Hampton Roads, Virginia Eight-Hour Ozone Maintenance Area

Transportation Conformity Analysis

2030 Long Range Transportation Plan and FY 09-12 Transportation Improvement Program

FINAL REPORT

Prepared by: Virginia Department of Transportation

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Virginia Department of Transportation

VDOT

Hampton Roads, Virginia
Eight-Hour Ozone Maintenance Area

Transportation Conformity Analysis

for the

Amended

2030 Long Range Transportation Plan

and

FY 09-12 Transportation Improvement Program

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APPENDICES

LIST OF EXHIBITS

Acronym List

BHP-hr	Brake-horsepower-hour
BPR	Bureau of Public Roads
BRT	Bus Rapid Transit
CAA	United States Clean Air Act, as amended
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
FHWA	Federal Highway Administration
FR	Federal Register
FTA	Federal Transit Administration
FY	Fiscal Year
g	grams
HCM	Highway Capacity Manual
HDDE	Heavy-Duty Diesel Engine
HDDV	Heavy-Duty Diesel Vehicle
HPMS	Highway Performance Monitoring System
HRPDC	Hampton Roads Planning District Commission
HRTPO	Hampton Roads Transportation Planning Organization
HRT	Hampton Roads Transit
I/M	Vehicle Emission Inspection and Maintenance Program
LRTP	Long Range Transportation Plan
LRT	Light Rail Transit
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NLEV	National Low Emission Vehicle Program
NO_X	Nitrogen Oxides
PPAQ	Post Processor for Air Quality
psi	Pounds per square inch
RFG	Reformulated Gasoline
RVP	Reid Vapor Pressure
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SHiPS	State Highway Planning System
SIP	State Implementation Plan (for air quality)
STIP	State Transportation Improvement Program
TAZ	Traffic Analysis Zone
TCM	Transportation Control Measure
TEA-21	Transportation Equity Act for the 21st Century
TIP	Transportation Improvement Program
TSD	Technical Support Document (for SIPs or SIP revisions)
V/C	Volume-to-Capacity (Ratio)
VAC	Virginia Administrative Code
VDEQ (or DEQ)	Virginia Department of Environmental Quality
VDOT	Virginia Department of Transportation
VDRPT	Virginia Department of Rail and Public Transportation
VEC	Virginia Employment Commission
VHT	Vehicle Hours of Travel
VMT	Vehicle Miles of Travel
VOC	Volatile Organic Compounds
VRS	Vapor Recovery System

Executive Summary

This report presents the regional conformity analysis and recommendation for a finding of conformity for the Hampton Roads 2030 Long Range Transportation Plan (LRTP, or "Plan") and associated Fiscal Year (FY) 2009-2012 Transportation Improvement Program (TIP, or "Program"), both as amended by the Hampton Roads Transportation Planning Organization (HRTPO). The HRTPO serves as the designated Metropolitan Planning Organization or MPO for the Hampton Roads region[1]. The conformity analysis was conducted in compliance with the federal transportation conformity rule *(*40 CFR Parts 51 and 93*)*[2] and the corresponding state conformity regulation *(*9 VAC 5-151*)*[3].

As summarized in Exhibit ES-1, the LRTP and TIP meet all applicable federal and state conformity requirements and criteria[4].

Exhibit ES-1: Conformity Analysis Summary*

Section	Criteria	Demonstrated:
93.108	Fiscal constraint	Yes**
93.110	Latest planning assumptions	Yes
93.111	Latest emissions model	Yes
93.112	Consultation	Yes***
93.113(b) & (c)	TCMs	na****
93.118	Emissions Budget	Yes

* *As specified in 40 CFR 93.109, "Table 1 – Conformity Criteria", with the addition of fiscal constraint as required in Section 93.108. Additional requirements apply, e.g. as specified in 93.122, although not specifically listed above.*

** *As indicated by MPO (HRTPO) approval and/or provision of the project lists for the Plan and Program and the supporting information provided with those documents, and subject to federal review consistent with 23 CFR Part 450 as referenced in the conformity rule in Section 93.108.*

*** *Conducted to meet both state and federal requirements.*

**** *The applicable implementation (maintenance) plan (72 FR 30490, effective June 1, 2007) for Hampton Roads does not include transportation control measures (TCMs), which therefore are not required for the conformity analysis or determination.*

A recommendation for a finding of conformity is therefore made, conditional upon any further and separate review as may be required by the US Department of Transportation (US DOT) for the fiscal constraint criterion consistent with Section 93.108[5] of the federal

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1 The Hampton Roads Metropolitan Planning Organization (HRMPO) was renamed the Hampton Roads Transportation Planning Organization (HRTPO) in 2009. Website: http://www.hrtpo.org.

2 Federal Transportation Conformity Regulations (EPA Website): http://www.epa.gov/otaq/stateresources/transconf/conf-regs.htm.

3 Virginia *Regulation for Transportation Conformity* (9 VAC5-151), effective January 19, 2010: http://leg1.state.va.us/000/reg/TOC09005.HTM#C0151

4 Federal Conformity Rule, 40 CFR 93.109 (*Criteria*…). See "*Table 1 - Conformity Criteria*": http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.109.htm

5 Federal Conformity Rule, 40 CFR 93.108 *Fiscal Constraints for Transportation Plans and TIPs*: http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.108.htm

conformity rule and the requirements of the federal planning rule specified at 23 CFR Part 450[6].

Supporting information for each of these criteria demonstrations is provided below, following a summary of the current status of the region with regard to air quality and, for context, an overview of the applicable regulatory requirements.

Hampton Roads Air Quality Planning Status

Hampton Roads is currently in attainment (maintenance) of the 1997 eight-hour ozone national ambient air quality standard (NAAQS) and in attainment of all of the other applicable NAAQS. The designated maintenance area includes the Counties of Gloucester, Isle of Wight, James City, and York, and the Cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg. Federal transportation conformity requirements apply for areas in nonattainment or maintenance, and therefore apply for Hampton Roads.

On June 1, 2007, the United State Environmental Protection Agency (US EPA) via Federal Register notice approved a redesignation request and State Implementation Plan (SIP) revision (maintenance plan) that had been submitted by the Virginia Department of Environmental Quality (VDEQ)[7]. EPA also found adequate and approved motor vehicle emission budgets for ozone precursors (nitrogen oxides or NO_x, and volatile organic compounds, or VOC) as specified in the maintenance plan. Pursuant to the requirements of the federal conformity rule, the maintenance plan budgets must be met in all regional conformity analyses for the Hampton Roads area.

Regulatory Requirements Overview

Conformity means, as indicated in Section 176(c) of the Clean Air Act (CAA)[8] as amended:

> *"(A) conformity to an [air quality] implementation plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards; and*
>
> *(B) that such activities will not— (i) cause or contribute to any new violation of any standard in any area; (ii) increase the frequency or severity of any existing*

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6 US DOT - Federal Highway Administration (FHWA), 23 CFR Parts 450 and 500 and Federal Transit Administration (FTA), 49 CFR Part 613, *Statewide Transportation Planning; Metropolitan Transportation Planning,* Final Rule effective March 16, 2007. See: http://edocket.access.gpo.gov/2007/07-493.htm.

For reference, the FHWA also provides a compilation of transportation-related legislation, regulations and guidance on their website: http://www.fhwa.dot.gov/hep/legreg.htm.

7 US EPA, 72 FR 30490, 40 CFR Parts 52 and 81 [EPA–R03–OAR–2006–0919; FRL–8320–9], *Approval and Promulgation of Air Quality Implementation Plans; Virginia; Redesignation of the Hampton Roads 8-Hour Ozone Nonattainment Area to Attainment and Approval of the Area's Maintenance Plan and 2002 Base-Year Inventory*, Final Rule, effective June 1, 2007. See: http://edocket.access.gpo.gov/2007/E7-10581.htm.

8 *Clean Air Act* (and amendments): http://www.epa.gov/air/caa/

> *violation of any standard in any area; or (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area. …"*

Section 176(c)(4)(B) of the CAA requires regulatory action in the form of criteria and procedures for conformity to be promulgated by EPA in concurrence with the US DOT:

> *"176(c)(4)(B) Transportation plans, programs, and projects.— The Administrator, with the concurrence of the Secretary of Transportation, shall promulgate, and periodically update, criteria and procedures for demonstrating and assuring conformity in the case of transportation plans, programs, and projects."*

The federal conformity rule was initially promulgated in 1993 and has been amended a number of times since. The most current compilation is that produced by EPA in March 2010[9]. Under the federal rule, MPOs, state departments of transportation and the FHWA along with the FTA are responsible for conformity determinations for: (1) LRTPs, (2) TIPs, (3) transportation projects that receive federal funding or require FHWA or FTA approval, and (4) regionally significant non-federal projects, if these actions occur in areas that have been designated by EPA as nonattainment or maintenance areas for any of the criteria pollutants.

State conformity regulations, primarily to address consultation, are a requirement of the federal conformity rule at 40 CFR Part 51. Accordingly, the VDEQ in 1997 developed the Virginia *Regulation for Transportation Conformity*[10]. The Virginia regulation was updated for consistency with EPA requirements in 2007, and amended again in 2008. The current version, specified in the Virginia Administrative Code (VAC) at 9 VAC 5-151[11], was approved by EPA via Federal Register notice on November 20, 2009 (effective January 19, 2010)[12]. The Virginia regulation closely reflects the requirements of the federal rule for inter-agency and public consultation.

Demonstrations of conformity are therefore conducted to meet the general objectives given in the CAA by meeting the technical criteria specified in the federal and state conformity regulations, with consultation as required by the federal and state regulations including local procedures for inter-agency and public consultation that have been established for the Hampton Roads area.

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9 US EPA, *Transportation Conformity Regulations Updated March 2010*, EPA-420-B-10-006, March 2010, available at: http://www.epa.gov/otaq/stateresources/transconf/regs/420b10006.pdf.

10 Specified in the Virginia Administrative Code (VAC) at 9 VAC 5-150. See: http://www.deq.virginia.gov/air/regulations/air150.html.

11 Virginia *Regulation for Transportation Conformity* (9 VAC 5-151). See: http://www.deq.virginia.gov/air/regulations/air151.html.

12 US EPA, 74 FR 60194, 40 CFR Part 52, [EPA-R03-OAR-2009-0674; FRL-8983-1], *Approval and Promulgation of Air Quality Implementation Plans; Virginia; Transportation Conformity Regulations*, Direct Final Rule, November 20, 2009, effective January 19, 2010. See: http://edocket.access.gpo.gov/2009/E9-27814.htm

Conformity Criteria Assessments

Summary assessments are presented below for each of the key conformity criteria listed in Exhibit ES-1, which includes not only the specific criteria identified for regional conformity analyses in Section 93.109[13] of the federal rule (namely, those specified in sections 93.110 through 93.113, and 93.118) but also fiscal constraint from Section 93.108 of that rule. However, as revenues and project costs are not generally assessed in air quality conformity analyses, but are instead assessed as required with the associated Plan and TIP, the fiscal constraint criterion effectively serves as a pre-requisite for the conformity analysis and determination. More detail and supporting information on the technical criteria and assessments are provided in the main report.

- *Section 93.108 (Fiscal Constraints for Transportation Plans and TIPs)*[14]: The federal conformity rule states: "*Transportation plans and TIPs must be fiscally constrained consistent with [US] DOT's planning regulations at 23 CFR part 450 in order to be found in conformity*."

  For Hampton Roads, the MPO (HRTPO) addresses fiscal constraint in the development of the Plan and Program as appropriate and typically includes specific sections or chapters addressing revenues, cost estimates, and financial constraint with those documents. For the purposes of this conformity demonstration, therefore, fiscal constraint is indicated by HRTPO provision and/or approval of the project lists for the Plan and Program and the supporting information referenced by those documents.

  A recommendation for a finding of conformity is therefore conditional upon any further and separate review as may be required by the US DOT for the fiscal constraint criterion consistent with Section 93.108 of the federal conformity rule as well as requirements of federal planning regulations specified at 23 CFR Part 450.

- *Section 93.110 (Latest Planning Assumptions)*[15]: All requirements for the application of latest planning assumptions were met as follows:

  - 93.110(a) Latest Planning Assumptions: This section requires that: "*the conformity determination … must be based upon the most recent planning assumptions in force at the time the conformity analysis begins...*"

    In general, the latest available and approved population and employment forecasts for 2030 by Traffic Analysis Zone (TAZ) were employed with the regional travel demand network model (TP+) to generate the traffic volume and vehicle-miles-traveled (VMT) forecasts applied in this conformity analysis. Regional roadway and transit networks were updated as

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13 Federal Conformity Rule, 40 CFR 93.109 ("Criteria…"). See "*Table 1 - Conformity Criteria*": http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.109.htm

14 Federal Conformity Rule, 40 CFR 93.108 *Fiscal Constraints for Transportation Plans and TIPs*: http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.108.htm

15 Federal Conformity Rule, 40 CFR 93.110 *Criteria and Procedures: Latest Planning Assumptions* http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.110.htm

appropriate using the Plan and Program project lists, which were subjected to interagency consultation as described below. Emission controls assumed for the analysis were consistent with those specified in the applicable implementation (maintenance) plan revision.

All of the latest planning assumptions and other aspects of the conformity analysis were reviewed by the Hampton Roads Interagency Consultation Group (ICG) at the beginning of the conformity analysis process, as documented in the chapter on consultation and in Appendix D. Additional details are provided below.

- 93.110 (b) Socioeconomic Forecasts: This section requires that "*Assumptions must be derived from the estimates of current and future population, employment, travel, and congestion most recently developed by the MPO or other agency authorized to make such estimates and approved by the MPO*". Further, Section 93.122(b)(1)(ii) requires that "*Land use, population, employment, and other network-based travel model assumptions must be documented and based on the best available information*". Section 93.122(b)(1)(iii) adds that "*Scenarios of land development and use must be consistent with the future transportation system alternatives for which emissions are being estimated*."

  As documented in the main report, the socioeconomic forecasts for 2030 (including interim years and sub-allocations as appropriate) represent the latest projections available and approved for use with the 2030 LRTP[16]. The Regional Economic Models, Inc. (REMI) econometric model was applied to develop control totals for key parameters such as population and employment for the Hampton Roads area. The HRTPO then sub-allocated the regional control totals to the local or jurisdiction level. The sub-allocations were reviewed by each locality and adjustments made where appropriate.

- 93.110(c) and (d) Transit: These sections respectively require that "*The conformity determination for each transportation plan and TIP must discuss how transit operating policies (including fares and service levels) and assumed transit ridership have changed since the previous conformity determination*" and "*The conformity determination must include reasonable assumptions about transit service and increases in transit fares and road and bridge tolls over time*".

  Transit operating policies (including fares and service levels) and modeling for transit (ridership) have not changed significantly since the previous

[16] While socioeconomic forecasts for 2034 have more recently been adopted for use in the pending development of the 2034 LRTP, they were not intended nor approved by the TPO for use with the existing and approved 2030 LRTP. Consistent with the consultation requirements of the federal conformity rule at 93.105 and the corresponding state regulation at 9 VAC 5-151-70 that is now in effect, the use of the 2030 versus the 2034 socioeconomic forecasts for this analysis was reviewed by the ICG at the beginning of the conformity analysis process. Minutes for that meeting are provided in Appendix D. The consensus of the ICG was to apply the approved 2030 socioeconomic forecasts for this analysis.

conformity determination. Transit service including proposed light rail is included in future networks for the region. While future transit ridership is effectively determined in the course of modeling for the conformity analysis, details on current transit operating policies including fares and service levels may be found on the Hampton Roads Transit (HRT) and Williamsburg Area Transportation Authority (WATA) websites[17]. Transit service and fares as well as road and bridge tolls are also addressed in supporting documentation for the Plan and associated modeling.

In brief, local transit fares have not changed (or not changed significantly) since the last conformity analysis for either HRT or the WATA. For HRT, the current single ticket fare for local bus service is $1.50. A day pass (the Go Pass) was introduced in 2008 with a fare of $3.50 for a one-day pass. For WATA, the fare for a one-way trip is $1.25; for seniors (60 and over) and disabled, a reduced fare of $0.50 applies. An all-day pass (for unlimited trips) is also available for a fare of $1.50. In keeping with the Americans with Disabilities Act (ADA), door-to-door service is also available for those unable to use bus at a fare of $2.00 per one-way trip. Finally, express bus service modeling includes the "Max" service, with fares converted to constant 2000 dollars.

- 93.110(e) Transportation Control Measures (TCMs) and Other Measures: This section requires that "*The conformity determination must use the latest existing information regarding the effectiveness of the TCMs [transportation control measures] and other implementation plan measures which have already been implemented*."

  The applicable SIP revision (maintenance plan) for Hampton Roads does not include transportation control measures (TCMs). TCMs are therefore not required for the conformity analysis or determination. Accordingly, credit for TCMs was not taken in this analysis. See 72 FR 30490, effective June 1, 2007.

  Other measures applicable for on-road motor vehicles as listed in the applicable implementation (maintenance) plan include *Tier 2/Low Sulfur Gasoline Rule*, *2007 On Road Diesel Engine Rule*, and *Reformulated gasoline (on-road)*[18]. Other or associated measures implemented in the region and documented in this report include gasoline Reid Vapor Pressure (RVP) limits and early implementation of the National Low Emission Vehicle

[17] See www.hrtransit.org and www.williamsburgtransport.com, respectively.

[18] VDEQ, *Maintenance Plan for the Hampton Roads Nonattainment Area Consisting of the Cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Suffolk, Virginia Beach, and Williamsburg and the Counties of James City, York, Gloucester, and Isle of Wight - Final*, ca October 2006. See Table 5.2.2-1 (*Maintenance Plan Control Measures and Emission Reductions*) on page 8.

The Technical Support Document (TSD) for the maintenance plan lists the same measures under slightly different headings, namely the *Federal Tier 2/Low Sulfur Gasoline Rule*, *Federal Heavy Duty Diesel Engine Rule*, and *Reformulated Gasoline (On-Road)*. See: VDEQ, *Technical Support Document for the Redesignation Request and Maintenance Plan for Hampton Roads 8-hour Ozone Nonattainment Area - Final*, ca October 2006, Table 8-1 (*Maintenance Plan Control Measures and Emission Reductions*), p.282.

(NLEV) Program. All of these measures have been implemented and were therefore credited in this analysis as appropriate.

Further, and though not specified in the implementation plan, other measures have been implemented that have or may have the effect of reducing emissions. Credit for these measures was not needed to demonstrate conformity and was therefore not taken for this analysis. These measures include transit bus replacements, Congestion Mitigation and Air Quality (CMAQ) funded projects, van pools, and park-and-ride lots.

- 93.110(f) Consultation on Key Assumptions: This section requires that "*Key assumptions shall be specified and included in the draft documents and supporting materials used for the interagency and public consultation required by Sec. 93.105*".

  Consultation was conducted on all key assumptions in accord with both federal and state regulations, as documented below in the summary on consultation.

- *Section 93.111 (Latest Emissions Model)*[19]. Requirements to apply the latest emission model were satisfied using MOBILE6.2 for this conformity analysis. The use of the latest emission model is specified in the federal conformity rule at 93.111(a) as follows: "*The conformity determination must be based on the latest emission estimation model available.*" However, when EPA issues a new model, a grace or transition period applies in which the previous model or version of the model may still be applied, per the federal conformity rule at 93.111(c) which states: "*Transportation plan and TIP conformity analyses for which the emissions analysis was begun during the grace period or before the Federal Register notice of availability of the latest emission model may continue to use the previous version of the model.*"

  On March 2, 2010, EPA officially released the next generation Motor Vehicle Emission Simulator (MOVES2010) model for use in SIP development and regional conformity applications[20]. The EPA notice indicated that a two-year grace period (ending March 2, 2012) will apply for use of the new model in regional emissions analyses for transportation conformity determinations. Therefore, for regional conformity analyses initiated before or within the two-year

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19 Federal Conformity Rule, 40 CFR 93.111 *Criteria and Procedures: Latest Emissions Model* http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.111.htm

20 US EPA, 75 FR 9411, [FRL–9121–1], *Official Release of the MOVES2010 Motor Vehicle Emissions Model for Emissions Inventories in SIPs and Transportation Conformity*, Notice of Availability, March 2, 2010. Available at: http://edocket.access.gpo.gov/2010/2010-4312.htm. The model name or version as initially released was "MOVES2010", and an updated version "MOVES2010a" was released in August 2010. To allow for pending future revisions to the model and any associated revisions to the model name, the current version of the model is referenced here generically as "MOVES". See:

- EPA website for MOVES: http://www.epa.gov/otaq/models/moves/index.htm.
- US EPA, *Policy Guidance on the Use of MOVES2010 for State Implementation Plan Development, Transportation Conformity, and Other Purposes*, EPA-420-B-09-046, December 2009. Direct link: http://www.epa.gov/otaq/models/moves/420b09046.pdf.

grace period, the MOBILE6.2 model (the model previously designated as the official model by EPA) may continue to be applied.

The selection of latest emission model for the conformity analysis was considered by the ICG at the beginning of the conformity analysis process, as documented in the chapter on consultation and in Appendix D. The consensus of the ICG was to apply the MOBILE6.2 model for this analysis, within the grace period. The MOVES model may be applied in future analyses once appropriate steps have been taken, within the grace period, to review and update as needed the applicable budgets specified in the maintenance plan[21].

- *Section 93.112 (Consultation)*[22]: Regulatory requirements for consultation that were initially established at the federal level have been reflected in state regulations and requirements as well as locally developed inter-agency and public consultation procedures. Exhibit ES-2 presents an overview of applicable federal, state and local consultation requirements.

