NEW YORK METROPOLITAN TRANSPORTATION COUNCIL

TRANSPORTATION CONFORMITY DETERMINATION

For

Federal Fiscal Years 2011-2015
TRANSPORTATION IMPROVEMENT PROGRAM

And

Federal Fiscal Years 2010-2035
REGIONAL TRANSPORTATION PLAN

October 11, 2011
Draft

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PREFACE

This document was developed by the New York Metropolitan Transportation Council (NYMTC) to demonstrate that Conformity for its Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP) complies with the motor vehicle emission milestones set forth in the New York State Implementation Plan for air quality.
This Conformity Determination was necessitated by 23 CFR 450.322(l) which requires a conformity determination on all updated or amended transportation plans and programs and was done to reflect the update of the Poughkeepsie Dutchess County Transportation Council and the Orange County Regional Transportation Plans.

II. ACRONYMS

ACRONYM	MEANING
AABB	Actions to Achieve a Balanced Budget
CAA	Clean Air Act
CAAA	Clean Air Act Amendments of 1990
CMAQ	Congestion Mitigation/Air Quality
GIS	Geographic Information Systems
HAJ	Household, Auto-Ownership and Journey-Frequency
ICG	Interagency Consultation Group
I/M	Inspection and Maintenance
MDSC	Mode, Destination and Stop Choice
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NYBPM	New York Best Practice Model
NYMTC	New York Metropolitan Transportation Council
NYSDEC	New York State Department of Environmental Conservation
OCTC	Orange County Transportation Council
PDCTC	Poughkeepsie-Dutchess County Transportation Council
PM	Particulate Matter
PONA	Poughkeepsie Ozone Non-Attainment Area
RTP	Regional Transportation Plan
SIP	State Implementation Plan
TIP	Transportation Improvement Program
Trans CAD	Transportation Computer Aided Data
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
VHT	Vehicle hours traveled
VMT	Vehicle miles traveled
VOC	Volatile Organic Compound

III. OVERVIEW

Every urban area in the United States of more than 50,000 persons, as recognized by the US Bureau of the Census, must have a designated Metropolitan Planning Organization (MPO) in order to qualify for Federal highway and transit funding. NYMTC was formed in June, 1982 when the member agencies of the three affected New York State Transportation Coordinating Committees entered into a Memorandum of Understanding (MOU) to form a Council of Transportation Coordinating Committees. This Council as per its MOU was subsequently designated as the new MPO by Governor Carey on July 1, 1982 in chapter 451 of the laws of 1982. On September 20, 1982 the Governor reaffirmed the designation and noted that the council would be known as the New York Metropolitan Transportation Council (NYMTC). The Planning boundary of NYMTC includes the five counties of New York City (Bronx, Manhattan, Queens, Kings, and Richmond); Westchester, Rockland, Putnam, Nassau, and Suffolk Counties.

The Clean Air Act (CAAA) requires United States Environmental Protection Agency (USEPA) to establish the national ambient air quality standards (NAAQS) for various pollutants. Areas where air quality monitoring shows a violation of the NAAQS are designated "non-attainment." By law the NYSDEC is required to produce a plan, known as the *State Implementation Plan (SIP)* that details how sufficient emission reductions, including reductions in the mobile source sector, will be achieved to meet the NAAQS. In addition, non-attainment areas are subject to a provision in CAA §176(c) known as *transportation conformity*.

The intent of the transportation conformity process is to fully coordinate transportation and air quality planning to ensure that Plans, TIPs, and transportation projects will not 1) cause or contribute to any new violation of the NAAQS, 2) increase the frequency or severity of any existing NAAQS violations, or 3) delay timely attainment of the NAAQS or any required interim emissions reductions or other milestones in any area. Conformity requires that the overall set of investments moves the region toward cleaner air. Therefore, NYMTC, as the Metropolitan Planning Organization (MPO) must consider the air quality impacts of its transportation investments.

This conformity determination addresses all non-attainment areas within the NYMTC planning boundary. The New York Metropolitan eight-hour ozone (VOC and NOx) moderate non-attainment area includes all NYMTC counties except Putnam. The carbon monoxide (CO) maintenance area consists of New York City (New York, Kings, Queens, Bronx and Richmond counties), Nassau County, and Westchester County. The coarse particulate matter (PM_{10}) non-attainment area is limited to the county of New York. The NY-NJ-CT annual and 24-hour fine particulate matter ($PM_{2.5}$) non-attainment areas include all NYMTC counties except Putnam and also include all or portions of eight other MPO boundaries in the tri-state area. Details of the regional emissions analysis requirements for each of these non-attainment areas are described in the"Analysis by Pollutant" portion of this document.

Putnam County is also classified non-attainment for 8-hour ozone. Putnam County, although in the planning boundary of NYMTC, is included in the Poughkeepsie moderate 8-hour ozone non-attainment area (PONA) consisting of Putnam, Orange, and Dutchess Counties. The conformity determination for the Putnam County portion of the NYMTC 2011 – 2015 TIP and 2035 Regional Transportation Plan (RTP) as amended, is made in a coordinated effort by NYMTC, the Poughkeepsie-Dutchess County Transportation Council (PDCTC) and the Orange County Transportation Council (OCTC) and is contained in the PONA Conformity Determination (Appendix 4).

IV. CORE PROCESS

The process components noted below are the core of every NYMTC conformity determination for all pollutants in the regional analysis.

1.0 The Modeling Process

1.1 Travel Demand Modeling

To determine the impact of future transportation projects, NYMTC uses the third generation of travel demand models which are commonly referred to as activity based models. This model, known as the New York Best Practice Model (NYBPM), attempts to predict and simulate detailed travel patterns for every individual residing inside the study area over a 24-hour period. The model uses journeys (travel between two primary locations including stops) as a unit of travel rather than just home-to-work trips. The model also looks at the daily activity agenda of each household member and intra-household interactions between them, and other constraints that affect the choice of travel with respect to time and space. The model requires replicating the existing and proposed transportation networks through spatially accurate digital mapping - Geographic Information Systems (GIS). The model uses the digitizes networks and demographic data, along with journey generation, destination and mode choice, time of day travel, and trip assignment data to simulate travel patterns.

1.2 Networks

1.2.1 Roadway Network

The NYBPM highway network is maintained and applied with TransCAD, which features a Geographic Information Systems (GIS) framework that provides a realistic representation of highway route system. The highway network has more than 53,000 links and includes most minor arterial and above roadway facilities. The database includes information on number of lanes, functional class, speed, parking restriction, and truck usage. Centerline and total lane miles are noted in Table 1.

TABLE 1

ROADWAY CENTERLINE MILES & LANE MILES FOR BASE YEAR 2005

FUNCTIONAL CLASS	AREA	AREA	CENTERLINE MILES	TOTAL LANE MILES
1	Rural Interstate	(Rural)	491	1222
2	Rural Principal Arterial	(Rural)	2561	6271
6	Rural Minor Arterial	(Rural)	2158	5486
7	Rural Major Collector	(Rural)	827	1968
8	Rural Minor Collector	(Rural)	472	1002
9	Rural Local	(Rural)	553	1289
11	Interstate	(Urban)	970	2367
12	Principal Arterial Expressway	(Urban)	1276	2818

14	Principal Arterial Streets	(Urban)	2518	5793
16	Minor Arterial	(Urban)	3851	8762
17	Collector	(Urban)	976	2065
19	Local	(Urban)	357	746
20	Ramp	(All)	429	861
TOTAL			17437	40650

1.2.2 Transit Network

The transit route system and networks are developed by combining various existing transit service representations and manually adding or editing other services. Transportation Computer Assisted Design (TransCAD) network settings and coding protocols are established and customized programs are created to calculate the skims needed for travel demand model development.

The transit route system representation integrates the many diverse transit services in New York City, Long Island, northern New Jersey, and five upstate New York counties into a single TransCAD (version 4.5) route system. The services include:

- commuter rail lines (Long Island Rail Road, Metro-North Commuter Railroad, and NJ Transit rail),
- subway lines (New York City Transit, PATH, and Newark City Subway),
- express bus and local bus routes (more than 20 operators), and
- Ferry operations and an aerial tramway.

1.3 Trip Generation

The NYBPM generates trips by applying a set of models called the Household, Auto-Ownership and Journey-Frequency (HAJ) Model that simulates total journeys for every household for all travel purposes over a 24-hour period. A journey is defined as travel between two primary locations, where one end is always home and the other end is work, school or other primary location. Market segmentation is used to group households by income, auto availability, household-size, and type of person (children, workers, and non working adults). A multinomial logit model, combined with Monte Carlo technique is used to generate discrete journeys for individual member of the households after evaluating interaction between household members in combination with time and space constraints that each person experiences in view of multiple-journey and daily activity pattern.

This HAJ model comprises of a set of sub-models applied in sequence: 1) household-synthesizing model, 2) auto-ownership model, and 3) journey production (frequency) model.

a. Household Synthesizing Model

This model forecasts the number and distribution of households in each zone. Using Census data, the model calculates probability for each possible combination of the household characteristics, including income, size, number of workers, non-working adults, and number of children. These probabilities are then used in combination with the aggregate demographic forecasts in order to produce number of households in each category, for each zone, and for all target years.

b. Auto-Ownership Model

This model determines the number of automobiles available in each household. The model considers the influence of household income and composition, vehicle-maintenance cost, parking availability, transit and highway accessibility and density as well as residential area type.

c. Journey-Frequency Model

This model determines the daily number of paired journeys (outbound and inbound) each person makes in every household by travel purpose. Each person is categorized as a worker, non-working adult, or a child. This model evaluates intra-household interrelationships among different household members, transit accessibility, and auto availability to come up with journey frequency for each person. Linkage of journey-frequency models across different household members allows for forecasting a realistic set of journeys made by each household.

1.4 Trip Attraction

The journey attraction model for NYBPM uses linear regression equations with contributing land use variables such as population, households, total employment, retail employment, office employment, school enrollment, and university enrollment. The attraction model is segmented by land use type for six travel purposes resulting in a set of journey attraction rates that are used for destination choice model.

1.5 Trip Distribution

In NYBPM, the Mode, Destination and Stop Choice (MDSC) model replaces the traditional trip distribution and mode choice model. The two steps are combined together as most choices regarding destination and mode are co-dependent. The travel purposes forecasted are work (low, medium, high income), school, university, maintenance, discretionary, and at work journeys.

This model comprises pre-mode choice, destination and mode choice, intermediate stop frequency and location choices modeled in sequence. In addition to combining the destination and the mode choice model this step also introduces the concept of intermediate stops in a journey. Explicitly modeling the number and location of the stops on a journey enables for a realistic representation of the interrelated decisions made by the traveler regarding all destinations (primary and secondary) and modes.

a. Pre-Mode Choice Model

This model distinguishes between motorized and non-motorized travel based on the person and household characteristics and land-use densities around the journey origin.

b. Destination Choice Model

Different destination-choice models are applied to motorized and non-motorized subsets of journeys. They take into account available attractions for each zone in retail, office and other employment categories along with school and university enrollments and then distribute journeys to the destination zones.

c. Motorized Mode Choice Model

The motorized mode-choice model predicts traveler decisions based on various time and cost factors as well as person and household characteristics. This model includes nine modes: drive alone; shared ride - 2 (driver and passenger); shared ride - 3 (driver and two passengers); shared ride - 4+ (driver and three or more passengers); walk to transit (including bus, subway and ferry); drive to transit; walk to commuter rail; drive to commuter rail; and taxi.

d. Stop-Frequency Choice Model

The stop-frequency model considers four combinations: direct journeys without stops, stop on the inbound journey only, stop on the outbound journey only, and stops on both inbound and outbound journeys.

e. Stop-Location Choice Model

The stop-location choice model predicts a location zone for each modeled stop based on the density of potential attractions along the journey route from origin to destination and the deviation (relative additional impedance) from the base journey route that is associated with visiting the stop zone.

The choice models are either multinomial or nested logit constructs. Multinomial logit models are applied for journey frequency, pre-mode, and destination choices. They are based on the assumption that all choice alternatives are equally similar and thus choice can be made according to their utility functions. Nested logit models are applied for mode and car-ownership choice where choice alternatives have a differential degree of similarity and should be grouped by characteristics in the choice modeling procedure (for example transit modes are grouped together while drive alone and shared ride choices form a separate group).

1.6 Other Models

In addition to the main model some auxiliary models are also used.

Time of day Model
Time of day models are used to convert the daily journeys into traditional trips by four time periods for traffic assignments process. These are AM (6 am -10 am), PM (4 pm-8 pm), Midday (10 am – 4 pm), and Night (8 pm – 6 am)

Truck and Commercial Vehicle Trip tables
Trucks and commercial vehicle trip tables are estimated outside the main model using the traditional gravity model and creating forecasts for future years.

External Model
To account for autos coming into the study area, leaving the study area or passing through the study area, external trip tables are forecasted based on data collected at cordon line.

1.7 Assignment

The trip tables from the time of day model are combined with truck and commercial trip tables, and external trip tables to create the highway and transit trip tables by time period. These are assigned to the highway and transit networks to forecast vehicular traffic flows on roadway segments and transit ridership by routes respectively.

1.8. Post Processing for Mobile 6.2 with PPSUITE

To produce the emission analysis, the output from NYBPM is fed into a post processor PPSuite. PPSuite processes the trip assignment files from NYBPM to reconcile Vehicle miles traveled (VMT) with HPMS data and seasonal factors, followed by speed estimates for intersection approaches. After these adjustments, the data is converted into appropriate format to run Mobile 6.2 to produce the emission rates. The following are the major steps of post processing before running Mobile 6.2:

1) Expand assigned 24 hour volumes (daily volume, minus transit buses) from the NYBPM output to 24 one-hour volumes. PPSuite applies VMT hourly distribution data (NY_HourPat_03A.dat) to the daily and peak period volumes from the BPM.

2) Adjust the 24 one-hour volumes to match Assigned Peak Volumes and to account for the impacts of off-peak Spreading.

3) Disaggregate to Vehicle Types – The vehicle pattern files were created using the NYSDOT 'Vehicle Mix 2002.xls' file to breakdown the one hour traffic volume into five vehicle classes.

4) Apply VMT Adjustments to Hourly Link Volumes - The assigned traffic volumes input from the network are adjusted to account for a variety of factors, such as accounting for daily/seasonal variation, reconciling VMT totals with totals reported by the Highway Performance Monitoring System (HPMS), and accounting for off-model projects (including TDM) which change VMT.

5) Calculate Link and Approach Capacities - Link (mid-block) carrying capacities are calculated off-line by the user, reflecting the facility type, area type, and number of lanes, and then a lookup table is built.

6) Calculate Link (mid-block) Delay - Using the above capacity and hourly volumes as input, link speeds are calculated.

7) Calculate Approach Delay - On those links where control devices (signals, stop signs) are either coded or implied by defaults, intersection approach delay is calculated.

8) Calculate VMT, Aggregate Link Speed - Once mid-block and intersection approach V/C ratios and speeds are finalized, the delays that result on both the link and the intersection approach, are summed. The average link speed is calculated from the combination of link and intersection delay.

9) Accumulate VMT, VHT, Average Speed - Vehicle miles traveled (VMT) and vehicle hours traveled (VHT) are accumulated by area type, facility type, and time period.

10) Apply Post-Speed VMT Adjustments - Similar to the VMT adjustments performed before speed calculations (Step 5 above), additional VMT adjustments are applied after the speed calculations (to account for such items as local street VMT not in the model).

11) MOBILE Input Vehicle Types – Calculated in step 3, five vehicle type classes are expanded to 16 classes using the 16-Vehicle Composite which is based on 2002 Vehicle Mix file. In the MOBILE module of the PPSuite, these 16 classes (after the appropriate number of express and local buses are added to represent the HDBT class), are further expanded to 28 classes by using the Diesel Fractions provided by NYSDOT.

12) Prepare and Run MOBILE6.2 to calculate emission rates. PPSuite assembles VMT, speed, vehicle type fractions, meteorological, I/M, and other related data into a MOBILE input file. This file contains several run scenarios for each area (county) and facility group. Input data also varies for the downstate and upstate counties.

13) Emission Estimates. PPSuite applies emission rates to the VMT by county and facility group to calculate area and regional emissions.

14) To calculate the PM 2.5 emission NYMTC moved from a two season approach to a 12-month approach. NYMTC proposed the monthly approach to ICG on January 19, 2010 and received their approval. The monthly approach was adopted to ensure consistency with NYS PM 2.5 SIP prepared by NYSDEC.

Create/Update ITS/SIGNAL Projects in the Network:

A comprehensive ITS/Signal database management methodology was developed and implemented for BPM 2005 base and tested in the April 2010 Conformity. Following are the development steps:

- ITS/Signal Projects were coded on highway network and saved as DBF file named with project number. Following fields are used to represent each project:
  - ITS Projects have 10 ITS fields
  - SIGNAL Projects have 5 signal fields
- ITS/Signal Scenario Manager is developed in line with Highway and Transit scenario manager for the first time in NYBPM, which controls the projects that will be added into the network. The scenario manager is created in excel format and has a list of all the projects, project pin, project name, year of completion of projects and scenario years when project will be active.

1.81 PM2.5 Emission Methodology

NYMTC uses postprocessor PPSuite to estimate emissions for Conformity Determinations. In the previous conformity determination the setup for annual PM2.5 emissions estimate was based upon a 2-season calculation. For the current conformity determination, NYMTC modified this approach to a 12-month analysis by estimating emissions for an average day in each of the 12 months, factoring this data to reflect the number of days in the month, and then summing emissions and related transportation data (VHT and VMT) for all 12 months into an annual PM2.5 emission report. This approach was proposed to ensure consistency with NYSDEC's approach for PM2.5 SIP budget

calculations. The ICG approved this methodology on January 19, 2010 and it includes the following steps:

1. Create a set of seasonal VMT adjustment factors to estimate average daily VMT for each of the 12 months (the average will include weekdays and weekend days).
2. Create monthly VMT expansion factors to convert the average weekday to a month total, for each month. Expansion factors created for the base year will be applied without modification to each future year.
3. Run postprocessor PPSUITE to produce unique VMT, VHT, speed, and PM2.5 emission estimates for each month.
4. Sum the monthly PM2.5 emission totals to an annual total.
5. Modify and test the model run set up (CENTRAL/PPSUITE/MOBILE6.2) and input data for 12-month analysis. Change seasonal file directory structure to monthly.
6. Setup report module for annual PM2.5 emissions.

The monthly VMT factors are based on NYSDOT documentation,
"Table 2.4: EXPANSION FACTORS FOR 2002 TRAFFIC COUNT PROCESSING"

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0.91	0.94	0.96	1.00	1.03	1.06	1.06	1.06	1.02	1.03	0.98	0.94

1.82 AP-42 Calculations for PM10 Road Dust Emissions Estimates

The NYMTC region is in Air Quality Non-Attainment for PM 10 in New York County (Manhattan) only. The AP-42 or the "US EPA's Compilation of Air Pollutant Factors – Volume 1 Stationary Point and Area Sources" is used for Road Dust Calculations to estimate emissions of PM 10 in the NYMTC the conformity determination. The AP-42 was modified by the EPA in January of 2011. NYMTC sought and received, on August 24, 2011 approval of the NYSICG to modify the Road Dust Calculations for PM- 10 methodology to the revised AP-42 update. This update ensures that NYMTC emission calculation approach is consistent with the latest EPA-recommended methodology.

Road Dust Calculations for PM10 Emissions Using January 2011 AP-42 Formula

NYMTC's modified the AP-42 formula as noted below:

1) The empirical predictive equation was revised. The revision is based upon stepwise regression of 83 profile emissions tests and adjustment of individual test data for vehicle exhaust, break wear and tire wear emissions prior to regression of the data.

2) The C term was removed from the empirical predictive equation and the C term values is removed since the exhaust, break wear and tire wear emissions were no longer part of the regressed data.

3) The PM 2.5 particle size multiplier was revised to 25% of PM10, since the PM10 test data used to develop the equation did not meet the necessary PM10 concentrations for a ratio of 15%.

4) The lower speed of the vehicle speed range supported by the empirical predictive equation was revised to 1 mph.

5) Information was added on an improved methodology to develop spatially and temporally resolved silt loadings or emissions factors by Mobile Monitoring Methodologies.

The revised road dust emission factor equation developed based on the above assumptions is stated below**:**

$$E = k\,(sL)^{0.91} \times (W)^{1.02}$$

where;
E: Particle Emission factor (grams/VMT)
k: Particle Size Multiplier = 1.00 (grams/VMT)
sL: Average silt loading of the road (grams/m^2)
W: Average weight of the vehicle fleet (tons)

The K multiplier for PM-10 was updated from 7.3 to 1.00 grams/VMT. The silt loading factor (sL) was updated from 0.2 to 0.09 for local streets according to the ADT estimate above 10,000. And 'C' (emission factor for 1980's vehicle fleet exhaust, break and tire wear) was removed with according to the revised AP-42 methodology.

It is important to note that the AP-42 road dust equation requires the average weight of all vehicles traveling the affected roadways. For example, if 99 percent of traffic on the road is 2-ton cars/trucks

while the remaining 1 percent consists of 20-ton trucks, then the mean weight "W" is 2.2 tons. More specifically, the road dust equation is not intended to be used to calculate a separate emission factor for each vehicle weight class. Instead, only one emission factor is calculated to represent the "fleet" average weight of all vehicles traveling the road.

Table 2 below states the vehicle weights used in the AP-42 calculation for roadways in Manhattan. In June 2009, the ICG concurred that these weights are appropriate for the regional analysis of PM10 emissions in Manhattan.

TABLE 2

Average Vehicle Weight (tons)		
Abbreviation	***Description***	***Weight***
LDGV	Light-Duty Gasoline Vehicles (Passenger Cars)	1.54
LDGT1	Light-Duty Gasoline Trucks 1 (0-6,000 lbs. GVWR, 0-3,750 lbs. LVW)	3.00
LDGT2	Light-Duty Gasoline Trucks 2 (0-6,000 lbs. GVWR, 3,751-5,750 lbs. LVW)	3.00
LDGT3	Light-Duty Gasoline Trucks 3 (6,001-8,500 lbs. GVWR, 0-5,750 lbs. ALVW)	3.50
LDGT4	Light-Duty Gasoline Trucks 4 (6,001-8,500 lbs. GVWR, greater than 5,751 lbs. ALVW)	3.50
HDGV2b	Class 2b Heavy-Duty Gasoline Vehicles (8,501-10,000 lbs. GVWR)	5.00
HDGV3	Class 3 Heavy-Duty Gasoline Vehicles (10,001-14,000 lbs. GVWR)	7.00
HDGV4	Class 4 Heavy-Duty Gasoline Vehicles (14,001-16,000 lbs. GVWR)	8.00
HDGV5	Class 5 Heavy-Duty Gasoline Vehicles (16,001-19,500 lbs. GVWR)	9.75
HDGV6	Class 6 Heavy-Duty Gasoline Vehicles (19,501-26,000 lbs. GVWR)	13.00
HDGV7	Class 7 Heavy-Duty Gasoline Vehicles (26,001-33,000 lbs. GVWR)	16.50
HDGV8a	Class 8a Heavy-Duty Gasoline Vehicles (33,001-60,000 lbs. GVWR)	30.00
HDGV8b	Class 8b Heavy-Duty Gasoline Vehicles (>60,000 lbs. GVWR)	40.00
LDDV	Light-Duty Diesel Vehicles (Passenger Cars)	1.85
LDDT12	Light-Duty Diesel Trucks 1and 2 (0-6,000 lbs. GVWR)	3.00
LDDT34	Light-Duty Diesel Trucks 3 and 4 (6,001-8,500 lbs. GVWR)	4.25
HDDV2b	Class 2b Heavy-Duty Diesel Vehicles (8,501-10,000 lbs. GVWR)	5.00
HDDV3	Class 3 Heavy-Duty Diesel Vehicles (10,001-14,000 lbs. GVWR)	7.00
HDDV4	Class 4 Heavy-Duty Diesel Vehicles (14,001-16,000 lbs. GVWR)	8.00
HDDV5	Class 5 Heavy-Duty Diesel Vehicles (16,001-19,500 lbs. GVWR)	9.75
HDDV6	Class 6 Heavy-Duty Diesel Vehicles (19,501-26,000 lbs. GVWR)	13.00
HDDV7	Class 7 Heavy-Duty Diesel Vehicles (26,001-33,000 lbs. GVWR)	16.50
HDDV8a	Class 8a Heavy-Duty Diesel Vehicles (33,001-60,000 lbs. GVWR)	30.00
HDDV8b	Class 8b Heavy-Duty Diesel Vehicles (>60,000 lbs. GVWR)	40.00
MC	Motorcycles (Gasoline)	0.28

HDGB	Gasoline Buses (School, Transit and Urban)	24.5
HDDBT	Diesel Transit and Urban Buses	24.5
HDDBS	Diesel School Buses	10.6

1.9 Mobile 6.2 Inputs and Parameters

In order to conduct the required regional emissions analyses, NYMTC generated emission factors using the EPA motor vehicle emissions model, MOBILE6.2.

