095	0.0163	0.0000	0.0052	0.0130	0.0033	0.0092
NH3:	0.0994	0.1012	0.1017	0.1013	0.0451	0.0000	0.0068	0.0270	0.0113	0.0918

* #####
* MA Freeway speed 4 mph
* File 1, Run 1, Scenario 3.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

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

VMT Distribution:	0.2607	0.4379	0.1723		0.0375	0.0000	0.0015	0.0864	0.0036	
	1.0000									

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0034	0.0033	0.0033	0.0033	0.0080	-----	-----	-----	0.0142	0.0033
ECARBON:	-----	-----	-----	-----	0.0000	0.0034	0.0083	-----	0.0007	
OCARBON:	-----	-----	-----	-----	0.0000	0.0049	0.0043	-----	0.0004	

SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0094 0.0000 0.0086 0.0135 0.0144
0.0050
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0000 0.0053 0.0053 0.0053 0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0000 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0112 0.0112 0.0113 0.0112 0.0169 0.0000 0.0159 0.0250 0.0207 0.0127
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

*****THROUGH*****

* #####
* MA Freeway speed 65 mph
* File 1, Run 1, Scenario 64.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
---------------	------	--------	--------	------	------	------	------	------	----	---------

GVWR:	<6000	>6000	(All)							
VMT Distribution:	0.2607	0.4379	0.1723		0.0375	0.0000	0.0015	0.0864	0.0036	1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0037 0.0035 0.0035 0.0035 0.0074 ----- 0.0142 0.0034
ECARBON: ----- 0.0000 0.0034 0.0083 ----- 0.0007
OCARBON: ----- 0.0000 0.0049 0.0043 ----- 0.0004
SO4: 0.0002 0.0004 0.0004 0.0004 0.0021 0.0000 0.0003 0.0009 0.0001 0.0005
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0095 0.0000 0.0086 0.0135 0.0143
0.0050
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0000 0.0053 0.0053 0.0053 0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0000 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0112 0.0112 0.0112 0.0112 0.0170 0.0000 0.0159 0.0250 0.0206 0.0127
SO2: 0.0065 0.0087 0.0115 0.0095 0.0161 0.0000 0.0052 0.0130 0.0033 0.0093
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* #####
* MA Arterial 2.5 mph (= minimum allowed arterial speed)

* File 1, Run 1, Scenario 65.

* #####

Calendar Year: 2030

Month: July

Gasoline Fuel Sulfur Content: 30. ppm

Diesel Fuel Sulfur Content: 15. ppm

Particle Size Cutoff: 2.50 Microns

Reformulated Gas: Yes

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

VMT Distribution:	0.2607	0.4379	0.1723		0.0375	0.0000	0.0015	0.0864	0.0036	1.0000
-------------------	--------	--------	--------	--	--------	--------	--------	--------	--------	--------

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0034	0.0033	0.0033	0.0033	0.0081	-----	-----	-----	0.0142	0.0033
ECARBON:	-----	-----	-----	-----	0.0000	0.0034	0.0083	-----	0.0007	
OCARBON:	-----	-----	-----	-----	0.0000	0.0049	0.0043	-----	0.0004	
SO4:	0.0005	0.0006	0.0006	0.0006	0.0013	0.0000	0.0003	0.0009	0.0002	0.0006
Total Exhaust PM:	0.0039	0.0039	0.0039	0.0039	0.0094	0.0000	0.0086	0.0135	0.0144	0.0050
Brake:	0.0053	0.0053	0.0053	0.0053	0.0053	0.0000	0.0053	0.0053	0.0053	0.0053
Tire:	0.0020	0.0020	0.0020	0.0020	0.0021	0.0000	0.0020	0.0062	0.0010	0.0024
Total PM:	0.0112	0.0112	0.0113	0.0113	0.0169	0.0000	0.0159	0.0250	0.0207	0.0127
SO2:	0.0064	0.0087	0.0115	0.0095	0.0163	0.0000	0.0052	0.0130	0.0033	0.0092
NH3:	0.0994	0.1012	0.1017	0.1013	0.0451	0.0000	0.0068	0.0270	0.0113	0.0918

* #####

* MA Arterial speed 3 mph

* File 1, Run 1, Scenario 66.

* #####

Calendar Year: 2030

Month: July

Gasoline Fuel Sulfur Content: 30. ppm

Diesel Fuel Sulfur Content: 15. ppm

Particle Size Cutoff: 2.50 Microns

Reformulated Gas: Yes

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

VMT Distribution:	0.2607	0.4379	0.1723		0.0375	0.0000	0.0015	0.0864	0.0036	1.0000
-------------------	--------	--------	--------	--	--------	--------	--------	--------	--------	--------

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0034 0.0033 0.0033 0.0033 0.0081 ----- 0.0142 0.0033
ECARBON: ----- 0.0000 0.0034 0.0083 ----- 0.0007
OCARBON: ----- 0.0000 0.0049 0.0043 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0013 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0094 0.0000 0.0086 0.0135 0.0144
0.0050
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0000 0.0053 0.0053 0.0053 0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0000 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0112 0.0112 0.0113 0.0113 0.0169 0.0000 0.0159 0.0250 0.0207 0.0127
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* #####
* MA Arterial speed 4 mph
* File 1, Run 1, Scenario 67.
* #####

Calendar Year: 2030

Month: July

Gasoline Fuel Sulfur Content: 30. ppm

Diesel Fuel Sulfur Content: 15. ppm

Particle Size Cutoff: 2.50 Microns

Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0034 0.0033 0.0033 0.0033 0.0081 ----- 0.0142 0.0033
ECARBON: ----- 0.0000 0.0034 0.0083 ----- 0.0007
OCARBON: ----- 0.0000 0.0049 0.0043 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0013 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0094 0.0000 0.0086 0.0135 0.0144
0.0050
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0000 0.0053 0.0053 0.0053 0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0000 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0112 0.0112 0.0113 0.0113 0.0169 0.0000 0.0159 0.0250 0.0207 0.0127
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

*****THROUGH*****

* #####
* MA Arterial speed 65 mph
* File 1, Run 1, Scenario 128.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HGTV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:	<6000	>6000	(All)							
VMT Distribution:	0.2607	0.4379	0.1723		0.0375	0.0000	0.0015	0.0864	0.0036	1.0000

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0037	0.0035	0.0035	0.0035	0.0074	-----	-----	-----	0.0142	0.0034
ECARBON:	-----	-----	-----	-----	0.0000	0.0034	0.0083	-----	0.0007	
OCARBON:	-----	-----	-----	-----	0.0000	0.0049	0.0043	-----	0.0004	
SO4:	0.0002	0.0004	0.0004	0.0004	0.0021	0.0000	0.0003	0.0009	0.0001	0.0005
Total Exhaust PM:	0.0039	0.0039	0.0039	0.0039	0.0095	0.0000	0.0086	0.0135	0.0143	0.0050
Brake:	0.0053	0.0053	0.0053	0.0053	0.0053	0.0000	0.0053	0.0053	0.0053	0.0053
Tire:	0.0020	0.0020	0.0020	0.0020	0.0021	0.0000	0.0020	0.0062	0.0010	0.0024
Total PM:	0.0112	0.0112	0.0112	0.0112	0.0170	0.0000	0.0159	0.0250	0.0206	0.0127
SO2:	0.0065	0.0087	0.0115	0.0095	0.0161	0.0000	0.0052	0.0130	0.0033	0.0093
NH3:	0.0994	0.1012	0.1017	0.1013	0.0451	0.0000	0.0068	0.0270	0.0113	0.0918

* #####
* MA Freeway 2.71 mph (= minimum allowed freeway speed)
* File 1, Run 1, Scenario 129.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0037 0.0036 0.0036 0.0036 0.0088 ----- 0.0205 0.0036
ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0207
0.0054
Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
Total PM: 0.0247 0.0247 0.0247 0.0247 0.0313 0.0000 0.0299 0.0520 0.0372 0.0274
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* #####
* MA Freeway speed 3 mph
* File 1, Run 1, Scenario 130.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0037 0.0036 0.0036 0.0036 0.0088 ----- 0.0205 0.0036
ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0207
0.0054

Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
Total PM: 0.0247 0.0247 0.0247 0.0247 0.0313 0.0000 0.0299 0.0520 0.0372 0.0274
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* MA Freeway speed 4 mph
* File 1, Run 1, Scenario 131.
#####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0037 0.0036 0.0036 0.0036 0.0088 ----- 0.0205 0.0036
ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0207
0.0054
Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
Total PM: 0.0247 0.0247 0.0247 0.0247 0.0313 0.0000 0.0299 0.0520 0.0372 0.0274
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

*****THROUGH*****

* MA Freeway speed 65 mph
* File 1, Run 1, Scenario 192.
#####

Calendar Year: 2030
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 10.00 Microns
 Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036 1.0000

 Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0040	0.0038	0.0038	0.0038	0.0081	-----	-----	-----	0.0205	0.0037
ECARBON:	-----	-----	-----	-----	0.0000	0.0037	0.0090	-----	0.0008	
OCARBON:	-----	-----	-----	-----	0.0000	0.0053	0.0046	-----	0.0004	
SO4:	0.0002	0.0004	0.0004	0.0004	0.0021	0.0000	0.0003	0.0009	0.0001	0.0005
Total Exhaust PM:	0.0042	0.0042	0.0042	0.0042	0.0102	0.0000	0.0093	0.0146	0.0206	0.0054
Brake:	0.0125	0.0125	0.0125	0.0125	0.0125	0.0000	0.0125	0.0125	0.0125	0.0125
Tire:	0.0080	0.0080	0.0080	0.0080	0.0085	0.0000	0.0080	0.0248	0.0040	0.0095
Total PM:	0.0247	0.0247	0.0247	0.0247	0.0313	0.0000	0.0299	0.0520	0.0371	0.0274
SO2:	0.0065	0.0087	0.0115	0.0095	0.0161	0.0000	0.0052	0.0130	0.0033	0.0093
NH3:	0.0994	0.1012	0.1017	0.1013	0.0451	0.0000	0.0068	0.0270	0.0113	0.0918

 * #####
 * MA Arterial 2.5 mph (= minimum allowed arterial speed)
 * File 1, Run 1, Scenario 193.
 * #####

Calendar Year: 2030
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 10.00 Microns
 Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036 1.0000

 Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
-------	--------	--------	--------	--------	--------	-------	-------	-------	--------	--------

GASPM: 0.0037 0.0036 0.0036 0.0036 0.0088 ----- 0.0205 0.0036
 ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
 OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
 SO4: 0.0005 0.0006 0.0006 0.0006 0.0013 0.0000 0.0003 0.0009 0.0002 0.0006
 Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0207
 0.0054
 Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
 Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
 Total PM: 0.0247 0.0247 0.0247 0.0247 0.0312 0.0000 0.0299 0.0520 0.0372 0.0274
 SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
 NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* #####
 * MA Arterial speed 3 mph
 * File 1, Run 1, Scenario 194.
 * #####

Calendar Year: 2030
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 10.00 Microns
 Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
 1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
 GASPM: 0.0037 0.0036 0.0036 0.0036 0.0088 ----- 0.0205 0.0036
 ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
 OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
 SO4: 0.0005 0.0006 0.0006 0.0006 0.0013 0.0000 0.0003 0.0009 0.0002 0.0006
 Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0207
 0.0054
 Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
 Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
 Total PM: 0.0247 0.0247 0.0247 0.0247 0.0312 0.0000 0.0299 0.0520 0.0372 0.0274
 SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
 NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* #####
* MA Arterial speed 4 mph
* File 1, Run 1, Scenario 195.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:	<6000	>6000	(All)							
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
VMT Distribution:	0.2607	0.4379	0.1723		0.0375	0.0000	0.0015	0.0864	0.0036	
1.0000										

Composite Emission Factors (g/mi):
Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0037 0.0036 0.0036 0.0036 0.0088 ----- 0.0205 0.0036
ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0013 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0207
0.0054
Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
Total PM: 0.0247 0.0247 0.0247 0.0247 0.0312 0.0000 0.0299 0.0520 0.0372 0.0274
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

*****THROUGH*****

* #####
* MA Arterial speed 65 mph
* File 1, Run 1, Scenario 256.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
---------------	------	--------	--------	------	------	------	------	------	----	---------

GVWR: <6000 >6000 (All)

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0040 0.0038 0.0038 0.0038 0.0081 ----- 0.0205 0.0037
ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
SO4: 0.0002 0.0004 0.0004 0.0004 0.0021 0.0000 0.0003 0.0009 0.0001 0.0005
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0206
0.0054
Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
Total PM: 0.0247 0.0247 0.0247 0.0247 0.0313 0.0000 0.0299 0.0520 0.0371 0.0274
SO2: 0.0065 0.0087 0.0115 0.0095 0.0161 0.0000 0.0052 0.0130 0.0033 0.0093
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918



Technical Report
Air Quality
Draft

MOBILE6.2 Output Files

- Particulate Matter 2.5 (PM_{2.5})



Technical Report
Air Quality
Draft

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2008 PM_{2.5} Output File - Freeway

* MOBILE6.2.03 (24-Sep-2003) *
 * Input file: MA08_SUM.INP (file 1, run 1). *

* #####
 * MA Freeway 2.71 mph (= minimum allowed freeway speed)

* File 1, Run 1, Scenario 1.
 * #####

Calendar Year: 2008
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 2.50 Microns
 Reformulated Gas: Yes

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
 Veh

GVWR: <6000 >6000 (All)

 VMT Distribution: 0.3513 0.3732 0.1467 0.0366 0.0005 0.0014 0.0862 0.0040
 1.0000

 Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
 GASPM: 0.0037 0.0036 0.0036 0.0036 0.0381 ----- 0.0142 0.0046
 ECARBON: ----- 0.0991 0.0255 0.1208 ----- 0.0105
 OCARBON: ----- 0.0279 0.0367 0.0602 ----- 0.0053
 SO4: 0.0005 0.0006 0.0006 0.0006 0.0012 0.0002 0.0003 0.0009 0.0002 0.0006
 Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0393 0.1272 0.0625 0.1819 0.0144
 0.0210
 Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053
 0.0053
 Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0020 0.0020 0.0062 0.0010 0.0024
 Total PM: 0.0115 0.0116 0.0115 0.0116 0.0468 0.1345 0.0698 0.1934 0.0207
 0.0287
 SO2: 0.0067 0.0087 0.0115 0.0095 0.0164 0.0030 0.0052 0.0131 0.0033 0.0091
 NH3: 0.1015 0.1015 0.1015 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
 0.0925

* #####
 * MA Freeway speed 3 mph
 * File 1, Run 1, Scenario 2.
 * #####

Calendar Year: 2008
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 2.50 Microns
 Reformulated Gas: Yes

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

VMT Distribution: 0.3513 0.3732 0.1467 0.0366 0.0005 0.0014 0.0862 0.0040
 1.0000

 Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0037	0.0036	0.0036	0.0036	0.0381	-----	-----	-----	0.0142	0.0046
ECARBON:	-----	-----	-----	-----	0.0991	0.0255	0.1208	-----	0.0105	
OCARBON:	-----	-----	-----	-----	0.0279	0.0367	0.0602	-----	0.0053	
SO4:	0.0005	0.0006	0.0006	0.0006	0.0012	0.0002	0.0003	0.0009	0.0002	0.0006
Total Exhaust PM:	0.0042	0.0042	0.0042	0.0042	0.0393	0.1272	0.0625	0.1819	0.0144	
0.0210										
Brake:	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	
0.0053										
Tire:	0.0020	0.0020	0.0020	0.0020	0.0021	0.0020	0.0020	0.0062	0.0010	0.0024
Total PM:	0.0115	0.0116	0.0115	0.0116	0.0468	0.1345	0.0698	0.1934	0.0207	
0.0287										
SO2:	0.0067	0.0087	0.0115	0.0095	0.0164	0.0030	0.0052	0.0131	0.0033	0.0091
NH3:	0.1015	0.1015	0.1015	0.1015	0.0451	0.0068	0.0068	0.0270	0.0113	
0.0925										

 * #####
 * MA Freeway speed 4 mph
 * File 1, Run 1, Scenario 3.
 * #####

Calendar Year: 2008
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 2.50 Microns
 Reformulated Gas: Yes

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Veh

GVWR: <6000 >6000 (All)

VMT Distribution: 0.3513 0.3732 0.1467 0.0366 0.0005 0.0014 0.0862 0.0040
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0037 0.0036 0.0036 0.0036 0.0381 ----- 0.0142 0.0046
ECARBON: ----- 0.0991 0.0255 0.1208 ----- 0.0105
OCARBON: ----- 0.0279 0.0367 0.0602 ----- 0.0053
SO4: 0.0005 0.0006 0.0006 0.0006 0.0012 0.0002 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0393 0.1272 0.0625 0.1819 0.0144
0.0210
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053
0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0020 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0115 0.0116 0.0115 0.0116 0.0468 0.1345 0.0698 0.1934 0.0207
0.0287
SO2: 0.0067 0.0087 0.0115 0.0095 0.0164 0.0030 0.0052 0.0131 0.0033 0.0091
NH3: 0.1015 0.1015 0.1015 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0925

THROUGH

* #####
* MA Freeway speed 65 mph
* File 1, Run 1, Scenario 64.
* #####

Calendar Year: 2008
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Veh

GVWR: <6000 >6000 (All)

VMT Distribution: 0.3513 0.3732 0.1467 0.0366 0.0005 0.0014 0.0862 0.0040
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0038 0.0037 0.0037 0.0037 0.0379 ----- 0.0142 0.0047
ECARBON: ----- 0.0991 0.0255 0.1208 ----- 0.0105
OCARBON: ----- 0.0279 0.0367 0.0602 ----- 0.0053
SO4: 0.0002 0.0004 0.0004 0.0004 0.0017 0.0002 0.0003 0.0009 0.0001 0.0004
Total Exhaust PM: 0.0040 0.0041 0.0041 0.0041 0.0396 0.1272 0.0625 0.1819 0.0143
0.0209
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053
0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0020 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0113 0.0115 0.0115 0.0115 0.0471 0.1345 0.0698 0.1934 0.0206
0.0286
SO2: 0.0068 0.0088 0.0115 0.0096 0.0163 0.0030 0.0052 0.0131 0.0033 0.0091
NH3: 0.1015 0.1015 0.1015 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0925

2008 PM_{2.5} Output File - Arterial

* #####
* MA Arterial 2.5 mph (= minimum allowed arterial speed)
* File 1, Run 1, Scenario 65.
* #####

Calendar Year: 2008
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Veh

GVWR: <6000 >6000 (All)

VMT Distribution: 0.3513 0.3732 0.1467 0.0366 0.0005 0.0014 0.0862 0.0040
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0037 0.0036 0.0036 0.0036 0.0381 ----- 0.0142 0.0046
ECARBON: ----- 0.0991 0.0255 0.1208 ----- 0.0105
OCARBON: ----- 0.0279 0.0367 0.0602 ----- 0.0053
SO4: 0.0005 0.0006 0.0006 0.0006 0.0012 0.0002 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0393 0.1272 0.0625 0.1819 0.0144
0.0210
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053
0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0020 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0115 0.0116 0.0115 0.0116 0.0468 0.1345 0.0698 0.1934 0.0207
0.0287
SO2: 0.0067 0.0087 0.0115 0.0095 0.0164 0.0030 0.0052 0.0131 0.0033 0.0090
NH3: 0.1015 0.1015 0.1015 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0925

* #####
* MA Arterial speed 3 mph
* File 1, Run 1, Scenario 66.
* #####

Calendar Year: 2008
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. Ppm

Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All
Veh										
GVWR:	<6000	>6000	(All)							
VMT Distribution:	0.3513	0.3732	0.1467		0.0366	0.0005	0.0014	0.0862	0.0040	1.0000

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0037	0.0036	0.0036	0.0036	0.0381	-----	-----	-----	0.0142	0.0046
ECARBON:	-----	-----	-----	-----	0.0991	0.0255	0.1208	-----	0.0105	
OCARBON:	-----	-----	-----	-----	0.0279	0.0367	0.0602	-----	0.0053	
SO4:	0.0005	0.0006	0.0006	0.0006	0.0012	0.0002	0.0003	0.0009	0.0002	0.0006
Total Exhaust PM:	0.0042	0.0042	0.0042	0.0042	0.0393	0.1272	0.0625	0.1819	0.0144	0.0210
Brake:	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053
Tire:	0.0020	0.0020	0.0020	0.0020	0.0021	0.0020	0.0020	0.0062	0.0010	0.0024
Total PM:	0.0115	0.0116	0.0115	0.0116	0.0468	0.1345	0.0698	0.1934	0.0207	0.0287
SO2:	0.0067	0.0087	0.0115	0.0095	0.0164	0.0030	0.0052	0.0131	0.0033	0.0090
NH3:	0.1015	0.1015	0.1015	0.1015	0.0451	0.0068	0.0068	0.0270	0.0113	0.0925

* #####
* MA Arterial speed 4 mph
* File 1, Run 1, Scenario 67.
* #####

Calendar Year: 2008
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All
Veh										
GVWR:	<6000	>6000	(All)							
VMT Distribution:	0.3513	0.3732	0.1467		0.0366	0.0005	0.0014	0.0862	0.0040	1.0000

Composite Emission Factors (g/mi):

Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0080 0.0080 0.0247 0.0040 0.0094
Total PM: 0.0249 0.0250 0.0250 0.0250 0.0651 0.1588 0.0884 0.2349 0.0371
0.0447
SO2: 0.0068 0.0088 0.0115 0.0096 0.0163 0.0030 0.0052 0.0131 0.0033 0.0091
NH3: 0.1015 0.1015 0.1015 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0925

2016 PM_{2.5} Output File – Freeway

* MOBILE6.2.03 (24-Sep-2003) *
* Input file: MA16_SUM.INP (file 1, run 1). *

* #####
* MA Freeway 2.71 mph (= minimum allowed freeway speed)

* File 1, Run 1, Scenario 1.
* #####

Calendar Year: 2016
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

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

VMT Distribution: 0.2778 0.4263 0.1677 0.0370 0.0001 0.0015 0.0858 0.0037
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0035 0.0034 0.0034 0.0034 0.0124 ----- 0.0142 0.0035
ECARBON: ----- 0.0688 0.0053 0.0262 ----- 0.0023
OCARBON: ----- 0.0194 0.0076 0.0134 ----- 0.0012
SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0002 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0138 0.0884 0.0132 0.0405 0.0144
0.0075
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053
0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0020 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0113 0.0113 0.0113 0.0113 0.0213 0.0957 0.0205 0.0520 0.0207
0.0152
SO2: 0.0066 0.0087 0.0115 0.0095 0.0163 0.0029 0.0052 0.0130 0.0033 0.0092
NH3: 0.1006 0.1014 0.1017 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0923

* #####
* MA Freeway speed 3 mph
* File 1, Run 1, Scenario 2.

* #####

Calendar Year: 2016
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Veh
GVWR: <6000 >6000 (All)
VMT Distribution: 0.2778 0.4263 0.1677 0.0370 0.0001 0.0015 0.0858 0.0037
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0035 0.0034 0.0034 0.0034 0.0124 ----- 0.0142 0.0035
ECARBON: ----- 0.0688 0.0053 0.0262 ----- 0.0023
OCARBON: ----- 0.0194 0.0076 0.0134 ----- 0.0012
SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0002 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0138 0.0884 0.0132 0.0405 0.0144
0.0075
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053
0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0020 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0113 0.0113 0.0113 0.0113 0.0213 0.0957 0.0205 0.0520 0.0207
0.0152
SO2: 0.0066 0.0087 0.0115 0.0095 0.0163 0.0029 0.0052 0.0130 0.0033 0.0092
NH3: 0.1006 0.1014 0.1017 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0923

* #####

* MA Freeway speed 4 mph
* File 1, Run 1, Scenario 3.

* #####

Calendar Year: 2016
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Veh

GVWR:	<6000	>6000	(All)						
VMT Distribution:	0.2778	0.4263	0.1677	0.0370	0.0001	0.0015	0.0858	0.0037	1.0000

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0035	0.0034	0.0034	0.0034	0.0124	-----	-----	-----	0.0142	0.0035
ECARBON:	-----	-----	-----	-----	0.0688	0.0053	0.0262	-----	0.0023	
OCARBON:	-----	-----	-----	-----	0.0194	0.0076	0.0134	-----	0.0012	
SO4:	0.0005	0.0006	0.0006	0.0006	0.0014	0.0002	0.0003	0.0009	0.0002	0.0006
Total Exhaust PM:	0.0039	0.0039	0.0039	0.0039	0.0138	0.0884	0.0132	0.0405	0.0144	0.0075
Brake:	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053
Tire:	0.0020	0.0020	0.0020	0.0020	0.0021	0.0020	0.0020	0.0062	0.0010	0.0024
Total PM:	0.0113	0.0113	0.0113	0.0113	0.0213	0.0957	0.0205	0.0520	0.0207	0.0152
SO2:	0.0066	0.0087	0.0115	0.0095	0.0163	0.0029	0.0052	0.0130	0.0033	0.0092
NH3:	0.1006	0.1014	0.1017	0.1015	0.0451	0.0068	0.0068	0.0270	0.0113	0.0923

THROUGH

* #####
* MA Freeway speed 65 mph
* File 1, Run 1, Scenario 64.
* #####

Calendar Year: 2016
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All
Veh										

GVWR:	<6000	>6000	(All)						
VMT Distribution:	0.2778	0.4263	0.1677	0.0370	0.0001	0.0015	0.0858	0.0037	1.0000

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0037	0.0035	0.0035	0.0035	0.0119	-----	-----	-----	0.0142	0.0036
ECARBON:	-----	-----	-----	-----	0.0688	0.0053	0.0262	-----	0.0023	

OCARBON: ----- 0.0194 0.0076 0.0134 ----- 0.0012
SO4: 0.0002 0.0004 0.0004 0.0004 0.0020 0.0002 0.0003 0.0009 0.0001 0.0005
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0140 0.0884 0.0132 0.0405 0.0143
0.0075
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053
0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0020 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0112 0.0113 0.0113 0.0113 0.0214 0.0957 0.0205 0.0520 0.0206
0.0152
SO2: 0.0067 0.0088 0.0115 0.0096 0.0161 0.0029 0.0052 0.0130 0.0033 0.0093
NH3: 0.1006 0.1014 0.1017 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0923

2016 PM_{2.5} Output File – Arterial

* #####
 * MA Arterial 2.5 mph (= minimum allowed arterial speed)
 * File 1, Run 1, Scenario 65.
 * #####

Calendar Year: 2016
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 2.50 Microns
 Reformulated Gas: Yes

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

VMT Distribution:	0.2778	0.4263	0.1677		0.0370	0.0001	0.0015	0.0858	0.0037	
-------------------	--------	--------	--------	--	--------	--------	--------	--------	--------	--

 Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0034	0.0033	0.0033	0.0033	0.0125	-----	-----	-----	0.0142	0.0035
ECARBON:	-----	-----	-----	-----	0.0688	0.0053	0.0262	-----	0.0023	
OCARBON:	-----	-----	-----	-----	0.0194	0.0076	0.0134	-----	0.0012	
SO4:	0.0005	0.0006	0.0006	0.0006	0.0013	0.0002	0.0003	0.0009	0.0002	0.0006
Total Exhaust PM:	0.0039	0.0039	0.0039	0.0039	0.0138	0.0884	0.0132	0.0405	0.0144	
0.0075										
Brake:	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053	0.0053
0.0053										
Tire:	0.0020	0.0020	0.0020	0.0020	0.0021	0.0020	0.0020	0.0062	0.0010	0.0024
Total PM:	0.0113	0.0113	0.0113	0.0113	0.0213	0.0957	0.0205	0.0520	0.0207	
0.0152										
SO2:	0.0066	0.0087	0.0115	0.0095	0.0163	0.0029	0.0052	0.0130	0.0033	0.0092
NH3:	0.1006	0.1014	0.1017	0.1015	0.0451	0.0068	0.0068	0.0270	0.0113	
0.0923										

 * #####
 * MA Arterial speed 3 mph
 * File 1, Run 1, Scenario 66.
 * #####

Calendar Year: 2016
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 2.50 Microns

Reformulated Gas: Yes

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Veh

GVWR: <6000 >6000 (All)

VMT Distribution: 0.2778 0.4263 0.1677 0.0370 0.0001 0.0015 0.0858 0.0037
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0034 0.0033 0.0033 0.0033 0.0125 ----- 0.0142 0.0035
ECARBON: ----- 0.0688 0.0053 0.0262 ----- 0.0023
OCARBON: ----- 0.0194 0.0076 0.0134 ----- 0.0012
SO4: 0.0005 0.0006 0.0006 0.0006 0.0013 0.0002 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0138 0.0884 0.0132 0.0405 0.0144
0.0075
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053
0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0020 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0113 0.0113 0.0113 0.0113 0.0213 0.0957 0.0205 0.0520 0.0207
0.0152
SO2: 0.0066 0.0087 0.0115 0.0095 0.0163 0.0029 0.0052 0.0130 0.0033 0.0092
NH3: 0.1006 0.1014 0.1017 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0923

* #####
* MA Arterial speed 4 mph
* File 1, Run 1, Scenario 67.
* #####

Calendar Year: 2016
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All
Veh

GVWR: <6000 >6000 (All)

VMT Distribution: 0.2778 0.4263 0.1677 0.0370 0.0001 0.0015 0.0858 0.0037
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000

GASPM: 0.0034 0.0033 0.0033 0.0033 0.0125 ----- 0.0142 0.0035
 ECARBON: ----- 0.0688 0.0053 0.0262 ----- 0.0023
 OCARBON: ----- 0.0194 0.0076 0.0134 ----- 0.0012
 SO4: 0.0005 0.0006 0.0006 0.0006 0.0013 0.0002 0.0003 0.0009 0.0002 0.0006
 Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0138 0.0884 0.0132 0.0405 0.0144
 0.0075
 Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053
 0.0053
 Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0020 0.0020 0.0062 0.0010 0.0024
 Total PM: 0.0113 0.0113 0.0113 0.0113 0.0213 0.0957 0.0205 0.0520 0.0207
 0.0152
 SO2: 0.0066 0.0087 0.0115 0.0095 0.0163 0.0029 0.0052 0.0130 0.0033 0.0092
 NH3: 0.1006 0.1014 0.1017 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
 0.0923

 THROUGH

* #####
 * MA Arterial speed 65 mph
 * File 1, Run 1, Scenario 128.
 * #####

Calendar Year: 2016
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 2.50 Microns
 Reformulated Gas: Yes

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

 VMT Distribution: 0.2778 0.4263 0.1677 0.0370 0.0001 0.0015 0.0858 0.0037
 1.0000

 Composite Emission Factors (g/mi):
 Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
 GASPM: 0.0037 0.0035 0.0035 0.0035 0.0119 ----- 0.0142 0.0036
 ECARBON: ----- 0.0688 0.0053 0.0262 ----- 0.0023
 OCARBON: ----- 0.0194 0.0076 0.0134 ----- 0.0012
 SO4: 0.0002 0.0004 0.0004 0.0004 0.0020 0.0002 0.0003 0.0009 0.0001 0.0005
 Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0140 0.0884 0.0132 0.0405 0.0143
 0.0075
 Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053 0.0053
 0.0053
 Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0020 0.0020 0.0062 0.0010 0.0024

Total PM: 0.0112 0.0113 0.0113 0.0113 0.0214 0.0957 0.0205 0.0520 0.0206
0.0152
SO2: 0.0067 0.0088 0.0115 0.0096 0.0161 0.0029 0.0052 0.0130 0.0033 0.0093
NH3: 0.1006 0.1014 0.1017 0.1015 0.0451 0.0068 0.0068 0.0270 0.0113
0.0923

MA30_SUM.PM

* MOBILE6.2.03 (24-Sep-2003) *
* Input file: MA30_SUM.INP (file 1, run 1). *

* #####
* MA Freeway 2.71 mph (= minimum allowed freeway speed)
* File 1, Run 1, Scenario 1.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
1.0000

Composite Emission Factors (g/mi):
Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0034 0.0033 0.0033 0.0033 0.0080 ----- 0.0142 0.0033
ECARBON: ----- 0.0000 0.0034 0.0083 ----- 0.0007
OCARBON: ----- 0.0000 0.0049 0.0043 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0094 0.0000 0.0086 0.0135 0.0144
0.0050
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0000 0.0053 0.0053 0.0053 0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0000 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0112 0.0112 0.0113 0.0112 0.0169 0.0000 0.0159 0.0250 0.0207 0.0127
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* #####
* MA Freeway speed 3 mph
* File 1, Run 1, Scenario 2.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm

Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

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

VMT Distribution:	0.2607	0.4379	0.1723		0.0375	0.0000	0.0015	0.0864	0.0036	
	1.0000									

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0034	0.0033	0.0033	0.0033	0.0080	-----	-----	-----	0.0142	0.0033
ECARBON:	-----	-----	-----	-----	0.0000	0.0034	0.0083	-----	0.0007	
OCARBON:	-----	-----	-----	-----	0.0000	0.0049	0.0043	-----	0.0004	
SO4:	0.0005	0.0006	0.0006	0.0006	0.0014	0.0000	0.0003	0.0009	0.0002	0.0006
Total Exhaust PM:	0.0039	0.0039	0.0039	0.0039	0.0094	0.0000	0.0086	0.0135	0.0144	0.0050
0.0050										
Brake:	0.0053	0.0053	0.0053	0.0053	0.0053	0.0000	0.0053	0.0053	0.0053	0.0053
Tire:	0.0020	0.0020	0.0020	0.0020	0.0021	0.0000	0.0020	0.0062	0.0010	0.0024
Total PM:	0.0112	0.0112	0.0113	0.0112	0.0169	0.0000	0.0159	0.0250	0.0207	0.0127
SO2:	0.0064	0.0087	0.0115	0.0095	0.0163	0.0000	0.0052	0.0130	0.0033	0.0092
NH3:	0.0994	0.1012	0.1017	0.1013	0.0451	0.0000	0.0068	0.0270	0.0113	0.0918

* #####
* MA Freeway speed 4 mph
* File 1, Run 1, Scenario 3.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

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

VMT Distribution:	0.2607	0.4379	0.1723		0.0375	0.0000	0.0015	0.0864	0.0036	
	1.0000									

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0034	0.0033	0.0033	0.0033	0.0080	-----	-----	-----	0.0142	0.0033
ECARBON:	-----	-----	-----	-----	0.0000	0.0034	0.0083	-----	0.0007	
OCARBON:	-----	-----	-----	-----	0.0000	0.0049	0.0043	-----	0.0004	

SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0094 0.0000 0.0086 0.0135 0.0144
0.0050
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0000 0.0053 0.0053 0.0053 0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0000 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0112 0.0112 0.0113 0.0112 0.0169 0.0000 0.0159 0.0250 0.0207 0.0127
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

*****THROUGH*****

* #####
* MA Freeway speed 65 mph
* File 1, Run 1, Scenario 64.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0037 0.0035 0.0035 0.0035 0.0074 ----- 0.0142 0.0034
ECARBON: ----- 0.0000 0.0034 0.0083 ----- 0.0007
OCARBON: ----- 0.0000 0.0049 0.0043 ----- 0.0004
SO4: 0.0002 0.0004 0.0004 0.0004 0.0021 0.0000 0.0003 0.0009 0.0001 0.0005
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0095 0.0000 0.0086 0.0135 0.0143
0.0050
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0000 0.0053 0.0053 0.0053 0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0000 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0112 0.0112 0.0112 0.0112 0.0170 0.0000 0.0159 0.0250 0.0206 0.0127
SO2: 0.0065 0.0087 0.0115 0.0095 0.0161 0.0000 0.0052 0.0130 0.0033 0.0093
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* #####
* MA Arterial 2.5 mph (= minimum allowed arterial speed)

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0034 0.0033 0.0033 0.0033 0.0081 ----- 0.0142 0.0033
ECARBON: ----- 0.0000 0.0034 0.0083 ----- 0.0007
OCARBON: ----- 0.0000 0.0049 0.0043 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0013 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0094 0.0000 0.0086 0.0135 0.0144
0.0050
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0000 0.0053 0.0053 0.0053 0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0000 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0112 0.0112 0.0113 0.0113 0.0169 0.0000 0.0159 0.0250 0.0207 0.0127
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* #####
* MA Arterial speed 4 mph
* File 1, Run 1, Scenario 67.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0034 0.0033 0.0033 0.0033 0.0081 ----- 0.0142 0.0033
ECARBON: ----- 0.0000 0.0034 0.0083 ----- 0.0007
OCARBON: ----- 0.0000 0.0049 0.0043 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0013 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0039 0.0039 0.0039 0.0039 0.0094 0.0000 0.0086 0.0135 0.0144
0.0050
Brake: 0.0053 0.0053 0.0053 0.0053 0.0053 0.0000 0.0053 0.0053 0.0053 0.0053
Tire: 0.0020 0.0020 0.0020 0.0020 0.0021 0.0000 0.0020 0.0062 0.0010 0.0024
Total PM: 0.0112 0.0112 0.0113 0.0113 0.0169 0.0000 0.0159 0.0250 0.0207 0.0127
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

*****THROUGH*****

* #####
* MA Arterial speed 65 mph
* File 1, Run 1, Scenario 128.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 2.50 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HGTV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:	<6000	>6000	(All)							
VMT Distribution:	0.2607	0.4379	0.1723		0.0375	0.0000	0.0015	0.0864	0.0036	1.0000

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0037	0.0035	0.0035	0.0035	0.0074	-----	-----	-----	0.0142	0.0034
ECARBON:	-----	-----	-----	-----	0.0000	0.0034	0.0083	-----	0.0007	
OCARBON:	-----	-----	-----	-----	0.0000	0.0049	0.0043	-----	0.0004	
SO4:	0.0002	0.0004	0.0004	0.0004	0.0021	0.0000	0.0003	0.0009	0.0001	0.0005
Total Exhaust PM:	0.0039	0.0039	0.0039	0.0039	0.0095	0.0000	0.0086	0.0135	0.0143	0.0050
Brake:	0.0053	0.0053	0.0053	0.0053	0.0053	0.0000	0.0053	0.0053	0.0053	0.0053
Tire:	0.0020	0.0020	0.0020	0.0020	0.0021	0.0000	0.0020	0.0062	0.0010	0.0024
Total PM:	0.0112	0.0112	0.0112	0.0112	0.0170	0.0000	0.0159	0.0250	0.0206	0.0127
SO2:	0.0065	0.0087	0.0115	0.0095	0.0161	0.0000	0.0052	0.0130	0.0033	0.0093
NH3:	0.0994	0.1012	0.1017	0.1013	0.0451	0.0000	0.0068	0.0270	0.0113	0.0918

* #####
* MA Freeway 2.71 mph (= minimum allowed freeway speed)
* File 1, Run 1, Scenario 129.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0037 0.0036 0.0036 0.0036 0.0088 ----- 0.0205 0.0036
ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0207
0.0054
Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
Total PM: 0.0247 0.0247 0.0247 0.0247 0.0313 0.0000 0.0299 0.0520 0.0372 0.0274
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* #####
* MA Freeway speed 3 mph
* File 1, Run 1, Scenario 130.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0037 0.0036 0.0036 0.0036 0.0088 ----- 0.0205 0.0036
ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0207
0.0054

Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
Total PM: 0.0247 0.0247 0.0247 0.0247 0.0313 0.0000 0.0299 0.0520 0.0372 0.0274
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* MA Freeway speed 4 mph
* File 1, Run 1, Scenario 131.
#####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0037 0.0036 0.0036 0.0036 0.0088 ----- 0.0205 0.0036
ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0014 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0207
0.0054
Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
Total PM: 0.0247 0.0247 0.0247 0.0247 0.0313 0.0000 0.0299 0.0520 0.0372 0.0274
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

*****THROUGH*****

* MA Freeway speed 65 mph
* File 1, Run 1, Scenario 192.
#####

Calendar Year: 2030
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 10.00 Microns
 Reformulated Gas: Yes

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

 VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
 1.0000

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
GASPM:	0.0040	0.0038	0.0038	0.0038	0.0081	-----	-----	-----	0.0205	0.0037
ECARBON:	-----	-----	-----	-----	0.0000	0.0037	0.0090	-----	0.0008	
OCARBON:	-----	-----	-----	-----	0.0000	0.0053	0.0046	-----	0.0004	
SO4:	0.0002	0.0004	0.0004	0.0004	0.0021	0.0000	0.0003	0.0009	0.0001	0.0005
Total Exhaust PM:	0.0042	0.0042	0.0042	0.0042	0.0102	0.0000	0.0093	0.0146	0.0206	0.0054
Brake:	0.0125	0.0125	0.0125	0.0125	0.0125	0.0000	0.0125	0.0125	0.0125	0.0125
Tire:	0.0080	0.0080	0.0080	0.0080	0.0085	0.0000	0.0080	0.0248	0.0040	0.0095
Total PM:	0.0247	0.0247	0.0247	0.0247	0.0313	0.0000	0.0299	0.0520	0.0371	0.0274
SO2:	0.0065	0.0087	0.0115	0.0095	0.0161	0.0000	0.0052	0.0130	0.0033	0.0093
NH3:	0.0994	0.1012	0.1017	0.1013	0.0451	0.0000	0.0068	0.0270	0.0113	0.0918

 * #####
 * MA Arterial 2.5 mph (= minimum allowed arterial speed)
 * File 1, Run 1, Scenario 193.
 * #####

Calendar Year: 2030
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 10.00 Microns
 Reformulated Gas: Yes

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

 VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
 1.0000

Composite Emission Factors (g/mi):

Lead:	0.0000	0.0000	0.0000	0.0000	0.0000	-----	-----	-----	0.0000	0.0000
-------	--------	--------	--------	--------	--------	-------	-------	-------	--------	--------

GASPM: 0.0037 0.0036 0.0036 0.0036 0.0088 ----- 0.0205 0.0036
 ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
 OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
 SO4: 0.0005 0.0006 0.0006 0.0006 0.0013 0.0000 0.0003 0.0009 0.0002 0.0006
 Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0207
 0.0054
 Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
 Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
 Total PM: 0.0247 0.0247 0.0247 0.0247 0.0312 0.0000 0.0299 0.0520 0.0372 0.0274
 SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
 NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* #####
 * MA Arterial speed 3 mph
 * File 1, Run 1, Scenario 194.
 * #####

Calendar Year: 2030
 Month: July
 Gasoline Fuel Sulfur Content: 30. ppm
 Diesel Fuel Sulfur Content: 15. ppm
 Particle Size Cutoff: 10.00 Microns
 Reformulated Gas: Yes

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

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
 1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
 GASPM: 0.0037 0.0036 0.0036 0.0036 0.0088 ----- 0.0205 0.0036
 ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
 OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
 SO4: 0.0005 0.0006 0.0006 0.0006 0.0013 0.0000 0.0003 0.0009 0.0002 0.0006
 Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0207
 0.0054
 Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
 Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
 Total PM: 0.0247 0.0247 0.0247 0.0247 0.0312 0.0000 0.0299 0.0520 0.0372 0.0274
 SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
 NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

* #####
* MA Arterial speed 4 mph
* File 1, Run 1, Scenario 195.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:	<6000	>6000	(All)							
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
VMT Distribution:	0.2607	0.4379	0.1723		0.0375	0.0000	0.0015	0.0864	0.0036	
1.0000										

Composite Emission Factors (g/mi):
Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0037 0.0036 0.0036 0.0036 0.0088 ----- 0.0205 0.0036
ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
SO4: 0.0005 0.0006 0.0006 0.0006 0.0013 0.0000 0.0003 0.0009 0.0002 0.0006
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0207
0.0054
Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
Total PM: 0.0247 0.0247 0.0247 0.0247 0.0312 0.0000 0.0299 0.0520 0.0372 0.0274
SO2: 0.0064 0.0087 0.0115 0.0095 0.0163 0.0000 0.0052 0.0130 0.0033 0.0092
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918

*****THROUGH*****

* #####
* MA Arterial speed 65 mph
* File 1, Run 1, Scenario 256.
* #####

Calendar Year: 2030
Month: July
Gasoline Fuel Sulfur Content: 30. ppm
Diesel Fuel Sulfur Content: 15. ppm
Particle Size Cutoff: 10.00 Microns
Reformulated Gas: Yes

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
---------------	------	--------	--------	------	------	------	------	------	----	---------

GVWR: <6000 >6000 (All)

VMT Distribution: 0.2607 0.4379 0.1723 0.0375 0.0000 0.0015 0.0864 0.0036
1.0000

Composite Emission Factors (g/mi):

Lead: 0.0000 0.0000 0.0000 0.0000 0.0000 ----- 0.0000 0.0000
GASPM: 0.0040 0.0038 0.0038 0.0038 0.0081 ----- 0.0205 0.0037
ECARBON: ----- 0.0000 0.0037 0.0090 ----- 0.0008
OCARBON: ----- 0.0000 0.0053 0.0046 ----- 0.0004
SO4: 0.0002 0.0004 0.0004 0.0004 0.0021 0.0000 0.0003 0.0009 0.0001 0.0005
Total Exhaust PM: 0.0042 0.0042 0.0042 0.0042 0.0102 0.0000 0.0093 0.0146 0.0206
0.0054
Brake: 0.0125 0.0125 0.0125 0.0125 0.0125 0.0000 0.0125 0.0125 0.0125 0.0125
Tire: 0.0080 0.0080 0.0080 0.0080 0.0085 0.0000 0.0080 0.0248 0.0040 0.0095
Total PM: 0.0247 0.0247 0.0247 0.0247 0.0313 0.0000 0.0299 0.0520 0.0371 0.0274
SO2: 0.0065 0.0087 0.0115 0.0095 0.0161 0.0000 0.0052 0.0130 0.0033 0.0093
NH3: 0.0994 0.1012 0.1017 0.1013 0.0451 0.0000 0.0068 0.0270 0.0113 0.0918



Hot Spot: Microscale (Local) Analysis

- Intersection Receptor Maps
- CAL3QHC Input Files
 - Carbon Monoxide (CO)
 - Particulate Matter 10 (PM₁₀)
 - Particulate Matter 2.5 (PM_{2.5})
- CAL3QHC Input Files
 - Carbon Monoxide (CO)
 - Particulate Matter 10 (PM₁₀)
 - Particulate Matter 2.5 (PM_{2.5})
- Microscale Results
 - Carbon Monoxide (CO)
 - Particulate Matter 10 (PM₁₀)
 - Particulate Matter 2.5 (PM_{2.5})



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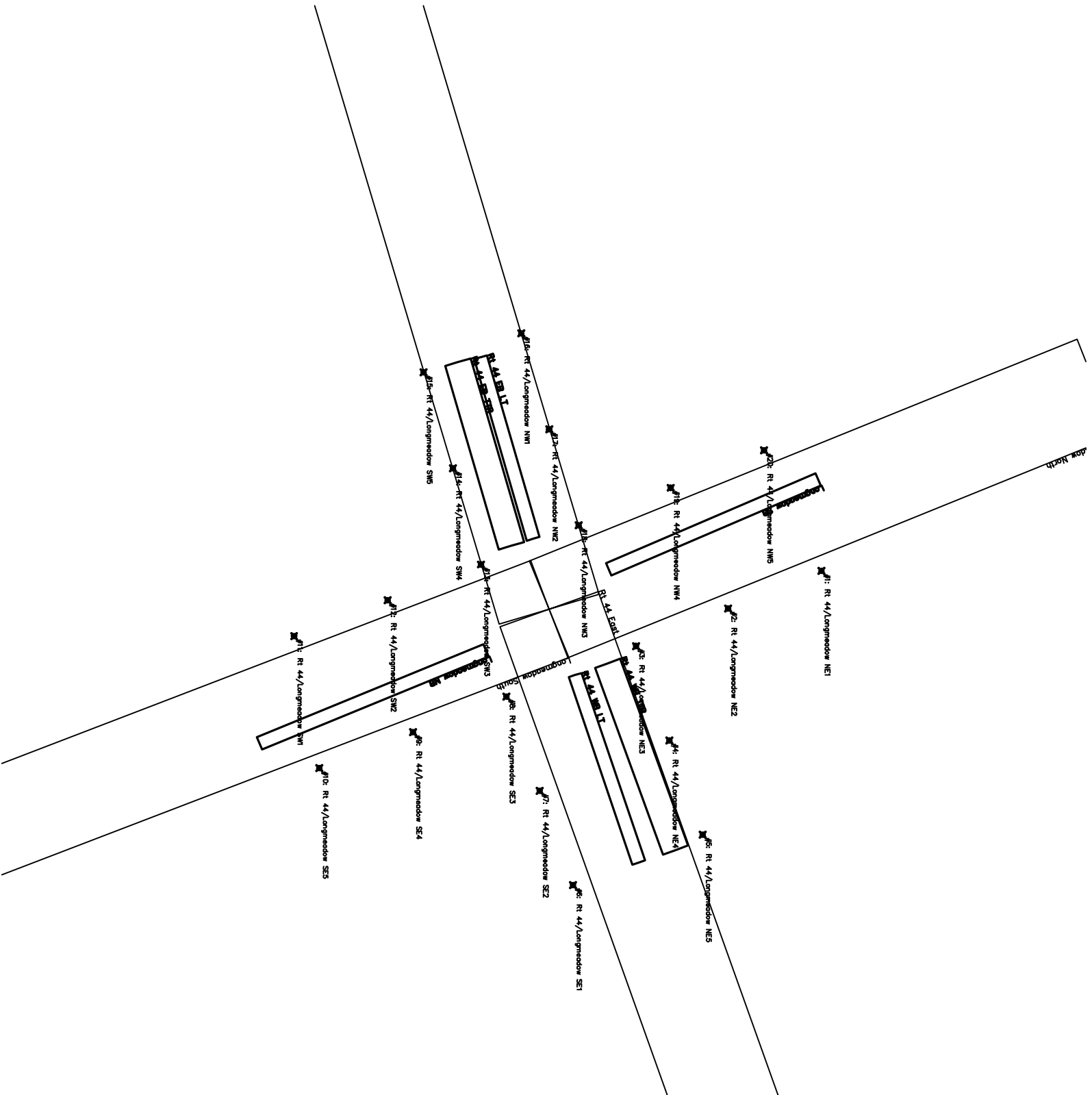
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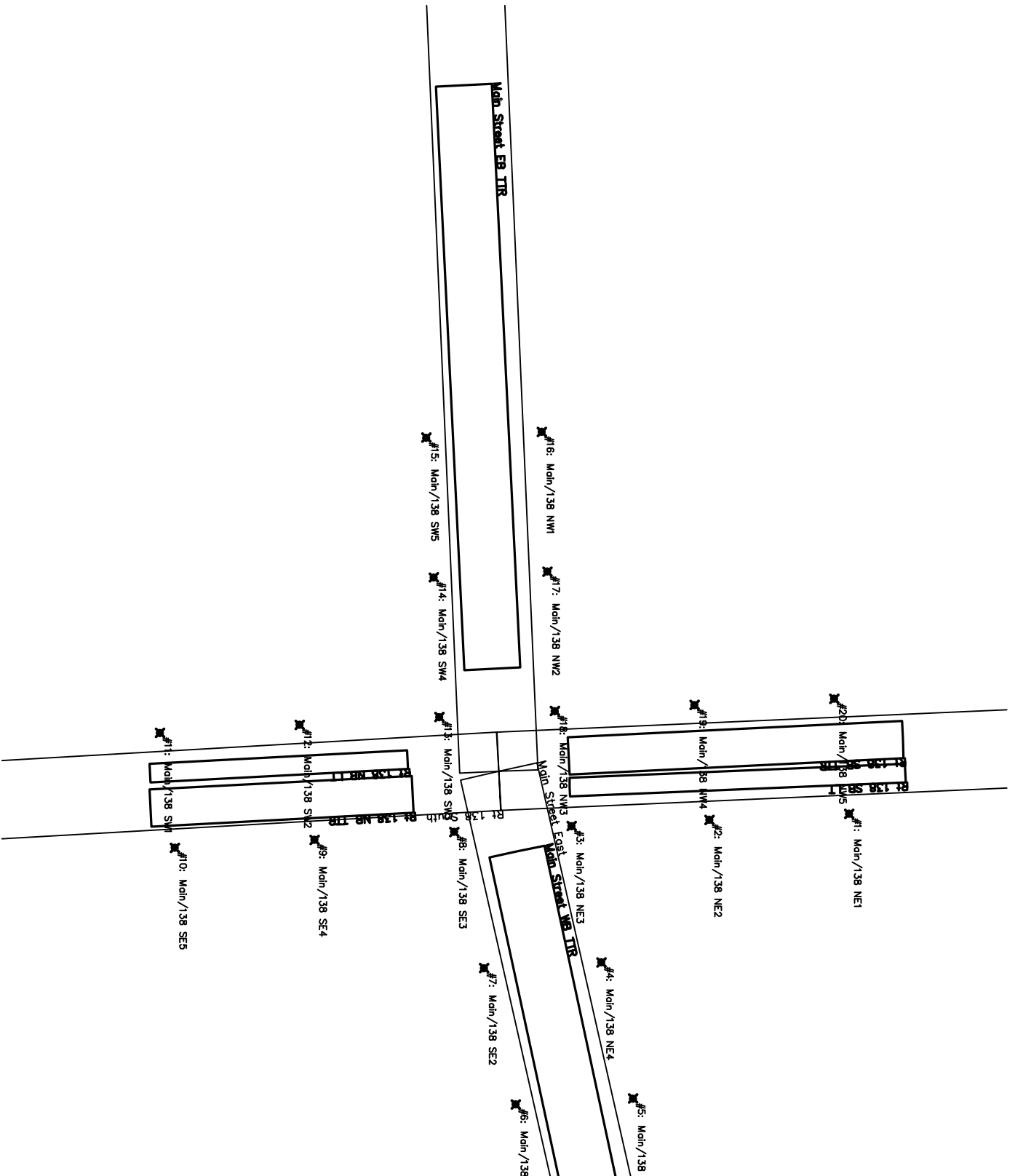
- Intersection Receptor Maps