  Federal Regulation: Federal requirements for consultation as specified in the conformity rule in Section 93.105 were made subject in Section 93.112 to the establishment and approval by EPA of corresponding state requirements, as follows: "*Conformity must be determined according to the consultation procedures in this subpart and in the applicable implementation plan, and according to the public involvement procedures established in compliance with 23 CFR part 450. Until the implementation plan revision required by §51.390 of this chapter is fully approved by EPA, the conformity determination must be made according to §93.105 (a)(2) and (e) and the requirements of 23 CFR part 450.*"

  The referenced section, 51.390, of the federal transportation conformity rule effectively requires the development of a state regulation to govern conformity consultation processes and further provides that the state regulation once approved by EPA effectively governs (over the federal) where they overlap. Section 51.390c provides that: *"Timing and approval... Following EPA approval of the state conformity provisions (or a portion thereof) in a revision to the state's conformity implementation plan, conformity determinations will be governed by the approved (or approved portion of the) state criteria and procedures as well as any applicable portions of the federal conformity rules that are not addressed by the approved conformity SIP."*

  Commonwealth of Virginia Regulation: The Virginia "*Regulation for Transportation Conformity*" (9 VAC 5-151) satisfies these requirements and is therefore the governing regulation for consultation for conformity purposes for the Commonwealth.

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21 A separate process to review and update as appropriate (using MOVES) the motor vehicle emission budgets specified in the currently applicable SIP revision (maintenance plan) is planned. This review and update process would need to be completed before the new or revised budgets could be applied in future conformity analyses.

22 Federal Conformity Rule, 40 CFR 93.112 *Criteria and Procedures: Consultation* http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.112.htm

Although the Virginia regulation generally mirrors the federal with regard to specific consultation requirements, one difference is that the Virginia regulation requires that the Lead (or Local) Planning Organization (LPO) for air quality planning that has been established for the region pursuant to Section 174 of the federal Clean Air Act as amended specifically be included in consultation for conformity purposes. The Hampton Roads Air Quality Committee (HRAQC) is the designated LPO for the region, and the involvement of the VDEQ staff representative for that Committee in the local inter-agency consultation process for conformity is considered to fulfill that requirement.

Hampton Roads Procedures: Both inter-agency and public consultation procedures have been established for Hampton Roads. Inter-agency consultation procedures for conformity were approved in 2005[23,24]. An Interagency Consultation Group (ICG) has been established that includes representatives of member agencies of the HRTPO, Virginia Department of Rail and Public Transportation (VDRPT), VDOT, FHWA, FTA, VDEQ and the US EPA. A representative of the LPO also participates in consultation with the ICG. All meetings are open to the public.

Public consultation for the LRTP, TIP and conformity is conducted following the extensive procedures presented in the "*Public Participation Plan*" (PPP)[25] that was approved by the HRTPO in December 2009. The PPP responds to SAFETEA-LU requirements as implemented with the revised planning regulations (23 CFR Part 450). The ICG procedures are also referenced in the PPP, and the two processes are coordinated.

The main report includes a summary of all applicable federal, state and local consultation requirements as well as a record of inter-agency and public consultation activities conducted in support of this analysis. The consultation record is also reviewed below.

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23 VDOT, *Consultation Procedures for the Hampton Roads Ozone Nonattainment Area in Support of the Transportation Conformity Regulations*, Revised July 18, 2005. See: http://www.hrtpo.org/Documents/Reports/Rev_HR_ICP2005.pdf

24 The recent approval by EPA of the Virginia *Regulation for Transportation Conformity* will require updates to currently established consultation procedures for MPOs across the Commonwealth, including the HRTPO. However, since the consultation requirements specified in the new Virginia regulation generally mirror those in the existing federal regulation, the updates are expected to be largely editorial in nature and not involve significant changes to established consultation processes.

For Hampton Roads, an update to existing consultation procedures is in the planning stages. The update is planned to not only reflect changes as appropriate to the applicable regulations for the new Virginia regulation but also to provide the ICG an opportunity to update and streamline existing consultation processes.

25 Hampton Roads TPO, *Public Participation Plan*, December 2009: http://www.hrtpo.org/Documents/Reports/HRTPO%20PPP%20-%20December%202009%20(Final).pdf

Exhibit ES-2: Federal, State and Local Consultation Requirements Relating to Transportation Conformity

DATE	REQUIREMENT
PENDING	
Update to Inter-Agency Consultation Procedures for Transportation Conformity	Update for the existing (2005) Hampton Roads Conformity Consultation Procedures, both to reflect the new Virginia Conformity SIP *(Regulation for Transportation Conformity* , 9 VAC 5-151) and to streamline and update existing processes as appropriate.
CURRENTLY APPLICABLE OR APPROVED	
Federal	***Legislation & Regulations***
US EPA Regulation for Transportation Conformity (40 CFR Parts 51 and 93). *Key requirements for consultation are addressed in Sections 51.390, 93.105, and 93.112.*	
March 24, 2010	*Transportation Conformity Regulations Updated March 2010* issued by EPA. This is the most current compilation by EPA of the Federal Transportation Conformity Rule (40 CFR Parts 51 and 93). It reflects all amendments made since the initial issuance by EPA of the rule in 1993 through March 24, 2010, including revisions promulgated pursuant to SAFETEA-LU in 2005.
US DOT Planning Assistance and Standards (23 CFR Part 450)(Transportation Planning & Programming Requirements). *Key requirements for consultation are addressed in Section 450.316 Interested parties, participation, and consultation.*	
February 14, 2007	US DOT, Federal Highway Administration, 23 CFR Parts 450 and 500, Federal Transit Administration, 49 CFR Part 613 [Docket No. FHWA–2005–22986] RIN 2125–AF09; FTA RIN 2132–AA82, *Statewide Transportation Planning; Metropolitan Transportation Planning* , Final Rule. Most recent major update to the federal planning regulations.
Legislation - Clean Air Act as amended, and subsequent SAFETEA-LU amendments.	
August 10, 2005	Federal Reauthorization (*Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users,* or *SAFETEA-LU* , Public Law 109-59), which addressed in part conformity.
November 15, 1990	Last set of major amendments to the *Clean Air Act* , although there have been minor amendments since. Conformity is addressed in Section 176(c).
State	***Federally-Required State Regulation for Transportation Conformity (9 VAC 5-151)***
January 19, 2010	Effective date for the new Virginia *Regulation for Transportation Conformity* (9 VAC 5-151) approved 11/20/09 by EPA via Federal Register notice. See US EPA, 74 FR 60194, 40 CFR Part 52, [EPA-R03-OAR-2009-0674; FRL-8983-1], "*Approval and Promulgation of Air Quality Implementation Plans; Virginia; Transportation Conformity Regulations* ", Direct Final Rule, November 20, 2009. The regulation was approved as submitted on March 23, 2009.
March 23, 2009	Submittal the Virginia *Regulation for Transportation Conformity* (9 VAC 5-151) by the VDEQ to the US EPA for approval in response to federal conformity rule requirements at 40 CFR Part 51. By the federal rule, the requirements of the new state regulation generally govern over the pre-existing federal requirements for consultation for conformity purposes (where they overlap, and as long as they are no less stringent).
Local	***Consultation Procedures***
Public Participation Plan	
December 16, 2009	MPO (HRTPO) approval of the *Hampton Roads Transportation Planning Organization Public Participation Plan* dated December 2009. This document responds to public and consultation stakeholder requirements specified in 23 CFR Part 450.
Inter-Agency Consultation Procedures for Transportation Conformity	
September 21, 2005	MPO (HRTPO) approval of (Inter-Agency) *Consultation Procedures for the Hampton Roads Ozone Nonattainment Area in Support of the Transportation Conformity Regulations (Revised July 18, 2005).* This revision updated the initial version approved in July 2001. These procedures were developed in response to requirements of the federal conformity rule at 40 CFR 93.105.

Consultation Record

Interagency and public consultation opportunities relating to this conformity analysis, including the prior development of project lists, were (*or will be*) provided at the following meetings and events:

- November 17, 2010: HRTPO approval of an amendment to the 2030 LRTP. HRTPO meetings are open to the public, with email announcements (including public notices) and agendas posted the week before the meeting.

- December 1, 2010: ICG meeting, marking the beginning of the conformity analysis process. This meeting provided an opportunity for detailed review and comment on all aspects of the proposed analysis, including models, associated methods and assumptions, project lists for the Plan and TIP (including changes), and overall schedule.

  Exhibit ES-3 lists current members of the Hampton Roads ICG. Membership includes all parties identified in the both the federal and state conformity regulations and is consistent with the requirements given in the 2005 Conformity Consultation Procedures for Hampton Roads.

  ICG meeting notices were distributed by email and also posted on the HRTPO web site. The email distribution list included representatives of all of the agencies listed in the Exhibit for the ICG, which includes members of the TTAC, as well as the staff representative for the HRAQC (LPO).

  Comments received from the ICG comments are documented in the minutes for the meeting, which are referenced below and copied in Appendix D. Comments were limited to minor updates to the project lists for modeling and to the proposed schedule for the conformity analysis.

  Public comment was also sought at or in conjunction with the ICG meeting and on the project lists for the conformity finalized at the ICG meeting. The ICG meeting was noted on the TTAC agenda for which the “HRTPO Weekly Update” public notice email was distributed the week before the meeting (on Friday, November 26, 2010). A public announcement for the meeting was posted on or by November 29, 2010 on the HRTPO website.

  An opportunity for public input was provided at the ICG meeting. No comments from the public were received at the meeting. One written comment from a member of the public was received one day in advance of the meeting and was distributed to meeting participants (and is copied in Appendix D, which addresses consultation). No comments were received that would require a material change to the conformity analysis.

  Following the meeting, the project lists for the conformity analysis were posted on the HRTPO website for a fourteen-day public review period. A notice of the availability of the project lists for the conformity analysis was included in the regular “HRTPO Weekly Update” email issued December 8, 2010 by the HRTPO. The public comment period ended December 20, 2010. No comments were received or none that would require a material change to

the conformity analysis.

Exhibit ES-3: Hampton Roads Interagency Consultation Group (ICG)

Agency		*Staff*	
City/County			
City of Chesapeake		Earl	Sorey
City of Hampton		Lynn	Allsbrook
City of Newport News		Michael	King
City of Norfolk		Jeffrey	Raliski
City of Poquoson		Deborah	Vest
City of Portsmouth		Richard	Hartman
City of Suffolk		Robert	Lewis
City of Virginia Beach		Travis	Campbell
City of Williamsburg		Reed	Nester
Gloucester County		Anne	Ducey-Ortiz
Isle of Wight County		Jane	Hill
James City County		Steven	Hicks
York County		Timothy	Cross
Regional			
Hampton Roads Transportation Planning Organization		Andy	Pickard
Hampton Roads Transit		Jayne	Whitney
Williamsburg Area Transit Authority		Richard	Drumwright
State			
Virginia Dept. of Environmental Quality		Sonya	Lewis-Cheatham
Virginia Dept. of Rail & Public Transportation		Joseph	Swartz
Virginia Dept. of Transportation – C/O Environmental		Jim	Ponticello
Virginia Dept. of Transportation – C/O Planning		Jaesup	Lee
Federal			
Environmental Protection Agency		Martin	Kotsch
Federal Highway Administration		Marisel	Lopez-Cruz
Federal Transit Administration		Tony	Cho
Alternates / Other (non-voting)			
City of Suffolk	*Alternate*	Sherry	Earley
	Other	Scott	Mills
James City County		Allen	Murphy
US Navy		Jennifer	Tabor

** Listing as of November 23, 2010.*

The presentation given at the ICG meeting included a review of the membership list (including the involvement of the LPO in the consultation process), selection of the latest emission model for the analysis, modeling methodology and assumptions (including the selection of socioeconomic forecasts to meet latest planning assumption requirements), the project lists to be applied in the conformity analysis for the Plan and TIP, and the conformity analysis schedule. The presentation also addressed a planned future update to the ICG Consultation Procedures pursuant to the recent approval of the Virginia *Regulation for Transportation Conformity*.

Draft meeting minutes (including attachments and an updated ICG Membership list) were distributed for comment. No comments were received.

Copies of all materials distributed for the ICG Meeting are provided in Appendix D, with the exception of the project lists for the Plan and TIP which are presented separately (given their length) in Appendix E. Appendix D includes the meeting agenda, membership list, draft modeling methodology and assumptions (draft chapter of conformity analysis report), draft conformity analysis schedule, presentation (PowerPoint slides), and email/website notices. Comments received are also copied in this appendix. Additionally, email transmittals for both draft and final minutes are copied in this Appendix, with the final minutes attached.

- December 6-20, 2010: Fourteen-day public comment period on the project lists for the Amended 2030 LRTP and FY 2009-2012 TIP. The public review period was initiated following changes agreed at the ICG meeting and noted in the minutes. An announcement of the public review period on the project lists was provided to more than 4,000 email addresses, among them local and regional media and public information officers. No comments requiring a material change to the analysis were received.

- March 2, 2011: TTAC recommendation for approval of the draft Conformity Analysis and proposed finding of conformity for the amended 2030 LRTP and amended FY 2009-2012 TIP, subject to no adverse comments received during the associated public review period that would require their review. No comments requiring a material change to the draft analysis or proposed finding of conformity were received.

- February 23-March 9, 2011: Fourteen-day public review period on the draft Regional Conformity Analysis and its proposed finding of conformity. A public notice with links to copies of the draft Conformity Analysis and its Executive Summary were posted on the HRTPO website, links to which were provided in its regular weekly broadcast email. The public review period was also noted in the agendas for the TTAC and TPO meetings in March 2011. No comments requiring a material change to the draft analysis or proposed finding of conformity were received.

- March 17, 2011: HRTPO approval of the draft Conformity Analysis and finding of conformity for the amended 2030 LRTP and amended FY 2009-2012 TIP, both of which were determined to be fiscally-constrained by the HRTPO. No comments requiring a material change to the draft analysis or proposed finding of conformity were received.

- *Section 93.113 (Timely Implementation of TCMs)*[26]: As indicated previously under "Latest Planning Assumptions", the applicable SIP revision (maintenance plan) for Hampton Roads does not include transportation control measures

[26] Federal Conformity Rule, 40 CFR 93.113 *Criteria and Procedures: Timely Implementation of TCMs* http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.113.htm

(TCMs). TCMs are therefore not required for the conformity analysis or determination. See 72 FR 30490, effective June 1, 2007.

- *Section 93.118 (Motor Vehicle Emissions Budget)*[27]: Requirements of the federal conformity rule with regard to the applicable motor vehicle emission budgets were met as follows:

  (a) The transportation plan, TIP… must be consistent with the motor vehicle emissions budget(s) in the applicable implementation plan... This criterion is satisfied if it is demonstrated that emissions of the pollutants …are less than or equal to the motor vehicle emissions budget(s)….",

  Exhibit ES-4 lists the motor vehicle emission budgets as specified in the applicable implementation plan revision, namely the 2007 maintenance plan for the eight-hour ozone standard as previously referenced. Budgets are specified for nitrogen oxides (NO_x) and for volatile organic compounds (VOC), both of which are precursors to ozone formation.

Exhibit ES-4: Motor Vehicle Emission Budgets for Hampton Roads

ADEQUATE AND APPROVED MOTOR VEHICLE EMISSIONS BUDGETS (MVEBS) IN TONS PER DAY (TPD)		
Budget year	NO_x	VOC
2011	50.387	37.846
2018	31.890	27.574

Source: Excerpted from 72 FR 30490, effective June 1, 2007.

Exhibit ES-5 presents the emission forecasts for the LRTP and TIP in comparison to the specified motor vehicle emission budgets. The forecast emissions are less than the corresponding budgets established in the applicable SIP revision (maintenance plan) for each pollutant and year tested. The emission tests required by the federal conformity rule are therefore passed.

For transparency and to demonstrate consistency with the methodology applied in the maintenance plan, the Exhibit presents separate emission totals for network emissions, off-network emissions, and contributions from mobile sources operating on military bases within the Hampton Roads maintenance area.

(b) "Consistency with the motor vehicle emissions budget(s) must be demonstrated for each year for which the applicable (and/or submitted) implementation plan specifically establishes motor vehicle emissions

[27] Federal Conformity Rule, 40 CFR 93.118 *Criteria and Procedures: Motor Vehicle Emissions Budget* http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.118.htm

budget(s), for the attainment year (if it is within the timeframe of the transportation plan and conformity determination), for the last year of the timeframe of the conformity determination …, and for any intermediate years within the timeframe of the conformity determination as necessary so that the years for which consistency is demonstrated are no more than ten years apart … "

Exhibit ES-5: Conformity (Emission Budget) Tests

Year		Regional Emissions *(tons per average ozone season weekday)*	
		NO_x	**VOC**
2011	**Budget Year**		
	Network	*36.81*	*27.94*
	Off-Network	*8.30*	*8.58*
	Miltary Base	*0.52*	*0.26*
	TOTAL FORECAST:	45.63	36.78
	Budget:	50.387	37.846
	Conformity Test:	PASSED	PASSED
2018	**Budget Year**		
	Network	*21.13*	*18.65*
	Off-Network	*4.92*	*5.95*
	Miltary Base	*0.52*	*0.26*
	TOTAL FORECAST:	26.57	24.86
	Budget:	31.890	27.574
	Conformity Test:	PASSED	PASSED
2020	**Interim Year** (within ten years of other years modeled)		
	Network	*19.07*	*16.57*
	Off-Network	*4.48*	*5.45*
	Miltary Base	*0.52*	*0.26*
	TOTAL FORECAST:	24.08	22.28
	2018 Budget:	31.890	27.574
	Conformity Test:	PASSED	PASSED
2030	**LRTP Horizon Year**		
	Network	*16.42*	*16.02*
	Off-Network	*4.04*	*5.64*
	Miltary Base	*0.52*	*0.26*
	TOTAL FORECAST:	20.97	21.92
	2018 Budget:	31.890	27.574
	Conformity Test:	PASSED	PASSED

** Budgets specified in 72 FR 30490, effective June 1, 2007, with military base contributions from Table 4-7, p. 62, in the TSD for the referenced Maintenance Plan.*

The motor vehicle emission budget tests were satisfied for each pollutant and year modeled, as noted above. The years modeled were selected as follows:

- 2011 and 2018 are years for which motor vehicle emission budgets are specified in the applicable implementation plan revision (maintenance plan) referenced above, and the federal conformity rule requires that years for which budgets are established must be modeled.
- 2030 is the horizon year for the LRTP, which the federal conformity requires to be modeled.
- 2020 satisfies the interim year requirement (such that analysis years are no more than ten years apart) specified in the federal conformity rule.

Since the federal conformity rule requires that motor vehicle budgets established "for the most recent prior year" apply for years for which budgets have not been "specifically established", the 2018 budgets as listed are also applicable for the subsequent test years (2020 and 2030).

(c) "Consistency with the motor vehicle emissions budget(s) must be demonstrated for each pollutant or pollutant precursor …for which the area is in nonattainment or maintenance and for which the applicable implementation plan (or implementation plan submission) establishes a motor vehicle emissions budget",

The motor vehicle emission budget tests were satisfied for each pollutant and year modeled, as noted above. The pollutants modeled (NO_x and VOC precursors to ozone) were ones for which motor vehicle emission budgets were specified in the applicable implementation plan revision, namely the 2007 maintenance plan for the eight-hour ozone standard) as noted above.

(d) "Consistency with the motor vehicle emissions budget(s) must be demonstrated by including emissions from the entire transportation system, including all regionally significant projects contained in the transportation plan and all other regionally significant highway and transit projects expected in the nonattainment or maintenance area in the timeframe of the transportation plan… "

The motor vehicle emission budget tests were satisfied for each pollutant and year modeled, as noted above. Emissions from the entire transportation system, including "all regionally significant projects contained in the transportation plan and all other regionally significant highway and transit projects expected in the maintenance area in the timeframe of the transportation plan", were included in the analysis. For this purpose, separate emission forecasts were generated for motor vehicle traffic on network and off-network facilities and military bases.

Network emissions are those attributable to travel on roadways included in the regional travel demand (network) model. This includes all existing roadway facilities and transit service as well as all regionally significant roadway projects and transit services planned to be open or operational by each year modeled. Estimates for emissions attributable to travel on network facilities were estimated for each year modeled for the conformity analysis.

Off-network emissions are for travel on local and collector streets not included in the regional travel demand network model. Estimates for emissions attributable to travel on off-network facilities were also estimated for each year modeled for the conformity analysis.

Exhibit ES-6 presents the estimated emissions for on-road motor vehicles operating on military bases in the Hampton Roads area as reported in the technical support document for the maintenance plan and incorporated into the emission forecasts for the conformity analysis. The estimates do not vary by year.

Exhibit ES-6: Hampton Roads Military Base Emissions

Year	**Regional Emissions** *(tons per ozone season weekday)*	
	NOx	**VOC**
2011	0.52	0.26
2018	0.52	0.26

Source: Table 4-7, page 62, in the Technical Support Document for the Maintenance Plan approved effective June 1, 2007 (72 FR 30490)

For reference, Chapter 1 of the main report provides a more detailed review of applicable federal, state and local regulatory requirements.

Chapter 2 documents the transportation and emission modeling methodology, key data and assumptions as applied in the analysis, and a summary of the modeling results.

Chapter 3 provides an overview of all applicable consultation requirements as well as a chronological consultation record of meetings and events related to the analysis. Copies of consultation materials including meeting agenda, minutes, conformity analysis schedule, presentation and handouts are provided in Appendix D. Project lists are provided in Appendix E.

Chapter 4 summarizes the results of the conformity demonstration and the conclusion.

1. Introduction and Overview

This report presents the transportation conformity analysis for the amended Hampton Roads 2030 Long Range Transportation Plan (LRTP, or "Plan") and Fiscal Year (FY) 2009-2012 Transportation Improvement Program (TIP, or "Program").

The Hampton Roads Transportation Planning Organization (HRTPO) serves as the as the designated Metropolitan Planning Organization or MPO for the Hampton Roads region and, as such, the forum for cooperative transportation decision-making for the area[28].

The HRTPO leads the development of the LRTP and TIP, in consultation and coordination with the Virginia Department of Transportation (VDOT) and other public and private stakeholders as appropriate. Per an interagency agreement developed to meet the requirements of the federal planning rule at 23 CFR 450.314[29], VDOT, working with the MPO and in consultation and coordination with other agencies and public and private stakeholders as appropriate, leads the development of the regional conformity analyses.