The modeling inputs and parameters used to develop the emission factors are the most recent inputs for each of the 10 NYMTC counties and were established in consultation with the New York State Department of Environmental Conservation (NYSDEC) and the New York State Air Quality Conformity Interagency Consultation Group (ICG). In August 2005, the ICG concurred that the PPSUITE process is an appropriate method to estimate emission for use in NYMTC conformity determinations. On January 19, 2010 the ICG also concurred on the methodology for the new 12-month approach to be used for PM2.5 analysis to be consistent with NYSDEC's approach for PM 2.5 SIP budget calculations. The MOBILE6.2 modeling parameters and input files used for this regional emissions analysis are the most recent inputs that were available for use at the time the modeling process began on May 16, 2011. Specific modeling inputs and parameters used to develop the emission factors are described below:

Evaluation Month - The month of July (i.e., summertime conditions) was specified in the VOC and NOx emission factor input files for all emissions analyses for ozone precursors. The month of January (i.e. wintertime conditions) was specified in the PM10 and CO emission factor input files for the PM10 and CO emissions analyses. For the purposes of calculating annual emissions of $PM_{2.5}$ and NO_X, an additive month-by-month analysis approach was used. Emission factors for direct $PM_{2.5}$ emissions and NO_X precursor emissions were calculated for each month of each analysis year and added cumulatively to estimate annual PM2.5 and NO_X in the $PM_{2.5}$ emissions analysis.

Vehicle Registration Distribution - Year 2002 registration data by county were used to model the 2002 base year. Year 2007 registration data by county were used to model all future analysis years.

Vehicle Mileage Accumulation Rate – MOBILE6.2 default vehicle mileage accumulation rate data were used in the emissions modeling process.

I/M Programs - NYSDEC inspection and maintenance (I/M) program data were used in the emission modeling. The NYSDEC file, NYVIPup.d, contain data for the Upstate NY I/M program. This file was used for modeling all future analysis years in Putnam County. No I/M program was in place in Putnam County in the 2002 base year. The NYSDEC file NYVIP.d was used for all future years in the remaining nine NYMTC counties.

Anti-Tampering Program – Various sets of anti-tampering program data as verified by NYSDEC in May 2009 was used to model downstate and upstate counties in different analysis years.

Anti-Tampering Program

The following anti-tampering program data was used in the modeling:

Table 3 – ANTI-TAMPERING PROGRAM DATA			
Parameter	**Putnam Co. Years 2002 – 2035**	**Nine "Downstate" NYMTC Counties**	
		Years 2002 2010	**Years 2011 - 2035**
Beginning calendar year	1984	1984	1984
Earliest model year	(Current yr – 25 yrs)	(Current yr – 25 yrs)	(Current yr – 25 yrs)
Final model year	(Current yr – 2 yrs)	(Current yr – 2 yrs)	(Current yr – 2 yrs)
Light-duty vehicles subject to inspection	LDGV, LDGT1, LDGT2, LDGT3, LDGT4	LDGV, LDGT1, LDGT2, LDGT3, LDGT4	LDGV, LDGT1, LDGT2, LDGT3, LDGT4
Heavy-duty vehicles subject to inspection	HDGV2B, HDGV3, HDGV4	HDGV2B, HDGV3, HDGV4, HDGV5, HDGV6, HDGV7, HDGV8A, HDGV8B, HDGB	HDGV2B, HDGV3, HDGV4
Annual or biennial	Annual	Annual	Annual
Compliance rate	98%	98%	98%
Component inspections (see MOBILE6.2 User's Guide)	All except tailpipe lead deposit test	All except tailpipe lead deposit test	All except tailpipe lead deposit test

Fuel Program and Fuel RVP- Average and maximum fuel sulfur levels and fuel Reid Vapor Pressure (RVP) levels as verified by NYSDEC in May 2009 were specified in the input files (as listed in Table 4).

Table 4

FUEL SULFUR AND RVP LEVELS				
All NYMTC Counties				
Year(s)	Season	Fuel Sulfur Levels (ppm)		RVP (psi)
		Average	Maximum	
2002	Summer	85.0	1000.0	6.8
	Sprall	111	1000.0	9.7
	Winter	137.0	1000.0	12.5
	Winter	120.0	303.0	12.5
2012 – 2035	Summer	30.0	80.0	6.8
	Sprall	30.0	80.0	9.7
	Winter	30.0	80.0	12.5

In Tables 4 and 5, "summer" parameters are used in the "ozone season day" analysis and the in months of June, July, and August in the annual $PM_{2.5}$ analysis. "Winter" parameters are used in the "carbon monoxide season"

analysis and in the months of December, January, and February in the annual $PM_{2.5}$ analysis. "Sprall" parameters are used in the months of March, April, May, September, October, and November in the annual $PM_{2.5}$ analysis.

Table 5

Gasoline fuel oxygenate data were also specified in the input files (as listed in the Table 5).

GASOLINE FUEL OXYGENATE DATA				
All NYMTC Counties (Reformulated Gasoline Program)				
Year(s)	Season	Oxygenate Type	Oxygenate Content (% by volume)	Market Share Fraction of Oxygenate
2002	Summer	MTBE	10.4%	0.98
		TAME	1.01%	0.02
	Sprall	MTBE	9.55%	0.97
		TAME	0.63%	0.03
	Winter	MTBE	8.7%	0.96
		TAME	0.3%	0.04
2004 – 2035	Summer/Sprall/Winter	Ethanol	10%	1.00

Temperature and Humidity - For each season and each month, county-specific hourly temperatures and relative humidity levels as verified by NYSDEC in May 2009 were used in the modeling.

Diesel Sale Fractions - Diesel sale fractions for NYSDOT Regions 8, 10, and 11 as appropriate were used in the modeling. Year 2002 diesel fractions were used to model the 2002 base year. Year 2007 diesel sale fractions were used to model all future analysis years.

Vehicle Start Distribution - County-specific vehicle start distribution data as received from NYSDEC in spring of 2007 and verified in November 2009 were used in the modeling.

VMT by Hour - County-specific VMT data (allocated by hour of day) as verified by NYSDEC in November 2009 were used in the modeling.

Low-Emission Vehicle (LEV) Standards - The following files were used to model the effects of implementing California's LEV me /LEV II programs in New York State:

- L2CERT.d – Specifies the LEV II 50,000-mile certification standards
- L2EVAP.d – Specifies the phase-in schedule for the LEV II evaporative emission standards
- L2EXH.d – Specifies the phase-in schedule for the LEV II exhaust emission standards
- LEV2.d – Provides fleet penetration fractions for light-duty gasoline vehicles under the LEV I/LEV II programs

These model inputs include the latest existing and future emissions control programs included in NYSDEC's statewide mobile source emission inventory, and the latest MOBILE6.2 input assumptions for the existing and future vehicle fleets traveling on roadways within the NYMTC planning boundary. The MOBILE6.2 input and external data files are available by contacting the NYSDOT Environmental Science Bureau.

Appendices 1A-1F displays the results from the BPM/PPSuite analysis.

1.10 OFF NETWORK CALCULATIONS

Many projects within the NYMTC TIP and RTP can not be analyzed fully on the Transit or Highway Network. In order to fully evaluate all transportation projects which are non-exempt NYMTC uses various methods as detailed below to assess the impact of these projects.

1.10.2 Ozone Action Days

For Ozone Action Days: 1.39% reduction in VMT in the AM, PM, MD and NT, which are all time periods, across the NYMTC region was assumed. This VMT reduction is done as part of post processing and then the resulting VMTs are applied to Mobile 6.2 within the PPSuite.

This approach has been reviewed by the ICG and their concurrence was transmitted to NYMTC from ESB dated 5/27/09.

1.10.3 ITS and Signal Projects in the network

A comprehensive ITS/Signal database management methodology was developed and implemented for BPM 2005 base and tested in the April 2010 Conformity. ITS/Signal projects were coded and updated on the highway network for the year the project would be active.

1.10.4 Off model Line Item Emission Assessment

Some projects could not be analyzed by any of the above tools. In those cases an off model line method was used to analyze them. For each of these projects the change in VMT was calculated and multiplied with emission factors for the average speed of that segment to get the resulting change in emissions. In addition for this conformity the closure of the Miller highway ramp under project X550.75 was reported late and had to be calculated as a line item. This project will be added to the highway network in subsequent conformity determinations. Further details on the handling of this project are noted below.

For a listing of all sub regional projects Using the EPA Commuter Model and all projects evaluated as Line Item emissions see Appendix 2.

1.10.45 Miller Highway

NYMTC was asked to include the Miller Highway 72nd Street Ramp Project into the regional emission analysis, after the assumptions were locked in for the NYBPM runs.
In order to meet the schedule for the PONA RTP conformity determination, NYMTC staff sought and received on August 24, 2011 NYSICG approval for an off model analysis of the Miller Highway 72nd ramp closure project.

The following assumptions were made to conduct an off model analysis to estimate emissions for the various non-attainment pollutants:

- Ramp speed of 20 mph,
- 2204 VPD at exit and entry to the Ramp
- Consider 2011 as the baseline for traffic flow
- All vehicles considered as LDGVs for EAB's emission rate
- 10 miles of diversion due to ramp closure
- Emissions calculated for New York County (Manhattan)
- Functional Class 11/12 (Interstate / freeway) for road type

The following Methodology was used to calculate the Off Model Emission for the various pollutants.

- Calculate the total number of vehicles that will be diverted due to ramp closure.
- Calculate VMTs generated from the diverted vehicles.
- Extract emission rates from NYSDOT EAB's website for all the pollutants.
- Calculate emissions by multiplying the emission rates with the VMTs.

2.0 Planning Assumptions

To be consistent with the updates of the Metropolitan transportation plans of the Poughkeepsie Dutchess and Orange County Transportation Council horizon years the NYMTC socioeconomic and demographic (SED) forecast were extrapolated to include 2040. The sixteen SED forecast variables that are input to the model were disaggregated to Transportation Analysis Zones for the 2005 - 2040 SED years. The New York BPM TAZ system is further explained in section 2.4 Land Use Patterns. The model was run with corresponding socioeconomic forecasts and modified networks for each future no build and build year. Based on consultation with the Interagency Consultation Group (ICG) and as per 40 CFR Part 93.110(a), May 16, 2011 is the date the conformity analysis began the FFY 2011 - 2015 TIP and the 2010-2035 Regional Transportation Plan conformity determination for the update of the PDCTC and OCTC MTP. The regional analysis is based on the planning assumptions in place on that date. Federal and State regulations require that a conformity determination be based on the latest planning assumptions available at the time. Specifically, information on five general areas must be provided: demographic data, transit operating policies, transit service levels, transportation control measures, and key assumptions. The MOBILE6.2 inputs and parameters are established by NYSDEC and provided to NYMTC by the NYSDOT ESB. The most recent set of updates to these inputs and parameters were verified by NYSDEC on November, 2009 and were used in the modeling process as detailed in Section 1.9 of this document.

The SED data applicable to this determination is presented in table 6. To model action years NYMTC developed the SED forecasts on county level in five year intervals from 2005-2040 and disaggregated the forecasts to the TAZ. With the exception of SED and Travel data, NYMTC's planning assumptions and other data are updated annually. The SED forecast is updated every three or four years to coincide with the update of the RTP. The travel data is also updated every three to four years to recalibrate the NYBPM to keep it current with the latest planning assumptions. For more details and information on the NYMTC SED forecasting methods can be found at http://www.nymtc.org/project/forecasting/SED_products/2035%20Forecasts/TM%201.4.5.2.pdf

2.1 Population

Population data from the 2005 Census Population Estimates along with survival rates, births, deaths, and migrations were modeled to produce the 2005-2035 population forecasts in five year increments. These forecasts were adopted by PFAC February 2009. For the current conformity determination the population model was run with the new 2040 extrapolated employment forecasts to produce the 2040 extrapolated population forecast, which was adopted September 16, 2010.

2.2 Employment

The 2000 CTPP Employment estimates were used as the basis for 2005 employment estimates by applying yearly growth rates from the Department of Labor's ES-202 data for year 2000-2005. The growth rates from the county level employment forecasts were applied to the 2005 employment forecast to produce the 2010-2035 TAZ level employment forecasts at five year intervals. National economic Global Insight drivers were extended 2035 to 2040 to produce the 2040 extrapolated forecast at the county level. Then the county level forecasts were disaggregated to the TAZ level based on the 2035 proportions.

2.3 Households

New York's census tract households were distributed from the 2005 American Community Survey county totals using the 2000 decennial census tract to county proportion of total households. The household model was run with the 2040 extrapolated population forecasts to produce the updated household forecasts.

Table 6
Employment, Population, & Households for NYMTC Counties
(in thousands)

Bronx	2002	2011	2012	2014	2020	2030	2035	2040
Employment	274.3	347.2	352.3	362.5	388.9	425.8	442.3	459.1
Population	1358.4	1374.3	1376.3	1380.2	1414.9	1488.7	1528.0	1528.0
Households	468.6	476.1	477.6	480.5	503.8	544.8	562.4	562.4

Kings	2002	2011	2012	2014	2020	2030	2035	2040
Employment	588.2	718.2	728.8	749.8	809.3	896.1	936.7	978.1
Population	2475.7	2527.0	2528.8	2532.4	2609.5	2777.8	2860.3	2860.3
Households	888.1	895.4	897.7	902.3	944.6	1021.3	1047.2	1047.2

New York	2002	2011	2012	2014	2020	2030	2035	2040
Employment	2548.8	2836.4	2848.6	2873.0	2948.0	3171.5	3288.7	3425.7
Population	1555.4	1668.4	1674.0	1685.0	1742.6	1820.0	1884.7	1884.7
Households	748.5	745.0	744.1	742.2	759.0	806.0	842.6	842.6

Queens	2002	2011	2012	2014	2020	2030	2035	2040
Employment	617.5	729.8	735.1	745.8	776.7	831.5	858.2	887.4
Population	2227.2	2282.5	2286.1	2293.4	2370.1	2585.3	2752.3	2752.3
Households	788.3	779.9	779.4	778.4	800.6	860.2	911.5	911.5

Richmond	2002	2011	2012	2014	2020	2030	2035	2040
Employment	116.3	152.4	155.4	161.4	177.8	205.1	218.4	232.2
Population	455.4	482.4	483.7	486.2	508.9	545.9	560.5	560.5
Households	160.4	165.8	166.6	168.1	179.1	192.8	197.3	197.3

Nassau	2002	2011	2012	2014	2020	2030	2035	2040
Employment	742.6	803.4	806.0	811.1	823.5	849.9	869.9	887.4
Population	1339.3	1341.7	1343.6	1347.3	1358.0	1446.7	1485.4	1523.8
Households	448.7	442.1	442.6	443.6	444.5	463.0	464.6	476.7

Suffolk	2002	2011	2012	2014	2020	2030	2035	2040
Employment	721.5	843.7	851.3	866.6	904.3	984.3	1026.7	1067.0
Population	1455.7	1536.7	1543.0	1555.7	1604.4	1710.5	1778.7	1848.5
Households	479.5	506.2	509.2	515.2	533.8	561.4	573.6	596.2

Westchester	2002	2011	2012	2014	2020	2030	2035	2040
Employment	512.7	594.8	601.3	614.4	650.3	712.7	743.0	776.5
Population	937.9	966.6	971.7	981.9	1019.4	1065.3	1083.2	1100.9
Households	342.1	336.6	338.2	341.4	354.4	361.6	359.4	365.3

Rockland	2002	2011	2012	2014	2020	2030	2035	2040
Employment	137.7	159.3	161.3	165.1	175.9	191.9	199.4	207.4
Population	291.2	300.9	302.7	306.4	317.2	333.5	340.0	344.4
Households	93.9	96.9	99.3	104.1	101.4	105.4	104.9	106.2

Table 7 - BPM Zone System – Base Year 2005 Household and Employment Densities

		Best Practice Model Zones		Average Density - Households			Average Density – Jobs		
ID-County	**Census Tracts 2000**	# of BPM TAZ's	Tracts per BPM-TAZ	BPM Households: 2005	HH's per BPM TAZ	Index to Regional Avg.	BPM Employment: 2005	Jobs per BPM TAZ	Index to Regional Avg.
1 - New York	296	**318**	0.93	731,400	2,300	1.06	2,680,700	8,430	2.55
2 – Queens	672	**434**	1.55	782,500	1,803	0.83	646,100	1,489	0.45
3 – Bronx	355	**273**	1.30	468,200	1,715	0.79	306,100	1,121	0.34
4 – Kings	783	**513**	1.53	882,200	1,720	0.80	605,400	1,180	0.36
5 – Richmond	110	**84**	1.31	161,900	1,927	0.89	122,600	1,460	0.44
6 – Nassau	274	**238**	1.15	437,100	1,837	0.85	765,500	3,216	0.97
7 – Suffolk	314	**236**	1.33	484,100	2,051	0.95	782,600	3,316	1.00
8 – Westchester	221	**169**	1.31	333,200	1,972	0.91	561,800	3,324	1.01
9 – Rockland	58	**38**	1.53	92,900	2,445	1.13	145,000	3,816	1.15
10 – Putnam	19	**14**	1.36	34,500	2,464	1.14	34,600	2,471	0.75
11 – Orange	67	**66**	1.02	123,400	1,870	0.86	157,300	2,383	0.72
12 – Dutchess	66	**66**	1.00	102,300	1,550	0.72	150,900	2,286	0.69
13 - Fairfield, CT	209	**213**	0.98	324,700	1,524	0.71	552,900	2,596	0.78
14 - Bergen, NJ	163	**70**	2.33	332,200	4,746	2.20	587,400	8,391	2.54
15 - Passaic, NJ	85	**16**	5.31	163,600	10,225	4.73	223,400	13,963	4.22
16 - Hudson, NJ	158	**158**	1.00	229,200	1,451	0.67	293,900	1,860	0.56
17 - Essex, NJ	212	**218**	0.97	283,800	1,302	0.60	451,800	2,072	0.63
18 - Union, NJ	106	**21**	5.05	182,500	8,690	4.02	285,000	13,571	4.10
19 - Morris, NJ	99	**39**	2.54	172,600	4,426	2.05	368,200	9,441	2.85
20 - Somerset, NJ	62	**21**	2.95	113,600	5,410	2.50	209,000	9,952	3.01
21 - Middlesex, NJ	177	**25**	7.08	267,900	10,716	4.96	479,200	19,168	5.80
22 - Monmouth, NJ	141	**53**	2.66	230,900	4,357	2.02	338,400	6,385	1.93
23 - Ocean, NJ	116	**33**	3.52	221,100	6,700	3.10	207,000	6,273	1.90
24 - Hunterdon, NJ	26	**26**	1.00	46,100	1,773	0.82	75,400	2,900	0.88
25 - Warren, NJ	23	**23**	1.00	43,300	1,883	0.87	48,200	2,096	0.63
26 - Sussex, NJ	40	**24**	1.67	55,200	2,300	1.06	61,200	2,550	0.77
27 - New Haven, CT	185	**184**	1.01	324,500	1,764	0.82	454,300	2,469	0.75
28 - Mercer, NJ	73	**13**	5.62	127,100	9,777	4.52	266,400	20,492	6.20
New York / 12 Cos.	3,235	**2,449**	1.32	4,633,700	1,892	0.88	6,958,600	2,841	0.86
Connecticut / 2 Cos.	209	**213**	0.98	649,200	3,048	1.41	1,007,200	4,729	1.43
New Jersey / 14 Cos.	1,666	**924**	1.80	2,469,100	2,672	1.24	3,894,500	4,215	1.27
Total NYMTC Modeled Area - 28 Counties	**5,110**	**3,586**	**1.42**	**7,752,000**	**2,162**	**1.00**	**11,860,300**	**3,307**	**1.00**
New York Counties	**3,235**	**2,449**	**1.32**	**4,633,700**	**1,892**	**0.88**	**6,958,600**	**2,841**	**0.86**

2.5 Changes to Transit Service and Operations

Transit Fares: The transit fares were updated December 30, 2010 for the baseline condition for the conformity analysis to reflect the 2010 fare increases proposed by MTA. These include:

- New York City Transit Local-Bus and Subway – $2.25 (up from $2 or a 12.5% increase in fare)
- New York City Transit Express Bus – $5.50 (up from $5 or 10% increase in fare)
- Reflection of the MTA New York City Transit Monthly Metrocard fare - Effective December 30, 2010 the MTA raised the monthly Metrocard ticket price from $89/month to $104/month. This resulted in an average overall fare increase of 4.7%. This 4.7% percent fare increase was applied to all MTA NYCT subway and local bus services.
- MTA Long Island Rail Road – Monthly zone based fares increase between 5% - 11.6% depending on the fare zones.
- MTA Metro-North Railroad – Monthly zone based fares increase between 7.1%-20% for New York State fare zones. Connecticut fare zones are unchanged.
- The BPM conformity transit networks reflect the current costs of transit for New Jersey Transit, Port Authority NJNY and other regional transit operators. Since 2005 (calibration year of the BPM), regional transit operators have been raising fares at a rate in excess of inflation. BPM was updated to account for the fares in effect at the time of this analysis.

Transit Service and Projects

Extensive efforts were conducted to ensure the following changes in the transit network service and project delivery were reflected in this conformity determination:

- The BPM conformity transit networks reflect service changes incorporated by the Metropolitan Transportation Authority in recently implemented Actions to Achieve a Balanced Budget (AABB). This program cut a wide variety of services across MTA operations through December 30, 2010.
- Changes in the delivery of MTA “Mega-Projects”. As part of this conformity determination, NYMTC and the MTA collaboratively reviewed the status of regional transit mega projects to refine the sequencing and delivery date of these projects. This effort resulted in a scaling back to “opening year” service offerings while delaying “ultimate build out” for the following regional transit mega projects – including LIRR East Side Access, Second Avenue Subway and #7 Extension to Hudson Yards.
- Inclusion of the Court Square Transfer Station - For each build alternative beyond 2011, NYMTC has updated the transit networks to include a new transfer complex at Court House Square in Long Island City, Queens. This project was scheduled to open in March 2011 and will facilitate transfers between the #7 and the E/M/G subways.
- Ferry services were updated to represent May 2010 ferry operations in the region.
- LIRR and MNR service offerings were reviewed and modified to the May, 2010 schedules.
- NJ TRANSIT commuter rail system was updated and NJ TRANSIT rail service cuts during the off-peak period ,service to Hoboken Terminal and other service changes were updated to May, 2010 schedules.
- Removal of the Access to the Region’s Core Project - On October 7, 2010, NJ TRANSIT discontinued construction of the Access to the Region’s Core project. This project, which would double the number of Trans-Hudson commuter rail trains in operation between New Jersey and New York, was scheduled to be completed in 2017. With the project cancellation, NYMTC removed the Access to the Region’s Core Project from the transit network.

Other Transit Network Changes*:*

It is important to note that only the service changes which can be modeled with the NYMTC BPM were coded. Some of the proposed actions cannot be implemented within the NYMTC BPM. Examples of such service changes include:

- Weekend service plan changes, as the BPM does not represent weekend services.
- Seasonal services (summer), as the BPM does not include seasonal services
- Specialty services (event/school specific) services

2.6 Changes to Highway Network

Highway data was collected to update the highway module of the NYBPM to reflect the baseline condition.

These changes included:

Revised Bridges and Tunnels Tolls

The charges for auto vehicles on major crossings increased from $5.5-$6.5 on, which is an increase of 18%. The minor crossings increased from $2.75 -$3.25 which is an increase of 18%. Verrazano-Narrows Bridge increased from $11-$13 which is an increase of 18%. Henry Hudson Bridge went from $3-$4 an increase of 33%. The E-Z pass across all the bridges and went up by about 5%. The changes occurred as of December 30, 2010.

Revised Truck Tolls

The trucks charges on all the Bridges and Tunnels went up from about 17%-19% depending on the number of axles and 5% for E-Z pass. The changes occurred as of December 30, 2010.

3.0 Long Range Plan Consistency

The projects proposed in the 2011-2015 TIP are consistent with the goals and objectives of the 2010-2035 NYMTC RTP. The regional analysis herein considers and evaluates all projects required by conformity within the RTP horizon year as amended. The NYMTC RTP was originally approved on September 24, 2009 by the NYMTC Council.

4.0 Interagency Consultation

The NYMTC conformity determination is based on continuous coordination with the New York Interagency Consultation Group (ICG). The ICG members are representatives from United States Environmental Protection Agency (USEPA), Federal Highway (FHWA), Federal Transit Administration (FTA), New York State Department of Conservation (NYSDEC), and New York State Department of Transportation's Environmental Science Bureau (ESB). All non-exempt, regionally significant projects and the assigned air quality coding of projects in the 2011-2015 NYMTC TIP and 2010-2035 Regional Transportation Plan were reviewed by the ICG. Many meetings were held to finalize coding; discuss and determine the analysis methodology; and other compliance issues to be addressed as part on the regional emission analysis and its documentation.