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#5: Main/138

#4: Main/138 NE4

#3: Main/138 NE3

#18: Main/138 NW3

#17: Main/138 NW2

#16: Main/138 NW1

#15: Main/138 SW5

#14: Main/138 SW4

#13: Main/138 SW3

#9: Main/138 SE4

#12: Main/138 SW2

#13: Main/138 SW3

#11: Main/138 SW1

#10: Main/138 SE5

#11: Main/138 SW1

#1: Main/138 NE1

#20: Main/138 SW5

#19: Main/138 NW4

#2: Main/138 NE2

#7: Main/138 SE2

#8: Main/138 NW3

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#13: Main/138 SW3

#14: Main/138 SW4

#15: Main/138 SW5

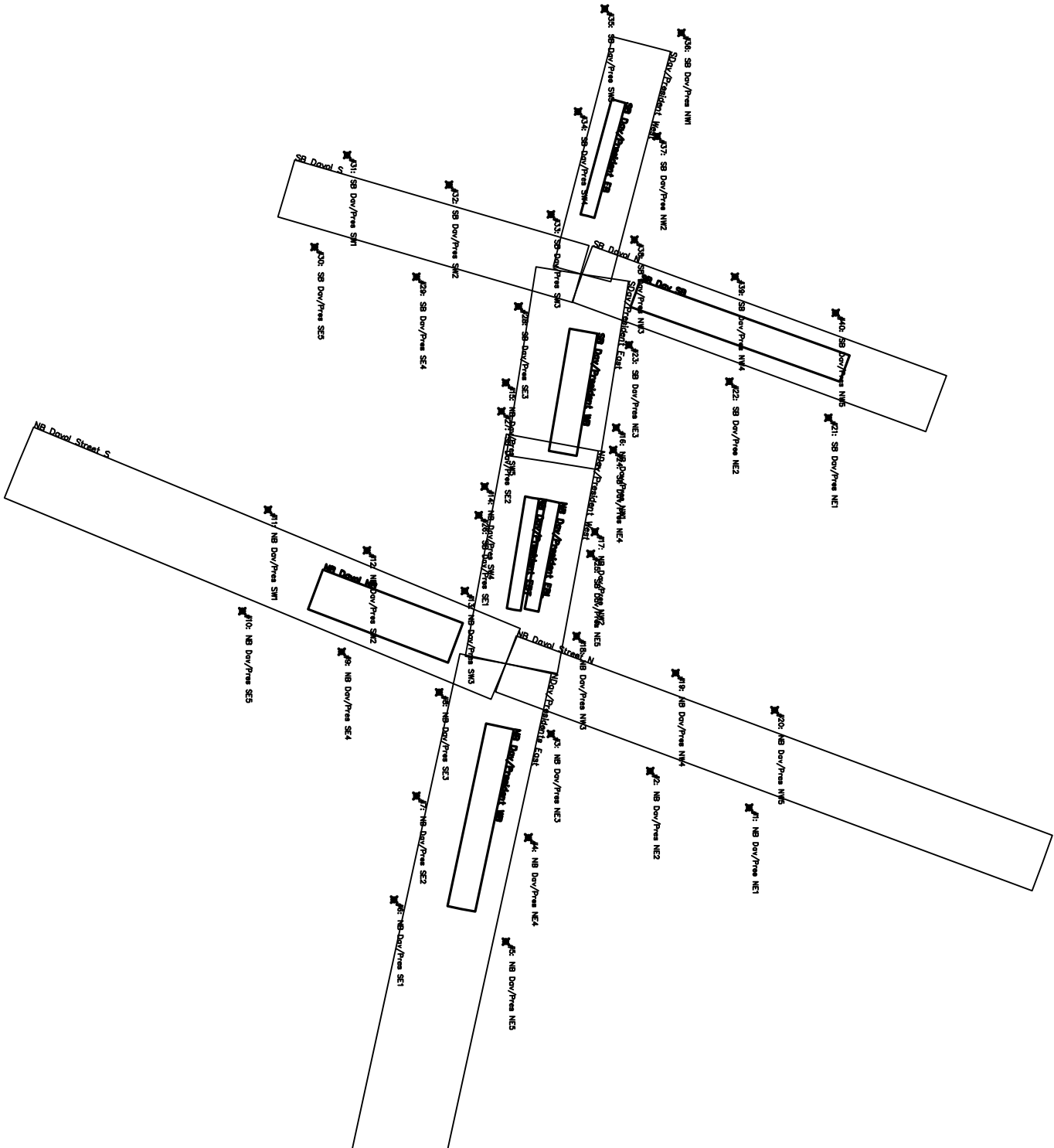
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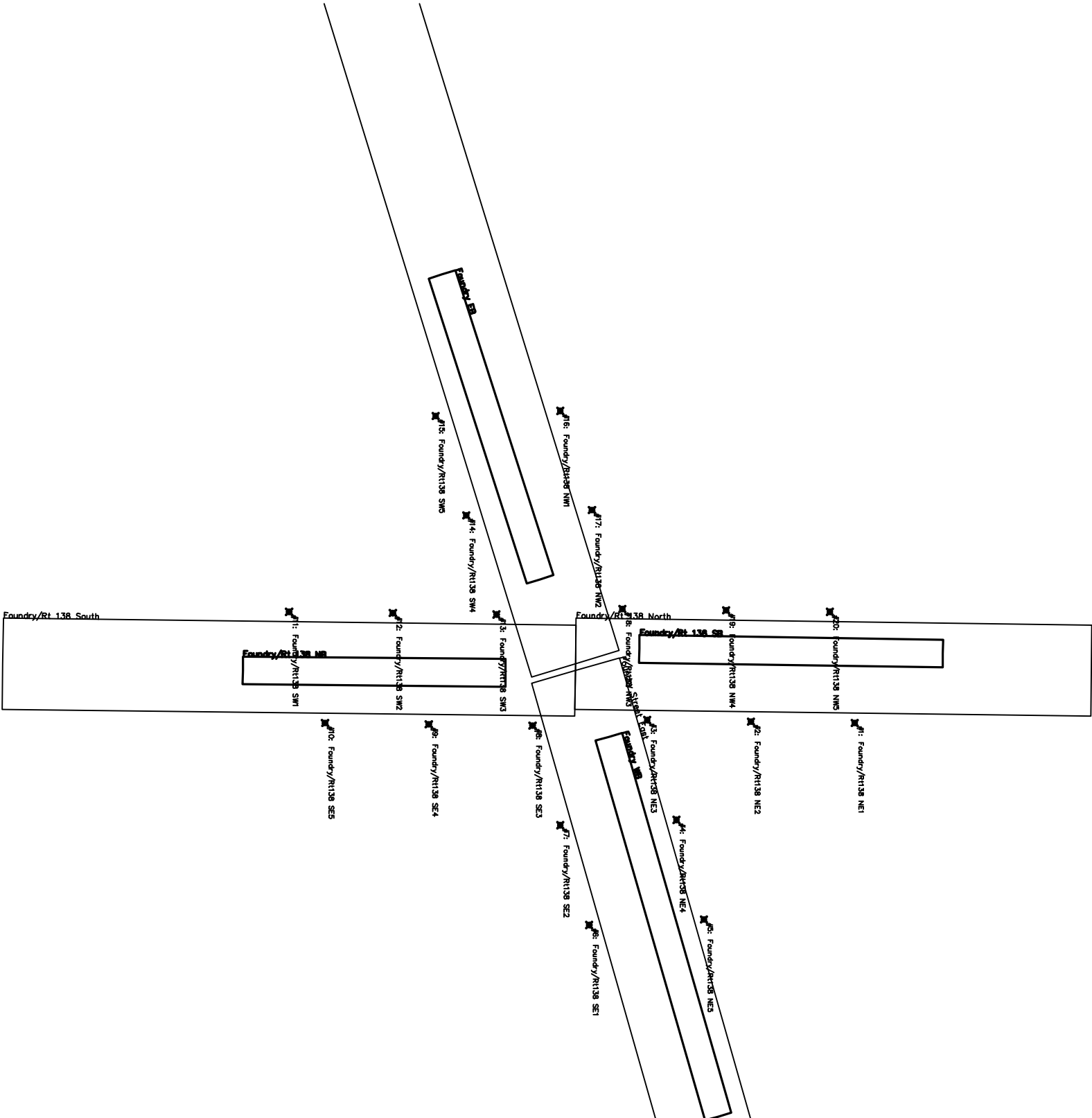
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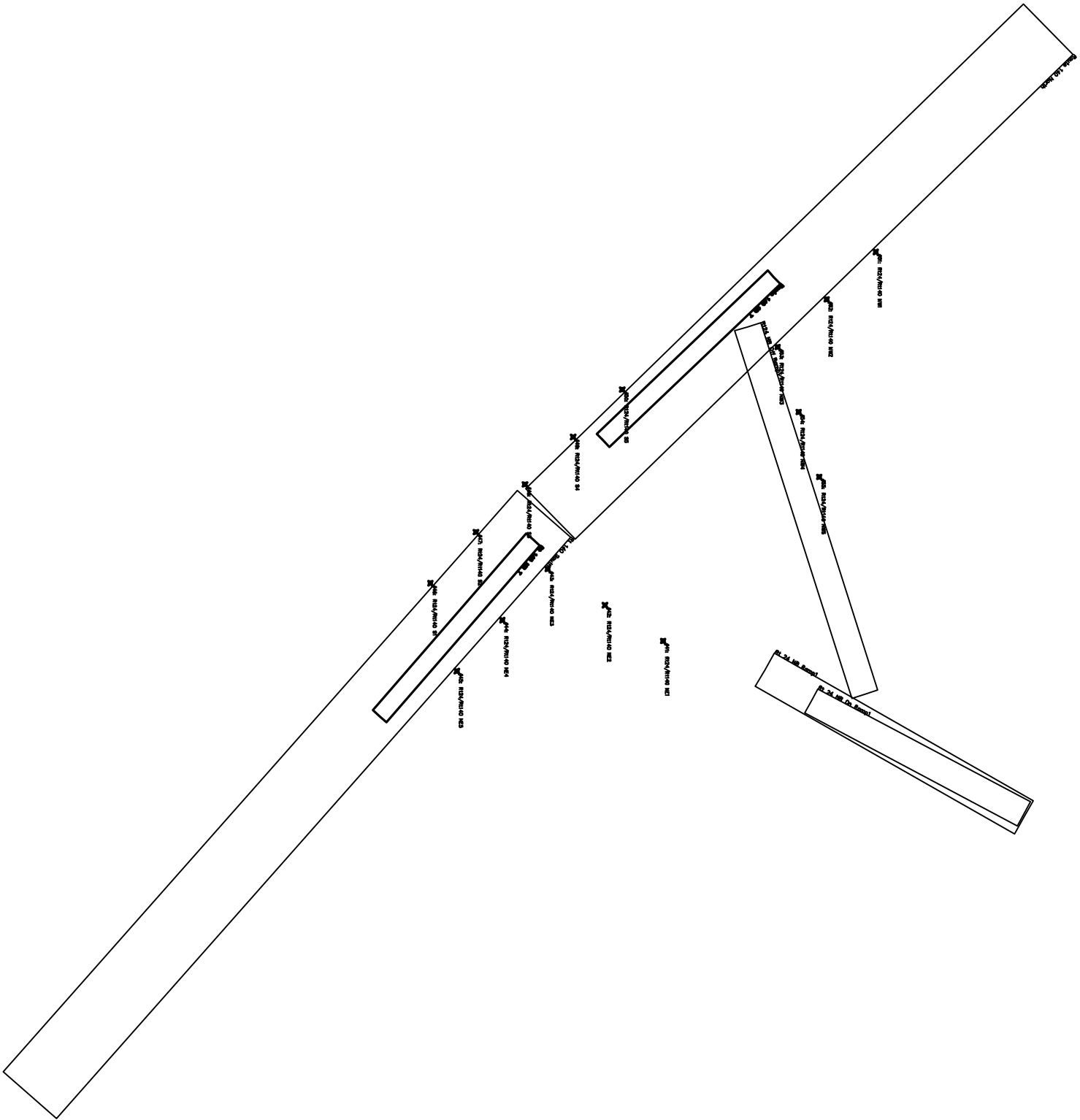
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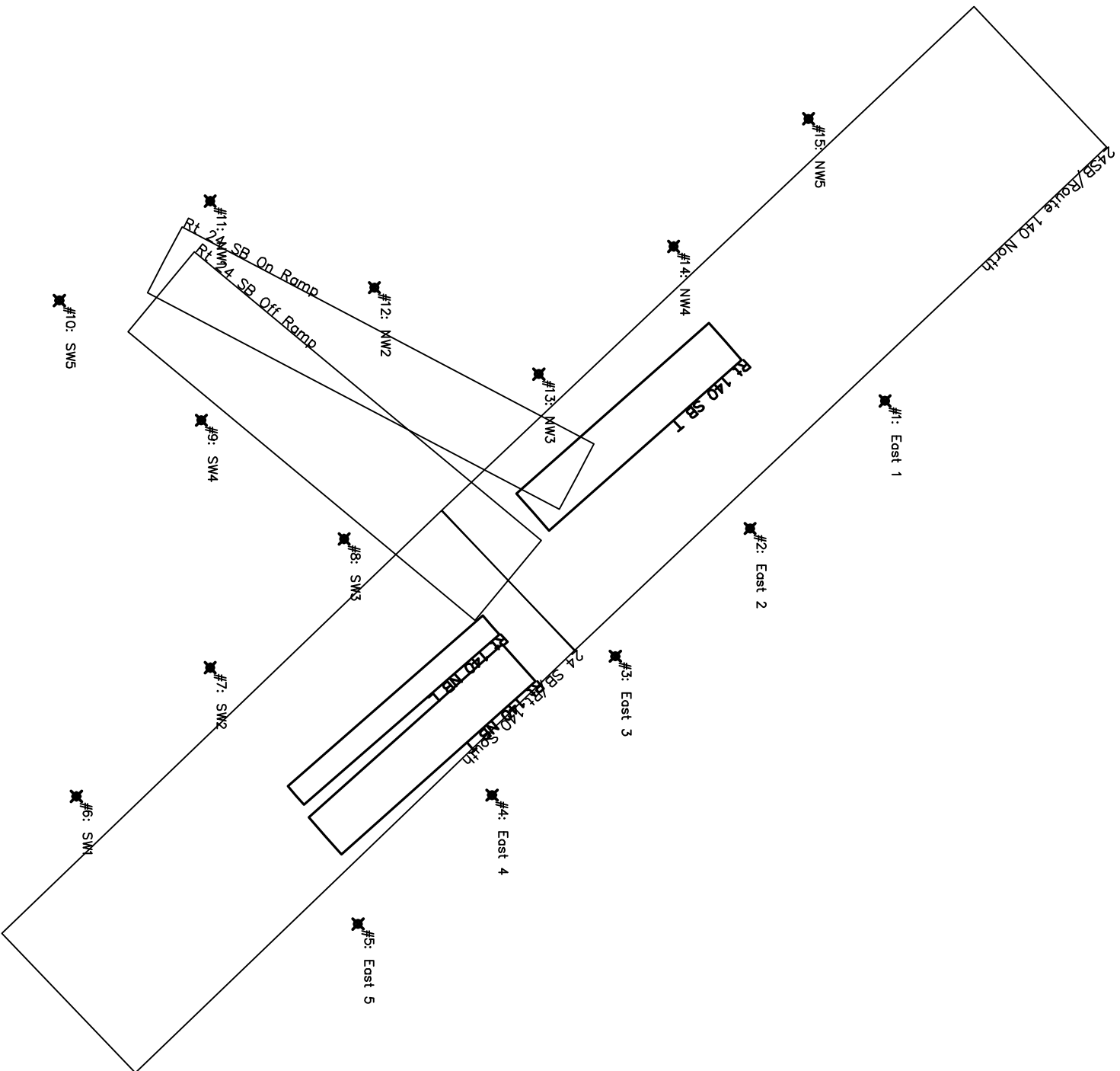
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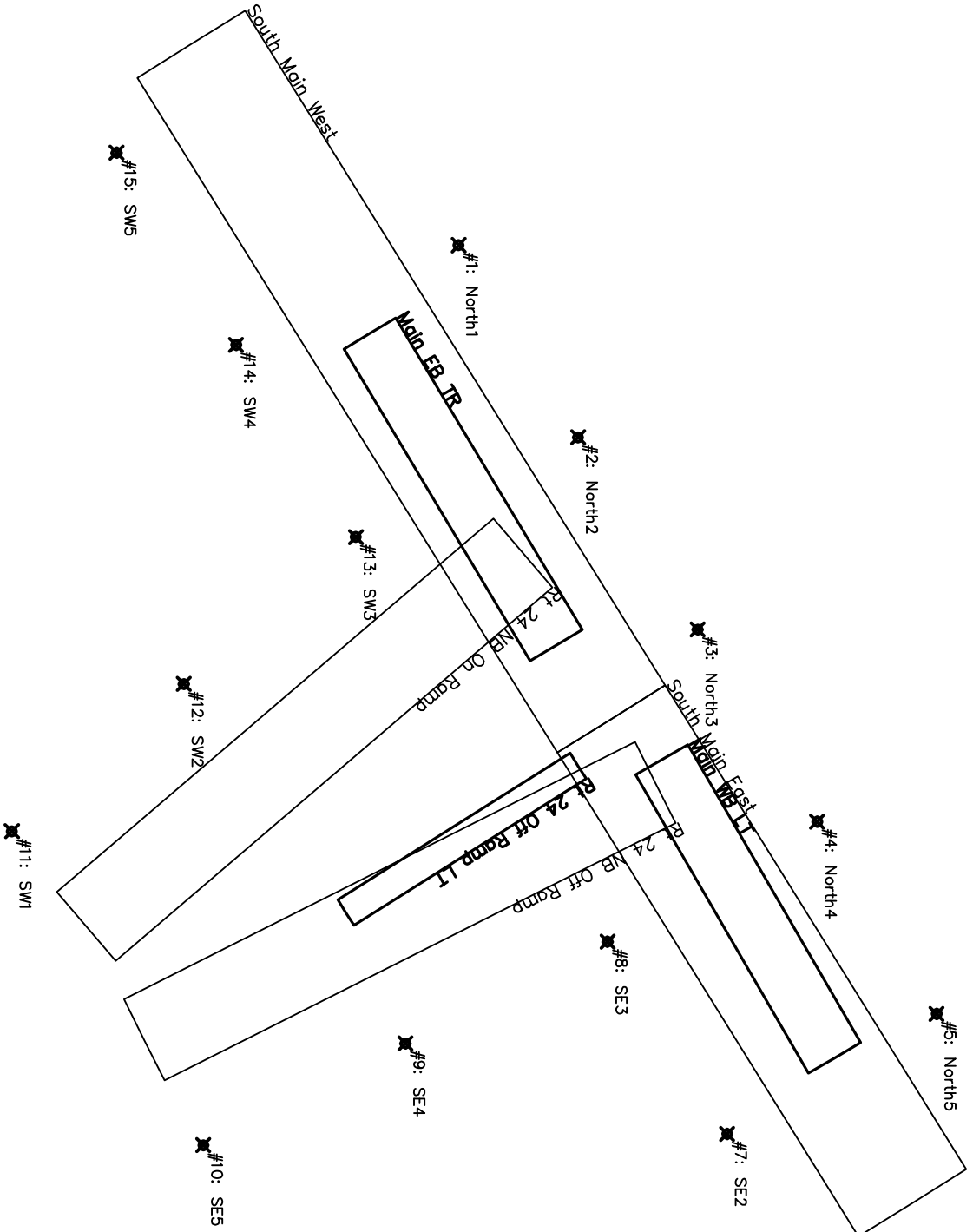
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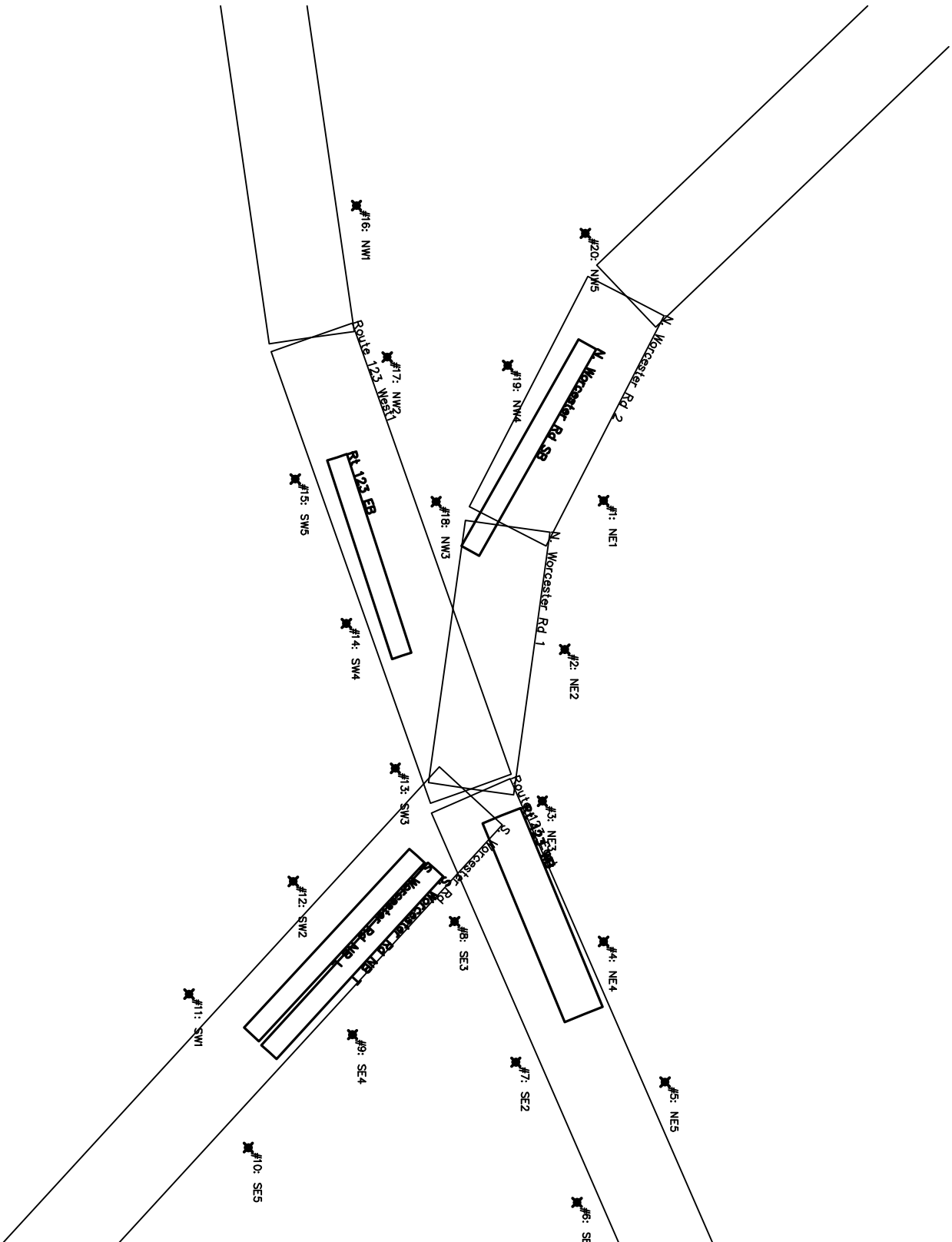


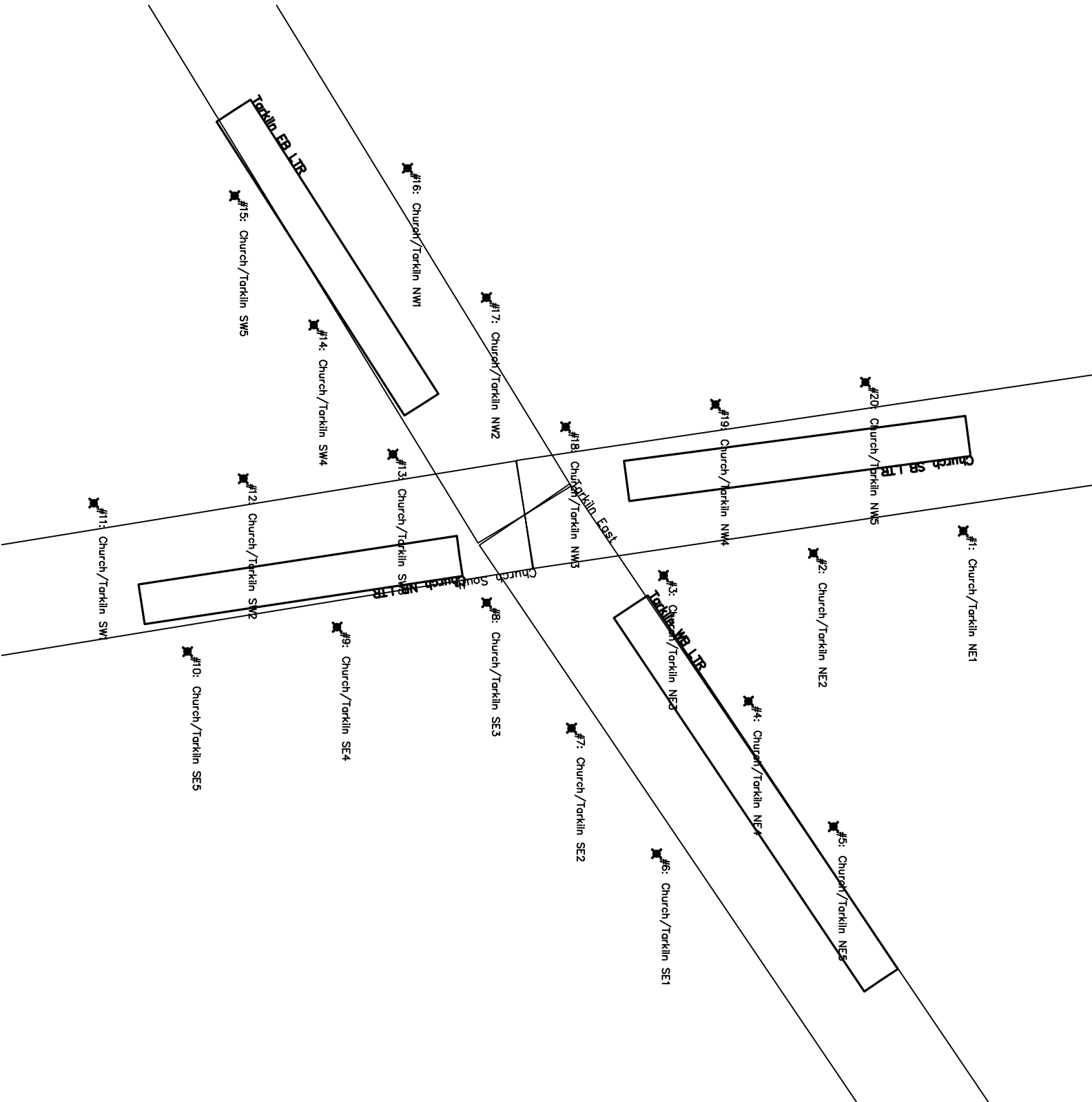


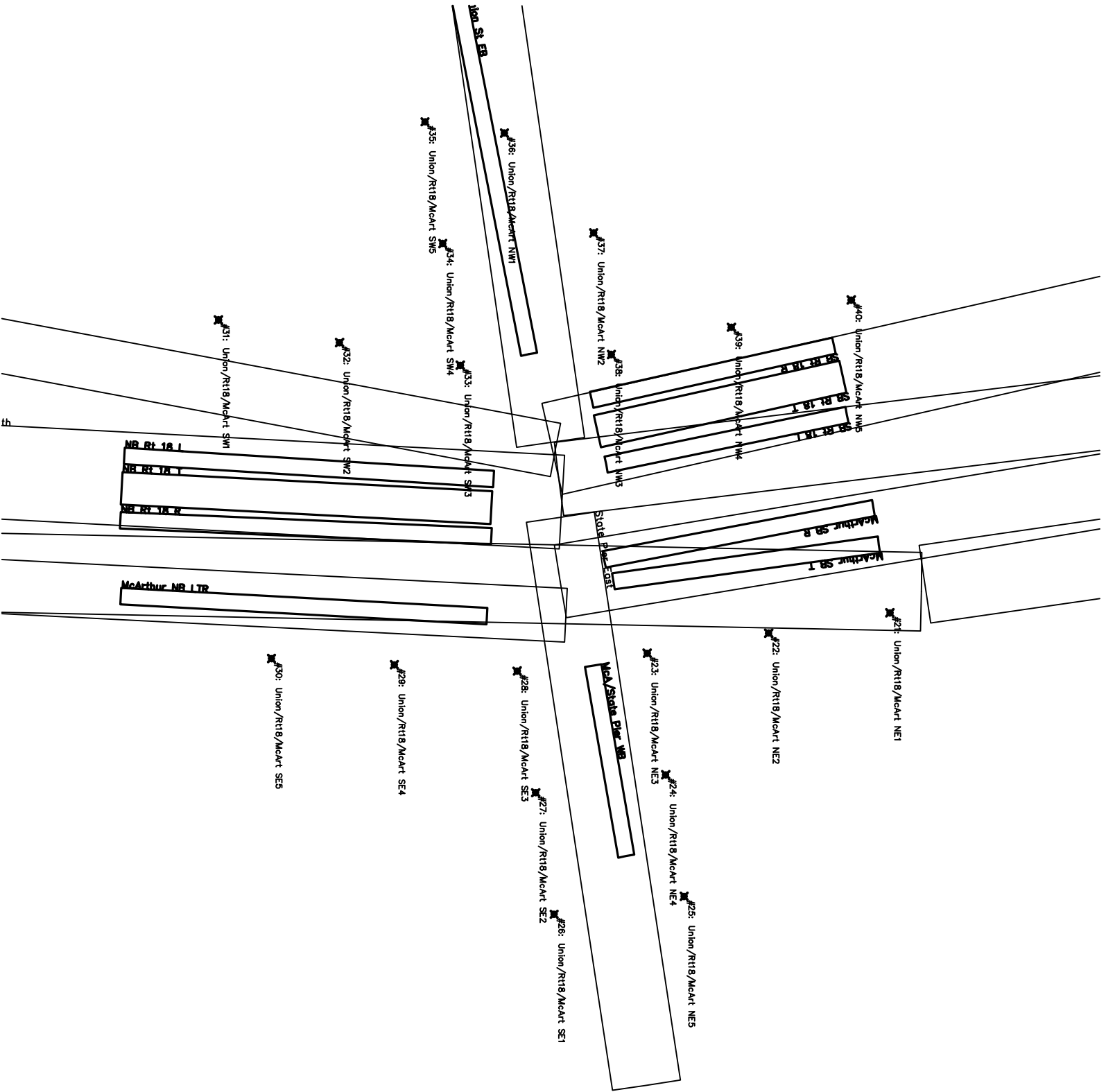












#22: Union/Rt18/McArt NE1

#23: Union/Rt18/McArt NE2

#24: Union/Rt18/McArt NE3

#25: Union/Rt18/McArt NE4

#26: Union/Rt18/McArt NE5

#27: Union/Rt18/McArt SE1

#28: Union/Rt18/McArt SE2

#29: Union/Rt18/McArt SE3

#30: Union/Rt18/McArt SE4

#31: Union/Rt18/McArt SE5

#32: Union/Rt18/McArt SW1

#33: Union/Rt18/McArt SW2

#34: Union/Rt18/McArt SW3

#35: Union/Rt18/McArt SW4

#36: Union/Rt18/McArt SW5

#37: Union/Rt18/McArt SW6

#38: Union/Rt18/McArt NW1

#39: Union/Rt18/McArt NW2

State Park Forest

McArthur NB 1

McArthur NB 2

McArthur NB 3

McArthur NB 4

McArthur NB 5

McArthur NB 6

McArthur NB 7

McArthur NB 8

McArthur NB 9

McArthur NB 10

McArthur NB 11

McArthur NB 12

McArthur NB 13

McArthur NB 14

McArthur NB 15

McArthur NB 16

McArthur NB 17

McArthur NB 18

McArthur NB 19

McArthur NB 20

McArthur NB 21

McArthur NB 22

McArthur NB 23

McArthur NB 24

McArthur NB 25

McArthur NB 26

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McArthur NB 30

McArthur NB 31

McArthur NB 32

McArthur NB 33

McArthur NB 34

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McArthur NB 40

McArthur NB 41

McArthur NB 42

McArthur NB 19

NB Rt 16 I

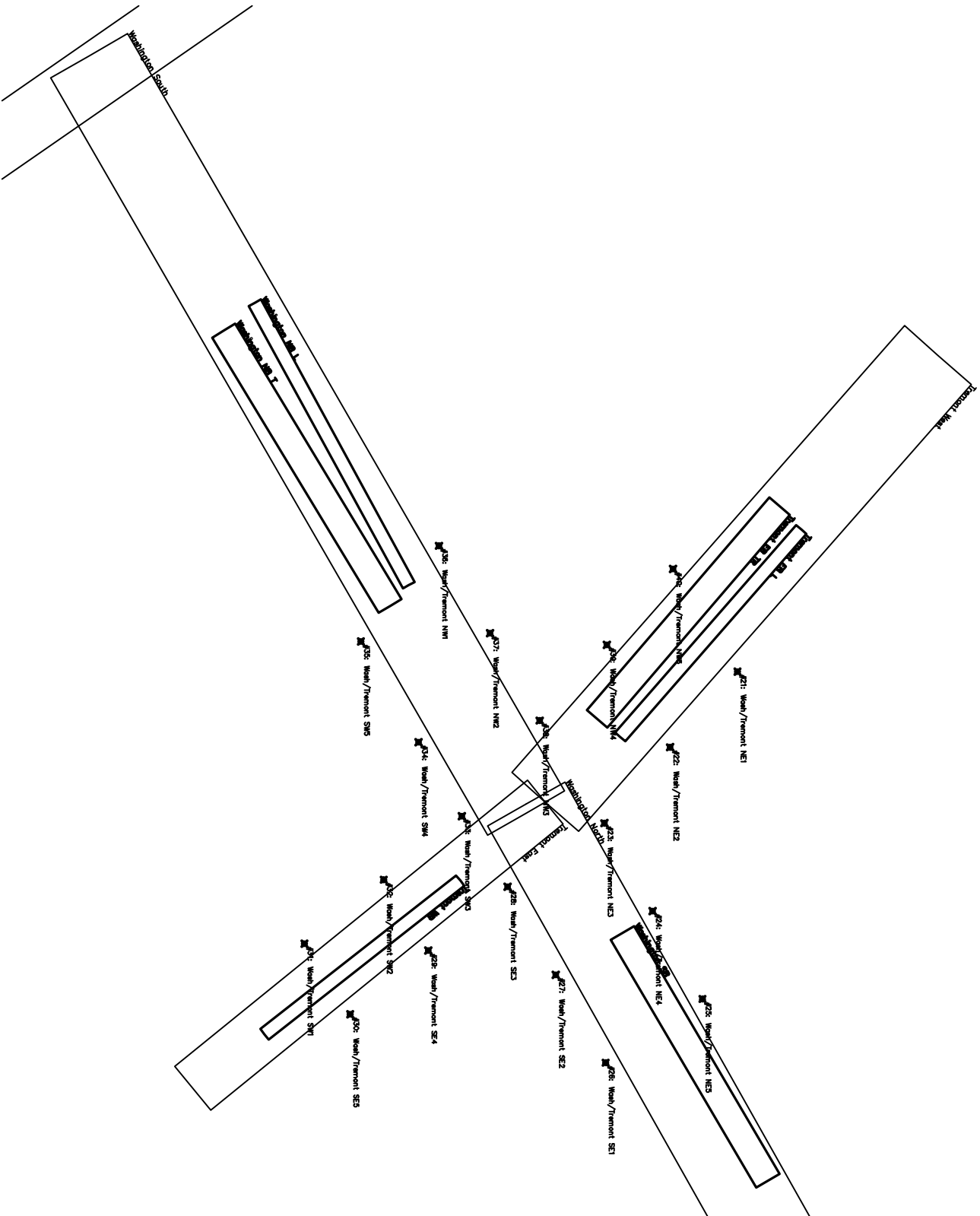
NB Rt 17 I

NB Rt 18 I

McArthur NB 1 TR

100 SR EB

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Hot Spot: Microscale (Local) Analysis

- CAL3QHC Input Files
 - Carbon Monoxide (CO)
 - Particulate Matter 10 (PM₁₀)
 - Particulate Matter 2.5 (PM_{2.5})



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Hot Spot: Microscale (Local) Analysis Cal3QHC - Input Files

- Carbon Monoxide (CO)



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Air Quality
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East Taunton 2008 Existing - CO

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'Existing Condition' 7 1 0 'C'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 205 72.225 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 790 72.225 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1000 72.225 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2350 12.67 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3335 12.67 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1580 12.54 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 525 12.54 1 30
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2016 No Build - CO

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2016 No Build' 7 1 0 'C'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 49.725 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 965 49.725 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1085 49.725 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2385 9.32 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3775 9.32 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 9.19 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 620 9.19 1 30
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2030 No-Build - CO

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2030 No Build' 7 1 0 'C'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 50.1 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 965 50.1 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1085 50.1 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2385 9.22 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3775 9.22 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 9.07 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 620 9.07 1 30
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2016 Build Mitigated (Diesel) – CO

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2016 Build with Mitigation' 11 1 0 'C'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 49.725 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 976 49.725 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1129 49.725 1600 1 3
2
'Train Queue' 'AG' 9191.51 -7114.1 9538.83 -7502.06 1 20 2
120 70 3 5 12.69 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2467 9.32 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3830 9.32 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 9.19 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 647 9.19 1 30
1
'Train Line 1' 'AG' -3325.63 6855.07 10135.78 -8168.58 5 8.87 1 48
1
'Train Line 2' 'AG' 10124.73 -8177.77 12559.4 -12250.66 5 8.87 1 48
1
'Train Line 3' 'AG' -3319.6 6871.82 -6541.35 11486.7 5 8.87 1 48
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2016 Build Mitigated (Electric) – CO

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2016 Build with Mitigation' 11 1 0 'C'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 49.725 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 976 49.725 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1129 49.725 1600 1 3
2
'Train Queue' 'AG' 9191.51 -7114.1 9538.83 -7502.06 1 20 2
120 70 3 5 0 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2467 9.32 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3830 9.32 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 9.19 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 647 9.19 1 30
1
'Train Line 1' 'AG' -3325.63 6855.07 10135.78 -8168.58 5 0 1 48
1
'Train Line 2' 'AG' 10124.73 -8177.77 12559.4 -12250.66 5 0 1 48
1
'Train Line 3' 'AG' -3319.6 6871.82 -6541.35 11486.7 5 0 1 48
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2030 Build Mitigated (Diesel) – CO

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2030 Build with Mitigation' 11 1 0 'C'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 50.1 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 976 50.1 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1129 50.1 1600 1 3
2
'Train Queue' 'AG' 9191.51 -7114.1 9538.83 -7502.06 1 20 2
120 70 3 5 12.69 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2467 9.22 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3830 9.22 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 9.07 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 647 9.07 1 30
1
'Train Line 1' 'AG' -3325.63 6855.07 10135.78 -8168.58 5 8.87 1 48
1
'Train Line 2' 'AG' 10124.73 -8177.77 12559.4 -12250.66 5 8.87 1 48
1
'Train Line 3' 'AG' -3319.6 6871.82 -6541.35 11486.7 5 8.87 1 48
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2030 Build Mitigated (Electric) – CO

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2030 Build with Mitigation' 11 1 0 'C'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 50.1 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 976 50.1 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1129 50.1 1600 1 3
2
'Train Queue' 'AG' 9191.51 -7114.1 9538.83 -7502.06 1 20 2
120 70 3 5 0 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2467 9.22 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3830 9.22 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 9.07 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 647 9.07 1 30
1
'Train Line 1' 'AG' -3325.63 6855.07 10135.78 -8168.58 5 0 1 48
1
'Train Line 2' 'AG' 10124.73 -8177.77 12559.4 -12250.66 5 0 1 48
1
'Train Line 3' 'AG' -3319.6 6871.82 -6541.35 11486.7 5 0 1 48
1 0 4 1000 0 'Y' 10 0 36



Technical Report
Air Quality
Draft

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Technical Report
Air Quality
Draft

Hot Spot: Microscale (Local) Analysis Cal3QHC - Input Files

- Particulate Matter 10 (PM₁₀)



Technical Report
Air Quality
Draft

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East Taunton 2008 Existing – PM₁₀

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'Existing Condition' 7 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 205 0.113 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 790 0.113 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1000 0.113 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2350 0.0453 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3335 0.0453 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1580 0.0453 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 525 0.0453 1 30
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2016 No-Build – PM₁₀

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2016 No Build' 7 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 0.075 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 965 0.075 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1085 0.075 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2385 0.0301 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3775 0.0301 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 0.0301 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 620 0.0301 1 30
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2030 No-Build – PM₁₀

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2030 No Build' 7 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 0.0685 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 965 0.0685 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1085 0.0685 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2385 0.0274 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3775 0.0274 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 0.0274 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 620 0.0274 1 30
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2016 Build Mitigated (Diesel) – PM₁₀

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2016 Build with Mitigation' 11 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 0.075 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 976 0.075 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1129 0.075 1600 1 3
2
'Train Queue' 'AG' 9191.51 -7114.1 9538.83 -7502.06 1 20 2
120 70 3 5 1.53 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2467 0.0301 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3830 0.0301 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 0.0301 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 647 0.0301 1 30
1
'Train Line 1' 'AG' -3325.63 6855.07 10135.78 -8168.58 5 1.03 1 48
1
'Train Line 2' 'AG' 10124.73 -8177.77 12559.4 -12250.66 5 1.03 1 48
1
'Train Line 3' 'AG' -3319.6 6871.82 -6541.35 11486.7 5 1.03 1 48
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2016 Build Mitigated (Electric) – PM₁₀

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2016 Build with Mitigation' 11 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 0.075 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 976 0.075 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1129 0.075 1600 1 3
2
'Train Queue' 'AG' 9191.51 -7114.1 9538.83 -7502.06 1 20 2
120 70 3 5 0 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2467 0.0301 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3830 0.0301 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 0.0301 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 647 0.0301 1 30
1
'Train Line 1' 'AG' -3325.63 6855.07 10135.78 -8168.58 5 0 1 48
1
'Train Line 2' 'AG' 10124.73 -8177.77 12559.4 -12250.66 5 0 1 48
1
'Train Line 3' 'AG' -3319.6 6871.82 -6541.35 11486.7 5 0 1 48
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2030 Build Mitigated (Diesel) – PM₁₀

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2030 Build with Mitigation' 11 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 0.0685 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 976 0.0685 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1129 0.0685 1600 1 3
2
'Train Queue' 'AG' 9191.51 -7114.1 9538.83 -7502.06 1 20 2
120 70 3 5 0.83 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2467 0.0274 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3830 0.0274 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 0.0274 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 647 0.0274 1 30
1
'Train Line 1' 'AG' -3325.63 6855.07 10135.78 -8168.58 5 0.267 1 48
1
'Train Line 2' 'AG' 10124.73 -8177.77 12559.4 -12250.66 5 0.267 1 48
1
'Train Line 3' 'AG' -3319.6 6871.82 -6541.35 11486.7 5 0.267 1 48
1 0 4 1000 5 'Y' 10 0 36

East Taunton 2030 Build Mitigated (Electric) – PM₁₀

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2030 Build with Mitigation' 11 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 0.0685 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 976 0.0685 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1129 0.0685 1600 1 3
2
'Train Queue' 'AG' 9191.51 -7114.1 9538.83 -7502.06 1 20 2
120 70 3 5 0 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2467 0.0274 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3830 0.0274 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 0.0274 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 647 0.0274 1 30
1
'Train Line 1' 'AG' -3325.63 6855.07 10135.78 -8168.58 5 0 1 48
1
'Train Line 2' 'AG' 10124.73 -8177.77 12559.4 -12250.66 5 0 1 48
1
'Train Line 3' 'AG' -3319.6 6871.82 -6541.35 11486.7 5 0 1 48
1 0 4 1000 0 'Y' 10 0 36



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Hot Spot: Microscale (Local) Analysis Cal3QHC - Input Files

- Particulate Matter 2.5 (PM_{2.5})



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East Taunton 2008 Existing – PM_{2.5}

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'Existing Condition' 7 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 205 0.0725 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 790 0.0725 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1000 0.0725 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2350 0.029 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3335 0.029 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1580 0.029 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 525 0.029 1 30
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2016 No-Build – PM_{2.5}

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2016 No Build' 7 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 0.038 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 965 0.038 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1085 0.038 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2385 0.0152 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3775 0.0152 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 0.0152 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 620 0.0152 1 30
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2030 No-Build – PM_{2.5}

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2030 No Build' 7 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 0.0318 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 965 0.0318 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1085 0.0318 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2385 0.0127 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3775 0.0127 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 0.0127 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 620 0.0127 1 30
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2016 Build Mitigated (Diesel) – PM_{2.5}

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2016 Build with Mitigation' 11 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 0.038 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 976 0.038 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1129 0.038 1600 1 3
2
'Train Queue' 'AG' 9191.51 -7114.1 9538.83 -7502.06 1 20 2
120 70 3 5 1.53 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2467 0.0152 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3830 0.0152 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 0.0152 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 647 0.0152 1 30
1
'Train Line 1' 'AG' -3325.63 6855.07 10135.78 -8168.58 5 1.00 1 48
1
'Train Line 2' 'AG' 10124.73 -8177.77 12559.4 -12250.66 5 1.00 1 48
1
'Train Line 3' 'AG' -3319.6 6871.82 -6541.35 11486.7 5 1.00 1 48
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2016 Build Mitigated (Electric) – PM_{2.5}

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2016 Build with Mitigation' 11 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 0.038 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 976 0.038 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1129 0.038 1600 1 3
2
'Train Queue' 'AG' 9191.51 -7114.1 9538.83 -7502.06 1 20 2
120 70 3 5 0 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2467 0.0152 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3830 0.0152 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 0.0152 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 647 0.0152 1 30
1
'Train Line 1' 'AG' -3325.63 6855.07 10135.78 -8168.58 5 0 1 48
1
'Train Line 2' 'AG' 10124.73 -8177.77 12559.4 -12250.66 5 0 1 48
1
'Train Line 3' 'AG' -3319.6 6871.82 -6541.35 11486.7 5 0 1 48
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2030 Build Mitigated (Diesel) – PM_{2.5}

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2030 Build with Mitigation' 11 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 0.0318 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 976 0.0318 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1129 0.0318 1600 1 3
2
'Train Queue' 'AG' 9191.51 -7114.1 9538.83 -7502.06 1 20 2
120 70 3 5 0.83 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2467 0.0127 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3830 0.0127 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 0.0127 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 647 0.0127 1 30
1
'Train Line 1' 'AG' -3325.63 6855.07 10135.78 -8168.58 5 0.259 1 48
1
'Train Line 2' 'AG' 10124.73 -8177.77 12559.4 -12250.66 5 0.259 1 48
1
'Train Line 3' 'AG' -3319.6 6871.82 -6541.35 11486.7 5 0.259 1 48
1 0 4 1000 0 'Y' 10 0 36

East Taunton 2030 Build Mitigated (Electric) – PM_{2.5}

'South Coast Rail (Taunton)' 60 175 0 0 15 0.3048 1 0
'East 1' 11858.27 -3406.06 6
'East 2' 11909.82 -3460.54 6
'East 3' 11961.38 -3515.01 6
'East 4' 12017.46 -3564.81 6
'East 5' 12069.51 -3618.96 6
'SW1' 12017.96 -3732.72 6
'SW2' 11965.99 -3678.65 6
'SW3' 11914.01 -3624.58 6
'SW4' 11866.05 -3682.24 6
'SW5' 11817.72 -3739.59 6
'NW1' 11777.59 -3678.67 6
'NW2' 11812.52 -3612.3 6
'NW3' 11847.45 -3545.93 6
'NW4' 11795.9 -3491.46 6
'NW5' 11744.34 -3436.98 6
'2030 Build with Mitigation' 11 1 0 'P'
2
'Rt 140 NB L' 'AG' 11948.78 -3565.21 12017.56 -3644.08 1 10 1
90 40 3 285 0.0318 1600 1 3
2
'Rt 140 NB T' 'AG' 11964 -3553.94 12033.91 -3632.25 1 20 2
90 0 3 976 0.0318 1600 1 3
2
'Rt 140 SB T' 'AG' 11903.11 -3548.31 11834.33 -3470.57 1 20 2
90 50 3 1129 0.0318 1600 1 3
2
'Train Queue' 'AG' 9191.51 -7114.1 9538.83 -7502.06 1 20 2
120 70 3 5 0 1600 1 3
1
'24SB/Route 140 North' 'AG' 11930.76 -3558.31 11727.31 -3343.33 2467 0.0127 1 78
1
'24 SB/Rt 140 South' 'AG' 11930.76 -3558.31 12101.47 -3735.9 3830 0.0127 1 78
1
'Rt 24 SB Off Ramp' 'AG' 11930.76 -3558.31 11814.19 -3698.46 1440 0.0127 1 42
1
'Rt 24 SB On Ramp' 'AG' 11888.83 -3530.64 11801.27 -3697.02 647 0.0127 1 30
1
'Train Line 1' 'AG' -3325.63 6855.07 10135.78 -8168.58 5 0 1 48
1
'Train Line 2' 'AG' 10124.73 -8177.77 12559.4 -12250.66 5 0 1 48
1
'Train Line 3' 'AG' -3319.6 6871.82 -6541.35 11486.7 5 0 1 48
1 0 4 1000 0 'Y' 10 0 36



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Hot Spot: Microscale (Local) Analysis Cal3QHC - Output Files

- Carbon Monoxide (CO)
- Particulate Matter 10 (PM₁₀)
- Particulate Matter 2.5 (PM_{2.5})



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Hot Spot: Microscale (Local) Analysis Cal3QHC - Output Files

- Carbon Monoxide (CO)



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JOB: South Coast Rail (Taunton)

RUN: Existing Condition

DATE : 9/15/ 9

TIME : 15:43: 0

ADDITIONAL QUEUE LINK PARAMETERS

 LINK DESCRIPTION * CYCLE RED CLEARANCE APPROACH SATURATION IDLE SIGNAL
 ARRIVAL

* LENGTH TIME LOST TIME VOL FLOW RATE EM FAC TYPE RATE
 * (SEC) (SEC) (SEC) (VPH) (VPH) (gm/hr)

	*									
1. Rt 140 NB L	*	90	40	3.0	205	1600	72.22	1	3	
2. Rt 140 NB T	*	90	0	3.0	790	1600	72.22	1	3	
3. Rt 140 SB T	*	90	50	3.0	1000	1600	72.22	1	3	

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT)			*
	*	X	Y	Z	*
1. East 1	*	11858.3	-3406.1	6.0	*
2. East 2	*	11909.8	-3460.5	6.0	*
3. East 3	*	11961.4	-3515.0	6.0	*
4. East 4	*	12017.5	-3564.8	6.0	*
5. East 5	*	12069.5	-3619.0	6.0	*
6. SW1	*	12018.0	-3732.7	6.0	*
7. SW2	*	11966.0	-3678.7	6.0	*
8. SW3	*	11914.0	-3624.6	6.0	*
9. SW4	*	11866.0	-3682.2	6.0	*
10. SW5	*	11817.7	-3739.6	6.0	*
11. NW1	*	11777.6	-3678.7	6.0	*
12. NW2	*	11812.5	-3612.3	6.0	*
13. NW3	*	11847.5	-3545.9	6.0	*
14. NW4	*	11795.9	-3491.5	6.0	*
15. NW5	*	11744.3	-3437.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (PPM)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

ANGLE *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15
0. *	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.5	1.4	1.0	0.4	0.5	1.2	0.9	0.6
10. *	0.0	0.0	0.0	0.0	0.0	1.1	1.0	1.5	1.3	1.1	0.4	0.6	1.2	1.0	0.7
20. *	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.3	1.3	1.1	0.4	0.6	1.1	1.0	0.7
30. *	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.2	1.0	1.1	0.6	0.7	1.1	1.0	0.7
40. *	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.1	0.9	0.8	0.8	0.7	1.1	1.1	0.7
50. *	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.1	0.6	0.6	1.1	0.9	1.1	1.1	0.7
60. *	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.0	0.6	0.4	1.1	1.0	1.2	1.1	0.7
70. *	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.0	0.6	0.4	1.2	1.1	1.3	1.1	0.7
80. *	0.0	0.0	0.0	0.0	0.0	0.8	1.0	1.0	0.6	0.3	1.1	1.2	1.4	1.2	0.9
90. *	0.0	0.0	0.0	0.0	0.0	0.7	1.1	1.1	0.5	0.2	1.1	1.2	1.6	1.3	1.0
100. *	0.0	0.0	0.0	0.0	0.0	0.5	1.0	1.1	0.4	0.1	0.9	1.2	1.7	1.4	1.3
110. *	0.0	0.0	0.0	0.0	0.0	0.4	0.9	1.1	0.2	0.0	0.5	1.1	1.8	1.7	1.5
120. *	0.1	0.1	0.1	0.0	0.0	0.2	0.7	0.9	0.1	0.0	0.3	0.9	1.7	1.5	1.5
130. *	0.3	0.4	0.3	0.1	0.1	0.1	0.4	0.6	0.0	0.0	0.2	0.7	1.4	1.3	1.3
140. *	0.8	0.8	0.7	0.4	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.6	1.0	0.8	0.8
150. *	1.3	1.2	1.1	0.8	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.6	0.6	0.5	0.4
160. *	1.5	1.3	1.2	1.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.3	0.1
170. *	1.6	1.4	1.3	1.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.2	0.1
180. *	1.5	1.4	1.4	1.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.1	0.0
190. *	1.3	1.4	1.2	1.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0
200. *	1.0	1.3	1.3	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0
210. *	1.0	1.2	1.4	0.9	0.9	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0
220. *	1.0	1.1	1.5	1.1	1.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
230. *	0.9	1.0	1.4	1.3	1.0	0.0	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
240. *	0.8	1.0	1.1	1.3	0.9	0.0	0.0	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.8	1.0	1.1	1.5	1.0	0.0	0.1	0.8	0.5	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.8	1.1	1.2	1.5	1.2	0.0	0.1	0.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.8	1.1	1.1	1.5	1.3	0.0	0.2	0.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.8	1.1	1.2	1.3	1.3	0.1	0.3	0.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.7	1.0	1.2	1.3	1.4	0.1	0.4	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0

300.	*	0.6	0.8	1.1	1.1	1.3	0.2	0.4	0.7	0.7	0.0	0.0	0.0	0.1	0.0	0.0
310.	*	0.4	0.5	0.8	0.7	0.9	0.7	0.8	1.0	0.7	0.0	0.0	0.0	0.2	0.1	0.1
320.	*	0.2	0.3	0.3	0.3	0.3	1.0	1.1	1.4	0.8	0.0	0.0	0.0	0.6	0.4	0.2
330.	*	0.1	0.1	0.1	0.1	0.1	1.3	1.4	1.7	0.8	0.1	0.0	0.1	1.0	0.6	0.3
340.	*	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.8	1.1	0.3	0.1	0.3	1.2	0.8	0.5
350.	*	0.0	0.0	0.0	0.0	0.0	1.2	1.4	1.7	1.3	0.6	0.2	0.5	1.3	0.8	0.6
360.	*	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.5	1.4	1.0	0.4	0.5	1.2	0.9	0.6
-----*																
MAX	*	1.6	1.4	1.5	1.5	1.4	1.4	1.4	1.8	1.4	1.1	1.2	1.2	1.8	1.7	1.5
DEGR.	*	170	170	220	250	290	340	330	340	0	10	70	80	110	110	120

THE HIGHEST CONCENTRATION OF 1.80 PPM OCCURRED AT RECEPTOR REC8 .