The report is organized as follows:

- Chapter 1 (this chapter) provides an overview of applicable federal, state and local regulatory requirements and guidance, focusing on transportation conformity. For context, the chapter begins with a brief review of federal air quality requirements and associated designations and air quality plan development for the Hampton Roads area. The chapter concludes with a tabulation of the chronology of conformity determinations for the region.

- Chapter 2 provides a detailed review of the modeling methodology and assumptions as applied in the conformity analysis.

- Chapter 3 summarizes the consultation process and results, which begins before the conformity (technical) analysis is initiated with inter-agency review of the proposed methods, assumptions, schedule and project lists to be analyzed and concludes with HRTPO approval of the draft conformity analysis and subsequent review and finding of conformity by the US DOT in consultation with the US EPA.

- Chapter 4 documents the results of the conformity analysis, supporting a recommendation for a finding of conformity for the LRTP and TIP.

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[28] The Hampton Roads Metropolitan Planning Organization (HRMPO) was renamed the Hampton Roads Transportation Planning Organization (HRTPO) in 2009. Website: http://www.hrtpo.org.

[29] *Metropolitan Planning Agreement for the Hampton Roads Area,* effective July 15, 2009. This Agreement satisfies the requirements of 23 CFR 450.314.

1.1 Clean Air Act Requirements

The Clean Air Act (CAA)[30] was passed in 1963 and most recently amended in 1990. Requirements of the CAA that are relevant to this analysis include national ambient air quality standards (NAAQS) for specific "criteria" pollutants, motor vehicle emission standards, and transportation conformity. The first two requirements are reviewed briefly in this section, including an overview of related trends; requirements for transportation conformity are reviewed in more detail later in this chapter.

Exhibit 1-1 lists the currently applicable NAAQS[31]. Areas not meeting these standards may be designated as nonattainment and made subject to various provisions of the CAA until attainment is achieved. Development of a state implementation plan (SIP) that demonstrates attainment by a required date is one such provision; federal transportation conformity requirements are another. SIPs address not only direct emissions of a pollutant but also its precursors. For example, nitrogen oxides (NO_x) and volatile organic compounds (VOC) are considered the primary precursors to ozone, as emissions of these pollutants react in the atmosphere in the presence of sunlight and contribute to the atmospheric formation of ozone.

Areas designated nonattainment that subsequently attain or regain attainment may be redesignated to attainment, subject to maintenance requirements[32]. The development and implementation of a "maintenance" plan (as a revision to the SIP) to "*provide for the maintenance of the national primary ambient air quality standard for such air pollutant in the area concerned for at least 10 years after the redesignation*"[33] is one such requirement. A second maintenance plan, or "*an additional revision of the applicable State implementation plan for maintaining the national primary ambient air quality standard for 10 years after the expiration of the 10-year period referred to in subsection (a)*", is another such requirement[34]. Maintenance plans typically include the establishment of motor vehicle emission budgets (MVEBs) for the region, which are limits or caps on total regional emissions from the on-road motor vehicle fleet. Federal and state conformity requirements, including demonstrations of conformity to the SIP and the motor vehicle emission budgets established therein, remain in force until the designated maintenance periods are over.

National Trends

Long-term trends in emissions and ambient concentrations are informative, given the time that has elapsed since the CAA of 1963 was passed and the efforts made since then to reduce emissions through technology and other means.

Using ozone as an example, Exhibit 1-1 as previously referenced lists the currently applicable 2008 eight-hour ozone standard of 0.075 parts per million (75 parts per billion

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30 *Clean Air Act* (and amendments): http://www.epa.gov/air/caa/

31 Revisions are addressed in the next section in relation to the air quality status for Hampton Roads.

32 CAA, Title I, Part D, Section 175A - *Maintenance Plans* http://www.law.cornell.edu/uscode/html/uscode42/usc_sec_42_00007505---a000-.html

33 *Ibid*, subsection (a).

34 *Ibid*, subsection (b).

or ppb) as well as the previous standards of 0.08 ppm (1997) and 0.12 ppm. Reducing ambient levels of ozone to achieve the more stringent standards requires reductions in emissions of its precursors, namely NO_x and VOC.

Exhibit 1-1: National Ambient Air Quality Standards

	Primary Standards		Secondary Standards	
Pollutant	**Level**	**Averaging Time**	**Level**	**Averaging Time**
Carbon Monoxide	9 ppm (10 mg/m^3)	8-hour (1)	None	
	35 ppm (40 mg/m^3)	1-hour (1)		
Lead	0.15 µg/m^3 (2)	Rolling 3-Month Average	Same as Primary	
	1.5 µg/m^3	Quarterly Average	Same as Primary	
Nitrogen Dioxide	53 ppb (3)	Annual (Arithmetic Average)	Same as Primary	
	100 ppb	1-hour (4)	None	
Particulate Matter (PM_{10})	150 µg/m^3	24-hour (5)	Same as Primary	
Particulate Matter ($PM_{2.5}$)	15.0 µg/m^3	Annual (6) (Arithmetic Average)	Same as Primary	
	35 µg/m^3	24-hour (7)	Same as Primary	
Ozone	0.075 ppm (2008 std)	8-hour (8)	Same as Primary	
	0.08 ppm (1997 std)	8-hour (9)	Same as Primary	
	0.12 ppm	1-hour (10)	Same as Primary	
Sulfur Dioxide	0.03 ppm	Annual (Arithmetic Average)	0.5 ppm	3-hour (1)
	0.14 ppm	24-hour (1)		
	75 ppb (11)	1-hour	None	

(1) Not to be exceeded more than once per year.
(2) Final rule signed October 15, 2008.
(3) The official level of the annual NO_2 standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard
(4) To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb (effective January 22, 2010).
(5) Not to be exceeded more than once per year on average over 3 years.
(6) To attain this standard, the 3-year average of the weighted annual mean PM2.5 concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m3.
(7) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m3 (effective December 17, 2006).
(8) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. (effective May 27, 2008)
(9) (a) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.
(b) The 1997 standard—and the implementation rules for that standard—will remain in place for implementation purposes as EPA undertakes rulemaking to address the transition from the 1997 ozone standard to the 2008 ozone standard.
(c) EPA is in the process of reconsidering these standards (set in March 2008).
(10) (a) EPA revoked the 1-hour ozone standard in all areas, although some areas have continuing obligations under that standard ("anti-backsliding").
(b) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is $\leq$ 1.
(11) (a) Final rule signed June 2, 2010. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.

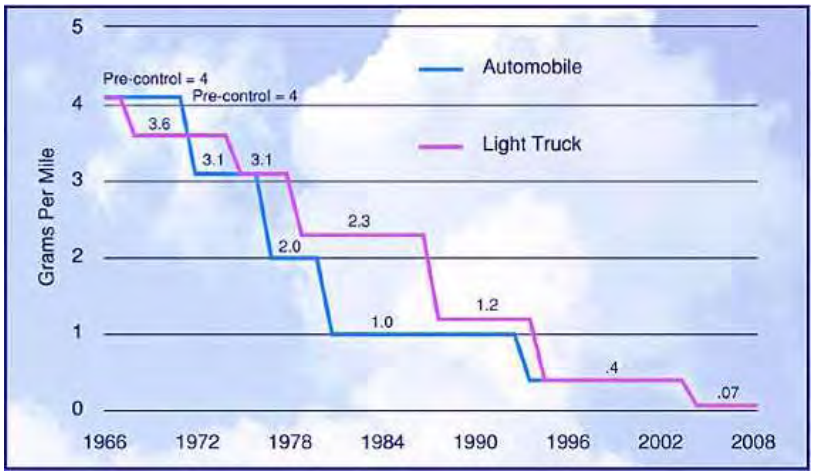
Source: US Environmental Protection Agency (http://www.epa.gov/air/criteria.htm , accessed January 24, 2011).

Exhibit 1-2 presents a simplified graphic of NO_x and VOC emission standards implemented since the 1960s for on-road light duty vehicles (cars and light trucks).

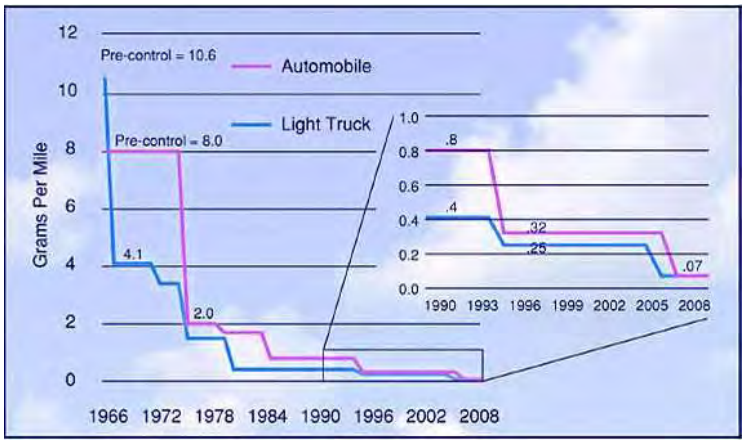
Emissions standards similarly apply for heavy duty vehicles (trucks and buses). Related fuel quality standards also apply. A complete listing of federal emission standards for on-road vehicles is available online from EPA[35]. The graphic gives a visual sense of how federal emission standards have been made increasing stringent over time.

Exhibit 1-2: Federal Emission Standards for Light Duty Vehicles and Trucks

(a) NO_x



(b) VOC



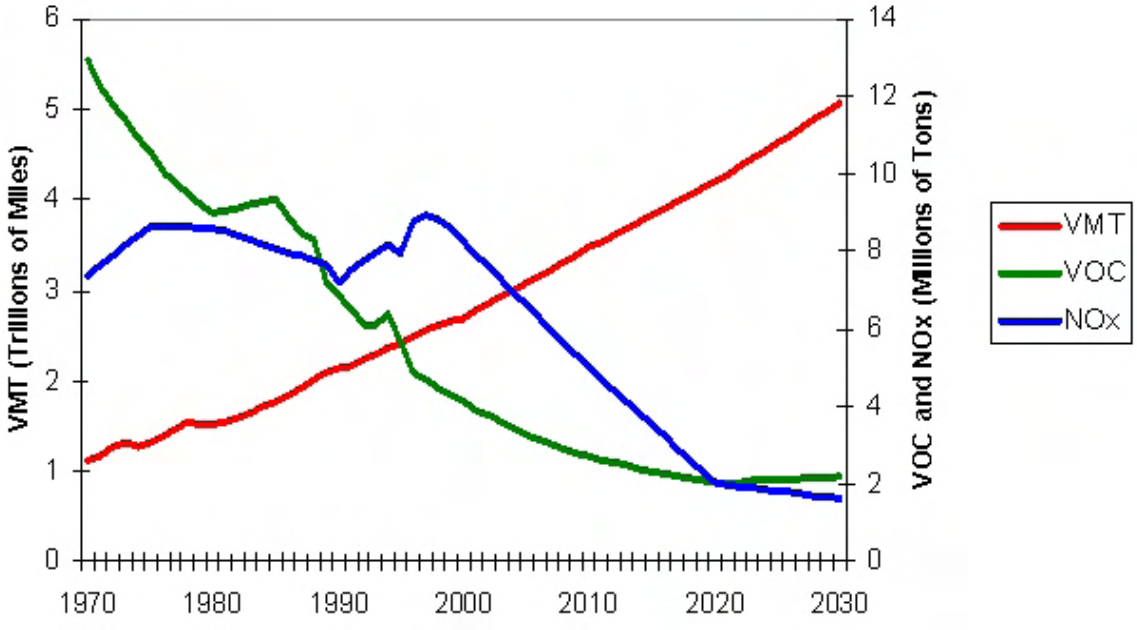
Source: FHWA website entitled "Federal Emissions Standards", accessed March 2010: http://www.fhwa.dot.gov/environment/aqfactbk/page14.htm

Exhibit 1-3 presents national trends in vehicle-miles-traveled (VMT) and associated emissions of NO_x and VOC from the on-road motor vehicle fleet. In general, despite ongoing and substantial increases in VMT across the nation, total emissions of NO_x and VOC have been reduced substantially over the same time period. The reduction in emissions from motor vehicles is attributable to the introduction of more stringent vehicle

[35] US EPA Office of Transportation & Air Quality website "*Emission Standards Reference Guide*": http://www.epa.gov/otaq/standards/allstandards.htm

and fuel quality standards and the emission controls implemented to meet those standards.

Exhibit 1-3: National Trends in Vehicle Miles Traveled (VMT) and Associated Emissions of Ozone Precursors



Source: Chart entitled "Vehicle Miles Traveled (VMT) vs. Vehicle Emissions", dated July 30, 2002, on FHWA website accessed March 2010: http://www.fhwa.dot.gov/environment/vmtems.htm

Exhibit 1-4 shows national trends in ambient ozone levels. The general trend is downward, that is, towards improved air quality with lower concentrations of ozone. This is attributable to the emission reductions across all sectors including transportation.

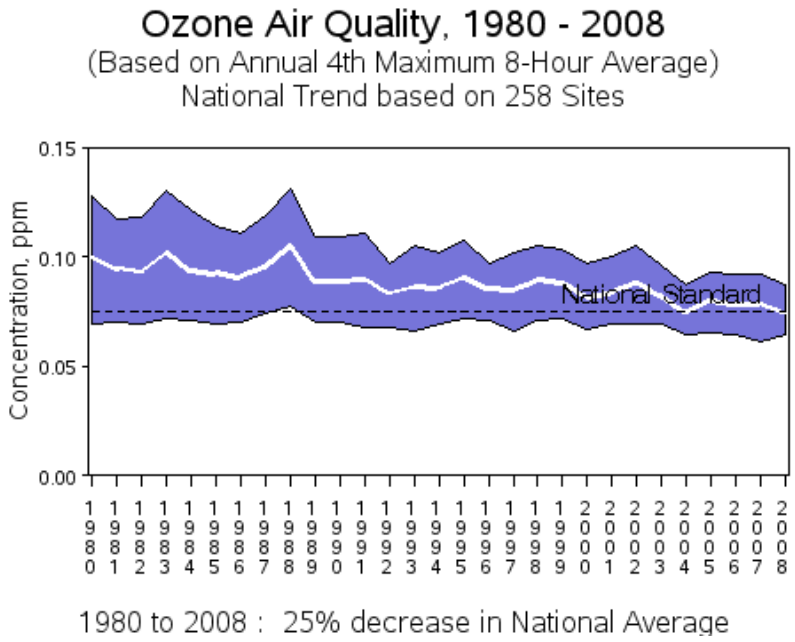
1.2 Air Quality Planning Status for Hampton Roads

The Hampton Roads area is currently in attainment for all of the NAAQS. However, as the area has previously been designated as nonattainment for ozone and then redesignated to attainment, it is subject to maintenance plan requirements and therefore to continued federal and state transportation conformity requirements. Motor vehicle emission budgets have accordingly been established for the region and most recently updated in the maintenance plan.

Chronology of Air Quality Designations for Hampton Roads

On November 6, 1991, the Hampton Roads, Virginia region was classified by EPA as a marginal ozone non-attainment area for the one-hour ozone standard (56 FR 56694). The designated non-attainment area included the Counties of James City and York as well as the Cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg.

Exhibit 1-4: National Trends in Ambient Ozone Levels



Source: US EPA website, accessed March 2010, Chart entitled "Ozone Air Quality, 1980 – 2008". The referenced "national standard" is 75 ppb. See: http://www.epa.gov/airtrends/ozone.html

On March 12, 1997, EPA approved a redesignation of the Hampton Roads one-hour ozone non-attainment area to attainment in a direct final rule effective April 28, 1997[36]. At the same time, EPA approved the associated maintenance plan revision to the SIP. The redesignation was based upon three years of quality-assured ambient air quality monitoring data for the area that demonstrated that the one-hour ozone NAAQS had been attained.

On July 18, 1997, EPA promulgated a revised (eight-hour) ozone NAAQS of 0.08 parts per million (ppm), with designations of areas across the nation as attainment or nonattainment for the new standard to follow[37]. Implementation of the new ("1997") eight-hour ozone standard was however delayed by litigation.

On April 30, 2004, EPA, in a final rule effective June 15, 2004, re-classified the Hampton Roads area to be in marginal non-attainment for the 1997 eight-hour ozone standard based on a review of local ambient air quality monitoring data for 2001 through 2003[38].

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[36] US EPA, 62 FR 11337, 40 CFR Parts 52 and 81 [VA068-5018a, VA066-5018a; FRL-5688-8], *Approval and Promulgation of Air Quality Implementation Plans; Designation of Areas for Air Quality Planning Purposes; Virginia; Redesignation to Attainment of the Hampton Roads Ozone Nonattainment Area, Approval of the Maintenance Plan and Mobile Emissions Budget*, Direct Final Rule effective April 28, 1997. Available at: http://www.gpoaccess.gov/fr/index.html.

[37] US EPA, 62 FR 38855, *National Ambient Air Quality Standards for Ozone; Final Rule*, July 18, 1997, Final Rule effective September 16, 1997. Available at: http://www.gpoaccess.gov/fr/index.html.

[38] US EPA, 69 FR 23858, 40 CFR Part 81 [OAR-2003-0083; FRL-7651-8] RIN 2060-, *Air Quality*

The area so designated included the area previously designated as non-attainment for the one-hour standard plus the Counties of Gloucester and Isle of Wight.

In September 2006, in response to the re-classification to nonattainment for the 1997 eight-hour ozone standard, VDEQ submitted to EPA a request[39] for redesignation to attainment along with a proposed maintenance plan[40] and base year inventory. Ambient air quality monitoring data for 2003 through 2005 showing attainment of the standard were presented with the redesignation request. The proposed maintenance plan included new motor vehicle emission budgets to be applied in future regional conformity analyses. As stated in the introduction of the redesignation request:

> "*Based on an analysis of air quality monitoring data, source emission reduction information, and the existing federal and state regulatory programs, the Commonwealth of Virginia has determined that the Hampton Roads 8-hour ozone nonattainment area qualifies for redesignation to attainment. The maintenance plan, which includes a mobile source budget, has also been developed in order for the acceptable ozone level to continue.*"

Exhibit 1-5, taken from the maintenance plan, shows the maintenance area for the 1997 eight-hour ozone standard.

On April 13, 2007, considering the VDEQ request and ambient air quality monitoring data showing attainment of the standard as well as other criteria for redesignation per the requirements of the CAA, EPA issued a proposed rule to redesignate the Hampton Roads area to attainment for the 1997 eight-hour ozone standard and approve the associated maintenance plan and base year inventory[41].

On June 1, 2007, EPA approved the request for redesignation of the Hampton Roads area to attainment for the 1997 eight-hour ozone standard[42]. EPA also approved the associated maintenance plan for the 1997 eight-hour ozone standard (superseding the maintenance plan for the one-hour standard), the associated motor vehicle emission budgets and 2002 base year inventory.

Designations and Classifications for the 8-Hour Ozone National Ambient Air Quality Standards; Early Action Compact Areas With Deferred Effective Dates, Final Rule, April 30, 2004. See: http://edocket.access.gpo.gov/2004/04-9152.htm.

39 Virginia DEQ, *Request for Redesignation to Attainment for the Hampton Roads Nonattainment Area Consisting of the Cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg, and the Counties of Gloucester, Isle of Wight, James City, and York. Final*, October 2006.

40 Virginia DEQ, "*Maintenance Plan for The Hampton Roads Nonattainment Area Consisting of the Cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Suffolk, Virginia Beach, and Williamsburg and the Counties of James City, York, Gloucester, and Isle of Wight. Final*, October 2006.

41 US EPA, 72 FR 18602, 40 CFR Parts 52 and 81 [EPA-R03-OAR-2006-0919; FRL-8298-2], *Approval and Promulgation of Air Quality Implementation Plans: Virginia; Redesignation of the Hampton Roads 8-Hour Ozone Nonattainment Area to Attainment and Approval of the Associated Maintenance Plan and 2002 Base-Year Inventory*, Proposed Rule, Friday, April 13, 2007. See: http://edocket.access.gpo.gov/2007/E7-7017.htm.

42 US EPA, 72 FR 30490, 40 CFR Parts 52 and 81 [EPA-R03-OAR-2006-0919; FRL-8320-9], *Approval and Promulgation of Air Quality Implementation Plans; Virginia; Redesignation of the Hampton Roads 8-Hour Ozone Nonattainment Area to Attainment and Approval of the Area's Maintenance Plan and 2002 Base-Year Inventory*, Final Rule, Friday, June 1, 2007 (effective the same day). See http://edocket.access.gpo.gov/2007/E7-10581.htm.

Exhibit 1-5: Hampton Roads Maintenance Area for the 1997 Eight-Hour Ozone Standard

Source: Virginia DEQ, "Maintenance Plan for The Hampton Roads Nonattainment Area Consisting of the Cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Suffolk, Virginia Beach, and Williamsburg and the Counties of James City, York, Gloucester, and Isle of Wight. Final", October 2006.

Exhibit 1-6 presents the motor vehicle emission budgets as excerpted from the final rule. Note, while the table lists units of tons per day (TPD), the methodology presented in the Technical Support Document (TSD) for the maintenance plan indicates the "day" selected represents an average ozone season weekday.

Exhibit 1-6: Motor Vehicle Emissions Budgets for Hampton Roads

ADEQUATE AND APPROVED MOTOR VEHICLE EMISSIONS BUDGETS (MVEBS) IN TONS PER DAY (TPD)		
Budget year	NO_x	VOC
2011	50.387	37.846
2018	31.890	27.574

Source: Excerpted from 72 FR 30490, effective June 1, 2007.

For reference, Exhibit 1-7 presents the estimated emissions as reported in the TSD for on-road motor vehicles operating on military bases in the Hampton Roads area. These emissions are included with the motor vehicle emission budget established for the region as reported above.