5.0 Public Participation

The NYMTC Public Participation Procedures require the TIP and the conformity determination be publically reviewed and adopted. As appropriate, NYMTC will seek public commentary through notification to all known interested parties and media outlets to review and comment on the draft conformity determination of the 2011-2015 TIP and the 2010-2035 RTP as amended. The public comment period will commence on October 11, 2011 and end on November 08, 2011. In addition, NYMTC will post the document on its web site www.nymtc.org.

6.0 Transportation Control Measures

TCMs are strategies that are specifically identified and committed to in SIPs; and are either listed in Section 108 of the CAAA, or will reduce transportation-related emissions by reducing vehicle use or improving traffic flow. Measures which reduce emissions by improving vehicle technologies, fuels, or maintenance practices are not TCMs.

The State and federal conformity regulations require all TIPs and RTPs to provide for the timely implementation of any TCMs from the applicable SIP and to ensure that no project in the program interferes with the implementation of any TCM.

There are no active TCMs in the NYMTC area. All TCMs previously included in the SIP have been completed in a timely manner or, in a few special cases, removed from the SIP. For example, on April 19, 2002 USEPA approved a request from the State of New York to remove several TCMs from the CO SIP that were demonstrated to no longer be necessary. Therefore the status of committed projects in the SIP contains a number of completed TCMs and several TCMs in the Downtown Brooklyn Master Plan that are no longer required.

In addition, no project in the 2011-2015 TIP or 2010-2035 RTP will interfere with the timely implementation of TCMs in other areas.

7.0 Projects Evaluated

All proposed projects in the NYMTC 2011 - 2015 proposed draft TIP were evaluated along with the applicable 2010-2035 RTP projects for their need to be a part of the regional emission analysis update as per 40 CFR part 93. All projects in the RTP and the TIP as amended show the designated air quality code. All assigned codes are based on Table 2 - Exempt Projects from 40 CFR 93.126 and 93.127. All AQ codes were reviewed and approved by NYSICG. All non exempt projects have been further evaluated for the ability to be modeled and the modeling approach. Those evaluations have all been conducted in consultation with the NYSICG. The results of this evaluation are noted in Table 8 on the following pages.

8.0 Regionally Significant Projects

There are two regionally significant projects in the NYMTC Non-Attainment area: 8TRIDGE - Ridge Village Access Road and 8TMETROBEE - Metrocard Implementation on Westchester County Bee

Line. Ridge Village Access Road is included in this conformity starting with the 2009 analysis year and 8TMETROBEE is included in this conformity as part of the no-build for all analysis years.

9.0 Statement of Conformity

The NYMTC 2011-2015 TIP and the 2010-2035 RTP as amended to date, support and comply with the applicable NYS SIPs (Ozone, CO, PM2.5 and PM-10) for the NYMTC Non-Attainment areas. This update of NYMTC 2011-2015 TIP and 2010-2035 RTP conformity determination demonstrates the correlation of these programs with the intent of the Clean Air Act and Transportation Conformity Regulations.

This determination is made in accordance with the criteria and procedures of 93.106 and parts 109 through 119.

TABLE 8A - NON EXEMPT PROJECTS EVALUATED

LOWER HUDSON VALLEY - PUTNAM COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
813064	ROUTE 22 RECONSTRUCTION (I-84 - CR 65)	1/31/2019	2020	PLAN	NON	BPM Highway
875691	BREWSTER NORTH RR PARKING	12/31/1998	2008	Complete	NON	BPM Transit
880546	VARIABLE MESSAGE SIGNS I-684	DELETED				DELETED
880697	PUTNAM COUNTY PARKING LOTS (5 LOTS)	8/31/2009	2012	Complete	NON	BPM Transit
882514	BREWSTER NORTH PARKING EXPANSION	12/31/2004	2008	PRIOR	NON	BPM Transit
M402-02-12	SOUTH-EAST PARKING EXPANSION	12/31/2018	2020	PLAN	NON	BPM Transit
M402-03-14	BREWSTER PARKING EXPANSION	12/31/2007	2008	Complete	NON	BPM Transit

LOWER HUDSON VALLEY - ROCKLAND COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
875685	SUFFERN RR PARKING	5/31/2021	2030	PLAN	NON	BPM Transit
882332	ROCKLAND COUNTY DIESEL RETROFIT PROJECT (was 8TRM85)	1/1/2013	2014	TIP	NON	Off-Model
8TRM85	ROCKLAND COUNTY DIESEL RETROFIT PROJECT (see 882332)	See 882332				
8TRM86	TOWN OF ORANGETOWN DIESEL RETROFIT PROJECT	6/1/2012	2012	TIP	NON	Off-Model
M402-03-06B	NANUET PARKING FACILITY	9/30/2004	2008	Complete	NON	BPM Transit
M402-03-08A	PEARL RIVER A - PARKING FACILITY	2/28/2004	2008	Complete	NON	BPM Transit
M402-03-08B	PEARL RIVER B - PARKING FACILITY	10/31/2005	2008	Complete	NON	BPM Transit

LOWER HUDSON VALLEY - WESTCHESTER COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
800320	TACONIC STATE PARKWAY STAGE 5	5/13/2008	2008	Complete	NON	BPM Highway
800404	BEAR MOUNTAIN PKWY EXTENSION (RT35/202-TSP)	12/31/2020	2030	PLAN	NON	BPM Highway
803210	OLD MAMARONECK RD SIGNALS (HAZELTON TO MAMARONECK)	DELETED				DELETED
804406	GOLDEN'S BRIDGE PARKING PH I	10/31/2002	2008	Complete	NON	BPM Transit
804407	GOLDEN'S BRIDGE PARKING PH II	10/31/2002	2008	Complete	NON	BPM Transit
809941	ATMS/ATIS: WESTCHESTER PARKWAYS TRAFFIC SENSORS	See 810141		Consolidated	NON	PPSUITE/ITS
810141	ATMS/ATIS: WESTCHESTER PKWYS: CROSS COUNTY, SMP, SBP, HUTCH	10/31/2011	2012	PRIOR	NON	PPSUITE/ITS
810322	RT 9A TRAFFIC IMPROVEMENTS (RT 119-RT 100C)	12/31/2016	2020	PLAN	NON	BPM Highway
810622	ATMS/ATIS SPRAIN BROOK PKWY BRP TO I-287	See 810141		Consolidated	NON	PPSUITE/ITS
810623	ATMS/ATIS SPRAIN BROOK PKWY I-287 TO TSP	See 810141		Consolidated	NON	PPSUITE/ITS
812733	ATMS/ATIS ON TACONIC STATE PARKWAY (SPRAIN-RT6)	DELETED				DELETED
821669	ATMS / ATIS SAW MILL RIVER PKWY (I-287 TO CROSS COUNTY PKY)	See 810141		Consolidated	NON	PPSUITE/ITS
821670	ATMS / ATIS SAW MILL RIVER PKWY (I-287 TO I-684)	See 810141		Consolidated	NON	PPSUITE/ITS
821671	ATMS / ATIS SAW MILL RIVER PKWY FIBER OPTIC	See 810141		Consolidated	NON	PPSUITE/ITS

TABLE 8A - NON EXEMPT PROJECTS EVALUATED

856116	RT. 35/202 RECON (PEEKSKILL-TSP)	12/31/2019	2020	PLAN	NON	BPM Highway
872930	I-287 I-87-RT. 120 STAGE 1	7/31/2006	2008	Complete	NON	BPM Highway
872951	I287 I87-CWE STAGE 2 SMRP-BPR	6/11/2008	2008	Complete	NON	BPM Highway
872952	I287 STAGE III - (BX RIVER PKWY - WHITE PLAIN AVE)	11/30/2010	2012	PRIOR	NON	BPM Highway
872957	I287 I87-CWESTAGE 1 TZ-INTER8	7/31/2006	2008	Complete	NON	BPM Highway
872967	ATMS/ATIS: I-287 (BLOOMINGDALE ROAD TO I-95)	7/31/2019	2020	PLAN	NON	PPSUITE/ITS
875480	KIMBAL & MCLEAN TRAFFIC SIGNALS	5/31/2016	2020	TIP	NON	PPSUITE/ITS
875608	NORTH AVENUE TRAFFIC SIGNALS	12/31/2005	2008	Complete	NON	PPSUITE/ITS
875678	CROTON STATION PARKING	11/30/1999	2008	Complete	NON	BPM Transit
875686	WESTCHESTER CITY SIGNALS	11/1/2003	2008	Complete	NON	PPSUITE/ITS
875693	YORKTOWN PARK & RIDE LOT	9/30/2004	2008	Complete	NON	BPM Transit
875758	BRONX RIVER PARKWAY TO YONKERS AVENUE EXIT RAMP	10/29/2009	2012	Complete	NON	BPM Highway
875899	PELHAM ROAD SIGNALS (PELHAM MANOR TO MAIN ST)	12/31/2014	2020	TIP	NON	PPSUITE
875900	NEW ROCHELLE TRAFFIC SIGNALS (MAIN ST & HUGUENOT ST)	5/31/2015	2020	TIP	NON	PPSUITE/Sig
875901	NORTH AVENUE TRAFFIC SIGNALS REPLACEMENT	DELETED				DELETED
875902	WEBSTER AVE SIGNALS (MAIN ST TO EASTCHESTER RD)	7/31/2017	2020	TIP	NON	PPSUITE/Sig
882212	NEW ROCHELE INTERMODAL CENTER	12/31/2004	2008	Complete	NON	BPM Transit
882279	TACONIC EXPRESS BUS SERVICE	12/31/2001	2008	Complete	NON	BPM Transit
882282	YONKERS INTERMODAL CENTER	10/31/2002	2008	Complete	NON	BPM Transit
882307	BEE-LINE PURCHASE OF CLEAN FUEL BUSES	12/31/2008	2012	Complete	NON	BPM Base
894004	ATMS/ATIS: WESTCHESTER PARKWAYS (DESIGN ONLY)	See 810141		Consolidated	NON	See 810141
8TMETROBEE	METROCARD IMPLEMENTATION ON WESTCHESTER COUNTY BEE LINE	6/30/2007	2008	Complete	REGL'SIG	BPM Transit
8TRIDGE	RIDGE HILL VILLAGE ACCESS ROADS	4/30/2011	2012	REGL'SIG	REGL'SIG	BPM Highway
8TRM49	PELHAM INTERMODAL FACILITY	6/30/2009	2012	Complete	NON	BPM Transit
8TRM94	BEE-LINE ORION BUS RETROFIT AND FILTERS	4/30/2009	2012	Complete	NON	Off-Model
H1007	THRUWAY NEW ROCHELLE TOLL EZPASS	11/20/2019	2020	PLAN	NON	BPM Highway
H2070	THRUWAY EXIT 6A YONKERS TOLL EZPASS	11/20/2019	2020	PLAN	NON	BPM Highway
M302-09-22	GOLDENS BRIDGE PARKING	10/31/2002	2008	Complete	NON	BPM Transit
M502-03-03	CORTLANDT PARKING EXPANSION	12/30/2011	2012	TIP	NON	BPM Transit
M502-03-NW	NORTH WHITE PLAINS PARKING EXPANSION	12/30/2012	2014	TIP	NON	BPM Transit

LOWER HUDSON VALLEY - MULTI-COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
808804	INTEGRATED 511 NEW YORK / REGIONAL BRANDING & MARKETING	11/29/2008	2012	TIP	NON	CommChoice
811356	ATMS/ATIS: I684; EXIT 2 TO I84	Deleted				Deleted
881029	SIGNAL RETIMING TO REDUCE EMISSIONS	10/1/2008	2012	Complete	NON	PPSUITE/ITS
881030	OZONE ACTION DAYS - EPISODIC EMISSIONS CONTROLS PROGRAM	12/31/2004	2008	Complete	NON	PPSUITE
881075	NYSDOT TRAFFIC SIGNAL RETIMING & UPGRADE	6/11/2011	2012	PRIOR	NON	PPSUITE/Sig
882038	TRAVEL DEMAND MANAGEMENT/511 PROGRAM	1/31/2008	2012	Complete	NON	CommChoice
882322	YONKERS TO LOWER MANHATTAN FERRY	4/30/2009	2012	Complete	NON	BPM Transit

TABLE 8A - NON EXEMPT PROJECTS EVALUATED

882384	TRIPS 123	5/1/2009	2012	Complete	NON	CommChoice
I001	NYS THRUWAY ITS UPGRADE-2003	9/30/2005	2008	Complete	NON	PPSUITE/ITS
I0096	NYS THRUWAY ITS	11/30/2017	2020	PLAN	NON	PPSUITE/ITS
M402-02-16	MNRR YANKEE STADIUM STATION	4/1/2009	2012	Complete	NON	BPM Transit
M502-03	PARKING PROJECTS -BLOCK FUNDING			TIP	NON	NC - b (Block)

LOWER HUDSON VALLEY - OUTSIDE NYMTC (See Table 8b & Table 8c)

LONG ISLAND - NASSAU COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
005028	SEAFORD OYSTER BAY EXPRESSWAY ITS (NY25-MERRICK)	5/19/2020	2020	PLAN	NON	PPSUITE/ITS
022896	LIE HOV - I-495 4TH LANE REC EXITS 32-37	8/12/2005	2008	Complete	NON	BPM Highway
022935	LIE HOV EXITS 37-38	6/21/2012	2012	TIP	NON	BPM Highway
052326	ITS FOR MEADOWBROOK STATE PARKWAY (MERRICK-NSP)	10/31/2008	2012	Complete	NON	PPSUITE/ITS
075682	NASSAU TRAFFIC SIGNAL COMPUTER EXPANSION	12/31/1999	2008	Complete	NON	PPSUITE/Sig
075727	NASSAU TRAFFIC SIGNAL COMPUTER EXPANSION	12/31/2002	2008	Complete	NON	PPSUITE/Sig
075734	NASSAU TRAFFIC SIGNAL COMPUTER EXPANSION	12/31/2002	2008	Complete	NON	PPSUITE/Sig
075745	MILL POND CONNECTOR ROAD	12/31/2007	2008	Complete	NON	BPM Highway
075751	NASSAU TRAFFIC SIGNAL COMPUTER EXPANSION	12/31/2006	2008	Complete	NON	PPSUITE/Sig
075753	NASSAU TRAFFIC SIGNAL COMPUTER EXPANSION	11/19/2008	2012	Complete	NON	PPSUITE/Sig
075824	OLD COUNTY ROAD ICM	3/16/2011	2012	PRIOR	NON	PPSUITE/ITS
075837	NASSAU COUNTY TRAFFIC SIGNAL SYSTEM UPDATE (0T1526)	9/13/2011	2012	PRIOR	NON	Signal Exempt
075846	PROSPECT AVENUE TRAFFIC CALMING, NORTH HEMPSTEAD	9/15/2010	2012	Complete	NON	BPM Highway
075935	TRAFFIC SIGNAL EXPANSION PHASE 2 (Was 0T1941)	12/18/2012	2014	TIP	NON	PPSUITE/Sig
075947	NASSAU COUNTY SIGNAL EXPANSION PHASE 7 (Was 0T2265)	12/18/2012	2014	TIP	NON	PPSUITE/Sig
075998	NASSAU COUNTY SIGNAL EXPANSION PHASE 6	12/17/2013	2014	TIP	NON	PPSUITE/Sig
080433	RECONSTRUCTION OF ROUTE 25 AND HILLSIDE AVE.	3/4/2005	2008	Complete	NON	BPM Highway
0T1526	COMPUTERIZED TRAFFIC SIGNAL SYSTEM UPDATE	See 075837				See 075837
0T2260	NASSAU COUNTY SIGNAL EXPANSION PHASE 6	See 075998				See 075998
0T2265	NASSAU COUNTY SIGNAL EXPANSION PHASE 7 (See 075947)	See 075947				See 075947
0T2408	NASSAU COUNTY SIGNAL EXPANSION	TBD		TIP	NON	SCOPE TBD
0T2414	NASSAU COUNTY SIGNAL EXPANSION PHASE 8	TBD		TIP	NON	SCOPE TBD
L/02/5K	FARMINGDALE PARKING	10/1/2000	2008	Complete	NON	BPM Transit
L/02/5L	NASSAU COUNTY PARKING	7/1/2000	2008	Complete	NON	BPM Transit
L302/05/5E	MERRICK PARKERS	10/1/1998	2008	Complete	NON	BPM Transit
L302/05/5H	BELLMORE PARKING	2/1/2002	2008	Complete	NON	BPM Transit
L402/05/J2	MINEOLA INTERMODAL CENTER (MIC)	9/30/2006	2008	Complete	NON	BPM Transit
L409/05/DG	LONG BEACH PARKING DECK	4/1/2004	2008	Complete	NON	BPM Transit

TABLE 8A - NON EXEMPT PROJECTS EVALUATED

LONG ISLAND - SUFFOLK COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
001620	NY112 RECONSTRUCTION (I-495-GRANNY RD)	11/1/2017	2020	PLAN	NON	BPM Highway
001621	NY112 RECON (OLD TOWN RD-PINE RD & NY347-25A)	10/12/2011	2012	TIP	NON	BPM Highway
001625	NY112 RECONSTRUCTION (GRANNY RD-NY25)	5/28/2020	2020	PLAN	NON	BPM Highway
001626	NY112 RECONSTRUCTION (PINE RD-NY347)	11/11/2011	2012	TIP	NON	BPM Highway
003016	NY454 & NY27 ITS	7/19/2018	2020	PLAN	NON	PPSUITE/ITS
004196	NY25 RECONSTRUCTION (NY111-MONTCLAIR)	4/25/2019	2020	PLAN	NON	BPM Highway
004197	NY25 RECONSTRUCTION (CR 83 - CORAM MT. SINIA RD)	12/31/2019	2020	PLAN	NON	BPM Highway
004217	NY25 RECONSTRUCTION (MT SINAI RD-CR21)	5/21/2026	2030	PLAN	NON	BPM Highway
005408	NY347 RECONSTRUCTION (NY454 SPLIT TO NY111)	6/18/2012	2012	TIP	NON	BPM Highway
005409	NY347 RECONSTRUCTION (CR97-HALLOCK RD)	5/4/2018	2020	PLAN	NON	BPM Highway
005410	NY347 RECONSTRUCTION (CR97 TO OLD TOWN RD)	5/17/2022	2030	PLAN	NON	BPM Highway
005411	NY347 RECONSTRUCTION (OLD WILLETS TO NY 454 SPLIT)	3/19/2021	2030	PLAN	NON	BPM Highway
005412	NY347 RECONSTRUCTION (NY347 OVER NY97 INTERCHANGE)	11/20/2019	2020	PLAN	NON	BPM Highway
005418	NY347 RECONSTRUCTION (NY25-TERRY RD)	6/17/2020	2020	PLAN	NON	BPM Highway
005420	NY347 RECONSTRUCTION (TERRY RD-NY111)	7/20/2016	2020	TIP	NON	BPM Highway
007708	NY111 REC (TOWNLINE RD-NY347)	3/17/2021	2030	PLAN	NON	BPM Highway
011256	NY110 RECON (LIE SERVICE RD NORTH & ARROWOOD LN)	6/15/2014	2020	TIP	NON	BPM Highway
011330	NY27A 3R WELLWOOD-NY109	11/1/2006	2008	Complete	NON	BPM Highway
022865	LIE HOV - SERVICE ROAD CONST EX 65-67	8/1/2003	2008	Complete	NON	BPM Highway
033912	LONG ISLAND TRAIN INTERMODAL - HIGHWAY	5/11/2016	2020	TIP	NON	BPM Highway
033913	LONG ISLAND TRAIN INTERMODAL - RAIL	6/15/2021	2030	TIP	NON	Off-Model
051641	NSP/NY110 INTERCHANGE RECON (LIE-NSP)	12/31/2013	2014	TIP	NON	BPM Highway
075598	RECON CR16 PORTION ROAD (RONKONKOMA AVE - NICHOLLS)	4/29/2011	2012	PRIOR	NON	BPM Highway
075668	RECON CR80 MONTAUK HIGHWAY (CR46 - MASTIC RD)	4/13/2011	2012	PRIOR	NON	BPM Highway
075669	RECONSTRUCTION OF CR 57 BAYSHORE ROAD (NY27 - NY231)	6/14/2011	2012	TIP	NON	BPM Highway
075681	CR83 OVER I-495 BRIDGE WIDENING	6/30/2008	2008	Complete	NON	BPM Highway
075684	RONKONKOMA STATION PARK & RIDE	12/31/2002	2008	Complete	NON	BPM Transit
075736	CR 39 RECONSTRUCTION (N SEA RD WEST TO NY27)	6/27/2008	2008	Complete	NON	BPM Highway
075736(B)	CR 39 RECONSTRUCTION (N SEA RD-MONTAUK HWY)	4/17/2012	2012	TIP	NON	BPM Highway
075747	SMITHTOWN CBD - HIGH PRIORITY PROJECT (NO 1408)	12/31/2003	2008	Complete	NON	BPM Highway
075823	HUNTINGTON STATION COMMUNITY DEVLOPMENT	10/31/2006	2008	Complete	NON	PPSUITE/Sig
075885	CR58, OLD COUNTY ROAD, I495 TO CR105	(See SC5529)				(See SC5529)
082614	WYANDANCH INTERMODAL CENTER	9/10/2013	2014	TIP	NON	BPM Transit
093561	CALVERTON RAIL SPUR ARRA PROJECT	3/13/2012	2012	TIP	NON	Off-Model
0T2155	NY347 C/M OLD TOWN ROAD TO NY25A	2/21/2020	2020	PLAN	NON	BPM Highway
0T2156	NY25 OVER NY347 RECON & NY347 (NY25-HALLOCK)	3/15/2022	2030	PLAN	NON	BPM Highway
0T2233	I495 HOV ACCESS IMPROVEMENTS, EXITS 52-60 (022933)	9/26/2009	2012	Complete	NON	BPM Highway
0T2236	SAGTIKOS & SUNKEN MEADOWS PARKWAYS (SSP TO NY 25A)	12/20/2023	2030	PLAN	NEW	PPSUITE/Sig
0T2253	SUFFOLK COUNTY CLOSED LOOP SIGNAL SYSTEM, PH 7	4/9/2014	2014	TIP	NON	PPSUITE/Sig
0T2305	NY347 C/M (NSP-OLD WILLETS)	2/1/2022	2030	PLAN	NON	BPM Highway

TABLE 8A - NON EXEMPT PROJECTS EVALUATED

0T2306	NY347 RECONSTRUCTION (STONY BROOK RD TO CR97)	2/12/2019	2020	TIP	NON	BPM Highway
0T2418	SUFFOLK COUNTY CLOSED LOOP SIGNAL SYSTEM	TBD		TIP	NON	SCOPE
0T2419	SUFFOLK COUNTY CLOSED LOOP SIGNAL SYSTEM	TBD		TIP	NON	SCOPE
0T2447	NY347 & NY112 INTERSECTION RECONSTRUCTION	TBD		TIP	NON	BPM Highway
0TBROOKHAV	BROOKHAVEN WALK	5/21/2013	PLAN	PLAN	NON	BPM Highway
SC5529	CR58, OLD COUNTY RD EIP, (I495 TO ROANOKE AVE)	12/15/2010	2012	PRIOR	NON	BPM Highway
RNY27A	RT 27 SUNRISE HIGHWAY / BARNES RD INTERCHANGE	12/19/2018	2020	PLAN	NON	BPM Highway
L/02/5Z	BABYLON STATION REHAB & INTERMODAL CENTER	9/1/2004	2008	Complete	NON	BPM Transit
L302/05/4N	SPEONK COMMUTER PARKING EXPANSION	6/1/2001	2008	Complete	NON	BPM Transit
L302/05/5X	PORT JEFFERSON PARKING	7/1/2001	2008	Complete	NON	BPM Transit
L302/09/CD	DEER PARK COMMUTER PARKING EXPANSION	12/1/2001	2008	Complete	NON	BPM Transit

LONG ISLAND - MULTI-COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
053459	SOUTHERN STATE PKY ITS SYSTEM	9/17/2003	2008	Complete	NON	PPSUITE/ITS
080395	LI COMMUTER CHOICE PROGAM	12/31/2004	2008	Complete	NON	CommChoice
080716	OZONE ACTION DAYS - EPISODIC EMISSIONS CONTROLS	6/30/2007	2008	Complete	NON	PPSUITE
L/09/2W	LIRR: EAST SIDE ACCESS (F2 SERVICE PLAN)	9/15/2016	2020	TIP	NON	BPM Transit
LIRR3.0	LIRR: MAINLINE CORRIDOR (3.0 SERVICE PLAN)	6/28/2030	2030	PLAN	NEW	BPM Transit
L03A-04-27	LIRR: TRACK CONNECTION, WEST SIDE TO PSNY TRACK 14 AND BELOW	6/30/2003	2008	Complete	NON	BPM Transit
L301-02-1K	LIRR: REGULAR AND DUAL MODE LOCOMOTIVES	3/31/2000	2008	Complete	NON	BPM Transit
L502/05/21	PARKING REHABILITATION - COMMUTER PARKING			PRIOR	NON	NC (Block)
L601/01/MD	ALTERNATIVE DIESEL EQUIPMENT FOR SCOOT SERVICE	TBD		TIP	NON	SCOPE
L602/05/U1	LIRR INTERMODAL FACILITY DEVELOPMENT (SITE TBD)	TBD		TIP	NON	SCOPE