JOB: South Coast Rail (Taunton)

RUN: 2016 No Build

DATE : 9/15/ 9

TIME : 11:33:25

ADDITIONAL QUEUE LINK PARAMETERS

 LINK DESCRIPTION * CYCLE RED CLEARANCE APPROACH SATURATION IDLE SIGNAL
 ARRIVAL

* LENGTH TIME LOST TIME VOL FLOW RATE EM FAC TYPE RATE
 * (SEC) (SEC) (SEC) (VPH) (VPH) (gm/hr)

	*									
1. Rt 140 NB L	*	90	40	3.0	285	1600	49.72	1	3	
2. Rt 140 NB T	*	90	0	3.0	965	1600	49.72	1	3	
3. Rt 140 SB T	*	90	50	3.0	1085	1600	49.72	1	3	

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT)			*
	*	X	Y	Z	*
1. East 1	*	11858.3	-3406.1	6.0	*
2. East 2	*	11909.8	-3460.5	6.0	*
3. East 3	*	11961.4	-3515.0	6.0	*
4. East 4	*	12017.5	-3564.8	6.0	*
5. East 5	*	12069.5	-3619.0	6.0	*
6. SW1	*	12018.0	-3732.7	6.0	*
7. SW2	*	11966.0	-3678.7	6.0	*
8. SW3	*	11914.0	-3624.6	6.0	*
9. SW4	*	11866.0	-3682.2	6.0	*
10. SW5	*	11817.7	-3739.6	6.0	*
11. NW1	*	11777.6	-3678.7	6.0	*
12. NW2	*	11812.5	-3612.3	6.0	*
13. NW3	*	11847.5	-3545.9	6.0	*
14. NW4	*	11795.9	-3491.5	6.0	*
15. NW5	*	11744.3	-3437.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (PPM)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

ANGLE *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15
0. *	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.2	1.0	0.6	0.3	0.4	0.9	0.8	0.5
10. *	0.0	0.0	0.0	0.0	0.0	0.9	0.8	1.0	1.1	0.7	0.3	0.4	0.9	0.8	0.5
20. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.0	1.0	0.9	0.3	0.4	0.8	0.8	0.5
30. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.0	0.8	0.8	0.4	0.5	0.8	0.8	0.5
40. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.7	0.6	0.6	0.5	0.8	0.8	0.5
50. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.5	0.4	0.8	0.8	0.9	0.9	0.6
60. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.5	0.3	0.9	0.8	0.9	0.8	0.6
70. *	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.8	0.5	0.3	0.9	0.8	0.9	0.8	0.7
80. *	0.0	0.0	0.0	0.0	0.0	0.7	0.9	0.9	0.5	0.3	0.9	1.0	0.9	0.9	0.8
90. *	0.0	0.0	0.0	0.0	0.0	0.6	0.9	0.9	0.4	0.2	0.8	1.0	1.1	0.9	0.9
100. *	0.0	0.0	0.0	0.0	0.0	0.4	0.9	0.9	0.3	0.1	0.6	0.9	1.2	1.0	0.9
110. *	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.9	0.2	0.0	0.4	0.8	1.3	1.1	1.1
120. *	0.1	0.1	0.1	0.0	0.0	0.2	0.5	0.8	0.1	0.0	0.2	0.6	1.2	1.3	1.1
130. *	0.3	0.2	0.3	0.1	0.0	0.1	0.3	0.5	0.0	0.0	0.2	0.5	1.0	1.0	1.0
140. *	0.7	0.6	0.6	0.3	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.4	0.7	0.6	0.6
150. *	1.1	0.9	0.9	0.6	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.5	0.3	0.3
160. *	1.1	1.1	1.0	0.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.2	0.1
170. *	1.1	0.9	1.1	0.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.2	0.0
180. *	1.0	1.0	1.1	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.1	0.0
190. *	1.0	1.1	1.0	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0
200. *	0.7	1.0	0.9	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
210. *	0.7	0.9	1.0	0.8	0.8	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
220. *	0.7	0.8	1.0	0.9	0.8	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
230. *	0.8	0.8	1.1	1.0	0.8	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
240. *	0.7	0.7	0.9	1.1	0.8	0.0	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.7	0.7	0.9	1.2	0.9	0.0	0.0	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.7	0.8	0.8	1.2	1.0	0.0	0.1	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.7	0.8	0.8	1.1	1.0	0.0	0.1	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.6	0.8	0.9	1.0	1.1	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.5	0.7	0.9	0.9	1.2	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0

300.	*	0.4	0.7	0.8	0.8	1.0	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	
310.	*	0.3	0.4	0.6	0.6	0.7	0.3	0.5	0.6	0.5	0.0	0.0	0.0	0.2	0.1	
320.	*	0.1	0.2	0.2	0.2	0.3	0.7	0.8	0.9	0.5	0.0	0.0	0.0	0.5	0.3	
330.	*	0.0	0.1	0.1	0.1	0.1	1.2	1.1	1.2	0.6	0.0	0.0	0.1	0.8	0.4	
340.	*	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.3	0.8	0.3	0.1	0.2	1.0	0.7	
350.	*	0.0	0.0	0.0	0.0	0.0	1.0	1.1	1.3	0.9	0.5	0.1	0.4	1.0	0.7	
360.	*	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.2	1.0	0.6	0.3	0.4	0.9	0.8	
-----*																
MAX	*	1.1	1.1	1.1	1.2	1.2	1.2	1.1	1.3	1.1	0.9	0.9	1.0	1.3	1.3	
DEGR.	*	150	160	170	250	290	330	330	340	10	20	60	80	110	120	

THE HIGHEST CONCENTRATION OF 1.30 PPM OCCURRED AT RECEPTOR REC13.

JOB: South Coast Rail (Taunton)

RUN: 2030 No Build

DATE : 6/29/ 9

TIME : 16:37:48

ADDITIONAL QUEUE LINK PARAMETERS

 LINK DESCRIPTION * CYCLE RED CLEARANCE APPROACH SATURATION IDLE SIGNAL
 ARRIVAL

	* LENGTH	TIME	LOST TIME	VOL	FLOW RATE	EM FAC	TYPE	RATE
	* (SEC)	(SEC)	(SEC)	(VPH)	(VPH)	(gm/hr)		
1. Rt 140 NB L	* 90	40	3.0	285	1600	50.10	1 3	
2. Rt 140 NB T	* 90	0	3.0	965	1600	50.10	1 3	
3. Rt 140 SB T	* 90	50	3.0	1085	1600	50.10	1 3	

RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (FT)	* X	Y	Z	* *
1. East 1	* 11858.3	-3406.1	6.0	*	
2. East 2	* 11909.8	-3460.5	6.0	*	
3. East 3	* 11961.4	-3515.0	6.0	*	
4. East 4	* 12017.5	-3564.8	6.0	*	
5. East 5	* 12069.5	-3619.0	6.0	*	
6. SW1	* 12018.0	-3732.7	6.0	*	
7. SW2	* 11966.0	-3678.7	6.0	*	
8. SW3	* 11914.0	-3624.6	6.0	*	
9. SW4	* 11866.0	-3682.2	6.0	*	
10. SW5	* 11817.7	-3739.6	6.0	*	
11. NW1	* 11777.6	-3678.7	6.0	*	
12. NW2	* 11812.5	-3612.3	6.0	*	
13. NW3	* 11847.5	-3545.9	6.0	*	
14. NW4	* 11795.9	-3491.5	6.0	*	
15. NW5	* 11744.3	-3437.0	6.0	*	

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (PPM)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

ANGLE *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15
0. *	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.2	0.9	0.6	0.3	0.4	0.9	0.8	0.5
10. *	0.0	0.0	0.0	0.0	0.0	0.9	0.8	1.0	1.1	0.7	0.3	0.4	0.9	0.8	0.5
20. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.0	0.8	0.9	0.3	0.5	0.8	0.8	0.5
30. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.0	0.7	0.8	0.4	0.5	0.8	0.8	0.5
40. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.7	0.6	0.6	0.5	0.8	0.8	0.5
50. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.5	0.4	0.7	0.7	0.8	0.8	0.5
60. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.5	0.3	0.9	0.8	0.9	0.8	0.6
70. *	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.9	0.5	0.3	0.9	0.8	0.9	0.8	0.7
80. *	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.9	0.5	0.3	0.8	1.0	0.9	0.9	0.8
90. *	0.0	0.0	0.0	0.0	0.0	0.6	0.9	0.9	0.4	0.2	0.8	1.0	1.1	0.9	0.9
100. *	0.0	0.0	0.0	0.0	0.0	0.4	0.9	0.9	0.3	0.1	0.6	0.9	1.2	1.0	0.9
110. *	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.9	0.2	0.0	0.4	0.8	1.3	1.1	1.0
120. *	0.1	0.1	0.1	0.0	0.0	0.2	0.5	0.8	0.1	0.0	0.2	0.6	1.2	1.2	1.1
130. *	0.3	0.2	0.3	0.1	0.0	0.1	0.3	0.5	0.0	0.0	0.2	0.5	1.0	1.0	1.0
140. *	0.7	0.6	0.6	0.3	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.4	0.6	0.6	0.6
150. *	1.1	0.9	0.9	0.6	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.5	0.3	0.3
160. *	1.1	1.1	1.0	0.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.2	0.1
170. *	1.0	0.9	1.1	0.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.2	0.0
180. *	1.0	1.0	1.1	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.1	0.0
190. *	1.0	1.1	1.0	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0
200. *	0.7	1.0	0.9	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
210. *	0.7	0.9	1.0	0.8	0.8	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
220. *	0.7	0.8	1.0	0.9	0.8	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
230. *	0.7	0.7	1.1	1.0	0.8	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
240. *	0.7	0.7	0.9	1.1	0.8	0.0	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.7	0.7	0.9	1.1	0.9	0.0	0.0	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.7	0.8	0.8	1.2	0.9	0.0	0.1	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.7	0.8	0.8	1.1	1.0	0.0	0.1	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.6	0.8	0.9	1.0	1.1	0.1	0.2	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.5	0.7	0.9	0.9	1.2	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0

300.	*	0.4	0.7	0.8	0.8	1.0	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	
310.	*	0.3	0.4	0.6	0.6	0.7	0.3	0.5	0.6	0.5	0.0	0.0	0.0	0.2	0.1	
320.	*	0.1	0.2	0.2	0.2	0.3	0.7	0.8	0.9	0.5	0.0	0.0	0.0	0.5	0.3	
330.	*	0.0	0.1	0.1	0.1	0.1	1.0	1.0	1.2	0.6	0.0	0.0	0.1	0.8	0.4	
340.	*	0.0	0.0	0.0	0.0	0.0	1.0	1.1	1.3	0.8	0.3	0.1	0.2	1.0	0.7	
350.	*	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.3	0.9	0.5	0.1	0.4	1.0	0.7	
360.	*	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.2	0.9	0.6	0.3	0.4	0.9	0.8	
-----*																
MAX	*	1.1	1.1	1.1	1.2	1.2	1.0	1.1	1.3	1.1	0.9	0.9	1.0	1.3	1.2	
DEGR.	*	150	160	170	260	290	330	340	340	10	20	60	80	110	120	

THE HIGHEST CONCENTRATION OF 1.30 PPM OCCURRED AT RECEPTOR REC13.

East Taunton 2016 Build Mitigated (Diesel) – CO

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE

1

JOB: South Coast Rail (Taunton)

RUN: 2016 Build with Mitigation

DATE : 9/15/ 9

TIME : 11:33:36

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	* X1	Y1	X2	Y2	* (FT) (DEG)	(G/MI)	(FT) (FT)	(VEH)	H	W
1. Rt 140 NB L	* 11948.8	-3565.2	11989.8	-3612.2	* 62. 139. AG	59. 100.0	1.0	10.0		
0.36 3.2										
2. Rt 140 NB T	* 11964.0	-3553.9	11964.1	-3554.1	* 0. 138. AG	0. 100.0	1.0	20.0		
0.32 0.0										
3. Rt 140 SB T	* 11903.1	-3548.3	11772.7	-3400.9	* 197. 318. AG	148. 100.0	1.0	20.0		
0.91 10.0										
4. Train Queue	* 9191.5	-7114.1	9192.0	-7114.7	* 1. 138. AG	40. 100.0	1.0	20.0		
0.00 0.0										
5. 24SB/Route 140 North	* 11930.8	-3558.3	11727.3	-3343.3	* 296. 317. AG	2467. 9.3	1.0			
78.0										
6. 24 SB/Rt 140 South	* 11930.8	-3558.3	12101.5	-3735.9	* 246. 136. AG	3830. 9.3	1.0			
78.0										
7. Rt 24 SB Off Ramp	* 11930.8	-3558.3	11814.2	-3698.5	* 182. 220. AG	1440. 9.2	1.0			
42.0										
8. Rt 24 SB On Ramp	* 11888.8	-3530.6	11801.3	-3697.0	* 188. 208. AG	647. 9.2	1.0			
30.0										
9. Train Line 1	* -3325.6	6855.1	10135.8	-8168.6	* ***** 138. AG	5. 8.9	1.0	48.0		
10. Train Line 2	* 10124.7	-8177.8	12559.4	-12250.7	* 4745. 149. AG	5. 8.9	1.0	48.0		
11. Train Line 3	* -3319.6	6871.8	-6541.4	11486.7	* 5628. 325. AG	5. 8.9	1.0	48.0		

JOB: South Coast Rail (Taunton)

RUN: 2016 Build with Mitigation

DATE : 9/15/ 9

TIME : 11:33:36

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL
ARRIVAL							
	* LENGTH	TIME	LOST TIME	VOL	FLOW RATE	EM FAC	TYPE RATE
	* (SEC)	(SEC)	(SEC)	(VPH)	(VPH)	(gm/hr)	
-----*							
1. Rt 140 NB L	*	90	40	3.0	285	1600	49.72 1 3
2. Rt 140 NB T	*	90	0	3.0	976	1600	49.72 1 3
3. Rt 140 SB T	*	90	50	3.0	1129	1600	49.72 1 3
4. Train Queue	*	120	70	3.0	5	1600	12.69 1 3

RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (FT)	* X	Y	Z	*
-----*					
1. East 1	*	11858.3	-3406.1	6.0	*
2. East 2	*	11909.8	-3460.5	6.0	*
3. East 3	*	11961.4	-3515.0	6.0	*
4. East 4	*	12017.5	-3564.8	6.0	*
5. East 5	*	12069.5	-3619.0	6.0	*
6. SW1	*	12018.0	-3732.7	6.0	*
7. SW2	*	11966.0	-3678.7	6.0	*
8. SW3	*	11914.0	-3624.6	6.0	*
9. SW4	*	11866.0	-3682.2	6.0	*
10. SW5	*	11817.7	-3739.6	6.0	*
11. NW1	*	11777.6	-3678.7	6.0	*
12. NW2	*	11812.5	-3612.3	6.0	*
13. NW3	*	11847.5	-3545.9	6.0	*
14. NW4	*	11795.9	-3491.5	6.0	*
15. NW5	*	11744.3	-3437.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (PPM)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

ANGLE *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15
0. *	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.2	1.0	0.6	0.3	0.4	0.9	0.9	0.5
10. *	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.0	1.1	0.8	0.3	0.5	0.9	0.9	0.5
20. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.0	1.0	0.9	0.3	0.5	0.9	0.9	0.5
30. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.0	0.8	0.8	0.4	0.5	0.8	0.8	0.6
40. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.7	0.6	0.7	0.5	0.9	0.9	0.7
50. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.6	0.4	0.8	0.8	0.9	0.9	0.8
60. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.5	0.3	0.9	0.8	0.9	0.8	0.7
70. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.5	0.3	0.9	0.8	1.0	0.8	0.8
80. *	0.0	0.0	0.0	0.0	0.0	0.7	0.9	0.9	0.5	0.3	0.9	1.0	1.0	0.9	0.9
90. *	0.0	0.0	0.0	0.0	0.0	0.6	0.9	0.9	0.4	0.2	0.8	1.0	1.2	0.9	0.9
100. *	0.0	0.0	0.0	0.0	0.0	0.4	0.9	1.0	0.3	0.1	0.6	1.0	1.2	1.0	1.0
110. *	0.0	0.0	0.0	0.0	0.0	0.3	0.8	0.9	0.2	0.0	0.4	0.9	1.5	1.1	1.1
120. *	0.1	0.1	0.1	0.0	0.0	0.2	0.6	0.8	0.1	0.0	0.2	0.7	1.3	1.4	1.1
130. *	0.3	0.4	0.3	0.1	0.0	0.1	0.3	0.5	0.0	0.0	0.2	0.6	1.1	1.0	1.0
140. *	0.7	0.6	0.6	0.3	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.5	0.7	0.6	0.6
150. *	1.1	1.0	0.9	0.6	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.5	0.3	0.3
160. *	1.1	1.1	1.0	0.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.2	0.1
170. *	1.1	1.0	1.1	0.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.2	0.0
180. *	1.0	1.0	1.1	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.1	0.0
190. *	1.0	1.2	1.0	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0
200. *	0.8	1.0	1.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
210. *	0.7	0.9	1.0	0.8	0.8	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
220. *	0.8	0.9	1.1	0.9	0.8	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
230. *	0.8	0.8	1.2	1.0	0.8	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
240. *	0.7	0.7	0.9	1.1	0.8	0.0	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.7	0.7	0.9	1.2	0.9	0.0	0.0	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.8	0.8	0.9	1.2	1.0	0.0	0.1	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.7	0.8	0.8	1.1	1.0	0.0	0.1	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.7	0.9	0.9	1.0	1.1	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.6	0.9	0.9	1.0	1.2	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0

300.	*	0.5	0.7	0.9	0.9	1.0	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.1	0.0	0.0
310.	*	0.3	0.4	0.6	0.6	0.7	0.3	0.6	0.6	0.5	0.0	0.0	0.0	0.2	0.1	0.0
320.	*	0.1	0.2	0.3	0.2	0.3	0.8	0.8	1.0	0.5	0.0	0.0	0.0	0.5	0.3	0.1
330.	*	0.0	0.1	0.1	0.1	0.1	1.2	1.1	1.2	0.6	0.0	0.0	0.1	0.8	0.6	0.3
340.	*	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.4	0.8	0.3	0.1	0.2	1.0	0.7	0.3
350.	*	0.0	0.0	0.0	0.0	0.0	1.0	1.1	1.3	0.9	0.6	0.1	0.4	1.0	0.8	0.4
360.	*	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.2	1.0	0.6	0.3	0.4	0.9	0.9	0.5
-----*																
MAX	*	1.1	1.2	1.2	1.2	1.2	1.2	1.1	1.4	1.1	0.9	0.9	1.0	1.5	1.4	1.1
DEGR.	*	150	190	230	250	290	330	330	340	10	20	60	80	110	120	110

THE HIGHEST CONCENTRATION OF 1.50 PPM OCCURRED AT RECEPTOR REC13.

East Taunton 2016 Build Mitigated (Electric) – CO

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE

1

JOB: South Coast Rail (Taunton)

RUN: 2016 Build with Mitigation

DATE : 9/15/ 9

TIME : 11:33:46

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH (G/MI)	BRG (FT)	TYPE (FT)	VPH (VEH)	EF	H	W
		X1	Y1	X2	Y2								
1. Rt 140 NB L	*	11948.8	-3565.2	11989.8	-3612.2	*	62.	139.	AG	59.	100.0	1.0	10.0
0.36													
3.2													
2. Rt 140 NB T	*	11964.0	-3553.9	11964.1	-3554.1	*	0.	138.	AG	0.	100.0	1.0	20.0
0.32													
0.0													
3. Rt 140 SB T	*	11903.1	-3548.3	11772.7	-3400.9	*	197.	318.	AG	148.	100.0	1.0	20.0
0.91													
10.0													
4. Train Queue	*	9191.5	-7114.1	9192.0	-7114.7	*	1.	138.	AG	0.	100.0	1.0	20.0
0.0													
5. 24SB/Route 140 North	*	11930.8	-3558.3	11727.3	-3343.3	*	296.	317.	AG	2467.	9.3	1.0	
78.0													
6. 24 SB/Rt 140 South	*	11930.8	-3558.3	12101.5	-3735.9	*	246.	136.	AG	3830.	9.3	1.0	
78.0													
7. Rt 24 SB Off Ramp	*	11930.8	-3558.3	11814.2	-3698.5	*	182.	220.	AG	1440.	9.2	1.0	
42.0													
8. Rt 24 SB On Ramp	*	11888.8	-3530.6	11801.3	-3697.0	*	188.	208.	AG	647.	9.2	1.0	
30.0													
9. Train Line 1	*	-3325.6	6855.1	10135.8	-8168.6	*	*****	138.	AG	5.	0.0	1.0	48.0
10. Train Line 2	*	10124.7	-8177.8	12559.4	-12250.7	*	4745.	149.	AG	5.	0.0	1.0	48.0
11. Train Line 3	*	-3319.6	6871.8	-6541.4	11486.7	*	5628.	325.	AG	5.	0.0	1.0	48.0

JOB: South Coast Rail (Taunton)

RUN: 2016 Build with Mitigation

DATE : 9/15/ 9

TIME : 11:33:46

ADDITIONAL QUEUE LINK PARAMETERS

 LINK DESCRIPTION * CYCLE RED CLEARANCE APPROACH SATURATION IDLE SIGNAL
 ARRIVAL

* LENGTH TIME LOST TIME VOL FLOW RATE EM FAC TYPE RATE
 * (SEC) (SEC) (SEC) (VPH) (VPH) (gm/hr)

	*									
1. Rt 140 NB L	*	90	40	3.0	285	1600	49.72	1	3	
2. Rt 140 NB T	*	90	0	3.0	976	1600	49.72	1	3	
3. Rt 140 SB T	*	90	50	3.0	1129	1600	49.72	1	3	
4. Train Queue	*	120	70	3.0	5	1600	0.00	1	3	

RECEPTOR LOCATIONS

	*	COORDINATES (FT)			*
RECEPTOR	*	X	Y	Z	*
1. East 1	*	11858.3	-3406.1	6.0	*
2. East 2	*	11909.8	-3460.5	6.0	*
3. East 3	*	11961.4	-3515.0	6.0	*
4. East 4	*	12017.5	-3564.8	6.0	*
5. East 5	*	12069.5	-3619.0	6.0	*
6. SW1	*	12018.0	-3732.7	6.0	*
7. SW2	*	11966.0	-3678.7	6.0	*
8. SW3	*	11914.0	-3624.6	6.0	*
9. SW4	*	11866.0	-3682.2	6.0	*
10. SW5	*	11817.7	-3739.6	6.0	*
11. NW1	*	11777.6	-3678.7	6.0	*
12. NW2	*	11812.5	-3612.3	6.0	*
13. NW3	*	11847.5	-3545.9	6.0	*
14. NW4	*	11795.9	-3491.5	6.0	*
15. NW5	*	11744.3	-3437.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (PPM)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

ANGLE *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15
0. *	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.2	1.0	0.6	0.3	0.4	0.9	0.9	0.5
10. *	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.0	1.1	0.8	0.3	0.5	0.9	0.9	0.5
20. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.0	1.0	0.9	0.3	0.5	0.9	0.9	0.5
30. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.0	0.8	0.8	0.4	0.5	0.8	0.8	0.6
40. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.7	0.6	0.7	0.5	0.9	0.9	0.7
50. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.6	0.4	0.8	0.8	0.9	0.9	0.8
60. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.5	0.3	0.9	0.8	0.9	0.8	0.7
70. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.5	0.3	0.9	0.8	1.0	0.8	0.8
80. *	0.0	0.0	0.0	0.0	0.0	0.7	0.9	0.9	0.5	0.3	0.9	1.0	1.0	0.9	0.9
90. *	0.0	0.0	0.0	0.0	0.0	0.6	0.9	0.9	0.4	0.2	0.8	1.0	1.2	0.9	0.9
100. *	0.0	0.0	0.0	0.0	0.0	0.4	0.9	1.0	0.3	0.1	0.6	1.0	1.2	1.0	1.0
110. *	0.0	0.0	0.0	0.0	0.0	0.3	0.8	0.9	0.2	0.0	0.4	0.9	1.5	1.1	1.1
120. *	0.1	0.1	0.1	0.0	0.0	0.2	0.6	0.8	0.1	0.0	0.2	0.7	1.3	1.4	1.1
130. *	0.3	0.4	0.3	0.1	0.0	0.1	0.3	0.5	0.0	0.0	0.2	0.6	1.1	1.0	1.0
140. *	0.7	0.6	0.6	0.3	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.5	0.7	0.6	0.6
150. *	1.1	1.0	0.9	0.6	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.5	0.3	0.3
160. *	1.1	1.1	1.0	0.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.2	0.1
170. *	1.1	1.0	1.1	0.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.2	0.0
180. *	1.0	1.0	1.1	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.1	0.0
190. *	1.0	1.2	1.0	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0
200. *	0.8	1.0	1.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
210. *	0.7	0.9	1.0	0.8	0.8	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
220. *	0.8	0.9	1.1	0.9	0.8	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
230. *	0.8	0.8	1.2	1.0	0.8	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
240. *	0.7	0.7	0.9	1.1	0.8	0.0	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.7	0.7	0.9	1.2	0.9	0.0	0.0	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.8	0.8	0.9	1.2	1.0	0.0	0.1	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.7	0.8	0.8	1.1	1.0	0.0	0.1	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.7	0.9	0.9	1.0	1.1	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.6	0.9	0.9	1.0	1.2	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0

300.	*	0.5	0.7	0.9	0.9	1.0	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.1	0.0	0.0
310.	*	0.3	0.4	0.6	0.6	0.7	0.3	0.6	0.6	0.5	0.0	0.0	0.0	0.2	0.1	0.0
320.	*	0.1	0.2	0.3	0.2	0.3	0.8	0.8	1.0	0.5	0.0	0.0	0.0	0.5	0.3	0.1
330.	*	0.0	0.1	0.1	0.1	0.1	1.2	1.1	1.2	0.6	0.0	0.0	0.1	0.8	0.6	0.3
340.	*	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.4	0.8	0.3	0.1	0.2	1.0	0.7	0.3
350.	*	0.0	0.0	0.0	0.0	0.0	1.0	1.1	1.3	0.9	0.6	0.1	0.4	1.0	0.8	0.4
360.	*	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.2	1.0	0.6	0.3	0.4	0.9	0.9	0.5
-----*																
MAX	*	1.1	1.2	1.2	1.2	1.2	1.2	1.1	1.4	1.1	0.9	0.9	1.0	1.5	1.4	1.1
DEGR.	*	150	190	230	250	290	330	330	340	10	20	60	80	110	120	110

THE HIGHEST CONCENTRATION OF 1.50 PPM OCCURRED AT RECEPTOR REC13.

East Taunton 2030 Build Mitigated (Diesel) – CO

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE

1

JOB: South Coast Rail (Taunton)

RUN: 2030 Build with Mitigation

DATE : 7/ 2/ 9

TIME : 9: 2: 1

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	* X1	Y1	X2	Y2	* (FT) (DEG)	(G/MI)	(FT)	(FT)	(VEH)	H	W
1. Rt 140 NB L	* 11948.8	-3565.2	11989.8	-3612.2	* 62. 139. AG	60. 100.0	1.0	10.0			
0.36 3.2											
2. Rt 140 NB T	* 11964.0	-3553.9	11964.1	-3554.1	* 0. 138. AG	0. 100.0	1.0	20.0			
0.32 0.0											
3. Rt 140 SB T	* 11903.1	-3548.3	11772.7	-3400.9	* 197. 318. AG	149. 100.0	1.0	20.0			
0.91 10.0											
4. Train Queue	* 9191.5	-7114.1	9192.0	-7114.7	* 1. 138. AG	40. 100.0	1.0	20.0			
0.00 0.0											
5. 24SB/Route 140 North	* 11930.8	-3558.3	11727.3	-3343.3	* 296. 317. AG	2467. 9.2	1.0				
78.0											
6. 24 SB/Rt 140 South	* 11930.8	-3558.3	12101.5	-3735.9	* 246. 136. AG	3830. 9.2	1.0				
78.0											
7. Rt 24 SB Off Ramp	* 11930.8	-3558.3	11814.2	-3698.5	* 182. 220. AG	1440. 9.1	1.0				
42.0											
8. Rt 24 SB On Ramp	* 11888.8	-3530.6	11801.3	-3697.0	* 188. 208. AG	647. 9.1	1.0				
30.0											
9. Train Line 1	* -3325.6	6855.1	10135.8	-8168.6	* ***** 138. AG	5. 8.9	1.0	48.0			
10. Train Line 2	* 10124.7	-8177.8	12559.4	-12250.7	* 4745. 149. AG	5. 8.9	1.0	48.0			
11. Train Line 3	* -3319.6	6871.8	-6541.4	11486.7	* 5628. 325. AG	5. 8.9	1.0	48.0			

JOB: South Coast Rail (Taunton)

RUN: 2030 Build with Mitigation

DATE : 7/ 2/ 9

TIME : 9: 2: 1

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL
ARRIVAL							
	* LENGTH	TIME	LOST TIME	VOL	FLOW RATE	EM FAC	TYPE RATE
	* (SEC)	(SEC)	(SEC)	(VPH)	(VPH)	(gm/hr)	
-----*							
1. Rt 140 NB L	*	90	40	3.0	285	1600	50.10 1 3
2. Rt 140 NB T	*	90	0	3.0	976	1600	50.10 1 3
3. Rt 140 SB T	*	90	50	3.0	1129	1600	50.10 1 3
4. Train Queue	*	120	70	3.0	5	1600	12.69 1 3

RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (FT)	* X	Y	Z	*
-----*					
1. East 1	*	11858.3	-3406.1	6.0	*
2. East 2	*	11909.8	-3460.5	6.0	*
3. East 3	*	11961.4	-3515.0	6.0	*
4. East 4	*	12017.5	-3564.8	6.0	*
5. East 5	*	12069.5	-3619.0	6.0	*
6. SW1	*	12018.0	-3732.7	6.0	*
7. SW2	*	11966.0	-3678.7	6.0	*
8. SW3	*	11914.0	-3624.6	6.0	*
9. SW4	*	11866.0	-3682.2	6.0	*
10. SW5	*	11817.7	-3739.6	6.0	*
11. NW1	*	11777.6	-3678.7	6.0	*
12. NW2	*	11812.5	-3612.3	6.0	*
13. NW3	*	11847.5	-3545.9	6.0	*
14. NW4	*	11795.9	-3491.5	6.0	*
15. NW5	*	11744.3	-3437.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (PPM)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

ANGLE *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15
0. *	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.2	0.9	0.6	0.3	0.4	0.9	0.9	0.5
10. *	0.0	0.0	0.0	0.0	0.0	0.9	0.8	1.0	1.1	0.8	0.3	0.5	0.9	0.9	0.5
20. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.0	0.9	0.9	0.3	0.5	0.9	0.8	0.5
30. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.0	0.7	0.8	0.4	0.5	0.8	0.8	0.6
40. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.7	0.6	0.7	0.5	0.9	0.9	0.7
50. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.6	0.4	0.7	0.8	0.9	0.9	0.8
60. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.5	0.3	0.9	0.8	0.9	0.8	0.7
70. *	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.9	0.5	0.3	0.9	0.8	0.9	0.8	0.8
80. *	0.0	0.0	0.0	0.0	0.0	0.7	0.9	0.9	0.5	0.3	0.8	1.0	0.9	0.9	0.9
90. *	0.0	0.0	0.0	0.0	0.0	0.6	0.9	0.9	0.4	0.2	0.8	1.0	1.2	0.9	0.9
100. *	0.0	0.0	0.0	0.0	0.0	0.4	0.9	0.9	0.3	0.1	0.6	1.0	1.2	1.0	1.0
110. *	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.9	0.2	0.0	0.4	0.9	1.5	1.1	1.1
120. *	0.1	0.1	0.1	0.0	0.0	0.2	0.5	0.8	0.1	0.0	0.2	0.7	1.3	1.3	1.1
130. *	0.3	0.2	0.3	0.1	0.0	0.1	0.3	0.5	0.0	0.0	0.2	0.6	1.1	1.0	1.0
140. *	0.7	0.6	0.6	0.3	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.5	0.7	0.6	0.6
150. *	1.1	1.0	0.9	0.6	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.5	0.3	0.3
160. *	1.1	1.1	1.0	0.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.2	0.1
170. *	1.1	1.0	1.1	0.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.2	0.0
180. *	1.0	1.0	1.1	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.1	0.0
190. *	1.0	1.1	1.0	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0
200. *	0.7	1.0	0.9	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
210. *	0.7	0.9	1.0	0.8	0.8	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
220. *	0.8	0.9	1.1	0.9	0.8	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
230. *	0.8	0.8	1.2	1.0	0.8	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
240. *	0.7	0.7	0.9	1.1	0.8	0.0	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.7	0.7	0.9	1.2	0.9	0.0	0.0	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.8	0.8	0.8	1.2	1.0	0.0	0.1	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.7	0.8	0.8	1.1	1.0	0.0	0.1	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.7	0.9	0.9	1.0	1.1	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.6	0.9	0.9	1.0	1.2	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0

300.	*	0.5	0.7	0.9	0.9	1.0	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.1	0.0	0.0
310.	*	0.3	0.4	0.6	0.6	0.7	0.3	0.6	0.6	0.5	0.0	0.0	0.0	0.2	0.1	0.0
320.	*	0.1	0.2	0.2	0.2	0.3	0.8	0.8	0.9	0.5	0.0	0.0	0.0	0.5	0.3	0.1
330.	*	0.0	0.1	0.1	0.1	0.1	1.2	1.0	1.2	0.6	0.0	0.0	0.1	0.8	0.6	0.3
340.	*	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.4	0.8	0.3	0.1	0.2	1.0	0.7	0.3
350.	*	0.0	0.0	0.0	0.0	0.0	1.0	1.1	1.3	0.9	0.6	0.1	0.4	1.0	0.8	0.4
360.	*	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.2	0.9	0.6	0.3	0.4	0.9	0.9	0.5
-----*																
MAX	*	1.1	1.1	1.2	1.2	1.2	1.2	1.1	1.4	1.1	0.9	0.9	1.0	1.5	1.3	1.1
DEGR.	*	150	160	230	250	290	330	340	340	10	20	60	80	110	120	110

THE HIGHEST CONCENTRATION OF 1.50 PPM OCCURRED AT RECEPTOR REC13.

East Taunton 2030 Build Mitigated (Electric) – CO

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE

1

JOB: South Coast Rail (Taunton)

RUN: 2030 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:38: 2

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S ZO = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	* X1	Y1	X2	Y2	* (FT) (DEG)	(G/MI)	(FT)	(FT)	(VEH)	H	W
1. Rt 140 NB L	* 11948.8	-3565.2	11989.8	-3612.2	* 62. 139. AG	60. 100.0	1.0	10.0			
0.36 3.2											
2. Rt 140 NB T	* 11964.0	-3553.9	11964.1	-3554.1	* 0. 138. AG	0. 100.0	1.0	20.0			
0.32 0.0											
3. Rt 140 SB T	* 11903.1	-3548.3	11772.7	-3400.9	* 197. 318. AG	149. 100.0	1.0	20.0			
0.91 10.0											
4. Train Queue	* 9191.5	-7114.1	9192.0	-7114.7	* 1. 138. AG	0. 100.0	1.0	20.0	0.00		
0.0											
5. 24SB/Route 140 North	* 11930.8	-3558.3	11727.3	-3343.3	* 296. 317. AG	2467. 9.2	1.0				
78.0											
6. 24 SB/Rt 140 South	* 11930.8	-3558.3	12101.5	-3735.9	* 246. 136. AG	3830. 9.2	1.0				
78.0											
7. Rt 24 SB Off Ramp	* 11930.8	-3558.3	11814.2	-3698.5	* 182. 220. AG	1440. 9.1	1.0				
42.0											
8. Rt 24 SB On Ramp	* 11888.8	-3530.6	11801.3	-3697.0	* 188. 208. AG	647. 9.1	1.0				
30.0											
9. Train Line 1	* -3325.6	6855.1	10135.8	-8168.6	* ***** 138. AG	5. 0.0	1.0	48.0			
10. Train Line 2	* 10124.7	-8177.8	12559.4	-12250.7	* 4745. 149. AG	5. 0.0	1.0	48.0			
11. Train Line 3	* -3319.6	6871.8	-6541.4	11486.7	* 5628. 325. AG	5. 0.0	1.0	48.0			

JOB: South Coast Rail (Taunton)

RUN: 2030 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:38: 2

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* CYCLE	RED	CLEARANCE	APPROACH	SATURATION	IDLE	SIGNAL
ARRIVAL	* LENGTH	TIME	LOST TIME	VOL	FLOW RATE	EM FAC	TYPE
	* (SEC)	(SEC)	(VPH)	(VPH)	(gm/hr)		RATE
1. Rt 140 NB L	* 90	40	3.0	285	1600	50.10	1 3
2. Rt 140 NB T	* 90	0	3.0	976	1600	50.10	1 3
3. Rt 140 SB T	* 90	50	3.0	1129	1600	50.10	1 3
4. Train Queue	* 120	70	3.0	5	1600	0.00	1 3

RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (FT)	* X	Y	Z	*
1. East 1	* 11858.3	-3406.1	6.0	*	
2. East 2	* 11909.8	-3460.5	6.0	*	
3. East 3	* 11961.4	-3515.0	6.0	*	
4. East 4	* 12017.5	-3564.8	6.0	*	
5. East 5	* 12069.5	-3619.0	6.0	*	
6. SW1	* 12018.0	-3732.7	6.0	*	
7. SW2	* 11966.0	-3678.7	6.0	*	
8. SW3	* 11914.0	-3624.6	6.0	*	
9. SW4	* 11866.0	-3682.2	6.0	*	
10. SW5	* 11817.7	-3739.6	6.0	*	
11. NW1	* 11777.6	-3678.7	6.0	*	
12. NW2	* 11812.5	-3612.3	6.0	*	
13. NW3	* 11847.5	-3545.9	6.0	*	
14. NW4	* 11795.9	-3491.5	6.0	*	
15. NW5	* 11744.3	-3437.0	6.0	*	

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (PPM)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

ANGLE *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15
0. *	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.2	0.9	0.6	0.3	0.4	0.9	0.9	0.5
10. *	0.0	0.0	0.0	0.0	0.0	0.9	0.8	1.0	1.1	0.8	0.3	0.5	0.9	0.9	0.5
20. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.0	0.9	0.9	0.3	0.5	0.9	0.8	0.5
30. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.0	0.7	0.8	0.4	0.5	0.8	0.8	0.6
40. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.7	0.6	0.7	0.5	0.9	0.9	0.7
50. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.6	0.4	0.7	0.8	0.9	0.9	0.8
60. *	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.9	0.5	0.3	0.9	0.8	0.9	0.8	0.7
70. *	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.9	0.5	0.3	0.9	0.8	0.9	0.8	0.8
80. *	0.0	0.0	0.0	0.0	0.0	0.7	0.9	0.9	0.5	0.3	0.8	1.0	0.9	0.9	0.9
90. *	0.0	0.0	0.0	0.0	0.0	0.6	0.9	0.9	0.4	0.2	0.8	1.0	1.2	0.9	0.9
100. *	0.0	0.0	0.0	0.0	0.0	0.4	0.9	0.9	0.3	0.1	0.6	1.0	1.2	1.0	1.0
110. *	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.9	0.2	0.0	0.4	0.9	1.5	1.1	1.1
120. *	0.1	0.1	0.1	0.0	0.0	0.2	0.5	0.8	0.1	0.0	0.2	0.7	1.3	1.3	1.1
130. *	0.3	0.2	0.3	0.1	0.0	0.1	0.3	0.5	0.0	0.0	0.2	0.6	1.1	1.0	1.0
140. *	0.7	0.6	0.6	0.3	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.5	0.7	0.6	0.6
150. *	1.1	1.0	0.9	0.6	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.5	0.3	0.3
160. *	1.1	1.1	1.0	0.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.2	0.1
170. *	1.1	1.0	1.1	0.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.2	0.0
180. *	1.0	1.0	1.1	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.1	0.0
190. *	1.0	1.1	1.0	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0
200. *	0.7	1.0	0.9	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
210. *	0.7	0.9	1.0	0.8	0.8	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
220. *	0.8	0.9	1.1	0.9	0.8	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
230. *	0.8	0.8	1.2	1.0	0.8	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
240. *	0.7	0.7	0.9	1.1	0.8	0.0	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
250. *	0.7	0.7	0.9	1.2	0.9	0.0	0.0	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0
260. *	0.8	0.8	0.8	1.2	1.0	0.0	0.1	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
270. *	0.7	0.8	0.8	1.1	1.0	0.0	0.1	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
280. *	0.7	0.9	0.9	1.0	1.1	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
290. *	0.6	0.9	0.9	1.0	1.2	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0

300.	*	0.5	0.7	0.9	0.9	1.0	0.1	0.3	0.5	0.5	0.0	0.0	0.0	0.1	0.0	0.0
310.	*	0.3	0.4	0.6	0.6	0.7	0.3	0.6	0.6	0.5	0.0	0.0	0.0	0.2	0.1	0.0
320.	*	0.1	0.2	0.2	0.2	0.3	0.8	0.8	0.9	0.5	0.0	0.0	0.0	0.5	0.3	0.1
330.	*	0.0	0.1	0.1	0.1	0.1	1.2	1.0	1.2	0.6	0.0	0.0	0.1	0.8	0.6	0.3
340.	*	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.4	0.8	0.3	0.1	0.2	1.0	0.7	0.3
350.	*	0.0	0.0	0.0	0.0	0.0	1.0	1.1	1.3	0.9	0.6	0.1	0.4	1.0	0.8	0.4
360.	*	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.2	0.9	0.6	0.3	0.4	0.9	0.9	0.5
-----*																
MAX	*	1.1	1.1	1.2	1.2	1.2	1.2	1.1	1.4	1.1	0.9	0.9	1.0	1.5	1.3	1.1
DEGR.	*	150	160	230	250	290	330	340	340	10	20	60	80	110	120	110

THE HIGHEST CONCENTRATION OF 1.50 PPM OCCURRED AT RECEPTOR REC13.