Exhibit 1-7: Hampton Roads Military Base Emissions

Year	Regional Emissions *(tons per ozone season weekday)*	
	NOx	VOC
2011	0.52	0.26
2018	0.52	0.26

Source: Table 4-7, page 62, in the TSD for the maintenance plan approved effective June 1, 2007 (72 FR 30490)

A legal review was undertaken in this same time period of certain aspects of the implementation rule[43] for the ozone standard. The result of the review was to confirm the status of that rule as well as the relative applicability of motor vehicle emission budgets associated with the one- and eight-hour standards.

In brief, the April 2007 proposed redesignation by EPA included a discussion of a December 22, 2006 DC Circuit Court of Appeals decision[44] regarding the Implementation Rule. Previously, on March 22, 2007, EPA had petitioned for a panel rehearing of that decision, and others had petitioned as well.

On June 8, 2007, the DC Circuit Court of Appeals issued a decision in which it denied

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[43] US EPA, 69 FR 23951, 40 CFR Parts 50, 51 and 81 [OAR 2003-0079, FRL-7651-7] RIN 2060-AJ99, *Final Rule To Implement the 8-Hour Ozone National Ambient Air Quality Standard--Phase 1*, Final Rule, April 30, 2004, effective June 15, 2004. See http://edocket.access.gpo.gov/2004/04-9153.htm.

[44] United States Court of Appeals for the District of Columbia Circuit, No. 04-1200, *South Coast Air Quality Management District, Petitioner v. Environmental Protection Agency, Respondent, National Environmental Development Association's Clean Air Regulatory Project, et al., Intervenors, Consolidated with No. 04-1201, et al., On Petitions for Review of a Final Rule of the Environmental Protection Agency*, Argued October 12, 2006, Decided December 22, 2006. See: http://pacer.cadc.uscourts.gov/docs/common/opinions/200612/04-1200a.pdf

the petitions[45]. However, it granted the joint request of EPA and other petitioners and clarified the December 22, 2006 ruling regarding both the (limited) scope of the vacatur of the 2004 Final Rule[46] as well as the relative applicability of motor vehicle emission budget for conformity determinations[47], such that budgets established for the eight-hour standard effectively supersede those previously set for the one-hour standard.

With the clarifications provided by the Court, the budgets for the 1997 eight-hour ozone standard as presented in the maintenance plan for Hampton Roads (and excerpted in the Exhibit above) superseded, effective June 1, 2007, the budgets previously established for the region for the one-hour ozone standard.

Pending Changes to the NAAQS

On July 11, 2007, EPA issued a proposed rule to further strengthen the eight-hour ozone standard[48]. On March 12, 2008, EPA announced the new primary and secondary standards and, on March 27, 2008, promulgated the final rule[49]. These are the "2008" standards that are presented in Exhibit 1-1 above.

On September 16, 2009, however, EPA announced it would "reconsider" the 2008 standards[50]. EPA indicated that this decision followed petitions in May 2008 from environmental and industry groups that had been filed with the D.C. Circuit Court of Appeals "*for review of the 2008 ozone standards*" and a subsequent Court decision, in March 2009, to grant an EPA "*request to stay the litigation so the new administration could review the standards and determine whether they should be reconsidered*".

Subsequently, on January 19, 2010, EPA issued a proposed rule to revise both the primary and secondary standards for ozone[51], stating: "*[b]ased on its reconsideration of the primary and secondary national ambient air quality standards (NAAQS) for ozone (O_3) set in March 2008, EPA proposes to set different primary and secondary standards*

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45 United States Court of Appeals for the District of Columbia Circuit, No. 04-1200, *South Coast Air Quality Management District, Petitioner v. Environmental Protection Agency, Respondent, National Environmental Development Association's Clean Air Regulatory Project, et al., Intervenors*, Consolidated with No. 04-1201, et al., filed June 8, 2007. See: http://pacer.cadc.uscourts.gov/docs/common/opinions/200706/04-1200b.pdf

46 *Ibid*, Section III, paragraph 2, pp.7-8. Regarding vacatur of the 2004 Final Rule, the June 2007 ruling stated: "*We also grant their request that the 2004 Rule be vacated only to the extent that the court has sustained challenges to it. …EPA is urged to act promptly in promulgating a revised rule that effectuates the statutory mandate by implementing the eight-hour standard*…".

47 *Ibid*, Section III, paragraph 1, page 7. Regarding conformity, the June 2007 ruling stated: "*We grant the joint request by EPA and the Environmental Petitioners to make explicit that the court's reference to conformity determinations speaks only to the use of one-hour motor vehicle emissions budgets as part of eight-hour conformity determinations until eight-hour motor vehicle emissions budgets are available*.".

48 US EPA, 72 FR 37818, 40 CFR Part 50 [EPA-HQ-OAR-2005-0172; FRL-8331-5] RIN 2060-AN24, *National Ambient Air Quality Standards for Ozone*, *Proposed Rule*, July 11, 2007. See: http://edocket.access.gpo.gov/2007/E7-12416.htm.

49 US EPA, 73 FR 16436, 40 CFR Parts 50 and 58 [EPA-HQ-OAR-2005-0172; FRL-8544-3] RIN 2060-AN24, *National Ambient Air Quality Standards for Ozone. Final Rule*, March 27, 2008, effective May 27, 2008. See: http://edocket.access.gpo.gov/2008/E8-5645.htm.

50 US EPA, *Fact Sheet - EPA to Reconsider Ozone Pollution Standards*, September 2009. See: http://www.epa.gov/air/ozonepollution/pdfs/O3_Reconsideration_FACT%20SHEET_091609.pdf

51 US EPA, 75 FR 2938, *National Ambient Air Quality Standards for Ozone. Proposed Rule*, January 19, 2010. See: http://edocket.access.gpo.gov/2010/2010-340.htm.

than those set in 2008 to provide requisite protection of public health and welfare, respectively[52]". Specifically, "[*w]ith regard to the primary standard for O_3, EPA proposes that the level of the 8-hour primary standard, which was set at 0.075 ppm in the 2008 final rule, should instead be set at a lower level within the range of 0.060 to 0.070 parts per million (ppm)…*", and "*[w]ith regard to the secondary standard for O3, EPA proposes that the secondary O_3 standard, which was set identical to the revised primary standard in the 2008 final rule, should instead be a new cumulative, seasonal standard expressed as an annual index of the sum of weighted hourly concentrations, cumulated over 12 hours per day (8 am to 8 pm) during the consecutive 3-month period within the O_3 season with the maximum index value, set at a level within the range of 7 to 15 ppm-hours…*"[53].

EPA set a due date for comments on the proposed rule of March 22, 2010. As noted in the preamble to the proposed rule: "*[i]n its [September 2009] notice to the Court, EPA stated that this notice of proposed rulemaking would be signed by December 21, 2009, and that the final rule will be signed by August 31, 2010*."[54] The Fact Sheet provided by EPA with the proposed rule restated this commitment for the schedule for the final rule, indicating that "*EPA will issue final standards by August 31, 2010*", and also outlined a general schedule for implementation of the new standards as follows[55]:

- *By January 2011: States make recommendations for areas to be designated attainment, nonattainment or unclassifiable.*
- *By July 2011: EPA makes final area designations.*
- *August 2011 Designations become effective.*
- *December 2013: State Implementation Plans, outlining how states will reduce pollution to meet the standards, are due to EPA.*
- *2014 to 2031: States are required to meet the primary standard, with deadlines depending on the severity of the problem.*

EPA did not meet the August 31, 2010 deadline for the final rule. After initially targeting a relatively brief delay, EPA on December 8, 2010 deferred the final rule until August 2011, providing the following explanation on their website[56]: "*In January 2010 EPA proposed stricter standards for smog. As part of EPA's extensive review of the science, Administrator Jackson will ask the Clean Air Scientific Advisory Committee (CASAC) for further interpretation of the epidemiological and clinical studies they used to make their recommendation. To ensure EPA's decision is grounded in the best science, EPA will review the input CASAC provides before the new standard is selected. Given this ongoing scientific review, EPA intends to set a final standard in the range recommended by the CASAC by the end of July, 2011*."

Next steps, pending finalization of revised standards, are the review of ambient air quality data and subsequent designation (as attainment or nonattainment) by EPA of areas across the country for the new primary and secondary standards. Areas

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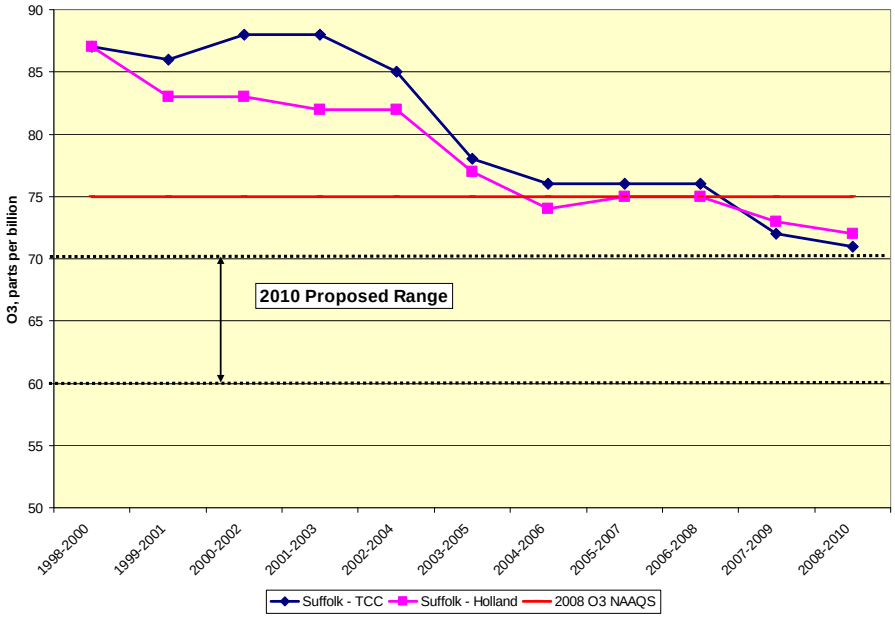
52 *Ibid,* p.2938.
53 *Ibid*, p.2938.
54 *Ibid*, p.2944.
55 US EPA, *Fact Sheet Proposal to Revise the National Ambient Air Quality Standards for Ozone*, January 2010. See: http://www.epa.gov/air/ozonepollution/pdfs/fs20100106std.pdf.
56 See: http://www.epa.gov/air/ozonepollution/actions.html

designated nonattainment will initiate preparation of revisions to SIPs as needed to show compliance to the new standard.

For reference, Exhibit 1-8 presents recent trends in ambient ozone levels. While the region is attainment with the 2008 primary (and secondary) NAAQS of 75 ppb, the region is currently above the range of 60 to 70 ppb proposed for the revised or "reconsidered" primary standard.

Exhibit 1-8: Recent Trends in Ozone Levels for Hampton Roads



Source: VDEQ, Email update 2/4/2011 to chart included in the "2008 Ozone Standard Reconsideration", Presentation to the Hampton Roads Transportation Technical Advisory Committee, April 7, 2010

With regard to conformity, SIP revisions for new or revised NAAQS generally involve the establishment of new or revised motor vehicle emission budgets to suit.

1.3 Transportation Conformity Requirements

Federal, state and local requirements addressing transportation conformity apply for air quality nonattainment and maintenance areas, of which there are several, including the Hampton Roads region, in the Commonwealth of Virginia. Conformity requirements originate from Section 176(c) of the Clean Air Act (CAA)[57] as amended, which requires that federal agencies and MPOs not approve any transportation project, program, or plan that does not conform with the approved State Implementation Plan (SIP) for air quality.

Section 176(c)(1) of the CAA provides a definition for conformity, stating:

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[57] *Clean Air Act* (and amendments): http://www.epa.gov/air/caa/

"… Conformity to an implementation plan means—

"(A) conformity to an [air quality] implementation plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards; and

(B) that such activities will not— (i) cause or contribute to any new violation of any standard in any area; (ii) increase the frequency or severity of any existing violation of any standard in any area; or (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area. …"

Further, Section 176(c)(4)(B) of the CAA adds a requirement for regulatory action in the form of criteria and procedures for conformity to be promulgated by EPA in concurrence with the US DOT:

176(c)(4)(B) Transportation plans, programs, and projects.— The Administrator, with the concurrence of the Secretary of Transportation, shall promulgate, and periodically update, criteria and procedures for demonstrating and assuring conformity in the case of transportation plans, programs, and projects.

Federal Conformity Regulation

On November 24, 1993, in keeping with CAA requirements, EPA promulgated a rule (40 CFR Part 51, Subpart T) establishing "*criteria and procedures for determining conformity to state and federal implementation plans of transportation plans, programs, and projects funded or approved under Title 23 U.S.C. or the Federal Transit Act*." The final rule for transportation conformity became effective on December 27, 1993.

EPA and the U.S. DOT have subsequently finalized a number of amendments to the federal conformity rule, e.g., following the passage of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) which was signed into law on August 10, 2005. Several sections of the amended rule have also been modified and/or remanded due to court rulings. The most current compilation is that produced by EPA in March 2010[58]. Although EPA has proposed amendments since then, they have not to date issued a final rule and the amendments as proposed would not affect this analysis[59].

In brief, the federal transportation conformity rule was written to meet CAA requirements and ensure conformity to SIPs for the purpose of: (1) eliminating or reducing the number and severity of violations of national ambient air quality standards (NAAQS) and (2) attaining these standards. It also is intended to ensure that neither a transportation system as a whole nor an individual project will cause or contribute to new air quality violations or will increase the frequency or severity of existing violations.

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[58] US EPA, *Transportation Conformity Regulations Updated March 2010*, EPA-420-B-10-006, March 2010, available at: http://www.epa.gov/otaq/stateresources/transconf/regs/420b10006.pdf.

[59] See http://www.epa.gov/otaq/stateresources/transconf/conf-regs.htm

Under the federal conformity rule, MPOs, state departments of transportation and the FHWA along with the FTA are responsible for conformity determinations for: (1) LRTPs, (2) TIPs, (3) transportation projects that receive federal funding or require FHWA or FTA approval, and (4) regionally significant non-federal projects, if these actions occur in areas that have been designated by EPA as nonattainment or maintenance areas for any of the criteria pollutants.

State Conformity Regulation

Pursuant to the federal conformity rule at 40 CFR Part 51, a state conformity regulation implementing certain requirements (primarily addressing consultation) of the federal conformity rule is also required. Accordingly, the Virginia *Regulation for Transportation Conformity* was developed by the VDEQ in 1997 and amended for consistency with EPA requirements in 2007. The current version is specified in the Virginia Administrative Code (VAC) at 9 VAC 5-151. The Virginia regulation was approved by EPA via Federal Register notice in November 2009 (effective January 19, 2010)[60]. More detail on the requirements of the state regulation for consultation is presented in Chapter 3.

Federal Criteria

Section 93.109[61] of the federal transportation conformity rule identifies specific criteria that are required to be satisfied in conformity demonstrations for transportation plans, programs and projects.

Exhibit 1-9 presents an excerpt from the federal rule showing the criteria specific to just plans and programs. Each of these listed criteria is reviewed briefly below, with more detail provided in Chapter 4 with the results of the conformity analysis.

- §93.110[62] requires that conformity determinations be based upon the latest planning assumptions in force at the time of the determination.

- §93.111[63] requires that the latest emissions model be applied.

- §93.112[64] requires that consultation be conducted following specified procedures. More detail on the requirements is presented in Chapter 3[65,66].

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60 US EPA, 74 FR 60194, 40 CFR Part 52, [EPA-R03-OAR-2009-0674; FRL-8983-1], *Approval and Promulgation of Air Quality Implementation Plans; Virginia; Transportation Conformity Regulations*, Direct Final Rule, effective January 19, 2010.
See: http://edocket.access.gpo.gov/2009/E9-27814.htm

61 Federal Conformity Rule, 40 CFR 93.109 *Criteria and Procedures for Determining Conformity of Transportation Plans, Programs, and Projects: General*.
http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.109.htm

62 Federal Conformity Rule, 40 CFR 93.110 *Criteria and Procedures: Latest Planning Assumptions*
http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.110.htm

63 Federal Conformity Rule, 40 CFR 93.111 *Criteria and Procedures: Latest Emissions Model*
http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.111.htm

64 Federal Conformity Rule, 40 CFR 93.112 *Criteria and Procedures: Consultation*
http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.112.htm

65 Section 93.112 states in part: "*Until the implementation plan revision required by Sec. 51.390 of this chapter is fully approved by EPA, the conformity determination must be made according to Sec. 93.105*

Exhibit 1-9: Excerpt from 40 CFR 93.109 ("Table 1--Conformity Criteria") of the Federal Transportation Conformity Rule

All Actions at all times:	
§93.110	Latest planning assumptions
§93.111	Latest emissions model
§93.112	Consultation
Transportation Plan:	
§93.113(b)	TCMs
§93.118 and/or §93.119	Emissions budget and/or Interim emissions
TIP:	
§93.113(c)	TCMs
§93.118 and/or §93.119	Emissions budget and/or Interim emissions

- §93.113[67] details the steps necessary to demonstrate that the Plan and Program provide for the timely implementation of transportation control measures (TCMs) and do not interfere with their implementation.

- §93.118[68] requires that the Plan and Program be consistent with the motor vehicle emission budgets specified in the applicable SIP. Since emission budgets have been established for the Hampton Roads area, as reviewed later in this chapter, emission budget tests as required in the federal rule are applicable for this region.[69]

  Budgets apply not only for the year for which they are established but also for subsequent years. Section 93.118(b)(1)(ii) specifically requires that "*Emissions in years for which no motor vehicle emission budget(s) are specifically established must be less than or equal to the motor vehicle emissions budget(s) established for the most recent prior year. …*"

Additional detailed requirements for modeling are provided in §93.122[70], which addresses "*procedures for determining regional transportation-related emissions"*. This section requires that all regionally significant projects included in the Plan and Program be included in the regional emissions analysis. This section also specifies requirements

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(a)(2) and (e) and the requirements of 23 CFR part 450."

66 Federal Conformity Rule, 40 CFR 93.105 *Consultation* http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.105.htm

67 Federal Conformity Rule, 40 CFR 93.113 *Criteria and Procedures: Timely Implementation of TCMs* http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.113.htm

68 Federal Conformity Rule, 40 CFR 93.118 *Criteria and Procedures: Motor Vehicle Emissions Budget* http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.118.htm

69 Since budget tests are applicable for this region, the interim tests provided in Section 93.119 are not required and are not reviewed here.

70 Federal Conformity Rule, 40 CFR 93.122 *Procedures for Determining Regional Transportation-Related Emissions*. http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.122.htm

for both transportation and emission modeling. The applicable modeling requirements for this analysis are summarized with the conformity demonstration in Chapter 4.

For reference, the federal rule also specifies related requirements apply for project-level determinations:

- §93.114[71] requires that a currently conforming plan and TIP at the time of project approval.
- §93.115[72] requires that projects be from a conforming transportation plan and program.
- §93.126[73] provides for exemptions for projects in certain categories from the requirement to determine conformity. It states in part that: "*Notwithstanding the other requirements of this subpart, highway and transit projects of the types listed in table 2 of this section are exempt from the requirement to determine conformity. Such projects may proceed toward implementation even in the absence of a conforming transportation plan and TIP*." The categories listed in Table 2 are grouped as safety, mass transit, air quality, and other projects.
- §93.127[74] provides for the exemption of certain project categories from the requirement to conduct regional emission analyses in support of conformity determinations. It states in part that: *"Notwithstanding the other requirements of this subpart, highway and transit projects of the types listed in Table 3 of this section are exempt from regional emissions analysis requirements.*" Projects listed in Table 3 include: intersection channelization projects, intersection signalization projects at individual intersections, interchange reconfiguration projects, changes in vertical and horizontal alignment, truck size and weight inspection stations, and bus terminals and transfer points. If the project is not otherwise exempt, requirements for project-level conformity determinations may still apply for these projects.

1.4 Chronology of Conformity Determinations for Hampton Roads

Exhibit 1-10 presents the chronology of conformity determinations for plans and programs for Hampton Roads from 2001 to the present.

The Exhibit also lists expiry dates for the current plan and TIP, i.e., the ones approved prior to this conformity analysis. Expiry dates apply as, pursuant to federal regulations, transportation plans and TIPs must be updated (and conformity re-determined) at least every four years.