NEW YORK CITY - BRONX COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X501.63	ITS ALONG THE I-95 NEW ENGLAND THRUWAY	9/30/2013	2014	PRIOR	NON	PPSUITE/ITS
X720.37	MAJOR DEEGAN EXPWY: WEST FORDHAM RD SAFETY IMPROVEMENT	8/16/2006	2008	Complete	NON	BPM Highway
X731.27	BRUCKNER EXPWY FOURTH LANE IMPLEMENTATION	4/30/2018	2020	PLAN	NON	BPM Highway
X760.55	MANHATTAN COLLEGE: VAN CORTLANDT PARKING	N/A		TIP	NON	NC
X770.05	HUNTS POINT/PORT MORRIS DIESEL EMISSIONS REDUCTION	9/1/2013	2014	TIP	NON	Off-Model
X770.18	GRAND CONCOURSE MULTIMODAL CORRIDOR (166TH to 171ST)	12/31/2013	2014	TIP	NON	BPM Highway
X804.08	BRUCKNER EXPRESSWAY ITS	6/30/2006	2008	Complete	NON	ITS/PPSUITE
X804.10	SEE X804.08	12/31/2004	2008	Complete	NON	ITS/PPSUITE
X770.28E	FORDHAM ROAD SELECT BUS SERVICE	6/28/2008	2008	Complete	NON	BPM Transit
X153ST	EAST 153RD STREET BRIDGE	DELETED				DELETED

TABLE 8A - NON EXEMPT PROJECTS EVALUATED

NEW YORK CITY - KINGS COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X501.55	TRANSPORTATION OF NEW YORK RECYCLABLES	12/31/2011	2012	TIP	NON	Off-Model
X501.74	SOUTH BROOKLYN MARINE TERMINAL RAIL EXTENSION (GM-01-09)	10/15/2012	2014	TIP	NON	Off-Model
X730.88	I-278 GOWANUS EXPRESSWAY RECON	2/28/2003	2008	Complete	NON	BPM Highway
X770.28B	NOSTRAND AVENUE SELECT BUS SERVICE (See X772.15)	12/30/2012	2014	SPLIT	NON	BPM Transit
X772.15	NOSTRAND AVENUE SELECT BUS SERVICE	12/30/2012	2014	TIP	NON	BPM Transit
X804.19	ITS FOR STATE ROUTES IN BKLYN PH.1	8/23/2022	2030	PLAN	NON	PPSUITE/ITS
X806.10	CONSTRUCTION OF JOINT TRAFFIC OPERATION CENTER- VIDEO	12/31/2013	2014	PRIOR	NON	PPSUITE/ITS
X806.22	GOWANUS EXPRESSWAY ITS IMPROVEMENTS	9/6/2011	2012	PRIOR	NON	PPSUITE/ITS
X806.51	GOWANUS EXPWY TRAVEL TIME (VZB-BBT)	7/10/2014	2020	TIP	NON	PPSUITE/ITS
XRK52_ATLYR	ATLANTIC YARDS ARENA REDEVELOPMENT	12/31/2014	2020	REGL'SIG	NON	BPM Highway
ERSKINE	ERSKINE STREET INTERCHANGE	10/31/2002	2008	Complete	BASE	BPM Highway

NEW YORK CITY - NEW YORK COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X024.39	ROUTE 9A ITS	4/30/2007	2008	Complete	NON	PPSUITE/ITS
X500.92	ADVANCED TRAVELER INFORMATION SERVICE	6/30/2012	2012	PRIOR	NON	PPSUITE/ITS
X500.93	DEPLOYMENT OF REAL-TIME TRAFFIC ADAPTIVE SYSTEM CITYWIDE	6/30/2011	2012	PRIOR	NON	PPSUITE/Sig
X500.94	LOCAL STREET NETWORK MANAGEMENT	6/30/2012	2012	PRIOR	NON	PPSUITE/ITS
X550.75	DEMOLITION OF ABANDONED PORTION OF MILLER HIGHWAY VIADUCT	8/1/2011	2012	TIP	NON	Off-Model
X760.21	HARLEM HOSPITAL CENTER PARKING GARAGE	N/A		PRIOR	NON	NC
X760.22	ADVANCED SOLID-STATE TRAFFIC CONTROLLERS, MANHATTAN ZONE 2	9/30/2013	2014	PRIOR	NON	PPSUITE/Sig
X760.41	WEST HARLEM WATERFRONT PROJECT (W125TH STREET)	9/30/2008	2012	Complete	NON	NC
X770.09	ADVANCED SOLID-STATE TRAFFIC CONTROLLERS, MANHATTAN ZONE 1	9/30/2013	2014	TIP	NON	NC
X770.10	ADVANCED SOLID-STATE TRAFFIC CONTROLLERS, MANHATTAN ZONE 3	9/30/2013	2014	TIP	NON	NC
X770.11	ADVANCED SOLID-STATE TRAFFIC CONTROLLERS, MANHATTAN ZONE 4	9/30/2013	2014	TIP	NON	NC
X770.12	ADVANCED SOLID-STATE TRAFFIC CONTROLLERS, MANHATTAN ZONE 5	9/30/2013	2014	TIP	NON	NC
X802.42	TOPICS IV COMPUTERIZED TRAFFIC SIGNAL PROGRAM	12/30/2011	2012	PRIOR	NON	PPSUITE/Sig
X802.43	TOPICS IV SIGNAL COMPUTER	12/30/2011	2012	TIP	NON	PPSUITE/Sig
X802.48	TOPICS IV SIGNALS	6/30/2012	2012	PRIOR	NON	PPSUITE/Sig
X802.69	COMPUTER PROCUREMENT FOR VTCS-WS AREA COMPUTE	12/31/2004	2008	Complete	NON	PPSUITE/Sig
X802.72	SIGNAL MODERNIZATION -1	9/30/2009	2012	Complete	NON	PPSUITE/Sig
X802.73	SIGNAL MODERNIZATION -2	7/10/2010	2012	Complete	NON	PPSUITE/Sig
X806.15	FDR DRIVE & HHP ITS	6/30/2012	2012	PRIOR	NON	ITS/PPSUITE
X822.66A	MOYNIHAN STATION DEVELOPMENT PROJECT	12/31/2018	2020	TIP/PLAN	NON	*NC
X770.28A	1ST AND 2ND AVENUE SELECT BUS SERVICE	9/15/2012	2014	PRIOR	NON	BPM Transit

TABLE 8A - NON EXEMPT PROJECTS EVALUATED

X823.41	34TH STREET TRANSITWAY (Was X770.28C)	10/30/2015	2020	TIP	NON	BPM Transit
XRN14_TIMES	RECONSTRUCTION OF DUFFY AND TIMES SQUARES	5/25/2009	2012	Complete	NON	BPM Highway
XRN53_WTC	WORLD TRADE CENTER SITE STREET OPENINGS	1/4/2016	2020	REGL'SIG	NON	BPM Highway
G610-01AA	SECOND AVENUE SUBWAY, PHASE 1	12/30/2016	2020	TIP	NON	BPM Transit
TN05_SECAV	SECOND AVENUE SUBWAY (FULL BUILD)	6/29/2035	2035	PLAN	NON	BPM Transit
G511-0101A	EXTENSION OF THE #7 LINE (W/O 41ST STN)	12/31/2013	2014	PRIOR	NON	BPM Transit
G511-0101B	EXTENSION OF THE #7 LINE (FULL BUILD)	DELETED				DELETED
ST09-5250	BROADWAY-LAFAYETTE TRANSFER	11/30/2011	2012	PRIOR	NON	BPM Transit

NEW YORK CITY - QUEENS COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X034.05	LONG ISLAND EXPWY/CLEARVIEW EXPWY INTERCHANGE IMPROVEME	9/23/2003	2008	Complete	NON	BPM Highway
X051.60	GCP / KEW GARDENS INTERCHANGE 3	11/4/2021	2030	PLAN	NON	BPM Highway
X228.65	I-495 LONG ISLAND EXPWY ITS	8/31/2010	2012	Complete	NON	PPSUITE/ITS
X228.66	BELL BLVD BRIDGE OVER LIE (AUX LANE) DELETED	DELETED				DELETED
X228.67	I-495 LONG ISLAND EXPWY BR'S & HWY REHAB (EXIT 29-32)	12/29/2006	2008	Complete	NON	BPM Highway
X501.61	ITS ON CROSS ISLAND EXPRESSWAY	9/30/2014	2020	TIP	NON	PPSUITE/ITS
X730.53	BQE RECONSTRUCTION (B'WAY - QNS BLVD)	11/13/2009	2012	Complete	NON	BPM Highway
X735.39A	WHITESTONE EXPWY/FLUSHING RVR BRIDGE REPLACEMENT	4/2/2012	2012	PRIOR	NON	BPM Highway
X735.45	VAN WYCK EXPWY ITS IMPROVEMENTS (KEW - JFK)	3/30/2007	2008	Complete	NON	BPM Highway
X735.47	VAN WYCK SYSTEM REHABILITATION	12/31/2002	2008	Complete	NON	PPSUITE/ITS
X735.48	VWE/WESTERN QUEENS ITS	12/31/2004	2008	Complete	NON	PPSUITE/ITS
X735.56	VAN WYCK/KEW GARDENS INTERCHANGE 1	8/8/2012	2014	PRIOR	NON	BPM Highway
X735.71	GRAND CENTRAL PKWY CORRIDOR ITS	2/28/2007	2008	Complete	NON	PPSUITE/ITS
X735.73	ATLANTIC AVENUE EXTENSION	10/31/2012	2014	TIP	NON	BPM Highway
X735.74	VWE CORRIDOR ITS IMPROVEMENT (JFK-KEW GARDENS)	1/1/2010	2012	Complete	NON	PPSUITE/ITS
X735.75	VAN WYCK/KEW GARDENS INTERCHANGE SB 2B	7/30/2019	2020	PLAN	NON	BPM Highway
X735.77	VAN WYCK/KEW GARDENS INTERCHANGE NB 2A	1/10/2015	2020	TIP	NON	BPM Highway
X770.35	CROSS ISLAND PARKWAY BRIDGE OVER 212 STREET	11/14/2012	2014	TIP	NON	BPM Highway
X770.44	WILLETS POINT DEVELOPMENT (VAN WYCK)	9/30/2015	2020	TIP	NON	BPM Highway
X804.11	EASTERN QUEENS ITS	DELETED				DELETED
X806.20	LONG ISLAND EXPWY ITS (MAIN ST-CITY LINE)	10/5/2010	2012		NON	PPSUITE/ITS
X806.21	GCP & LIE ITS TRANSMIT (VAN WYCK-CITY LINE)	4/26/2013	2014	TIP	NON	PPSUITE/ITS
X823.29	LAGUARDIA AIRPORT FERRY	9/30/2013	2014	TIP	NON	BPM Transit
PANYNJ JFK	PANYNJ JFK AIRTRAIN	12/31/2003	2008	Complete	NON	BPM Transit
EN12-4743	63RD STREET CONNECTION	12/31/2002	2008	Complete	NON	BPM Transit

TABLE 8A - NON EXEMPT PROJECTS EVALUATED

NEW YORK CITY - RICHMOND COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X096.18	WEST SHORE EXRESSWAY ACCESS AND SAFTY IMPROVEMENT	9/1/2020	2030	PLAN	NON	BPM Highway
X096.26	SIE EB RAMP IMPROVEMENTS (SOUTH AVE TO MLK INTERCHANGE)	TBD		TIP	NON	SCOPE
X096.27	SI EARLY ACTION INTELLIGENT TRANSPORTATION SYSTEM (ITS)	TBD		TIP	NON	SCOPE
X501.65	FIBER OPTICS CABLE ALONG KOREAN WAR VETS PKWY	12/30/2011	2012	PRIOR	NON	PPSUITE/ITS
X730.93	SIE TSM IMPROVEMENTS (BUS LANE)	6/30/2005	2008	Complete	NON	BPM Highway
X731.05	ARTHUR KILL ROAD PARK & RIDE	12/30/2021	2030	PLAN	NON	Off-Model
X731.09	STATEN ISLAND ITS (VMS)	7/15/2004	2008	Complete	NON	PPSUITE/ITS
X731.17	STATEN ISLAND ITS (CCTV & VMS)	6/6/2006	2008	Complete	NON	PPSUITE/ITS
X731.22	STATEN ISLAND EXPRESSWAY BUS LANE EXTEN (SLOSSON-VICTORY)	8/15/2013	2014	TIP	NON	BPM Transit
X731.23	SI ITS/ATMS UPGRADE (GOETHALS & OUTERBRIDGE TO BAYONNE & VZB)	8/31/2011	2012	PRIOR	NON	PPSUITE/ITS
X731.30	SIE ACCESS IMPROVEMENTS, NEW RAMPS (VZB-RENWICK)	8/21/2012	2014	PRIOR	NON	BPM Highway
X804.18	STATEN ISLAND ADVANCED TRAVELERS INFORMATION SYSTEM (ATIS)	5/29/2009	2012	Complete	NON	PPSUITE/ITS
X804.45	ARTHUR KILL PARK&RIDE LOT	12/31/2000	2008	Complete	NON	Off-Model
X806.38	HUGUENOT AVENUE PARK & RIDE	12/6/2010	2012	TIP	NON	Off-Model
X806.39	ELTINGVILLE TRANSIT CENTER	11/5/2010	2012	Complete	NON	Off-Model
X806.50	TRAVEL TIME ALONG SIE/W SHORE EXPWY	12/28/2015	2020	TIP	NON	PPSUITE/ITS
X806.62	SMALL‐SCALE PARK & RIDE FACILITIES	TBD		PLAN	NON	SCOPE
SI01-5220	SIRTOA: NEW ARTHUR KILL STATION	6/30/2014	2014	TIP	NON	BPM Transit
X770.28D	HYLAN BOULEVARD SELECT BUS SERVICE (SF01-7397 Multi)	1/31/2013	2014	PLAN	NON	BPM Transit

NEW YORK CITY - MULTI-COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X500.09	QUEENSBORO BRIDGE FIBER CABLE AND SURVEILLANCE	10/20/2006	2008	Complete	NON	PPSUITE/ITS
X501.27	CONSTRUCTION OF FIBER OPTICS IN OUTER BOROUGHS	DELETED				DELETED
X501.29	OZONE ACTION DAYS - EPISODIC EMISSIONS CONTROLS	6/30/2008	2008	Complete	NON	PPSUITE
X501.39	PRIVATE FLEET ALTERNATE FUEL PROGRAM	(See X501.83)				(See X501.83)
X501.40	NYC MUNICIPAL FLEET ALT FUELS PROGRAM	6/30/2010	2012	PRIOR	NON	Off-Model
X501.53	RAIL FREIGHT IMPROVEMENTS (BR CLEARANCES)	N/A		PRIOR	NON	NC
X501.56	TRANSIT ADVISOR / COMMUTER CHOICE INTEGRATION	(See X806.35)				(See X806.35)
X501.60	FIBER OPTICS ON JACKIE ROBINSON PKY	9/30/2014	2020	TIP	NON	PPSUITE/ITS
X501.62	FIBER OPTICS LINKS ON BELT PKWY	9/30/2013	2014	TIP	NON	PPSUITE/ITS
X501.64	FIBER OPTICS LINKS ALONG HENRY HUDSON PKY	9/30/2014	2020	TIP	NON	PPSUITE/ITS
X501.66	UPDATE TRIPS 123	9/30/2009	2012	TIP	NON	CommChoice
X501.83	PRIVATE FLEET ALTERNATE FUEL PROGRAM	12/31/2011	2012	TIP	NON	Off-Model
X726.84	TRAFFIC MANAGEMENT SYSTEM ALONG I-95 CORRIDOR	12/31/2001	2008	Complete	NON	PPSUITE/ITS
X727.04	NYSDOT ARTERIAL OPERATIONAL IMPROVEMENTS	TBD		PLAN	NON	SCOPE
X729.77	KOSCIUSZKO BRIDGE RECONSTRUCTION-CONT4	12/31/2019	2020	PLAN	NON	BPM Highway
X731.24	KOSCIUSZKO BRIDGE RECONSTRUCTION-CONT1	12/31/2019	2020	PLAN	NON	BPM Highway

TABLE 8A - NON EXEMPT PROJECTS EVALUATED

X731.25	KOSCIUSZKO BRIDGE RECONSTRUCTION-CONT2	12/31/2019	2020	PLAN	NON	BPM Highway
X731.26	KOSCIUSZKO BRIDGE RECONSTRUCTION-CONT3	12/31/2019	2020	PLAN	NON	BPM Highway
X735.72	BQE CORRIDOR ITS IMPROVEMENT PROJECT (BBT-GCP)	3/30/2007	2008	Complete	NON	PPSUITE/ITS
X757.90	INTEGRATED TRANSPORTATION MANAGEMENT SYS (CENTER TO CTR)	12/1/2010	2012	PRIOR	NON	PPSUITE/ITS
X760.16	TRAFFIC SIGNAL RETIMING (OUTER BOROUGHS)	9/30/2012	2014	PRIOR	NON	PPSUITE/Sig
X760.46	PRIVATE DIESEL RETROFIT EMISSION REDUCTION	8/13/2011	2012	PRIOR	NON	Off-Model
X770.04	PROGRAM TO RETROFIT HEAVY-DUTY NON ROAD FLEET VEHICLES	9/3/2012	2014	TIP	N/A	N/A
X770.06	MUNICIPAL ON-ROAD FLEET EMISSION REDUCTION	9/1/2013	2014	TIP	NON	NC
X770.07	PRIVATE FLEETS CONVERT TO ALTERNATE FUELS OR RETROFITS	9/1/2013	2014	TIP	NON	Off-Model
X770.08	EXPANSION OF CROSS HARBOR RAIL FLOAT SERVICE	10/28/2011	2012	PRIOR	N/A	Off-Model
X770.28	NYC BUS RAPID TRANSIT DEMONSTRATION (See Individual SBS PINs)					See Individual PINs
X770.29	NYC TAXICAB & BLACK CAR LIMOUSINE	DELETED				Not Modelable
X770.32	BROOKLYN BRIDGE ITS	9/30/2014	2020	TIP	NON	PPSUITE/ITS
X770.37	BLOCK FUNDING FOR TRAFFIC SIGNAL PRIORITY & ADV CONTROLLERS	12/31/2013	2014	TIP	NON	PPSUITE/Sig
X770.45	SCHOOL BUS DIESEL EMISSIONS REDUCTION PROJECT (AF-01-09)	6/1/2011	2012	PRIOR	NON	Off-Model
X770.47	GOETHALS BRIDGE MODERNIZATION PROGRAM	12/15/2016	2020	TIP	NON	BPM Highway
X802.79	EXPANDING VIDEO SURVEILLANCE AT NEW YORK TMC	12/1/2008	2012	Complete	NON	PPSUITE/ITS
X803.28	AUTOMATED TRAFFIC CONTROL SIGNALS	6/30/2010	2012	PRIOR	NON	PPSUITE/ITS
X804.09	TRAFFIC MANAGEMENT SYSTEM ALONG I-95 CORRIDOR	12/31/2001	2008	Complete	NON	PPSUITE/ITS
X804.16	INTERIM TRAFFIC OPERATING CENTER	6/29/2007	2008	Complete	NON	PPSUITE/ITS
X805.34	INTERIM TRAFFIC OPERATION CENTER ELECTRICAL	12/31/1999	2008	Complete	NON	PPSUITE/ITS
X805.35	INTERIM TRAFFIC OPERTION CENTER -HVAC, PLUMBING	12/31/1999	2008	Complete	NON	PPSUITE/ITS
X805.69	MAJOR DEEGAN AND HARLEM RIVER DR. CORRIDORS ITS	1/31/2007	2008	Complete	NON	PPSUITE/ITS
X805.70	CROSS BRONX EXPWY & HUTCHINSON RIVER PKWY ITS	1/31/2007	2008	Complete	NON	ITS/PPSUITE
X805.83	BRONX AND NORTHERN MANHATTAN PARKWAY ITS	3/31/2011	2012	PRIOR	NON	PPSUITE/ITS
X806.16	HIGHWAY EMERGENCY LOCAL PATROL	12/31/2014	2020	TIP	NON	PPSUITE/ITS
X806.28	HIGHWAY EMERGENCY LOCAL PATROL	2/28/2017	2020	TIP	NON	PPSUITE/ITS
X806.35	NEXT GENERATION REG'L TRANSIT INFO PORTAL (was X501.56)	12/31/2012	2014	PRIOR	NON	PPSUITE/ITS
X806.37	511 TRAVEL INFORMATION PROGRAM	12/31/2012	2014	PRIOR	NON	PPSUITE/ITS
X806.49	LIE (MT-MAIN) & BQE (LIE-BBT) TRAVEL TIME	4/2/2014	2014	TIP	NON	PPSUITE/ITS
XT1604	NYSDOT ARTERIAL OPERATIONAL IMPROVEMENTS	TBD		TIP	NON	SCOPE
XT-ARC	ACCESS TO REGIONS CORE (ARC)	DELETED				DELETED
XT-Holland	HOLLAND TUNNEL ITS	12/30/2006	2008	Complete	NON	PPSUITE/ITS
XT-Lincoln	LINCOLN TUNNEL ITS	3/30/2007	2008	Complete	NON	PPSUITE/ITS
SF01-7397	FIRST PHASE OF BRT/SELECT BUS SERVICE	See Individual PINs		TIP	NON	See Individual PINs

TABLE 8B - PROJECTS USED FOR DRAFT HIGHWAY NETWORK OPERATIONAL CHANGES

LOWER HUDSON VALLEY - PUTNAM COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
802137	ROUTE 52 @ FARMERS MILL RD. TOWN OF KENT	6/16/2006	2008	Complete	EXEMPT	BPM Highway
875689	STONELEIGH AVE. @ DREWVULLE RD IMPROVEMENT	12/31/2017	2020	PLAN	EXEMPT	BPM Highway

LOWER HUDSON VALLEY - ROCKLAND COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
803042	ROUTE 59 AT AIRMONT ROAD	7/31/2021	2030	PLAN	EXEMPT	BPM Highway
850207	ROUTE 303 AND NJ LINE ROUTE 59	12/31/2018	2020	PLAN	EXEMPT	BPM Highway
850210	ROUTE 59 FROM ROUTE 303 TO BROOME BLVD	7/31/2019	2020	PLAN	EXEMPT	BPM Highway
850220	ROUTE 303 AT LAKE ROAD, VALLEY COTTAGE	7/31/2017	2020	PLAN	EXEMPT	BPM Highway
875460	NORTH MAIN STREET RECONSTRUCTION	11/30/2001	2008	Complete	EXEMPT	BPM Highway
875523	NEW HEMPSTEAD RD RECON (PALISADES-RT304)	9/30/2011	2012	TIP	EXEMPT	BPM Highway
875898	SUFFERN LANE AT HAMMOND RD	5/31/2018	2020	PLAN	EXEMPT	BPM Highway
875903	PASCACK ROAD RECONSTRUCTION	5/31/2021	2030	PLAN	EXEMPT	BPM Highway
875907	PASCACK ROAD AT LAWRENCE STREET	5/31/2017	2020	PLAN	EXEMPT	BPM Highway
880689	ROCKLAND TRAVEL DEMAND MANAGEMENT PROGRAM	10/31/2007	2008	Complete	EXEMPT	PPSUITE/ITS
8TROUTE59	ROUTE 59 SIGNAL OPTIMIZATION	DELETED				DELETED

LOWER HUDSON VALLEY - WESTCHESTER COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
804094	ROUTE 9 RECONSTRUCTION	12/31/2010	2012	PRIOR	EXEMPT	BPM Highway
810142	RELOCATE HUTCHINSON NB RAMP TO EB CROSS COUNTY PKWY	8/31/2017	2020	PLAN	EXEMPT	BPM Highway
856134	ROUTE 35/202 PINE GROVE COURT/STONEY STREET	12/31/2013	2014	TIP	EXEMPT	BPM Highway
875488	WILMOT ROAD RECONSTRUCTION	12/30/2005	2008	Complete	EXEMPT	BPM Highway
880834	WHITE PLAINS IRREVERSIBLE COORDINATED SIGNAL SYSTEM	9/30/2006	2008	Complete	EXEMPT	PPSUITE/ITS
881049	HELP SYSTEM EXPANSION	9/30/2009	2012	Complete	EXEMPT	PPSUITE/ITS

LOWER HUDSON VALLEY - MULTI-COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
880598	HUDSON VALLEY TRANSPORTATION MANAGEMENT CENTER	12/31/2004	2008	Complete	EXEMPT	PPSUITE/ITS

LOWER HUDSON VALLEY - OUTSIDE NYMTC

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
8ATS06	ATMS / ATIS AT ROUTE 17	DELETED			Not NYMTC	DELETED