Technical Report
Air Quality
Draft

Hot Spot: Microscale (Local) Analysis Cal3QHC - Output Files

- Particulate Matter 10 (PM₁₀)



Technical Report
Air Quality
Draft

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JOB: South Coast Rail (Taunton)

RUN: Existing Condition

DATE : 6/29/ 9

TIME : 16:39:21

1. Rt 140 NB L	*	90	40	3.0	205	1600	0.11	1	3
2. Rt 140 NB T	*	90	0	3.0	790	1600	0.11	1	3
3. Rt 140 SB T	*	90	50	3.0	1000	1600	0.11	1	3

RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (FT)			*
	*	X	Y	Z	*
1. East 1	*	11858.3	-3406.1	6.0	*
2. East 2	*	11909.8	-3460.5	6.0	*
3. East 3	*	11961.4	-3515.0	6.0	*
4. East 4	*	12017.5	-3564.8	6.0	*
5. East 5	*	12069.5	-3619.0	6.0	*
6. SW1	*	12018.0	-3732.7	6.0	*
7. SW2	*	11966.0	-3678.7	6.0	*
8. SW3	*	11914.0	-3624.6	6.0	*
9. SW4	*	11866.0	-3682.2	6.0	*
10. SW5	*	11817.7	-3739.6	6.0	*
11. NW1	*	11777.6	-3678.7	6.0	*
12. NW2	*	11812.5	-3612.3	6.0	*
13. NW3	*	11847.5	-3545.9	6.0	*
14. NW4	*	11795.9	-3491.5	6.0	*
15. NW5	*	11744.3	-3437.0	6.0	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

ANGLE *	REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15
0. *	0.	0.	0.	0.	5.	5.	6.	5.	4.	1.	2.	4.	4.	3.	
10. *	0.	0.	0.	0.	4.	4.	6.	5.	4.	1.	2.	4.	4.	3.	
20. *	0.	0.	0.	0.	4.	4.	5.	5.	4.	2.	2.	4.	3.	3.	
30. *	0.	0.	0.	0.	4.	4.	5.	4.	4.	2.	2.	4.	3.	3.	
40. *	0.	0.	0.	0.	4.	4.	5.	3.	3.	3.	3.	4.	4.	3.	
50. *	0.	0.	0.	0.	4.	4.	4.	3.	2.	4.	3.	4.	4.	3.	
60. *	0.	0.	0.	0.	4.	4.	4.	2.	2.	5.	4.	4.	4.	3.	
70. *	0.	0.	0.	0.	4.	4.	4.	2.	2.	5.	4.	4.	4.	3.	
80. *	0.	0.	0.	0.	3.	4.	4.	2.	1.	5.	5.	5.	4.	3.	
90. *	0.	0.	0.	0.	3.	4.	4.	2.	1.	4.	5.	6.	4.	4.	
100. *	0.	0.	0.	0.	2.	4.	5.	2.	0.	4.	5.	6.	5.	4.	
110. *	0.	0.	0.	0.	2.	4.	4.	1.	0.	2.	4.	7.	6.	5.	
120. *	0.	0.	0.	0.	1.	3.	4.	0.	0.	2.	3.	7.	6.	6.	
130. *	2.	2.	1.	1.	0.	0.	1.	2.	0.	0.	1.	3.	6.	5.	5.
140. *	3.	3.	3.	2.	1.	0.	0.	1.	0.	0.	0.	2.	4.	3.	3.
150. *	5.	5.	4.	3.	2.	0.	0.	0.	0.	0.	0.	2.	3.	2.	2.
160. *	5.	5.	5.	4.	3.	0.	0.	0.	0.	0.	0.	2.	2.	1.	1.
170. *	5.	5.	5.	4.	4.	0.	0.	0.	0.	0.	0.	2.	2.	1.	0.
180. *	5.	5.	5.	4.	4.	0.	0.	0.	0.	0.	0.	2.	2.	1.	0.
190. *	5.	5.	5.	4.	4.	0.	0.	0.	0.	0.	0.	1.	2.	0.	0.
200. *	4.	5.	5.	4.	4.	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.
210. *	3.	4.	6.	4.	4.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
220. *	4.	4.	6.	4.	4.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.
230. *	3.	4.	6.	5.	4.	0.	0.	2.	1.	0.	0.	0.	0.	0.	0.
240. *	3.	3.	5.	5.	4.	0.	0.	3.	1.	0.	0.	0.	0.	0.	0.
250. *	3.	3.	4.	6.	4.	0.	0.	3.	2.	0.	0.	0.	0.	0.	0.
260. *	3.	4.	4.	6.	5.	0.	1.	3.	2.	0.	0.	0.	0.	0.	0.
270. *	3.	4.	4.	6.	6.	0.	1.	3.	3.	0.	0.	0.	0.	0.	0.
280. *	3.	4.	4.	5.	6.	0.	1.	3.	3.	0.	0.	0.	0.	0.	0.
290. *	3.	4.	4.	5.	6.	1.	1.	3.	3.	0.	0.	0.	0.	0.	0.

300. * 2. 3. 4. 4. 5. 1. 2. 3. 3. 0. 0. 0. 0. 0.
 310. * 2. 2. 3. 3. 3. 2. 3. 4. 3. 0. 0. 0. 1. 1. 0.
 320. * 1. 1. 1. 1. 2. 4. 4. 5. 3. 0. 0. 0. 2. 1. 1.
 330. * 0. 0. 0. 0. 0. 5. 5. 6. 4. 0. 0. 0. 3. 2. 1.
 340. * 0. 0. 0. 0. 0. 5. 6. 7. 4. 1. 0. 1. 4. 3. 2.
 350. * 0. 0. 0. 0. 0. 5. 5. 7. 5. 2. 1. 2. 4. 4. 2.
 360. * 0. 0. 0. 0. 0. 5. 5. 6. 5. 4. 1. 2. 4. 4. 3.

-----*

MAX * 5. 5. 6. 6. 6. 5. 6. 7. 5. 4. 5. 5. 7. 6. 6.

DEGR. * 160 190 220 260 280 330 340 340 0 20 70 90 120 120 120

THE HIGHEST CONCENTRATION OF 7. ug/m**3 OCCURRED AT RECEPTOR REC13.

JOB: South Coast Rail (Taunton)

RUN: 2016 No Build

DATE : 6/29/ 9

TIME : 16:39: 3

| | | | | | | | | | |
|----------------|---|----|----|-----|------|------|------|---|---|
| 1. Rt 140 NB L | * | 90 | 40 | 3.0 | 285 | 1600 | 0.08 | 1 | 3 |
| 2. Rt 140 NB T | * | 90 | 0 | 3.0 | 965 | 1600 | 0.08 | 1 | 3 |
| 3. Rt 140 SB T | * | 90 | 50 | 3.0 | 1085 | 1600 | 0.08 | 1 | 3 |

RECEPTOR LOCATIONS

| RECEPTOR | * | COORDINATES (FT) | | | * |
|-----------|---|------------------|---------|-----|---|
| | * | X | Y | Z | * |
| 1. East 1 | * | 11858.3 | -3406.1 | 6.0 | * |
| 2. East 2 | * | 11909.8 | -3460.5 | 6.0 | * |
| 3. East 3 | * | 11961.4 | -3515.0 | 6.0 | * |
| 4. East 4 | * | 12017.5 | -3564.8 | 6.0 | * |
| 5. East 5 | * | 12069.5 | -3619.0 | 6.0 | * |
| 6. SW1 | * | 12018.0 | -3732.7 | 6.0 | * |
| 7. SW2 | * | 11966.0 | -3678.7 | 6.0 | * |
| 8. SW3 | * | 11914.0 | -3624.6 | 6.0 | * |
| 9. SW4 | * | 11866.0 | -3682.2 | 6.0 | * |
| 10. SW5 | * | 11817.7 | -3739.6 | 6.0 | * |
| 11. NW1 | * | 11777.6 | -3678.7 | 6.0 | * |
| 12. NW2 | * | 11812.5 | -3612.3 | 6.0 | * |
| 13. NW3 | * | 11847.5 | -3545.9 | 6.0 | * |
| 14. NW4 | * | 11795.9 | -3491.5 | 6.0 | * |
| 15. NW5 | * | 11744.3 | -3437.0 | 6.0 | * |

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

| ANGLE * | REC1 | REC2 | REC3 | REC4 | REC5 | REC6 | REC7 | REC8 | REC9 | REC10 | REC11 | REC12 | REC13 | REC14 | REC15 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0. * | 0. | 0. | 0. | 0. | 4. | 4. | 4. | 4. | 2. | 1. | 1. | 3. | 3. | 2. | |
| 10. * | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 3. | 3. | 1. | 1. | 3. | 3. | 2. | |
| 20. * | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 3. | 3. | 1. | 2. | 2. | 2. | 2. | |
| 30. * | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 3. | 3. | 2. | 2. | 2. | 2. | 2. | |
| 40. * | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 2. | 2. | 2. | 3. | 2. | 2. | |
| 50. * | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 2. | 3. | 2. | 3. | 2. | 2. | |
| 60. * | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 1. | 3. | 3. | 3. | 2. | 2. | |
| 70. * | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 1. | 3. | 3. | 3. | 2. | 2. | |
| 80. * | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 2. | 1. | 3. | 3. | 3. | 3. | 2. | |
| 90. * | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 2. | 1. | 3. | 4. | 4. | 3. | 3. | |
| 100. * | 0. | 0. | 0. | 0. | 2. | 3. | 4. | 1. | 0. | 2. | 3. | 4. | 3. | 3. | |
| 110. * | 0. | 0. | 0. | 0. | 1. | 3. | 3. | 1. | 0. | 2. | 3. | 5. | 4. | 4. | |
| 120. * | 0. | 0. | 0. | 0. | 1. | 2. | 3. | 0. | 0. | 1. | 2. | 5. | 4. | 4. | |
| 130. * | 1. | 1. | 1. | 0. | 0. | 0. | 1. | 2. | 0. | 0. | 1. | 2. | 4. | 3. | 3. |
| 140. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 2. | 3. | 2. | 2. |
| 150. * | 4. | 4. | 3. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 1. | 1. | |
| 160. * | 4. | 4. | 4. | 3. | 2. | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 1. | 1. | |
| 170. * | 4. | 4. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 1. | 0. | |
| 180. * | 4. | 4. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 0. | 0. | |
| 190. * | 3. | 4. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. | |
| 200. * | 3. | 3. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. | |
| 210. * | 2. | 3. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| 220. * | 2. | 3. | 4. | 3. | 3. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | |
| 230. * | 2. | 2. | 4. | 4. | 3. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | |
| 240. * | 2. | 2. | 3. | 4. | 3. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | |
| 250. * | 2. | 2. | 3. | 4. | 3. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | |
| 260. * | 2. | 2. | 3. | 4. | 4. | 0. | 0. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | |
| 270. * | 2. | 3. | 3. | 4. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | |
| 280. * | 2. | 3. | 3. | 4. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | |
| 290. * | 2. | 3. | 3. | 3. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | |

300. * 2. 2. 3. 3. 4. 1. 1. 2. 2. 0. 0. 0. 0. 0.
 310. * 1. 2. 2. 2. 2. 2. 2. 2. 2. 0. 0. 0. 1. 0.
 320. * 0. 1. 1. 1. 1. 3. 3. 3. 2. 0. 0. 0. 1. 1. 0.
 330. * 0. 0. 0. 0. 0. 4. 4. 4. 2. 0. 0. 0. 2. 2. 1.
 340. * 0. 0. 0. 0. 0. 4. 4. 4. 3. 1. 0. 1. 3. 2. 1.
 350. * 0. 0. 0. 0. 0. 4. 4. 4. 3. 2. 0. 1. 3. 2. 2.
 360. * 0. 0. 0. 0. 0. 4. 4. 4. 4. 2. 1. 1. 3. 3. 2.

-----*

MAX * 4. 4. 4. 4. 4. 4. 4. 4. 4. 3. 3. 4. 5. 4. 4.

DEGR. * 160 170 220 250 280 340 340 350 0 20 70 90 110 120 120

THE HIGHEST CONCENTRATION OF 5. ug/m**3 OCCURRED AT RECEPTOR REC13.

JOB: South Coast Rail (Taunton)

RUN: 2030 No Build

DATE : 6/29/ 9

TIME : 16:39:11

| | | | | | | | | | |
|----------------|---|----|----|-----|------|------|------|---|---|
| 1. Rt 140 NB L | * | 90 | 40 | 3.0 | 285 | 1600 | 0.07 | 1 | 3 |
| 2. Rt 140 NB T | * | 90 | 0 | 3.0 | 965 | 1600 | 0.07 | 1 | 3 |
| 3. Rt 140 SB T | * | 90 | 50 | 3.0 | 1085 | 1600 | 0.07 | 1 | 3 |

RECEPTOR LOCATIONS

| RECEPTOR | * | COORDINATES (FT) | | | * |
|-----------|---|------------------|---------|-----|---|
| | * | X | Y | Z | * |
| 1. East 1 | * | 11858.3 | -3406.1 | 6.0 | * |
| 2. East 2 | * | 11909.8 | -3460.5 | 6.0 | * |
| 3. East 3 | * | 11961.4 | -3515.0 | 6.0 | * |
| 4. East 4 | * | 12017.5 | -3564.8 | 6.0 | * |
| 5. East 5 | * | 12069.5 | -3619.0 | 6.0 | * |
| 6. SW1 | * | 12018.0 | -3732.7 | 6.0 | * |
| 7. SW2 | * | 11966.0 | -3678.7 | 6.0 | * |
| 8. SW3 | * | 11914.0 | -3624.6 | 6.0 | * |
| 9. SW4 | * | 11866.0 | -3682.2 | 6.0 | * |
| 10. SW5 | * | 11817.7 | -3739.6 | 6.0 | * |
| 11. NW1 | * | 11777.6 | -3678.7 | 6.0 | * |
| 12. NW2 | * | 11812.5 | -3612.3 | 6.0 | * |
| 13. NW3 | * | 11847.5 | -3545.9 | 6.0 | * |
| 14. NW4 | * | 11795.9 | -3491.5 | 6.0 | * |
| 15. NW5 | * | 11744.3 | -3437.0 | 6.0 | * |

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

| ANGLE * | REC1 | REC2 | REC3 | REC4 | REC5 | REC6 | REC7 | REC8 | REC9 | REC10 | REC11 | REC12 | REC13 | REC14 | REC15 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 3. | 2. | 1. | 1. | 3. | 2. | 2. |
| 10. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 3. | 2. | 1. | 1. | 2. | 2. | 2. |
| 20. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 3. | 3. | 1. | 1. | 2. | 2. | 2. |
| 30. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 2. | 1. | 2. | 2. | 2. | 2. |
| 40. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 2. | 2. | 2. | 2. | 2. | 2. |
| 50. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 2. | 2. | 2. | 2. | 2. | 2. |
| 60. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 1. | 3. | 2. | 2. | 2. | 2. |
| 70. * | 0. | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 2. | 1. | 3. | 3. | 3. | 2. | 2. |
| 80. * | 0. | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 2. | 1. | 3. | 3. | 3. | 2. | 2. |
| 90. * | 0. | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 2. | 1. | 3. | 3. | 4. | 3. | 2. |
| 100. * | 0. | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 1. | 0. | 2. | 3. | 4. | 3. | 3. |
| 110. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 3. | 1. | 0. | 2. | 3. | 4. | 4. | 3. |
| 120. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 3. | 0. | 0. | 1. | 2. | 4. | 4. | 4. |
| 130. * | 1. | 1. | 1. | 0. | 0. | 0. | 1. | 2. | 0. | 0. | 0. | 2. | 4. | 3. | 3. |
| 140. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 1. | 2. | 2. | 2. |
| 150. * | 3. | 3. | 3. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 1. | 1. |
| 160. * | 3. | 3. | 4. | 3. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 1. | 0. |
| 170. * | 4. | 3. | 4. | 3. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 180. * | 3. | 3. | 3. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 190. * | 3. | 3. | 3. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 200. * | 2. | 3. | 3. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. |
| 210. * | 2. | 3. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 220. * | 2. | 2. | 4. | 3. | 3. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 230. * | 2. | 2. | 3. | 3. | 3. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 240. * | 2. | 2. | 3. | 3. | 3. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 250. * | 2. | 2. | 2. | 4. | 3. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 260. * | 2. | 2. | 3. | 4. | 3. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 270. * | 2. | 2. | 2. | 4. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |
| 280. * | 2. | 2. | 3. | 3. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |
| 290. * | 2. | 2. | 3. | 3. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |

300. * 2. 2. 2. 2. 4. 1. 1. 2. 2. 0. 0. 0. 0. 0.
 310. * 1. 1. 2. 2. 2. 1. 2. 2. 2. 0. 0. 0. 0. 0.
 320. * 0. 1. 1. 1. 1. 3. 3. 3. 2. 0. 0. 0. 1. 1. 0.
 330. * 0. 0. 0. 0. 0. 4. 3. 4. 2. 0. 0. 0. 2. 2. 1.
 340. * 0. 0. 0. 0. 0. 4. 4. 4. 3. 1. 0. 1. 3. 2. 1.
 350. * 0. 0. 0. 0. 0. 3. 4. 4. 3. 2. 0. 1. 3. 2. 1.
 360. * 0. 0. 0. 0. 0. 3. 3. 4. 3. 2. 1. 1. 3. 2. 2.

-----*

MAX * 4. 3. 4. 4. 4. 4. 4. 4. 3. 3. 3. 3. 4. 4. 4.

DEGR. * 170 170 220 260 280 340 340 340 0 20 70 90 110 120 120

THE HIGHEST CONCENTRATION OF 4. ug/m**3 OCCURRED AT RECEPTOR REC13.

East Taunton 2016 Build Mitigated (Diesel)– PM₁₀

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE

1

JOB: South Coast Rail (Taunton)

RUN: 2016 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:38:27

The MODE flag has been set to P for calculating PM averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S ZO = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 ug/m**3

LINK VARIABLES

| LINK DESCRIPTION | * X1 | Y1 | X2 | Y2 | * (FT) (DEG) | (G/MI) | (FT) (FT) | (VEH) | H | W |
|-------------------------|-----------|---------|---------|----------|-----------------|-----------|-----------|-------|------|---|
| 1. Rt 140 NB L | * 11948.8 | -3565.2 | 11989.8 | -3612.2 | * 62. 139. AG | 0. 100.0 | 1.0 | 10.0 | | |
| 0.36 3.2 | | | | | | | | | | |
| 2. Rt 140 NB T | * 11964.0 | -3553.9 | 11964.1 | -3554.1 | * 0. 138. AG | 0. 100.0 | 1.0 | 20.0 | | |
| 0.32 0.0 | | | | | | | | | | |
| 3. Rt 140 SB T | * 11903.1 | -3548.3 | 11772.7 | -3400.9 | * 197. 318. AG | 0. 100.0 | 1.0 | 20.0 | | |
| 0.91 10.0 | | | | | | | | | | |
| 4. Train Queue | * 9191.5 | -7114.1 | 9192.0 | -7114.7 | * 1. 138. AG | 5. 100.0 | 1.0 | 20.0 | 0.00 | |
| 0.0 | | | | | | | | | | |
| 5. 24SB/Route 140 North | * 11930.8 | -3558.3 | 11727.3 | -3343.3 | * 296. 317. AG | 2467. 0.0 | 1.0 | | | |
| 78.0 | | | | | | | | | | |
| 6. 24 SB/Rt 140 South | * 11930.8 | -3558.3 | 12101.5 | -3735.9 | * 246. 136. AG | 3830. 0.0 | 1.0 | | | |
| 78.0 | | | | | | | | | | |
| 7. Rt 24 SB Off Ramp | * 11930.8 | -3558.3 | 11814.2 | -3698.5 | * 182. 220. AG | 1440. 0.0 | 1.0 | | | |
| 42.0 | | | | | | | | | | |
| 8. Rt 24 SB On Ramp | * 11888.8 | -3530.6 | 11801.3 | -3697.0 | * 188. 208. AG | 647. 0.0 | 1.0 | | | |
| 30.0 | | | | | | | | | | |
| 9. Train Line 1 | * -3325.6 | 6855.1 | 10135.8 | -8168.6 | * ***** 138. AG | 5. 1.0 | 1.0 | 48.0 | | |
| 10. Train Line 2 | * 10124.7 | -8177.8 | 12559.4 | -12250.7 | * 4745. 149. AG | 5. 1.0 | 1.0 | 48.0 | | |
| 11. Train Line 3 | * -3319.6 | 6871.8 | -6541.4 | 11486.7 | * 5628. 325. AG | 5. 1.0 | 1.0 | 48.0 | | |

JOB: South Coast Rail (Taunton)

RUN: 2016 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:38:27

| | | | | | | | | | |
|----------------|---|-----|----|-----|------|------|------|---|---|
| 1. Rt 140 NB L | * | 90 | 40 | 3.0 | 285 | 1600 | 0.08 | 1 | 3 |
| 2. Rt 140 NB T | * | 90 | 0 | 3.0 | 976 | 1600 | 0.08 | 1 | 3 |
| 3. Rt 140 SB T | * | 90 | 50 | 3.0 | 1129 | 1600 | 0.08 | 1 | 3 |
| 4. Train Queue | * | 120 | 70 | 3.0 | 5 | 1600 | 1.53 | 1 | 3 |

RECEPTOR LOCATIONS

| RECEPTOR | * | COORDINATES (FT) | | | * |
|-----------|---|------------------|---------|-----|---|
| | | * X | Y | Z | |
| 1. East 1 | * | 11858.3 | -3406.1 | 6.0 | * |
| 2. East 2 | * | 11909.8 | -3460.5 | 6.0 | * |
| 3. East 3 | * | 11961.4 | -3515.0 | 6.0 | * |
| 4. East 4 | * | 12017.5 | -3564.8 | 6.0 | * |
| 5. East 5 | * | 12069.5 | -3619.0 | 6.0 | * |
| 6. SW1 | * | 12018.0 | -3732.7 | 6.0 | * |
| 7. SW2 | * | 11966.0 | -3678.7 | 6.0 | * |
| 8. SW3 | * | 11914.0 | -3624.6 | 6.0 | * |
| 9. SW4 | * | 11866.0 | -3682.2 | 6.0 | * |
| 10. SW5 | * | 11817.7 | -3739.6 | 6.0 | * |
| 11. NW1 | * | 11777.6 | -3678.7 | 6.0 | * |
| 12. NW2 | * | 11812.5 | -3612.3 | 6.0 | * |
| 13. NW3 | * | 11847.5 | -3545.9 | 6.0 | * |
| 14. NW4 | * | 11795.9 | -3491.5 | 6.0 | * |
| 15. NW5 | * | 11744.3 | -3437.0 | 6.0 | * |

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

| ANGLE * | REC1 | REC2 | REC3 | REC4 | REC5 | REC6 | REC7 | REC8 | REC9 | REC10 | REC11 | REC12 | REC13 | REC14 | REC15 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0. * | 0. | 0. | 0. | 0. | 4. | 4. | 4. | 4. | 2. | 1. | 1. | 3. | 3. | 2. | |
| 10. * | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 4. | 3. | 1. | 2. | 3. | 3. | 2. | |
| 20. * | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 3. | 3. | 1. | 2. | 3. | 2. | 2. | |
| 30. * | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 3. | 3. | 2. | 2. | 2. | 2. | 2. | |
| 40. * | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 2. | 2. | 2. | 2. | 3. | 3. | 2. | |
| 50. * | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 2. | 3. | 2. | 3. | 3. | 2. | |
| 60. * | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 1. | 3. | 3. | 3. | 2. | 2. | |
| 70. * | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 1. | 3. | 3. | 3. | 2. | 2. | |
| 80. * | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 2. | 1. | 3. | 3. | 4. | 3. | 3. | |
| 90. * | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 2. | 1. | 3. | 4. | 4. | 3. | 3. | |
| 100. * | 0. | 0. | 0. | 0. | 2. | 3. | 4. | 1. | 0. | 2. | 3. | 4. | 3. | 3. | |
| 110. * | 0. | 0. | 0. | 0. | 1. | 3. | 3. | 1. | 0. | 2. | 3. | 5. | 4. | 4. | |
| 120. * | 0. | 0. | 0. | 0. | 1. | 2. | 3. | 0. | 0. | 1. | 2. | 5. | 4. | 4. | |
| 130. * | 1. | 1. | 1. | 0. | 0. | 0. | 1. | 2. | 0. | 0. | 1. | 2. | 4. | 3. | 4. |
| 140. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 2. | 3. | 2. | 2. |
| 150. * | 4. | 4. | 3. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 1. | 1. | |
| 160. * | 4. | 4. | 4. | 3. | 2. | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 1. | 1. | |
| 170. * | 4. | 4. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 1. | 0. | |
| 180. * | 4. | 4. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 0. | 0. | |
| 190. * | 3. | 4. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. | |
| 200. * | 3. | 3. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. | |
| 210. * | 2. | 3. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | |
| 220. * | 2. | 3. | 4. | 3. | 3. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | |
| 230. * | 2. | 3. | 4. | 4. | 3. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | |
| 240. * | 2. | 2. | 3. | 4. | 3. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | |
| 250. * | 2. | 2. | 3. | 4. | 3. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | |
| 260. * | 2. | 3. | 3. | 4. | 4. | 0. | 0. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | |
| 270. * | 2. | 3. | 3. | 4. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | |
| 280. * | 2. | 3. | 3. | 4. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | |
| 290. * | 2. | 3. | 3. | 3. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | |

300. * 2. 2. 3. 3. 4. 1. 1. 2. 2. 0. 0. 0. 0. 0.
 310. * 1. 2. 2. 2. 2. 2. 2. 2. 2. 0. 0. 0. 1. 0.
 320. * 0. 1. 1. 1. 1. 3. 3. 3. 2. 0. 0. 0. 2. 1. 0.
 330. * 0. 0. 0. 0. 0. 4. 4. 4. 2. 0. 0. 0. 2. 2. 1.
 340. * 0. 0. 0. 0. 0. 4. 4. 5. 3. 1. 0. 1. 3. 2. 1.
 350. * 0. 0. 0. 0. 0. 4. 4. 5. 3. 2. 1. 1. 3. 3. 2.
 360. * 0. 0. 0. 0. 0. 4. 4. 4. 4. 2. 1. 1. 3. 3. 2.

-----*

MAX * 4. 4. 4. 4. 4. 4. 4. 5. 4. 3. 3. 4. 5. 4. 4.

DEGR. * 160 170 220 250 280 340 340 340 0 20 70 90 120 120 120

THE HIGHEST CONCENTRATION OF 5. ug/m**3 OCCURRED AT RECEPTOR REC13.

East Taunton 2016 Build Mitigated (Electric) – PM₁₀

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE

1

JOB: South Coast Rail (Taunton)

RUN: 2016 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:38:33

The MODE flag has been set to P for calculating PM averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 ug/m**3

LINK VARIABLES

| LINK DESCRIPTION | * X1 | Y1 | X2 | Y2 | * (FT) (DEG) | (G/MI) | (FT) (FT) | (VEH) | H | W |
|-------------------------|-----------|---------|---------|----------|-----------------|-----------|---------------|-------|---|---|
| 1. Rt 140 NB L | * 11948.8 | -3565.2 | 11989.8 | -3612.2 | * 62. 139. AG | 0. 100.0 | 1.0 10.0 | | | |
| 0.36 3.2 | | | | | | | | | | |
| 2. Rt 140 NB T | * 11964.0 | -3553.9 | 11964.1 | -3554.1 | * 0. 138. AG | 0. 100.0 | 1.0 20.0 | | | |
| 0.32 0.0 | | | | | | | | | | |
| 3. Rt 140 SB T | * 11903.1 | -3548.3 | 11772.7 | -3400.9 | * 197. 318. AG | 0. 100.0 | 1.0 20.0 | | | |
| 0.91 10.0 | | | | | | | | | | |
| 4. Train Queue | * 9191.5 | -7114.1 | 9192.0 | -7114.7 | * 1. 138. AG | 0. 100.0 | 1.0 20.0 0.00 | | | |
| 0.0 | | | | | | | | | | |
| 5. 24SB/Route 140 North | * 11930.8 | -3558.3 | 11727.3 | -3343.3 | * 296. 317. AG | 2467. 0.0 | 1.0 | | | |
| 78.0 | | | | | | | | | | |
| 6. 24 SB/Rt 140 South | * 11930.8 | -3558.3 | 12101.5 | -3735.9 | * 246. 136. AG | 3830. 0.0 | 1.0 | | | |
| 78.0 | | | | | | | | | | |
| 7. Rt 24 SB Off Ramp | * 11930.8 | -3558.3 | 11814.2 | -3698.5 | * 182. 220. AG | 1440. 0.0 | 1.0 | | | |
| 42.0 | | | | | | | | | | |
| 8. Rt 24 SB On Ramp | * 11888.8 | -3530.6 | 11801.3 | -3697.0 | * 188. 208. AG | 647. 0.0 | 1.0 | | | |
| 30.0 | | | | | | | | | | |
| 9. Train Line 1 | * -3325.6 | 6855.1 | 10135.8 | -8168.6 | * ***** 138. AG | 5. 0.0 | 1.0 48.0 | | | |
| 10. Train Line 2 | * 10124.7 | -8177.8 | 12559.4 | -12250.7 | * 4745. 149. AG | 5. 0.0 | 1.0 48.0 | | | |
| 11. Train Line 3 | * -3319.6 | 6871.8 | -6541.4 | 11486.7 | * 5628. 325. AG | 5. 0.0 | 1.0 48.0 | | | |

JOB: South Coast Rail (Taunton)

RUN: 2016 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:38:33

| | | | | | | | | | |
|----------------|---|-----|----|-----|------|------|------|---|---|
| 1. Rt 140 NB L | * | 90 | 40 | 3.0 | 285 | 1600 | 0.08 | 1 | 3 |
| 2. Rt 140 NB T | * | 90 | 0 | 3.0 | 976 | 1600 | 0.08 | 1 | 3 |
| 3. Rt 140 SB T | * | 90 | 50 | 3.0 | 1129 | 1600 | 0.08 | 1 | 3 |
| 4. Train Queue | * | 120 | 70 | 3.0 | 5 | 1600 | 0.00 | 1 | 3 |

RECEPTOR LOCATIONS

| RECEPTOR | * | COORDINATES (FT) | | | * |
|-----------|---|------------------|---------|-----|---|
| | * | X | Y | Z | * |
| 1. East 1 | * | 11858.3 | -3406.1 | 6.0 | * |
| 2. East 2 | * | 11909.8 | -3460.5 | 6.0 | * |
| 3. East 3 | * | 11961.4 | -3515.0 | 6.0 | * |
| 4. East 4 | * | 12017.5 | -3564.8 | 6.0 | * |
| 5. East 5 | * | 12069.5 | -3619.0 | 6.0 | * |
| 6. SW1 | * | 12018.0 | -3732.7 | 6.0 | * |
| 7. SW2 | * | 11966.0 | -3678.7 | 6.0 | * |
| 8. SW3 | * | 11914.0 | -3624.6 | 6.0 | * |
| 9. SW4 | * | 11866.0 | -3682.2 | 6.0 | * |
| 10. SW5 | * | 11817.7 | -3739.6 | 6.0 | * |
| 11. NW1 | * | 11777.6 | -3678.7 | 6.0 | * |
| 12. NW2 | * | 11812.5 | -3612.3 | 6.0 | * |
| 13. NW3 | * | 11847.5 | -3545.9 | 6.0 | * |
| 14. NW4 | * | 11795.9 | -3491.5 | 6.0 | * |
| 15. NW5 | * | 11744.3 | -3437.0 | 6.0 | * |

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

| ANGLE * | REC1 | REC2 | REC3 | REC4 | REC5 | REC6 | REC7 | REC8 | REC9 | REC10 | REC11 | REC12 | REC13 | REC14 | REC15 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0. * | 0. | 0. | 0. | 0. | 0. | 4. | 4. | 4. | 4. | 2. | 1. | 1. | 3. | 3. | 2. |
| 10. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 4. | 3. | 1. | 2. | 3. | 3. | 2. |
| 20. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 3. | 3. | 1. | 2. | 3. | 2. | 2. |
| 30. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 3. | 3. | 2. | 2. | 2. | 2. | 2. |
| 40. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 2. | 2. | 2. | 2. | 3. | 3. | 2. |
| 50. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 2. | 3. | 2. | 3. | 3. | 2. |
| 60. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 1. | 3. | 3. | 3. | 2. | 2. |
| 70. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 1. | 3. | 3. | 3. | 2. | 2. |
| 80. * | 0. | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 2. | 1. | 3. | 3. | 4. | 3. | 3. |
| 90. * | 0. | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 2. | 1. | 3. | 4. | 4. | 3. | 3. |
| 100. * | 0. | 0. | 0. | 0. | 0. | 2. | 3. | 4. | 1. | 0. | 2. | 3. | 4. | 3. | 3. |
| 110. * | 0. | 0. | 0. | 0. | 0. | 1. | 3. | 3. | 1. | 0. | 2. | 3. | 5. | 4. | 4. |
| 120. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 3. | 0. | 0. | 1. | 2. | 5. | 4. | 4. |
| 130. * | 1. | 1. | 1. | 0. | 0. | 0. | 1. | 2. | 0. | 0. | 1. | 2. | 4. | 3. | 4. |
| 140. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 2. | 3. | 2. | 2. |
| 150. * | 4. | 4. | 3. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 1. | 1. |
| 160. * | 4. | 4. | 4. | 3. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 1. | 1. |
| 170. * | 4. | 4. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 1. | 0. |
| 180. * | 4. | 4. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 0. | 0. |
| 190. * | 3. | 4. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 200. * | 3. | 3. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. |
| 210. * | 2. | 3. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 220. * | 2. | 3. | 4. | 3. | 3. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 230. * | 2. | 3. | 4. | 4. | 3. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 240. * | 2. | 2. | 3. | 4. | 3. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 250. * | 2. | 2. | 3. | 4. | 3. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 260. * | 2. | 3. | 3. | 4. | 4. | 0. | 0. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |
| 270. * | 2. | 3. | 3. | 4. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |
| 280. * | 2. | 3. | 3. | 4. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |
| 290. * | 2. | 3. | 3. | 3. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |

300. * 2. 2. 3. 3. 4. 1. 1. 2. 2. 0. 0. 0. 0. 0.
 310. * 1. 2. 2. 2. 2. 2. 2. 2. 2. 0. 0. 0. 1. 0.
 320. * 0. 1. 1. 1. 1. 3. 3. 3. 2. 0. 0. 0. 2. 1. 0.
 330. * 0. 0. 0. 0. 0. 4. 4. 4. 2. 0. 0. 0. 2. 2. 1.
 340. * 0. 0. 0. 0. 0. 4. 4. 5. 3. 1. 0. 1. 3. 2. 1.
 350. * 0. 0. 0. 0. 0. 4. 4. 5. 3. 2. 1. 1. 3. 3. 2.
 360. * 0. 0. 0. 0. 0. 4. 4. 4. 4. 2. 1. 1. 3. 3. 2.

-----*

MAX * 4. 4. 4. 4. 4. 4. 4. 5. 4. 3. 3. 4. 5. 4. 4.

DEGR. * 160 170 220 250 280 340 340 340 0 20 70 90 120 120 120

THE HIGHEST CONCENTRATION OF 5. ug/m**3 OCCURRED AT RECEPTOR REC13.

East Taunton 2030 Build Mitigated (Diesel) – PM₁₀

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE

1

JOB: South Coast Rail (Taunton)

RUN: 2030 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:38:47

The MODE flag has been set to P for calculating PM averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S ZO = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 5.0 ug/m**3

LINK VARIABLES

| LINK DESCRIPTION | * X1 | Y1 | X2 | Y2 | * (FT) (DEG) | (G/MI) | (FT) (FT) | (VEH) | H | W |
|-------------------------|-----------|---------|---------|----------|-----------------|-----------|---------------|-------|---|---|
| 1. Rt 140 NB L | * 11948.8 | -3565.2 | 11989.8 | -3612.2 | * 62. 139. AG | 0. 100.0 | 1.0 10.0 | | | |
| 0.36 3.2 | | | | | | | | | | |
| 2. Rt 140 NB T | * 11964.0 | -3553.9 | 11964.1 | -3554.1 | * 0. 138. AG | 0. 100.0 | 1.0 20.0 | | | |
| 0.32 0.0 | | | | | | | | | | |
| 3. Rt 140 SB T | * 11903.1 | -3548.3 | 11772.7 | -3400.9 | * 197. 318. AG | 0. 100.0 | 1.0 20.0 | | | |
| 0.91 10.0 | | | | | | | | | | |
| 4. Train Queue | * 9191.5 | -7114.1 | 9192.0 | -7114.7 | * 1. 138. AG | 3. 100.0 | 1.0 20.0 0.00 | | | |
| 0.0 | | | | | | | | | | |
| 5. 24SB/Route 140 North | * 11930.8 | -3558.3 | 11727.3 | -3343.3 | * 296. 317. AG | 2467. 0.0 | 1.0 | | | |
| 78.0 | | | | | | | | | | |
| 6. 24 SB/Rt 140 South | * 11930.8 | -3558.3 | 12101.5 | -3735.9 | * 246. 136. AG | 3830. 0.0 | 1.0 | | | |
| 78.0 | | | | | | | | | | |
| 7. Rt 24 SB Off Ramp | * 11930.8 | -3558.3 | 11814.2 | -3698.5 | * 182. 220. AG | 1440. 0.0 | 1.0 | | | |
| 42.0 | | | | | | | | | | |
| 8. Rt 24 SB On Ramp | * 11888.8 | -3530.6 | 11801.3 | -3697.0 | * 188. 208. AG | 647. 0.0 | 1.0 | | | |
| 30.0 | | | | | | | | | | |
| 9. Train Line 1 | * -3325.6 | 6855.1 | 10135.8 | -8168.6 | * ***** 138. AG | 5. 0.3 | 1.0 48.0 | | | |
| 10. Train Line 2 | * 10124.7 | -8177.8 | 12559.4 | -12250.7 | * 4745. 149. AG | 5. 0.3 | 1.0 48.0 | | | |
| 11. Train Line 3 | * -3319.6 | 6871.8 | -6541.4 | 11486.7 | * 5628. 325. AG | 5. 0.3 | 1.0 48.0 | | | |

JOB: South Coast Rail (Taunton)

RUN: 2030 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:38:47

| | | | | | | | | | |
|----------------|---|-----|----|-----|------|------|------|---|---|
| 1. Rt 140 NB L | * | 90 | 40 | 3.0 | 285 | 1600 | 0.07 | 1 | 3 |
| 2. Rt 140 NB T | * | 90 | 0 | 3.0 | 976 | 1600 | 0.07 | 1 | 3 |
| 3. Rt 140 SB T | * | 90 | 50 | 3.0 | 1129 | 1600 | 0.07 | 1 | 3 |
| 4. Train Queue | * | 120 | 70 | 3.0 | 5 | 1600 | 0.83 | 1 | 3 |

RECEPTOR LOCATIONS

| RECEPTOR | * | COORDINATES (FT) | | | * |
|-----------|---|------------------|---------|-----|---|
| | * | X | Y | Z | * |
| 1. East 1 | * | 11858.3 | -3406.1 | 6.0 | * |
| 2. East 2 | * | 11909.8 | -3460.5 | 6.0 | * |
| 3. East 3 | * | 11961.4 | -3515.0 | 6.0 | * |
| 4. East 4 | * | 12017.5 | -3564.8 | 6.0 | * |
| 5. East 5 | * | 12069.5 | -3619.0 | 6.0 | * |
| 6. SW1 | * | 12018.0 | -3732.7 | 6.0 | * |
| 7. SW2 | * | 11966.0 | -3678.7 | 6.0 | * |
| 8. SW3 | * | 11914.0 | -3624.6 | 6.0 | * |
| 9. SW4 | * | 11866.0 | -3682.2 | 6.0 | * |
| 10. SW5 | * | 11817.7 | -3739.6 | 6.0 | * |
| 11. NW1 | * | 11777.6 | -3678.7 | 6.0 | * |
| 12. NW2 | * | 11812.5 | -3612.3 | 6.0 | * |
| 13. NW3 | * | 11847.5 | -3545.9 | 6.0 | * |
| 14. NW4 | * | 11795.9 | -3491.5 | 6.0 | * |
| 15. NW5 | * | 11744.3 | -3437.0 | 6.0 | * |

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

| ANGLE * | REC1 | REC2 | REC3 | REC4 | REC5 | REC6 | REC7 | REC8 | REC9 | REC10 | REC11 | REC12 | REC13 | REC14 | REC15 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0. * | 5. | 5. | 5. | 5. | 5. | 8. | 8. | 9. | 8. | 7. | 6. | 6. | 8. | 8. | 7. |
| 10. * | 5. | 5. | 5. | 5. | 5. | 8. | 8. | 9. | 8. | 8. | 6. | 6. | 8. | 7. | 7. |
| 20. * | 5. | 5. | 5. | 5. | 5. | 8. | 8. | 8. | 8. | 8. | 6. | 6. | 7. | 7. | 7. |
| 30. * | 5. | 5. | 5. | 5. | 5. | 8. | 8. | 8. | 8. | 7. | 6. | 6. | 7. | 7. | 7. |
| 40. * | 5. | 5. | 5. | 5. | 5. | 8. | 8. | 8. | 7. | 7. | 7. | 7. | 7. | 7. | 7. |
| 50. * | 5. | 5. | 5. | 5. | 5. | 8. | 8. | 8. | 7. | 7. | 8. | 7. | 7. | 7. | 7. |
| 60. * | 5. | 5. | 5. | 5. | 5. | 8. | 8. | 8. | 7. | 6. | 8. | 8. | 7. | 7. | 7. |
| 70. * | 5. | 5. | 5. | 5. | 5. | 8. | 8. | 8. | 7. | 6. | 8. | 8. | 8. | 7. | 7. |
| 80. * | 5. | 5. | 5. | 5. | 5. | 7. | 8. | 8. | 7. | 6. | 8. | 8. | 8. | 7. | 7. |
| 90. * | 5. | 5. | 5. | 5. | 5. | 7. | 8. | 8. | 6. | 6. | 8. | 8. | 9. | 8. | 8. |
| 100. * | 5. | 5. | 5. | 5. | 5. | 6. | 8. | 8. | 6. | 5. | 7. | 8. | 9. | 8. | 8. |
| 110. * | 5. | 5. | 5. | 5. | 5. | 6. | 8. | 8. | 6. | 5. | 6. | 8. | 10. | 9. | 8. |
| 120. * | 5. | 5. | 5. | 5. | 5. | 6. | 7. | 8. | 5. | 5. | 6. | 7. | 10. | 9. | 9. |
| 130. * | 6. | 6. | 6. | 5. | 5. | 5. | 6. | 7. | 5. | 5. | 6. | 7. | 9. | 8. | 8. |
| 140. * | 7. | 7. | 7. | 6. | 6. | 5. | 5. | 6. | 5. | 5. | 5. | 6. | 8. | 7. | 7. |
| 150. * | 8. | 8. | 8. | 7. | 6. | 5. | 5. | 5. | 5. | 5. | 5. | 6. | 7. | 6. | 6. |
| 160. * | 9. | 8. | 9. | 8. | 7. | 5. | 5. | 5. | 5. | 5. | 5. | 6. | 6. | 6. | 5. |
| 170. * | 9. | 8. | 8. | 8. | 8. | 5. | 5. | 5. | 5. | 5. | 5. | 6. | 6. | 6. | 5. |
| 180. * | 8. | 8. | 8. | 8. | 8. | 5. | 5. | 5. | 5. | 5. | 5. | 6. | 6. | 5. | 5. |
| 190. * | 8. | 8. | 8. | 8. | 8. | 5. | 5. | 5. | 5. | 5. | 5. | 6. | 6. | 5. | 5. |
| 200. * | 8. | 8. | 8. | 8. | 8. | 5. | 5. | 5. | 5. | 5. | 5. | 5. | 6. | 5. | 5. |
| 210. * | 7. | 8. | 9. | 8. | 8. | 5. | 5. | 5. | 5. | 5. | 5. | 5. | 5. | 5. | 5. |
| 220. * | 7. | 8. | 9. | 8. | 8. | 5. | 5. | 6. | 5. | 5. | 5. | 5. | 5. | 5. | 5. |
| 230. * | 7. | 7. | 8. | 8. | 8. | 5. | 5. | 6. | 6. | 5. | 5. | 5. | 5. | 5. | 5. |
| 240. * | 7. | 7. | 8. | 8. | 8. | 5. | 5. | 7. | 6. | 5. | 5. | 5. | 5. | 5. | 5. |
| 250. * | 7. | 7. | 8. | 9. | 8. | 5. | 5. | 7. | 6. | 5. | 5. | 5. | 5. | 5. | 5. |
| 260. * | 7. | 7. | 8. | 9. | 8. | 5. | 5. | 7. | 6. | 5. | 5. | 5. | 5. | 5. | 5. |
| 270. * | 7. | 8. | 8. | 9. | 9. | 5. | 6. | 7. | 6. | 5. | 5. | 5. | 5. | 5. | 5. |
| 280. * | 7. | 8. | 8. | 8. | 9. | 5. | 6. | 7. | 7. | 5. | 5. | 5. | 5. | 5. | 5. |
| 290. * | 7. | 8. | 8. | 8. | 9. | 5. | 6. | 6. | 7. | 5. | 5. | 5. | 5. | 5. | 5. |

300. * 6. 7. 8. 8. 8. 6. 6. 7. 7. 5. 5. 5. 5. 5.
 310. * 6. 6. 7. 7. 7. 6. 7. 7. 7. 5. 5. 5. 6. 5. 5.
 320. * 5. 6. 6. 6. 6. 8. 8. 8. 7. 5. 5. 5. 6. 6. 6.
 330. * 5. 5. 5. 5. 5. 9. 8. 9. 7. 5. 5. 5. 7. 7. 6.
 340. * 5. 5. 5. 5. 5. 9. 9. 9. 8. 6. 5. 6. 8. 7. 6.
 350. * 5. 5. 5. 5. 5. 8. 9. 9. 8. 7. 5. 6. 8. 7. 6.
 360. * 5. 5. 5. 5. 5. 8. 8. 9. 8. 7. 6. 6. 8. 8. 7.

-----*

MAX * 9. 8. 9. 9. 9. 9. 9. 9. 8. 8. 8. 8. 10. 9. 9.

DEGR. * 160 160 220 250 280 340 340 340 0 20 70 90 110 120 120

THE HIGHEST CONCENTRATION OF 10. ug/m**3 OCCURRED AT RECEPTOR REC13.

East Taunton 2030 Build Mitigated (Electric) – PM₁₀

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE

1

JOB: South Coast Rail (Taunton)

RUN: 2030 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:38:41

The MODE flag has been set to P for calculating PM averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S ZO = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 ug/m**3

LINK VARIABLES

| LINK DESCRIPTION | * X1 | Y1 | X2 | Y2 | * (FT) (DEG) | (G/MI) | (FT) | (FT) | (VEH) |
|-------------------------|-----------|---------|---------|----------|-----------------|-----------|------|------|-------|
| 1. Rt 140 NB L | * 11948.8 | -3565.2 | 11989.8 | -3612.2 | * 62. 139. AG | 0. 100.0 | 1.0 | 10.0 | |
| 0.36 3.2 | | | | | | | | | |
| 2. Rt 140 NB T | * 11964.0 | -3553.9 | 11964.1 | -3554.1 | * 0. 138. AG | 0. 100.0 | 1.0 | 20.0 | |
| 0.32 0.0 | | | | | | | | | |
| 3. Rt 140 SB T | * 11903.1 | -3548.3 | 11772.7 | -3400.9 | * 197. 318. AG | 0. 100.0 | 1.0 | 20.0 | |
| 0.91 10.0 | | | | | | | | | |
| 4. Train Queue | * 9191.5 | -7114.1 | 9192.0 | -7114.7 | * 1. 138. AG | 0. 100.0 | 1.0 | 20.0 | 0.00 |
| 0.0 | | | | | | | | | |
| 5. 24SB/Route 140 North | * 11930.8 | -3558.3 | 11727.3 | -3343.3 | * 296. 317. AG | 2467. 0.0 | 1.0 | | |
| 78.0 | | | | | | | | | |
| 6. 24 SB/Rt 140 South | * 11930.8 | -3558.3 | 12101.5 | -3735.9 | * 246. 136. AG | 3830. 0.0 | 1.0 | | |
| 78.0 | | | | | | | | | |
| 7. Rt 24 SB Off Ramp | * 11930.8 | -3558.3 | 11814.2 | -3698.5 | * 182. 220. AG | 1440. 0.0 | 1.0 | | |
| 42.0 | | | | | | | | | |
| 8. Rt 24 SB On Ramp | * 11888.8 | -3530.6 | 11801.3 | -3697.0 | * 188. 208. AG | 647. 0.0 | 1.0 | | |
| 30.0 | | | | | | | | | |
| 9. Train Line 1 | * -3325.6 | 6855.1 | 10135.8 | -8168.6 | * ***** 138. AG | 5. 0.0 | 1.0 | 48.0 | |
| 10. Train Line 2 | * 10124.7 | -8177.8 | 12559.4 | -12250.7 | * 4745. 149. AG | 5. 0.0 | 1.0 | 48.0 | |
| 11. Train Line 3 | * -3319.6 | 6871.8 | -6541.4 | 11486.7 | * 5628. 325. AG | 5. 0.0 | 1.0 | 48.0 | |

JOB: South Coast Rail (Taunton)

RUN: 2030 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:38:41

| | | | | | | | | | |
|----------------|---|-----|----|-----|------|------|------|---|---|
| 1. Rt 140 NB L | * | 90 | 40 | 3.0 | 285 | 1600 | 0.07 | 1 | 3 |
| 2. Rt 140 NB T | * | 90 | 0 | 3.0 | 976 | 1600 | 0.07 | 1 | 3 |
| 3. Rt 140 SB T | * | 90 | 50 | 3.0 | 1129 | 1600 | 0.07 | 1 | 3 |
| 4. Train Queue | * | 120 | 70 | 3.0 | 5 | 1600 | 0.00 | 1 | 3 |

RECEPTOR LOCATIONS

| RECEPTOR | * | COORDINATES (FT) | | | * |
|-----------|---|------------------|---------|-----|---|
| | * | X | Y | Z | * |
| 1. East 1 | * | 11858.3 | -3406.1 | 6.0 | * |
| 2. East 2 | * | 11909.8 | -3460.5 | 6.0 | * |
| 3. East 3 | * | 11961.4 | -3515.0 | 6.0 | * |
| 4. East 4 | * | 12017.5 | -3564.8 | 6.0 | * |
| 5. East 5 | * | 12069.5 | -3619.0 | 6.0 | * |
| 6. SW1 | * | 12018.0 | -3732.7 | 6.0 | * |
| 7. SW2 | * | 11966.0 | -3678.7 | 6.0 | * |
| 8. SW3 | * | 11914.0 | -3624.6 | 6.0 | * |
| 9. SW4 | * | 11866.0 | -3682.2 | 6.0 | * |
| 10. SW5 | * | 11817.7 | -3739.6 | 6.0 | * |
| 11. NW1 | * | 11777.6 | -3678.7 | 6.0 | * |
| 12. NW2 | * | 11812.5 | -3612.3 | 6.0 | * |
| 13. NW3 | * | 11847.5 | -3545.9 | 6.0 | * |
| 14. NW4 | * | 11795.9 | -3491.5 | 6.0 | * |
| 15. NW5 | * | 11744.3 | -3437.0 | 6.0 | * |

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14

REC15

| ANGLE * | REC1 | REC2 | REC3 | REC4 | REC5 | REC6 | REC7 | REC8 | REC9 | REC10 | REC11 | REC12 | REC13 | REC14 | REC15 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 3. | 2. | 1. | 1. | 3. | 2. | 2. |
| 10. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 3. | 2. | 1. | 1. | 3. | 2. | 2. |
| 20. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 3. | 3. | 1. | 1. | 2. | 2. | 2. |
| 30. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 3. | 2. | 1. | 2. | 2. | 2. | 2. |
| 40. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 2. | 2. | 2. | 2. | 2. | 2. |
| 50. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 2. | 3. | 2. | 2. | 2. | 2. |
| 60. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 1. | 3. | 2. | 2. | 2. | 2. |
| 70. * | 0. | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 2. | 1. | 3. | 3. | 3. | 2. | 2. |
| 80. * | 0. | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 2. | 1. | 3. | 3. | 3. | 2. | 2. |
| 90. * | 0. | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 2. | 1. | 3. | 3. | 4. | 3. | 3. |
| 100. * | 0. | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 1. | 0. | 2. | 3. | 4. | 3. | 3. |
| 110. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 3. | 1. | 0. | 2. | 3. | 4. | 4. | 3. |
| 120. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 3. | 0. | 0. | 1. | 2. | 4. | 4. | 4. |
| 130. * | 1. | 1. | 1. | 0. | 0. | 0. | 1. | 2. | 0. | 0. | 0. | 2. | 4. | 3. | 3. |
| 140. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 1. | 2. | 2. | 2. |
| 150. * | 3. | 3. | 3. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 1. | 1. |
| 160. * | 4. | 4. | 4. | 3. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 1. | 0. |
| 170. * | 4. | 3. | 4. | 3. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 180. * | 3. | 3. | 3. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 190. * | 3. | 3. | 3. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 200. * | 2. | 3. | 3. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. |
| 210. * | 2. | 3. | 4. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 220. * | 2. | 2. | 4. | 3. | 3. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 230. * | 2. | 2. | 3. | 3. | 3. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 240. * | 2. | 2. | 3. | 4. | 3. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 250. * | 2. | 2. | 3. | 4. | 3. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 260. * | 2. | 2. | 3. | 4. | 3. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 270. * | 2. | 2. | 2. | 4. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |
| 280. * | 2. | 2. | 3. | 3. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |
| 290. * | 2. | 2. | 3. | 3. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |

300. * 2. 2. 2. 3. 4. 1. 1. 2. 2. 0. 0. 0. 0. 0.
 310. * 1. 2. 2. 2. 2. 1. 2. 2. 2. 0. 0. 0. 0. 0.
 320. * 0. 1. 1. 1. 1. 3. 3. 3. 2. 0. 0. 0. 1. 1. 0.
 330. * 0. 0. 0. 0. 0. 4. 4. 4. 2. 0. 0. 0. 2. 2. 1.
 340. * 0. 0. 0. 0. 0. 4. 4. 4. 3. 1. 0. 1. 3. 2. 1.
 350. * 0. 0. 0. 0. 0. 3. 4. 4. 3. 2. 0. 1. 3. 2. 2.
 360. * 0. 0. 0. 0. 0. 3. 3. 4. 3. 2. 1. 1. 3. 2. 2.