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71 Federal Conformity Rule, 40 CFR 93.114 *Criteria and procedures: Currently Conforming Transportation Plan and TIP*. http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.114.htm

72 Federal Conformity Rule, 40 CFR 93.115 *Criteria and procedures: Projects from a Transportation Plan and TIP*. http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.115.htm

73 Federal Conformity Rule, 40 CFR 93.126 *Exempt Projects*. http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.126.htm

74 Federal Conformity Rule, 40 CFR 93.127, *Projects Exempt from Regional Emissions Analyses*. http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.127.htm

Exhibit 1-10: Chronology of Conformity Determinations for Hampton Roads

Date	Plan	TIP	Cycle Length* (Years)
Expiry Dates for the Current Plan, TIP and Associated Conformity Status			
August 30, 2014 July 30, 2012 January 22, 2012	Conformity 2030 CLRP	Conformity FY 09-12 TIP	
US DOT Conformity Finding (Approval Dates)			
August 30, 2010	2030 LRTP	FY 2009-2012 TIP	4
July 30, 2008	*[2030 CLRP unchanged]*	FY 2009-2012 TIP	4
January 22, 2008	2030 CLRP	FY 2006-2009 TIP (Amended)	4
August 22, 2006	2026 CLRP (Amended)	FY 2006-2009 TIP	4
October 21, 2005	2026 CLRP (Amended)	FY 2005-2008 TIP (Amended)	4
August 10, 2005 - SAFETEA-LU signed, adding a year to planning & conformity cycles.			
December 10, 2004	2026 CLRP (Amended)	FY 2005-2008 TIP	3
August 27, 2004	*[2026 CLRP unchanged]*	FY 2005-2007 TIP	3
June 21, 2004	*[2026 CLRP unchanged]*	FY 2003-2005 TIP	3
February 3, 2004	2026 CLRP	*[FY 2003-2006 TIP unchanged]*	3

** Four years update cycles apply for transportation plans and TIPs and their respective conformity determinations. See 23 CFR 450.322 & 450.324, and 40 CFR 93.104. Note planning & TIP cycles restart with updates only, and not with amendments. In contrast, conformity cycles restart with both updates and amendments to the Plan and/or TIP respectively. Planning & TIP cycles therefore tend to be more limiting, as they are not restarted with amendments.*

Regulations on Plan, TIP and Conformity Cycles:

Plans: 23 CFR 450.322 - *Development and content of the metropolitan transportation plan... (c) The MPO shall review and update the transportation plan at least every four years in air quality nonattainment and maintenance areas...*

TIPs: 23 CFR 450.324 - *Development and content of the transportation improvement program (TIP). (a) ... The TIP shall ...be updated at least every four years, ... The TIP expires when the FHWA/FTA approval of the STIP expires....*

Conformity Cycle for Plans: 40 CFR § 93.104 - *Frequency of conformity determinations...(b) Frequency of conformity determinations for transportation plans...(3) The MPO and DOT must determine the conformity of the transportation plan (including a new regional emissions analysis) no less frequently than every four years...*

Conformity Cycle for TIPs: *(c) Frequency of conformity determinations for transportation improvement programs... (3) The MPO and DOT must determine the conformity of the TIP (including a new regional emissions analysis) no less frequently than every four years...*

An additional limitation applies for TIPs, such that they also expire when FHWA/FTA approval of the state transportation improvement program (STIP) expires[75].

Note the update cycle requirements for plans and TIPs differ from those for conformity determinations. Plan and TIP cycles restart with updates only, and not amendments, to the Plan and/or TIP respectively. In contrast, conformity cycles for Plans and/or TIPs restart with either updates or amendments to the Plan and/or TIP respectively. Plan and TIP cycles therefore tend to be the limiting factor for new conformity determinations, as they are not restarted with amendments.

[75] See 23 CFR 450.322 & 450.324, and 40 CFR 93.104 respectively:

- Federal Planning Rule, 23 CFR 450.322 *Development and Content of the Metropolitan Transportation Plan* (April 1, 2009 CFR revision): http://edocket.access.gpo.gov/cfr_2009/aprqtr/23cfr450.322.htm
- Federal Planning Rule, 23 CFR 450.324 *Development and Content of the Transportation Improvement Program (TIP)* (April 1, 2009 CFR revision): http://edocket.access.gpo.gov/cfr_2009/aprqtr/23cfr450.324.htm
- Federal Conformity Rule, 40 CFR 93.104 *Frequency of Conformity Determinations* (July 1, 2009 CFR revision): http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.104.htm

2. Modeling

A review of the modeling methodology and assumptions applied in the conformity analysis is presented in this chapter, beginning with an overview of the general approach and the determination of the analysis years and motor vehicle emission budgets applicable for Hampton Roads. Then, in turn, reviews of the key input data and specific assumptions applied in each step of the modeling process (transportation modeling, emission factor modeling, and emission modeling) are presented.

2.1 General Approach

Emissions are generally calculated as the product of vehicle activity and an emission factor corresponding to that vehicle class and activity. Emission factors are typically expressed in units of grams per mile (effectively, grams of pollutant emitted per vehicle-mile-traveled), consistent with federal new vehicle exhaust emission standards that are expressed on a grams per mile basis. Estimates for regional emissions, therefore, typically are generated as the product of VMT (by speed, roadway class, vehicle class etc.) estimated with corresponding emission factors.

Three separate models are typically applied in the development of the regional emission forecasts for conformity analyses:

1) a regional travel demand forecasting model,
2) the latest EPA-approved model to generate forecasts for regional fleet-average emission factors, and
3) a post-processor designed to combine the results from the first two models and generate estimates for regional total emissions for each pollutant and year as required for the conformity analysis.

Exhibit 2-1 below presents the key steps in this process.

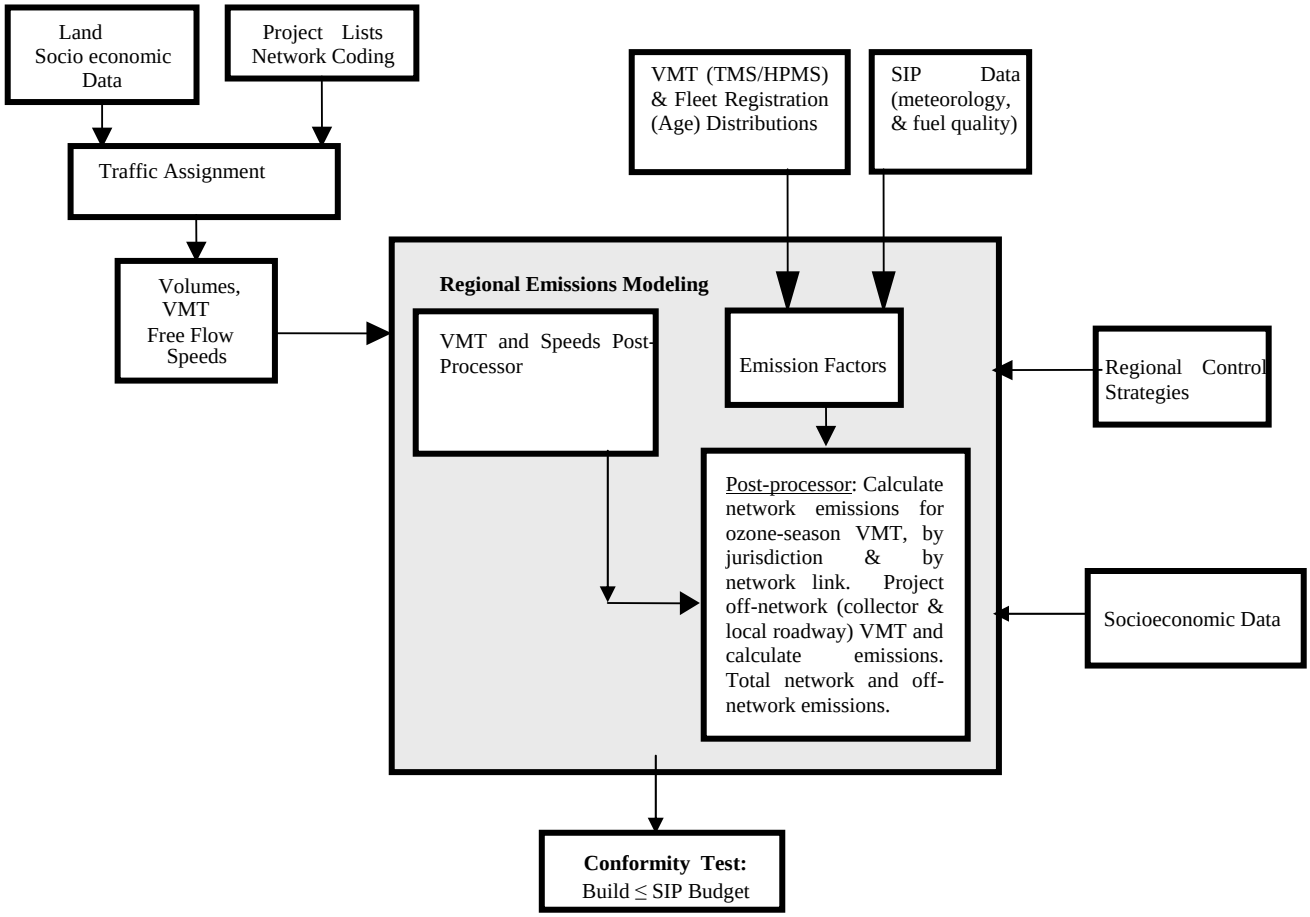
First, as shown on the left side of the exhibit, forecasts for travel demand for each year being modeled in the conformity analysis are developed. Key inputs for this step include the latest available socioeconomic forecasts and project lists. The latter are applied to update the regional transportation networks as appropriate for changes to the Plan and Program. The regional transportation networks include both existing and new regionally significant facilities, i.e. all interstates, freeways, expressways, principal arterials, and minor arterials as specified in the Plan and Program and expected to be open to traffic by the forecast year to be modeled for the conformity analysis. Separate networks are developed for each of the specific forecast years needed for the conformity analysis.

Concurrent with the development of travel demand forecasts, and as shown on the right side of the exhibit, emission factors (in unit of grams per mile) are generated using the latest EPA-approved emission factor model (MOBILE6.2)[76] for each pollutant and

[76] As noted later in this chapter, on March 2, 2010, EPA has released a next generation emission model (MOVES2010, updated in August 2010 as MOVES2010a) that is planned as the replacement for the MOBILE6.2 model that is currently in use. EPA indicated that a two-year grace period applies for conformity purposes.

forecast year. The factors are generally tabulated by speed, vehicle class, roadway class (or facility type), and, to allow for possible differences in fuel quality or emission control programs, jurisdiction. Key region-specific inputs include vehicle age distributions, VMT distributions, fuel quality data and meteorological data.

Exhibit 2-1: Conformity Analysis Process



Next, regional total emissions are calculated in the post-processor in three steps: 1) regional network emission, 2) off-network emissions, and 3) military base contributions are combined with the results from network and off-network emissions.

In the first step in the post-processor, regional network emissions are calculated using the traffic forecasts generated for the regional network by the travel demand model and the fleet-average emission factors as described above.

In the second step in the post-processor, emissions for traffic operating on “off-network” facilities (collectors and local streets) not included in the regional transportation model networks are estimated based on VMT generated by a simple growth model to the modeled year from base year traffic counts. Estimates for vehicle travel were also developed for the portion of Gloucester County that are within the designated maintenance area but are not (at least as yet) included in the regional network model.

In the third and last step in the post-processor, estimated contributions to regional emissions from mobile sources operating on military facilities (as specified in the maintenance plan[77]) are added to the estimates for emissions for network and off-network emissions to obtain estimates for regional total emissions for the maintenance area.

The post-processor calculations are repeated for each analysis year as needed. Conformity (emission budget) tests as described in the previous chapter are then applied for each analysis year.

2.2 Analysis Years and Budgets

Exhibit 2-2 presents the years selected for modeling for this conformity analysis and the associated motor vehicle emission budgets as specified in the maintenance plan. The budgets listed in the table were generated using the US EPA MOBILE6.2 model.

Exhibit 2-2: Analysis Years and Budgets

Year	Regional Emission Budgets *(tons per ozone season weekday)*	
	NOx	**VOC**
2011*	50.387	37.846
2018*	31.890	27.574
2020	31.890	27.574
2030	31.890	27.574

** Budgets specified in 72 FR 30490, effective June 1, 2007.*

The years selected for analysis are consistent with the requirements of Section 93.118 of the conformity rule, which requires that years selected for the regional conformity analysis include the years for which budgets are established, the horizon year of the transportation plan, and an interim year such that analysis years are no more than ten years apart.

For this analysis, the years 2011 and 2018 were selected as they are years for which the maintenance plan specifies budgets. The year 2030 was selected as the horizon year for the transportation plan. To meet the interim year requirement (ten-year limit), the year 2020 was also selected.

Since Section 93.118 the conformity rule requires budgets established "for the most recent prior year" to apply for years for which budgets have not been "specifically

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[77] Hampton Roads Maintenance Plan for the 1997 Eight-Hour Ozone Standard, as previous referenced. See US EPA, 72 FR 30490, 40 CFR Parts 52 and 81 [EPA–R03–OAR–2006–0919; FRL–8320–9], *Approval and Promulgation of Air Quality Implementation Plans; Virginia; Redesignation of the Hampton Roads 8-Hour Ozone Nonattainment Area to Attainment and Approval of the Area's Maintenance Plan and 2002 Base-Year Inventory*, Final Rule, effective June 1, 2007.
See: http://edocket.access.gpo.gov/2007/E7-10581.htm.

established", the 2018 budgets as listed above are also applicable for the subsequent years (2020 and 2030).

2.3 Transportation Demand Forecasting (TP+ Model)

The Hampton Roads regional traffic model is based on the TP+ transportation model, which is a suite of programs implementing a traditional four-step transportation model that includes trip generation, trip distribution, mode split and traffic assignment. The Hampton Roads regional traffic model covers the Counties of Gloucester (southern portion), Isle of Wight, James City, and York, as well as the Cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Williamsburg, and Virginia Beach. The model satisfies the requirements enumerated in 40 CFR 93.110 as well as the related requirements in 40 CFR 93.122 as summarized below.

The model was validated and calibrated for 2000 traffic volumes and land use conditions [40 CFR 93.122(b)(1)(i)][78]. Additional documentation on the calibration process is provided in the User Guide for the model[79].

Consistent with the requirements of federal conformity rule, all regionally significant projects in service or open to traffic in the year of analysis are included in the modeling [40 CFR 93.122(a)]. Roadway data input by the user (e.g., road segment length, capacity, number of lanes, and free-flow speeds by facility type) are used to create a representation of the regional transportation system for each analysis year, which includes all regionally significant projects identified for the Plan and TIP. A transportation system network is developed for all motorized modes of travel including single-occupant vehicle, high or multi-occupant vehicle (HOV), bus transit, and light rail transit. Following network development, travel time and cost estimates for all networks modeled are tabulated for use in subsequent model steps.

Trip making activity is estimated in the trip generation and trip distribution steps. Trip generation uses land use information aggregated by traffic analysis zone (TAZ), estimated trip rates, and standard equations to estimate the number of trips that will be generated by and attracted to each TAZ. The TAZ trip data are then used in the trip distribution step that links trip origins with trip destinations to create trip tables, which are disaggregated for work and non-work trip purposes. Trips that leave or pass through the Hampton Roads region were also estimated, using observed 2000 traffic counts at major exit points of the region, and expanded based on forecast traffic counts at those locations in future years.

Trip tables from trip distribution along with network-based travel time and cost data [40 CFR 93.122(b)(1)(v, vi)] are input to the mode split step to estimate trip tables by trip purpose and mode. In the mode split step, nested-logit equations are applied to allocate trips between auto and transit modes. Individual trip tables are created for auto and transit modes. Prior to traffic assignment, trip tables are processed to apply standard

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[78] Michael Baker, Jr., Inc., *2000 Hampton Roads Model Validation Memorandum*, May 2004. Note this analysis was initiated in 2010, i.e. within ten years of the model validation and calibration.

[79] Michael Baker, Jr., Inc., *2000 Hampton Roads Model Users Guide*, August 2004

auto occupancy rates, convert the tables from model-based production-attraction format to standard origin-destination format, and aggregate results.

Finally, in the traffic assignment step, the trip tables are loaded onto the appropriate highway or transit network and the model run to produce forecasts for traffic volumes for each roadway or transit link. Highway assignment utilizes a capacity restraint formula to simulate congestion effects on the roadway system [40 CFR 93.122(b)(1)(iv)]. The model makes route decisions based upon the estimated level of roadway congestion, redirecting trips to less congested routes until equilibrium is achieved (i.e., when shifting trips to alternative routes will no longer realize any time savings).

Output from the highway assignment is a network file that includes the assigned roadway volumes for each roadway link. Transit assignment is based upon best available route and does not have a modeled congestion process. The assigned volumes are applied to generate VMT estimates.

This overall modeling process is applied for each analysis year. Appendix B presents resulting forecasts by jurisdiction. Key inputs to the network model are reviewed below.

2.3.1 Socioeconomic Forecasts

The HRTPO developed the socioeconomic data to be used in the conformity analysis using the Regional Economic Models, Inc. (REMI) econometric model. The REMI model is a conjoined input-output and econometric model widely used by local, state and federal governments, colleges and universities, consulting firms and others for economic forecasting including impact analyses.

Following standard practice for the development of socioeconomic forecasts, the REMI model was applied to develop "control totals" for key parameters such as population and employment for the Hampton Roads area. The HRTPO then sub-allocated the regional control totals generated with the REMI model to the local or jurisdiction level for the Hampton Roads area. The sub-allocations were reviewed by each locality and adjustments were made where appropriate [40CFR93.110; 40CFR93.122(b)(1)(iiii)].

Participants in this process included the Counties of Gloucester, Isle of Wight, James City, and York, as well as the Cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Williamsburg, and Virginia Beach. Representatives of these jurisdictions distributed the regional population and employment projections to the TAZs used in the transportation model, covering the LRTP Study Area.

Exhibit 2-3 presents the socioeconomic forecasts underlying the travel demand forecasts developed for this conformity analysis. The forecasts (including interim years and sub-allocations as appropriate) represent the latest projections available and approved for use with the 2030 LRTP[80] [40CFR93.110(a,b); 40CFR93.122(b)(1)(ii)]. More detailed data are presented in Appendix A.

[80] While socioeconomic forecasts for 2034 have more recently been adopted for use in the pending development of the 2034 LRTP, they were not intended nor approved by the TPO for use with the existing and approved 2030 LRTP. Consistent with the consultation requirements of the federal conformity rule at 93.105 and the corresponding state regulation at 9 VAC 5-151-70 that is now in

Exhibit 2-3: Socioeconomic Forecasts*

Year	Hampton Roads LRP Study Area			
	Population	Households	Automobiles	Employment
2011	1,693,101	627,306	1,282,689	1,045,049
2018	1,796,281	668,383	1,408,788	1,101,666
2020	1,825,772	680,130	1,444,843	1,117,867
2030	1,973,250	738,865	1,625,000	1,198,775

** The projections for 2030 were adopted by the Hampton Roads TPO in December 2004. The projections for other years were obtained by interpolation, by TAZ, between 2000 and 2030.*

2.3.2 Transit Service

Transit operating policies (including fares and service levels) and modeling for transit (ridership) have not changed significantly since the previous conformity determination [40 CFR 93.110(c) and (d)]. Proposed light rail service is included in future networks for the region. Transit service and fares as well as road and bridge tolls are addressed in more detail in supporting documentation for the Plan and associated modeling. While future transit ridership is effectively determined in the course of modeling for the conformity analysis, details on current transit operating policies including fares and service levels may be found on the Hampton Roads Transit (HRT) and Williamsburg Area Transportation Authority (WATA) websites[81].

In brief, local transit fares have not changed (or not changed significantly) since the last conformity analysis for either HRT or the WATA. For HRT, the current single ticket fare for local bus service is $1.50. A day pass (the Go Pass) was introduced in 2008 with a fare of $3.50 for a one-day pass. For WATA, the fare for a one-way trip is $1.25; for seniors (60 and over) and disabled, a reduced fare of $0.50 applies. An all-day pass (for unlimited trips) is also available for a fare of $1.50. In keeping with the Americans with Disabilities Act (ADA), door-to-door service is also available for those unable to use bus at a fare of $2.00 per one-way trip. Finally, express bus service modeling includes the "Max" service, with fares converted to constant 2000 dollars.

2.3.3 Project Lists & Regional Network Development

The federal conformity rule at 40 CFR 93.122(a) requires that "*General requirements. (1) The regional emissions analysis … for the transportation plan, TIP… must include all regionally significant projects expected in the nonattainment or maintenance area. The analysis shall include FHWA/FTA projects proposed in the transportation plan and TIP*

effect, the use of the 2030 versus the 2034 socioeconomic forecasts for this analysis was reviewed by the Hampton Roads Interagency Consultation Group at the beginning of the conformity analysis process, as documented with the minutes for that meeting (which are included in Appendix D). The consensus of the ICG was to apply the approved 2030 socioeconomic forecasts for this analysis.

[81] See www.hrtransit.org and www.williamsburgtransport.com, respectively.

and all other regionally significant projects which are disclosed to the MPO as required by Sec. 93.105."

All regionally significant and/or federally funded or approved projects identified in the Plan and Program were incorporated into the respective highway networks for each analysis year. The project list for the Plan and TIP was subjected to Interagency Consultation Group review (pursuant to Section 93.105 and the corresponding state regulation) as documented in the chapter on consultation.

Each network is a representation of the region's highway system as it is likely to appear by the specified year. Similarly, the transit network for each scenario and analysis year is coded to estimate transit volumes and ridership.

Regionally significant projects are defined in the federal conformity rule and generally include arterials and higher level facilities (freeways, expressways, interstates) that serve a regional function and are typically coded in the transportation model network for transportation analyses. Minor arterials, collectors, or local streets are usually only coded in the model if they enhance the capability of the traffic model to route trips on the network.

Since regional emission analyses are performed for a number of analysis years as needed for the conformity determination, the transportation networks were coded to include all regionally significant projects specified or included in the Plan and Program and open to traffic in each of the selected analysis years. Appendix E presents the project list for modeling (i.e., regionally significant changes to the existing roadway and transit system) including years modeled as open to traffic.

Projects were coded in the networks based on the first analysis year in which the project would be open to traffic or operational. For the most part, project opening dates were determined at the District level based upon detailed project information provided by either the localities or the associated VDOT project manager. In cases where that level of detail in scheduling was not available, reasonable assumptions were made. For example, completion dates where otherwise not available were estimated by adding three years to the advertisement date for major projects. Shorter times were allocated as appropriate for the completion of minor projects.

2.3.4 Adjustments for Gloucester County

The federal conformity rule at 40 CFR 93.122(a)(7) requires that "*Reasonable methods shall be used to estimate nonattainment or maintenance area VMT on off-network roadways within the urban transportation planning area, and on roadways outside the urban transportation planning area.*"

The Hampton Roads TP+ travel demand model covers the Hampton Roads MPO (TPO) study area. Although only a portion of Gloucester County is within the study area, the remainder of the county is also in the maintenance area and must be included in the conformity analysis. Therefore, for the off-network area within Gloucester County, traffic counts and forecasts as needed were extracted from the VDOT Statewide Planning System database.

The specific data extracted included the roadway functional class, posted speed, link distance, and traffic count / forecast for each analysis year for all links that were not inside the network area. Estimates of vehicle-miles-traveled (VMT) were computed by multiplying link length by the traffic count forecast for each link. These off-network results were then added to the network VMT estimates produced by the regional travel demand model to obtain the regional forecasts needed, covering the entire County.