TABLE 8B - PROJECTS USED FOR DRAFT HIGHWAY NETWORK OPERATIONAL CHANGES

LONG ISLAND - NASSAU COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
005895	NY 27 SUNRISE HIGHWAY SAFETY (CARTWRIGHT-LOUDEN)	3/1/2008	2008	Complete	EXEMPT	BPM Highway
051731	ITS FOR WANTAGH STATE PARKWAY	11/30/2010	2012	PRIOR	EXEMPT	PPSUITE/ITS
052323	MSP/SSP INTERCHANGE REC	12/25/2017	2020	TIP	EXEMPT	BPM Highway
075778	TRAFFIC SIGNAL EXPANSION, PHASE 1	12/14/2010	2012	PRIOR	EXEMPT	PPSUITE/Sig
075806	MARCUS AVE/DENTON AVE. INTERSECTION IMPROVEMENTS	12/31/2005	2008	Complete	EXEMPT	BPM Highway
075822	OLD COUNTY ROAD, GARDEN CITY AND MINEOLA	11/29/2006	2008	Complete	EXEMPT	BPM Highway
075934	HERB HILL/GARVIES POINT ROAD (0T1947)	Deleted		Deleted		Deleted
075936	TRAFFIC SIGNAL EXPANSION PHASE 3 (Was 0T1942)	3/27/2013	2014	TIP	EXEMPT	PPSUITE/Sig
075958	TRAFFIC SIGNAL EXPANSION PHASE 4 (Was 0T1943)	6/7/2012	2012	TIP	EXEMPT	PPSUITE/Sig
0T1944	TRAFFIC SIGNAL EXPANSION PHASE 5	9/10/2013	2014	TIP	EXEMPT	NEW

LONG ISLAND - SUFFOLK COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
001141	NY 112 INTERSECTION IMPROVEMENTS (Now in 001621 & 001626)	See 001621&26		Consolidated		See 001621&26
004202	NY25 RECONSTRUCTION (NY347-S HOWELL)	2/16/2011	2012	PRIOR	EXEMPT	BPM Highway
004218	NY25/NY110 INTERSECTION IMPROVEMENTS	8/14/2013	2014	TIP	EXEMPT	BPM Highway
011253	LIE/NY110 INTERCHANGE & BRIDGE REHAB	11/9/2011	2012	TIP	EXEMPT	BPM Highway
022908	LIE HOV - I-495 BRIDGE WIDENING EXITS 49-57	5/13/2026	2030	PLAN	EXEMPT	BPM Highway
053464	ITS MONITORING FOR THE SOUTHERN STATE PARKWAY	11/30/2006	2008	Complete	EXEMPT	PPSUITE/ITS
075614	RECON CR 67 MOTOR PARKWAY BRIDGE OVER LIE	9/11/2011	2012	TIP	EXEMPT	BPM Highway
075656	CR3 INTERSECTION REALIGNMENT: WELLWOOD ROAD/CONKLIN AVE	10/15/2014	2020	TIP	EXEMPT	BPM Highway
075671	CR3/SSP BRIDGE WIDENING	6/30/2008	2008	Complete	EXEMPT	BPM Highway
075672(A)	SUFFOLK COUNTY CLOSED LOOP SIGNAL SYSTEM, PH 1	12/31/2006	2008	Complete	EX-PART 93	PPSUITE/Sig
075672(B)	SUFFOLK COUNTY CLOSED LOOP SIGNAL SYSTEM, PH 2 & 3	4/12/2011	2012	PRIOR	EX-PART 93	PPSUITE/Sig
075672(C)	SUFFOLK COUNTY CLOSED LOOP SIGNAL SYSTEM, PH 4	See 075975		Consolidated		See 075975
075818	INTERSECTION IMPRVMT CR 11 PULASKI RD / CR35	1/18/2007	2008	Complete	EXEMPT	BPM Highway
075894	LARKFIELD SIGNAL RECONSTRUCTION (DALY-BELLEROSE)	9/19/2012	2014	PRIOR	EXEMPT	PPSUITE/Sig
075975	SUFFOLK COUNTY CLOSED LOOP SIGNAL SYSTEM, PH4 & PH5)	8/15/2012	2014	TIP	EX-PART 93	PPSUITE/Sig
0T1849	0T1849-NY 347 SHORT TERM IMPROVEMENTS	10/21/2006	2008	Complete	EXEMPT	BPM Highway
0T1967	NY25 RECONSTRUCTION (MONTCLAIR-NY347)	6/22/2022	2030	TIP	EXEMPT	BPM Highway
0T2251	SUFFOLK COUNTY CLOSED LOOP SIGNAL SYSTEM, PH 5	See 075975				See 075975
0T2252	SUFFOLK COUNTY CLOSED LOOP SIGNAL SYSTEM, PH 6	4/10/2013	2014	TIP	EXEMPT	PPSUITE/Sig
0T2405	CR46 WILLIAM FLOYD PKWY RECON (MORICHES-LIE) 0T2405	1/20/2015	2020	TIP	EXEMPT	BPM Highway
0TBROOKHAV	BROOKHAVEN WALK	5/21/2013	2014	TIP	NON	BPM Highway
SC5515	CR46 WILLIAM FLOYD PKWY RECON (MORICHES-LIE) 0T2405	See 0T2405				See 0T2405
SC5521	TURN LANES WELLWOOD AVE:CENTRAL & SMITH	8/16/2010	2012	Complete	EXEMPT	BPM Highway
SC5534	IMPROVEMENTS TO CR80 MONTAUK HIGHWAY (NY112-CR101)	4/20/2010	2012	Complete	EXEMPT	BPM Highway
SC5539	CR7 WICKS ROAD CORRIDOR IMPROVEMENTS (CR67 - 3 AVE)	12/11/2012	2014	PRIOR	EXEMPT	BPM Highway

TABLE 8B - PROJECTS USED FOR DRAFT HIGHWAY NETWORK OPERATIONAL CHANGES

LONG ISLAND - MULTI-COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
051650	NORTHERN STATE PARKWAY INFORM UPGRADE	8/1/2007	2008	Complete	EXEMPT	PPSUITE/ITS
080556	HIGHWAY EMERGENCY LOCAL PATROL (HELP)	12/31/2005	2008	Complete	EXEMPT	PPSUITE/ITS
080567	INTERSECTION IMPROVEMENTS	4/30/2009	2012	Complete	EXEMPT	BPM Highway
080676	OPERATION OF INFORM TRAFFIC MANAGEMENT SYSTEM	12/31/2005	2008	Complete	EXEMPT	PPSUITE/ITS

NEW YORK CITY - BRONX COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X101.07	SAFETY IMPROVEMENTS ON HUTCHINSON RIVER PARKWAY	7/25/2024	2030	TIP	EXEMPT	BPM Highway
X727.03	I-95 NEW ENGLAND THRUWAY INTERCHANGE 11	12/31/2014	2020	TIP	EXEMPT	BPM Highway

NEW YORK CITY - KINGS COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X021.52	BELT PARKWAY OVER MILL BASIN	3/25/2013	2014	TIP	EXEMPT	BPM Highway
X021.53	SHORE (BELT) PKWY OVER FRESH CREEK BASIN (LET w X021.62)	7/7/2014	2020	PRIOR	EXEMPT	BPM Highway
X021.54	BELT PARKWAY OVER GERRITSEN INLET	10/15/2014	2020	TIP	EXEMPT	BPM Highway
X021.62	REPLACEMENT OF BELT PARKWAY BRIDGE OVER PAERDEGAT BASIN	7/7/2014	2020	PRIOR	EXEMPT	BPM Highway
X021.68	LEIF ERICSON DRIVE (BELT PARKWAY) OVER NOSTRAND AVE.	10/17/2014	2020	TIP	EXEMPT	BPM Highway
X021.71	SHORE (BELT) PKWY OVER ROCKAWAY PKWY (LET w X021.62)	7/7/2014	2020	PRIOR	EXEMPT	BPM Highway
X730.57	REHAB OF THE BQE (I-278) FROM FLUSHING AVE TO SANDS ST	5/26/2010	2012	PRIOR	EXEMPT	BPM Highway
X731.19	GOWANUS DECK REPLACEMENT	1/30/2013	2014	Complete	EXEMPT	BPM Highway
X757.64	BELT PKWY AND OCEAN PKWY INTERCHANGE	6/15/2006	2008	Complete	EXEMPT	BPM Highway
XHWK700A	HWK700A_COLUMBIA STREET	6/30/2009	2012	Complete	PLAN	BPM Highway

NEW YORK CITY - NEW YORK COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X804.13	INTEGRATED INCIDENT MANAGEMENT SYSTEM -NEW YORK	12/31/2005	2008	PRIOR	EXEMPT	ITS/PPSUITE
X805.79	HIGHWAY EMERGENCY LOCAL PATROL (HELP) - NEW YORK	12/31/2006	2008	PRIOR	EXEMPT	PPSUITE
X805.80	HIGHWAY EMERGENCY LOCAL PATROL (HELP) PROJECT - NEW YORK	2/26/2010	2012	PRIOR	EXEMPT	PPSUITE
XHWM738	HWM738 EAST AND WEST HOUSTON STREET	7/1/2009	2012	Complete	PLAN	BPM Highway
XTHRU	THRU STREETS PROGRAM	12/31/2002	2008	Complete	PLAN	BPM Highway

NEW YORK CITY - QUEENS COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X735.67	VAN WYCK EXPRESSWAY (I-678) RECONSTRUCTION AND BRIDGE R	12/31/2005	2008	Complete	EXEMPT	BPM Highway
XGCPTRUCK	TRUCKS ON GCP TO BQE	12/31/2004	2008	Complete	BASE	BPM Highway

TABLE 8B - PROJECTS USED FOR DRAFT HIGHWAY NETWORK OPERATIONAL CHANGES

NEW YORK CITY - RICHMOND COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X349.13	KOREAN WAR VETERANS PKWY RAMP TERMINUS PROJECT (X349.19)	10/31/2019	2020	PLAN	EXEMPT	BPM Highway
X501.25	STATEN ISLAND RAILROAD REACTIVATION OF ARLINGTON YARD	12/31/2005	2008	Complete	EXEMPT	PPSUITE
XHWRP054	HYLAN BOULEVARD RECON (4 INTERSECTIONS)	12/31/2013	2014	Local	PLAN	BPM Highway

NEW YORK CITY - MULTI-COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
X726.81	I95 CORRIDOR, ALEXANDER HAMILTON BRIDGE	3/15/2014	2014	PRIOR	EXEMPT	BPM Highway
X757.00	REPLACEMENT OF WILLIS AVE. BRIDGE	3/7/2013	2014	PRIOR	EXEMPT	BPM Highway
X757.49	REPLACEMENT OF THE THIRD AVE. BRIDGE	1/15/2010	2012	PRIOR	EXEMPT	BPM Highway
X757.59	RECONSTRUCTION OF 145TH STREET BRIDGE OVER HARLEM RIVER	3/31/2010	2012	PRIOR	EXEMPT	BPM Highway
X805.81	HIGHWAY EMERGENCY LOCAL PATROL	2/28/2013	2014	PRIOR	EXEMPT	PPSUITE/ITS
X805.82	HIGHWAY EMERGENCY LOCAL PATROL	2/28/2013	2014	PRIOR	EXEMPT	PPSUITE/ITS
X806.02	INTEGRATED INCIDENT MANAGEMENT SYSTEM	9/30/2013	2014	PRIOR	EXEMPT	PPSUITE/ITS
XONEWAY	ONE WAY STREET CONVERSION	12/31/2005	2008	Complete	BASE	BPM Highway

TABLE 8C - EXEMPT TRANSIT PROJECTS USED FOR OPERATIONAL NETWORK CHANGES

LOWER HUDSON VALLEY - PUTNAM COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
882264	HART SHUTTLES (DANBURY-BREWSTER & RIDGEFIELD-KATONAH	1/26/2004	2008	Complete	EXEMPT	BPM Transit
MPATT	PATTERSON PARKING EXPANSION	8/31/2003	2008	Complete		BPM Transit

LOWER HUDSON VALLEY - ROCKLAND COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
882300	TAPPAN ZEE EXPRESS	7/31/2001	2008	Complete	EXEMPT	BPM Transit
882305	COMMUNITY & NEIGHBORHOOD SHUTTLE BUSES	10/31/2017	2020	PLAN	EXEMPT	BPM Transit
882306	RAIL & FERRY FEEDER BUSES	10/31/2015	2020	TIP	EXEMPT	BPM Transit
8T-LOT 14	EXIT 14 PARK AND RIDE LOT	12/31/2002	2008	Complete		BPM Transit
8T-LOT J	PALISADES CENTER LOT J PARK AND RIDE	4/30/1999	2008	Complete		BPM Transit
8T-TOR91	TOR #91 EXPRESS	3/31/2002	2008	Complete		BPM Transit

LOWER HUDSON VALLEY - WESTCHESTER COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
882185	STAMFORD-WHITE PLAINS EXP. BUS (I-BUS)	1/30/1998	2008	Complete	EXEMPT	BPM Transit
895005	WESTCHESTER COUNTY SHUTTLE NETWORK	9/30/2002	2008	Complete	EXEMPT	BPM Transit
8TFDR	FDR PARK & RIDE LOT	6/30/2004	2008	Complete		BPM Transit
MTPCHEST	PORT CHESTER PARKING GARAGE	12/31/2004	2008	Complete		BPM Transit

LOWER HUDSON VALLEY - MULTI-COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
882157	DUTCHESS-PUTNAM-WHITE PLAINS EXP BUS (LEP)	3/25/1996	2008	Complete	EXEMPT	BPM Transit
882161	ORANGE TO WESTCHESTER LINK (OWL)	3/31/1996	2008	Complete	EXEMPT	BPM Transit
882218	HAVERSTRAW-OSSINNING FERRY	9/30/2004	2008	Complete	EXEMPT	BPM Transit
882244	CROTON FALLS SHUTTLE - INCLUDES PIN 882243 (PRIOR YEAR)	1/30/1997	2008	Complete	EXEMPT	BPM Transit
M404-01-18	MNR: UPPER HARLEM SIGNALIZATION	12/31/2004	2008	Complete	EXEMPT	PPSUITE/Sig

TABLE 8C - EXEMPT TRANSIT PROJECTS USED FOR OPERATIONAL NETWORK CHANGES

LOWER HUDSON VALLEY - OUTSIDE NYMTC

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
M302-14-01	SECAUCUS TRANSFER PROJECT	12/31/2003	2008	Complete	Not NYMTC	BPM Transit
M307-01-01	MNR: HARLEM LINE EXTENSION TO WASSAIC	7/31/2000	2008	Complete	Not NYMTC	BPM Transit
M402-03-06A	HARRIMAN PARKING FACILITY	7/31/2003	2008	Complete	Not NYMTC	BPM Transit
M402-03-12	SALISBURG MILLS PARKING PROJECT	10/31/2005	2008	Complete	Not NYMTC	BPM Transit
M502-03-01	WASSAIC PARKING IMPROVEMENTS	12/31/2016	2020		Not NYMTC	BPM Transit
M602-03-BC	BEACON PARKING EXPANSION	4/15/2019	2020		Not NYMTC	BPM Transit
MBEACON	BEACON PARKING EXPANSION	7/31/2006	2008		Not NYMTC	BPM Transit
MBEACON-38	BEACON PARKING EXPANSION	7/31/2006	2008		Not NYMTC	BPM Transit
MBEACON-40	BEACON PARKING EXPANSION	4/15/2019	2020		Not NYMTC	BPM Transit
MTUXEDO	TUXEDO PARKING EXPANSION	5/31/2003	2008	Complete	Not NYMTC	BPM Transit

LONG ISLAND - NASSAU COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
075813	TRANSIT BLOCK - LI BUS	6/30/2003	2008	Complete	EXEMPT	BPM Transit
080726	TRANSIT BLOCK - MERRICK SHUTTLE	12/31/2002	2008	Complete	EXEMPT	BPM Transit
0L3200	HEMPSTEAD TRANSIT CENTER INTERMODAL FACILITY UPGRADE	4/1/2009	2012	Complete	EXEMPT	BPM Transit

LONG ISLAND - SUFFOLK COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
075814	SC INNOVATIVE TRANSIT	7/31/2001	2008	Complete	EXEMPT	BPM Transit
080659	SUFFOLK COUNTY EXPRESS (THE CLIPPER)	3/30/2000	2008	Complete	EXEMPT	BPM Transit

LONG ISLAND - MULTI-COUNTY - NONE

NEW YORK CITY - BRONX COUNTY - NONE

NEW YORK CITY - KINGS COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
ST09-5560	CONSTRUCT NEW PASSENGER TRANSFER: JAY - LAWRENCE ST STN	12/10/2010	2012	Complete	EXEMPT	BPM Transit
STILLWELL	STILLWELL AVE. STATION RECONSTRUCTION	3/31/2005	2008	Complete	EXEMPT	BPM Transit

TABLE 8C - EXEMPT TRANSIT PROJECTS USED FOR OPERATIONAL NETWORK CHANGES

NEW YORK CITY - NEW YORK COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
G412-01AA	FULTON STREET TRANSIT CENTER	6/30/2014	2014	TIP	EXEMPT	BPM Transit
G412-0202	SOUTH FERRY TERMINAL STATION	3/16/2009	2012	Complete	EXEMPT	BPM Transit

NEW YORK CITY - QUEENS COUNTY - NONE

NEW YORK CITY - RICHMOND COUNTY - NONE

NEW YORK CITY - MULTI-COUNTY

PIN	Project Name	Completion Date	1st Year Modeled	Scenario	Status	Analysis Tool
MHTN BRDG	FULL MANHATTAN BRIDGE RECONSTRUCTION	2/22/2004	2008	Complete	BASE	BPM Transit
TR01-6630	OPERATIONS: INCREASE SERVICE ON #4 AND #5 LINES, PH 1	2/28/2010	2012	Complete	EXEMPT	BPM Transit
TR01-7009	OPERATIONS: INCREASE SERVICE ON #4 AND #5 LINES, PH 2	4/15/2014	2014	TIP	EXEMPT	BPM Transit

V. ANALYSIS BY POLLUTANT

Eight-hour Ozone
Budget for New York Portion of the NY-NJ-CT 8-hour Moderate Non-Attainment Area (VOC and NO_X Ozone Precursors in tons/day)

USEPA classified Westchester, Rockland, Bronx, New York, Richmond, Kings, Queens, Nassau and Suffolk Counties as a moderate non-attainment for the eight-hour ozone standard on June 15, 2004. On June 12, 2008, the USEPA released the proposed Motor Vehicle Emissions Budgets (MVEB) for the New York portion of the New York-New Jersey-Connecticut 8-hour ozone non-attainment area for public review and comment. Effective August 17, 2010, the USEPA determined that the proposed MVEB for the New York portion of the NY-NJ-CT 8-hour ozone moderate nonattainment was adequate. Thus, the required emissions test for the purposes of the 8-hour ozone standard is the emissions "budget test" for the ground level ozone precursors VOC and NO_X. The MVEB established specific budgets for a typical "ozone season day" as shown in the table below.

Analysis Years – The years 2014, 2020, 2030, 2035 and 2040 were analyzed for consistency with the MVEB for the eight-hour ozone standard. These analysis years meet the requirements of the federal transportation conformity regulations as follows: Analysis year 2014 meets the requirement that the first analysis year be no more than five years from the year that the conformity determination is being made. Analysis year 2035 is the horizon year of NYMTC's Regional Transportation Plan and 2040 is the horizon year for the PDCTC and OCTC Metropolitan Transportation Plans. Analysis years 2020 and 2030 were analyzed to meet the requirement that consecutive analysis years be no more than ten years apart.

9- County NOx Emissions Analysis (tons per day)

	Analysis Year				
Scenario	**2014**	**2020**	**2030**	**2035**	**2040**
BPM/PPSuite 9 Counties	92.45	52.72	35.72	34.33	35.44
Off model emissions	-0.76	-0.67	-0.60	-0.59	-0.59
Total emissions	91.68	52.05	35.12	33.74	34.85
Ozone SIP budget (NO_X)	147.43	147.43	147.43	147.43	147.43
Conclusion	***Pass***	***Pass***	***Pass***	***Pass***	***Pass***

9-County VOC Emissions Analysis (tons per day)

	Analysis Year				
Scenario	**2014**	**2020**	**2030**	**2035**	**2040**
BPM/PPSuite 9 Counties	88.65	65.64	59.64	63.12	64.76
Off model emissions	-0.02	-0.02	-0.02	-0.02	-0.02
Total emissions	88.63	65.62	59.62	63.10	64.74
Ozone SIP budget (VOC)	111.08	111.08	111.08	111.08	111.08
Conclusion	***Pass***	***Pass***	***Pass***	***Pass***	***Pass***

***Note: Putnam County emissions are not included in the tables above. Putnam County is part of the Poughkeepsie Moderate eight-hour ozone non-attainment area (PONA). Appendix 4 contains the conformity determination for the PONA.**

Carbon Monoxide

On November 6, 1991 the counties of Westchester, Bronx, New York, Richmond, Kings, Queens and Nassau were classified as a moderate non-attainment area under the eight-hour CO standard. By 1999, air quality monitoring demonstrated the CO standard had been attained in this area. Before an area can be permanently designated to attainment, it must first be reclassified as a *Maintenance Area.* The designation of *maintenance* means the monitored air quality has attained the CO standards, but the ambient CO standard must be attained for a period of at least ten years. On April 19, 2002 EPA officially designated these seven counties as a CO Maintenance Area and approved New York State's proposed CO Maintenance Plan for the New York Metropolitan Area. This Maintenance Plan included an emissions budget for CO and is expected to be in effect for two ten-year periods. Consistent with 40 CFR Part 93.109(f) and 93.118, NYMTC is demonstrating conformity using the budget test for CO.

Analysis Years – The years 2012, 2020, 2030, 2035 and 2040 were analyzed for consistency with the MVEB for the New York State portion of the NY-NJ-CT CO Maintenance Area.
These analysis years meet the requirements of the federal transportation conformity regulation as follows: Year 2012 is the final milestone year in the applicable CO Maintenance SIP; 2012 also meets the requirement that the first analysis year be no more than five years from the year that the conformity determination is being made. Analysis year 2035 is the horizon year of NYMTC's Regional Transportation Plan and 2040 is the horizon year for the PDCTC and OCTC Metropolitan Transportation Plans. Analysis years 2020 and 2030 were analyzed to meet the requirement that consecutive analysis years be no more than ten years apart.

7 County CO Emissions Analysis in Tons/Day

	Analysis Years				
Year	**2012**	**2020**	**2030**	**2035**	**2040**
BPM / PPSuite 7 Counties	1148.43	1026.23	1046.13	1076.01	1102.35
Off model emissions	-0.44	-0.03	-0.15	-0.14	-0.14
Total emissions	1147.99	1026.20	1045.98	1075.87	1102.21
SIP budget	2,431	2,431	2,431	2,431	2,431
Conclusion	***Pass***	***Pass***	***Pass***	***Pass***	***Pass***

Coarse Particulate Matter between 2.5 and 10 Microns in diameter (PM_{10})

New York County was classified as a moderate non-attainment area for PM_{10} on January 20, 1994. *There is no applicable motor vehicle emissions budget for PM_{10}, therefore,* consistent with 40 CFR Part 93.109(g) and 93.119 the regional emissions analysis includes a comparison of the TIP and RTP *build* scenario emissions to the *no build* scenario in each conformity analysis year.

The years 2012, 2020, 2030, 2035 and 2040 were analyzed to demonstrate conformity to the PM_{10} standard. These analysis years meet the requirements of the federal transportation conformity regulation for PM_{10} non-attainment areas without motor vehicle emissions budgets as follows: Year 2012 is final milestone year in the applicable CO Maintenance SIP; 2012 also meets the requirement that the first analysis year be no more than five years from the year that the conformity determination is being made. Analysis year 2035 is the horizon year of NYMTC's Regional Transportation Plan and 2040 is the horizon year for the PDCTC and OCTC Metropolitan Transportation Plans. Analysis years 2020 and 2030 were analyzed to meet the requirement that consecutive analysis years be no more than ten years apart.

PM_{10} Emissions Analysis for New York County (Manhattan) for Winter (tons/day)

Year	2002	2012N	2012B	2020N	2020B	2030N	2030B	2035N	2035B	2040N	2040B
Manhattan County	**13.64**	2.29	2.20	2.31	2.22	2.37	2.32	2.44	2.40	2.52	2.47
Off- Model			-0.04		-0.03		-0.03		-0.03		-0.03
Total		2.29	2.16	2.31	2.19	2.37	2.29	2.44	2.37	2.52	2.44
Conclusion		***Pass***		***Pass***		***Pass***		***Pass***			

B = build scenario (TIP & RTP)
N = no build scenario

Fine Particulate Matter ($PM_{2.5}$)

1997 PM standards: In July 1997, EPA issued National Ambient Air Quality Standards (NAAQS) for fine particulate matter ($PM_{2.5}$), designed to protect the public from exposure to $PM_{2.5}$ at levels that may cause health problems. The 1997 standards included an annual standard set at 15 micrograms per cubic meter, based on the 3-year average of annual mean $PM_{2.5}$ concentrations and a 24-hour standard of 65 micrograms per cubic meter, based on the 3-year average of the 98th percentile of 24-hour concentrations. The New York-New Jersey-Connecticut metropolitan area is classified non-attainment for the 1997 annual $PM_{2.5}$ standard and is classified attainment for the 1997 24-hour $PM_{2.5}$ standard.