-----*

MAX * 4. 4. 4. 4. 4. 4. 4. 4. 3. 3. 3. 3. 4. 4. 4.

DEGR. * 170 160 220 260 280 340 340 340 0 20 70 90 110 120 120

THE HIGHEST CONCENTRATION OF 4. ug/m**3 OCCURRED AT RECEPTOR REC13.



Technical Report
Air Quality
Draft

Hot Spot: Microscale (Local) Analysis Cal3QHC - Output Files

- Particulate Matter 2.5 (PM_{2.5})



Technical Report
Air Quality
Draft

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JOB: South Coast Rail (Taunton)

RUN: Existing Condition

DATE : 6/29/ 9

TIME : 16:39:29

| | | | | | | | | | |
|----------------|---|----|----|-----|------|------|------|---|---|
| 1. Rt 140 NB L | * | 90 | 40 | 3.0 | 205 | 1600 | 0.07 | 1 | 3 |
| 2. Rt 140 NB T | * | 90 | 0 | 3.0 | 790 | 1600 | 0.07 | 1 | 3 |
| 3. Rt 140 SB T | * | 90 | 50 | 3.0 | 1000 | 1600 | 0.07 | 1 | 3 |

RECEPTOR LOCATIONS

| RECEPTOR | * | COORDINATES (FT) | | | * |
|-----------|---|------------------|---------|-----|---|
| | * | X | Y | Z | * |
| 1. East 1 | * | 11858.3 | -3406.1 | 6.0 | * |
| 2. East 2 | * | 11909.8 | -3460.5 | 6.0 | * |
| 3. East 3 | * | 11961.4 | -3515.0 | 6.0 | * |
| 4. East 4 | * | 12017.5 | -3564.8 | 6.0 | * |
| 5. East 5 | * | 12069.5 | -3619.0 | 6.0 | * |
| 6. SW1 | * | 12018.0 | -3732.7 | 6.0 | * |
| 7. SW2 | * | 11966.0 | -3678.7 | 6.0 | * |
| 8. SW3 | * | 11914.0 | -3624.6 | 6.0 | * |
| 9. SW4 | * | 11866.0 | -3682.2 | 6.0 | * |
| 10. SW5 | * | 11817.7 | -3739.6 | 6.0 | * |
| 11. NW1 | * | 11777.6 | -3678.7 | 6.0 | * |
| 12. NW2 | * | 11812.5 | -3612.3 | 6.0 | * |
| 13. NW3 | * | 11847.5 | -3545.9 | 6.0 | * |
| 14. NW4 | * | 11795.9 | -3491.5 | 6.0 | * |
| 15. NW5 | * | 11744.3 | -3437.0 | 6.0 | * |

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

| ANGLE * | REC1 | REC2 | REC3 | REC4 | REC5 | REC6 | REC7 | REC8 | REC9 | REC10 | REC11 | REC12 | REC13 | REC14 | REC15 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 4. | 2. | 1. | 1. | 3. | 2. | 2. |
| 10. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 4. | 3. | 3. | 1. | 1. | 3. | 2. | 2. |
| 20. * | 0. | 0. | 0. | 0. | 0. | 3. | 2. | 4. | 3. | 3. | 1. | 1. | 2. | 2. | 2. |
| 30. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 3. | 3. | 3. | 2. | 2. | 2. | 2. | 2. |
| 40. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 3. | 2. | 2. | 2. | 2. | 2. | 2. | 2. |
| 50. * | 0. | 0. | 0. | 0. | 0. | 3. | 3. | 3. | 2. | 2. | 3. | 2. | 2. | 2. | 2. |
| 60. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 3. | 2. | 1. | 3. | 2. | 2. | 2. | 2. |
| 70. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 2. | 1. | 3. | 3. | 3. | 2. | 2. |
| 80. * | 0. | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 2. | 1. | 3. | 3. | 3. | 2. | 2. |
| 90. * | 0. | 0. | 0. | 0. | 0. | 2. | 3. | 3. | 1. | 1. | 3. | 3. | 4. | 3. | 2. |
| 100. * | 0. | 0. | 0. | 0. | 0. | 1. | 3. | 3. | 1. | 0. | 2. | 3. | 4. | 3. | 3. |
| 110. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 3. | 1. | 0. | 2. | 3. | 4. | 4. | 3. |
| 120. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 0. | 0. | 1. | 2. | 4. | 4. | 4. |
| 130. * | 1. | 1. | 1. | 0. | 0. | 0. | 1. | 2. | 0. | 0. | 0. | 2. | 4. | 3. | 3. |
| 140. * | 2. | 2. | 2. | 1. | 0. | 0. | 0. | 1. | 0. | 0. | 0. | 2. | 2. | 2. | 2. |
| 150. * | 3. | 3. | 3. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 1. | 1. |
| 160. * | 4. | 3. | 3. | 3. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 1. | 0. |
| 170. * | 4. | 3. | 3. | 3. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 0. |
| 180. * | 3. | 4. | 3. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 190. * | 3. | 4. | 3. | 3. | 3. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 200. * | 2. | 3. | 3. | 3. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. |
| 210. * | 2. | 3. | 4. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 220. * | 2. | 3. | 4. | 3. | 2. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 230. * | 2. | 2. | 4. | 3. | 3. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 240. * | 2. | 2. | 3. | 3. | 2. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 250. * | 2. | 2. | 3. | 4. | 3. | 0. | 0. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 260. * | 2. | 2. | 2. | 4. | 3. | 0. | 0. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |
| 270. * | 2. | 2. | 3. | 4. | 3. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |
| 280. * | 2. | 2. | 3. | 3. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |
| 290. * | 2. | 2. | 3. | 3. | 4. | 0. | 1. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. |

300. * 2. 2. 3. 3. 3. 1. 1. 2. 2. 0. 0. 0. 0. 0.
 310. * 1. 1. 2. 2. 2. 2. 2. 2. 2. 0. 0. 0. 0. 0.
 320. * 0. 1. 1. 1. 1. 2. 3. 3. 2. 0. 0. 0. 1. 1. 0.
 330. * 0. 0. 0. 0. 0. 3. 4. 4. 2. 0. 0. 0. 2. 2. 1.
 340. * 0. 0. 0. 0. 0. 4. 4. 4. 3. 1. 0. 1. 3. 2. 1.
 350. * 0. 0. 0. 0. 0. 3. 4. 4. 3. 2. 0. 1. 3. 2. 2.
 360. * 0. 0. 0. 0. 0. 3. 3. 4. 4. 2. 1. 1. 3. 2. 2.

-----*

MAX * 4. 4. 4. 4. 4. 4. 4. 4. 4. 3. 3. 3. 4. 4. 4.

DEGR. * 170 190 220 250 280 340 340 340 0 20 70 90 120 110 120

THE HIGHEST CONCENTRATION OF 4. ug/m**3 OCCURRED AT RECEPTOR REC13.

JOB: South Coast Rail (Taunton)

RUN: 2016 No Build

DATE : 6/29/ 9

TIME : 16:39:38

| | | | | | | | | | |
|----------------|---|----|----|-----|------|------|------|---|---|
| 1. Rt 140 NB L | * | 90 | 40 | 3.0 | 285 | 1600 | 0.04 | 1 | 3 |
| 2. Rt 140 NB T | * | 90 | 0 | 3.0 | 965 | 1600 | 0.04 | 1 | 3 |
| 3. Rt 140 SB T | * | 90 | 50 | 3.0 | 1085 | 1600 | 0.04 | 1 | 3 |

RECEPTOR LOCATIONS

| RECEPTOR | * | COORDINATES (FT) | | | * |
|-----------|---|------------------|---------|-----|---|
| | * | X | Y | Z | * |
| 1. East 1 | * | 11858.3 | -3406.1 | 6.0 | * |
| 2. East 2 | * | 11909.8 | -3460.5 | 6.0 | * |
| 3. East 3 | * | 11961.4 | -3515.0 | 6.0 | * |
| 4. East 4 | * | 12017.5 | -3564.8 | 6.0 | * |
| 5. East 5 | * | 12069.5 | -3619.0 | 6.0 | * |
| 6. SW1 | * | 12018.0 | -3732.7 | 6.0 | * |
| 7. SW2 | * | 11966.0 | -3678.7 | 6.0 | * |
| 8. SW3 | * | 11914.0 | -3624.6 | 6.0 | * |
| 9. SW4 | * | 11866.0 | -3682.2 | 6.0 | * |
| 10. SW5 | * | 11817.7 | -3739.6 | 6.0 | * |
| 11. NW1 | * | 11777.6 | -3678.7 | 6.0 | * |
| 12. NW2 | * | 11812.5 | -3612.3 | 6.0 | * |
| 13. NW3 | * | 11847.5 | -3545.9 | 6.0 | * |
| 14. NW4 | * | 11795.9 | -3491.5 | 6.0 | * |
| 15. NW5 | * | 11744.3 | -3437.0 | 6.0 | * |

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

| ANGLE * | REC1 | REC2 | REC3 | REC4 | REC5 | REC6 | REC7 | REC8 | REC9 | REC10 | REC11 | REC12 | REC13 | REC14 | REC15 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 2. | 1. | 0. | 1. | 2. | 1. | 1. |
| 10. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 2. | 1. | 0. | 1. | 1. | 1. | 1. |
| 20. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 2. | 1. | 1. | 1. | 1. | 1. | 1. |
| 30. * | 0. | 0. | 0. | 0. | 0. | 2. | 1. | 2. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 40. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 50. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 60. * | 0. | 0. | 0. | 0. | 0. | 2. | 1. | 2. | 1. | 1. | 2. | 1. | 1. | 1. | 1. |
| 70. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 1. | 1. | 2. | 2. | 2. | 1. | 1. |
| 80. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 1. | 0. | 2. | 2. | 2. | 1. | 1. |
| 90. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 1. | 0. | 2. | 2. | 2. | 2. | 1. |
| 100. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 1. | 0. | 1. | 2. | 2. | 2. | 2. |
| 110. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 0. | 0. | 1. | 2. | 2. | 2. | 2. |
| 120. * | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. | 1. | 1. | 2. | 2. | 2. |
| 130. * | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. | 0. | 1. | 2. | 2. | 2. |
| 140. * | 1. | 1. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. |
| 150. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 0. |
| 160. * | 2. | 2. | 2. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 170. * | 2. | 2. | 2. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 180. * | 2. | 2. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 190. * | 2. | 2. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. |
| 200. * | 1. | 2. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 210. * | 1. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 220. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 230. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 240. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 250. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 260. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 270. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 280. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 290. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |

300. * 1. 1. 1. 1. 2. 0. 0. 1. 1. 0. 0. 0. 0. 0.
 310. * 0. 1. 1. 1. 1. 1. 1. 1. 1. 0. 0. 0. 0. 0.
 320. * 0. 0. 0. 0. 0. 2. 1. 2. 1. 0. 0. 0. 1. 0. 0.
 330. * 0. 0. 0. 0. 0. 2. 2. 2. 1. 0. 0. 0. 1. 1. 0.
 340. * 0. 0. 0. 0. 0. 2. 2. 2. 1. 0. 0. 0. 1. 1. 1.
 350. * 0. 0. 0. 0. 0. 2. 2. 2. 2. 1. 0. 1. 2. 1. 1.
 360. * 0. 0. 0. 0. 0. 2. 2. 2. 2. 1. 0. 1. 2. 1. 1.

-----*

MAX * 2. 2. 2. 2. 2. 2. 2. 2. 2. 1. 2. 2. 2. 2. 2.

DEGR. * 160 190 170 240 270 340 340 350 0 10 60 90 120 120 120

THE HIGHEST CONCENTRATION OF 2. ug/m**3 OCCURRED AT RECEPTOR REC13.

JOB: South Coast Rail (Taunton)

RUN: 2030 No Build

DATE : 6/29/ 9

TIME : 16:39:45

| | | | | | | | | | |
|----------------|---|----|----|-----|------|------|------|---|---|
| 1. Rt 140 NB L | * | 90 | 40 | 3.0 | 285 | 1600 | 0.03 | 1 | 3 |
| 2. Rt 140 NB T | * | 90 | 0 | 3.0 | 965 | 1600 | 0.03 | 1 | 3 |
| 3. Rt 140 SB T | * | 90 | 50 | 3.0 | 1085 | 1600 | 0.03 | 1 | 3 |

RECEPTOR LOCATIONS

| RECEPTOR | * | COORDINATES (FT) | | | * |
|-----------|---|------------------|---------|-----|---|
| | * | X | Y | Z | * |
| 1. East 1 | * | 11858.3 | -3406.1 | 6.0 | * |
| 2. East 2 | * | 11909.8 | -3460.5 | 6.0 | * |
| 3. East 3 | * | 11961.4 | -3515.0 | 6.0 | * |
| 4. East 4 | * | 12017.5 | -3564.8 | 6.0 | * |
| 5. East 5 | * | 12069.5 | -3619.0 | 6.0 | * |
| 6. SW1 | * | 12018.0 | -3732.7 | 6.0 | * |
| 7. SW2 | * | 11966.0 | -3678.7 | 6.0 | * |
| 8. SW3 | * | 11914.0 | -3624.6 | 6.0 | * |
| 9. SW4 | * | 11866.0 | -3682.2 | 6.0 | * |
| 10. SW5 | * | 11817.7 | -3739.6 | 6.0 | * |
| 11. NW1 | * | 11777.6 | -3678.7 | 6.0 | * |
| 12. NW2 | * | 11812.5 | -3612.3 | 6.0 | * |
| 13. NW3 | * | 11847.5 | -3545.9 | 6.0 | * |
| 14. NW4 | * | 11795.9 | -3491.5 | 6.0 | * |
| 15. NW5 | * | 11744.3 | -3437.0 | 6.0 | * |

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14

REC15

| ANGLE * | REC1 | REC2 | REC3 | REC4 | REC5 | REC6 | REC7 | REC8 | REC9 | REC10 | REC11 | REC12 | REC13 | REC14 | REC15 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 2. | 1. | 0. | 1. | 1. | 1. | 1. |
| 10. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 1. | 1. | 0. | 1. | 1. | 1. | 1. |
| 20. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 1. | 1. | 0. | 1. | 1. | 1. | 1. |
| 30. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 40. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 50. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 60. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 70. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 0. | 1. | 1. | 1. | 1. | 1. |
| 80. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 0. | 1. | 1. | 2. | 1. | 1. |
| 90. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 0. | 1. | 1. | 2. | 1. | 1. |
| 100. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 0. | 0. | 1. | 1. | 2. | 1. | 1. |
| 110. * | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. | 1. | 1. | 2. | 2. | 1. |
| 120. * | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 1. | 2. | 2. | 2. |
| 130. * | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. | 0. | 1. | 2. | 2. | 1. |
| 140. * | 1. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. |
| 150. * | 2. | 1. | 1. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 160. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 170. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 180. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. |
| 190. * | 1. | 1. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. |
| 200. * | 1. | 1. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 210. * | 1. | 1. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 220. * | 1. | 1. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 230. * | 1. | 1. | 2. | 2. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 240. * | 1. | 1. | 1. | 2. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 250. * | 1. | 1. | 1. | 2. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 260. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 270. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 280. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 290. * | 1. | 1. | 1. | 1. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |

300. * 1. 1. 1. 1. 2. 0. 0. 1. 1. 0. 0. 0. 0. 0.
 310. * 0. 1. 1. 1. 1. 1. 1. 1. 1. 0. 0. 0. 0. 0.
 320. * 0. 0. 0. 0. 0. 1. 1. 1. 1. 0. 0. 0. 1. 0. 0.
 330. * 0. 0. 0. 0. 0. 2. 2. 2. 1. 0. 0. 0. 1. 1. 0.
 340. * 0. 0. 0. 0. 0. 2. 2. 2. 1. 0. 0. 0. 1. 1. 0.
 350. * 0. 0. 0. 0. 0. 2. 2. 2. 2. 1. 0. 0. 1. 1. 1.
 360. * 0. 0. 0. 0. 0. 1. 1. 2. 2. 1. 0. 1. 1. 1. 1.

-----*

MAX * 2. 2. 2. 2. 2. 2. 2. 2. 2. 1. 1. 1. 2. 2. 2.

DEGR. * 170 160 210 240 280 340 340 340 0 20 70 80 110 110 120

THE HIGHEST CONCENTRATION OF 2. ug/m**3 OCCURRED AT RECEPTOR REC13.

East Taunton 2016 Build Mitigated (Diesel) – PM_{2.5}

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE

1

JOB: South Coast Rail (Taunton)

RUN: 2016 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:40:11

The MODE flag has been set to P for calculating PM averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 ug/m**3

LINK VARIABLES

| LINK DESCRIPTION | * X1 | Y1 | X2 | Y2 | * (FT) (DEG) | (G/MI) | (FT) | (FT) | (VEH) |
|-------------------------|-----------|---------|---------|----------|-----------------|-----------|------|------|-------|
| 1. Rt 140 NB L | * 11948.8 | -3565.2 | 11989.8 | -3612.2 | * 62. 139. AG | 0. 100.0 | 1.0 | 10.0 | |
| 0.36 3.2 | | | | | | | | | |
| 2. Rt 140 NB T | * 11964.0 | -3553.9 | 11964.1 | -3554.1 | * 0. 138. AG | 0. 100.0 | 1.0 | 20.0 | |
| 0.32 0.0 | | | | | | | | | |
| 3. Rt 140 SB T | * 11903.1 | -3548.3 | 11772.7 | -3400.9 | * 197. 318. AG | 0. 100.0 | 1.0 | 20.0 | |
| 0.91 10.0 | | | | | | | | | |
| 4. Train Queue | * 9191.5 | -7114.1 | 9192.0 | -7114.7 | * 1. 138. AG | 5. 100.0 | 1.0 | 20.0 | 0.00 |
| 0.0 | | | | | | | | | |
| 5. 24SB/Route 140 North | * 11930.8 | -3558.3 | 11727.3 | -3343.3 | * 296. 317. AG | 2467. 0.0 | 1.0 | | |
| 78.0 | | | | | | | | | |
| 6. 24 SB/Rt 140 South | * 11930.8 | -3558.3 | 12101.5 | -3735.9 | * 246. 136. AG | 3830. 0.0 | 1.0 | | |
| 78.0 | | | | | | | | | |
| 7. Rt 24 SB Off Ramp | * 11930.8 | -3558.3 | 11814.2 | -3698.5 | * 182. 220. AG | 1440. 0.0 | 1.0 | | |
| 42.0 | | | | | | | | | |
| 8. Rt 24 SB On Ramp | * 11888.8 | -3530.6 | 11801.3 | -3697.0 | * 188. 208. AG | 647. 0.0 | 1.0 | | |
| 30.0 | | | | | | | | | |
| 9. Train Line 1 | * -3325.6 | 6855.1 | 10135.8 | -8168.6 | * ***** 138. AG | 5. 1.0 | 1.0 | 48.0 | |
| 10. Train Line 2 | * 10124.7 | -8177.8 | 12559.4 | -12250.7 | * 4745. 149. AG | 5. 1.0 | 1.0 | 48.0 | |
| 11. Train Line 3 | * -3319.6 | 6871.8 | -6541.4 | 11486.7 | * 5628. 325. AG | 5. 1.0 | 1.0 | 48.0 | |

JOB: South Coast Rail (Taunton)

RUN: 2016 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:40:11

| | | | | | | | | | |
|----------------|---|-----|----|-----|------|------|------|---|---|
| 1. Rt 140 NB L | * | 90 | 40 | 3.0 | 285 | 1600 | 0.04 | 1 | 3 |
| 2. Rt 140 NB T | * | 90 | 0 | 3.0 | 976 | 1600 | 0.04 | 1 | 3 |
| 3. Rt 140 SB T | * | 90 | 50 | 3.0 | 1129 | 1600 | 0.04 | 1 | 3 |
| 4. Train Queue | * | 120 | 70 | 3.0 | 5 | 1600 | 1.53 | 1 | 3 |

RECEPTOR LOCATIONS

| RECEPTOR | * | COORDINATES (FT) | | | * |
|-----------|---|------------------|---------|-----|---|
| | | * X | Y | Z | |
| 1. East 1 | * | 11858.3 | -3406.1 | 6.0 | * |
| 2. East 2 | * | 11909.8 | -3460.5 | 6.0 | * |
| 3. East 3 | * | 11961.4 | -3515.0 | 6.0 | * |
| 4. East 4 | * | 12017.5 | -3564.8 | 6.0 | * |
| 5. East 5 | * | 12069.5 | -3619.0 | 6.0 | * |
| 6. SW1 | * | 12018.0 | -3732.7 | 6.0 | * |
| 7. SW2 | * | 11966.0 | -3678.7 | 6.0 | * |
| 8. SW3 | * | 11914.0 | -3624.6 | 6.0 | * |
| 9. SW4 | * | 11866.0 | -3682.2 | 6.0 | * |
| 10. SW5 | * | 11817.7 | -3739.6 | 6.0 | * |
| 11. NW1 | * | 11777.6 | -3678.7 | 6.0 | * |
| 12. NW2 | * | 11812.5 | -3612.3 | 6.0 | * |
| 13. NW3 | * | 11847.5 | -3545.9 | 6.0 | * |
| 14. NW4 | * | 11795.9 | -3491.5 | 6.0 | * |
| 15. NW5 | * | 11744.3 | -3437.0 | 6.0 | * |

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

| ANGLE * | REC1 | REC2 | REC3 | REC4 | REC5 | REC6 | REC7 | REC8 | REC9 | REC10 | REC11 | REC12 | REC13 | REC14 | REC15 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 2. | 1. | 0. | 1. | 2. | 1. | 1. |
| 10. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 2. | 1. | 0. | 1. | 1. | 1. | 1. |
| 20. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 2. | 1. | 1. | 1. | 1. | 1. | 1. |
| 30. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 2. | 1. | 1. | 1. | 1. | 1. | 1. |
| 40. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 50. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 60. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 1. | 1. | 2. | 1. | 1. | 1. | 1. |
| 70. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 1. | 1. | 2. | 2. | 2. | 1. | 1. |
| 80. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 1. | 0. | 2. | 2. | 2. | 1. | 1. |
| 90. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 1. | 0. | 2. | 2. | 2. | 2. | 2. |
| 100. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 1. | 0. | 1. | 2. | 2. | 2. | 2. |
| 110. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 0. | 0. | 1. | 2. | 2. | 2. | 2. |
| 120. * | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 0. | 0. | 1. | 1. | 2. | 2. | 2. |
| 130. * | 1. | 1. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 1. | 2. | 2. | 2. |
| 140. * | 1. | 1. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. |
| 150. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 0. |
| 160. * | 2. | 2. | 2. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 170. * | 2. | 2. | 2. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 180. * | 2. | 2. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 190. * | 2. | 2. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. |
| 200. * | 1. | 2. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 210. * | 1. | 2. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 220. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 230. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 240. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 250. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 260. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 270. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 280. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 290. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |

300. * 1. 1. 1. 1. 2. 0. 0. 1. 1. 0. 0. 0. 0. 0.
 310. * 1. 1. 1. 1. 1. 1. 1. 1. 1. 0. 0. 0. 0. 0.
 320. * 0. 0. 0. 0. 0. 2. 1. 2. 1. 0. 0. 0. 1. 0. 0.
 330. * 0. 0. 0. 0. 0. 2. 2. 2. 1. 0. 0. 0. 1. 1. 0.
 340. * 0. 0. 0. 0. 0. 2. 2. 2. 1. 0. 0. 0. 2. 1. 1.
 350. * 0. 0. 0. 0. 0. 2. 2. 2. 2. 1. 0. 1. 2. 1. 1.
 360. * 0. 0. 0. 0. 0. 2. 2. 2. 2. 1. 0. 1. 2. 1. 1.

-----*

MAX * 2. 2. 2. 2. 2. 2. 2. 2. 2. 1. 2. 2. 2. 2. 2.

DEGR. * 160 190 170 240 270 340 330 350 0 10 60 90 120 120 120

THE HIGHEST CONCENTRATION OF 2. ug/m**3 OCCURRED AT RECEPTOR REC13.

East Taunton 2016 Build Mitigated (Electric) – PM_{2.5}

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE

1

JOB: South Coast Rail (Taunton)

RUN: 2016 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:40: 6

The MODE flag has been set to P for calculating PM averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S ZO = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 ug/m**3

LINK VARIABLES

| LINK DESCRIPTION | * X1 | Y1 | X2 | Y2 | * (FT) (DEG) | (G/MI) | (FT) | (FT) | (VEH) |
|-------------------------|-----------|---------|---------|----------|-----------------|-----------|------|------|-------|
| 1. Rt 140 NB L | * 11948.8 | -3565.2 | 11989.8 | -3612.2 | * 62. 139. AG | 0. 100.0 | 1.0 | 10.0 | |
| 0.36 3.2 | | | | | | | | | |
| 2. Rt 140 NB T | * 11964.0 | -3553.9 | 11964.1 | -3554.1 | * 0. 138. AG | 0. 100.0 | 1.0 | 20.0 | |
| 0.32 0.0 | | | | | | | | | |
| 3. Rt 140 SB T | * 11903.1 | -3548.3 | 11772.7 | -3400.9 | * 197. 318. AG | 0. 100.0 | 1.0 | 20.0 | |
| 0.91 10.0 | | | | | | | | | |
| 4. Train Queue | * 9191.5 | -7114.1 | 9192.0 | -7114.7 | * 1. 138. AG | 0. 100.0 | 1.0 | 20.0 | 0.00 |
| 0.0 | | | | | | | | | |
| 5. 24SB/Route 140 North | * 11930.8 | -3558.3 | 11727.3 | -3343.3 | * 296. 317. AG | 2467. 0.0 | 1.0 | | |
| 78.0 | | | | | | | | | |
| 6. 24 SB/Rt 140 South | * 11930.8 | -3558.3 | 12101.5 | -3735.9 | * 246. 136. AG | 3830. 0.0 | 1.0 | | |
| 78.0 | | | | | | | | | |
| 7. Rt 24 SB Off Ramp | * 11930.8 | -3558.3 | 11814.2 | -3698.5 | * 182. 220. AG | 1440. 0.0 | 1.0 | | |
| 42.0 | | | | | | | | | |
| 8. Rt 24 SB On Ramp | * 11888.8 | -3530.6 | 11801.3 | -3697.0 | * 188. 208. AG | 647. 0.0 | 1.0 | | |
| 30.0 | | | | | | | | | |
| 9. Train Line 1 | * -3325.6 | 6855.1 | 10135.8 | -8168.6 | * ***** 138. AG | 5. 0.0 | 1.0 | 48.0 | |
| 10. Train Line 2 | * 10124.7 | -8177.8 | 12559.4 | -12250.7 | * 4745. 149. AG | 5. 0.0 | 1.0 | 48.0 | |
| 11. Train Line 3 | * -3319.6 | 6871.8 | -6541.4 | 11486.7 | * 5628. 325. AG | 5. 0.0 | 1.0 | 48.0 | |

JOB: South Coast Rail (Taunton)

RUN: 2016 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:40: 6

| | | | | | | | | | |
|----------------|---|-----|----|-----|------|------|------|---|---|
| 1. Rt 140 NB L | * | 90 | 40 | 3.0 | 285 | 1600 | 0.04 | 1 | 3 |
| 2. Rt 140 NB T | * | 90 | 0 | 3.0 | 976 | 1600 | 0.04 | 1 | 3 |
| 3. Rt 140 SB T | * | 90 | 50 | 3.0 | 1129 | 1600 | 0.04 | 1 | 3 |
| 4. Train Queue | * | 120 | 70 | 3.0 | 5 | 1600 | 0.00 | 1 | 3 |

RECEPTOR LOCATIONS

| RECEPTOR | * | COORDINATES (FT) | | | * |
|-----------|---|------------------|---------|-----|---|
| | * | X | Y | Z | * |
| 1. East 1 | * | 11858.3 | -3406.1 | 6.0 | * |
| 2. East 2 | * | 11909.8 | -3460.5 | 6.0 | * |
| 3. East 3 | * | 11961.4 | -3515.0 | 6.0 | * |
| 4. East 4 | * | 12017.5 | -3564.8 | 6.0 | * |
| 5. East 5 | * | 12069.5 | -3619.0 | 6.0 | * |
| 6. SW1 | * | 12018.0 | -3732.7 | 6.0 | * |
| 7. SW2 | * | 11966.0 | -3678.7 | 6.0 | * |
| 8. SW3 | * | 11914.0 | -3624.6 | 6.0 | * |
| 9. SW4 | * | 11866.0 | -3682.2 | 6.0 | * |
| 10. SW5 | * | 11817.7 | -3739.6 | 6.0 | * |
| 11. NW1 | * | 11777.6 | -3678.7 | 6.0 | * |
| 12. NW2 | * | 11812.5 | -3612.3 | 6.0 | * |
| 13. NW3 | * | 11847.5 | -3545.9 | 6.0 | * |
| 14. NW4 | * | 11795.9 | -3491.5 | 6.0 | * |
| 15. NW5 | * | 11744.3 | -3437.0 | 6.0 | * |

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

| ANGLE * | REC1 | REC2 | REC3 | REC4 | REC5 | REC6 | REC7 | REC8 | REC9 | REC10 | REC11 | REC12 | REC13 | REC14 | REC15 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 2. | 1. | 0. | 1. | 2. | 1. | 1. |
| 10. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 2. | 1. | 0. | 1. | 1. | 1. | 1. |
| 20. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 2. | 1. | 1. | 1. | 1. | 1. | 1. |
| 30. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 2. | 1. | 1. | 1. | 1. | 1. | 1. |
| 40. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 50. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 60. * | 0. | 0. | 0. | 0. | 0. | 2. | 2. | 2. | 1. | 1. | 2. | 1. | 1. | 1. | 1. |
| 70. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 1. | 1. | 2. | 2. | 2. | 1. | 1. |
| 80. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 1. | 0. | 2. | 2. | 2. | 1. | 1. |
| 90. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 1. | 0. | 2. | 2. | 2. | 2. | 2. |
| 100. * | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 1. | 0. | 1. | 2. | 2. | 2. | 2. |
| 110. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 0. | 0. | 1. | 2. | 2. | 2. | 2. |
| 120. * | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 0. | 0. | 1. | 1. | 2. | 2. | 2. |
| 130. * | 1. | 1. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 1. | 2. | 2. | 2. |
| 140. * | 1. | 1. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. |
| 150. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 0. |
| 160. * | 2. | 2. | 2. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 170. * | 2. | 2. | 2. | 2. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 180. * | 2. | 2. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 190. * | 2. | 2. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. |
| 200. * | 1. | 2. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 210. * | 1. | 2. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 220. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 230. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 240. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 250. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 260. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 270. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 280. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 290. * | 1. | 1. | 2. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |

300. * 1. 1. 1. 1. 2. 0. 0. 1. 1. 0. 0. 0. 0. 0.
 310. * 1. 1. 1. 1. 1. 1. 1. 1. 1. 0. 0. 0. 0. 0.
 320. * 0. 0. 0. 0. 0. 2. 1. 2. 1. 0. 0. 0. 1. 0.
 330. * 0. 0. 0. 0. 0. 2. 2. 2. 1. 0. 0. 0. 1. 0.
 340. * 0. 0. 0. 0. 0. 2. 2. 2. 1. 0. 0. 0. 2. 1.
 350. * 0. 0. 0. 0. 0. 2. 2. 2. 2. 1. 0. 1. 2. 1.
 360. * 0. 0. 0. 0. 0. 2. 2. 2. 2. 1. 0. 1. 2. 1.

-----*

MAX * 2. 2. 2. 2. 2. 2. 2. 2. 2. 1. 2. 2. 2. 2.

DEGR. * 160 190 170 240 270 340 330 350 0 10 60 90 120 120 120

THE HIGHEST CONCENTRATION OF 2. ug/m**3 OCCURRED AT RECEPTOR REC13.

East Taunton 2030 Build Mitigated (Diesel) – PM_{2.5}

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE

1

JOB: South Coast Rail (Taunton)

RUN: 2030 Build with Mitigation

DATE : 7/ 2/ 9

TIME : 13:29: 2

The MODE flag has been set to P for calculating PM averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S ZO = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 ug/m**3

LINK VARIABLES

| LINK DESCRIPTION | * X1 | Y1 | X2 | Y2 | * (FT) (DEG) | (G/MI) | (FT) (FT) | (VEH) | H | W |
|-------------------------|-----------|---------|---------|----------|-----------------|-----------|---------------|-------|---|---|
| 1. Rt 140 NB L | * 11948.8 | -3565.2 | 11989.8 | -3612.2 | * 62. 139. AG | 0. 100.0 | 1.0 10.0 | | | |
| 0.36 3.2 | | | | | | | | | | |
| 2. Rt 140 NB T | * 11964.0 | -3553.9 | 11964.1 | -3554.1 | * 0. 138. AG | 0. 100.0 | 1.0 20.0 | | | |
| 0.32 0.0 | | | | | | | | | | |
| 3. Rt 140 SB T | * 11903.1 | -3548.3 | 11772.7 | -3400.9 | * 197. 318. AG | 0. 100.0 | 1.0 20.0 | | | |
| 0.91 10.0 | | | | | | | | | | |
| 4. Train Queue | * 9191.5 | -7114.1 | 9192.0 | -7114.7 | * 1. 138. AG | 3. 100.0 | 1.0 20.0 0.00 | | | |
| 0.0 | | | | | | | | | | |
| 5. 24SB/Route 140 North | * 11930.8 | -3558.3 | 11727.3 | -3343.3 | * 296. 317. AG | 2467. 0.0 | 1.0 | | | |
| 78.0 | | | | | | | | | | |
| 6. 24 SB/Rt 140 South | * 11930.8 | -3558.3 | 12101.5 | -3735.9 | * 246. 136. AG | 3830. 0.0 | 1.0 | | | |
| 78.0 | | | | | | | | | | |
| 7. Rt 24 SB Off Ramp | * 11930.8 | -3558.3 | 11814.2 | -3698.5 | * 182. 220. AG | 1440. 0.0 | 1.0 | | | |
| 42.0 | | | | | | | | | | |
| 8. Rt 24 SB On Ramp | * 11888.8 | -3530.6 | 11801.3 | -3697.0 | * 188. 208. AG | 647. 0.0 | 1.0 | | | |
| 30.0 | | | | | | | | | | |
| 9. Train Line 1 | * -3325.6 | 6855.1 | 10135.8 | -8168.6 | * ***** 138. AG | 5. 0.3 | 1.0 48.0 | | | |
| 10. Train Line 2 | * 10124.7 | -8177.8 | 12559.4 | -12250.7 | * 4745. 149. AG | 5. 0.3 | 1.0 48.0 | | | |
| 11. Train Line 3 | * -3319.6 | 6871.8 | -6541.4 | 11486.7 | * 5628. 325. AG | 5. 0.3 | 1.0 48.0 | | | |

JOB: South Coast Rail (Taunton)

RUN: 2030 Build with Mitigation

DATE : 7/ 2/ 9

TIME : 13:29: 2

| | | | | | | | | | |
|----------------|---|-----|----|-----|------|------|------|---|---|
| 1. Rt 140 NB L | * | 90 | 40 | 3.0 | 285 | 1600 | 0.03 | 1 | 3 |
| 2. Rt 140 NB T | * | 90 | 0 | 3.0 | 976 | 1600 | 0.03 | 1 | 3 |
| 3. Rt 140 SB T | * | 90 | 50 | 3.0 | 1129 | 1600 | 0.03 | 1 | 3 |
| 4. Train Queue | * | 120 | 70 | 3.0 | 5 | 1600 | 0.83 | 1 | 3 |

RECEPTOR LOCATIONS

| RECEPTOR | * | COORDINATES (FT) | | | * |
|-----------|---|------------------|---------|-----|---|
| | | * X | Y | Z | |
| 1. East 1 | * | 11858.3 | -3406.1 | 6.0 | * |
| 2. East 2 | * | 11909.8 | -3460.5 | 6.0 | * |
| 3. East 3 | * | 11961.4 | -3515.0 | 6.0 | * |
| 4. East 4 | * | 12017.5 | -3564.8 | 6.0 | * |
| 5. East 5 | * | 12069.5 | -3619.0 | 6.0 | * |
| 6. SW1 | * | 12018.0 | -3732.7 | 6.0 | * |
| 7. SW2 | * | 11966.0 | -3678.7 | 6.0 | * |
| 8. SW3 | * | 11914.0 | -3624.6 | 6.0 | * |
| 9. SW4 | * | 11866.0 | -3682.2 | 6.0 | * |
| 10. SW5 | * | 11817.7 | -3739.6 | 6.0 | * |
| 11. NW1 | * | 11777.6 | -3678.7 | 6.0 | * |
| 12. NW2 | * | 11812.5 | -3612.3 | 6.0 | * |
| 13. NW3 | * | 11847.5 | -3545.9 | 6.0 | * |
| 14. NW4 | * | 11795.9 | -3491.5 | 6.0 | * |
| 15. NW5 | * | 11744.3 | -3437.0 | 6.0 | * |

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14 REC15

| ANGLE * | REC1 | REC2 | REC3 | REC4 | REC5 | REC6 | REC7 | REC8 | REC9 | REC10 | REC11 | REC12 | REC13 | REC14 | REC15 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 2. | 1. | 0. | 1. | 1. | 1. | 1. |
| 10. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 1. | 1. | 0. | 1. | 1. | 1. | 1. |
| 20. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 30. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 40. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 50. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 60. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 70. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 0. | 1. | 1. | 1. | 1. | 1. |
| 80. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 0. | 1. | 1. | 2. | 1. | 1. |
| 90. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 0. | 1. | 2. | 2. | 1. | 1. |
| 100. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 0. | 0. | 1. | 1. | 2. | 1. | 1. |
| 110. * | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 0. | 0. | 1. | 1. | 2. | 2. | 2. |
| 120. * | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 1. | 2. | 2. | 2. |
| 130. * | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. | 0. | 1. | 2. | 2. | 2. |
| 140. * | 1. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. |
| 150. * | 2. | 1. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 160. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 170. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 180. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. |
| 190. * | 1. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. |
| 200. * | 1. | 1. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 210. * | 1. | 1. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 220. * | 1. | 1. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 230. * | 1. | 1. | 2. | 2. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 240. * | 1. | 1. | 1. | 2. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 250. * | 1. | 1. | 1. | 2. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 260. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 270. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 280. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 290. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |

300. * 1. 1. 1. 1. 2. 0. 0. 1. 1. 0. 0. 0. 0. 0.
 310. * 0. 1. 1. 1. 1. 1. 1. 1. 1. 0. 0. 0. 0. 0.
 320. * 0. 0. 0. 0. 0. 1. 1. 1. 1. 0. 0. 0. 1. 0. 0.
 330. * 0. 0. 0. 0. 0. 2. 2. 2. 1. 0. 0. 0. 1. 1. 0.
 340. * 0. 0. 0. 0. 0. 2. 2. 2. 1. 0. 0. 0. 1. 1. 0.
 350. * 0. 0. 0. 0. 0. 2. 2. 2. 2. 1. 0. 0. 1. 1. 1.
 360. * 0. 0. 0. 0. 0. 1. 1. 2. 2. 1. 0. 1. 1. 1. 1.

-----*

MAX * 2. 2. 2. 2. 2. 2. 2. 2. 2. 1. 1. 2. 2. 2. 2.

DEGR. * 170 160 210 240 280 340 340 340 0 20 70 90 120 110 120

THE HIGHEST CONCENTRATION OF 2. ug/m**3 OCCURRED AT RECEPTOR REC13.

East Taunton 2030 Build Mitigated (Electric) – PM_{2.5}

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0 Dated 95221

PAGE

1

JOB: South Coast Rail (Taunton)

RUN: 2030 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:39:59

The MODE flag has been set to P for calculating PM averages.

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S ZO = 175. CM
 U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 ug/m**3

LINK VARIABLES

| LINK DESCRIPTION | * X1 | Y1 | X2 | Y2 | * (FT) (DEG) | (G/MI) | (FT) (FT) | VPH (VEH) | EF | H | W |
|-------------------------|-----------|---------|---------|----------|-----------------|-----------|---------------|-----------|----|---|---|
| V/C QUEUE | *-----* | | | | | | | | | | |
| 1. Rt 140 NB L | * 11948.8 | -3565.2 | 11989.8 | -3612.2 | * 62. 139. AG | 0. 100.0 | 1.0 10.0 | | | | |
| 0.36 3.2 | | | | | | | | | | | |
| 2. Rt 140 NB T | * 11964.0 | -3553.9 | 11964.1 | -3554.1 | * 0. 138. AG | 0. 100.0 | 1.0 20.0 | | | | |
| 0.32 0.0 | | | | | | | | | | | |
| 3. Rt 140 SB T | * 11903.1 | -3548.3 | 11772.7 | -3400.9 | * 197. 318. AG | 0. 100.0 | 1.0 20.0 | | | | |
| 0.91 10.0 | | | | | | | | | | | |
| 4. Train Queue | * 9191.5 | -7114.1 | 9192.0 | -7114.7 | * 1. 138. AG | 0. 100.0 | 1.0 20.0 0.00 | | | | |
| 0.0 | | | | | | | | | | | |
| 5. 24SB/Route 140 North | * 11930.8 | -3558.3 | 11727.3 | -3343.3 | * 296. 317. AG | 2467. 0.0 | 1.0 | | | | |
| 78.0 | | | | | | | | | | | |
| 6. 24 SB/Rt 140 South | * 11930.8 | -3558.3 | 12101.5 | -3735.9 | * 246. 136. AG | 3830. 0.0 | 1.0 | | | | |
| 78.0 | | | | | | | | | | | |
| 7. Rt 24 SB Off Ramp | * 11930.8 | -3558.3 | 11814.2 | -3698.5 | * 182. 220. AG | 1440. 0.0 | 1.0 | | | | |
| 42.0 | | | | | | | | | | | |
| 8. Rt 24 SB On Ramp | * 11888.8 | -3530.6 | 11801.3 | -3697.0 | * 188. 208. AG | 647. 0.0 | 1.0 | | | | |
| 30.0 | | | | | | | | | | | |
| 9. Train Line 1 | * -3325.6 | 6855.1 | 10135.8 | -8168.6 | * ***** 138. AG | 5. 0.0 | 1.0 48.0 | | | | |
| 10. Train Line 2 | * 10124.7 | -8177.8 | 12559.4 | -12250.7 | * 4745. 149. AG | 5. 0.0 | 1.0 48.0 | | | | |
| 11. Train Line 3 | * -3319.6 | 6871.8 | -6541.4 | 11486.7 | * 5628. 325. AG | 5. 0.0 | 1.0 48.0 | | | | |

JOB: South Coast Rail (Taunton)

RUN: 2030 Build with Mitigation

DATE : 6/29/ 9

TIME : 16:39:59

| | | | | | | | | | |
|----------------|---|-----|----|-----|------|------|------|---|---|
| 1. Rt 140 NB L | * | 90 | 40 | 3.0 | 285 | 1600 | 0.03 | 1 | 3 |
| 2. Rt 140 NB T | * | 90 | 0 | 3.0 | 976 | 1600 | 0.03 | 1 | 3 |
| 3. Rt 140 SB T | * | 90 | 50 | 3.0 | 1129 | 1600 | 0.03 | 1 | 3 |
| 4. Train Queue | * | 120 | 70 | 3.0 | 5 | 1600 | 0.00 | 1 | 3 |

RECEPTOR LOCATIONS

| RECEPTOR | * | COORDINATES (FT) | | | * |
|-----------|---|------------------|---------|-----|---|
| | | * X | Y | Z | |
| 1. East 1 | * | 11858.3 | -3406.1 | 6.0 | * |
| 2. East 2 | * | 11909.8 | -3460.5 | 6.0 | * |
| 3. East 3 | * | 11961.4 | -3515.0 | 6.0 | * |
| 4. East 4 | * | 12017.5 | -3564.8 | 6.0 | * |
| 5. East 5 | * | 12069.5 | -3619.0 | 6.0 | * |
| 6. SW1 | * | 12018.0 | -3732.7 | 6.0 | * |
| 7. SW2 | * | 11966.0 | -3678.7 | 6.0 | * |
| 8. SW3 | * | 11914.0 | -3624.6 | 6.0 | * |
| 9. SW4 | * | 11866.0 | -3682.2 | 6.0 | * |
| 10. SW5 | * | 11817.7 | -3739.6 | 6.0 | * |
| 11. NW1 | * | 11777.6 | -3678.7 | 6.0 | * |
| 12. NW2 | * | 11812.5 | -3612.3 | 6.0 | * |
| 13. NW3 | * | 11847.5 | -3545.9 | 6.0 | * |
| 14. NW4 | * | 11795.9 | -3491.5 | 6.0 | * |
| 15. NW5 | * | 11744.3 | -3437.0 | 6.0 | * |

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND * CONCENTRATION

ANGLE * (ug/m**3)

(DEGR)* REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8 REC9 REC10 REC11 REC12 REC13 REC14

REC15

| ANGLE * | REC1 | REC2 | REC3 | REC4 | REC5 | REC6 | REC7 | REC8 | REC9 | REC10 | REC11 | REC12 | REC13 | REC14 | REC15 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 2. | 1. | 0. | 1. | 1. | 1. | 1. |
| 10. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 1. | 1. | 0. | 1. | 1. | 1. | 1. |
| 20. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 30. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 40. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 50. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 60. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| 70. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 0. | 1. | 1. | 1. | 1. | 1. |
| 80. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 0. | 1. | 1. | 2. | 1. | 1. |
| 90. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. | 0. | 1. | 2. | 2. | 1. | 1. |
| 100. * | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 2. | 0. | 0. | 1. | 1. | 2. | 1. | 1. |
| 110. * | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 2. | 0. | 0. | 1. | 1. | 2. | 2. | 2. |
| 120. * | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 1. | 2. | 2. | 2. |
| 130. * | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. | 0. | 1. | 2. | 2. | 2. |
| 140. * | 1. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 1. | 1. |
| 150. * | 2. | 1. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 160. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 170. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 1. | 0. | 0. |
| 180. * | 2. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. |
| 190. * | 1. | 2. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. |
| 200. * | 1. | 1. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 210. * | 1. | 1. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 220. * | 1. | 1. | 2. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 230. * | 1. | 1. | 2. | 2. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 240. * | 1. | 1. | 1. | 2. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 250. * | 1. | 1. | 1. | 2. | 1. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 260. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 270. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 280. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |
| 290. * | 1. | 1. | 1. | 2. | 2. | 0. | 0. | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. |

300. * 1. 1. 1. 1. 2. 0. 0. 1. 1. 0. 0. 0. 0. 0.
 310. * 0. 1. 1. 1. 1. 1. 1. 1. 1. 0. 0. 0. 0. 0.
 320. * 0. 0. 0. 0. 0. 1. 1. 1. 1. 0. 0. 0. 1. 0.
 330. * 0. 0. 0. 0. 0. 2. 2. 2. 1. 0. 0. 0. 1. 1.
 340. * 0. 0. 0. 0. 0. 2. 2. 2. 1. 0. 0. 0. 1. 1.
 350. * 0. 0. 0. 0. 0. 2. 2. 2. 2. 1. 0. 0. 1. 1.
 360. * 0. 0. 0. 0. 0. 1. 1. 2. 2. 1. 0. 1. 1. 1.

-----*

MAX * 2. 2. 2. 2. 2. 2. 2. 2. 2. 1. 1. 2. 2. 2.

DEGR. * 170 160 210 240 280 340 340 340 0 20 70 90 120 110 120

THE HIGHEST CONCENTRATION OF 2. ug/m**3 OCCURRED AT RECEPTOR REC13.