2.3.5 Treatment of Off-Network Facilities (Local and Collector Roads)

Local and collector roadways are not typically coded in regional transportation model networks and, consistent with that practice, are not coded in the TP+ regional network developed for Hampton Roads. However, the travel demand model output is not directly adjusted to account for traffic on these facilities. Instead, traffic and emissions for these facilities are addressed in the post-processor and, accordingly, documented with the post-processor.

See Section 2.5 on post-processing for more information on the adjustments for off-network facilities.

2.3.6 Optional Off-line Analyses

Some transportation projects that have a potentially significant impact on regional air quality cannot be coded into the transportation modeling network. These are categorized as "off-line projects" and are analyzed using a variety of methodologies that include elasticity/pivot-point analysis and the use of traffic engineering principles to estimate their traffic and emission impacts.

Off-line analyses for Hampton Roads would include transit bus replacements, Congestion Mitigation and Air Quality (CMAQ) funded projects, van pools, and park-and-ride lots. However, since these adjustments were not needed to demonstrate conformity for this conformity analysis, they were not applied.

2.4 Emission Factor Forecasting

This section presents the selection of the latest emission model as well as key inputs for that model.

2.4.1 Latest Emission Model

The federal conformity rule at 93.111(a) requires the use of the latest emission model as follows: "*The conformity determination must be based on the latest emission estimation model available.*"[82] However, when EPA issues a new model, a grace or transition period applies in which the previous version of the model may still be applied, per the federal conformity rule at 93.111(c) which states: "*Transportation plan and TIP conformity analyses for which the emissions analysis was begun during the grace period or before*

[82] Federal Conformity Rule, 40 CFR 93.111 *Criteria and Procedures: Latest Emissions Model* http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.111.htm

the Federal Register notice of availability of the latest emission model may continue to use the previous version of the model."

On March 2, 2010, EPA officially released the next generation Motor Vehicle Emission Simulator (MOVES2010) model for use in SIP development and regional conformity applications[83]. The EPA notice indicated that a two-year grace period (ending March 2, 2012) applies for use of the new model in regional emissions analyses for transportation conformity determinations. Therefore, for regional conformity analyses initiated before or within the two-year grace period, the MOBILE6.2 model (the model previously designated as the official model by EPA) may continue to be applied.

Since this conformity analysis for Hampton Roads is being initiated within the two-year grace period, the MOBILE6.2 model may be applied. Given that the applicable budgets for the Hampton Roads region were developed based on the MOBILE6.2 model, and that this model has been applied successfully to meet those budgets in previous conformity analyses for the region, it was selected for application for this conformity analysis. The MOVES model may be applied in future analyses once appropriate steps have been taken, within the two-year grace period, to review and update as needed the applicable budgets[84].

2.4.2 MOBILE Model Inputs

The MOBILE6.2 model may be applied to generate estimates for historic, current and future emission factors for regional on-road motor vehicle fleets. Fleet average emission factors may be generated for:

- multiple pollutants, including hydrocarbons, carbon monoxide, nitrogen oxides, exhaust particulate, hazardous air pollutants (HAPs), and carbon dioxide,
- multiple vehicle and fuel-types, including gasoline, diesel, and natural gas-fueled cars, trucks, buses and motorcycles, and
- calendar years between 1952 and 2050.

Modeled emission factors also vary with age (registration distribution by vehicle class), humidity, ambient temperatures, detailed fuel specifications, and operation (speed, by roadway functional class).

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[83] US EPA, 75 FR 9411, [FRL–9121–1], *Official Release of the MOVES2010 Motor Vehicle Emissions Model for Emissions Inventories in SIPs and Transportation Conformity*, Notice of Availability, March 2, 2010. Available at: http://edocket.access.gpo.gov/2010/2010-4312.htm. The model name or version as initially released was "MOVES2010", and an updated version "MOVES2010a" was released in August 2010. To allow for pending future revisions to the model and any associated revisions to the model name, the current version of the model is referenced here generically as "MOVES". See:

- EPA website for MOVES: http://www.epa.gov/otaq/models/moves/index.htm.
- US EPA, *Policy Guidance on the Use of MOVES2010 for State Implementation Plan Development, Transportation Conformity, and Other Purposes*, EPA-420-B-09-046, December 2009. Direct link: http://www.epa.gov/otaq/models/moves/420b09046.pdf.

[84] A separate process to review and update as appropriate (using MOVES) the motor vehicle emission budgets specified in the currently applicable SIP revision (maintenance plan) is planned. This budget review and update process would need to be completed before the new or revised budgets could be applied for the region in future conformity analyses.

Emission factors are generated by the model in units of grams of pollutant per vehicle mile of travel. Emission forecasts are obtained (as noted previously) as the product of these estimated emission factors with corresponding VMT forecasts.

For this analysis, both national default data and region-specific inputs were used with MOBILE6.2. Region-specific inputs include meteorological data, emission control programs, and on-road fleet registration and traffic distribution data, which are summarized in turn below. A sample of a MOBILE6.2 input file applied in this conformity analysis is provided in Appendix C.

2.4.2.1 Ambient Conditions

The federal conformity rule at 93.122(a)(6) requires that "*The ambient temperatures used for the regional emissions analysis shall be consistent with those used to establish the emissions budget in the applicable implementation plan.…*" [85].

Exhibit 2-4 presents average hourly ambient temperatures, hourly relative humidities, and barometric pressure data as presented in the Technical Support Document for the applicable implementation (maintenance) plan. The hourly data for ambient temperature and relative humidity along with the average daily value for barometric pressure were applied in this conformity analysis, consistent with the maintenance plan.

2.4.2.2 Emission Control Programs

Exhibit 2-5 lists emission control programs in effect for the Hampton Roads area as input to the MOBILE6.2 model. The locality-specific MOBILE input parameters are consistent with the approved maintenance SIP and based on the latest planning assumptions.

Emission control programs for Hampton Roads as modeled for this analysis include:

- Reformulated Gasoline (RFG), and Gasoline Reid Vapor Pressure (RVP): RFG was modeled for all jurisdictions within the maintenance area with the exception of the Counties of Gloucester and Isle of Wight, which use conventional gasoline. RFG benefits were modeled for all analysis years after 1996, consistent with Virginia regulations requiring RFG and the Maintenance Plan.

  RFG Phase 2, which is currently in effect, has an approximate Reid vapor pressure (RVP) of 6.8 pounds per square inch (PSI). For the Counties of Gloucester and Isle of Wight, the RVP for conventional gasoline was taken as 8.4 PSI.

- 2007 Heavy Duty Diesel Vehicle (HDDV): The 2007 Heavy Duty Diesel Vehicle (HDDV) program including the implementation of ultra low sulfur diesel was included in the generation of emission factors for the conformity analysis. From the regulatory announcement[86]:

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[85] Federal Conformity Rule, 40 CFR 93.122 *Procedures for Determining Regional Transportation-Related Emissions*: http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.122.htm

[86] US EPA, *Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*, EPA420-F-00-057, Office of Transportation and Air Quality, December 2000.

Exhibit 2-4: Ambient Conditions - Ozone Season

Average Hourly Meteorological Data				
Time (EDT)	Temperature (F)	Dew Point (F)	Relative Humidity (%)	Pressure (In)
6:00 AM	71.77	66.4	83.9	30.017
7:00 AM	75.2	67.7	78.1	30.029
8:00 AM	77.8	68.09	72.7	30.033
9:00 AM	81.07	67.22	63	30.034
10:00 AM	83.04	66.91	58.5	30.034
11:00 AM	84.34	65.99	54.5	30.027
12:00 PM	85.79	65.04	50	30.019
1:00 PM	86.59	64.81	48.9	30.009
2:00 PM	87.4	64.09	46.6	29.996
3:00 PM	87.27	63.82	46	29.985
4:00 PM	87.6	63.22	44.7	29.978
5:00 PM	87.01	63.86	46.7	29.974
6:00 PM	85.51	63.99	49.1	29.973
7:00 PM	83.21	65.42	55.9	29.982
8:00 PM	79.39	68.16	69	29.99
9:00 PM	77.9	68.5	73.3	30.004
10:00 PM	77.02	68.08	74.5	30.006
11:00 PM	75.38	67.87	78.1	30.007
12:00 AM	73.31	66.4	79.8	30.006
1:00 AM	72.91	66.31	80.7	30.004
2:00 AM	72.71	66.49	81.7	29.997
3:00 AM	71.9	63.8	78.1	29.995
4:00 AM	71.2	65.5	82.8	29.995
5:00 AM	70.73	65.49	84.3	30.006
	Avg Min T	70.51		
	Avg Max T	88.01		
	Avg Pres	30.004		

Source: VDEQ, "Technical Support Document for the Redesignation Request and Maintenance Plan for Hampton Roads 8-Hour Ozone Nonattainment Area, Final", as approved June 1, 2007, 72 FR 30490. See Table 4.1-2 on age 64. Reproduced with permission.

Exhibit 2-5: Emission Control Programs

Programs	**2011**	**2018**	**2020**	**2030**
Reformulated Gasoline*	Yes	Yes	Yes	Yes
RVP (PSI):				
• All jurisdictions but Gloucester and Isle of Wight	6.8	6.8	6.8	6.8
• Gloucester and Isle of Wight	8.4	8.4	8.4	8.4
2007 HDDV Program	Yes	Yes	Yes	Yes
NLEV Early Implementation	Yes	Yes	Yes	Yes
Tier 2 Standards	Yes	Yes	Yes	Yes

**Except for the counties of Gloucester and Isle of Wight, which use conventional gasoline.*

New Standards for Heavy-Duty Highway Engines and Vehicles

[EPA is] finalizing a PM emissions standard for new heavy-duty engines of 0.01 grams per brake-horsepower-hour (g/bhp-hr), to take full effect for diesels in the 2007 model year. [EPA is] also finalizing standards for NOx and non-methane hydrocarbons (NMHC) of 0.20 g/bhp-hr and 0.14 g/bhp-hr, respectively. These NOx and NMHC standards will be phased in together between 2007 and 2010, for diesel engines. The phase-in will be on a percent of-sales basis: 50 percent from 2007 to 2009 and 100 percent in 2010. Gasoline engines will be subject to these standards based on a phase in requiring 50 percent compliance in the 2008 model year and 100 percent compliance in the 2009 model year.

The program includes flexibility provisions to facilitate the transition to the new standards and to encourage the early introduction of clean technologies, and adjustments to various testing and compliance requirements to address differences between the new technologies and existing engine based technologies.

New Standards for Diesel Fuel

Refiners will be required to start producing diesel fuel for use in highway vehicles with a sulfur content of no more than 15 parts per million (ppm), beginning June 1, 2006. At the terminal level, highway diesel fuel sold as low sulfur fuel will be required to meet the 15 ppm sulfur standard as of July 15, 2006. For retail stations and fleets, highway diesel fuel sold as low sulfur fuel must meet the 15 ppm sulfur standard by September 1, 2006.

This program includes a combination of flexibilities available to refiners to ensure a smooth transition to low sulfur highway diesel fuel.

- National Low Emission Vehicle (NLEV) Program Early Implementation: Early implementation of the NLEV program was included in the modeling for the conformity analysis. The NLEV program, finalized by EPA in March 1998, implemented cleaner light-duty gasoline vehicles beginning in model year 1999 throughout Virginia.

- Tier 2 Vehicle Emission Standards: EPA Tier 2 vehicle emission standards implementation beginning with the 2004 model year was specified for the modeling for the conformity analysis. Gasoline sulfur levels as required for the Tier 2 standards were incorporated into the modeling. From the supplementary information included with the final Tier 2 rule[87]:

Highlights of the Tier2/Gasoline Sulfur Program
For cars, and light trucks, and larger passenger vehicles, the program will—
o *Starting in 2004, through a phase in, apply for the first time the same set of emission standards covering passenger cars, light trucks, and large SUVs and passenger vehicles. …*

[87] US EPA, 65 FR 6698, 40 CFR Parts 80, 85, and 86, *Control of Air Pollution From New Motor Vehicles: Tier 2 Motor Vehicle Emissions Standards and Gasoline Sulfur Control Requirements; Final Rule*, February 10, 2000. Published in four sections spanning pages 6697-6870. See:
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&docid=page+6697-6746
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&docid=page+6747-6796
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&docid=page+6797-6846
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&docid=page+6847-6870

- o *Introduce a new category of vehicles, ''medium-duty passenger vehicles,'' thus bringing larger passenger vans and SUVs into the Tier 2 program.*
- o *During the phase-in, apply interim fleet emission average standards that match or are more stringent than current federal and California ''LEV I'' (Low-Emission Vehicle, Phase I) standards.*
- o *Apply the same standards to vehicles operated on any fuel.*
- o *Allow auto manufacturers to comply with the very stringent new standards in a flexible way while ensuring that the needed environmental benefits occur.*
- o *Build on the recent technology improvements resulting from the successful National Low-Emission Vehicles (NLEV) program and improve the performance of these vehicles through lower sulfur gasoline.*
- o *Set more stringent particulate matter standards.*
- o *Set more stringent evaporative emission standards.*

For commercial gasoline, the program will—

- o *Significantly reduce average gasoline sulfur levels nationwide as early as 2000, fully phased-in in 2006. Refiners will generally add refining equipment to remove sulfur in their refining processes. Importers of gasoline will be required to import and market only gasoline meeting the sulfur limits.*

…

- o *Enable the new Tier 2 vehicles to meet the emission standards by greatly reducing the degradation of vehicle emission control performance from sulfur in gasoline. Lower sulfur gasoline also appears to be necessary for the introduction of advanced technologies that promise higher fuel economy but are very susceptible to sulfur poisoning (for example, gasoline direct injection engines).*
- o *Reduce emissions from NLEV vehicles and other vehicles already on the road.*

Consistent with the modeling presented in the Technical Support Document for the maintenance plan, inspection and maintenance or anti-tampering programs were not included in the modeling for this analysis.

2.4.2.3 Fleet Distribution Data

Fleet data are input into the MOBILE6.2 model for vehicle age distributions by vehicle class and VMT distributions by vehicle and roadway class. Separate distributions are applied for each jurisdiction in the region.

Exhibit 2-6 presents a sample of vehicle registration distribution data (relative vehicle population by vehicle "age"[88] and class). The sample is for the entire regional on-road motor vehicle fleet in Hampton Roads in 2008, which is not applied directly in the conformity analysis. For greater accuracy, the conformity analysis was instead conducted using the corresponding age distributions developed for each individual jurisdiction within the Hampton Roads region.

The data for each jurisdiction in the region as well as the regional set presented here were developed by the VDEQ in support of the preparation of the federally-required 2008 Periodic Emission Inventory ("2008 PEI"). The VDEQ developed the update to the registration distribution data using detailed vehicle identification number (VIN) data for

[88] Defined by EPA as the calendar year minus model year, plus one. See: US EPA, *User's Guide to MOBILE6.1 and MOBILE6.2 Mobile Source Emission Factor Model*, EPA420-R-03-010, August 2003, p.95 (Section 2.8.7.1 *Distribution of Vehicle Registrations*)

July 1, 2008 for all jurisdictions in the Commonwealth. The jurisdictional data for Hampton Roads so developed were incorporated into the MOBILE6.2 input files for this conformity analysis, consistent with but updating the data applied in the 2007 maintenance plan for the region.

Exhibit 2-6: 2008 Vehicle Registration Distributions for Hampton Roads

MOBILE Model	**Vehicle Age (Calendar Year - Model Year +1)**									
Composite Vehicle Class*	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
	11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
(Number, Abbreviation, Description)	**21**	**22**	**23**	**24**	**25+**					
1. LDV - Light-Duty Vehicles (Passenger Cars)	0.0471	0.0672	0.0626	0.0638	0.0646	0.0677	0.0669	0.0637	0.0698	0.0575
	0.0518	0.0505	0.0424	0.0441	0.0357	0.0298	0.0244	0.0194	0.0164	0.0132
	0.0109	0.0094	0.0073	0.0053	0.0084					
2. LDT1 - Light-Duty Trucks 1	0.0348	0.0000	0.0559	0.0722	0.0227	0.0646	0.0589	0.0546	0.0378	0.0355
(0-6,000 lbs. GVWR, 0-3,750 lbs. LVW)	0.0305	0.0311	0.0540	0.0244	0.0178	0.0175	0.0181	0.0187	0.0162	0.0418
	0.0793	0.0814	0.0511	0.0277	0.0534					
3. LDT2 - Light-Duty Trucks 2	0.0395	0.0653	0.0626	0.0749	0.0781	0.0722	0.0774	0.0649	0.0695	0.0556
(0-6,000 lbs. GVWR, 3,751-5,750 lbs. LVW)	0.0542	0.0477	0.0372	0.0349	0.0315	0.0252	0.0178	0.0159	0.0132	0.0135
	0.0123	0.0105	0.0094	0.0060	0.0108					
4. LDT3 - Light-Duty Trucks 3	0.0443	0.0676	0.0759	0.0795	0.0985	0.0952	0.0796	0.0669	0.0610	0.0624
(6,001-8,500 lbs. GVWR, 0-5,750 lbs. ALVW*)	0.0364	0.0339	0.0329	0.0363	0.0285	0.0185	0.0139	0.0087	0.0117	0.0122
	0.0098	0.0073	0.0070	0.0047	0.0076					
5. LDT4 - Light-Duty Trucks 4	0.0472	0.1382	0.0806	0.1090	0.1361	0.0843	0.0471	0.0543	0.0572	0.0730
(6,001-8,500 lbs. GVWR, 5,751 lbs. and greater ALVW)	0.0501	0.0431	0.0162	0.0131	0.0121	0.0083	0.0042	0.0026	0.0043	0.0048
	0.0056	0.0029	0.0015	0.0014	0.0031					
6. HDV2B Class 2b Heavy-Duty Vehicles	0.0432	0.0602	0.0913	0.0764	0.0957	0.0933	0.0660	0.0678	0.0691	0.0568
(8,501-10,000 lbs. GVWR)	0.0274	0.0428	0.0324	0.0342	0.0209	0.0166	0.0143	0.0093	0.0120	0.0152
	0.0112	0.0080	0.0113	0.0092	0.0155					
7. HDV3 - Class 3 Heavy-Duty Vehicles	0.0557	0.0591	0.1320	0.1044	0.0719	0.0636	0.0619	0.0620	0.0614	0.0638
(10,001-14,000 lbs. GVWR)	0.0266	0.0270	0.0186	0.0277	0.0192	0.0137	0.0125	0.0077	0.0148	0.0146
	0.0197	0.0154	0.0156	0.0111	0.0197					
8. HDV4 - Class 4 Heavy-Duty Vehicles	0.0296	0.0559	0.0531	0.0480	0.0432	0.0613	0.0527	0.0596	0.0722	0.0754
(14,001-16,000 lbs. GVWR)	0.0341	0.0765	0.0391	0.0490	0.0475	0.0223	0.0240	0.0195	0.0249	0.0289
	0.0220	0.0168	0.0121	0.0110	0.0214					
9. HDV5 - Class 5 Heavy-Duty Vehicles	0.0517	0.0848	0.1079	0.1326	0.0919	0.0693	0.0369	0.0369	0.0567	0.0649
(16,001-19,500 lbs. GVWR)	0.0193	0.0815	0.0226	0.0341	0.0270	0.0149	0.0110	0.0088	0.0072	0.0077
	0.0061	0.0094	0.0061	0.0044	0.0066					
10. HDV6 - Class 6 Heavy-Duty Vehicles	0.0329	0.0815	0.0778	0.0790	0.0787	0.0440	0.0544	0.0505	0.0774	0.0697
(19,501-26,000 lbs. GVWR)	0.0508	0.0350	0.0282	0.0463	0.0167	0.0217	0.0178	0.0178	0.0171	0.0144
	0.0124	0.0178	0.0153	0.0151	0.0275					
11. HDV7 - Class 7 Heavy-Duty Vehicles	0.0204	0.0527	0.0429	0.0422	0.0468	0.0281	0.0404	0.0408	0.0556	0.0492
(26,001-33,000 lbs. GVWR	0.0601	0.0348	0.0334	0.0745	0.0440	0.0222	0.0267	0.0366	0.0482	0.0323
	0.0411	0.0390	0.0274	0.0260	0.0345					
12. HDV8 - Class 8a Heavy-Duty Vehicles	0.0267	0.0768	0.0382	0.0398	0.0330	0.0298	0.0485	0.0605	0.0633	0.0700
(33,001-60,000 lbs. GVWR)	0.0633	0.0569	0.0374	0.0676	0.0378	0.0334	0.0227	0.0231	0.0302	0.0283
	0.0267	0.0251	0.0175	0.0231	0.0203					
13. HDV8B Class 8b Heavy-Duty Vehicles	0.0215	0.0786	0.0772	0.0664	0.0580	0.0458	0.0348	0.0776	0.0945	0.0723
(>60,000 lbs. GVWR)	0.0647	0.0510	0.0502	0.0481	0.0363	0.0230	0.0154	0.0160	0.0131	0.0143
	0.0120	0.0078	0.0072	0.0076	0.0067					
14. HDBS - School Buses	0.0026	0.0068	0.0047	0.0047	0.0350	0.0575	0.0178	0.0606	0.0721	0.0669
	0.0789	0.0418	0.0706	0.0664	0.0235	0.0355	0.0382	0.0486	0.0805	0.0711
	0.0105	0.0303	0.0314	0.0256	0.0183					
15. HDBT - Transit and Urban Buses	0.0324	0.0333	0.0182	0.0373	0.0280	0.0266	0.0506	0.0235	0.0200	0.0337
	0.0258	0.0129	0.0222	0.0706	0.0448	0.0608	0.0249	0.0262	0.0324	0.0626
	0.0710	0.0870	0.0586	0.0435	0.0528					
16. MC - Motorcycles (All)	0.0578	0.1231	0.1274	0.1053	0.0847	0.0957	0.0705	0.0555	0.0447	0.0362
	0.0249	0.0196	0.0203	0.0157	0.0146	0.0120	0.0087	0.0063	0.0060	0.0065
	0.0053	0.0073	0.0109	0.0111	0.0297					

* *EPA footnote for the vehicle class definitions*: ALVW = Alternative Loaded Vehicle Weight: The adjusted loaded vehicle weight is the numerical average (GVWR) of the vehicle curb weight and the gross vehicle weight rating (GVWR)

Source for the vehicle registration data: VDEQ Email to VDOT regarding "2008 Vehicle Registration Data (more)", September 9, 2009. Sums normalized in MOBILE model execution.