2006 PM standards: In September 2006, the USEPA revised the 1997 fine particle standards. The 2006 standards strengthened the 24-hour $PM_{2.5}$ standard from 65 micrograms per cubic meter (µg/m3) to 35 µg/m3, and retained the current annual $PM_{2.5}$ standard at 15 µg/m3. On December 14, 2009, the NY-NJ-CT metropolitan area was classified non-attainment for the new 2006 24-hour $PM_{2.5}$ standard. Transportation conformity will apply for those areas designated as non-attainment under the new standard one year after the effective date of the designations (i.e. December 14, 2010). Thus, this regional emissions analysis demonstrates conformity to both the 2006 24-hour $PM_{2.5}$ standard and 1997 annual $PM_{2.5}$ standard.

The NY-NJ-CT $PM_{2.5}$ non-attainment area encompasses all or portions of nine MPOs, as follows:

Connecticut: Council of Governments of the Central Naugatuck Valley (COGCNV)
Greater Bridgeport and Valley Regional Planning Organizations (GB&V MPO)
Housatonic Valley Council of Elected Officials (HVCEO)
South Central Regional Council of Governments (SCRCOG)
South Western Regional Planning Agency (SWRPA)
New Jersey: Delaware Valley Regional Planning Commission (DVRPC)
North Jersey Transportation Planning Authority (NJTPA)
New York: New York Metropolitan Transportation Council (NYMTC) Orange County Transportation Council (OCTC)

The Connecticut and New Jersey $PM_{2.5}$ motor vehicle emissions budgets for the 1997 annual $PM_{2.5}$ standard were found to be adequate by USEPA on June 20, 2007 and June 26, 2006, respectively. The MVEB for the New York State portion of the NY-NJ-CT PM2.5 non-attainment area includes Orange County and all NYMTC counties except Putnam and was found adequate by USEPA on December 1, 2010. Thus, to demonstrate conformity to the annual PM2.5 standard, the annual budget test for direct PM2.5 and NOx precursor was used.

Until a motor vehicle emissions budget for the New York State portion of the NY-NJ-CT 2006 24-hour $PM_{2.5}$ non-attainment area is found to be adequate by USEPA, the transportation conformity regulations at 40 CFR Part 93.109(k)(3)(i) require conformity to the SIP for the 2006 24-hour $PM_{2.5}$ standard to be demonstrated by passing the motor vehicle emissions budget that was established for the 1997 annual $PM_{2.5}$ standard. Accordingly, the combined OCTC and NYMTC emissions analyses demonstrate that emissions predicted in each analysis year "action" scenario are not greater than emissions established by the MVEB for annual direct $PM_{2.5}$ and NOx. Noted below are the analysis tables for NYMTC, and the combined OCTC/NYMTC tables. For details of the OCTC conformity process and procedures, see the OCTC $PM_{2.5}$ conformity document in Appendix 3.

The years 2014, 2020, 2030, 2035 and 2040 were analyzed to demonstrate conformity to the SIP for both $PM_{2.5}$ standards. These analysis years meet the requirements of the federal transportation conformity regulation as follows: Year 2014 meets the requirement that the first analysis year be no more than five years from the year that the conformity determination is being made. Year 2014 is also the attainment year for the 2006 24-hour $PM_{2.5}$ standard. Analysis year 2035 is the horizon year of NYMTC's Regional Transportation Plan and 2040 is the horizon year for the PDCTC and OCTC Metropolitan Transportation Plans. Analysis years 2020 and 2030 were analyzed to meet the requirement that consecutive analysis years be no more than ten years apart. The ICG concurred that these are the appropriate analysis years for both $PM_{2.5}$ standards.

NYMTC 9-County and OCTC Combined Annual
NO_X Emissions Analysis in Tons/Year – Budget Test

Year	2014	2020	2030	2035	2040
NYMTC	36,719.61	20,760.36	13,888.71	13,418.70	13,900.85
OCTC	3,215.46	1,893.63	1,194.72	1,167.51	1,273.87
Total (Tons/year)	36,719.61	20,760.36	13,888.71	13,418.70	13,900.85
Budget	77,571	77,571	77,571	77,571	77,571
Conclusion	***PASS***	***PASS***	***PASS***	***PASS***	***PASS***

NYMTC 9-County and OCTC Combined Annual PM2.5 Emissions Analysis in Tons/Year – Budget Test

Year	2014	2020	2030N	2035	2040
NYMTC	976.09	847.88	853.13	870.45	894.71
OCTC	78.94	71.89	74.66	78.59	85.79
Total (Tons / year)	1,058.00	919.77	927.79	949.04	980.5
Budget	1,750	1,750	1,750	1,750	1,750
Conclusion	***PASS***	***PASS***	***PASS***	***PASS***	***PASS***

NYMTC 9-County Annual PM2.5 Emissions Analysis in Tons/Year

Year	2014N	2014B	2020N	2020B	2030N	2030B	2035N	2035B	2040N	2040B
BPM/PPSuite 9 Counties	1004.68	979.70	876.63	854.90	881.12	860.00	900.36	877.31	926.20	901.6
Off-Model		-0.64		-7.02		-6.87		-6.85		-6.85
Total (Tons / year)	1,004.68	979.06	876.63	847.88	881.12	853.13	900.36	870.45	926.20	894.71
Conclusion	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**

B = build scenario (TIP & RTP)
N = no build scenario

NYMTC 9-County Annual NOx Emissions Analysis in Tons/Year

Year	2014N	2014B	2020N	2020B	2030N	2030B	2035N	2035B	2040N	2040B
NYMTC 9 Counties	33,992.47	33707.05	19,216.04	19,063.34	12957.24	12871.49	12531.87	12426.63	12,914.6	12,802.42
Off-Model		-202.90		-196.61		-177.50		-175.44		-175.44
Total (Tons / year)	33992.47	33504.15	19216.04	18866.73	12957.24	12693.99	12531.87	12251.19	12,914.58	12,626.98
Conclusion	***Pass***	**Pass**	***Pass***	***Pass***	***Pass***	***Pass***	***Pass***	***Pass***	***Pass***	***Pass***

B = build scenario (TIP & RTP)
N = no build scenario

VI. APPENDICES

Appendix 1A Build Summer Emissions by County

Appendix 1B Build Winter Emissions by County

Appendix 1C Build & No Build Annual PM2.5 Emissions by County

Appendix 1D No Build Summer Emissions by County

Appendix 1E No Build Winter Emissions by County

Appendix 1F Build and No Build Annual NOX Emissions by County

Appendix 1G NYMTC PM 2.5 Monthly Results

Appendix 2 Off-Model Projects and Analysis

Appendix 3 OCTC Draft Conformity Determination

Appendix 4 PDCTC Draft Conformity Determination

Appendix 5 Public Comments and Responses

Appendix 6 Resolutions

Appendix 1A

2014 Build Summer Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,657,962	294,997	12.4	1.51	1.29
	2) Arterials	5,479,302	1,441,922	3.8	5.65	4.74
	3) Locals	2,811,671	1,874,447	1.5	3.03	1.73
	County Total	**11,948,935**	**3,611,366**	**3.3**	**10.19**	**7.77**
2) Queens	1) Freeways	11,954,941	461,581	25.9	4.28	4.98
	2) Arterials	10,152,198	1,285,088	7.9	5.84	6.91
	3) Locals	5,369,479	894,913	6.0	3.10	1.92
	County Total	**27,476,618**	**2,641,582**	**10.4**	**13.21**	**13.81**
3) Bronx	1) Freeways	5,551,954	181,436	30.6	1.96	3.39
	2) Arterials	2,925,753	328,736	8.9	1.55	2.30
	3) Locals	2,718,436	339,805	8.0	1.45	1.28
	County Total	**11,196,143**	**849,977**	**13.2**	**4.96**	**6.96**
4) Kings	1) Freeways	4,183,358	164,699	25.4	1.49	1.81
	2) Arterials	9,839,217	1,667,664	5.9	6.69	6.27
	3) Locals	2,788,670	619,704	4.5	1.94	1.27
	County Total	**16,811,245**	**2,452,067**	**6.9**	**10.12**	**9.34**
5) Richmond	1) Freeways	2,339,602	68,610	34.1	0.83	1.40
	2) Arterials	2,602,647	169,003	15.4	1.11	1.42
	3) Locals	1,714,420	209,076	8.2	0.86	0.65
	County Total	**6,656,669**	**446,689**	**14.9**	**2.80**	**3.47**
6) Nassau	1) Freeways	13,102,279	444,145	29.5	4.38	5.20
	2) Arterials	14,690,868	1,728,337	8.5	7.73	6.54
	3) Locals	8,169,788	1,008,616	8.1	4.49	3.00
	County Total	**35,962,935**	**3,181,098**	**11.3**	**16.60**	**14.73**
7) Suffolk	1) Freeways	13,401,113	316,811	42.3	4.29	6.86
	2) Arterials	17,976,918	1,393,560	12.9	8.69	7.85
	3) Locals	11,578,068	523,894	22.1	4.32	3.57
	County Total	**42,956,099**	**2,234,265**	**19.2**	**17.29**	**18.28**
8) Westchester	1) Freeways	13,324,147	643,679	20.7	5.15	8.98
	2) Arterials	6,224,800	368,331	16.9	2.66	3.04
	3) Locals	5,583,513	164,221	34.0	2.07	1.79
	County Total	**25,132,460**	**1,176,231**	**21.4**	**9.87**	**13.81**
9) Rockland	1) Freeways	3,570,332	124,837	28.6	1.25	1.92
	2) Arterials	3,071,311	142,190	21.6	1.21	1.51
	3) Locals	1,961,499	179,954	10.9	1.15	0.85
	County Total	**8,603,142**	**446,981**	**19.2**	**3.61**	**4.28**
Grand Total (9 Counties)		**186,744,246**	**17,040,257**	**11.0**	**88.65**	**92.45**
10) Putnam	1) Freeways	1,841,095	28,767	64.0	0.69	2.66
	2) Arterials	2,391,394	207,947	11.5	1.29	1.54
	3) Locals	2,620,629	73,202	35.8	1.04	0.91
	County Total	**6,853,118**	**309,916**	**22.1**	**3.01**	**5.11**

Appendix 1A

2020 Build Summer Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,686,930	302,207	12.2	1.06	0.74
	2) Arterials	5,536,199	1,456,894	3.8	4.24	2.70
	3) Locals	3,120,841	2,229,172	1.4	2.68	1.12
	County Total	**12,343,970**	**3,988,274**	**3.1**	**7.97**	**4.56**
2) Queens	1) Freeways	12,092,017	474,197	25.5	2.97	2.77
	2) Arterials	10,267,240	1,299,651	7.9	4.25	3.99
	3) Locals	5,431,207	890,362	6.1	2.22	1.14
	County Total	**27,790,464**	**2,664,209**	**10.4**	**9.44**	**7.90**
3) Bronx	1) Freeways	5,701,599	191,329	29.8	1.39	1.83
	2) Arterials	3,048,019	354,421	8.6	1.17	1.36
	3) Locals	2,818,776	356,807	7.9	1.08	0.75
	County Total	**11,568,394**	**902,557**	**12.8**	**3.65**	**3.93**
4) Kings	1) Freeways	4,356,805	173,578	25.1	1.07	1.03
	2) Arterials	10,024,085	1,758,611	5.7	5.03	3.65
	3) Locals	2,857,736	649,485	4.4	1.47	0.77
	County Total	**17,238,626**	**2,581,675**	**6.7**	**7.57**	**5.45**
5) Richmond	1) Freeways	2,460,355	74,331	33.1	0.60	0.74
	2) Arterials	2,790,458	195,137	14.3	0.86	0.87
	3) Locals	1,856,673	241,126	7.7	0.68	0.42
	County Total	**7,107,486**	**510,594**	**13.9**	**2.14**	**2.03**
6) Nassau	1) Freeways	13,123,191	446,367	29.4	3.04	2.83
	2) Arterials	14,770,319	1,737,685	8.5	5.65	3.72
	3) Locals	8,244,927	1,030,616	8.0	3.31	1.75
	County Total	**36,138,437**	**3,214,668**	**11.2**	**12.00**	**8.29**
7) Suffolk	1) Freeways	13,706,926	329,493	41.6	3.02	3.65
	2) Arterials	18,558,605	1,461,307	12.7	6.48	4.51
	3) Locals	12,242,300	569,409	21.5	3.21	2.18
	County Total	**44,507,831**	**2,360,210**	**18.9**	**12.72**	**10.33**
8) Westchester	1) Freeways	14,026,688	674,360	20.8	3.88	4.87
	2) Arterials	6,485,403	390,687	16.6	1.96	1.78
	3) Locals	6,003,802	183,043	32.8	1.58	1.11
	County Total	**26,515,893**	**1,248,090**	**21.2**	**7.42**	**7.75**
9) Rockland	1) Freeways	3,830,517	140,828	27.2	0.94	1.09
	2) Arterials	3,207,213	150,573	21.3	0.89	0.88
	3) Locals	2,064,664	194,780	10.6	0.89	0.51
	County Total	**9,102,394**	**486,181**	**18.7**	**2.72**	**2.48**
Grand Total (9 Counties)		**192,313,495**	**17,956,457**	**10.7**	**65.64**	**52.72**
10) Putnam	1) Freeways	1,991,448	31,312	63.6	0.53	1.49
	2) Arterials	2,500,297	238,124	10.5	1.02	0.85
	3) Locals	2,864,514	81,610	35.1	0.79	0.56
	County Total	**7,356,259**	**351,046**	**21.0**	**2.34**	**2.90**

Appendix 1A

2030 Build Summer Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,735,072	308,684	12.1	0.91	0.54
	2) Arterials	5,581,549	1,508,527	3.7	3.84	1.64
	3) Locals	3,199,806	2,461,389	1.3	2.52	0.82
	County Total	**12,516,427**	**4,278,600**	**2.9**	**7.26**	**3.00**
2) Queens	1) Freeways	12,334,909	495,378	24.9	2.51	1.83
	2) Arterials	10,698,995	1,426,533	7.5	3.97	2.49
	3) Locals	5,655,607	958,577	5.9	2.06	0.94
	County Total	**28,689,511**	**2,880,488**	**10.0**	**8.53**	**5.26**
3) Bronx	1) Freeways	5,826,949	196,856	29.6	1.16	1.04
	2) Arterials	3,137,242	373,481	8.4	1.06	0.78
	3) Locals	2,871,800	368,179	7.8	0.96	0.53
	County Total	**11,835,991**	**938,517**	**12.6**	**3.18**	**2.36**
4) Kings	1) Freeways	4,438,529	178,254	24.9	0.90	0.67
	2) Arterials	10,321,598	1,876,654	5.5	4.72	2.40
	3) Locals	2,978,035	726,350	4.1	1.41	0.62
	County Total	**17,738,162**	**2,781,258**	**6.4**	**7.02**	**3.69**
5) Richmond	1) Freeways	2,574,637	79,464	32.4	0.51	0.44
	2) Arterials	3,029,380	236,670	12.8	0.84	0.60
	3) Locals	2,114,549	285,750	7.4	0.69	0.37
	County Total	**7,718,566**	**601,884**	**12.8**	**2.04**	**1.41**
6) Nassau	1) Freeways	13,407,179	473,752	28.3	2.59	1.91
	2) Arterials	15,362,231	1,896,572	8.1	5.27	2.70
	3) Locals	8,623,417	1,105,566	7.8	3.07	1.40
	County Total	**37,392,827**	**3,475,890**	**10.8**	**10.93**	**6.01**
7) Suffolk	1) Freeways	14,357,682	344,309	41.7	2.58	2.32
	2) Arterials	19,549,124	1,551,518	12.6	5.91	3.25
	3) Locals	12,985,407	633,434	20.5	2.90	1.76
	County Total	**46,892,213**	**2,529,261**	**18.5**	**11.38**	**7.33**
8) Westchester	1) Freeways	15,036,359	751,818	20.0	3.48	2.81
	2) Arterials	6,841,374	435,756	15.7	1.80	1.23
	3) Locals	6,556,249	206,822	31.7	1.45	0.93
	County Total	**28,433,982**	**1,394,396**	**20.4**	**6.73**	**4.96**
9) Rockland	1) Freeways	4,290,562	168,257	25.5	0.89	0.73
	2) Arterials	3,420,885	167,690	20.4	0.81	0.61
	3) Locals	2,225,997	229,484	9.7	0.86	0.39
	County Total	**9,937,444**	**565,432**	**17.6**	**2.56**	**1.72**
Grand Total (9 Counties)		**201,155,123**	**19,445,726**	**10.3**	**59.64**	**35.72**
10) Putnam	1) Freeways	2,256,022	35,981	62.7	0.47	0.70
	2) Arterials	2,771,674	282,824	9.8	0.98	0.58
	3) Locals	3,161,509	93,813	33.7	0.72	0.47
	County Total	**8,189,205**	**412,618**	**19.8**	**2.16**	**1.74**

Appendix 1A

2035 Build Summer Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,805,681	319,805	11.9	0.93	0.52
	2) Arterials	5,718,197	1,545,459	3.7	3.97	1.46
	3) Locals	3,310,225	2,546,327	1.3	2.64	0.82
	County Total	**12,834,103**	**4,411,591**	**2.9**	**7.54**	**2.81**
2) Queens	1) Freeways	12,596,725	520,526	24.2	2.57	1.78
	2) Arterials	11,172,125	1,596,018	7.0	4.28	2.26
	3) Locals	5,987,923	1,088,713	5.5	2.19	0.97
	County Total	**29,756,773**	**3,205,257**	**9.3**	**9.04**	**5.01**
3) Bronx	1) Freeways	5,901,680	201,423	29.3	1.17	0.97
	2) Arterials	3,195,233	389,663	8.2	1.09	0.65
	3) Locals	2,926,633	380,082	7.7	1.00	0.51
	County Total	**12,023,546**	**971,167**	**12.4**	**3.25**	**2.14**
4) Kings	1) Freeways	4,518,666	185,191	24.4	0.91	0.64
	2) Arterials	10,608,752	2,040,145	5.2	5.01	2.23
	3) Locals	3,074,977	788,456	3.9	1.53	0.63
	County Total	**18,202,395**	**3,013,791**	**6.0**	**7.45**	**3.50**
5) Richmond	1) Freeways	2,617,713	81,549	32.1	0.52	0.42
	2) Arterials	3,126,216	254,164	12.3	0.88	0.54
	3) Locals	2,276,110	320,579	7.1	0.76	0.40
	County Total	**8,020,039**	**656,291**	**12.2**	**2.16**	**1.35**
6) Nassau	1) Freeways	13,584,949	493,998	27.5	2.63	1.85
	2) Arterials	15,706,869	1,988,211	7.9	5.46	2.63
	3) Locals	8,837,159	1,147,683	7.7	3.15	1.40
	County Total	**38,128,977**	**3,629,892**	**10.5**	**11.24**	**5.88**
7) Suffolk	1) Freeways	14,805,468	364,667	40.6	2.65	2.24
	2) Arterials	20,266,723	1,661,207	12.2	6.19	3.20
	3) Locals	13,594,448	683,138	19.9	3.06	1.81
	County Total	**48,666,639**	**2,709,012**	**18.0**	**11.90**	**7.25**
8) Westchester	1) Freeways	15,430,124	791,288	19.5	3.59	2.66
	2) Arterials	7,020,607	455,884	15.4	1.85	1.16
	3) Locals	6,690,319	212,391	31.5	1.47	0.92
	County Total	**29,141,050**	**1,459,563**	**20.0**	**6.91**	**4.74**
9) Rockland	1) Freeways	4,478,306	179,852	24.9	0.93	0.71
	2) Arterials	3,489,920	173,628	20.1	0.82	0.57
	3) Locals	2,292,548	254,728	9.0	0.90	0.38
	County Total	**10,260,774**	**608,207**	**16.9**	**2.65**	**1.66**
Grand Total (9 Counties)		**207,034,296**	**20,664,772**	**10.0**	**62.13**	**34.33**
10) Putnam	1) Freeways	2,385,542	38,230	62.4	0.49	0.61
	2) Arterials	2,886,146	307,037	9.4	1.04	0.56
	3) Locals	3,284,664	98,343	33.4	0.75	0.47
	County Total	**8,556,352**	**443,610**	**19.3**	**2.27**	**1.64**

Appendix 1A

2040 Build Summer Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,913,127	346,294	11.3	0.98	0.54
	2) Arterials	5,939,436	1,746,893	3.4	4.29	1.57
	3) Locals	3,575,074	2,750,057	1.3	3.01	0.94
	County Total	**13,427,637**	**4,843,244**	**2.8**	**8.28**	**3.05**
2) Queens	1) Freeways	12,734,088	532,807	23.9	2.60	1.80
	2) Arterials	11,271,132	1,633,497	6.9	4.36	2.28
	3) Locals	6,047,528	1,119,913	5.4	2.24	0.99
	County Total	**30,052,748**	**3,286,217**	**9.1**	**9.20**	**5.07**
3) Bronx	1) Freeways	6,010,739	207,984	28.9	1.20	1.00
	2) Arterials	3,236,768	399,601	8.1	1.11	0.66
	3) Locals	2,943,802	382,312	7.7	1.00	0.52
	County Total	**12,191,309**	**989,897**	**12.3**	**3.31**	**2.17**
4) Kings	1) Freeways	4,580,214	190,050	24.1	0.93	0.66
	2) Arterials	10,694,865	2,097,032	5.1	5.09	2.25
	3) Locals	3,106,342	796,498	3.9	1.55	0.64
	County Total	**18,381,421**	**3,083,581**	**6.0**	**7.58**	**3.55**
5) Richmond	1) Freeways	2,757,888	94,773	29.1	0.57	0.44
	2) Arterials	3,246,866	282,336	11.5	0.95	0.57
	3) Locals	2,355,492	336,499	7.0	0.79	0.41
	County Total	**8,360,246**	**713,608**	**11.7**	**2.30**	**1.42**
6) Nassau	1) Freeways	13,736,289	510,643	26.9	2.68	1.87
	2) Arterials	16,050,048	2,084,422	7.7	5.66	2.69
	3) Locals	9,029,320	1,203,909	7.5	3.28	1.44
	County Total	**38,815,657**	**3,798,974**	**10.2**	**11.61**	**6.00**
7) Suffolk	1) Freeways	15,186,362	382,528	39.7	2.73	2.27
	2) Arterials	20,947,931	1,760,330	11.9	6.49	3.31
	3) Locals	14,142,329	740,436	19.1	3.21	1.89
	County Total	**50,276,622**	**2,883,294**	**17.4**	**12.43**	**7.47**
8) Westchester	1) Freeways	16,017,149	851,976	18.8	3.79	2.80
	2) Arterials	7,309,702	490,584	14.9	1.95	1.22
	3) Locals	6,978,961	226,590	30.8	1.55	0.97
	County Total	**30,305,812**	**1,569,150**	**19.3**	**7.28**	**4.98**
9) Rockland	1) Freeways	4,753,982	199,747	23.8	1.00	0.75
	2) Arterials	3,559,888	178,889	19.9	0.84	0.57
	3) Locals	2,352,832	270,440	8.7	0.93	0.39
	County Total	**10,666,702**	**649,076**	**16.4**	**2.77**	**1.72**
Grand Total (9 Counties)		**212,478,154**	**21,817,041**	**9.7**	**64.76**	**35.44**
10) Putnam	1) Freeways	2,516,106	40,714	61.8	0.51	0.66
	2) Arterials	3,021,442	328,418	9.2	1.11	0.60
	3) Locals	3,430,496	104,588	32.8	0.79	0.49
	County Total	**8,968,044**	**473,720**	**18.9**	**2.41**	**1.75**

Appendix 1B

2012 Build Winter Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,249,654	105,167	30.9	30.25
	2) Arterials	4,867,204	501,774	9.7	46.36
	3) Locals	2,483,727	451,587	5.5	25.65
	County Total	**10,600,585**	**1,058,527**	**10.0**	**102.25**
2) Queens	1) Freeways	10,641,090	334,625	31.8	99.35
	2) Arterials	9,048,519	913,992	9.9	84.55
	3) Locals	4,760,908	643,366	7.4	43.85
	County Total	**24,450,517**	**1,891,983**	**12.9**	**227.76**
3) Bronx	1) Freeways	4,907,943	134,834	36.4	46.90
	2) Arterials	2,599,178	238,457	10.9	24.38
	3) Locals	2,416,301	254,347	9.5	22.96
	County Total	**9,923,422**	**627,638**	**15.8**	**94.24**
4) Kings	1) Freeways	3,766,626	119,956	31.4	34.56
	2) Arterials	8,678,345	1,141,888	7.6	85.16
	3) Locals	2,456,849	438,723	5.6	24.81
	County Total	**14,901,820**	**1,700,567**	**8.8**	**144.53**
5) Richmond	1) Freeways	2,063,633	50,828	40.6	19.58
	2) Arterials	2,300,511	129,242	17.8	20.72
	3) Locals	1,509,952	150,995	10.0	14.29
	County Total	**5,874,096**	**331,066**	**17.7**	**54.59**
6) Nassau	1) Freeways	11,685,430	309,138	37.8	116.57
	2) Arterials	13,122,038	1,237,928	10.6	132.52
	3) Locals	7,295,918	645,656	11.3	72.86
	County Total	**32,103,386**	**2,192,723**	**14.6**	**321.95**
7) Westchester	1) Freeways	11,726,631	480,600	24.4	106.36
	2) Arterials	5,494,360	276,098	19.9	51.33
	3) Locals	4,923,670	140,676	35.0	45.43
	County Total	**22,144,661**	**897,374**	**24.7**	**203.11**
Grand Total (7 Counties)		**119,998,487**	**8,699,878**	**13.8**	**1148.43**