Technical Report
Air Quality
Draft

Hot Spot: Microscale (Local) Analysis

- Microscale Results
 - Carbon Monoxide (CO)
 - Particulate Matter 10 (PM₁₀)
 - Particulate Matter 2.5 (PM_{2.5})



Technical Report
Air Quality
Draft

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Technical Report
Air Quality
Draft

Hot Spot: Microscale (Local) Analysis Microscale Results

- Carbon Monoxide (CO)



Technical Report
Air Quality
Draft

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1 Hour CO Results

Background 3.0

| Town | Station | 2008 | 2016 | | | | | | 2030 | | | | | | | |
|--------------|--------------------|--|------------------------|------------|--------------------|--------------------|--------------------|--------------------|------------------|-----------|--------------------|--------------------|--------------------|--------------------|------------------|-----------|
| | | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | |
| Norton | Barrowsville | <u>North Worcester Street at Route 123/Main Street</u> | | | | | | | | | | | | | | |
| | | Quadrant | Intersection/Receptors | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus |
| | | Northeast | 1 | 3.5 | 3.4 | 3.5 | 3.5 | | | | 3.4 | 3.5 | 3.5 | | | |
| | | | 2 | 3.7 | 3.6 | 3.6 | 3.6 | | | | 3.6 | 3.6 | 3.6 | | | |
| | | | 3 | 3.8 | 3.7 | 4.1 | 4.1 | | | | 3.7 | 4.2 | 4.2 | | | |
| | | | 4 | 3.7 | 3.5 | 3.8 | 3.8 | | | | 3.5 | 3.8 | 3.8 | | | |
| | | | 5 | 3.6 | 3.5 | 3.6 | 3.6 | | | | 3.5 | 3.6 | 3.6 | | | |
| | | Southeast | 1 | 3.6 | 3.4 | 3.5 | 3.5 | | | | 3.4 | 3.5 | 3.5 | | | |
| | | | 2 | 3.7 | 3.6 | 3.7 | 3.7 | | | | 3.6 | 3.7 | 3.7 | | | |
| | | | 3 | 3.9 | 3.8 | 3.8 | 3.8 | | | | 3.8 | 3.8 | 3.8 | | | |
| | | | 4 | 3.8 | 3.6 | 3.8 | 3.8 | | | | 3.6 | 3.7 | 3.7 | | | |
| | | | 5 | 3.7 | 3.6 | 3.6 | 3.6 | | | | 3.6 | 3.6 | 3.6 | | | |
| | | Southwest | 1 | 3.5 | 3.5 | 3.7 | 3.7 | | | | 3.4 | 3.6 | 3.6 | | | |
| | | | 2 | 3.6 | 3.5 | 3.7 | 3.7 | | | | 3.5 | 3.7 | 3.7 | | | |
| | | | 3 | 3.8 | 3.6 | 3.7 | 3.7 | | | | 3.6 | 3.7 | 3.7 | | | |
| | | | 4 | 3.8 | 3.5 | 3.6 | 3.6 | | | | 3.5 | 3.6 | 3.6 | | | |
| | | | 5 | 3.7 | 3.5 | 3.6 | 3.6 | | | | 3.5 | 3.6 | 3.6 | | | |
| | | Northwest | 1 | 3.6 | 3.5 | 3.5 | 3.5 | | | | 3.5 | 3.5 | 3.5 | | | |
| | | | 2 | 3.7 | 3.6 | 3.7 | 3.7 | | | | 3.6 | 3.7 | 3.7 | | | |
| | | | 3 | 3.7 | 3.6 | 3.7 | 3.7 | | | | 3.6 | 3.6 | 3.6 | | | |
| 4 | 3.8 | | 3.5 | 3.6 | 3.6 | | | | 3.5 | 3.6 | 3.6 | | | | | |
| 5 | 3.5 | | 3.4 | 3.5 | 3.5 | | | | 3.4 | 3.5 | 3.5 | | | | | |
| East Taunton | East Taunton North | <u>Route 140 at the Route 24 Southbound Ramps</u> | | | | | | | | | | | | | | |
| | | Quadrant | Intersection/Receptors | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus |
| | | East | 1 | 4.6 | 4.1 | | | 4.1 | 4.1 | | 4.1 | | | 4.1 | 4.1 | |
| | | | 2 | 4.4 | 4.1 | | | 4.2 | 4.2 | | 4.1 | | | 4.1 | 4.1 | |
| | | | 3 | 4.5 | 4.1 | | | 4.2 | 4.2 | | 4.1 | | | 4.2 | 4.2 | |
| | | | 4 | 4.5 | 4.2 | | | 4.2 | 4.2 | | 4.2 | | | 4.2 | 4.2 | |
| | | | 5 | 4.4 | 4.2 | | | 4.2 | 4.2 | | 4.2 | | | 4.2 | 4.2 | |
| | | Southwest | 1 | 4.4 | 4.2 | | | 4.2 | 4.2 | | 4.0 | | | 4.2 | 4.2 | |
| | | | 2 | 4.4 | 4.1 | | | 4.1 | 4.1 | | 4.1 | | | 4.1 | 4.1 | |
| | | | 3 | 4.8 | 4.3 | | | 4.4 | 4.4 | | 4.3 | | | 4.4 | 4.4 | |
| | | | 4 | 4.4 | 4.1 | | | 4.1 | 4.1 | | 4.1 | | | 4.1 | 4.1 | |
| | | | 5 | 4.1 | 3.9 | | | 3.9 | 3.9 | | 3.9 | | | 3.9 | 3.9 | |
| | | Northwest | 1 | 4.2 | 3.9 | | | 3.9 | 3.9 | | 3.9 | | | 3.9 | 3.9 | |
| | | | 2 | 4.2 | 4.0 | | | 4.0 | 4.0 | | 4.0 | | | 4.0 | 4.0 | |
| | | | 3 | 4.8 | 4.3 | | | 4.5 | 4.5 | | 4.3 | | | 4.5 | 4.5 | |
| | | | 4 | 4.7 | 4.3 | | | 4.4 | 4.4 | | 4.2 | | | 4.3 | 4.3 | |
| | | | 5 | 4.5 | 4.1 | | | 4.1 | 4.1 | | 4.1 | | | 4.1 | 4.1 | |

1 Hour CO Results

Background 3.0

| Town | Station | Quadrant | Intersection/Receptors | 2008 | 2016 | | | | | 2030 | | | | | | | | | |
|------------|------------------|---|------------------------|------------|------------|--------------------|------------------|--------------------|------------------|------------|----------|--------------------|------------------|--------------------|------------------|------------|--|--|--|
| | | | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | | |
| Easton | Easton Village | <u>Route 138 at Main Street</u> | | | | | | | | | | | | | | | | | |
| | | | 1 | 4.7 | 4.4 | | | 4.3 | 4.3 | | | 4.4 | | | 4.3 | 4.3 | | | |
| | | Northeast | 2 | 4.8 | 4.5 | | | 4.5 | 4.5 | | | 4.5 | | | 4.5 | 4.5 | | | |
| | | | 3 | 4.8 | 4.5 | | | 4.4 | 4.4 | | | 4.5 | | | 4.4 | 4.4 | | | |
| | | | 4 | 4.7 | 4.4 | | | 4.3 | 4.3 | | | 4.4 | | | 4.3 | 4.3 | | | |
| | | | 5 | 4.1 | 3.9 | | | 3.9 | 3.9 | | | 3.9 | | | 3.9 | 3.9 | | | |
| | | | 1 | 4.4 | 4.1 | | | 4.1 | 4.1 | | | 4.1 | | | 4.1 | 4.1 | | | |
| | | Southeast | 2 | 4.5 | 4.3 | | | 4.4 | 4.4 | | | 4.3 | | | 4.6 | 4.6 | | | |
| | | | 3 | 4.7 | 4.6 | | | 4.4 | 4.4 | | | 4.5 | | | 4.4 | 4.4 | | | |
| | | | 4 | 5.1 | 4.6 | | | 4.5 | 4.5 | | | 4.6 | | | 4.5 | 4.5 | | | |
| | | | 5 | 4.7 | 4.6 | | | 4.4 | 4.4 | | | 4.7 | | | 4.4 | 4.4 | | | |
| | | | 1 | 4.7 | 4.6 | | | 4.5 | 4.5 | | | 4.6 | | | 4.5 | 4.5 | | | |
| | | Southwest | 2 | 4.7 | 4.4 | | | 4.4 | 4.4 | | | 4.4 | | | 4.4 | 4.4 | | | |
| | | | 3 | 4.9 | 4.7 | | | 4.5 | 4.5 | | | 4.7 | | | 4.5 | 4.5 | | | |
| | | | 4 | 5.0 | 4.5 | | | 4.7 | 4.7 | | | 4.5 | | | 4.7 | 4.7 | | | |
| | | | 5 | 4.5 | 4.2 | | | 4.3 | 4.3 | | | 4.2 | | | 4.1 | 4.1 | | | |
| | | | 1 | 4.7 | 4.3 | | | 4.2 | 4.2 | | | 4.3 | | | 4.2 | 4.2 | | | |
| | | Northwest | 2 | 5.0 | 4.5 | | | 4.6 | 4.6 | | | 4.5 | | | 4.6 | 4.6 | | | |
| | | | 3 | 4.8 | 4.5 | | | 4.4 | 4.4 | | | 4.5 | | | 4.4 | 4.4 | | | |
| | | | 4 | 5.0 | 4.4 | | | 4.5 | 4.5 | | | 4.4 | | | 4.5 | 4.5 | | | |
| 5 | 5.1 | | 4.6 | | | 4.6 | 4.6 | | | 4.6 | | | 4.6 | 4.6 | | | | | |
| 1 | 4.7 | | 4.3 | | | 4.2 | 4.2 | | | 4.3 | | | 4.2 | 4.2 | | | | | |
| Fall River | Fall River Depot | <u>North Davol Street at President Avenue</u> | | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 3.7 | 3.5 | 3.5 | 3.5 | | | | | 3.5 | 3.5 | 3.5 | | | | | |
| | | | 2 | 3.8 | 3.6 | 3.8 | 3.8 | | | | | 3.6 | 3.8 | 3.8 | | | | | |
| | | | 3 | 4.5 | 4.1 | 3.9 | 3.9 | | | | | 4.1 | 3.9 | 3.9 | | | | | |
| | | | 4 | 4.5 | 4.1 | 4.1 | 4.1 | | | | | 4.1 | 4.1 | 4.1 | | | | | |
| | | | 5 | 4.5 | 4.1 | 4.0 | 4.0 | | | | | 4.1 | 3.9 | 3.9 | | | | | |
| | | Southeast | 1 | 4.2 | 4.0 | 4.0 | 4.0 | | | | | 4.0 | 3.9 | 3.9 | | | | | |
| | | | 2 | 4.3 | 4.0 | 3.9 | 3.9 | | | | | 4.0 | 3.9 | 3.9 | | | | | |
| | | | 3 | 4.4 | 4.1 | 4.2 | 4.2 | | | | | 4.1 | 4.2 | 4.2 | | | | | |
| | | | 4 | 4.5 | 4.2 | 4.1 | 4.1 | | | | | 4.2 | 4.1 | 4.1 | | | | | |
| | | | 5 | 4.0 | 3.8 | 4.0 | 4.0 | | | | | 3.8 | 4.0 | 4.0 | | | | | |
| | | Southwest | 1 | 4.0 | 3.8 | 3.8 | 3.8 | | | | | 3.8 | 3.9 | 3.9 | | | | | |
| | | | 2 | 4.6 | 4.1 | 4.1 | 4.1 | | | | | 4.1 | 4.1 | 4.1 | | | | | |
| | | | 3 | 4.7 | 4.2 | 4.2 | 4.2 | | | | | 4.2 | 4.2 | 4.2 | | | | | |
| | | | 4 | 4.2 | 4.0 | 3.8 | 3.8 | | | | | 4.0 | 3.8 | 3.8 | | | | | |
| | | | 5 | 4.3 | 4.0 | 3.9 | 3.9 | | | | | 4.0 | 3.9 | 3.9 | | | | | |
| | | Northwest | 1 | 4.1 | 3.9 | 3.8 | 3.8 | | | | | 3.9 | 3.8 | 3.8 | | | | | |
| | | | 2 | 4.1 | 3.9 | 3.8 | 3.8 | | | | | 3.9 | 3.8 | 3.8 | | | | | |
| | | | 3 | 4.6 | 4.0 | 4.1 | 4.1 | | | | | 4.0 | 4.0 | 4.0 | | | | | |
| | | | 4 | 3.9 | 3.7 | 3.7 | 3.7 | | | | | 3.7 | 3.7 | 3.7 | | | | | |
| 5 | 3.8 | | 3.6 | 3.6 | 3.6 | | | | | 3.6 | 3.6 | 3.6 | | | | | | | |

1 Hour CO Results

Background 3.0

| Town | Station | 2008 | | 2016 | | | | | | 2030 | | | | | | |
|------------|------------------|---|------------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|-----------|
| | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | |
| Fall River | Fall River Depot | <u>South Davol Street at President Avenue</u> | | | | | | | | | | | | | | |
| | | Quadrant | Intersection/Receptors | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus |
| | | Northeast | 1 | 4.0 | 3.7 | 3.7 | 3.7 | | | | 3.7 | 3.7 | 3.7 | | | |
| | | | 2 | 4.1 | 3.8 | 3.8 | 3.8 | | | | 3.8 | 3.8 | 3.8 | | | |
| | | | 3 | 4.2 | 3.9 | 4.0 | 4.1 | | | | 3.9 | 4.0 | 4.0 | | | |
| | | | 4 | 4.0 | 3.7 | 3.8 | 3.8 | | | | 3.7 | 3.8 | 3.8 | | | |
| | | | 5 | 4.2 | 3.8 | 3.8 | 3.8 | | | | 3.8 | 3.8 | 3.8 | | | |
| | | Southeast | 1 | 4.2 | 3.9 | 3.9 | 3.9 | | | | 3.9 | 3.9 | 3.9 | | | |
| | | | 2 | 4.3 | 3.9 | 3.9 | 3.9 | | | | 3.9 | 3.9 | 3.9 | | | |
| | | | 3 | 4.3 | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | 4.0 | | | |
| | | | 4 | 3.9 | 3.8 | 3.8 | 3.8 | | | | 3.8 | 3.8 | 3.8 | | | |
| | | | 5 | 3.7 | 3.6 | 3.6 | 3.6 | | | | 3.6 | 3.6 | 3.6 | | | |
| | | Southwest | 1 | 3.8 | 3.7 | 3.7 | 3.7 | | | | 3.7 | 3.7 | 3.7 | | | |
| | | | 2 | 3.9 | 3.8 | 3.8 | 3.8 | | | | 3.8 | 3.8 | 3.8 | | | |
| | | | 3 | 4.4 | 3.9 | 3.9 | 3.9 | | | | 3.9 | 3.9 | 3.9 | | | |
| | | | 4 | 3.7 | 3.7 | 3.6 | 3.6 | | | | 3.7 | 3.6 | 3.6 | | | |
| | | | 5 | 3.6 | 3.4 | 3.3 | 3.3 | | | | 3.4 | 3.3 | 3.3 | | | |
| | | Northwest | 1 | 3.6 | 3.5 | 3.4 | 3.4 | | | | 3.5 | 3.4 | 3.4 | | | |
| | | | 2 | 3.8 | 3.7 | 3.6 | 3.6 | | | | 3.7 | 3.6 | 3.6 | | | |
| | | | 3 | 4.6 | 4.2 | 4.1 | 4.1 | | | | 4.1 | 4.0 | 4.0 | | | |
| 4 | 4.6 | | 4.2 | 4.2 | 4.2 | | | | 4.2 | 4.2 | 4.2 | | | | | |
| 5 | 4.4 | | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | 4.0 | | | | | |
| Freetown | Freetown | <u>South Main Street at Route 24 Northbound Ramps</u> | | | | | | | | | | | | | | |
| | | Quadrant | Intersection/Receptors | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus |
| | | North | 1 | 3.4 | 4.0 | | | 4.0 | 4.0 | | 3.9 | | | 3.9 | 3.9 | |
| | | | 2 | 3.5 | 3.9 | | | 3.9 | 3.9 | | 3.8 | | | 3.8 | 3.8 | |
| | | | 3 | 3.5 | 3.9 | | | 3.9 | 3.9 | | 3.9 | | | 3.9 | 3.9 | |
| | | | 4 | 3.5 | 4.1 | | | 4.1 | 4.1 | | 4.1 | | | 4.1 | 4.1 | |
| | | | 5 | 3.5 | 4.0 | | | 4.0 | 4.0 | | 4.0 | | | 4.0 | 4.0 | |
| | | Southeast | 1 | 3.5 | 3.8 | | | 3.8 | 3.8 | | 3.8 | | | 3.8 | 3.8 | |
| | | | 2 | 3.4 | 4.0 | | | 4.0 | 4.0 | | 3.9 | | | 3.9 | 3.9 | |
| | | | 3 | 3.6 | 4.0 | | | 4.0 | 4.0 | | 4.0 | | | 4.0 | 4.0 | |
| | | | 4 | 3.4 | 3.7 | | | 3.7 | 3.7 | | 3.7 | | | 3.7 | 3.7 | |
| | | | 5 | 3.3 | 3.4 | | | 3.4 | 3.4 | | 3.4 | | | 3.4 | 3.4 | |
| | | Southwest | 1 | 3.2 | 3.4 | | | 3.4 | 3.4 | | 3.4 | | | 3.4 | 3.4 | |
| | | | 2 | 3.3 | 3.6 | | | 3.6 | 3.6 | | 3.6 | | | 3.6 | 3.6 | |
| | | | 3 | 3.4 | 4.0 | | | 4.1 | 4.1 | | 4.0 | | | 4.0 | 4.0 | |
| | | | 4 | 3.4 | 3.7 | | | 3.7 | 3.7 | | 3.7 | | | 3.7 | 3.7 | |
| | | | 5 | 3.4 | 3.7 | | | 3.7 | 3.7 | | 3.7 | | | 3.7 | 3.7 | |

1 Hour CO Results

Background 3.0

| Town Station | | 2008 | 2016 | | | | | | 2030 | | | | | |
|--------------|---|----------|----------|--------------------|-----------------|--------------------|-------------------|-----------|----------|--------------------|-----------------|--------------------|-------------------|-----------|
| Quadrant | Intersection/Receptors | Existing | No Build | Attelboro Electric | Atteboro Diesel | Stoughton Electric | Stroughton Diesel | Rapid Bus | No Build | Attelboro Electric | Atteboro Diesel | Stoughton Electric | Stroughton Diesel | Rapid Bus |
| New Bedford | <u>King's Highway Church Strret at Tarkiln Road</u> | | | | | | | | | | | | | |
| | Northeast | 1 | 3.6 | 3.6 | 3.5 | 3.6 | | | | 3.5 | 3.6 | 3.6 | | |
| | | 2 | 3.9 | 3.6 | 3.5 | 3.7 | | | | 3.6 | 3.8 | 3.7 | | |
| | | 3 | 4.0 | 3.8 | 3.8 | 3.9 | | | | 3.8 | 4.1 | 3.9 | | |
| | | 4 | 4.0 | 3.8 | 3.8 | 4.0 | | | | 3.8 | 3.9 | 4.0 | | |
| | | 5 | 3.8 | 3.6 | 3.6 | 3.8 | | | | 3.5 | 3.8 | 3.8 | | |
| | Southeast | 1 | 3.8 | 3.6 | 3.6 | 3.7 | | | | 3.6 | 3.7 | 3.8 | | |
| | | 2 | 3.9 | 3.6 | 3.6 | 3.7 | | | | 3.6 | 3.9 | 3.7 | | |
| | | 3 | 4.1 | 3.8 | 3.7 | 3.8 | | | | 3.8 | 4.0 | 3.8 | | |
| | | 4 | 4.1 | 3.8 | 3.6 | 3.8 | | | | 3.8 | 3.9 | 3.8 | | |
| | | 5 | 3.6 | 3.6 | 3.6 | 3.7 | | | | 3.6 | 3.6 | 3.7 | | |
| | Southwest | 1 | 3.7 | 3.5 | 3.5 | 3.6 | | | | 3.5 | 3.6 | 3.6 | | |
| | | 2 | 3.9 | 3.6 | 3.5 | 3.6 | | | | 3.6 | 3.8 | 3.6 | | |
| | | 3 | 4.1 | 3.8 | 3.7 | 3.9 | | | | 3.8 | 4.0 | 3.8 | | |
| | | 4 | 4.1 | 3.9 | 3.9 | 4.0 | | | | 3.9 | 4.0 | 4.0 | | |
| | | 5 | 3.9 | 3.7 | 3.6 | 3.9 | | | | 3.7 | 3.8 | 3.9 | | |
| | Northwest | 1 | 3.9 | 3.7 | 3.6 | 3.8 | | | | 3.7 | 3.8 | 3.8 | | |
| | | 2 | 3.9 | 3.7 | 3.7 | 3.7 | | | | 3.7 | 3.8 | 3.7 | | |
| | | 3 | 4.0 | 3.8 | 3.8 | 3.8 | | | | 3.8 | 4.0 | 3.8 | | |
| | | 4 | 4.1 | 3.7 | 3.6 | 3.8 | | | | 3.7 | 3.8 | 3.8 | | |
| 5 | | 3.6 | 3.6 | 3.6 | 3.6 | | | | 3.6 | 3.7 | 3.6 | | | |
| Raynham | <u>Raynham Park Route 138 at Found Street/Route 106</u> | | | | | | | | | | | | | |
| | Northeast | 1 | 4.1 | 3.8 | 3.8 | 3.8 | | | | 3.8 | 3.8 | 3.8 | | |
| | | 2 | 4.1 | 3.9 | 3.9 | 3.9 | | | | 3.9 | 3.9 | 3.9 | | |
| | | 3 | 4.4 | 4.1 | 4.2 | 4.2 | | | | 4.1 | 4.1 | 4.1 | | |
| | | 4 | 4.5 | 4.0 | 4.1 | 4.1 | | | | 4.0 | 4.1 | 4.1 | | |
| | | 5 | 4.1 | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | 4.0 | | |
| | Southeast | 1 | 4.1 | 3.9 | 3.9 | 3.9 | | | | 3.9 | 3.9 | 3.9 | | |
| | | 2 | 4.2 | 3.9 | 3.9 | 3.9 | | | | 3.9 | 3.9 | 3.9 | | |
| | | 3 | 4.3 | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | 4.0 | | |
| | | 4 | 4.3 | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | 4.0 | | |
| | | 5 | 4.1 | 3.8 | 3.9 | 3.9 | | | | 3.8 | 3.9 | 3.9 | | |
| | Southwest | 1 | 4.1 | 3.8 | 3.9 | 3.9 | | | | 3.8 | 3.9 | 3.9 | | |
| | | 2 | 4.3 | 4.1 | 4.1 | 4.1 | | | | 4.1 | 4.1 | 4.1 | | |
| | | 3 | 4.2 | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | 4.0 | | |
| | | 4 | 4.0 | 3.9 | 3.9 | 3.9 | | | | 3.9 | 3.9 | 3.9 | | |
| | | 5 | 3.8 | 3.7 | 3.8 | 3.8 | | | | 3.7 | 3.7 | 3.7 | | |
| | Northwest | 1 | 3.8 | 3.8 | 3.8 | 3.8 | | | | 3.8 | 3.8 | 3.8 | | |
| | | 2 | 4.0 | 3.8 | 3.8 | 3.8 | | | | 3.8 | 3.8 | 3.8 | | |
| | | 3 | 4.3 | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | 4.0 | | |
| | | 4 | 4.3 | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | 4.0 | | |
| 5 | | 4.2 | 3.9 | 4.0 | 4.0 | | | | 3.9 | 4.0 | 4.0 | | | |

1 Hour CO Results

Background 3.0

| Town | Station | 2008 | | 2016 | | | | | | 2030 | | | | | | |
|-----------|-------------|------------------------------------|---------------|---|-----------------|--------------------|------------------|------------|------------|--------------------|-----------------|--------------------|------------------|------------|------------|--|
| | | Existing | No Build | Attelboro Electric | Atteboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Atteboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | |
| Taunton | Dean Street | Route 44 at Longmeadow Road | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 4.1 | 3.7 | | | 3.7 | 3.7 | | 3.7 | | | 3.7 | 3.7 | |
| | | | 2 | 4.2 | 3.9 | | | 3.9 | 3.9 | | 3.9 | | | 3.9 | 3.9 | |
| | | | 3 | 5.2 | 4.6 | | | 4.5 | 4.5 | | 4.6 | | | 4.5 | 4.5 | |
| | | | 4 | 5.1 | 4.6 | | | 4.5 | 4.5 | | 4.6 | | | 4.5 | 4.5 | |
| | | | 5 | 5.2 | 4.6 | | | 4.7 | 4.7 | | 4.6 | | | 4.6 | 4.6 | |
| | | Southeast | 1 | 4.7 | 4.3 | | | 4.3 | 4.3 | | 4.3 | | | 4.3 | 4.3 | |
| | | | 2 | 4.5 | 4.1 | | | 4.2 | 4.2 | | 4.1 | | | 4.2 | 4.2 | |
| | | | 3 | 4.7 | 4.3 | | | 4.4 | 4.4 | | 4.3 | | | 4.4 | 4.4 | |
| | | | 4 | 4.4 | 4.1 | | | 4.0 | 4.0 | | 4.1 | | | 4.0 | 4.0 | |
| | | | 5 | 4.4 | 4.0 | | | 4.0 | 4.0 | | 4.0 | | | 4.0 | 4.0 | |
| | | Southwest | 1 | 4.3 | 4.0 | | | 4.0 | 4.0 | | 4.0 | | | 4.0 | 4.0 | |
| | | | 2 | 4.4 | 4.1 | | | 4.1 | 4.1 | | 4.1 | | | 4.1 | 4.1 | |
| | | | 3 | 5.4 | 4.7 | | | 4.8 | 4.8 | | 4.7 | | | 4.8 | 4.8 | |
| | | | 4 | 5.2 | 4.5 | | | 4.7 | 4.7 | | 4.5 | | | 4.7 | 4.7 | |
| | | | 5 | 5.2 | 4.6 | | | 4.6 | 4.6 | | 4.6 | | | 4.6 | 4.6 | |
| | | Northwest | 1 | 4.7 | 4.3 | | | 4.4 | 4.4 | | 4.3 | | | 4.4 | 4.4 | |
| | | | 2 | 4.8 | 4.2 | | | 4.4 | 4.4 | | 4.2 | | | 4.4 | 4.4 | |
| | | | 3 | 5.1 | 4.5 | | | 4.6 | 4.6 | | 4.5 | | | 4.6 | 4.6 | |
| | | | 4 | 4.4 | 4.0 | | | 3.9 | 3.9 | | 4.1 | | | 3.9 | 3.9 | |
| | | | 5 | 4.1 | 3.9 | | | 3.9 | 3.9 | | 3.9 | | | 3.9 | 3.9 | |
| | | Taunton | Taunton Depot | Route 140 at the Route 24 Northbound Ramps without Slip Ramp | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | Northeast | 1 | 3.6 | 3.5 | 3.5 | 3.5 | | | | 3.5 | 3.5 | 3.5 | |
| 2 | 3.9 | | | | 3.7 | 3.7 | 3.7 | | | | 3.7 | 3.7 | 3.7 | | | |
| 3 | 5.0 | | | | 4.6 | 4.8 | 4.8 | | | | 4.6 | 4.8 | 4.8 | | | |
| 4 | 5.0 | | | | 4.7 | 4.7 | 4.6 | | | | 4.7 | 4.7 | 4.7 | | | |
| 5 | 5.1 | | | | 4.7 | 4.8 | 4.7 | | | | 4.7 | 4.8 | 4.8 | | | |
| South | 1 | | | 5.2 | 4.7 | 4.7 | 4.7 | | | | 4.7 | 4.7 | 4.7 | | | |
| | 2 | | | 5.1 | 4.7 | 4.8 | 4.7 | | | | 4.7 | 4.7 | 4.7 | | | |
| | 3 | | | 5.3 | 4.8 | 4.9 | 4.9 | | | | 4.8 | 4.9 | 4.9 | | | |
| | 4 | | | 5.2 | 4.8 | 4.8 | 4.7 | | | | 4.8 | 4.8 | 4.8 | | | |
| | 5 | | | 5.1 | 4.7 | 4.7 | 4.6 | | | | 4.7 | 4.7 | 4.7 | | | |
| Northwest | 1 | | | 5.2 | 4.8 | 4.7 | 4.6 | | | | 4.8 | 4.6 | 4.6 | | | |
| | 2 | | | 5.2 | 4.8 | 4.6 | 4.5 | | | | 4.8 | 4.6 | 4.6 | | | |
| | 3 | | | 5.2 | 4.9 | 4.7 | 4.6 | | | | 4.9 | 4.7 | 4.7 | | | |
| | 4 | | | 4.0 | 3.8 | 3.8 | 3.8 | | | | 3.8 | 3.8 | 3.8 | | | |
| | 5 | | | 3.7 | 3.6 | 3.6 | 3.6 | | | | 3.6 | 3.6 | 3.6 | | | |

1 Hour CO Results

Background 3.0

| Town | Station | 2008 | 2016 | | | | | | 2030 | | | | | | | | | |
|-----------|---------------|--|------------------------|--|------------------------|--------------------|--------------------|--------------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------|--------------------|------------------|-----------|
| | | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | | |
| Taunton | Taunton Depot | <u>Washington Street at Tremont Street</u> | | | | | | | | | | | | | | | | |
| | | Quadrant | Intersection/Receptors | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | |
| | | Northeast | 1 | 4.3 | 4.0 | 4.1 | 4.1 | | | | 4.0 | 4.1 | 4.1 | | | | | |
| | | | 2 | 4.4 | 4.0 | 4.2 | 4.2 | | | | 4.0 | 4.2 | 4.2 | | | | | |
| | | | 3 | 4.4 | 4.0 | 4.0 | 4.0 | | | | 4.0 | 4.0 | 4.0 | | | | | |
| | | | 4 | 4.8 | 4.2 | 4.2 | 4.2 | | | | 4.2 | 4.2 | 4.2 | | | | | |
| | | | 5 | 4.8 | 4.2 | 4.2 | 4.2 | | | | 4.3 | 4.2 | 4.2 | | | | | |
| | | Southeast | 1 | 4.4 | 4.0 | 4.1 | 4.1 | | | | 4.0 | 4.1 | 4.1 | | | | | |
| | | | 2 | 4.3 | 4.0 | 3.9 | 3.9 | | | | 4.0 | 3.9 | 3.9 | | | | | |
| | | | 3 | 4.5 | 4.2 | 4.2 | 4.2 | | | | 4.2 | 4.2 | 4.2 | | | | | |
| | | | 4 | 4.1 | 3.9 | 4.0 | 4.0 | | | | 3.8 | 4.0 | 4.0 | | | | | |
| | | | 5 | 4.0 | 3.7 | 3.7 | 3.7 | | | | 3.7 | 3.7 | 3.7 | | | | | |
| | | Southwest | 1 | 3.9 | 3.7 | 3.7 | 3.7 | | | | 3.7 | 3.7 | 3.7 | | | | | |
| | | | 2 | 4.1 | 3.8 | 3.7 | 3.7 | | | | 3.8 | 3.7 | 3.7 | | | | | |
| | | | 3 | 4.4 | 4.0 | 4.0 | 4.0 | | | | 3.9 | 4.0 | 4.0 | | | | | |
| | | | 4 | 4.1 | 3.8 | 3.8 | 3.8 | | | | 3.8 | 3.8 | 3.8 | | | | | |
| | | | 5 | 4.0 | 3.7 | 3.9 | 3.9 | | | | 3.8 | 4.0 | 4.0 | | | | | |
| | | Northwest | 1 | 3.9 | 3.7 | 3.8 | 3.8 | | | | 3.7 | 3.8 | 3.8 | | | | | |
| | | | 2 | 4.1 | 3.8 | 3.8 | 3.8 | | | | 3.8 | 3.8 | 3.8 | | | | | |
| | | | 3 | 4.5 | 4.1 | 4.1 | 4.1 | | | | 4.1 | 4.1 | 4.1 | | | | | |
| | | | 4 | 4.9 | 4.4 | 4.3 | 4.3 | | | | 4.4 | 4.3 | 4.3 | | | | | |
| | | | 5 | 4.5 | 4.0 | 4.2 | 4.2 | | | | 4.0 | 4.2 | 4.2 | | | | | |
| | | New Bedford | Whale's Tooth | <u>Union Street at McCarthur at Route 18 at State Pier</u> | | | | | | | | | | | | | | |
| | | | | Quadrant | Intersection/Receptors | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus |
| | | | | Northeast | 1 | 4.3 | 3.9 | 3.9 | 3.9 | | | | 4.3 | 4.3 | 4.3 | | | |
| 2 | 4.4 | | | | 4.0 | 4.0 | 4.0 | | | | 4.3 | 4.3 | 4.3 | | | | | |
| 3 | 4.5 | | | | 3.9 | 4.1 | 4.1 | | | | 4.2 | 4.3 | 4.3 | | | | | |
| 4 | 3.8 | | | | 3.7 | 3.7 | 3.7 | | | | 3.9 | 3.9 | 3.9 | | | | | |
| 5 | 3.6 | | | | 3.4 | 3.5 | 3.5 | | | | 3.6 | 3.6 | 3.6 | | | | | |
| Southeast | 1 | | | 3.7 | 3.4 | 3.5 | 3.5 | | | | 3.6 | 3.6 | 3.6 | | | | | |
| | 2 | | | 3.9 | 3.6 | 3.7 | 3.7 | | | | 3.9 | 3.9 | 3.9 | | | | | |
| | 3 | | | 4.3 | 4.0 | 4.0 | 4.0 | | | | 4.3 | 4.4 | 4.4 | | | | | |
| | 4 | | | 4.5 | 4.1 | 4.0 | 4.0 | | | | 4.4 | 4.4 | 4.4 | | | | | |
| | 5 | | | 4.5 | 4.2 | 4.1 | 4.1 | | | | 4.5 | 4.6 | 4.6 | | | | | |
| Southwest | 1 | | | 4.2 | 3.7 | 3.8 | 3.8 | | | | 4.1 | 4.2 | 4.2 | | | | | |
| | 2 | | | 4.2 | 3.9 | 4.0 | 4.0 | | | | 4.2 | 4.3 | 4.3 | | | | | |
| | 3 | | | 4.7 | 4.2 | 4.2 | 4.2 | | | | 4.7 | 4.7 | 4.7 | | | | | |
| | 4 | | | 4.3 | 3.9 | 3.9 | 3.9 | | | | 4.2 | 4.4 | 4.4 | | | | | |
| | 5 | | | 4.0 | 3.7 | 3.7 | 3.7 | | | | 4.1 | 4.1 | 4.1 | | | | | |
| Northwest | 1 | | | 4.9 | 4.4 | 4.0 | 4.0 | | | | 4.7 | 4.3 | 4.3 | | | | | |
| | 2 | | | 4.0 | 3.7 | 3.8 | 3.8 | | | | 4.0 | 4.1 | 4.1 | | | | | |
| | 3 | | | 4.9 | 4.4 | 4.5 | 4.5 | | | | 4.8 | 4.8 | 4.8 | | | | | |
| | 4 | | | 4.7 | 4.2 | 4.2 | 4.2 | | | | 4.6 | 4.6 | 4.6 | | | | | |
| | 5 | | | 4.7 | 4.1 | 4.2 | 4.2 | | | | 4.5 | 4.5 | 4.5 | | | | | |

8 Hour CO Results

Factor 0.7 Background 2.1

| Town | Station | 2008 | 2016 | | | | | | 2030 | | | | | | | |
|--------------|--------------------|--|------------------------|------------|--------------------|--------------------|--------------------|--------------------|------------------|-----------|--------------------|--------------------|--------------------|--------------------|------------------|------------|
| | | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | |
| Norton | Barrowsville | <u>North Worcester Street at Route 123/Main Street</u> | | | | | | | | | | | | | | |
| | | Quadrant | Intersection/Receptors | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus |
| | | Northeast | 1 | 2.5 | 2.4 | 2.5 | 2.5 | | | | 2.4 | 2.5 | 2.5 | | | |
| | | | 2 | 2.6 | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | | |
| | | | 3 | 2.7 | 2.6 | 2.9 | 2.9 | | | | 2.6 | 2.9 | 2.9 | | | |
| | | | 4 | 2.6 | 2.5 | 2.7 | 2.7 | | | | 2.5 | 2.7 | 2.7 | | | |
| | | | 5 | 2.5 | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | | |
| | | Southeast | 1 | 2.5 | 2.4 | 2.5 | 2.5 | | | | 2.4 | 2.5 | 2.5 | | | |
| | | | 2 | 2.6 | 2.5 | 2.6 | 2.6 | | | | 2.5 | 2.6 | 2.6 | | | |
| | | | 3 | 2.7 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | | |
| | | | 4 | 2.7 | 2.5 | 2.7 | 2.7 | | | | 2.5 | 2.6 | 2.6 | | | |
| | | | 5 | 2.6 | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | | |
| | | Southwest | 1 | 2.5 | 2.5 | 2.6 | 2.6 | | | | 2.4 | 2.5 | 2.5 | | | |
| | | | 2 | 2.5 | 2.5 | 2.6 | 2.6 | | | | 2.5 | 2.6 | 2.6 | | | |
| | | | 3 | 2.7 | 2.5 | 2.6 | 2.6 | | | | 2.5 | 2.6 | 2.6 | | | |
| | | | 4 | 2.7 | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | | |
| | | | 5 | 2.6 | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | | |
| | | Northwest | 1 | 2.5 | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | | |
| | | | 2 | 2.6 | 2.5 | 2.6 | 2.6 | | | | 2.5 | 2.6 | 2.6 | | | |
| | | | 3 | 2.6 | 2.5 | 2.6 | 2.6 | | | | 2.5 | 2.5 | 2.5 | | | |
| 4 | 2.7 | | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | | | | |
| 5 | 2.5 | | 2.4 | 2.5 | 2.5 | | | | 2.4 | 2.5 | 2.5 | | | | | |
| East Taunton | East Taunton North | <u>Route 140 at the Route 24 Southbound Ramps</u> | | | | | | | | | | | | | | |
| | | Quadrant | Intersection/Receptors | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus |
| | | East | 1 | 3.2 | 2.9 | | | 2.9 | 2.9 | | 2.9 | | | | 2.9 | 2.9 |
| | | | 2 | 3.1 | 2.9 | | | 2.9 | 2.9 | | 2.9 | | | | 2.9 | 2.9 |
| | | | 3 | 3.2 | 2.9 | | | 2.9 | 2.9 | | 2.9 | | | | 2.9 | 2.9 |
| | | | 4 | 3.2 | 2.9 | | | 2.9 | 2.9 | | 2.9 | | | | 2.9 | 2.9 |
| | | | 5 | 3.1 | 2.9 | | | 2.9 | 2.9 | | 2.9 | | | | 2.9 | 2.9 |
| | | Southwest | 1 | 3.1 | 2.9 | | | 2.9 | 2.9 | | 2.8 | | | | 2.9 | 2.9 |
| | | | 2 | 3.1 | 2.9 | | | 2.9 | 2.9 | | 2.9 | | | | 2.9 | 2.9 |
| | | | 3 | 3.4 | 3.0 | | | 3.1 | 3.1 | | 3.0 | | | | 3.1 | 3.1 |
| | | | 4 | 3.1 | 2.9 | | | 2.9 | 2.9 | | 2.9 | | | | 2.9 | 2.9 |
| | | | 5 | 2.9 | 2.7 | | | 2.7 | 2.7 | | 2.7 | | | | 2.7 | 2.7 |
| | | Northwest | 1 | 2.9 | 2.7 | | | 2.7 | 2.7 | | 2.7 | | | | 2.7 | 2.7 |
| | | | 2 | 2.9 | 2.8 | | | 2.8 | 2.8 | | 2.8 | | | | 2.8 | 2.8 |
| | | | 3 | 3.4 | 3.0 | | | 3.2 | 3.2 | | 3.0 | | | | 3.2 | 3.2 |
| | | | 4 | 3.3 | 3.0 | | | 3.1 | 3.1 | | 2.9 | | | | 3.0 | 3.0 |
| | | | 5 | 3.2 | 2.9 | | | 2.9 | 2.9 | | 2.9 | | | | 2.9 | 2.9 |

8 Hour CO Results

Factor **0.7** Background **2.1**

| Town | Station | | 2008 | 2016 | | | | | 2030 | | | | | | | | |
|-----------|----------------|---------------------------------|------------------|---|--------------------|-----------------|--------------------|------------------|------------|----------|--------------------|-----------------|--------------------|------------------|------------|--|--|
| | Quadrant | Intersection/Receptors | Existing | No Build | Attelboro Electric | Atteboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Atteboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | |
| Easton | Easton Village | <u>Route 138 at Main Street</u> | | | | | | | | | | | | | | | |
| | | | 1 | 3.3 | 3.1 | | | 3.0 | 3.0 | | 3.1 | | | 3.0 | 3.0 | | |
| | | Northeast | 2 | 3.4 | 3.2 | | | 3.2 | 3.2 | | 3.2 | | | 3.2 | 3.2 | | |
| | | | 3 | 3.4 | 3.2 | | | 3.1 | 3.1 | | 3.2 | | | 3.1 | 3.1 | | |
| | | | 4 | 3.3 | 3.1 | | | 3.0 | 3.0 | | 3.1 | | | 3.0 | 3.0 | | |
| | | | 5 | 2.9 | 2.7 | | | 2.7 | 2.7 | | 2.7 | | | 2.7 | 2.7 | | |
| | | | 1 | 3.1 | 2.9 | | | 2.9 | 2.9 | | 2.9 | | | 2.9 | 2.9 | | |
| | | Southeast | 2 | 3.2 | 3.0 | | | 3.1 | 3.1 | | 3.0 | | | 3.2 | 3.2 | | |
| | | | 3 | 3.3 | 3.2 | | | 3.1 | 3.1 | | 3.2 | | | 3.1 | 3.1 | | |
| | | | 4 | 3.6 | 3.2 | | | 3.2 | 3.2 | | 3.2 | | | 3.2 | 3.2 | | |
| | | | 5 | 3.3 | 3.2 | | | 3.1 | 3.1 | | 3.3 | | | 3.1 | 3.1 | | |
| | | | 1 | 3.3 | 3.2 | | | 3.2 | 3.2 | | 3.2 | | | 3.2 | 3.2 | | |
| | | Southwest | 2 | 3.3 | 3.1 | | | 3.1 | 3.1 | | 3.1 | | | 3.1 | 3.1 | | |
| | | | 3 | 3.4 | 3.3 | | | 3.2 | 3.2 | | 3.3 | | | 3.2 | 3.2 | | |
| | | | 4 | 3.5 | 3.2 | | | 3.3 | 3.3 | | 3.2 | | | 3.3 | 3.3 | | |
| | | | 5 | 3.2 | 2.9 | | | 3.0 | 3.0 | | 2.9 | | | 2.9 | 2.9 | | |
| | | | 1 | 3.3 | 3.0 | | | 2.9 | 2.9 | | 3.0 | | | 2.9 | 2.9 | | |
| | | Northwest | 2 | 3.5 | 3.2 | | | 3.2 | 3.2 | | 3.2 | | | 3.2 | 3.2 | | |
| | | | 3 | 3.4 | 3.2 | | | 3.1 | 3.1 | | 3.2 | | | 3.1 | 3.1 | | |
| | | | 4 | 3.5 | 3.1 | | | 3.2 | 3.2 | | 3.1 | | | 3.2 | 3.2 | | |
| | | | 5 | 3.6 | 3.2 | | | 3.2 | 3.2 | | 3.2 | | | 3.2 | 3.2 | | |
| | | | 1 | 3.3 | 3.0 | | | 2.9 | 2.9 | | 3.0 | | | 2.9 | 2.9 | | |
| | | Fall River | Fall River Depot | <u>North Davol Street at President Avenue</u> | | | | | | | | | | | | | |
| | | | | Northeast | 1 | 2.6 | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | |
| | | | | | 2 | 2.7 | 2.5 | 2.7 | 2.7 | | | | 2.5 | 2.7 | 2.7 | | |
| 3 | 3.2 | | | | 2.9 | 2.7 | 2.7 | | | | 2.9 | 2.7 | 2.7 | | | | |
| 4 | 3.2 | | | | 2.9 | 2.9 | 2.9 | | | | 2.9 | 2.9 | 2.9 | | | | |
| 5 | 3.2 | | | | 2.9 | 2.8 | 2.8 | | | | 2.9 | 2.7 | 2.7 | | | | |
| Southeast | 1 | | | 2.9 | 2.8 | 2.8 | 2.8 | | | | 2.8 | 2.7 | 2.7 | | | | |
| | 2 | | | 3.0 | 2.8 | 2.7 | 2.7 | | | | 2.8 | 2.7 | 2.7 | | | | |
| | 3 | | | 3.1 | 2.9 | 2.9 | 2.9 | | | | 2.9 | 2.9 | 2.9 | | | | |
| | 4 | | | 3.2 | 2.9 | 2.9 | 2.9 | | | | 2.9 | 2.9 | 2.9 | | | | |
| | 5 | | | 2.8 | 2.7 | 2.8 | 2.8 | | | | 2.7 | 2.8 | 2.8 | | | | |
| Southwest | 1 | | | 2.8 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | | | |
| | 2 | | | 3.2 | 2.9 | 2.9 | 2.9 | | | | 2.9 | 2.9 | 2.9 | | | | |
| | 3 | | | 3.3 | 2.9 | 2.9 | 2.9 | | | | 2.9 | 2.9 | 2.9 | | | | |
| | 4 | | | 2.9 | 2.8 | 2.7 | 2.7 | | | | 2.8 | 2.7 | 2.7 | | | | |
| | 5 | | | 3.0 | 2.8 | 2.7 | 2.7 | | | | 2.8 | 2.7 | 2.7 | | | | |
| Northwest | 1 | | | 2.9 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | | | |
| | 2 | | | 2.9 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | | | |
| | 3 | | | 3.2 | 2.8 | 2.9 | 2.9 | | | | 2.8 | 2.8 | 2.8 | | | | |
| | 4 | | | 2.7 | 2.6 | 2.6 | 2.6 | | | | 2.6 | 2.6 | 2.6 | | | | |
| | 5 | | | 2.7 | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | | | |

8 Hour CO Results

Factor 0.7 Background 2.1

| Town | Station | 2008 | 2016 | | | | | 2030 | | | | | | | | |
|------------|------------------|---|------------------------|------------|--------------------|--------------------|--------------------|--------------------|------------------|------------|--------------------|--------------------|--------------------|--------------------|------------------|-----------|
| | | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | |
| Fall River | Fall River Depot | <u>South Davol Street at President Avenue</u> | | | | | | | | | | | | | | |
| | | Quadrant | Intersection/Receptors | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus |
| | | Northeast | 1 | 2.8 | 2.6 | 2.6 | 2.6 | | | | 2.6 | 2.6 | 2.6 | | | |
| | | | 2 | 2.9 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | | |
| | | | 3 | 2.9 | 2.7 | 2.8 | 2.9 | | | | 2.7 | 2.8 | 2.8 | | | |
| | | | 4 | 2.8 | 2.6 | 2.7 | 2.7 | | | | 2.6 | 2.7 | 2.7 | | | |
| | | | 5 | 2.9 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | | |
| | | Southeast | 1 | 2.9 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | | |
| | | | 2 | 3.0 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | | |
| | | | 3 | 3.0 | 2.8 | 2.8 | 2.8 | | | | 2.8 | 2.8 | 2.8 | | | |
| | | | 4 | 2.7 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | | |
| | | | 5 | 2.6 | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | | |
| | | Southwest | 1 | 2.7 | 2.6 | 2.6 | 2.6 | | | | 2.6 | 2.6 | 2.6 | | | |
| | | | 2 | 2.7 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | | |
| | | | 3 | 3.1 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | | |
| | | | 4 | 2.6 | 2.6 | 2.5 | 2.5 | | | | 2.6 | 2.5 | 2.5 | | | |
| | | | 5 | 2.5 | 2.4 | 2.3 | 2.3 | | | | 2.4 | 2.3 | 2.3 | | | |
| | | Northwest | 1 | 2.5 | 2.5 | 2.4 | 2.4 | | | | 2.5 | 2.4 | 2.4 | | | |
| | | | 2 | 2.7 | 2.6 | 2.5 | 2.5 | | | | 2.6 | 2.5 | 2.5 | | | |
| | | | 3 | 3.2 | 2.9 | 2.9 | 2.9 | | | | 2.9 | 2.8 | 2.8 | | | |
| 4 | 3.2 | | 2.9 | 2.9 | 2.9 | | | | 2.9 | 2.9 | 2.9 | | | | | |
| 5 | 3.1 | | 2.8 | 2.8 | 2.8 | | | | 2.8 | 2.8 | 2.8 | | | | | |
| Freetown | Freetown | <u>South Main Street at Route 24 Northbound Ramps</u> | | | | | | | | | | | | | | |
| | | North | 1 | 2.4 | 2.8 | | | 2.8 | 2.8 | | 2.7 | | | 2.7 | 2.7 | |
| | | | 2 | 2.5 | 2.7 | | | 2.7 | 2.7 | | 2.7 | | | 2.7 | 2.7 | |
| | | | 3 | 2.5 | 2.7 | | | 2.7 | 2.7 | | 2.7 | | | 2.7 | 2.7 | |
| | | | 4 | 2.5 | 2.9 | | | 2.9 | 2.9 | | 2.9 | | | 2.9 | 2.9 | |
| | | | 5 | 2.5 | 2.8 | | | 2.8 | 2.8 | | 2.8 | | | 2.8 | 2.8 | |
| | | Southeast | 1 | 2.5 | 2.7 | | | 2.7 | 2.7 | | 2.7 | | | 2.7 | 2.7 | |
| | | | 2 | 2.4 | 2.8 | | | 2.8 | 2.8 | | 2.7 | | | 2.7 | 2.7 | |
| | | | 3 | 2.5 | 2.8 | | | 2.8 | 2.8 | | 2.8 | | | 2.8 | 2.8 | |
| | | | 4 | 2.4 | 2.6 | | | 2.6 | 2.6 | | 2.6 | | | 2.6 | 2.6 | |
| | | | 5 | 2.3 | 2.4 | | | 2.4 | 2.4 | | 2.4 | | | 2.4 | 2.4 | |
| | | Southwest | 1 | 2.2 | 2.4 | | | 2.4 | 2.4 | | 2.4 | | | 2.4 | 2.4 | |
| | | | 2 | 2.3 | 2.5 | | | 2.5 | 2.5 | | 2.5 | | | 2.5 | 2.5 | |
| | | | 3 | 2.4 | 2.8 | | | 2.9 | 2.9 | | 2.8 | | | 2.8 | 2.8 | |
| | | | 4 | 2.4 | 2.6 | | | 2.6 | 2.6 | | 2.6 | | | 2.6 | 2.6 | |
| 5 | 2.4 | | 2.6 | | | 2.6 | 2.6 | | 2.6 | | | 2.6 | 2.6 | | | |