Source for the vehicle class definitions: *Appendix B, MOBILE6 Input Data Format Reference Tables, Table 1 - Composite Vehicle Classes for Vehicle Registration Data and Vehicle Miles Traveled Fractions (REG DIST and VMT FRACTIONS Commands)* from US EPA, *User's Guide to MOBILE6.1 and MOBILE6.2 Mobile Source Emission Factor Model,* EPA420-R-03-010, August 2003

Exhibit 2-7 presents VMT distributions by vehicle and federal roadway functional class. The distributions were generated using TMS/HPMS data compiled by VDOT[89]. Similar to the registration distribution data, the VMT distribution data were developed in support of the preparation of the federally-required 2008 PEI.

2.5 Post-Processing

The post-processor generates regional total emission forecasts based on estimates developed for three separate sub-categories, namely:

1) regional network VMT and emissions, which are generated using the VMT and emission factor output from the regional travel demand and emission factor modeling steps as described above,

2) "off-network" VMT and emissions, for which traffic (VMT and speeds) expected for roadways that are not typically coded in regional transportation model networks (i.e., local and collector roadways) are first projected and the results combined with the emission factors generated previously to generate emission estimates for these minor facilities, and

3) military base contributions to emissions, as specified in the maintenance plan (referenced earlier). Following the procedure in the maintenance plan, the military base contributions are added without adjustment in the post-processor to the estimate for total regional emissions.

The post-processor is based upon transportation engineering methods presented in the 2000 *Highway Capacity Manual (HCM)* and *National Cooperative Highway Research Program (NCHRP) Report 387*.

While the development of estimates for VMT and emissions factors for traffic on the regional network has been presented, the calculation of emissions for the regional network involves two additional adjustments: i) for congested speeds, and ii) for seasonal traffic levels. These are reviewed in turn below.

The development of estimates for traffic and emissions on off-network facilities is then reviewed. This section concludes with a presentation of the hourly profiles that were applied for the VMT tables included in the appendices.

[89] VDOT, *Traffic Data for the 2008 Highway Emissions Inventory. Air Quality Planning Areas: Fredericksburg, Hampton Roads, Northern Virginia, Richmond, Roanoke & Winchester*, September 2009.

Exhibit 2-7: 2008 VMT Distribution by Roadway Functional Class for Hampton Roads

FHWA Roadway Functional Class		Hampton Roads Ozone Maintenance Area Daily VMT Distribution																
		LDV	LDT1	LDT2	LDT3	LDT4	HDV2b	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8a	HDV8b	HDBS	HDBT	MC	SUM
1	Rural Interstate	0.38141	0.08791	0.29267	0.08912	0.04098	0.03405	0.00335	0.00275	0.00205	0.00760	0.00897	0.00975	0.03477	0.00172	0.00079	0.00211	1.00
2	Rural Principal Arterial	0.37691	0.08688	0.28923	0.08807	0.04050	0.03785	0.00373	0.00306	0.00228	0.00844	0.00997	0.01083	0.03865	0.00192	0.00088	0.00080	1.00
6	Rural Minor Arterial	0.38059	0.08773	0.29205	0.08893	0.04089	0.03373	0.00332	0.00273	0.00203	0.00753	0.00889	0.00965	0.03445	0.00171	0.00079	0.00498	1.00
7	Rural Major Collector	0.41055	0.09464	0.31505	0.09593	0.04411	0.01177	0.00116	0.00095	0.00071	0.00263	0.00310	0.00337	0.01202	0.00060	0.00027	0.00314	1.00
8	Rural Minor Collector	0.41590	0.09587	0.31915	0.09718	0.04469	0.00805	0.00079	0.00065	0.00049	0.00180	0.00212	0.00231	0.00822	0.00041	0.00019	0.00218	1.00
9	Rural Local	0.39413	0.09085	0.30245	0.09209	0.04235	0.02347	0.00231	0.00190	0.00142	0.00524	0.00619	0.00672	0.02397	0.00119	0.00055	0.00517	1.00
11	Urban Interstate	0.40916	0.09431	0.31396	0.09560	0.04396	0.01267	0.00125	0.00102	0.00076	0.00283	0.00334	0.00363	0.01294	0.00064	0.00030	0.00363	1.00
12	Urban Freeway/Expressway	0.40658	0.09372	0.31200	0.09500	0.04369	0.01456	0.00143	0.00118	0.00088	0.00325	0.00384	0.00417	0.01487	0.00074	0.00034	0.00375	1.00
14	Urban Principal Arterial	0.41686	0.09609	0.31989	0.09740	0.04479	0.00645	0.00064	0.00052	0.00039	0.00144	0.00170	0.00185	0.00658	0.00033	0.00015	0.00492	1.00
16	Urban Minor Arterial	0.41215	0.09500	0.31625	0.09630	0.04428	0.01000	0.00098	0.00081	0.00060	0.00223	0.00263	0.00286	0.01021	0.00051	0.00023	0.00496	1.00
17	Urban Collector	0.41485	0.09563	0.31835	0.09694	0.04458	0.00823	0.00081	0.00066	0.00050	0.00184	0.00217	0.00236	0.00840	0.00042	0.00019	0.00407	1.00
19	Urban Local	0.39980	0.09215	0.30678	0.09341	0.04296	0.01887	0.00186	0.00152	0.00114	0.00421	0.00497	0.00540	0.01926	0.00096	0.00044	0.00627	1.00
All Functional Classes		**0.41064**	**0.09465**	**0.31509**	**0.09594**	**0.04412**	**0.01129**	**0.00111**	**0.00091**	**0.00068**	**0.00252**	**0.00298**	**0.00323**	**0.01153**	**0.00057**	**0.00026**	**0.00448**	**1.00**

Source: *VDOT, "Traffic Data for the 2008 Highway Emissions Inventory. Air Quality Planning Areas: Fredericksburg, Hampton Roads, Northern Virginia, Richmond, Roanoke & Winchester", September 2009, Exhibit 29.*

2.5.1 Congested Speed Calculation

The post-processor estimates congested speeds using standard Bureau of Public Roads (BPR) formulae that are based upon free flow speeds, volumes and capacity[90]. Two forms of the BPR equation are applied:

1) for non-signalized roadway segments:

$$speed\ \ for\ unsignalized\ \ facilities = \frac{corridor\ \ free\ \ flow\ speed}{1 + 0.2(volume / capacity)^{10}}$$

2) for signalized roadway segments, defined as facilities on which traffic signals are spaced two miles or less apart:

$$speed\ \ for\ signalized\ \ facilities = \frac{corridor\ \ free\ \ flow\ speed}{1 + 0.05(volume / capacity)^{10}}$$

2.5.2 Seasonal Adjustments to Traffic

Exhibit 2-8 presents average ozone season weekday adjustment factors for the Hampton Roads area. The factors are applied to the forecast VMT to more accurately account for observed ozone (summer) season traffic levels.

Exhibit 2-8: Ozone Season Traffic Adjustment Factors

FHWA Roadway Functional Class		Average Ozone Season Weekday VMT Adjustment Factor
1	Rural Interstate	1.0582
2	Rural Principal Arterial	1.0602
6	Rural Minor Arterial	1.0765
7	Rural Major Collector	1.0798
8	Rural Minor Collector	1.0751
9	Rural Local	1.0004
11	Urban Interstate	1.0902
12	Urban Freeway/Expressway	1.0786
14	Urban Principal Arterial	1.0851
16	Urban Minor Arterial	1.1001
17	Urban Collector	1.1008
19	Urban Local	1.0854

Source: VDOT, "Traffic Data for the 2008 Highway Emissions Inventory. Air Quality Planning Areas: Fredericksburg, Hampton Roads, Northern Virginia, Richmond, Roanoke & Winchester", September 2009.

[90] Generally, free flow speed is taken here as the speed at which a vehicle on the roadway segment would travel given no conflict with other traffic, i.e., no congestion. As traffic volumes increase and the carrying capacity of the roadway is reached (i.e. congestion increases), average speeds would be expected to be reduced. The free flow speeds used are consistent with those used in the TP+ model.

The tabulated factors were obtained as the average for the TMS/HPMS values reported for May through September (the summer ozone season) for the Hampton Roads area for 2008.

2.5.3 Adjustments for Off-Network Facilities (Local and Collector Roads)

The federal conformity rule at 40 CFR 93.122(a) requires that "*…Projects which are not regionally significant are not required to be explicitly modeled, but vehicle miles traveled (VMT) from such projects must be estimated in accordance with reasonable professional practice.*"

All regionally significant projects are included in the network modeling as summarized previously. However local and collector roadways are not typically coded in regional transportation model networks and are not coded in the TP+ regional network developed for Hampton Roads.

The post-processor was therefore designed to generate estimates for VMT for these minor facilities, projecting future traffic volumes using traffic count data for a base year and average annual growth rates applicable through the horizon year of the LRTP for the region. Speeds are taken from the VDOT Statewide Planning System (SPS) database or MOBILE model defaults. The base year VMT data for local and collector roads were obtained for 2009 from the VDOT TMS/HPMS database previously referenced. Tabulations of the VMT forecasts generated are presented in Appendix B.

Exhibit 2-9 presents forecast annual average growth rates for local and collector road VMT for the Hampton Roads area. As an approximation, the rates were taken as equivalent to the annual average growth rates reported with the socioeconomic data for auto ownership in Hampton Roads.

2.5.4 Hourly Traffic Volumes

Exhibit 2-10 presents the hourly VMT distributions by vehicle class for the region. These profiles were applied in the generation of the VMT tables that are presented in Appendix B.

Exhibit 2-9: Annual Average Growth Rates for Local and Collector Road VMT

Jurisdiction	Annual Average Growth Rate
Chesapeake	1.55%
Gloucester	2.48%
Hampton	1.40%
Isle of Wight	2.10%
James City	2.90%
Newport News	1.24%
Norfolk	0.58%
Poquoson	2.17%
Portsmouth	0.65%
Suffolk	2.48%
Virginia Beach	1.09%
Williamsburg	1.24%
York	1.52%

Exhibit 2-10: Hourly Traffic Distribution by Roadway Functional Class

Hampton Roads Hourly VMT Distributions by Vehicle Class All FHWA Roadway Functional Classes																		
Hour	**LDV**	**LDT1**	**LDT2**	**LDT3**	**LDT4**	**HDV2b**	**HDV3**	**HDV4**	**HDV5**	**HDV6**	**HDV7**	**HDV8a**	**HDV8b**	**HDBS**	**HDBT**	**MC**	**Total for Hour**	**Percent of Daily**
0	0.41459	0.09557	0.31814	0.09687	0.04455	0.00842	0.00083	0.00068	0.00051	0.00188	0.00222	0.00241	0.00860	0.00043	0.00020	0.00410	1.00000	0.9552%
1	0.41017	0.09455	0.31476	0.09584	0.04407	0.01195	0.00118	0.00097	0.00072	0.00267	0.00315	0.00342	0.01220	0.00061	0.00028	0.00346	1.00000	0.6143%
2	0.40472	0.09329	0.31057	0.09457	0.04349	0.01626	0.00160	0.00131	0.00098	0.00363	0.00428	0.00465	0.01660	0.00082	0.00038	0.00285	1.00000	0.5130%
3	0.39574	0.09122	0.30366	0.09246	0.04252	0.02286	0.00225	0.00185	0.00138	0.00510	0.00603	0.00654	0.02335	0.00116	0.00053	0.00335	1.00000	0.4410%
4	0.39983	0.09217	0.30682	0.09343	0.04296	0.01941	0.00191	0.00157	0.00117	0.00433	0.00512	0.00556	0.01982	0.00098	0.00045	0.00447	1.00000	0.8194%
5	0.41000	0.09450	0.31461	0.09580	0.04405	0.01144	0.00113	0.00092	0.00069	0.00255	0.00301	0.00327	0.01168	0.00058	0.00027	0.00550	1.00000	2.3098%
6	0.41031	0.09457	0.31483	0.09587	0.04408	0.01130	0.00111	0.00091	0.00068	0.00252	0.00298	0.00323	0.01154	0.00057	0.00026	0.00524	1.00000	4.6178%
7	0.40881	0.09423	0.31369	0.09552	0.04392	0.01288	0.00127	0.00104	0.00078	0.00287	0.00339	0.00369	0.01316	0.00065	0.00030	0.00380	1.00000	5.9858%
8	0.40355	0.09303	0.30968	0.09430	0.04336	0.01702	0.00168	0.00138	0.00103	0.00380	0.00449	0.00487	0.01738	0.00086	0.00040	0.00317	1.00000	5.4590%
9	0.40099	0.09243	0.30770	0.09369	0.04309	0.01879	0.00185	0.00152	0.00113	0.00419	0.00495	0.00538	0.01919	0.00095	0.00044	0.00371	1.00000	4.9462%
10	0.40189	0.09265	0.30842	0.09391	0.04319	0.01809	0.00178	0.00146	0.00109	0.00404	0.00477	0.00518	0.01847	0.00092	0.00042	0.00372	1.00000	5.1546%
11	0.40365	0.09304	0.30974	0.09431	0.04337	0.01659	0.00163	0.00134	0.00100	0.00370	0.00437	0.00475	0.01694	0.00084	0.00039	0.00434	1.00000	5.6473%
12	0.40647	0.09370	0.31192	0.09498	0.04368	0.01440	0.00142	0.00116	0.00087	0.00321	0.00380	0.00412	0.01471	0.00073	0.00034	0.00449	1.00000	6.1765%
13	0.40601	0.09359	0.31155	0.09487	0.04362	0.01473	0.00145	0.00119	0.00089	0.00329	0.00388	0.00422	0.01504	0.00075	0.00034	0.00458	1.00000	6.1112%
14	0.40635	0.09366	0.31181	0.09494	0.04366	0.01431	0.00141	0.00116	0.00086	0.00319	0.00377	0.00409	0.01461	0.00072	0.00033	0.00513	1.00000	6.5444%
15	0.41017	0.09455	0.31474	0.09584	0.04407	0.01135	0.00112	0.00092	0.00068	0.00253	0.00299	0.00325	0.01158	0.00057	0.00026	0.00538	1.00000	7.3457%
16	0.41438	0.09552	0.31798	0.09682	0.04452	0.00820	0.00081	0.00066	0.00049	0.00183	0.00216	0.00235	0.00837	0.00042	0.00019	0.00530	1.00000	7.7849%
17	0.41846	0.09645	0.32110	0.09777	0.04496	0.00536	0.00053	0.00043	0.00032	0.00120	0.00141	0.00153	0.00547	0.00027	0.00012	0.00462	1.00000	7.7010%
18	0.41961	0.09672	0.32198	0.09804	0.04508	0.00445	0.00044	0.00036	0.00027	0.00099	0.00117	0.00127	0.00455	0.00023	0.00010	0.00474	1.00000	6.0557%
19	0.42016	0.09685	0.32240	0.09817	0.04514	0.00409	0.00040	0.00033	0.00025	0.00091	0.00108	0.00117	0.00418	0.00021	0.00010	0.00456	1.00000	4.4681%
20	0.42054	0.09694	0.32270	0.09826	0.04519	0.00386	0.00038	0.00031	0.00023	0.00086	0.00102	0.00110	0.00394	0.00020	0.00009	0.00438	1.00000	3.6562%
21	0.42062	0.09696	0.32276	0.09828	0.04519	0.00394	0.00039	0.00032	0.00024	0.00088	0.00104	0.00113	0.00402	0.00020	0.00009	0.00394	1.00000	3.0277%
22	0.41983	0.09678	0.32217	0.09810	0.04511	0.00457	0.00045	0.00037	0.00028	0.00102	0.00120	0.00131	0.00466	0.00023	0.00011	0.00381	1.00000	2.1751%
23	0.41823	0.09641	0.32094	0.09772	0.04494	0.00585	0.00058	0.00047	0.00035	0.00131	0.00154	0.00167	0.00597	0.00030	0.00014	0.00358	1.00000	1.4900%
Daily	**0.41064**	**0.09465**	**0.31509**	**0.09594**	**0.04412**	**0.01129**	**0.00111**	**0.00091**	**0.00068**	**0.00252**	**0.00298**	**0.00323**	**0.01153**	**0.00057**	**0.00026**	**0.00448**	**1.00000**	**100.00%**

Source: VDOT, "Traffic Data for the 2008 Highway Emissions Inventory. Air Quality Planning Areas: Fredericksburg, Hampton Roads, Northern Virginia, Richmond, Roanoke & Winchester", September 2009.

2.6 Modeling Results

This section presents the emission forecasts for NO_x and VOC generated using the US EPA model MOBILE6.2 for this conformity analysis following the methodology summarized previously in this chapter. Also presented in this section for reference purposes are summary statistics derived from the results of the analysis, including regional average emissions per mile, capita and household for each year modeled.

2.6.1 Motor Vehicle Emission Forecasts & Budget Test Results

Exhibit 2-10 presents the hourly VMT distributions by vehicle class for the region. These profiles were applied in the generation of the VMT tables that are presented in Appendix B.

Exhibits 2-11 and 2-12 respectively present the emission forecasts for NO_x and VOC generated for this conformity analysis following the methodology summarized in this chapter. The forecasts are presented graphically (in bar chart format) in comparison to the applicable motor vehicle emission budgets for each year. The emission forecasts are lower than the applicable budgets for all years tested, so the emission budget tests specified in the federal conformity rule are passed for this analysis.

Exhibit 2-11: Motor Vehicle Emission Budget Test Results for NO_x

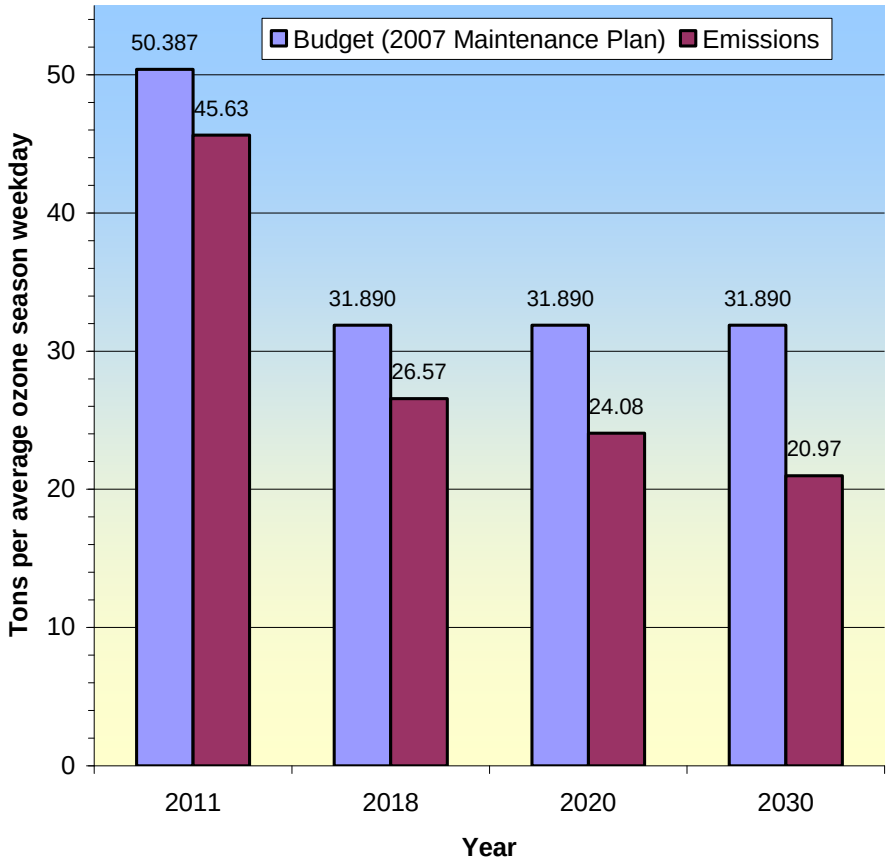
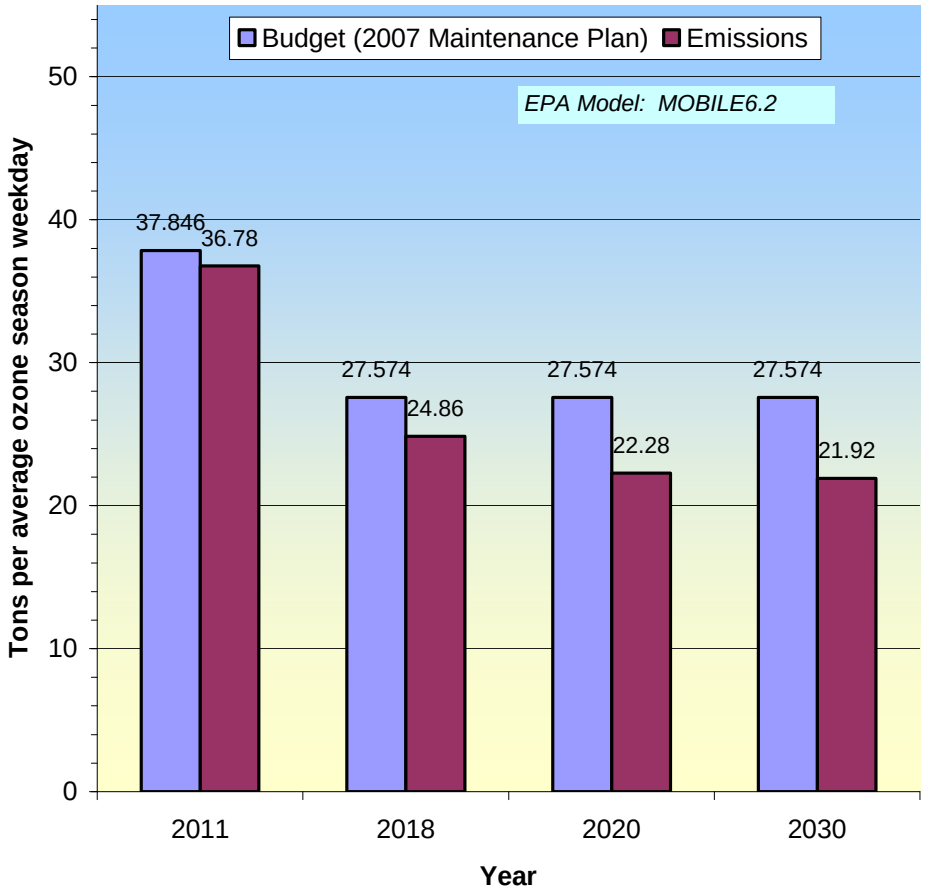


Exhibit 2-12: Motor Vehicle Emission Budget Test Results for VOC



2.6.2 Summary Statistics

Exhibit 2-13 presents, for reference, a tabulation of summary statistics derived from the results of the conformity analysis. The summary statistics include regional average emission rates per vehicle mile travelled, per capita, per household and per member of the labor force (employee) for each year analyzed. The forecasts are indexed to the base year for the analysis (2011) to better show the relative changes over time.