Appendix 1B

2014 Build Winter Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,266,966	220,741	14.8	27.99
	2) Arterials	4,899,639	1,139,451	4.3	56.28
	3) Locals	2,510,576	1,673,717	1.5	30.46
	County Total	**10,677,181**	**3,033,909**	**3.5**	**114.73**
2) Queens	1) Freeways	10,675,064	335,694	31.8	93.28
	2) Arterials	9,076,902	916,859	9.9	79.26
	3) Locals	4,796,173	657,010	7.3	41.71
	County Total	**24,548,139**	**1,909,563**	**12.9**	**214.25**
3) Bronx	1) Freeways	4,957,951	137,339	36.1	44.29
	2) Arterials	2,617,882	242,396	10.8	23.03
	3) Locals	2,427,792	258,276	9.4	21.64
	County Total	**10,003,625**	**638,012**	**15.7**	**88.96**
4) Kings	1) Freeways	3,736,043	126,646	29.5	32.09
	2) Arterials	8,793,566	1,172,475	7.5	80.69
	3) Locals	2,490,178	452,760	5.5	23.57
	County Total	**15,019,787**	**1,751,881**	**8.6**	**136.34**
5) Richmond	1) Freeways	2,089,299	51,715	40.4	18.54
	2) Arterials	2,326,461	129,970	17.9	19.64
	3) Locals	1,531,531	156,279	9.8	13.65
	County Total	**5,947,291**	**337,964**	**17.6**	**51.83**
6) Nassau	1) Freeways	11,698,514	310,305	37.7	109.67
	2) Arterials	13,120,158	1,261,554	10.4	124.93
	3) Locals	7,294,971	776,061	9.4	71.11
	County Total	**32,113,643**	**2,347,920**	**13.7**	**305.71**
7) Westchester	1) Freeways	11,896,813	491,604	24.2	100.81
	2) Arterials	5,560,409	282,254	19.7	48.76
	3) Locals	4,985,946	142,456	35.0	43.36
	County Total	**22,443,168**	**916,314**	**24.5**	**192.92**
Grand Total (7 Counties)		**120,752,834**	**10,935,561**	**11.0**	**1104.75**

Appendix 1B

2020 Build Winter Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,292,818	225,535	14.6	25.48
	2) Arterials	4,950,411	1,178,669	4.2	50.77
	3) Locals	2,786,679	1,990,485	1.4	31.03
	County Total	**11,029,908**	**3,394,690**	**3.2**	**107.28**
2) Queens	1) Freeways	10,797,450	343,868	31.4	85.22
	2) Arterials	9,179,605	936,694	9.8	72.21
	3) Locals	4,851,343	655,587	7.4	38.12
	County Total	**24,828,398**	**1,936,149**	**12.8**	**195.55**
3) Bronx	1) Freeways	5,091,607	143,023	35.6	41.06
	2) Arterials	2,727,052	262,217	10.4	21.74
	3) Locals	2,517,333	270,681	9.3	20.38
	County Total	**10,335,992**	**675,920**	**15.3**	**83.19**
4) Kings	1) Freeways	3,890,912	132,344	29.4	30.11
	2) Arterials	8,958,595	1,227,205	7.3	74.09
	3) Locals	2,551,953	472,584	5.4	21.85
	County Total	**15,401,460**	**1,832,133**	**8.4**	**126.05**
5) Richmond	1) Freeways	2,197,129	56,337	39.0	17.70
	2) Arterials	2,494,230	148,466	16.8	19.19
	3) Locals	1,657,801	180,196	9.2	13.52
	County Total	**6,349,160**	**384,998**	**16.5**	**50.41**
6) Nassau	1) Freeways	11,717,146	311,626	37.6	99.88
	2) Arterials	13,190,831	1,268,349	10.4	114.01
	3) Locals	7,361,950	783,186	9.4	65.08
	County Total	**32,269,927**	**2,363,162**	**13.7**	**278.97**
7) Westchester	1) Freeways	12,524,069	513,282	24.4	96.18
	2) Arterials	5,793,033	298,610	19.4	46.05
	3) Locals	5,360,423	157,197	34.1	42.54
	County Total	**23,677,525**	**969,089**	**24.4**	**184.77**
Grand Total (7 Counties)		**123,892,370**	**11,556,140**	**10.7**	**1026.23**

Appendix 1B

2030 Build Winter Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,335,747	230,052	14.5	25.23
	2) Arterials	4,990,841	1,188,295	4.2	49.99
	3) Locals	2,857,194	2,040,853	1.4	31.28
	County Total	**11,183,782**	**3,459,200**	**3.2**	**106.50**
2) Queens	1) Freeways	11,014,335	358,773	30.7	84.76
	2) Arterials	9,565,174	1,017,572	9.4	74.31
	3) Locals	5,050,585	701,470	7.2	39.24
	County Total	**25,630,094**	**2,077,815**	**12.3**	**198.31**
3) Bronx	1) Freeways	5,203,453	146,576	35.5	40.75
	2) Arterials	2,806,712	275,168	10.2	21.98
	3) Locals	2,564,689	278,771	9.2	20.39
	County Total	**10,574,854**	**700,515**	**15.1**	**83.11**
4) Kings	1) Freeways	3,963,881	135,286	29.3	29.92
	2) Arterials	9,224,295	1,317,756	7.0	75.34
	3) Locals	2,659,147	521,401	5.1	22.53
	County Total	**15,847,323**	**1,974,444**	**8.0**	**127.78**
5) Richmond	1) Freeways	2,299,178	60,031	38.3	17.94
	2) Arterials	2,707,486	175,811	15.4	20.60
	3) Locals	1,887,069	212,030	8.9	15.11
	County Total	**6,893,733**	**447,872**	**15.4**	**53.65**
6) Nassau	1) Freeways	11,970,707	327,068	36.6	99.50
	2) Arterials	13,719,388	1,385,797	9.9	116.81
	3) Locals	7,700,003	846,154	9.1	66.91
	County Total	**33,390,098**	**2,559,019**	**13.0**	**283.22**
7) Westchester	1) Freeways	13,425,429	568,874	23.6	100.31
	2) Arterials	6,111,050	330,327	18.5	47.69
	3) Locals	5,854,029	175,270	33.4	45.56
	County Total	**25,390,508**	**1,074,471**	**23.6**	**193.55**
Grand Total (7 Counties)		**128,910,392**	**12,293,336**	**10.5**	**1046.13**

Appendix 1B

2035 Build Winter Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,398,833	237,681	14.3	25.70
	2) Arterials	5,112,860	1,247,039	4.1	51.42
	3) Locals	2,955,679	2,111,199	1.4	32.57
	County Total	**11,467,372**	**3,595,919**	**3.2**	**109.69**
2) Queens	1) Freeways	11,248,055	374,935	30.0	86.39
	2) Arterials	9,987,597	1,134,954	8.8	78.41
	3) Locals	5,347,423	786,386	6.8	41.74
	County Total	**26,583,075**	**2,296,275**	**11.6**	**206.54**
3) Bronx	1) Freeways	5,270,232	149,723	35.2	41.16
	2) Arterials	2,858,481	288,735	9.9	22.42
	3) Locals	2,613,668	287,216	9.1	20.84
	County Total	**10,742,381**	**725,674**	**14.8**	**84.41**
4) Kings	1) Freeways	4,035,426	140,119	28.8	30.38
	2) Arterials	9,480,639	1,415,021	6.7	78.25
	3) Locals	2,745,857	572,054	4.8	23.59
	County Total	**16,261,922**	**2,127,193**	**7.6**	**132.22**
5) Richmond	1) Freeways	2,337,585	61,678	37.9	18.21
	2) Arterials	2,793,955	188,781	14.8	21.35
	3) Locals	2,031,877	236,265	8.6	16.37
	County Total	**7,163,417**	**486,723**	**14.7**	**55.93**
6) Nassau	1) Freeways	12,129,394	337,866	35.9	100.55
	2) Arterials	14,027,111	1,461,157	9.6	119.85
	3) Locals	7,890,847	876,761	9.0	68.68
	County Total	**34,047,352**	**2,675,784**	**12.7**	**289.08**
7) Westchester	1) Freeways	13,777,073	596,410	23.1	102.73
	2) Arterials	6,271,044	344,563	18.2	48.93
	3) Locals	5,973,796	179,393	33.3	46.48
	County Total	**26,021,913**	**1,120,366**	**23.2**	**198.14**
Grand Total (7 Counties)		**132,287,432**	**13,027,935**	**10.2**	**1076.01**

Appendix 1B

2040 Build Winter Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,494,786	255,094	13.7	26.45
	2) Arterials	5,310,440	1,361,651	3.9	53.91
	3) Locals	3,192,257	2,455,582	1.3	35.63
	County Total	**11,997,483**	**4,072,327**	**2.9**	**115.98**
2) Queens	1) Freeways	11,370,721	381,568	29.8	87.12
	2) Arterials	10,075,956	1,158,156	8.7	79.30
	3) Locals	5,400,166	818,207	6.6	42.35
	County Total	**26,846,843**	**2,357,931**	**11.4**	**208.77**
3) Bronx	1) Freeways	5,367,667	153,362	35.0	41.70
	2) Arterials	2,895,577	295,467	9.8	22.77
	3) Locals	2,629,029	288,904	9.1	20.98
	County Total	**10,892,273**	**737,733**	**14.8**	**85.45**
4) Kings	1) Freeways	4,090,421	144,029	28.4	30.66
	2) Arterials	9,557,517	1,448,109	6.6	79.09
	3) Locals	2,773,717	577,858	4.8	23.85
	County Total	**16,421,655**	**2,169,995**	**7.6**	**133.60**
5) Richmond	1) Freeways	2,462,769	69,374	35.5	19.03
	2) Arterials	2,901,670	207,262	14.0	22.34
	3) Locals	2,103,840	247,511	8.5	16.99
	County Total	**7,468,279**	**524,147**	**14.2**	**58.36**
6) Nassau	1) Freeways	12,264,605	347,439	35.3	101.42
	2) Arterials	14,333,356	1,524,825	9.4	123.07
	3) Locals	8,062,236	916,163	8.8	70.36
	County Total	**34,660,197**	**2,788,428**	**12.4**	**294.84**
7) Westchester	1) Freeways	14,301,190	641,309	22.3	106.04
	2) Arterials	6,528,972	368,868	17.7	50.95
	3) Locals	6,230,040	189,363	32.9	48.36
	County Total	**27,060,202**	**1,199,540**	**22.6**	**205.34**
Grand Total (7 Counties)		**135,346,932**	**13,850,101**	**9.8**	**1102.35**

Appendix 1C

2014 Build & No Build Annual PM2.5 Emissions by County

COUNTY	No Build Scenario	Build Scenario
	Tons	Tons
1) New York	71.12	69.71
2) Queens	149.39	148.46
3) Bronx	70.04	68.09
4) Kings	95.08	92.79
5) Richmond	37.13	36.24
6) Nassau	176.26	171.42
7) Suffolk	214.84	208.11
8) Westchester	144.33	139.61
9) Rockland	46.49	45.28
Grand Total	**1,004.68**	**979.70**
10) Putnam	42.97	41.81

Appendix 1C

2020 Build & No Build Annual PM2.5 Emissions by County

COUNTY	No Build Scenario	Build Scenario
	Tons	Tons
1) New York	56.82	55.96
2) Queens	123.73	123.30
3) Bronx	55.46	54.19
4) Kings	78.79	76.73
5) Richmond	32.48	31.57
6) Nassau	161.03	155.83
7) Suffolk	199.38	193.22
8) Westchester	127.00	123.08
9) Rockland	41.95	41.02
Grand Total	**876.63**	**854.90**
10) Putnam	36.76	35.77

Appendix 1C

2030 Build & No Build Annual PM2.5 Emissions by County

COUNTY	No Build Scenario	Build Scenario
	Tons	Tons
1) New York	54.97	54.24
2) Queens	122.36	122.38
3) Bronx	53.59	52.36
4) Kings	77.64	75.90
5) Richmond	33.84	32.92
6) Nassau	161.92	156.77
7) Suffolk	204.52	197.46
8) Westchester	128.55	125.11
9) Rockland	43.76	42.86
Grand Total	**881.12**	**860.00**
10) Putnam	37.63	36.72

Appendix 1C

2035 Build & No Build Annual PM2.5 Emissions by County

COUNTY	No Build Scenario	Build Scenario
	Tons	Tons
1) New York	55.77	54.89
2) Queens	125.95	125.59
3) Bronx	53.82	52.42
4) Kings	79.28	77.05
5) Richmond	34.77	33.84
6) Nassau	164.44	159.03
7) Suffolk	210.51	203.76
8) Westchester	130.91	126.86
9) Rockland	44.92	43.86
Grand Total	**900.36**	**877.31**
10) Putnam	38.71	37.70

Appendix 1C

2040 Build & No Build Annual PM2.5 Emissions by County

COUNTY	No Build Scenario	Build Scenario
	Tons	Tons
1) New York	59.62	58.39
2) Queens	127.69	126.88
3) Bronx	54.69	53.25
4) Kings	80.26	77.91
5) Richmond	36.17	35.33
6) Nassau	167.49	161.79
7) Suffolk	217.13	210.07
8) Westchester	136.64	132.41
9) Rockland	46.50	45.55
Grand Total	**926.20**	**901.57**
10) Putnam	40.81	39.68

Appendix 1D
2014 No Build Summer Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,764,818	147,640	25.5	1.34	1.31
	2) Arterials	5,630,783	721,895	7.8	3.29	4.26
	3) Locals	2,872,551	586,235	4.9	1.77	1.57
	County Total	**12,268,152**	**1,455,770**	**8.4**	**6.41**	**7.14**
2) Queens	1) Freeways	12,295,544	518,799	23.7	4.49	5.12
	2) Arterials	10,432,222	1,199,106	8.7	5.73	7.02
	3) Locals	4,737,468	893,862	5.3	2.79	1.75
	County Total	**27,465,234**	**2,611,767**	**10.5**	**13.01**	**13.88**
3) Bronx	1) Freeways	5,703,387	187,611	30.4	2.02	3.48
	2) Arterials	3,010,889	284,046	10.6	1.47	2.31
	3) Locals	2,797,064	349,633	8.0	1.49	1.31
	County Total	**11,511,340**	**821,291**	**14.0**	**4.97**	**7.10**
4) Kings	1) Freeways	4,369,472	167,413	26.1	1.55	1.87
	2) Arterials	10,071,740	1,549,498	6.5	6.42	6.27
	3) Locals	2,867,655	651,740	4.4	2.01	1.30
	County Total	**17,308,867**	**2,368,651**	**7.3**	**9.99**	**9.44**
5) Richmond	1) Freeways	2,401,343	70,628	34.0	0.85	1.43
	2) Arterials	2,691,631	179,442	15.0	1.16	1.46
	3) Locals	1,766,855	207,865	8.5	0.88	0.66
	County Total	**6,859,829**	**457,935**	**15.0**	**2.89**	**3.55**
6) Nassau	1) Freeways	13,460,041	456,273	29.5	4.51	5.34
	2) Arterials	15,102,983	1,735,975	8.7	7.82	6.71
	3) Locals	8,406,920	832,368	10.1	3.94	3.00
	County Total	**36,969,944**	**3,024,616**	**12.2**	**16.27**	**15.05**
7) Suffolk	1) Freeways	13,792,847	324,538	42.5	4.41	7.05
	2) Arterials	18,423,365	1,137,245	16.2	7.76	7.84
	3) Locals	12,145,294	535,035	22.7	4.46	3.73
	County Total	**44,361,506**	**1,996,817**	**22.2**	**16.63**	**18.62**
8) Westchester	1) Freeways	13,690,663	866,498	15.8	5.65	9.08
	2) Arterials	6,402,302	392,779	16.3	2.77	3.11
	3) Locals	5,843,720	206,492	28.3	2.22	1.87
	County Total	**25,936,685**	**1,465,769**	**17.7**	**10.64**	**14.06**
9) Rockland	1) Freeways	3,667,780	162,291	22.6	1.33	1.91
	2) Arterials	3,138,970	154,629	20.3	1.26	1.51
	3) Locals	2,023,485	243,793	8.3	1.27	0.88
	County Total	**8,830,235**	**560,714**	**15.7**	**3.86**	**4.29**
Grand Total (9 Counties)		**191,511,792**	**14,763,330**	**13.0**	**84.66**	**93.13**
10) Putnam	1) Freeways	1,883,993	29,437	64.0	0.70	2.72
	2) Arterials	2,465,921	214,428	11.5	1.33	1.59
	3) Locals	2,692,724	75,006	35.9	1.06	0.93
	County Total	**7,042,638**	**318,872**	**22.1**	**3.09**	**5.24**

Appendix 1D
2020 No Build Summer Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,838,702	153,548	25.0	0.94	0.76
	2) Arterials	5,723,373	753,075	7.6	2.44	2.43
	3) Locals	2,966,078	605,322	4.9	1.35	0.91
	County Total	**12,528,153**	**1,511,946**	**8.3**	**4.73**	**4.10**
2) Queens	1) Freeways	12,432,834	533,598	23.3	3.13	2.85
	2) Arterials	10,619,400	1,249,341	8.5	4.23	4.08
	3) Locals	4,788,381	903,468	5.3	2.04	1.04
	County Total	**27,840,615**	**2,686,407**	**10.4**	**9.40**	**7.97**
3) Bronx	1) Freeways	5,831,778	195,043	29.9	1.43	1.87
	2) Arterials	3,117,826	305,669	10.2	1.09	1.36
	3) Locals	2,881,462	369,418	7.8	1.10	0.77
	County Total	**11,831,066**	**870,130**	**13.6**	**3.62**	**4.00**
4) Kings	1) Freeways	4,447,745	173,740	25.6	1.09	1.04
	2) Arterials	10,309,254	1,662,783	6.2	4.88	3.67
	3) Locals	2,956,904	687,652	4.3	1.54	0.79
	County Total	**17,713,903**	**2,524,175**	**7.0**	**7.51**	**5.50**
5) Richmond	1) Freeways	2,501,363	76,494	32.7	0.61	0.77
	2) Arterials	2,870,962	206,544	13.9	0.89	0.89
	3) Locals	1,925,412	240,677	8.0	0.69	0.42
	County Total	**7,297,737**	**523,715**	**13.9**	**2.20**	**2.09**
6) Nassau	1) Freeways	13,567,876	467,858	29.0	3.16	2.91
	2) Arterials	15,289,380	1,777,835	8.6	5.79	3.84
	3) Locals	8,497,141	849,714	10.0	2.88	1.75
	County Total	**37,354,397**	**3,095,407**	**12.1**	**11.82**	**8.51**
7) Suffolk	1) Freeways	14,180,955	340,888	41.6	3.14	3.75
	2) Arterials	19,083,451	1,223,298	15.6	5.80	4.53
	3) Locals	12,667,905	575,814	22.0	3.27	2.24
	County Total	**45,932,311**	**2,140,000**	**21.5**	**12.21**	**10.52**
8) Westchester	1) Freeways	14,324,676	942,413	15.2	4.30	4.91
	2) Arterials	6,725,961	425,694	15.8	2.09	1.83
	3) Locals	6,276,710	235,967	26.6	1.71	1.17
	County Total	**27,327,347**	**1,604,073**	**17.0**	**8.10**	**7.91**
9) Rockland	1) Freeways	3,927,157	180,975	21.7	1.01	1.08
	2) Arterials	3,275,205	166,254	19.7	0.94	0.88
	3) Locals	2,130,021	262,966	8.1	0.97	0.52
	County Total	**9,332,383**	**610,195**	**15.3**	**2.91**	**2.48**
Grand Total (9 Counties)		**197,157,912**	**15,566,048**	**12.7**	**62.50**	**53.07**
10) Putnam	1) Freeways	2,026,425	31,912	63.5	0.54	1.49
	2) Arterials	2,631,888	248,291	10.6	1.08	0.93
	3) Locals	2,866,616	81,207	35.3	0.80	0.56
	County Total	**7,524,929**	**361,411**	**20.8**	**2.41**	**2.99**

Appendix 1D
2030 No Build Summer Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,873,938	154,340	25.1	0.78	0.54
	2) Arterials	5,759,034	747,926	7.7	2.13	1.42
	3) Locals	3,023,078	616,955	4.9	1.20	0.66
	County Total	**12,656,050**	**1,519,221**	**8.3**	**4.11**	**2.62**
2) Queens	1) Freeways	12,653,537	557,425	22.7	2.65	1.88
	2) Arterials	11,027,831	1,361,461	8.1	3.89	2.53
	3) Locals	4,961,189	992,238	5.0	1.87	0.85
	County Total	**28,642,557**	**2,911,123**	**9.8**	**8.41**	**5.26**
3) Bronx	1) Freeways	5,943,551	201,476	29.5	1.19	1.06
	2) Arterials	3,210,210	324,264	9.9	0.97	0.78
	3) Locals	2,953,203	383,533	7.7	0.99	0.55
	County Total	**12,106,964**	**909,273**	**13.3**	**3.15**	**2.39**
4) Kings	1) Freeways	4,521,148	179,411	25.2	0.91	0.67
	2) Arterials	10,571,424	1,761,904	6.0	4.51	2.40
	3) Locals	3,058,488	745,973	4.1	1.46	0.64
	County Total	**18,151,060**	**2,687,287**	**6.8**	**6.88**	**3.71**
5) Richmond	1) Freeways	2,611,458	81,101	32.2	0.52	0.46
	2) Arterials	3,123,560	249,885	12.5	0.87	0.61
	3) Locals	2,184,048	291,206	7.5	0.70	0.38
	County Total	**7,919,066**	**622,192**	**12.7**	**2.09**	**1.45**
6) Nassau	1) Freeways	13,840,486	492,544	28.1	2.68	1.97
	2) Arterials	15,890,823	1,961,830	8.1	5.40	2.79
	3) Locals	8,904,586	937,325	9.5	2.68	1.40
	County Total	**38,635,895**	**3,391,699**	**11.4**	**10.75**	**6.16**
7) Suffolk	1) Freeways	14,776,041	365,744	40.4	2.68	2.37
	2) Arterials	20,152,394	1,380,301	14.6	5.36	3.28
	3) Locals	13,649,711	656,236	20.8	3.01	1.85
	County Total	**48,578,146**	**2,402,281**	**20.2**	**11.05**	**7.49**
8) Westchester	1) Freeways	15,182,361	1,047,059	14.5	3.88	2.84
	2) Arterials	7,175,830	475,221	15.1	1.94	1.28
	3) Locals	6,817,707	261,215	26.1	1.56	0.97
	County Total	**29,175,898**	**1,783,495**	**16.4**	**7.38**	**5.09**
9) Rockland	1) Freeways	4,393,245	216,416	20.3	0.96	0.73
	2) Arterials	3,480,299	186,112	18.7	0.87	0.61
	3) Locals	2,270,159	306,778	7.4	0.94	0.39
	County Total	**10,143,703**	**709,306**	**14.3**	**2.76**	**1.73**
Grand Total (9 Counties)		**206,009,339**	**16,935,878**	**12.2**	**56.58**	**35.89**
10) Putnam	1) Freeways	2,297,753	36,588	62.8	0.48	0.71
	2) Arterials	2,902,571	299,234	9.7	1.05	0.62
	3) Locals	3,173,224	92,245	34.4	0.72	0.47
	County Total	**8,373,548**	**428,067**	**19.6**	**2.25**	**1.79**