8 Hour CO Results

Factor 0.7 Background 2.1
 Town Station

| | | 2008 | 2016 | | | | | 2030 | | | | | | | |
|-------------|------------------------|--|----------|---------------------|-------------------|--------------------|------------------|-----------|----------|---------------------|-------------------|--------------------|------------------|-----------|--|
| Quadrant | Intersection/Receptors | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | |
| New Bedford | King's Highway | <u>Church Strret at Tarklin Road</u> | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 2.5 | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | |
| | | | 2 | 2.7 | 2.5 | 2.5 | 2.6 | | | | 2.5 | 2.7 | 2.6 | | |
| | | | 3 | 2.8 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.9 | 2.7 | | |
| | | | 4 | 2.8 | 2.7 | 2.7 | 2.8 | | | | 2.7 | 2.7 | 2.8 | | |
| | | | 5 | 2.7 | 2.5 | 2.5 | 2.7 | | | | 2.5 | 2.7 | 2.7 | | |
| | | Southeast | 1 | 2.7 | 2.5 | 2.5 | 2.6 | | | | 2.5 | 2.6 | 2.7 | | |
| | | | 2 | 2.7 | 2.5 | 2.5 | 2.6 | | | | 2.5 | 2.7 | 2.6 | | |
| | | | 3 | 2.9 | 2.7 | 2.6 | 2.7 | | | | 2.7 | 2.8 | 2.7 | | |
| | | | 4 | 2.9 | 2.7 | 2.5 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | |
| | | | 5 | 2.5 | 2.5 | 2.5 | 2.6 | | | | 2.5 | 2.5 | 2.6 | | |
| | | Southwest | 1 | 2.6 | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | |
| | | | 2 | 2.7 | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.7 | 2.5 | | |
| | | | 3 | 2.9 | 2.7 | 2.6 | 2.7 | | | | 2.7 | 2.8 | 2.7 | | |
| | | | 4 | 2.9 | 2.7 | 2.7 | 2.8 | | | | 2.7 | 2.8 | 2.8 | | |
| | | | 5 | 2.7 | 2.6 | 2.5 | 2.7 | | | | 2.6 | 2.7 | 2.7 | | |
| | | Northwest | 1 | 2.7 | 2.6 | 2.5 | 2.7 | | | | 2.6 | 2.7 | 2.7 | | |
| | | | 2 | 2.7 | 2.6 | 2.6 | 2.6 | | | | 2.6 | 2.7 | 2.6 | | |
| | | | 3 | 2.8 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.8 | 2.7 | | |
| 4 | 2.9 | | 2.6 | 2.5 | 2.7 | | | | 2.6 | 2.7 | 2.7 | | | | |
| 5 | 2.5 | | 2.5 | 2.5 | 2.5 | | | | 2.5 | 2.6 | 2.5 | | | | |
| Raynham | Raynham Park | <u>Route 138 at Found Street/Route 106</u> | | | | | | | | | | | | | |
| | | | | Whittenton Electric | Whittenton Diesel | | | | | Whittenton Electric | Whittenton Diesel | | | | |
| | | Northeast | 1 | 2.9 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | |
| | | | 2 | 2.9 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | |
| | | | 3 | 3.1 | 2.9 | 2.9 | 2.9 | | | | 2.9 | 2.9 | 2.9 | | |
| | | | 4 | 3.2 | 2.8 | 2.9 | 2.9 | | | | 2.8 | 2.9 | 2.9 | | |
| | | | 5 | 2.9 | 2.8 | 2.8 | 2.8 | | | | 2.8 | 2.8 | 2.8 | | |
| | | Southeast | 1 | 2.9 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | |
| | | | 2 | 2.9 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | |
| | | | 3 | 3.0 | 2.8 | 2.8 | 2.8 | | | | 2.8 | 2.8 | 2.8 | | |
| | | | 4 | 3.0 | 2.8 | 2.8 | 2.8 | | | | 2.8 | 2.8 | 2.8 | | |
| | | | 5 | 2.9 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | |
| | | Southwest | 1 | 2.9 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | |
| | | | 2 | 3.0 | 2.9 | 2.9 | 2.9 | | | | 2.9 | 2.9 | 2.9 | | |
| | | | 3 | 2.9 | 2.8 | 2.8 | 2.8 | | | | 2.8 | 2.8 | 2.8 | | |
| | | | 4 | 2.8 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | |
| | | | 5 | 2.7 | 2.6 | 2.7 | 2.7 | | | | 2.6 | 2.6 | 2.6 | | |
| | | Northwest | 1 | 2.7 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | |
| | | | 2 | 2.8 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | |
| | | | 3 | 3.0 | 2.8 | 2.8 | 2.8 | | | | 2.8 | 2.8 | 2.8 | | |
| 4 | 3.0 | | 2.8 | 2.8 | 2.8 | | | | 2.8 | 2.8 | 2.8 | | | | |
| 5 | 2.9 | | 2.7 | 2.8 | 2.8 | | | | 2.7 | 2.8 | 2.8 | | | | |

8 Hour CO Results

Factor 0.7 Background 2.1

| Town | Station | Quadrant | Intersection/Receptors | 2008 | 2016 | | | | | 2030 | | | | | | | | | | |
|---------|---------------|---|------------------------|------------|------------|--------------------|-----------------|--------------------|------------------|------------|------------|--------------------|-----------------|--------------------|------------------|-----------|------------|--|--|--|
| | | | | Existing | No Build | Attelboro Electric | Atteboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Atteboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | | | |
| Taunton | Dean Street | <u>Route 44 at Longmeadow Road</u> | | | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 2.9 | 2.6 | | | 2.6 | 2.6 | | 2.6 | | | 2.6 | | | 2.6 | | | |
| | | | 2 | 2.9 | 2.7 | | | 2.7 | 2.7 | | 2.7 | | | 2.7 | | | 2.7 | | | |
| | | | 3 | 3.6 | 3.2 | | | 3.2 | 3.2 | | 3.2 | | | 3.2 | | | 3.2 | | | |
| | | | 4 | 3.6 | 3.2 | | | 3.2 | 3.2 | | 3.2 | | | 3.2 | | | 3.2 | | | |
| | | | 5 | 3.6 | 3.2 | | | 3.3 | 3.3 | | 3.2 | | | 3.2 | | | 3.2 | | | |
| | | Southeast | 1 | 3.3 | 3.0 | | | 3.0 | 3.0 | | 3.0 | | | 3.0 | | | 3.0 | | | |
| | | | 2 | 3.2 | 2.9 | | | 2.9 | 2.9 | | 2.9 | | | 2.9 | | | 2.9 | | | |
| | | | 3 | 3.3 | 3.0 | | | 3.1 | 3.1 | | 3.0 | | | 3.1 | | | 3.1 | | | |
| | | | 4 | 3.1 | 2.9 | | | 2.8 | 2.8 | | 2.9 | | | 2.8 | | | 2.8 | | | |
| | | | 5 | 3.1 | 2.8 | | | 2.8 | 2.8 | | 2.8 | | | 2.8 | | | 2.8 | | | |
| | | Southwest | 1 | 3.0 | 2.8 | | | 2.8 | 2.8 | | 2.8 | | | 2.8 | | | 2.8 | | | |
| | | | 2 | 3.1 | 2.9 | | | 2.9 | 2.9 | | 2.9 | | | 2.9 | | | 2.9 | | | |
| | | | 3 | 3.8 | 3.3 | | | 3.4 | 3.4 | | 3.3 | | | 3.4 | | | 3.4 | | | |
| | | | 4 | 3.6 | 3.2 | | | 3.3 | 3.3 | | 3.2 | | | 3.3 | | | 3.3 | | | |
| | | | 5 | 3.6 | 3.2 | | | 3.2 | 3.2 | | 3.2 | | | 3.2 | | | 3.2 | | | |
| | | Northwest | 1 | 3.3 | 3.0 | | | 3.1 | 3.1 | | 3.0 | | | 3.1 | | | 3.1 | | | |
| | | | 2 | 3.4 | 2.9 | | | 3.1 | 3.1 | | 2.9 | | | 3.1 | | | 3.1 | | | |
| | | | 3 | 3.6 | 3.2 | | | 3.2 | 3.2 | | 3.2 | | | 3.2 | | | 3.2 | | | |
| | | | 4 | 3.1 | 2.8 | | | 2.7 | 2.7 | | 2.9 | | | 2.7 | | | 2.7 | | | |
| 5 | 2.9 | | 2.7 | | | 2.7 | 2.7 | | 2.7 | | | 2.7 | | | 2.7 | | | | | |
| Taunton | Taunton Depot | <u>Route 140 at the Route 24 Northbound Ramps without Slip Ramp</u> | | | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 2.5 | 2.5 | 2.5 | 2.5 | | | 2.5 | 2.5 | 2.5 | | | | | | | | |
| | | | 2 | 2.7 | 2.6 | 2.6 | 2.6 | | | 2.6 | 2.6 | 2.6 | | | | | | | | |
| | | | 3 | 3.5 | 3.2 | 3.4 | 3.4 | | | 3.2 | 3.4 | 3.4 | | | | | | | | |
| | | | 4 | 3.5 | 3.3 | 3.3 | 3.2 | | | 3.3 | 3.3 | 3.3 | | | | | | | | |
| | | | 5 | 3.6 | 3.3 | 3.4 | 3.3 | | | 3.3 | 3.4 | 3.4 | | | | | | | | |
| | | South | 1 | 3.6 | 3.3 | 3.3 | 3.3 | | | 3.3 | 3.3 | 3.3 | | | | | | | | |
| | | | 2 | 3.6 | 3.3 | 3.4 | 3.3 | | | 3.3 | 3.3 | 3.3 | | | | | | | | |
| | | | 3 | 3.7 | 3.4 | 3.4 | 3.4 | | | 3.4 | 3.4 | 3.4 | | | | | | | | |
| | | | 4 | 3.6 | 3.4 | 3.4 | 3.3 | | | 3.4 | 3.4 | 3.4 | | | | | | | | |
| | | | 5 | 3.6 | 3.3 | 3.3 | 3.2 | | | 3.3 | 3.3 | 3.3 | | | | | | | | |
| | | Northwest | 1 | 3.6 | 3.4 | 3.3 | 3.2 | | | 3.4 | 3.2 | 3.2 | | | | | | | | |
| | | | 2 | 3.6 | 3.4 | 3.2 | 3.2 | | | 3.4 | 3.2 | 3.2 | | | | | | | | |
| | | | 3 | 3.6 | 3.4 | 3.3 | 3.2 | | | 3.4 | 3.3 | 3.3 | | | | | | | | |
| | | | 4 | 2.8 | 2.7 | 2.7 | 2.7 | | | 2.7 | 2.7 | 2.7 | | | | | | | | |
| | | | 5 | 2.6 | 2.5 | 2.5 | 2.5 | | | 2.5 | 2.5 | 2.5 | | | | | | | | |

8 Hour CO Results

Factor 0.7 Background 2.1

| Town | Station | 2008 | 2016 | | | | | 2030 | | | | | | | | |
|-------------|---------------|--|------------------------|------------|--------------------|------------------|--------------------|------------------|------------|------------|--------------------|------------------|--------------------|------------------|-----------|--|
| | | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | |
| Taunton | Taunton Depot | <u>Washington Street at Tremont Street</u> | | | | | | | | | | | | | | |
| | | Quadrant | Intersection/Receptors | | | | | | | | | | | | | |
| | | | 1 | 3.0 | 2.8 | 2.9 | 2.9 | | | | 2.8 | 2.9 | 2.9 | | | |
| | | | 2 | 3.1 | 2.8 | 2.9 | 2.9 | | | | 2.8 | 2.9 | 2.9 | | | |
| | | Northeast | 3 | 3.1 | 2.8 | 2.8 | 2.8 | | | | 2.8 | 2.8 | 2.8 | | | |
| | | | 4 | 3.4 | 2.9 | 2.9 | 2.9 | | | | 2.9 | 2.9 | 2.9 | | | |
| | | | 5 | 3.4 | 2.9 | 2.9 | 2.9 | | | | 3.0 | 2.9 | 2.9 | | | |
| | | | 1 | 3.1 | 2.8 | 2.9 | 2.9 | | | | 2.8 | 2.9 | 2.9 | | | |
| | | | 2 | 3.0 | 2.8 | 2.7 | 2.7 | | | | 2.8 | 2.7 | 2.7 | | | |
| | | Southeast | 3 | 3.2 | 2.9 | 2.9 | 2.9 | | | | 2.9 | 2.9 | 2.9 | | | |
| | | | 4 | 2.9 | 2.7 | 2.8 | 2.8 | | | | 2.7 | 2.8 | 2.8 | | | |
| | | | 5 | 2.8 | 2.6 | 2.6 | 2.6 | | | | 2.6 | 2.6 | 2.6 | | | |
| | | | 1 | 2.7 | 2.6 | 2.6 | 2.6 | | | | 2.6 | 2.6 | 2.6 | | | |
| | | | 2 | 2.9 | 2.7 | 2.6 | 2.6 | | | | 2.7 | 2.6 | 2.6 | | | |
| | | Southwest | 3 | 3.1 | 2.8 | 2.8 | 2.8 | | | | 2.7 | 2.8 | 2.8 | | | |
| | | | 4 | 2.9 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | | |
| | | | 5 | 2.8 | 2.6 | 2.7 | 2.7 | | | | 2.7 | 2.8 | 2.8 | | | |
| | | | 1 | 2.7 | 2.6 | 2.7 | 2.7 | | | | 2.6 | 2.7 | 2.7 | | | |
| | | | 2 | 2.9 | 2.7 | 2.7 | 2.7 | | | | 2.7 | 2.7 | 2.7 | | | |
| | | Northwest | 3 | 3.2 | 2.9 | 2.9 | 2.9 | | | | 2.9 | 2.9 | 2.9 | | | |
| 4 | 3.4 | | 3.1 | 3.0 | 3.0 | | | | 3.1 | 3.0 | 3.0 | | | | | |
| 5 | 3.2 | | 2.8 | 2.9 | 2.9 | | | | 2.8 | 2.9 | 2.9 | | | | | |
| New Bedford | Whale's Tooth | <u>Union Street at McCarthur at Route 18 at State Pier</u> | | | | | | | | | | | | | | |
| | | Quadrant | Intersection/Receptors | | | | | | | | | | | | | |
| | | | 1 | 3.0 | 2.7 | 2.7 | 2.7 | | | | 3.0 | 3.0 | 3.0 | | | |
| | | | 2 | 3.1 | 2.8 | 2.8 | 2.8 | | | | 3.0 | 3.0 | 3.0 | | | |
| | | Northeast | 3 | 3.2 | 2.7 | 2.9 | 2.9 | | | | 2.9 | 3.0 | 3.0 | | | |
| | | | 4 | 2.7 | 2.6 | 2.6 | 2.6 | | | | 2.7 | 2.7 | 2.7 | | | |
| | | | 5 | 2.5 | 2.4 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | | |
| | | | 1 | 2.6 | 2.4 | 2.5 | 2.5 | | | | 2.5 | 2.5 | 2.5 | | | |
| | | | 2 | 2.7 | 2.5 | 2.6 | 2.6 | | | | 2.7 | 2.7 | 2.7 | | | |
| | | Southeast | 3 | 3.0 | 2.8 | 2.8 | 2.8 | | | | 3.0 | 3.1 | 3.1 | | | |
| | | | 4 | 3.2 | 2.9 | 2.8 | 2.8 | | | | 3.1 | 3.1 | 3.1 | | | |
| | | | 5 | 3.2 | 2.9 | 2.9 | 2.9 | | | | 3.2 | 3.2 | 3.2 | | | |
| | | | 1 | 2.9 | 2.6 | 2.7 | 2.7 | | | | 2.9 | 2.9 | 2.9 | | | |
| | | | 2 | 2.9 | 2.7 | 2.8 | 2.8 | | | | 2.9 | 3.0 | 3.0 | | | |
| | | Southwest | 3 | 3.3 | 2.9 | 2.9 | 2.9 | | | | 3.3 | 3.3 | 3.3 | | | |
| | | | 4 | 3.0 | 2.7 | 2.7 | 2.7 | | | | 2.9 | 3.1 | 3.1 | | | |
| | | | 5 | 2.8 | 2.6 | 2.6 | 2.6 | | | | 2.9 | 2.9 | 2.9 | | | |
| | | | 1 | 3.4 | 3.1 | 2.8 | 2.8 | | | | 3.3 | 3.0 | 3.0 | | | |
| | | | 2 | 2.8 | 2.6 | 2.7 | 2.7 | | | | 2.8 | 2.9 | 2.9 | | | |
| | | Northwest | 3 | 3.4 | 3.1 | 3.2 | 3.2 | | | | 3.4 | 3.4 | 3.4 | | | |
| 4 | 3.3 | | 2.9 | 2.9 | 2.9 | | | | 3.2 | 3.2 | 3.2 | | | | | |
| 5 | 3.3 | | 2.9 | 2.9 | 2.9 | | | | 3.2 | 3.2 | 3.2 | | | | | |



Technical Report
Air Quality
Draft

Hot Spot: Microscale (Local) Analysis Microscale Results

- Particulate Matter 10 (PM₁₀)



Technical Report
Air Quality
Draft

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24 Hour PM10 Results

Factor 0.4 Background 45.7

| Town | Station | Quadrant | Receptor Location | Intersection/Receptors | 2008
Existing | 2016 | | | | | 2030 | | | | | | | | | |
|--------------|--------------------|--|-------------------|------------------------|------------------|----------|--------------------|------------------|--------------------|------------------|-----------|----------|--------------------|------------------|--------------------|------------------|-----------|--|--|--|
| | | | | | | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | | |
| Norton | Barrowsville | <u>North Worcester Street at Route 123/Main Street</u> | | | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 46.5 | 46.1 | 46.5 | 46.5 | 46.1 | 46.1 | 46.5 | 46.5 | 46.5 | 46.1 | 46.1 | 46.1 | | | | | |
| | | | 2 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | |
| | | | 3 | 46.9 | 46.5 | 46.9 | 46.9 | 46.9 | 46.5 | 46.9 | 46.9 | 46.9 | 46.5 | 46.9 | 46.9 | | | | | |
| | | | 4 | 46.9 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | |
| | | | 5 | 46.9 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | |
| | | Southeast | 1 | 46.9 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | |
| | | | 2 | 46.9 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | |
| | | | 3 | 47.3 | 46.9 | 46.9 | 46.9 | 46.9 | 46.5 | 46.9 | 46.9 | 46.9 | 46.5 | 46.9 | 46.9 | | | | | |
| | | | 4 | 46.9 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | |
| | | | 5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | |
| | | Southwest | 1 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.1 | 46.5 | 46.5 | | | | | |
| | | | 2 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.1 | 46.5 | 46.5 | | | | | |
| | | | 3 | 46.9 | 46.5 | 46.9 | 46.9 | 46.9 | 46.5 | 46.9 | 46.9 | 46.9 | 46.5 | 46.5 | 46.5 | | | | | |
| | | | 4 | 46.9 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | |
| | | | 5 | 46.9 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | |
| | | Northwest | 1 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | |
| | | | 2 | 46.9 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | |
| | | | 3 | 46.9 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | |
| | | | 4 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | |
| 5 | 46.5 | | 46.1 | 46.1 | 46.1 | 46.1 | 46.1 | 46.1 | 46.1 | 46.1 | 46.1 | 46.1 | 46.1 | | | | | | | |
| East Taunton | East Taunton North | <u>Route 140 at the Route 24 Southbound Ramps</u> | | | | | | | | | | | | | | | | | | |
| | | East | 1 | 47.7 | 47.3 | | | | 47.3 | 47.3 | | | 47.3 | | 47.3 | 49.3 | | | | |
| | | | 2 | 47.7 | 47.3 | | | | 47.3 | 47.3 | | | 46.9 | | 47.3 | 48.9 | | | | |
| | | | 3 | 48.1 | 47.3 | | | | 47.3 | 47.3 | | | 47.3 | | 47.3 | 49.3 | | | | |
| | | | 4 | 48.1 | 47.3 | | | | 47.3 | 47.3 | | | 47.3 | | 47.3 | 49.3 | | | | |
| | | | 5 | 48.1 | 47.3 | | | | 47.3 | 47.3 | | | 47.3 | | 47.3 | 49.3 | | | | |
| | | Southwest | 1 | 47.7 | 47.3 | | | | 47.3 | 47.3 | | | 47.3 | | 47.3 | 49.3 | | | | |
| | | | 2 | 48.1 | 47.3 | | | | 47.3 | 47.3 | | | 47.3 | | 47.3 | 49.3 | | | | |
| | | | 3 | 48.5 | 47.3 | | | | 47.7 | 47.7 | | | 47.3 | | 47.3 | 49.3 | | | | |
| | | | 4 | 47.7 | 47.3 | | | | 47.3 | 47.3 | | | 46.9 | | 46.9 | 48.9 | | | | |
| | | | 5 | 47.3 | 46.9 | | | | 46.9 | 46.9 | | | 46.9 | | 46.9 | 48.9 | | | | |
| | | Northwest | 1 | 47.7 | 46.9 | | | | 46.9 | 46.9 | | | 46.9 | | 46.9 | 48.9 | | | | |
| | | | 2 | 47.7 | 47.3 | | | | 47.3 | 47.3 | | | 46.9 | | 46.9 | 48.9 | | | | |
| | | | 3 | 48.5 | 47.7 | | | | 47.7 | 47.7 | | | 47.3 | | 47.3 | 49.7 | | | | |
| | | | 4 | 48.1 | 47.3 | | | | 47.3 | 47.3 | | | 47.3 | | 47.3 | 49.3 | | | | |
| | | | 5 | 48.1 | 47.3 | | | | 47.3 | 47.3 | | | 47.3 | | 47.3 | 49.3 | | | | |

24 Hour PM10 Results

Factor 0.4 Background 45.7

| Town | Station | Quadrant | Receptor Location | Intersection/Receptors | 2008
Existing | 2016 | | | | | 2030 | | | | | | | | | | |
|------------|------------------|---|-------------------|------------------------|------------------|----------|--------------------|------------------|--------------------|------------------|-----------|----------|--------------------|------------------|--------------------|------------------|-----------|--|--|--|--|
| | | | | | | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | | | |
| Easton | Easton Village | <u>Route 138 at Main Street</u> | | | | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 47.7 | 47.3 | | 47.3 | 47.3 | | | | 47.3 | | | 47.3 | 47.3 | | | | | |
| | | | 2 | 47.7 | 47.3 | | 47.3 | 47.3 | | | | 47.3 | | | 47.3 | 47.3 | | | | | |
| | | | 3 | 48.1 | 47.3 | | 47.3 | 47.3 | | | | 47.3 | | | 47.3 | 47.3 | | | | | |
| | | | 4 | 47.7 | 47.3 | | 46.9 | 46.9 | | | | 46.9 | | | 46.9 | 46.9 | | | | | |
| | | | 5 | 47.3 | 46.9 | | 46.9 | 46.9 | | | | 46.9 | | | 46.9 | 46.9 | | | | | |
| | | Southeast | 1 | 47.3 | 46.9 | | 46.9 | 46.9 | | | | 46.9 | | | 46.9 | 46.9 | | | | | |
| | | | 2 | 47.3 | 47.3 | | 47.3 | 47.3 | | | | 46.9 | | | 47.3 | 47.3 | | | | | |
| | | | 3 | 48.1 | 47.7 | | 47.7 | 47.7 | | | | 47.3 | | | 47.3 | 47.3 | | | | | |
| | | | 4 | 48.1 | 47.3 | | 47.3 | 47.3 | | | | 47.3 | | | 47.3 | 47.3 | | | | | |
| | | | 5 | 47.7 | 47.7 | | 47.3 | 47.3 | | | | 47.3 | | | 47.3 | 47.3 | | | | | |
| | | Southwest | 1 | 47.7 | 47.3 | | 47.3 | 47.3 | | | | 47.3 | | | 47.3 | 47.3 | | | | | |
| | | | 2 | 47.7 | 47.3 | | 47.3 | 47.3 | | | | 47.3 | | | 47.3 | 47.3 | | | | | |
| | | | 3 | 48.1 | 47.7 | | 47.7 | 47.7 | | | | 47.3 | | | 47.3 | 47.3 | | | | | |
| | | | 4 | 47.7 | 47.3 | | 47.3 | 47.3 | | | | 47.3 | | | 47.3 | 47.3 | | | | | |
| | | | 5 | 47.7 | 47.3 | | 47.3 | 47.3 | | | | 46.9 | | | 46.9 | 46.9 | | | | | |
| | | Northwest | 1 | 47.7 | 47.3 | | 46.9 | 46.9 | | | | 46.9 | | | 46.9 | 46.9 | | | | | |
| | | | 2 | 47.7 | 47.3 | | 47.3 | 47.3 | | | | 47.3 | | | 47.3 | 47.3 | | | | | |
| | | | 3 | 48.1 | 47.7 | | 47.7 | 47.7 | | | | 47.3 | | | 47.3 | 47.3 | | | | | |
| | | | 4 | 47.7 | 47.3 | | 47.3 | 47.3 | | | | 47.3 | | | 47.3 | 47.3 | | | | | |
| 5 | 48.1 | | 47.3 | | 47.3 | 47.3 | | | | 47.3 | | | 47.3 | 47.3 | | | | | | | |
| Fall River | Fall River Depot | <u>North Davol Street at President Avenue</u> | | | | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 46.9 | 46.5 | 46.5 | 46.5 | | | | | 46.5 | 46.5 | 46.5 | | | | | | | |
| | | | 2 | 46.9 | 46.5 | 46.5 | 46.5 | | | | | 46.5 | 46.5 | 46.5 | | | | | | | |
| | | | 3 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | 46.9 | 46.9 | 46.9 | | | | | | | |
| | | | 4 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | 46.9 | 46.9 | 46.9 | | | | | | | |
| | | | 5 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | 46.9 | 46.9 | 46.9 | | | | | | | |
| | | Southeast | 1 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | 46.9 | 46.9 | 46.9 | | | | | | | |
| | | | 2 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | 46.5 | 46.9 | 46.9 | | | | | | | |
| | | | 3 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | 46.9 | 46.9 | 46.9 | | | | | | | |
| | | | 4 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | 46.9 | 46.9 | 46.9 | | | | | | | |
| | | | 5 | 46.9 | 46.5 | 46.9 | 46.9 | | | | | 46.5 | 46.5 | 46.5 | | | | | | | |
| | | Southwest | 1 | 46.9 | 46.5 | 46.9 | 46.9 | | | | | 46.5 | 46.5 | 46.5 | | | | | | | |
| | | | 2 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | 46.9 | 46.9 | 46.9 | | | | | | | |
| | | | 3 | 47.7 | 47.3 | 46.9 | 46.9 | | | | | 46.9 | 46.9 | 46.9 | | | | | | | |
| | | | 4 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | 46.5 | 46.5 | 46.5 | | | | | | | |
| | | | 5 | 47.3 | 46.9 | 46.5 | 46.5 | | | | | 46.5 | 46.5 | 46.5 | | | | | | | |
| | | Northwest | 1 | 46.9 | 46.5 | 46.5 | 46.5 | | | | | 46.5 | 46.5 | 46.5 | | | | | | | |
| | | | 2 | 47.3 | 46.9 | 46.5 | 46.5 | | | | | 46.5 | 46.5 | 46.5 | | | | | | | |
| | | | 3 | 47.7 | 47.3 | 46.9 | 46.9 | | | | | 46.9 | 46.9 | 46.9 | | | | | | | |
| | | | 4 | 46.9 | 46.5 | 46.5 | 46.5 | | | | | 46.5 | 46.5 | 46.5 | | | | | | | |
| 5 | 46.9 | | 46.5 | 46.5 | 46.5 | | | | | 46.5 | 46.5 | 46.5 | | | | | | | | | |

24 Hour PM10 Results

Factor 0.4 Background 45.7

| Town | Station | Quadrant | Receptor Location | Intersection/Receptors | 2008
Existing | 2016 | | | | | 2030 | | | | | | | | | | | | |
|------------|------------------|----------|-------------------|---|------------------|----------|--------------------|------------------|--------------------|------------------|-------------|----------|--------------------|------------------|--------------------|------------------|-------------|-------------|--|--|--|--|--|
| | | | | | | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | | | | | |
| Fall River | Fall River Depot | | | <u>South Davol Street at President Avenue</u> | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Northeast | 1 | 46.9 | 46.5 | 46.5 | 46.5 | | | | | | 46.5 | 46.5 | 46.5 | | | | | | |
| | | | | | 2 | 46.9 | 46.5 | 46.5 | 46.5 | | | | | | 46.5 | 46.5 | 46.5 | | | | | | |
| | | | | | 3 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | | 46.5 | 46.5 | 46.5 | | | | | | |
| | | | | | 4 | 46.9 | 46.5 | 46.5 | 46.5 | | | | | | 46.5 | 46.5 | 46.5 | | | | | | |
| | | | | | 5 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | | 46.5 | 46.5 | 46.5 | | | | | | |
| | | | | Southeast | 1 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | | 46.9 | 46.5 | 46.5 | | | | | | |
| | | | | | 2 | 47.3 | 46.9 | 46.5 | 46.5 | | | | | | 46.5 | 46.5 | 46.5 | | | | | | |
| | | | | | 3 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | | 46.9 | 46.9 | 46.9 | | | | | | |
| | | | | | 4 | 46.9 | 46.5 | 46.5 | 46.5 | | | | | | 46.5 | 46.5 | 46.5 | | | | | | |
| | | | | | 5 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | | 46.5 | 46.5 | 46.5 | | | | | | |
| | | | | Southwest | 1 | 46.9 | 46.5 | 46.5 | 46.5 | | | | | | 46.5 | 46.5 | 46.5 | | | | | | |
| | | | | | 2 | 46.9 | 46.5 | 46.5 | 46.5 | | | | | | 46.5 | 46.5 | 46.5 | | | | | | |
| | | | | | 3 | 47.3 | 46.9 | 46.9 | 46.9 | | | | | | 46.9 | 46.9 | 46.9 | | | | | | |
| | | | | | 4 | 46.9 | 46.5 | 46.5 | 46.5 | | | | | | 46.5 | 46.5 | 46.5 | | | | | | |
| | | | | | 5 | 46.5 | 46.5 | 46.1 | 46.1 | | | | | | 46.5 | 46.1 | 46.1 | | | | | | |
| | | | | Northwest | 1 | 46.5 | 46.5 | 46.5 | 46.5 | | | | | | 46.1 | 46.1 | 46.1 | | | | | | |
| | | | | | 2 | 46.9 | 46.5 | 46.5 | 46.5 | | | | | | 46.5 | 46.5 | 46.5 | | | | | | |
| | | | | | 3 | 47.7 | 47.3 | 47.3 | 47.3 | | | | | | 46.9 | 46.9 | 46.9 | | | | | | |
| 4 | 47.3 | 46.9 | 46.9 | | 46.9 | | | | | | 46.9 | 46.9 | 46.9 | | | | | | | | | | |
| 5 | 47.3 | 46.9 | 46.9 | | 46.9 | | | | | | 46.5 | 46.9 | 46.9 | | | | | | | | | | |
| Freetown | Freetown | | | <u>South Main Street at Route 24 Northbound Ramps</u> | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | North | 1 | 46.5 | 46.9 | | | 46.9 | 46.9 | | | | 46.9 | | 46.9 | 46.9 | | | | | |
| | | | | | 2 | 46.5 | 46.9 | | | 46.9 | 46.9 | | | | 46.9 | | 46.9 | 46.9 | | | | | |
| | | | | | 3 | 46.5 | 46.9 | | | 46.9 | 46.9 | | | | 46.9 | | 46.9 | 46.9 | | | | | |
| | | | | | 4 | 46.5 | 47.3 | | | 47.3 | 47.3 | | | | 46.9 | | 46.9 | 46.9 | | | | | |
| | | | | | 5 | 46.5 | 47.3 | | | 47.3 | 47.3 | | | | 46.9 | | 46.9 | 46.9 | | | | | |
| | | | | Southeast | 1 | 46.5 | 46.9 | | | 46.9 | 46.9 | | | | 46.9 | | 46.9 | 46.9 | | | | | |
| | | | | | 2 | 46.5 | 46.9 | | | 46.9 | 46.9 | | | | 46.9 | | 46.9 | 46.9 | | | | | |
| | | | | | 3 | 46.5 | 47.3 | | | 47.3 | 47.3 | | | | 46.9 | | 46.9 | 46.9 | | | | | |
| | | | | | 4 | 46.1 | 46.5 | | | 46.5 | 46.5 | | | | 46.5 | | 46.5 | 46.5 | | | | | |
| | | | | | 5 | 46.1 | 46.5 | | | 46.5 | 46.5 | | | | 46.5 | | 46.5 | 46.5 | | | | | |
| | | | | Southwest | 1 | 46.1 | 46.5 | | | 46.5 | 46.5 | | | | 46.1 | | 46.1 | 46.1 | | | | | |
| | | | | | 2 | 46.1 | 46.5 | | | 46.5 | 46.5 | | | | 46.5 | | 46.5 | 46.5 | | | | | |
| | | | | | 3 | 46.5 | 46.9 | | | 46.9 | 46.9 | | | | 46.9 | | 46.9 | 46.9 | | | | | |
| | | | | | 4 | 46.5 | 46.9 | | | 46.9 | 46.9 | | | | 46.9 | | 46.9 | 46.9 | | | | | |
| | | | | | 5 | 46.5 | 46.5 | | | 46.5 | 46.5 | | | | 46.5 | | 46.5 | 46.5 | | | | | |



Technical Report
Air Quality
Draft

Hot Spot: Microscale (Local) Analysis Microscale Results

- Particulate Matter 2.5 (PM_{2.5})



Technical Report
Air Quality
Draft

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24 Hour PM2.5 Results

| Town | Station | Quadrant | Receptor Location | Intersection/Receptors | 2008
Existing | 2016 | | | | | 2030 | | | | | | | | | | | |
|-----------------|-----------------------|--|-------------------|------------------------|------------------|----------|-----------------------|---------------------|-----------------------|---------------------|-----------|----------|-----------------------|---------------------|-----------------------|---------------------|-----------|------|------|------|------|------|
| | | | | | | No Build | Attelboro
Electric | Attelboro
Diesel | Stoughton
Electric | Stoughton
Diesel | Rapid Bus | No Build | Attelboro
Electric | Attelboro
Diesel | Stoughton
Electric | Stoughton
Diesel | Rapid Bus | | | | | |
| Norton | Barrowsville | <u>North Worcester Street at
Route 123/Main Street</u> | | | | | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | |
| | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | | 3 | 30.5 | 30.1 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 |
| | | | 4 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | Southeast | 1 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | | 3 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | | 4 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | Southwest | 1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | | 3 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | | 4 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | Northwest | 1 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | | 3 | 30.5 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| | | | 4 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 |
| 5 | 30.1 | | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | 30.1 | | |
| East
Taunton | East Taunton
North | <u>Route 140 at the Route 24
Southbound Ramps</u> | | | | | | | | | | | | | | | | | | | | |
| | | East | 1 | 31.3 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | |
| | | | 2 | 31.3 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 |
| | | | 3 | 31.3 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 |
| | | | 4 | 31.3 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 |
| | | | 5 | 31.3 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 |
| | | Southwest | 1 | 31.3 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 |
| | | | 2 | 31.3 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 |
| | | | 3 | 31.3 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 |
| | | | 4 | 31.3 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 |
| | | | 5 | 30.9 | 30.1 | | 30.1 | 30.1 | | 30.1 | 30.1 | | 30.1 | | 30.1 | 30.1 | | 30.1 | 30.1 | | 30.1 | 30.1 |
| | | Northwest | 1 | 30.9 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.1 | | 30.1 | 30.1 | | 30.1 | 30.1 | | 30.1 | 30.1 |
| | | | 2 | 30.9 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.1 | | 30.1 | 30.1 | | 30.1 | 30.1 | | 30.1 | 30.1 |
| | | | 3 | 31.3 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 |
| | | | 4 | 31.3 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 |
| | | | 5 | 31.3 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 | | 30.5 | 30.5 |

24 Hour PM2.5 Results

| Town | Station | Quadrant | Receptor Location | Intersection/Receptors | 2008
Existing | 2016 | | | | 2030 | | | | | | | | | | | |
|------------|------------------|---|-------------------|------------------------|------------------|-------------|--------------------|------------------|--------------------|------------------|-----------|----------|--------------------|------------------|--------------------|------------------|-----------|--|--|--|--|
| | | | | | | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | | | |
| Easton | Easton Village | <u>Route 138 at Main Street</u> | | | | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 30.9 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| | | | 2 | 31.3 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| | | | 3 | 31.3 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| | | | 4 | 30.9 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| | | | 5 | 30.5 | 30.1 | | | | | 30.1 | 30.1 | | | 30.1 | | | 30.1 | | | | |
| | | Southeast | 1 | 30.9 | 30.5 | | | | | 30.5 | 30.5 | | | 30.1 | | | 30.1 | | | | |
| | | | 2 | 30.9 | 30.5 | | | | | 30.5 | 30.5 | | | 30.1 | | | 30.1 | | | | |
| | | | 3 | 31.3 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| | | | 4 | 31.3 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| | | | 5 | 30.9 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| | | Southwest | 1 | 30.9 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| | | | 2 | 30.9 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| | | | 3 | 31.3 | 30.5 | | | | | 30.9 | 30.9 | | | 30.5 | | | 30.5 | | | | |
| | | | 4 | 30.9 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| | | | 5 | 30.9 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| | | Northwest | 1 | 30.9 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.1 | | | | |
| | | | 2 | 30.9 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| | | | 3 | 31.3 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| | | | 4 | 31.3 | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | |
| 5 | 31.3 | | 30.5 | | | | | 30.5 | 30.5 | | | 30.5 | | | 30.5 | | | | | | |
| Fall River | Fall River Depot | <u>North Davol Street at President Avenue</u> | | | | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 30.5 | 30.1 | 30.1 | 30.1 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | 3 | 30.9 | 30.5 | 30.5 | 30.5 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | 4 | 30.9 | 30.5 | 30.5 | 30.5 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | 5 | 30.9 | 30.5 | 30.5 | 30.5 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | Southeast | 1 | 30.9 | 30.5 | 30.5 | 30.5 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | 2 | 30.9 | 30.1 | 30.5 | 30.5 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | 3 | 30.9 | 30.1 | 30.5 | 30.5 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | 4 | 30.9 | 30.5 | 30.5 | 30.5 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | Southwest | 1 | 30.5 | 30.1 | 30.1 | 30.1 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | 2 | 30.9 | 30.5 | 30.5 | 30.5 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | 3 | 30.9 | 30.5 | 30.5 | 30.5 | | | | | | 30.5 | 30.1 | 30.1 | | | | | | |
| | | | 4 | 30.5 | 30.1 | 30.1 | 30.1 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | Northwest | 1 | 30.5 | 30.1 | 30.1 | 30.1 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | 3 | 30.9 | 30.5 | 30.5 | 30.5 | | | | | | 30.5 | 30.1 | 30.1 | | | | | | |
| | | | 4 | 30.5 | 30.1 | 30.1 | 30.1 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| 5 | 30.5 | | 30.1 | 30.1 | 30.1 | | | | | | 30.1 | 30.1 | 30.1 | | | | | | | | |

24 Hour PM2.5 Results

| Factor
Town | 0.4
Station | Background | 29.7 | 2008 | | | | | | 2016 | | | | | | 2030 | | | | | |
|----------------|------------------|--|-----------|----------|----------|--------------------|------------------|--------------------|------------------|-----------|----------|--------------------|------------------|--------------------|------------------|-----------|------|--|--|--|--|
| | | | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | | | | |
| Fall River | Fall River Depot | South Davol Street at President Avenue | Northeast | 1 | 30.5 | 30.1 | 30.1 | 30.1 | | | | | 30.1 | 30.1 | 30.1 | | | | | | |
| | | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 3 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 4 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | Southeast | 1 | 30.9 | 30.5 | 30.5 | 30.5 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 3 | 30.9 | 30.1 | 30.5 | 30.5 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 4 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | Southwest | 1 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 34.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 3 | 30.9 | 30.5 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 4 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 5 | 30.1 | 30.1 | 30.1 | 30.1 | | | | 29.7 | 29.7 | 29.7 | | | | | | | |
| | | | Northwest | 1 | 30.1 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 3 | 30.9 | 30.5 | 30.5 | 30.5 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 4 | 30.9 | 30.5 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| | | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | | | | |
| Freetown | Freetown | South Main Street at Route 24 Northbound Ramps | North | 1 | 30.1 | 30.1 | | | 30.1 | 30.1 | | | | 30.1 | | 30.1 | 30.1 | | | | |
| | | | | 2 | 30.1 | 30.5 | | | 30.5 | 30.5 | | 30.1 | | 30.1 | 30.1 | | | | | | |
| | | | | 3 | 30.1 | 30.5 | | | 30.5 | 30.5 | | 30.1 | | 30.1 | 30.1 | | | | | | |
| | | | | 4 | 30.1 | 30.5 | | | 30.5 | 30.5 | | 30.1 | | 30.1 | 30.1 | | | | | | |
| | | | | 5 | 30.1 | 30.5 | | | 30.5 | 30.5 | | 30.5 | | 30.5 | 30.5 | | | | | | |
| | | | Southeast | 1 | 30.1 | 30.5 | | | 30.5 | 30.5 | | 30.1 | | 30.1 | 30.1 | | | | | | |
| | | | | 2 | 30.1 | 30.5 | | | 30.5 | 30.5 | | 30.1 | | 30.1 | 30.1 | | | | | | |
| | | | | 3 | 30.1 | 30.5 | | | 30.5 | 30.5 | | 30.1 | | 30.1 | 30.1 | | | | | | |
| | | | | 4 | 30.1 | 30.1 | | | 30.1 | 30.1 | | 30.1 | | 30.1 | 30.1 | | | | | | |
| | | | | 5 | 30.1 | 30.1 | | | 30.1 | 30.1 | | 30.1 | | 30.1 | 30.1 | | | | | | |
| | | | Southwest | 1 | 30.1 | 30.1 | | | 30.1 | 30.1 | | 30.1 | | 30.1 | 30.1 | | | | | | |
| | | | | 2 | 30.1 | 30.1 | | | 30.1 | 30.1 | | 30.1 | | 30.1 | 30.1 | | | | | | |
| | | | | 3 | 30.1 | 30.5 | | | 30.5 | 30.5 | | 30.1 | | 30.1 | 30.1 | | | | | | |
| | | | | 4 | 30.1 | 30.1 | | | 30.1 | 30.1 | | 30.1 | | 30.1 | 30.1 | | | | | | |
| | | | | 5 | 30.1 | 30.1 | | | 30.1 | 30.1 | | 30.1 | | 30.1 | 30.1 | | | | | | |

24 Hour PM2.5 Results

Factor 0.4 Background 29.7
 Town Station

| Town | Station | Quadrant | Receptor Location | Intersection/Receptors | 2008 | 2016 | | | | | 2030 | | | | | |
|-------------|----------------|--|-------------------|------------------------|-----------|----------|--------------------|------------------|---------------------|-------------------|-----------|----------|--------------------|------------------|---------------------|-------------------|
| | | | | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel |
| New Bedford | King's Highway | <u>Church Street at Tarklin Road</u> | | | 1 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | |
| | | | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | |
| | | | | | Northeast | 3 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 4 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | Southeast | 1 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 3 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 4 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | Southwest | 1 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 3 | 30.9 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 4 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | Northwest | 1 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 3 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 4 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| Raynham | Raynham Park | <u>Route 138 at Found Street/Route 106</u> | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | Northeast | 1 | 30.5 | 30.5 | Whittenton Electric | Whittenton Diesel | | | | 30.1 | Whittenton Electric | Whittenton Diesel |
| | | | | | | 2 | 30.9 | 30.5 | 30.5 | 30.5 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 3 | 31.3 | 30.5 | 30.5 | 30.5 | | | | 30.5 | 30.5 | 30.5 |
| | | | | | | 4 | 30.9 | 30.5 | 30.5 | 30.5 | | | | 30.5 | 30.5 | 30.5 |
| | | | | | | 5 | 30.9 | 30.5 | 30.5 | 30.5 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | Southeast | 1 | 30.9 | 30.1 | 30.5 | 30.5 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 2 | 30.5 | 30.5 | 30.5 | 30.5 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 3 | 30.9 | 30.5 | 30.5 | 30.5 | | | | 30.5 | 30.5 | 30.5 |
| | | | | | | 4 | 30.9 | 30.5 | 30.5 | 30.5 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 5 | 30.9 | 30.5 | 30.5 | 30.5 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | Southwest | 1 | 30.9 | 30.5 | 30.5 | 30.5 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 2 | 30.9 | 30.5 | 30.5 | 30.5 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 3 | 30.9 | 30.5 | 30.5 | 30.5 | | | | 30.5 | 30.5 | 30.5 |
| | | | | | | 4 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | Northwest | 1 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 2 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 |
| | | | | | | 3 | 30.9 | 30.5 | 30.5 | 30.5 | | | | 30.5 | 30.5 | 30.5 |
| 4 | 30.9 | 30.5 | 30.5 | 30.5 | | | | | 30.1 | 30.1 | 30.1 | | | | | |
| 5 | 30.9 | 30.5 | 30.5 | 30.5 | | | | | 30.1 | 30.1 | 30.1 | | | | | |

24 Hour PM2.5 Results

| Factor
Town | 0.4
Station | Background
29.7 | 2008 | | | | | | | | | | 2016 | | | | | | 2030 | | | | | |
|---|----------------|--------------------|------------------------------------|-------------------|------------------------|----------|-------------|--------------------|------------------|--------------------|------------------|-----------|----------|--------------------|------------------|--------------------|------------------|-----------|------|-------------|------|------|--|--|
| | | | Quadrant | Receptor Location | Intersection/Receptors | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | | | | | |
| Taunton | Dean Street | | <u>Route 44 at Longmeadow Road</u> | | | | | | | | | | | | | | | | | | | | | |
| | | | | 1 | 30.5 | 30.1 | | | | 30.1 | 30.1 | | | 30.1 | | | | 30.1 | | | 30.1 | 30.1 | | |
| | | | Northeast | 2 | 30.9 | 30.1 | | | | 30.5 | 30.5 | | | 30.1 | | | | 30.1 | | | 30.1 | 30.1 | | |
| | | | | 3 | 31.3 | 30.5 | | | | 30.5 | 30.5 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | | 4 | 31.3 | 30.5 | | | | 30.5 | 30.5 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | | 5 | 31.3 | 30.9 | | | | 30.5 | 30.5 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | | 1 | 31.3 | 30.5 | | | | 30.5 | 30.5 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | Southeast | 2 | 31.3 | 30.5 | | | | 30.5 | 30.5 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | | 3 | 31.3 | 30.5 | | | | 30.5 | 30.5 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | | 4 | 30.9 | 30.5 | | | | 30.5 | 30.5 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | | 5 | 30.9 | 30.5 | | | | 30.5 | 30.5 | | | 30.1 | | | | 30.1 | | | 30.1 | 30.1 | | |
| | | | | 1 | 30.9 | 30.5 | | | | 30.5 | 30.5 | | | 30.1 | | | | 30.1 | | | 30.1 | 30.1 | | |
| | | | Southwest | 2 | 30.9 | 30.5 | | | | 30.5 | 30.5 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | | 3 | 31.7 | 30.9 | | | | 30.9 | 30.9 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | | 4 | 31.7 | 30.5 | | | | 30.9 | 30.9 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | | 5 | 31.7 | 30.5 | | | | 30.9 | 30.9 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | | 1 | 31.3 | 30.5 | | | | 30.5 | 30.5 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | Northwest | 2 | 31.3 | 30.5 | | | | 30.5 | 30.5 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | | 3 | 31.7 | 30.9 | | | | 30.9 | 30.9 | | | 30.5 | | | | 30.5 | | | 30.5 | 30.5 | | |
| | | | | 4 | 30.9 | 30.5 | | | | 30.5 | 30.5 | | | 30.1 | | | | 30.1 | | | 30.1 | 30.1 | | |
| 5 | 30.5 | 30.1 | | | | | 30.5 | 30.5 | | | 30.1 | | | | 30.1 | | | 30.1 | 30.1 | | | | | |
| <u>Route 140 at the Route 24 Northbound Ramps without Slip Ramp</u> | | | | | | | | | | | | | | | | | | | | | | | | |
| Taunton | Taunton Depot | | | 1 | 30.5 | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | | |
| | | | Northeast | 2 | 30.5 | 30.1 | 30.1 | 30.1 | | | | | 30.5 | 30.1 | 30.1 | | | | 30.5 | 30.1 | 30.1 | | | |
| | | | | 3 | 31.7 | 30.9 | 30.9 | 30.9 | | | | | 30.9 | 30.9 | 30.9 | | | | 30.9 | 30.9 | 30.9 | | | |
| | | | | 4 | 31.7 | 30.9 | 30.9 | 30.9 | | | | | 30.9 | 30.9 | 30.9 | | | | 30.9 | 30.9 | 30.9 | | | |
| | | | | 5 | 31.7 | 30.9 | 30.9 | 30.9 | | | | | 30.9 | 30.9 | 30.9 | | | | 30.9 | 30.9 | 30.9 | | | |
| | | | | 1 | 31.7 | 30.9 | 30.9 | 30.9 | | | | | 30.9 | 30.9 | 30.9 | | | | 30.9 | 30.9 | 30.9 | | | |
| | | | South | 2 | 31.7 | 30.9 | 30.9 | 30.9 | | | | | 30.9 | 30.9 | 30.9 | | | | 30.9 | 30.9 | 30.9 | | | |
| | | | | 3 | 32.1 | 30.9 | 31.3 | 30.9 | | | | | 31.3 | 30.9 | 30.9 | | | | 31.3 | 30.9 | 30.9 | | | |
| | | | | 4 | 32.1 | 30.9 | 30.9 | 30.9 | | | | | 32.1 | 30.9 | 30.9 | | | | 32.1 | 30.9 | 30.9 | | | |
| | | | | 5 | 32.1 | 30.9 | 30.9 | 30.9 | | | | | 32.1 | 30.9 | 30.9 | | | | 32.1 | 30.9 | 30.9 | | | |
| | | | | 1 | 32.1 | 30.9 | 30.9 | 30.9 | | | | | 30.9 | 30.9 | 30.9 | | | | 30.9 | 30.9 | 30.9 | | | |
| | | | Northwest | 2 | 32.1 | 30.9 | 30.9 | 30.9 | | | | | 30.9 | 30.9 | 30.9 | | | | 30.9 | 30.9 | 30.9 | | | |
| | | | | 3 | 32.1 | 30.9 | 30.9 | 30.9 | | | | | 30.9 | 30.9 | 30.9 | | | | 30.9 | 30.9 | 30.9 | | | |
| | | | | 4 | 30.5 | 30.5 | 30.1 | 30.1 | | | | | 30.5 | 30.1 | 30.1 | | | | 30.5 | 30.1 | 30.1 | | | |
| | | | | 5 | 30.5 | 30.1 | 30.1 | 30.1 | | | | | 30.1 | 30.1 | 30.1 | | | | 30.1 | 30.1 | 30.1 | | | |

Annual PM2.5 Results

Factor **0.08** Background **11.7**

| Town | Station | Quadrant | Receptor Location | Intersection/Receptors | 2008 | | 2016 | | | | 2030 | | | | | | | | | | |
|--------------|--------------------|--|-------------------|------------------------|----------|----------|--------------------|------------------|--------------------|------------------|-----------|----------|--------------------|------------------|--------------------|------------------|-----------|--|------|------|--|
| | | | | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | | | |
| Norton | Barrowsville | <u>North Worcester Street at Route 123/Main Street</u> | | | | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 11.8 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 3 | 11.9 | 11.8 | 11.9 | 11.9 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | Southeast | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 3 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | Southwest | 1 | 11.8 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 3 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | Northwest | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 3 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 4 | 11.8 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| 5 | 11.8 | | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | | | |
| East Taunton | East Taunton North | <u>Route 140 at the Route 24 Southbound Ramps</u> | | | | | | | | | | | | | | | | | | | |
| | | East | 1 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | | 11.9 | | | | | | 11.9 | 11.9 | |
| | | | 2 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | | 11.9 | | | | | | 11.9 | 11.9 | |
| | | | 3 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | | 11.9 | | | | | | 11.9 | 11.9 | |
| | | | 4 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | | 11.9 | | | | | | 11.9 | 11.9 | |
| | | | 5 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | | 11.9 | | | | | | 11.9 | 11.9 | |
| | | Southwest | 1 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | | 11.9 | | | | | | 11.9 | 11.9 | |
| | | | 2 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | | 11.9 | | | | | | 11.9 | 11.9 | |
| | | | 3 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | | 11.9 | | | | | | 11.9 | 11.9 | |
| | | | 4 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | | 11.9 | | | | | | 11.9 | 11.9 | |
| | | | 5 | 11.9 | 11.8 | | | 11.8 | 11.8 | | | | 11.8 | | | | | | 11.8 | 11.8 | |
| | | Northwest | 1 | 11.9 | 11.9 | | | 11.9 | 11.9 | | | | 11.8 | | | | | | 11.8 | 11.8 | |
| | | | 2 | 11.9 | 11.9 | | | 11.9 | 11.9 | | | | 11.8 | | | | | | 11.9 | 11.9 | |
| | | | 3 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | | 11.9 | | | | | | 11.9 | 11.9 | |
| | | | 4 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | | 11.9 | | | | | | 11.9 | 11.9 | |
| | | | 5 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | | 11.9 | | | | | | 11.9 | 11.9 | |

Annual PM2.5 Results

Factor **0.08** Background **11.7**

| Town | Station | Quadrant | Receptor Location | Intersection/Receptors | 2008 | | 2016 | | | | 2030 | | | | | | | | | | |
|------------|------------------|---|-------------------|------------------------|-----------|-----------|-------------------|-----------------|--------------------|------------------|-----------|----------|-------------------|-----------------|--------------------|------------------|-----------|------|------|------|------|
| | | | | | Existing | No Build | Atteboro Electric | Atteboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Atteboro Electric | Atteboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | | | |
| Easton | Easton Village | <u>Route 138 at Main Street</u> | | | 1 | 11.9 | 11.9 | | | 11.9 | 11.9 | | | | | 11.9 | 11.9 | | | | |
| | | | | | 2 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | |
| | | | | | Northeast | 3 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| | | | | | | 4 | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| | | | | | | 5 | 11.9 | 11.8 | | | 11.8 | 11.8 | | | 11.8 | 11.8 | | | 11.8 | 11.8 | |
| | | | | | | Southeast | 1 | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.8 | 11.8 | | | 11.8 | 11.8 |
| | | | | | | | 2 | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.8 | 11.9 | | | 11.9 | 11.9 |
| | | | | | 3 | | 12.0 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| | | | | | 4 | | 12.0 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| | | | | | 5 | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| | | | | | Southwest | 1 | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| | | | | | | 2 | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| | | | | | | 3 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| | | | | | | 4 | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| | | | | | | 5 | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| | | | | | Northwest | 1 | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.8 | | | 11.8 | 11.8 | |
| | | | | | | 2 | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| | | | | | | 3 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| | | | | | | 4 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| | | | | | | 5 | 12.0 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | 11.9 | |
| Fall River | Fall River Depot | <u>North Davol Street at President Avenue</u> | | | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | | | | | |
| | | | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | | | | | |
| | | | | | Northeast | 3 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | 11.8 | 11.8 | 11.8 | | | | |
| | | | | | | 4 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | 11.8 | 11.8 | 11.8 | | | | |
| | | | | | | 5 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | 11.8 | 11.8 | 11.8 | | | | |
| | | | | | | Southeast | 1 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | 11.8 | 11.8 | 11.8 | | | |
| | | | | | | | 2 | 11.9 | 11.8 | 11.9 | 11.9 | | | | | 11.8 | 11.8 | 11.8 | | | |
| | | | | | 3 | | 11.9 | 11.8 | 11.9 | 11.9 | | | | | 11.8 | 11.8 | 11.8 | | | | |
| | | | | | 4 | | 11.9 | 11.9 | 11.9 | 11.9 | | | | | 11.8 | 11.8 | 11.8 | | | | |
| | | | | | 5 | | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | | | | |
| | | | | | Southwest | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | | | | |
| | | | | | | 2 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | 11.8 | 11.8 | 11.8 | | | | |
| | | | | | | 3 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | 11.9 | 11.8 | 11.8 | | | | |
| | | | | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | | | | |
| | | | | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | | | | |
| | | | | | Northwest | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | | | | |
| | | | | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | | | | |
| | | | | | | 3 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | 11.9 | 11.8 | 11.8 | | | | |
| | | | | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | | | | |
| | | | | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | | | | |

Annual PM2.5 Results

Factor **0.08** Background **11.7**

| Town | Station | Quadrant | Receptor Location | Intersection/Receptors | 2008 | | 2016 | | | | 2030 | | | | | | | |
|------------|------------------|----------|-------------------|------------------------|---|----------|--------------------|------------------|--------------------|------------------|-----------|----------|--------------------|------------------|--------------------|------------------|-----------|------|
| | | | | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | |
| Fall River | Fall River Depot | | | | <u>South Davol Street at President Avenue</u> | | | | | | | | | | | | | |
| | | | | | Northeast | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 3 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | Southeast | 1 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 3 | 11.9 | 11.8 | 11.9 | 11.9 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | Southwest | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 12.6 | 11.8 | 11.8 | |
| | | | | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 3 | 11.9 | 11.9 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 5 | 11.8 | 11.8 | 11.8 | 11.8 | | | | | 11.7 | 11.7 | 11.7 | |
| | | | | | Northwest | 1 | 11.8 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 3 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | 11.8 | 11.8 | 11.8 | |
| | | | | | | 4 | 11.9 | 11.9 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | |
| 5 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| Freetown | Freetown | | | | <u>South Main Street at Route 24 Northbound Ramps</u> | | | | | | | | | | | | | |
| | | | | | North | 1 | 11.8 | 11.8 | | | 11.8 | 11.8 | | | 11.8 | | 11.8 | 11.8 |
| | | | | | | 2 | 11.8 | 11.9 | | | 11.9 | 11.9 | | | 11.8 | | 11.8 | 11.8 |
| | | | | | | 3 | 11.8 | 11.9 | | | 11.9 | 11.9 | | | 11.8 | | 11.8 | 11.8 |
| | | | | | | 4 | 11.8 | 11.9 | | | 11.9 | 11.9 | | | 11.8 | | 11.8 | 11.8 |
| | | | | | | 5 | 11.8 | 11.9 | | | 11.9 | 11.9 | | | 11.9 | | 11.9 | 11.9 |
| | | | | | Southeast | 1 | 11.8 | 11.9 | | | 11.9 | 11.9 | | | 11.8 | | 11.8 | 11.8 |
| | | | | | | 2 | 11.8 | 11.9 | | | 11.9 | 11.9 | | | 11.8 | | 11.8 | 11.8 |
| | | | | | | 3 | 11.8 | 11.9 | | | 11.9 | 11.9 | | | 11.8 | | 11.8 | 11.8 |
| | | | | | | 4 | 11.8 | 11.8 | | | 11.8 | 11.8 | | | 11.8 | | 11.8 | 11.8 |
| | | | | | | 5 | 11.8 | 11.8 | | | 11.8 | 11.8 | | | 11.8 | | 11.8 | 11.8 |
| | | | | | Southwest | 1 | 11.8 | 11.8 | | | 11.8 | 11.8 | | | 11.8 | | 11.8 | 11.8 |
| | | | | | | 2 | 11.8 | 11.8 | | | 11.8 | 11.8 | | | 11.8 | | 11.8 | 11.8 |
| | | | | | | 3 | 11.8 | 11.9 | | | 11.9 | 11.9 | | | 11.8 | | 11.8 | 11.8 |
| | | | | | | 4 | 11.8 | 11.8 | | | 11.8 | 11.8 | | | 11.8 | | 11.8 | 11.8 |
| | | | | | | 5 | 11.8 | 11.8 | | | 11.8 | 11.8 | | | 11.8 | | 11.8 | 11.8 |

Annual PM2.5 Results

Factor **0.08** Background **11.7**

| Town | Station | Quadrant | Receptor Location | Intersection/Receptors | 2008 | | 2016 | | | | 2030 | | | | | | | | | | |
|-------------|----------------|--|-------------------|------------------------|----------|----------|--------------------|------------------|--------------------|------------------|-----------|----------|--------------------|------------------|--------------------|------------------|-----------|--|--|--|--|
| | | | | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | | | |
| New Bedford | King's Highway | <u>Church Street at Tarklin Road</u> | | | | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 3 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | Southeast | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 3 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | Southwest | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 3 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | Northwest | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 3 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| 5 | 11.9 | | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | | | |
| Raynham | Raynham Park | <u>Route 138 at Found Street/Route 106</u> | | | | | | | | | | | | | | | | | | | |
| | | Northeast | | | | | | | | | | | | | | | | | | | |
| | | | 1 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 2 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 3 | 12.0 | 11.9 | 11.9 | 11.9 | | | | | | 11.9 | 11.9 | 11.9 | | | | | | |
| | | | 4 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | | 11.9 | 11.9 | 11.9 | | | | | | |
| | | Southeast | 1 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 2 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 3 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | | 11.9 | 11.9 | 11.9 | | | | | | |
| | | | 4 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 5 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | Southwest | 1 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 2 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 3 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | | 11.9 | 11.9 | 11.9 | | | | | | |
| | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | Northwest | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 3 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | | 11.9 | 11.9 | 11.9 | | | | | | |
| | | | 4 | 11.9 | 11.9 | 11.9 | 11.9 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| 5 | 11.9 | | 11.9 | 11.9 | 11.9 | | | | | | 11.8 | 11.8 | 11.8 | | | | | | | | |

Annual PM2.5 Results

Factor 0.08 Background 11.7

| Town | Station | Quadrant | Receptor Location | Intersection/Receptors | 2008 | | 2016 | | | | 2030 | | | | | | | | | |
|---------|---------------|---|-------------------|------------------------|----------|----------|--------------------|------------------|--------------------|------------------|-----------|----------|--------------------|------------------|--------------------|------------------|-----------|--|--|--|
| | | | | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | | | |
| Taunton | Dean Street | <u>Route 44 at Longmeadow Road</u> | | | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 11.9 | 11.8 | | | 11.8 | | 11.8 | | | 11.8 | | | 11.8 | | | | |
| | | | 2 | 11.9 | 11.8 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | | 3 | 12.0 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | | 4 | 12.0 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | | 5 | 12.0 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | Southeast | 1 | 12.0 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | | 2 | 12.0 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | | 3 | 12.0 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | | 4 | 11.9 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | | 5 | 11.9 | 11.9 | | | 11.9 | | 11.9 | | | 11.8 | | | 11.8 | | | | |
| | | Southwest | 1 | 11.9 | 11.9 | | | 11.9 | | 11.9 | | | 11.8 | | | 11.8 | | | | |
| | | | 2 | 11.9 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | | 3 | 12.1 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | | 4 | 12.1 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | | 5 | 12.1 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | Northwest | 1 | 12.0 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | | 2 | 12.0 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | | 3 | 12.1 | 11.9 | | | 11.9 | | 11.9 | | | 11.9 | | | 11.9 | | | | |
| | | | 4 | 11.9 | 11.9 | | | 11.9 | | 11.9 | | | 11.8 | | | 11.8 | | | | |
| 5 | 11.9 | | 11.8 | | | 11.9 | | 11.9 | | | 11.8 | | | 11.8 | | | | | | |
| Taunton | Taunton Depot | <u>Route 140 at the Route 24 Northbound Ramps without Slip Ramp</u> | | | | | | | | | | | | | | | | | | |
| | | Northeast | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | | | | | | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.9 | 11.8 | 11.8 | | | | | | |
| | | | 3 | 12.1 | 11.9 | 11.9 | 11.9 | | | | | 11.9 | 11.9 | 11.9 | | | | | | |
| | | | 4 | 12.1 | 11.9 | 11.9 | 11.9 | | | | | 11.9 | 11.9 | 11.9 | | | | | | |
| | | | 5 | 12.1 | 11.9 | 11.9 | 11.9 | | | | | 11.9 | 11.9 | 11.9 | | | | | | |
| | | South | 1 | 12.1 | 11.9 | 11.9 | 11.9 | | | | | 11.9 | 11.9 | 11.9 | | | | | | |
| | | | 2 | 12.1 | 11.9 | 11.9 | 11.9 | | | | | 11.9 | 11.9 | 11.9 | | | | | | |
| | | | 3 | 12.2 | 11.9 | 12.0 | 11.9 | | | | | 12.0 | 11.9 | 11.9 | | | | | | |
| | | | 4 | 12.2 | 11.9 | 11.9 | 11.9 | | | | | 12.2 | 11.9 | 11.9 | | | | | | |
| | | | 5 | 12.2 | 11.9 | 11.9 | 11.9 | | | | | 12.2 | 11.9 | 11.9 | | | | | | |
| | | Northwest | 1 | 12.2 | 11.9 | 11.9 | 11.9 | | | | | 11.9 | 11.9 | 11.9 | | | | | | |
| | | | 2 | 12.2 | 11.9 | 11.9 | 11.9 | | | | | 11.9 | 11.9 | 11.9 | | | | | | |
| | | | 3 | 12.2 | 11.9 | 11.9 | 11.9 | | | | | 11.9 | 11.9 | 11.9 | | | | | | |
| | | | 4 | 11.9 | 11.9 | 11.8 | 11.8 | | | | | 11.9 | 11.8 | 11.8 | | | | | | |
| | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | | | | 11.8 | 11.8 | 11.8 | | | | | | |

Annual PM2.5 Results

Factor 0.08 Background 11.7

| Town | Station | Quadrant | Receptor Location | Intersection/Receptors | 2008 | | | | | | 2030 | | | | | |
|-------------|---------------|-----------|-------------------|------------------------|---|----------|--------------------|------------------|--------------------|------------------|-----------|----------|--------------------|------------------|--------------------|------------------|
| | | | | | Existing | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel | Rapid Bus | No Build | Attelboro Electric | Attelboro Diesel | Stoughton Electric | Stoughton Diesel |
| Taunton | Taunton Depot | | | | <u>Washington Street at Tremont Street</u> | | | | | | | | | | | |
| | | | | | 1 | 11.9 | 11.8 | 11.9 | 11.9 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 |
| | | Northeast | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 3 | 11.9 | 11.9 | 11.9 | 11.9 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 4 | 11.9 | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | |
| | | | 5 | 11.9 | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | |
| | | | 5 | 11.9 | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | |
| | | Southeast | 1 | 11.9 | 11.9 | 11.9 | 11.9 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 2 | 11.9 | 11.9 | 11.9 | 11.9 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 3 | 12.0 | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | |
| | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | Southwest | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 3 | 11.9 | 11.9 | 11.9 | 11.9 | | 11.8 | 11.9 | 11.9 | | 11.8 | 11.9 | 11.9 | |
| | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | Northwest | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 3 | 12.0 | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | |
| 4 | 12.0 | | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | | | |
| 5 | 11.9 | | 11.9 | 11.9 | 11.9 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | | |
| New Bedford | Whale's Tooth | | | | <u>Union Street at McCarthy at Route 18 at State Pier</u> | | | | | | | | | | | |
| | | | | | 1 | 11.9 | 11.8 | 11.9 | 11.9 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 |
| | | Northeast | 2 | 11.9 | 11.8 | 11.8 | 11.9 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 3 | 11.9 | 11.8 | 11.8 | 11.9 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 5 | 11.8 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.7 | 11.8 | |
| | | | 5 | 11.8 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | Southeast | 1 | 11.8 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.7 | 11.8 | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 3 | 11.9 | 11.9 | 11.8 | 11.9 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 4 | 11.9 | 11.8 | 11.9 | 11.9 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 5 | 11.9 | 11.9 | 11.9 | 11.9 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | Southwest | 1 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 3 | 11.9 | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.8 | |
| | | | 4 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 5 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | Northwest | 1 | 11.9 | 11.9 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 2 | 11.9 | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | |
| | | | 3 | 12.0 | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.9 | | 11.9 | 11.9 | 11.8 | |
| 4 | 11.9 | | 11.9 | 11.9 | 11.9 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | | |
| 5 | 11.9 | | 11.9 | 11.9 | 11.9 | | 11.8 | 11.8 | 11.8 | | 11.8 | 11.8 | 11.8 | | | |



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Mesoscale (Regional) Analysis

- CTPS Model Data
- Rapid Bus Alternative
- Train Emissions



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South Coast Rail Air Quality Mesoscale Results

| Alternative | TOTAL EMSSIONS | | | | | | | |
|---------------------|-----------------------------|-----------|----------|--------------|---------|---------|---------------|-------------|
| | CO-Winter | NOx | VOC | CO2 | PM2.5 | PM10 | VMT | VHT |
| | look below for
Tons/year | | | | | | | |
| | kg/day | kg/day | kg/day | kg/day | kg/day | kg/day | Avg daily | Avg daily |
| Existing | 1,852,715.1 | 212,844.2 | 75,306.9 | 69,130,131.4 | 4,534.4 | 6,632.2 | 125,719,800.0 | 4,203,768.0 |
| No-Build (TSM) | 1,162,045.5 | 20,878.3 | 24,803.9 | 76,170,121.3 | 1,704.7 | 3,671.1 | 133,778,821.0 | 4,464,879.0 |
| Attleboro Electric | 1,159,470.0 | 20,835.0 | 24,748.0 | 75,999,344.0 | 1,703.0 | 3,665.0 | 133,482,252.0 | 4,442,755.0 |
| Difference | (2,575.5) | (43.3) | (55.9) | (170,777.3) | (1.7) | (6.1) | (296,569.0) | (22,124.0) |
| Attleboro Diesel | 1,159,930.3 | 20,867.4 | 24,757.6 | 76,034,198.7 | 1,704.0 | 3,667.4 | 133,522,400.0 | 4,444,185.0 |
| Difference | (2,115.2) | (10.9) | (46.3) | (135,922.5) | (0.7) | (3.7) | (256,421.0) | (20,694.0) |
| Stoughton Electric | 1,159,586.0 | 20,837.5 | 24,751.0 | 76,006,518.2 | 1,703.2 | 3,665.6 | 133,482,899.0 | 4,443,176.0 |
| Difference | (2,459.5) | (40.8) | (52.9) | (163,603.1) | (1.5) | (5.5) | (295,922.0) | (21,703.0) |
| Stoughton Diesel | 1,160,161.2 | 20,869.5 | 24,762.5 | 76,049,553.9 | 1,704.4 | 3,667.8 | 133,550,116.0 | 4,444,815.0 |
| Difference | (1,884.3) | (8.7) | (41.5) | (120,567.4) | (0.3) | (3.4) | (228,705.0) | (20,064.0) |
| Whittenton Electric | 1,160,155.0 | 20,847.0 | 24,762.0 | 76,045,234.0 | 1,704.0 | 3,667.0 | 133,550,803.0 | 4,444,876.0 |
| Difference | (1,890.5) | (31.3) | (41.9) | (124,887.3) | (0.7) | (4.1) | (228,018.0) | (20,003.0) |
| Whittenton Diesel | 1,160,543.9 | 20,874.7 | 24,780.6 | 76,080,802.5 | 1,705.4 | 3,669.4 | 133,604,860.0 | 4,450,380.0 |
| Difference | (1,501.6) | (3.5) | (23.3) | (89,318.7) | 0.7 | (1.8) | (173,961.0) | (14,499.0) |
| Rapid Bus | 1,161,433.2 | 20,882.5 | 24,794.6 | 76,152,071.7 | 1,706.4 | 3,672.8 | 133,697,326.0 | 4,450,872.0 |
| Difference | (612.3) | 4.2 | (9.3) | (18,049.6) | 1.7 | 1.7 | (81,495.0) | (14,007.0) |

South Coast Rail Air Quality Mesoscale Results

| | | | | TOTAL EMSSIONS | | | |
|-------------------------------|--|--|-----------------------------|-------------------------------------|-----|---------------------------|------|
| Alternative | | | CO2 | | | | |
| | | | CO2 Converted to Tons/Year | Annualization Factor ¹ = | 365 | Kg to Tons (1000kg/1Ton)= | 1000 |
| Existing | | | 25,232,498.0 | | | | |
| No-Build (TSM) | | | 27,802,094.3 | | | | |
| Attleboro Electric | | | 27,739,760.6
(62,333.70) | | | | |
| Attleboro Diesel | | | 27,752,482.5
(49,611.73) | | | | |
| Stoughton Electric Difference | | | 27,742,379.1
(59,715.12) | | | | |
| Stoughton Diesel Difference | | | 27,758,087.2
(44,007.08) | | | | |
| Whittenton Electric | | | 27,756,510.4
(45,583.85) | | | | |
| Whittendon Diesel | | | 27,769,492.9
(32,601.34) | | | | |
| Rapid Bus | | | 27,795,506.2
(6,588.11) | | | | |

1: Based on CTPS' Calculation of Annualization Factor which used the commuter rail ridership information.

South Coast Rail Air Quality Mesoscale Results

| Alternative | CTPS EMISSIONS WITHOUT SCR TRAIN EMISSIONS | | | | | | | |
|-----------------------------------|--|------------------|------------------|---------------------------|----------------|----------------|----------------------------|-------------------------|
| | CO-Winter | NOx | VOC | CO2 | PM2.5 | PM10 | VMT | VHT |
| | kg/day | kg/day | kg/day | kg/day | kg/day | kg/day | Avg daily | Avg daily |
| Existing | 1,852,715 | 212,844 | 75,307 | 69,130,131 | 4,534 | 6,632 | 125,719,800 | 4,203,768 |
| No-Build (TSM) | 1,162,045 | 20,878 | 24,804 | 76,170,121 | 1,705 | 3,671 | 133,778,821 | 4,464,879 |
| Attleboro Electric
Difference | 1,159,470 | 20,835 | 24,748 | 75,999,344 | 1,703 | 3,665 | 133,482,252 | 4,442,755 |
| Attleboro Diesel
Difference | 1,159,917 | 20,843 | 24,757 | 76,029,115 | 1,704 | 3,667 | 133,522,400 | 4,444,185 |
| Stoughton Electric
Difference | 1,159,586
(2,459.5) | 20,837
(40.8) | 24,751
(52.9) | 76,006,518
(163,603.1) | 1,703
(1.5) | 3,666
(5.5) | 133,482,899
(295,922.0) | 4,443,176
(21,703.0) |
| Stoughton Diesel
Difference | 1,160,149
(1,896.5) | 20,847
(31.3) | 24,762
(42.0) | 76,044,858
(125,262.8) | 1,704
(0.6) | 3,667
(3.7) | 133,550,116
(228,705.0) | 4,444,815
(20,064.0) |
| Whittenton Electric
Difference | 1,160,155 | 20,847 | 24,762 | 76,045,234 | 1,704 | 3,667 | 133,550,803 | 4,444,876 |
| Whittenton Diesel
Difference | 1,160,532 | 20,853 | 24,780 | 76,076,229 | 1,705 | 3,669 | 133,604,860 | 4,450,380 |
| Rapid Bus
Difference | 1,161,430 | 20,869 | 24,792 | 76,129,499 | 1,706 | 3,672 | 133,697,326 | 4,450,872 |

South Coast Rail Air Quality Mesoscale Results

| Alternative | SCR TRAIN EMISSIONS (1) | | | | | | | |
|-----------------------------------|-------------------------|--------|--------|----------|--------|--------|-----------|-----------|
| | CO-Winter | NOx | VOC | CO2 | PM2.5 | PM10 | VMT | VHT |
| | kg/day | kg/day | kg/day | kg/day | kg/day | kg/day | Avg daily | Avg daily |
| Existing | | | | | | | | |
| No-Build (TSM) | | | | | | | | |
| Attleboro Electric
Difference | | | | | | | | - |
| Attleboro Diesel
Difference | 13.3 | 24.4 | 0.6 | 5,083.7 | 0.4 | 0.4 | | |
| Stoughton Electric
Difference | | | | | | | | |
| Stoughton Diesel
Difference | 12.2 | 22.5 | 0.6 | 4,695.5 | 0.4 | 0.4 | | |
| Whittenton Electric
Difference | | | | | | | | |
| Whittenton Diesel
Difference | 11.9 | 21.9 | 0.6 | 4,573.2 | 0.4 | 0.4 | | |
| Rapid Bus
Difference | 3.2 | 13.5 | 2.6 | 22,572.7 | 0.4 | 0.8 | | |

1 Based on estimated train mileage for SCR and EPA Train Emissions information - see XX



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Mesoscale (Regional) Analysis

- Rapid Bus Alternative



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Mesoscale Analysis Summary - Rapid Bus Alternative

| Bus Route (To/From) | No. of Buses | Local Roads | Freeways | | Emissions (kg/day) | | | | | |
|---|--------------|--|--|--|--------------------|--------------|-------------|------------------------------|-------------|-------------|
| | | RT ¹ Distance in miles
(Bus Station to freeways ²) | RT ¹ Distance in miles
(freeways ² to Route 24) | RT ¹ Distance in miles
(Route 24 to South Station) | CO-W | Nox | VOC | CO ₂ ³ | PM2.5 | PM10 |
| Whale's Tooth Station - King's Hwy Station - South Station | 50 | 3.24 | 40.35 | 78.85 | 1.21 | 5.18 | 0.97 | 8552.73 | 0.15 | 0.32 |
| Fall River Depot Station - Freetown Station - South Station | 42 | 9.61 | 4.67 | 91.95 | 0.89 | 3.66 | 0.73 | 6232.94 | 0.11 | 0.23 |
| Galleria Station - South Station | 34 | 1.60 | 1.28 | 78.85 | 0.55 | 2.36 | 0.44 | 3882.11 | 0.07 | 0.14 |
| Taunton Depot Station - South Station | 34 | 7.67 | 0.00 | 74.54 | 0.56 | 2.29 | 0.46 | 3904.88 | 0.07 | 0.15 |
| Emissions Total | | | | | 3.21 | 13.49 | 2.59 | 22572.65 | 0.40 | 0.84 |

***Notes:**

1. RT = Round Trip
2. Any other freeways included in the bus routes that leads to Route 24
3. CO₂ concentrations are expressed in tons per year



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Mesoscale (Regional) Analysis

- Train Emissions



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Train Emissions

Number of Trains

38

19

4

Emission Factor (kg)

| <u>Alternatives</u> | <u>From</u> | <u>To</u> | <u>Miles</u> | <u>PM_{2.5}</u> | <u>PM₁₀</u> | <u>HC</u> | <u>NOX</u> | <u>CO</u> | <u>CO₂</u> |
|----------------------------------|---------------------|---------------------|--------------|-------------------------|------------------------|-------------|--------------|--------------|-----------------------|
| <u>Stoughton</u> | | | | | | | | | |
| | Weir Junction | Canton Junction | 20.51 | 0.20 | 0.21 | 0.33 | 12.73 | 6.92 | 2,653.77 |
| | Canton Junction | South Station | 14.70 | 0.02 | 0.02 | 0.02 | 0.96 | 0.52 | 200.25 |
| | | | | 0.22 | 0.22 | 0.35 | 13.69 | 7.44 | 2,854.03 |
| Including Southern Triangle | | | | 0.45 | 0.46 | 0.73 | 28.39 | 15.43 | 5,920.26 |
| <u>Whittenton</u> | | | | | | | | | |
| | Weir Junction | Whittenton Junction | 1.89 | 0.02 | 0.02 | 0.03 | 1.17 | 0.64 | 244.57 |
| | Whittenton Junction | Stoughton | 1.88 | 0.02 | 0.02 | 0.03 | 1.16 | 0.63 | 242.70 |
| | Stoughton | Canton Junction | 16.17 | 0.16 | 0.16 | 0.26 | 10.04 | 5.45 | 2,092.97 |
| | Canton Junction | South Station | 14.70 | 0.02 | 0.02 | 0.02 | 0.96 | 0.52 | 200.25 |
| | | | | 0.21 | 0.22 | 0.34 | 13.34 | 7.25 | 2,780.50 |
| Including Southern Triangle | | | | 0.44 | 0.46 | 0.72 | 28.04 | 15.24 | 5,846.73 |
| <u>Attleboro</u> | | | | | | | | | |
| | Weir Junction | Attleboro Bypass | 12.51 | 0.12 | 0.13 | 0.20 | 7.76 | 4.22 | 1,618.45 |
| | Attleboro Bypass | Canton Junction | 14.00 | 0.01 | 0.01 | 0.02 | 0.91 | 0.50 | 190.72 |
| | Canton Junction | South Station | 14.70 | 0.02 | 0.02 | 0.02 | 0.96 | 0.52 | 200.25 |
| | | | | 0.15 | 0.16 | 0.25 | 9.64 | 5.24 | 2,009.42 |
| Including Southern Triangle | | | | 0.39 | 0.40 | 0.63 | 24.34 | 13.23 | 5,075.66 |
| <u>Southern Triangle</u> | | | | | | | | | |
| New Bedford Mainline | Cotley Junction | Weir Junction | 1.42 | 0.01 | 0.01 | 0.02 | 0.88 | 0.48 | 183.17 |
| | Myricks Junction | Cotley Junction | 3.60 | 0.04 | 0.04 | 0.06 | 2.23 | 1.21 | 465.67 |
| | New Bedford | Myricks Junction | 14.82 | 0.07 | 0.08 | 0.12 | 4.60 | 2.50 | 959.01 |
| | | | | 0.12 | 0.13 | 0.20 | 7.71 | 4.19 | 1,607.85 |
| Fall River Secondary | Cotley Junction | Weir Junction | 1.42 | 0.01 | 0.01 | 0.02 | 0.88 | 0.48 | 183.17 |
| | Myricks Junction | Cotley Junction | 3.60 | 0.04 | 0.04 | 0.06 | 2.23 | 1.21 | 465.67 |
| | Fall River | Myricks Junction | 12.51 | 0.06 | 0.06 | 0.10 | 3.88 | 2.11 | 809.54 |
| | | | | 0.11 | 0.11 | 0.18 | 6.99 | 3.80 | 1,458.39 |
| <u>Northeast Corridor</u> | | | | | | | | | |
| Northeast Corridor (South) | Attleboro Bypass | Canton Junction | 14.00 | 0.01 | 0.01 | 0.02 | 0.91 | 0.50 | 190.72 |
| Northeast Corridor (North) | Canton Junction | South Station | 14.70 | 0.02 | 0.02 | 0.02 | 0.96 | 0.52 | 200.25 |
| | | | | 0.03 | 0.03 | 0.05 | 1.88 | 1.02 | 390.97 |



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Layover Facilities Emissions



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CO2 Emissions at Layover Facilities

Convert Mwh to lbs
Convert lbs to tons

1107 lbs
0.0005 tons

| | | <u>kwh</u> | <u>Mwh</u> | <u>tons/yr</u> | <u>kg/d</u> |
|--------------------|-------------|------------|------------|----------------|-------------|
| Layover facilities | 6 hours/day | 258 | 0.258 | 1271.5 | 129.6651 |



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Emission Factors for Locomotives



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Emission Factors for Locomotives

The Environmental Protection Agency (EPA) has established emission standards for oxides of nitrogen (NO_x), hydrocarbons (HC), carbon monoxide (CO), particulate matter (PM) and smoke for newly manufactured and remanufactured locomotives. These standards, which are codified at 40 CFR part 1033, include several sets of emission standards with applicability dependent on the date a locomotive is first manufactured. The first set of standards (Tier 0) applies to most locomotives originally manufactured before 2001. The most stringent set of standards (Tier 4) applies to locomotives originally manufactured in 2015 and later. This fact sheet describes EPA's estimates of the typical in-use emission rates for locomotives subject to these standards, as well as the previous standards.

It is important to emphasize that this fact sheet relies on many simplifying assumptions. Thus emission rates calculated as described in this fact sheet should be considered as approximations.

Estimated Locomotive Emission Rates by Tier

EPA has estimated average emission rates, given in grams per brake horsepower-hour (g/bhp-hr), for uncontrolled locomotives and those required to meet the various emission standards. Emissions were estimated for two different types of operation: a low power cycle representing operation in a switch yard, and a higher power cycle representative of general line-haul operation. These estimates are shown in Tables 1 and 2. Note that plus signs in the table indicate that a given tier of standards was revised in a 2008 rulemaking (73 FR 37096, June 30, 2008). For example, locomotives originally manufactured in years 2002-2004 were initially subject to the original Tier 1 standards, but will be required to meet revised Tier 1 standards (also known as Tier 1+ standards) when remanufactured. See the regulatory text for a more precise explanation of which standards apply to which locomotives.

It is important to note that there can be significant variability in in-use emission rates, especially for uncontrolled locomotives. Also, a single locomotive's emission rate can vary throughout its life as the engine ages and as ambient conditions change. Thus the values presented here are intended to reflect the average emission rates. It is also worth noting that these emission estimates were developed in the context of adopting new emission standards. This is especially important for the CO emission factors. Because EPA's CO emission standards were intended to cap CO emissions at pre-control levels (which were relatively low), we have not projected any reductions in CO emission factors. However, recent testing indicates that emission controls designed to reduce PM and HC emissions are also reducing CO emissions. Thus the CO emission rates presented here may be too high and should be used with some caution. A similar effect may also apply for HC emissions from Tier 0 and Tier 1 locomotives (but not the Tier 0+ and Tier 1+ locomotives).

Table 1 - Line-Haul Emission Factors (g/bhp-hr)

| | PM ₁₀ | HC | NO _x | CO |
|--|------------------|------|-----------------|------|
| UNCONTROLLED | 0.32 | 0.48 | 13.00 | 1.28 |
| TIER 0 | 0.32 | 0.48 | 8.60 | 1.28 |
| TIER 0+ | 0.20 | 0.30 | 7.20 | 1.28 |
| TIER 1 | 0.32 | 0.47 | 6.70 | 1.28 |
| TIER 1+ | 0.20 | 0.29 | 6.70 | 1.28 |
| TIER2 | 0.18 | 0.26 | 4.95 | 1.28 |
| TIER 2+ & TIER 3 | 0.08 | 0.13 | 4.95 | 1.28 |
| TIER 4 | 0.015 | 0.04 | 1.00 | 1.28 |
| + INDICATES THAT THESE ARE THE REVISED STANDARDS IN 40 CFR PART 1033 | | | | |

Table 2 - Switch Emission Factors (g/bhp-hr)

| | PM ₁₀ | HC | NO _x | CO |
|--|------------------|------|-----------------|------|
| UNCONTROLLED | 0.44 | 1.01 | 17.40 | 1.83 |
| TIER 0 | 0.44 | 1.01 | 12.60 | 1.83 |
| TIER 0+ | 0.23 | 0.57 | 10.60 | 1.83 |
| TIER 1 | 0.43 | 1.01 | 9.90 | 1.83 |
| TIER 1+ | 0.23 | 0.57 | 9.90 | 1.83 |
| TIER2 | 0.19 | 0.51 | 7.30 | 1.83 |
| TIER 2+ | 0.11 | 0.26 | 7.30 | 1.83 |
| TIER 3 | 0.08 | 0.26 | 4.50 | 1.83 |
| TIER 4 | 0.015 | 0.08 | 1.00 | 1.83 |
| + INDICATES THAT THESE ARE THE REVISED STANDARDS IN 40 CFR PART 1033 | | | | |

Conversion to Gram per Gallon Emission Factors

It is often useful to express emission rates as grams of pollutant emitted per gallon of fuel consumed (g/gal). This can be done by multiplying the emission rates in Table 1 or 2 by a conversion factor relating the fuel consumption (gal/hr) and the usable power (bhp) of the engine. EPA has estimated different conversion factors for different types of locomotive service as shown in Table 3. The two primary reasons for the differences are variations in locomotive age and duty cycle. Fuel efficiency tends to be worse for older locomotive designs and for locomotives used in low power applications such as switching. Note that the g/gal emission factors presented at the end of this fact sheet can be converted back to g/bhp-hr by dividing them by the conversion factors shown here.

| Table 3
Conversion Factors (bhp-hr/gal) | |
|--|--------------------------------|
| Locomotive Application | Conversion Factor (bhp-hr/gal) |
| Large Line-Haul and Passenger | 20.8 |
| Small Line-Haul | 18.2 |
| Switching | 15.2 |

Conversion to Gram per Ton-Mile Emission Factors

In some cases, it can be helpful to express emission factors as grams emitted per ton-mile of freight hauled. However, this can also be very problematic because the amount of engine work required for each ton-mile varies significantly with a variety of factors. For example, it takes more work to haul freight through mountainous terrain than across flat areas. Since EPA does not have detailed information about these variations, we cannot provide accurate g/ton-mile emission rates. However, very approximate national average values can be calculated based on data collected by the Association of American Railroads for revenue ton-miles and fuel consumption, which show that about one gallon of fuel is consumed by the railroads to haul 400 tons-miles of freight. Thus dividing g/gal emission rates by 400 ton-miles/gal gives approximate g/ton-mile emission rates.

Emission Inventory Estimation

Total emissions can be calculated by multiplying the emission factors (in g/gal) by the fuel consumption rates (in million-gal/yr) to give annual emission rates (in metric tons per year). Multiplying this metric estimate by 1.102 gives standard U.S. tons (or short tons) per year.

EPA has estimated that locomotives consume approximately 4 billion gallons of diesel fuel each year. This includes national/regional freight service, switching, local freight service, and passenger service. The relative amounts of fuel used in the United States for these four different types of operation are shown in Table 4. The great majority of fuel consumed by locomotives each year is used in line-haul freight service by the largest railroads. Smaller amounts are also used in

switching and passenger service, and by very small railroads. For the purpose of this fact sheet, we are aggregating the largest railroads with smaller railroads that are fully subject to EPA’s emission requirements. This includes regional railroads as well as other railroads such as those that are owned by large businesses. The local freight category includes only those railroads that meet our regulatory definition of “small railroad” (40 CFR 1033.901) to qualify for small business allowances under our regulations. These railroads are included in this fact sheet as local whether or not they are truly local in nature. The passenger category includes local commuter railroads and AMTRAK.

| Table 4 - Locomotive Fuel Consumption by Service Category | |
|--|-----|
| National and Regional Freight Line-haul | 88% |
| National Freight Switching | 7% |
| Local Freight | <2% |
| Passenger | 3% |

Other Pollutants

The preceding emission factors include those pollutants for which EPA has set emission standards. However, other pollutants may also be of interest.

The broad category of volatile organic compounds (VOC) is a slightly different way of aggregating the organic pollutants controlled by our HC emission standards. In our rulemaking analysis (<http://www.epa.gov/otaq/regs/nonroad/420r08001a.pdf>), we estimated that VOC emissions can be assumed to be equal to 1.053 times the HC emissions. Similarly, PM emissions can be expressed as PM₁₀ (which includes all particles up to 10 microns in diameter) or PM_{2.5} (which includes only those particles up to 2.5 microns in diameter). PM_{2.5} emissions can be estimated as 0.97 times the PM₁₀ emissions, meaning that nearly all of the PM is less than 2.5 microns in diameter.

Gram per gallon emissions of sulfur dioxide (SO₂) and carbon dioxide (CO₂) are largely independent of engine parameters and are primarily dependent on fuel properties. Locomotive-specific emission rates are not presented here. Instead, SO₂ and CO₂ emission rates should be calculated based on the properties of the specific fuel being used by the locomotives. These emission rates can also be assumed to be the same as for other diesel engines operating on similar fuel. Note that special caution should be used when estimating SO₂ emission rates since the sulfur content of diesel fuel varies much more than the carbon content. Also, while the vast majority of sulfur in the fuel is typically converted to SO₂, up to 5 percent of the sulfur is oxidized further to sulfate (and forms particulate matter), so that the fraction of fuel sulfur emitted as SO₂ may be as low as 95 percent. Examples of these calculations are shown below based on inputs described in the NONROAD technical document NR-009c (<http://www.epa.gov/otaq/models/nonrdmdl/nonrdmdl2004/420p04009.pdf>).

$$\text{SO}_2 \text{ (g/gal)} = (\text{fuel density}) \times (\text{conversion factor}) \times (64 \text{ g SO}_2/32 \text{ g S}) \times (\text{S content of fuel})$$

Consider the example where the density of diesel fuel is 3200 g/gal, the fraction of fuel sulfur converted to SO₂ is 97.8 percent, and the sulfur content of the fuel is 300 ppm.

$$\text{SO}_2 \text{ (g/gal)} = (3200) \times (0.978) \times (2.00) \times (300 \times 10^{-6}) = 1.88 \text{ g/gal}$$

$$\text{CO}_2 \text{ (g/gal)} = (\text{fuel density}) \times (44 \text{ g CO}_2/12 \text{ g C}) \times (\text{C content of fuel})$$

Consider the example where the density of diesel fuel is 3200 g/gal and the carbon content of the fuel is 87 percent by mass.

$$\text{CO}_2 \text{ (g/gal)} = (3200) \times (3.67) \times (0.87) = 10,217 \text{ g/gal}$$

Other trace pollutants such as N₂O, methane, and many air toxics are more dependent on engine parameters. At this time, however, EPA does not have detailed emission rates for these pollutants from locomotives. Where estimates are needed for N₂O or methane, you may assume that emissions of these pollutants from locomotives are similar to those of other diesel engines with similar technology. For N₂O, you may assume the emissions are proportional to total NO_x. For methane, you may assume the emissions are proportional to total hydrocarbons. Note however, that the presence of catalyzed components in the exhaust can significantly affect these ratios. So it is best to compare emissions from uncatalyzed locomotives to emissions from other uncatalyzed diesel engines. While this same approach could be used for air toxics (assuming that air toxic emissions are proportional to total hydrocarbons), EPA has estimated air toxic emissions from locomotives. These estimates are described in the National Emission Inventory documentation (see ftp://ftp.epa.gov/EmisInventory/2002finalnei/documentation/mobile/2002nei_mobile_nonroad_methods.pdf - appendix C).

Projected Future Emission Factors

Tables 5-7 give the expected fleet average NO_x, PM₁₀, and HC emission factors by calendar year for the four categories of locomotives (the same four categories as are shown in Table 4). The steady decline in these emission factors reflects the penetration of the various tiers of locomotives into the fleet over time. More detail regarding the assumptions on which these projections were based can be found in the Regulatory Impact Analysis for the 2008 rulemaking (<http://www.epa.gov/otaq/regs/nonroad/420r08001a.pdf>)

For More Information

You can access the rule and related documents on EPA's Office of Transportation and Air Quality (OTAQ) Web site at: www.epa.gov/otaq/locomotives.htm.

For more information on this rule, please contact the Assessment and Standards Division information line at:

U.S. Environmental Protection Agency
Office of Transportation and Air Quality
2000 Traverwood Drive
Ann Arbor, MI 48105
Voicemail: (734) 214-4636
E-mail: asinfo@epa.gov

Table 5 – NOx Emission Factors (g/gal)

| Calendar Year | Large Line-haul | Large Switch | Small Railroads | Passenger/Commuter | Overall Average |
|---------------|-----------------|--------------|-----------------|--------------------|-----------------|
| 2006 | 180 | 250 | 242 | 244 | 188 |
| 2007 | 175 | 249 | 242 | 229 | 183 |
| 2008 | 169 | 243 | 242 | 214 | 177 |
| 2009 | 165 | 241 | 242 | 200 | 172 |
| 2010 | 157 | 236 | 242 | 183 | 165 |
| 2011 | 149 | 235 | 242 | 167 | 157 |
| 2012 | 144 | 227 | 242 | 157 | 152 |
| 2013 | 139 | 225 | 242 | 147 | 147 |
| 2014 | 135 | 217 | 242 | 138 | 143 |
| 2015 | 129 | 215 | 240 | 131 | 137 |
| 2016 | 121 | 208 | 239 | 119 | 129 |
| 2017 | 114 | 206 | 237 | 112 | 122 |
| 2018 | 108 | 202 | 236 | 105 | 117 |
| 2019 | 103 | 200 | 233 | 98 | 112 |
| 2020 | 99 | 187 | 231 | 93 | 107 |
| 2021 | 94 | 185 | 228 | 88 | 102 |
| 2022 | 89 | 177 | 225 | 83 | 97 |
| 2023 | 84 | 172 | 223 | 78 | 92 |
| 2024 | 79 | 162 | 220 | 73 | 87 |
| 2025 | 74 | 150 | 217 | 68 | 81 |
| 2026 | 69 | 144 | 215 | 64 | 77 |
| 2027 | 65 | 138 | 212 | 60 | 72 |
| 2028 | 61 | 132 | 209 | 56 | 68 |
| 2029 | 57 | 126 | 206 | 52 | 64 |
| 2030 | 53 | 119 | 203 | 49 | 60 |
| 2031 | 49 | 112 | 200 | 46 | 56 |
| 2032 | 46 | 105 | 197 | 42 | 52 |
| 2033 | 43 | 98 | 193 | 39 | 49 |
| 2034 | 40 | 91 | 190 | 36 | 46 |
| 2035 | 37 | 84 | 187 | 33 | 43 |
| 2036 | 35 | 77 | 184 | 30 | 40 |
| 2037 | 33 | 71 | 180 | 28 | 38 |
| 2038 | 31 | 67 | 177 | 26 | 36 |
| 2039 | 29 | 63 | 174 | 24 | 34 |
| 2040 | 28 | 60 | 171 | 23 | 32 |

Table 6 – PM₁₀ Emission Factors (g/gal)

| Calendar Year | Large Line-haul | Large Switch | Small Railroads | Passenger/Commuter | Overall Average |
|---------------|-----------------|--------------|-----------------|--------------------|-----------------|
| 2006 | 6.4 | 6.5 | 6.5 | 6.5 | 6.4 |
| 2007 | 6.3 | 6.5 | 6.5 | 6.4 | 6.3 |
| 2008 | 5.1 | 5.5 | 5.7 | 5.1 | 5.1 |
| 2009 | 4.9 | 5.5 | 5.7 | 5.0 | 4.9 |
| 2010 | 4.7 | 5.4 | 5.7 | 4.8 | 4.7 |
| 2011 | 4.4 | 5.3 | 5.7 | 4.5 | 4.5 |
| 2012 | 4.1 | 5.1 | 5.7 | 4.2 | 4.2 |
| 2013 | 3.8 | 5.0 | 5.6 | 3.9 | 3.9 |
| 2014 | 3.6 | 4.8 | 5.6 | 3.6 | 3.7 |
| 2015 | 3.4 | 4.8 | 5.5 | 3.4 | 3.5 |
| 2016 | 3.1 | 4.6 | 5.5 | 3.1 | 3.3 |
| 2017 | 2.9 | 4.5 | 5.4 | 2.8 | 3.0 |
| 2018 | 2.7 | 4.4 | 5.4 | 2.6 | 2.8 |
| 2019 | 2.5 | 4.4 | 5.4 | 2.3 | 2.6 |
| 2020 | 2.3 | 4.1 | 5.3 | 2.1 | 2.5 |
| 2021 | 2.2 | 4.0 | 5.3 | 2.0 | 2.4 |
| 2022 | 2.0 | 3.9 | 5.3 | 1.8 | 2.2 |
| 2023 | 1.9 | 3.7 | 5.2 | 1.7 | 2.1 |
| 2024 | 1.7 | 3.5 | 5.2 | 1.5 | 1.9 |
| 2025 | 1.6 | 3.2 | 5.1 | 1.4 | 1.8 |
| 2026 | 1.5 | 3.1 | 5.1 | 1.2 | 1.6 |
| 2027 | 1.4 | 3.0 | 5.1 | 1.1 | 1.5 |
| 2028 | 1.3 | 2.8 | 5.0 | 1.0 | 1.4 |
| 2029 | 1.1 | 2.7 | 5.0 | 0.9 | 1.3 |
| 2030 | 1.0 | 2.5 | 4.9 | 0.8 | 1.2 |
| 2031 | 1.0 | 2.4 | 4.8 | 0.7 | 1.1 |
| 2032 | 0.9 | 2.2 | 4.8 | 0.7 | 1.0 |
| 2033 | 0.8 | 2.1 | 4.7 | 0.6 | 0.9 |
| 2034 | 0.7 | 1.9 | 4.6 | 0.6 | 0.9 |
| 2035 | 0.7 | 1.7 | 4.6 | 0.5 | 0.8 |
| 2036 | 0.6 | 1.6 | 4.5 | 0.5 | 0.7 |
| 2037 | 0.6 | 1.5 | 4.4 | 0.4 | 0.7 |
| 2038 | 0.5 | 1.4 | 4.4 | 0.4 | 0.6 |
| 2039 | 0.5 | 1.3 | 4.3 | 0.4 | 0.6 |
| 2040 | 0.4 | 1.2 | 4.2 | 0.3 | 0.5 |

Table 7 - HC Emission Factors (g/gal)

| Calendar Year | Large Line-haul | Large Switch | Small Railroads | Passenger/Commuter | Overall Average |
|---------------|-----------------|--------------|-----------------|--------------------|-----------------|
| 2006 | 9.5 | 15.0 | 11.7 | 9.7 | 10.0 |
| 2007 | 9.3 | 15.0 | 11.7 | 9.5 | 9.8 |
| 2008 | 9.0 | 14.5 | 11.7 | 9.3 | 9.5 |
| 2009 | 8.7 | 14.5 | 11.7 | 9.1 | 9.1 |
| 2010 | 8.3 | 14.1 | 11.7 | 8.6 | 8.8 |
| 2011 | 7.7 | 14.0 | 11.7 | 8.1 | 8.2 |
| 2012 | 7.1 | 13.3 | 11.7 | 7.5 | 7.6 |
| 2013 | 6.5 | 13.3 | 11.7 | 6.9 | 7.1 |
| 2014 | 6.1 | 12.7 | 11.7 | 6.3 | 6.7 |
| 2015 | 5.7 | 12.6 | 11.7 | 5.8 | 6.3 |
| 2016 | 5.1 | 12.0 | 11.7 | 5.2 | 5.7 |
| 2017 | 4.6 | 11.8 | 11.7 | 4.6 | 5.2 |
| 2018 | 4.2 | 11.5 | 11.7 | 4.1 | 4.8 |
| 2019 | 3.9 | 11.4 | 11.7 | 3.5 | 4.5 |
| 2020 | 3.6 | 10.5 | 11.7 | 3.1 | 4.2 |
| 2021 | 3.4 | 10.4 | 11.7 | 2.9 | 4.0 |
| 2022 | 3.2 | 9.8 | 11.7 | 2.7 | 3.8 |
| 2023 | 3.0 | 9.5 | 11.7 | 2.4 | 3.6 |
| 2024 | 2.8 | 8.9 | 11.7 | 2.2 | 3.4 |
| 2025 | 2.6 | 8.0 | 11.7 | 2.0 | 3.1 |
| 2026 | 2.5 | 7.6 | 11.7 | 1.8 | 2.9 |
| 2027 | 2.3 | 7.3 | 11.7 | 1.6 | 2.8 |
| 2028 | 2.1 | 6.9 | 11.7 | 1.5 | 2.6 |
| 2029 | 2.0 | 6.5 | 11.7 | 1.3 | 2.4 |
| 2030 | 1.9 | 6.2 | 11.7 | 1.2 | 2.3 |
| 2031 | 1.7 | 5.8 | 11.7 | 1.1 | 2.2 |
| 2032 | 1.6 | 5.5 | 11.7 | 1.0 | 2.0 |
| 2033 | 1.5 | 5.1 | 11.7 | 0.9 | 1.9 |
| 2034 | 1.4 | 4.7 | 11.7 | 0.8 | 1.8 |
| 2035 | 1.3 | 4.4 | 11.7 | 0.7 | 1.7 |
| 2036 | 1.2 | 4.0 | 11.7 | 0.7 | 1.6 |
| 2037 | 1.2 | 3.7 | 11.7 | 0.6 | 1.5 |
| 2038 | 1.1 | 3.6 | 11.7 | 0.6 | 1.4 |
| 2039 | 1.1 | 3.4 | 11.7 | 0.5 | 1.4 |
| 2040 | 1.0 | 3.2 | 11.7 | 0.5 | 1.3 |