Appendix 1D
2035 No Build Summer Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	3,958,892	162,250	24.4	0.81	0.53
	2) Arterials	5,916,294	810,451	7.3	2.24	1.25
	3) Locals	3,133,771	666,760	4.7	1.28	0.66
	County Total	**13,008,957**	**1,639,461**	**7.9**	**4.32**	**2.43**
2) Queens	1) Freeways	12,982,437	592,805	21.9	2.74	1.84
	2) Arterials	11,593,160	1,545,755	7.5	4.27	2.30
	3) Locals	5,248,396	1,093,416	4.8	2.03	0.89
	County Total	**29,823,993**	**3,231,976**	**9.2**	**9.04**	**5.03**
3) Bronx	1) Freeways	6,034,459	206,660	29.2	1.20	1.00
	2) Arterials	3,281,252	338,273	9.7	1.00	0.64
	3) Locals	3,023,930	403,191	7.5	1.03	0.53
	County Total	**12,339,641**	**948,124**	**13.0**	**3.24**	**2.17**
4) Kings	1) Freeways	4,621,190	187,853	24.6	0.93	0.65
	2) Arterials	10,931,025	1,951,969	5.6	4.86	2.24
	3) Locals	3,185,606	838,317	3.8	1.59	0.65
	County Total	**18,737,821**	**2,978,139**	**6.3**	**7.38**	**3.55**
5) Richmond	1) Freeways	2,665,125	84,073	31.7	0.53	0.43
	2) Arterials	3,220,405	268,367	12.0	0.92	0.56
	3) Locals	2,335,420	333,631	7.0	0.77	0.40
	County Total	**8,220,950**	**686,072**	**12.0**	**2.21**	**1.39**
6) Nassau	1) Freeways	14,044,670	516,348	27.2	2.73	1.91
	2) Arterials	16,255,914	2,057,711	7.9	5.58	2.72
	3) Locals	9,125,969	981,287	9.3	2.77	1.41
	County Total	**39,426,553**	**3,555,346**	**11.1**	**11.07**	**6.03**
7) Suffolk	1) Freeways	15,169,825	385,021	39.4	2.75	2.29
	2) Arterials	20,849,699	1,478,702	14.1	5.61	3.22
	3) Locals	14,262,667	706,073	20.2	3.16	1.89
	County Total	**50,282,191**	**2,569,796**	**19.6**	**11.52**	**7.40**
8) Westchester	1) Freeways	15,652,079	1,110,077	14.1	4.03	2.71
	2) Arterials	7,384,570	498,957	14.8	2.00	1.21
	3) Locals	7,006,483	270,521	25.9	1.60	0.97
	County Total	**30,043,132**	**1,879,555**	**16.0**	**7.62**	**4.89**
9) Rockland	1) Freeways	4,604,250	234,911	19.6	1.01	0.72
	2) Arterials	3,573,740	195,286	18.3	0.90	0.57
	3) Locals	2,334,371	343,290	6.8	0.99	0.39
	County Total	**10,512,361**	**773,487**	**13.6**	**2.90**	**1.68**
Grand Total (9 Counties)		**212,395,599**	**18,261,954**	**11.6**	**59.30**	**34.57**
10) Putnam	1) Freeways	2,435,464	39,093	62.3	0.50	0.62
	2) Arterials	3,024,856	321,793	9.4	1.10	0.60
	3) Locals	3,313,779	97,752	33.9	0.75	0.47
	County Total	**8,774,099**	**458,637**	**19.1**	**2.34**	**1.69**

Appendix 1D
2040 No Build Summer Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	VOC	NOx
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day	Tons per day
1) New York	1) Freeways	4,076,523	176,473	23.1	0.84	0.55
	2) Arterials	6,173,553	949,777	6.5	2.53	1.36
	3) Locals	3,449,074	783,880	4.4	1.53	0.77
	County Total	**13,699,150**	**1,910,131**	**7.2**	**4.91**	**2.67**
2) Queens	1) Freeways	13,130,764	607,906	21.6	2.79	1.86
	2) Arterials	11,710,030	1,582,436	7.4	4.36	2.33
	3) Locals	5,390,168	1,146,844	4.7	2.12	0.92
	County Total	**30,230,962**	**3,337,186**	**9.1**	**9.26**	**5.12**
3) Bronx	1) Freeways	6,159,080	214,602	28.7	1.24	1.02
	2) Arterials	3,326,183	346,477	9.6	1.02	0.65
	3) Locals	3,032,463	404,328	7.5	1.04	0.53
	County Total	**12,517,726**	**965,408**	**13.0**	**3.29**	**2.21**
4) Kings	1) Freeways	4,686,086	193,640	24.2	0.95	0.67
	2) Arterials	11,041,554	2,007,555	5.5	4.96	2.27
	3) Locals	3,215,781	846,258	3.8	1.62	0.66
	County Total	**18,943,421**	**3,047,453**	**6.2**	**7.54**	**3.60**
5) Richmond	1) Freeways	2,789,177	96,179	29.0	0.57	0.46
	2) Arterials	3,331,400	294,814	11.3	0.97	0.58
	3) Locals	2,422,669	341,221	7.1	0.80	0.42
	County Total	**8,543,246**	**732,214**	**11.7**	**2.34**	**1.46**
6) Nassau	1) Freeways	14,219,423	534,565	26.6	2.78	1.93
	2) Arterials	16,639,880	2,161,023	7.7	5.81	2.79
	3) Locals	9,330,120	1,025,288	9.1	2.86	1.44
	County Total	**40,189,423**	**3,720,876**	**10.8**	**11.45**	**6.17**
7) Suffolk	1) Freeways	15,586,165	406,949	38.3	2.83	2.32
	2) Arterials	21,534,190	1,583,396	13.6	5.89	3.33
	3) Locals	14,850,314	765,480	19.4	3.33	1.98
	County Total	**51,970,669**	**2,755,826**	**18.9**	**12.05**	**7.63**
8) Westchester	1) Freeways	16,248,186	1,185,999	13.7	4.26	2.85
	2) Arterials	7,683,541	537,311	14.3	2.11	1.27
	3) Locals	7,282,214	286,701	25.4	1.67	1.01
	County Total	**31,213,941**	**2,010,011**	**15.5**	**8.04**	**5.14**
9) Rockland	1) Freeways	4,872,501	260,562	18.7	1.10	0.77
	2) Arterials	3,626,781	200,375	18.1	0.91	0.58
	3) Locals	2,390,559	362,206	6.6	1.02	0.40
	County Total	**10,889,841**	**823,142**	**13.2**	**3.03**	**1.74**
Grand Total (9 Counties)		**218,198,379**	**19,302,247**	**11.3**	**61.91**	**35.73**
10) Putnam	1) Freeways	2,581,709	41,979	61.5	0.53	0.67
	2) Arterials	3,166,260	351,807	9.0	1.18	0.64
	3) Locals	3,462,681	103,984	33.3	0.78	0.49
	County Total	**9,210,650**	**497,770**	**18.5**	**2.49**	**1.80**

Appendix 1E
2012 No Build Winter Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,338,431	108,391	30.8	31.06
	2) Arterials	5,001,698	515,639	9.7	47.63
	3) Locals	2,545,831	462,878	5.5	26.29
	County Total	**10,885,960**	**1,086,908**	**10.0**	**104.98**
2) Queens	1) Freeways	10,927,142	366,683	29.8	101.49
	2) Arterials	9,274,799	843,164	11.0	85.00
	3) Locals	4,239,219	632,719	6.7	39.72
	County Total	**24,441,160**	**1,842,565**	**13.3**	**226.22**
3) Bronx	1) Freeways	5,046,951	139,419	36.2	48.17
	2) Arterials	2,668,095	210,086	12.7	24.32
	3) Locals	2,483,574	264,210	9.4	23.60
	County Total	**10,198,620**	**613,715**	**16.6**	**96.08**
4) Kings	1) Freeways	3,871,418	125,695	30.8	35.45
	2) Arterials	8,941,105	1,064,417	8.4	85.61
	3) Locals	2,539,934	453,560	5.6	25.69
	County Total	**15,352,457**	**1,643,672**	**9.3**	**146.75**
5) Richmond	1) Freeways	2,115,477	52,234	40.5	20.05
	2) Arterials	2,367,429	133,002	17.8	21.33
	3) Locals	1,560,475	156,048	10.0	14.78
	County Total	**6,043,381**	**341,283**	**17.7**	**56.16**
6) Nassau	1) Freeways	11,997,890	317,404	37.8	119.66
	2) Arterials	13,470,828	1,270,833	10.6	136.01
	3) Locals	7,478,362	612,980	12.2	73.80
	County Total	**32,947,080**	**2,201,218**	**15.0**	**329.46**
7) Westchester	1) Freeways	12,057,307	637,953	18.9	108.88
	2) Arterials	5,661,811	296,430	19.1	52.24
	3) Locals	5,150,601	169,987	30.3	46.35
	County Total	**22,869,719**	**1,104,369**	**20.7**	**207.48**
Grand Total (7 Counties)		**122,738,377**	**8,833,731**	**13.9**	**1167.12**

Appendix 1E
2014 No Build Winter Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,362,410	109,883	30.6	29.32
	2) Arterials	5,034,869	524,466	9.6	44.82
	3) Locals	2,564,984	466,361	5.5	24.70
	County Total	**10,962,263**	**1,100,709**	**10.0**	**98.85**
2) Queens	1) Freeways	10,979,260	369,672	29.7	95.42
	2) Arterials	9,327,283	855,714	10.9	80.03
	3) Locals	4,230,135	640,930	6.6	37.39
	County Total	**24,536,678**	**1,866,316**	**13.1**	**212.84**
3) Bronx	1) Freeways	5,093,227	141,479	36.0	45.45
	2) Arterials	2,694,017	212,127	12.7	23.04
	3) Locals	2,497,946	265,739	9.4	22.25
	County Total	**10,285,190**	**619,345**	**16.6**	**90.74**
4) Kings	1) Freeways	3,902,184	127,107	30.7	33.42
	2) Arterials	9,001,120	1,084,472	8.3	80.60
	3) Locals	2,560,678	465,578	5.5	24.28
	County Total	**15,463,982**	**1,677,157**	**9.2**	**138.31**
5) Richmond	1) Freeways	2,144,421	53,344	40.2	19.04
	2) Arterials	2,405,949	137,483	17.5	20.36
	3) Locals	1,578,000	157,800	10.0	14.01
	County Total	**6,128,370**	**348,627**	**17.6**	**53.42**
6) Nassau	1) Freeways	12,017,868	318,776	37.7	112.63
	2) Arterials	13,488,031	1,272,456	10.6	127.81
	3) Locals	7,506,265	615,268	12.2	69.63
	County Total	**33,012,164**	**2,206,500**	**15.0**	**310.07**
7) Westchester	1) Freeways	12,224,055	650,216	18.8	103.03
	2) Arterials	5,719,181	302,602	18.9	49.54
	3) Locals	5,218,898	174,545	29.9	44.20
	County Total	**23,162,134**	**1,127,363**	**20.5**	**196.77**
Grand Total (7 Counties)		**123,550,781**	**8,946,016**	**13.8**	**1100.99**

Appendix 1E
2020 No Build Winter Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,428,388	113,523	30.2	27.02
	2) Arterials	5,117,583	538,693	9.5	41.19
	3) Locals	2,648,526	481,550	5.5	23.07
	County Total	**11,194,497**	**1,133,766**	**9.9**	**91.28**
2) Queens	1) Freeways	11,101,824	378,902	29.3	87.08
	2) Arterials	9,494,423	887,329	10.7	73.59
	3) Locals	4,275,096	657,707	6.5	34.43
	County Total	**24,871,343**	**1,923,938**	**12.9**	**195.10**
3) Bronx	1) Freeways	5,207,839	146,288	35.6	41.97
	2) Arterials	2,789,535	226,791	12.3	21.62
	3) Locals	2,573,453	279,723	9.2	20.84
	County Total	**10,570,827**	**652,802**	**16.2**	**84.44**
4) Kings	1) Freeways	3,972,088	131,526	30.2	30.64
	2) Arterials	9,213,176	1,151,647	8.0	74.61
	3) Locals	2,640,298	498,169	5.3	22.66
	County Total	**15,825,562**	**1,781,343**	**8.9**	**127.91**
5) Richmond	1) Freeways	2,233,661	57,421	38.9	17.95
	2) Arterials	2,565,961	155,513	16.5	19.80
	3) Locals	1,719,336	179,098	9.6	13.91
	County Total	**6,518,958**	**392,031**	**16.6**	**51.66**
6) Nassau	1) Freeways	12,114,264	323,911	37.4	103.12
	2) Arterials	13,654,427	1,300,422	10.5	117.59
	3) Locals	7,586,819	627,010	12.1	64.08
	County Total	**33,355,510**	**2,251,342**	**14.8**	**284.79**
7) Westchester	1) Freeways	12,790,026	706,631	18.1	97.72
	2) Arterials	6,007,901	326,516	18.4	47.36
	3) Locals	5,603,950	196,630	28.5	43.40
	County Total	**24,401,877**	**1,229,777**	**19.8**	**188.47**
Grand Total (7 Counties)		**126,738,574**	**9,364,999**	**13.5**	**1023.64**

Appendix 1E
2030 No Build Winter Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,459,792	114,185	30.3	26.64
	2) Arterials	5,149,386	542,041	9.5	40.50
	3) Locals	2,699,395	482,035	5.6	23.00
	County Total	**11,308,573**	**1,138,260**	**9.9**	**90.13**
2) Queens	1) Freeways	11,298,893	393,690	28.7	86.47
	2) Arterials	9,859,083	957,193	10.3	75.32
	3) Locals	4,430,857	714,654	6.2	35.16
	County Total	**25,588,833**	**2,065,537**	**12.4**	**196.94**
3) Bronx	1) Freeways	5,307,624	150,358	35.3	41.53
	2) Arterials	2,871,995	239,333	12.0	21.85
	3) Locals	2,637,402	289,824	9.1	20.96
	County Total	**10,817,021**	**679,515**	**15.9**	**84.34**
4) Kings	1) Freeways	4,037,626	134,588	30.0	30.39
	2) Arterials	9,447,330	1,226,926	7.7	75.35
	3) Locals	2,730,954	535,481	5.1	23.20
	County Total	**16,215,910**	**1,896,995**	**8.5**	**128.93**
5) Richmond	1) Freeways	2,332,037	61,208	38.1	18.24
	2) Arterials	2,791,583	184,873	15.1	21.29
	3) Locals	1,951,235	216,804	9.0	15.58
	County Total	**7,074,855**	**462,885**	**15.3**	**55.10**
6) Nassau	1) Freeways	12,357,599	339,494	36.4	102.59
	2) Arterials	14,191,237	1,419,124	10.0	120.46
	3) Locals	7,950,752	685,410	11.6	66.18
	County Total	**34,499,588**	**2,444,028**	**14.1**	**289.23**
7) Westchester	1) Freeways	13,555,929	779,076	17.4	100.81
	2) Arterials	6,409,724	362,131	17.7	49.61
	3) Locals	6,087,697	215,876	28.2	46.26
	County Total	**26,053,350**	**1,357,083**	**19.2**	**196.67**
Grand Total (7 Counties)		**131,558,130**	**10,044,303**	**13.1**	**1041.33**

Appendix 1E
2035 No Build Winter Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,535,663	118,646	29.8	27.20
	2) Arterials	5,289,817	581,299	9.1	41.84
	3) Locals	2,798,219	518,189	5.4	23.99
	County Total	**11,623,699**	**1,218,134**	**9.5**	**93.03**
2) Queens	1) Freeways	11,592,538	416,998	27.8	88.51
	2) Arterials	10,363,820	1,079,565	9.6	80.20
	3) Locals	4,685,549	807,853	5.8	37.42
	County Total	**26,641,907**	**2,304,416**	**11.6**	**206.13**
3) Bronx	1) Freeways	5,388,859	153,529	35.1	42.05
	2) Arterials	2,935,468	250,895	11.7	22.36
	3) Locals	2,700,662	303,445	8.9	21.57
	County Total	**11,024,989**	**707,869**	**15.6**	**85.98**
4) Kings	1) Freeways	4,126,970	140,373	29.4	30.99
	2) Arterials	9,768,366	1,356,718	7.2	78.97
	3) Locals	2,844,487	605,210	4.7	24.55
	County Total	**16,739,823**	**2,102,301**	**8.0**	**134.51**
5) Richmond	1) Freeways	2,379,873	63,294	37.6	18.58
	2) Arterials	2,878,106	198,490	14.5	22.05
	3) Locals	2,085,393	245,340	8.5	16.74
	County Total	**7,343,372**	**507,125**	**14.5**	**57.36**
6) Nassau	1) Freeways	12,539,953	352,246	35.6	103.77
	2) Arterials	14,517,324	1,496,631	9.7	123.64
	3) Locals	8,149,003	721,151	11.3	67.98
	County Total	**35,206,280**	**2,570,028**	**13.7**	**295.39**
7) Westchester	1) Freeways	13,975,305	822,077	17.0	104.02
	2) Arterials	6,596,044	379,083	17.4	51.08
	3) Locals	6,256,851	223,459	28.0	47.56
	County Total	**26,828,200**	**1,424,619**	**18.8**	**202.66**
Grand Total (7 Counties)		**135,408,270**	**10,834,490**	**12.5**	**1075.05**

Appendix 1E
2040 No Build Winter Emissions by County

COUNTY	FACILITY	DAILY VMT	VHT	SPEED	CO
		Vehicle miles traveled	Vehicle hours traveled	Miles per hour	Tons per day
1) New York	1) Freeways	3,640,672	127,743	28.5	27.92
	2) Arterials	5,519,525	681,423	8.1	44.16
	3) Locals	3,079,783	603,879	5.1	26.79
	County Total	**12,239,980**	**1,413,045**	**8.7**	**98.87**
2) Queens	1) Freeways	11,724,982	426,363	27.5	89.34
	2) Arterials	10,468,264	1,113,645	9.4	81.27
	3) Locals	4,814,189	830,033	5.8	38.55
	County Total	**27,007,435**	**2,370,041**	**11.4**	**209.16**
3) Bronx	1) Freeways	5,500,087	157,596	34.9	42.69
	2) Arterials	2,975,578	256,515	11.6	22.70
	3) Locals	2,708,033	304,273	8.9	21.63
	County Total	**11,183,698**	**718,384**	**15.6**	**87.02**
4) Kings	1) Freeways	4,184,853	144,305	29.0	31.26
	2) Arterials	9,867,045	1,389,725	7.1	80.02
	3) Locals	2,871,275	610,910	4.7	24.78
	County Total	**16,923,173**	**2,144,939**	**7.9**	**136.06**
5) Richmond	1) Freeways	2,490,708	70,759	35.2	19.30
	2) Arterials	2,977,176	215,737	13.8	22.93
	3) Locals	2,163,157	248,639	8.7	17.35
	County Total	**7,631,041**	**535,135**	**14.3**	**59.59**
6) Nassau	1) Freeways	12,696,004	362,743	35.0	104.81
	2) Arterials	14,860,101	1,564,221	9.5	127.22
	3) Locals	8,330,586	750,503	11.1	69.70
	County Total	**35,886,691**	**2,677,467**	**13.4**	**301.73**
7) Westchester	1) Freeways	14,507,556	879,246	16.5	107.52
	2) Arterials	6,862,920	406,090	16.9	53.15
	3) Locals	6,502,486	235,597	27.6	49.33
	County Total	**27,872,962**	**1,520,933**	**18.3**	**209.99**
Grand Total (7 Counties)		**138,744,980**	**11,379,945**	**12.2**	**1102.42**

Appendix 1F
2014 Build and No Build Annual NOX Emissions by County

COUNTY	No- Build Scenario Tons / Year	Build Scenario Tons /Year
1) New York	2,489.12	2,639.35
2) Queens	4,956.04	4,922.05
3) Bronx	2,528.90	2,469.78
4) Kings	3,228.85	3,183.07
5) Richmond	1,270.09	1,242.66
6) Nassau	5,697.69	5,575.19
7) Suffolk	7,111.05	6,965.53
8) Westchester	5,122.75	5,108.66
9) Rockland	1,588.00	1,600.77
Grand Total	**33,992.47**	**33,707.05**
10) Putnam	1,875.56	1,827.40

Appendix 1F
2020 Build and No Build Annual NOX Emissions by County

COUNTY	No- Build Scenario	Build Scenario
	Tons / Year	Tons /Year
1) New York	1,413.87	1,520.80
2) Queens	2,812.22	2,785.29
3) Bronx	1,416.21	1,387.89
4) Kings	1,849.54	1,826.42
5) Richmond	739.40	717.78
6) Nassau	3,187.16	3,106.59
7) Suffolk	4,005.42	3,926.60
8) Westchester	2,878.54	2,866.91
9) Rockland	913.68	925.05
Grand Total	**19,216.04**	**19,063.34**
10) Putnam	1,068.12	1,037.66

Appendix 1F
2030 Build and No Build Annual NOX Emissions by County

COUNTY	No- Build Scenario Tons / Year	Build Scenario Tons /Year
1) New York	886.90	971.11
2) Queens	1,825.97	1,821.87
3) Bronx	839.91	825.60
4) Kings	1,211.11	1,200.08
5) Richmond	505.09	490.94
6) Nassau	2,296.69	2,239.21
7) Suffolk	2,876.11	2,808.90
8) Westchester	1,872.85	1,864.43
9) Rockland	642.62	649.34
Grand Total	**12,957.24**	**12,871.49**
10) Putnam	650.70	632.72

Appendix 1F
2035 Build and No Build Annual NOX Emissions by County

COUNTY	No- Build Scenario Tons / Year	Build Scenario Tons /Year
1) New York	824.56	908.56
2) Queens	1,746.07	1,737.37
3) Bronx	768.58	753.70
4) Kings	1,152.34	1,132.73
5) Richmond	485.04	470.78
6) Nassau	2,257.19	2,197.56
7) Suffolk	2,854.39	2,794.75
8) Westchester	1,813.87	1,797.94
9) Rockland	629.83	633.23
Grand Total	**12,531.87**	**12,426.63**
10) Putnam	624.65	606.81

Appendix 1F
2040 Build and No Build Annual NOX Emissions by County

COUNTY	No- Build Scenario	Build Scenario
	Tons / Year	Tons /Year
1) New York	897.81	982.35
2) Queens	1,770.22	1,757.22
3) Bronx	782.07	766.83
4) Kings	1,169.37	1,147.35
5) Richmond	505.33	493.95
6) Nassau	2,302.55	2,239.50
7) Suffolk	2,938.59	2,877.71
8) Westchester	1,897.37	1,881.40
9) Rockland	651.27	656.12
Grand Total	**12,914.58**	**12,802.42**
10) Putnam	663.27	645.33

Appendix 2 - OFF-MODEL PROJECTS & ANALYSIS

2011-2015 TIP and 2010-2035 PLAN - for PONA

Off Model Projects				
PIN	**PROJECT NAME**	**COUNTY**	**YEAR**	**Proposed Tool**
X501.83	Private Fleet Alternative Fuel Program	NYC-Multi	12/31/2011	Emission Table
X501.40	NYC Municipal Fleet alt. Fuel Program	NYC-Multi	6/30/2010	CMAQ Traq
8TRM 85	Diesel Retrofit Project	Rockland	10/31/2011	CMAQ Traq
8TRM 86	Orange Town Diesel Retrofit Project	Rockland	10/31/2011	CMAQ Traq
X760.46	Private Diesel Retrofit Emission Reduction	NYC-Multi	1/8/2014	CMAQ Traq
X770.05	Diesel Emission Reduction in Hunts Point	NYC-Multi	6/19/2008	Emission T./EPA's V.T
X770.07	Private Fleet Reimbursement for Retrofit	NYC-Multi	3/31/2014	Emission T./EPA's V.T
X770.08	Expansion of Cross Harbor Float Service	NYC Multi	6-31-09	Emission Table
033913	Long Island Truck Rail Intermodal Facility	NS	6/17/2020	Emission Table
X501.55	Transportation New York Recycables	NYC Multi	12/31/2012	Emission Table
8TRM94	Retrofit of 104 Orion Buses and Install Particulate Filters	Westchester	10/31/2009	Emission T./EPA's V.T
X501.74	Southern Brooklyn Marine Terminal Rail Extension	Kings	10/29/2010	Emission Table
X770.45	School Bus Diesel Emissions Reduction Project	NYC Multi	9/30/2010	CMAQ Traq
093561	Calverton Rail Spur ARRA Project	Suffolk	2/17/2012	Emission Table
	Miller Highway 72nd Street Ramp Closure project	NYC	8/24/2011	Emission Table
Total				

Commuter Choice Projects				
TCC	**PROJECT NAME**	**COUNTY**		
NYCTCC	Commuter Choice in NYC	NYC		Commuter Choice
MHSTCC	Commuter Choice in MHS	MHS		Commuter Choice
NSTCC	Commuter Choice in NS	NS		Commuter Choice

APPENDIX 1G – NYMTC PM 2.5 Monthly Results/County/Facility Type

The NYMTC PM 2.5 Monthly Results/County/Facility Type is available on the NYMTC web as a separate file

APPENDIX 3 – OCTC Draft Conformity Determination

The Draft Air Quality Conformity Determination for the Orange County Portion of the NY-NJ-CT PM2.5 Non-Attainment Area is available on the NYMTC web as a separate file

APPENDIX 4 – PDCTC Draft Conformity Determination

The Draft Air Quality Conformity Determination Statement for the Poughkeepsie Ozone Non-attainment Area is available on the NYMTC web as a separate file

APPENDIX 5 - Public Comments and Responses *(TO BE ADDED WHEN FINALIZED)*

APPENDIX 6 – Resolutions *(TO BE ADDED WHEN FINALIZED)*

New York Metropolitan Transportation Council (NYMTC)

Orange County Transportation Council (OCTC)

Poughkeepsie-Dutchess County Transportation Council (PDCTC)