Exhibits 2-14(a) through (e) show the same forecasts in graphical format. In each case, the trend in emissions is downward initially then flattening. The downward trend is a result of the implementation of more stringent vehicle emission and fuel quality standards as reviewed in Chapter 1. Since fleet turnover to vehicles constructed to meet the more stringent standards takes time to be fully implemented, the benefits in terms of reduced emissions also takes time to be fully realized. In the long run (based 2030 based on these charts), without the introduction of additional new more stringent vehicle emission and/or fuel quality standards, the trend in vehicle emissions may be expected to turn upward given a continued growth in VMT.

Exhibit 2-13: Summary Statistics

Parameter	2011	(Index)	2018	(Index)	2020	(Index)	2030	(Index)
Forecasts:								
VMT (millions/ozone season weekday):	48.7	*(100.0)*	52.9	*(108.7)*	54.0	*(110.9)*	60.3	*(123.7)*
NOx (tons/ozone season weekday):	45.6	*(100.0)*	26.6	*(58.2)*	24.1	*(52.8)*	21.0	*(46.0)*
VOC (tons/ozone season weekday):	36.8	*(100.0)*	24.9	*(67.6)*	22.3	*(60.6)*	21.9	*(59.6)*
Derived Statistics*:								
NOx (grams per VMT)	0.85	*(100.0)*	0.46	*(53.6)*	0.40	*(47.6)*	0.32	*(37.2)*
VOC (grams per VMT)	0.68	*(100.0)*	0.43	*(62.2)*	0.37	*(54.6)*	0.33	*(48.2)*
Ozone Season Weekday VMT (per vehicle)	37.98	*(100.0)*	37.58	*(99.0)*	37.39	*(98.5)*	37.08	*(97.6)*
NOx (grams per day per vehicle)	32.27	*(100.0)*	17.11	*(53.0)*	15.12	*(46.8)*	11.71	*(36.3)*
VOC (grams per day per vehicle)	26.01	*(100.0)*	16.01	*(61.5)*	13.99	*(53.8)*	12.24	*(47.0)*
Ozone Season Weekday VMT (per capita)	28.77	*(100.0)*	29.47	*(102.4)*	29.59	*(102.8)*	30.53	*(106.1)*
NOx (grams per day per capita)	24.45	*(100.0)*	13.42	*(54.9)*	11.96	*(48.9)*	9.64	*(39.4)*
VOC (grams per day per capita)	19.71	*(100.0)*	12.55	*(63.7)*	11.07	*(56.2)*	10.08	*(51.1)*
Ozone Season Weekday VMT (per household)	77.66	*(100.0)*	79.21	*(102.0)*	79.43	*(102.3)*	81.55	*(105.0)*
NOx (grams per day per household)	65.99	*(100.0)*	36.06	*(54.7)*	32.11	*(48.7)*	25.75	*(39.0)*
VOC (grams per day per household)	53.19	*(100.0)*	33.74	*(63.4)*	29.72	*(55.9)*	26.91	*(50.6)*
Ozone Season Weekday VMT (per employee)	46.61	*(100.0)*	48.06	*(103.1)*	48.33	*(103.7)*	50.26	*(107.8)*
NOx (grams per day per employee)	39.61	*(100.0)*	21.88	*(55.2)*	19.54	*(49.3)*	15.87	*(40.1)*
VOC (grams per day per employee)	31.93	*(100.0)*	20.47	*(64.1)*	18.08	*(56.6)*	16.59	*(52.0)*

** Based upon: 1) emission forecasts generated using the US EPA model MOBILE6.2, and 2) socioeconomic forecasts for for Hampton Roads for automobile ownership, population, households and employment as presented in Chapter 2.*

Exhibit 2-14(a): Regional Trends in VMT and Emissions

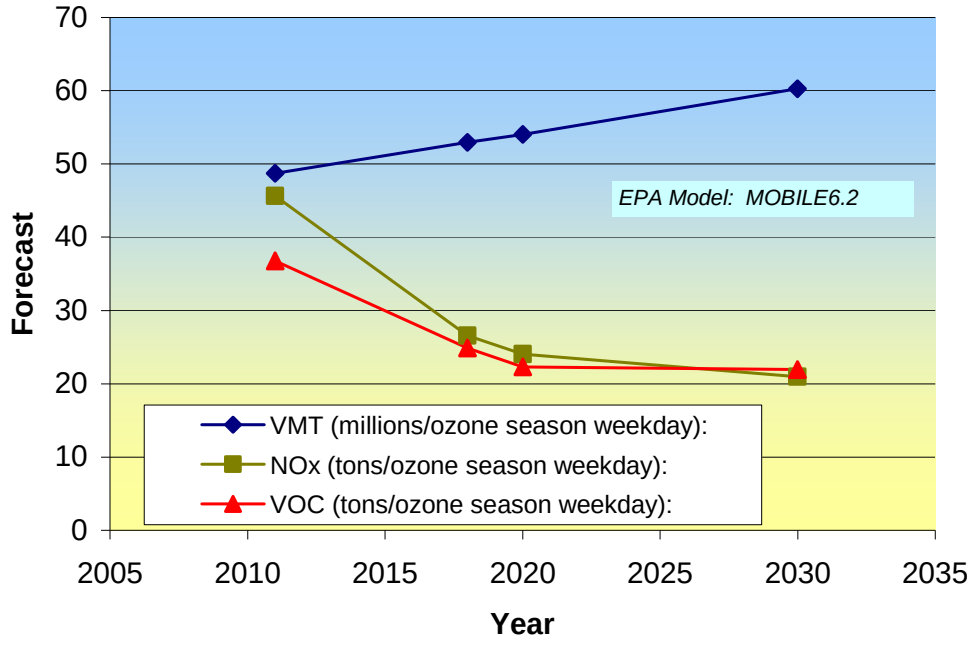


Exhibit 2-14(b): Regional Trends in Emissions per VMT

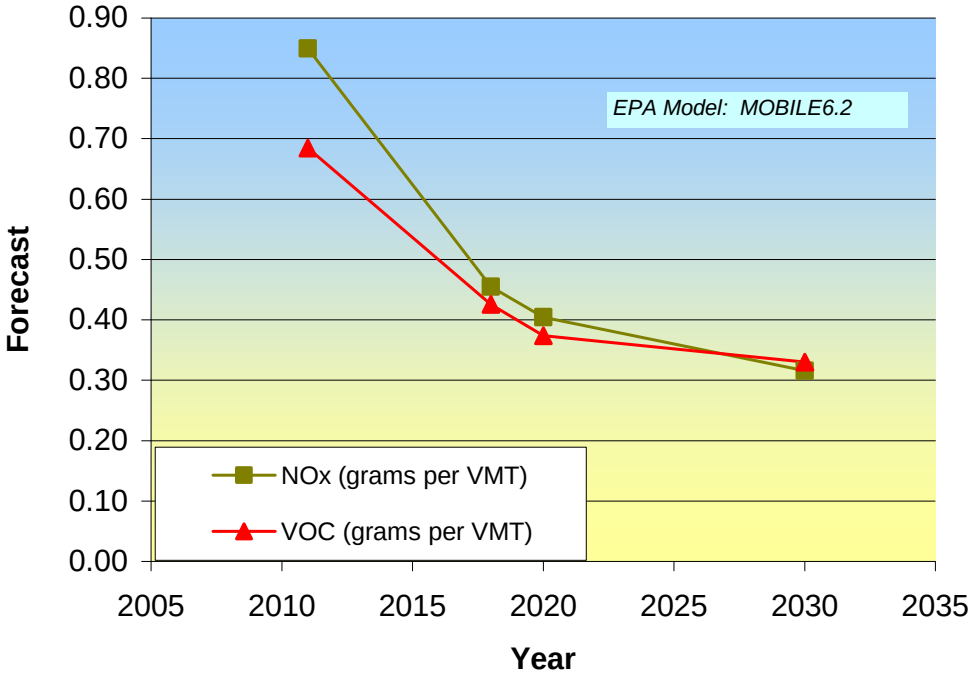


Exhibit 2-14(c): Regional Trends in Emissions per Vehicle

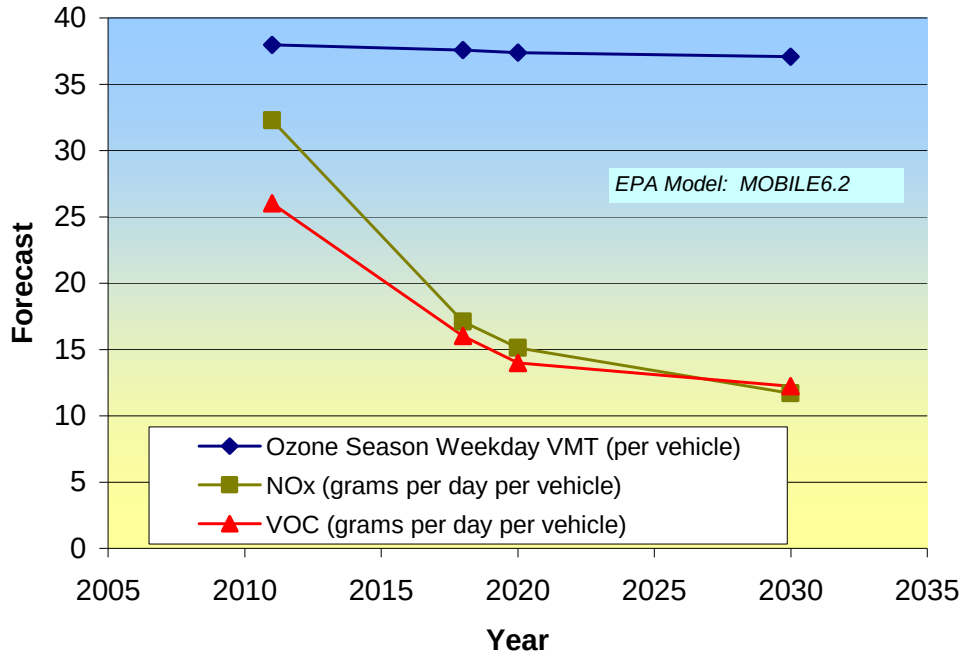


Exhibit 2-14(d): Regional Trends in Emissions per Capita

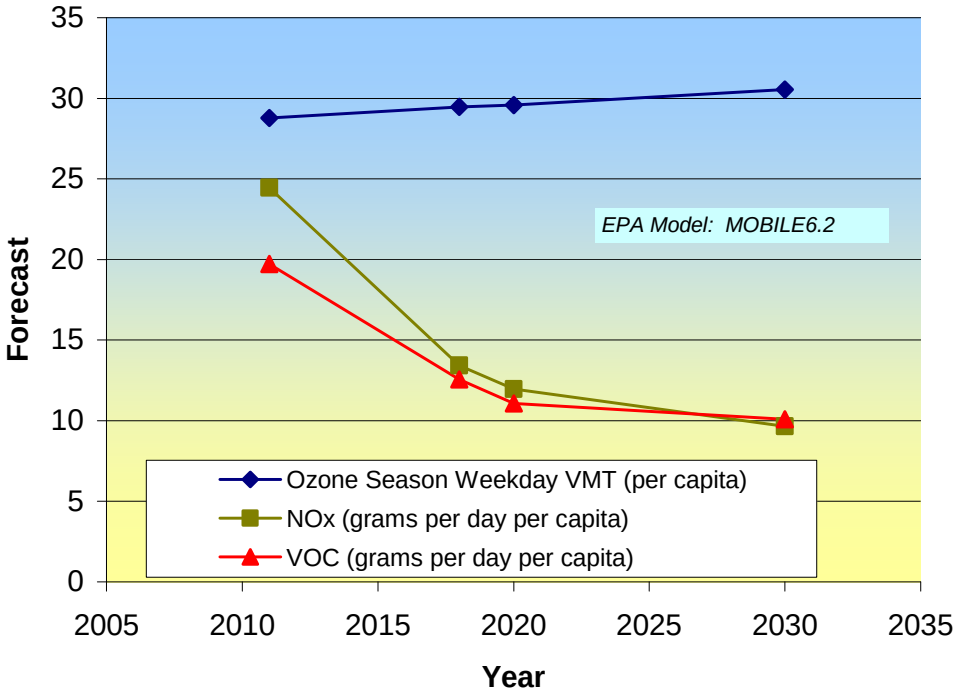
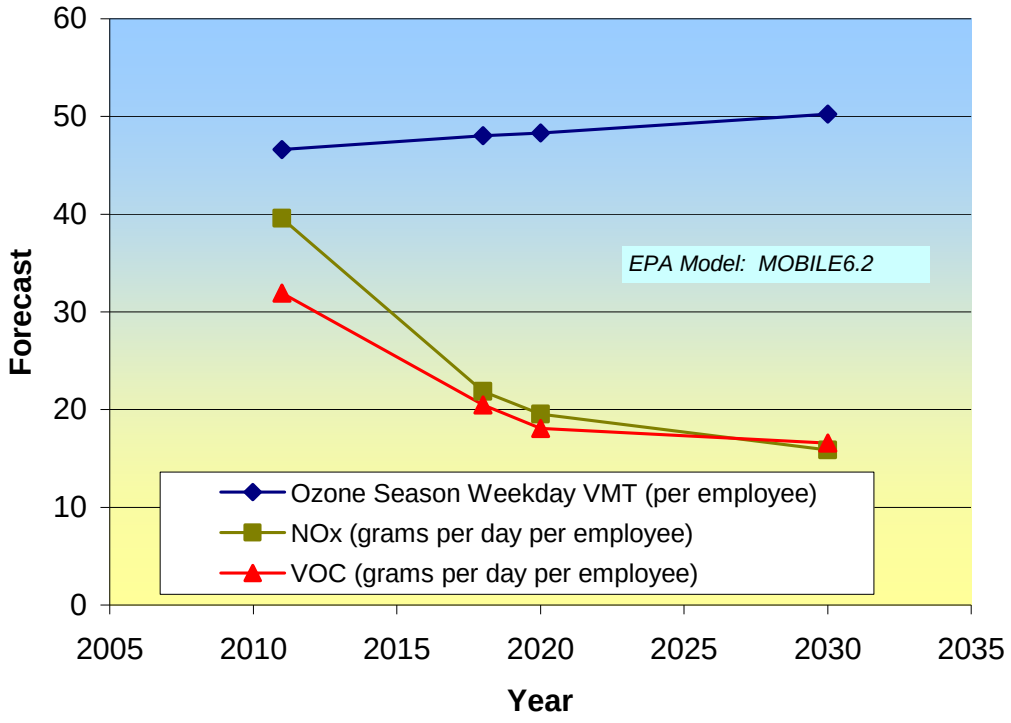


Exhibit 2-14(e): Regional Trends in Emissions per Employee



3. Consultation

Federal, state and local requirements for consultation apply for the development of transportation conformity analyses and determinations. This section documents both the applicable regulatory requirements and the consultation record for this analysis.

3.1 Regulatory Requirements

Regulatory requirements for consultation that were initially established at the federal level have been reflected in state regulations and requirements as well as locally-developed inter-agency and public consultation procedures. Exhibit 3-1 presents an overview of federal, state and local consultation requirements, which are reviewed in turn below.

3.1.1 Federal Requirements

While the federal transportation conformity rule includes specific requirements for consultation in Section 93.105, those requirements were made subject in Section 93.112 of the same rule to the establishment and approval by EPA of corresponding state requirements, as follows:

> *"§93.112 Criteria and procedures: Consultation. Conformity must be determined according to the consultation procedures in this subpart and in the applicable implementation plan, and according to the public involvement procedures established in compliance with 23 CFR part 450. Until the implementation plan revision required by §51.390 of this chapter is fully approved by EPA, the conformity determination must be made according to §93.105 (a)(2) and (e) and the requirements of 23 CFR part 450."*[91]

The referenced section, 93.105(a)(2), requires consultation with local, state and federal agencies, as follows:

> *"[§93.105 (a)(2)]: Before EPA approves the conformity implementation plan revision required by §51.390 of this chapter, MPOs and State departments of transportation must provide reasonable opportunity for consultation with State air agencies, local air quality and transportation agencies, DOT, and EPA, including consultation on the issues described in paragraph (c)(1) of this section, before making conformity determinations."*

The referenced paragraphs [(c)(1)] state:

> *"(c) Interagency consultation procedures: Specific processes. Interagency consultation procedures shall also include the following specific processes: (1) A process involving the MPO, State and local air quality planning agencies, State and local transportation agencies, EPA, and DOT for the following:…"*

[91] See Federal Conformity Rule, 40 CFR 93.112 *Criteria and Procedures: Consultation* http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.112.htm

Exhibit 3-1: Federal, State and Local Consultation Requirements Relating to Transportation Conformity

DATE	REQUIREMENT
PENDING	
Update to Inter-Agency Consultation Procedures for Transportation Conformity	
	Update for the existing (2005) Hampton Roads Conformity Consultation Procedures, both to reflect the new Virginia Conformity SIP *(Regulation for Transportation Conformity* , 9 VAC 5-151) and to streamline and update existing processes as appropriate.
CURRENTLY APPLICABLE OR APPROVED	
Federal	***Legislation & Regulations***
US EPA Regulation for Transportation Conformity (40 CFR Parts 51 and 93). *Key requirements for consultation are addressed in Sections 51.390, 93.105, and 93.112.*	
March 24, 2010	*Transportation Conformity Regulations Updated March 2010* issued by EPA. This is the most current compilation by EPA of the Federal Transportation Conformity Rule (40 CFR Parts 51 and 93). It reflects all amendments made since the initial issuance by EPA of the rule in 1993 through March 24, 2010, including revisions promulgated pursuant to SAFETEA-LU in 2005.
US DOT Planning Assistance and Standards (23 CFR Part 450)(Transportation Planning & Programming Requirements). *Key requirements for consultation are addressed in Section 450.316 Interested parties, participation, and consultation.*	
February 14, 2007	US DOT, Federal Highway Administration, 23 CFR Parts 450 and 500, Federal Transit Administration, 49 CFR Part 613 [Docket No. FHWA–2005–22986] RIN 2125–AF09; FTA RIN 2132–AA82, *Statewide Transportation Planning; Metropolitan Transportation Planning* , Final Rule. Most recent major update to the federal planning regulations.
Legislation - Clean Air Act as amended, and subsequent SAFETEA-LU amendments.	
August 10, 2005	Federal Reauthorization (*Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users,* or *SAFETEA-LU* , Public Law 109-59), which addressed in part conformity.
November 15, 1990	Last set of major amendments to the *Clean Air Act* , although there have been minor amendments since. Conformity is addressed in Section 176(c).
State	***Federally-Required State Regulation for Transportation Conformity (9 VAC 5-151)***
January 19, 2010	Effective date for the new Virginia *Regulation for Transportation Conformity* (9 VAC 5-151) approved 11/20/09 by EPA via Federal Register notice. See US EPA, 74 FR 60194, 40 CFR Part 52, [EPA-R03-OAR-2009-0674; FRL-8983-1], "*Approval and Promulgation of Air Quality Implementation Plans; Virginia; Transportation Conformity Regulations* ", Direct Final Rule, November 20, 2009. The regulation was approved as submitted on March 23, 2009.
March 23, 2009	Submittal the Virginia *Regulation for Transportation Conformity* (9 VAC 5-151) by the VDEQ to the US EPA for approval in response to federal conformity rule requirements at 40 CFR Part 51. By the federal rule, the requirements of the new state regulation generally govern over the pre-existing federal requirements for consultation for conformity purposes (where they overlap, and as long as they are no less stringent).
Local	***Consultation Procedures***
Public Participation Plan	
December 16, 2009	MPO (HRTPO) approval of the *Hampton Roads Transportation Planning Organization Public Participation Plan* dated December 2009. This document responds to public and consultation stakeholder requirements specified in 23 CFR Part 450.
Inter-Agency Consultation Procedures for Transportation Conformity	
September 21, 2005	MPO (HRTPO) approval of (Inter-Agency) *Consultation Procedures for the Hampton Roads Ozone Nonattainment Area in Support of the Transportation Conformity Regulations (Revised July 18, 2005).* This revision updated the initial version approved in July 2001. These procedures were developed in response to requirements of the federal conformity rule at 40 CFR 93.105.

The specific processes identified in the remainder of 93.105(c)(1) are lengthy but include, in general terms: the emission model(s) to be applied in regional (and project-level) conformity analyses as well as associated methods and assumptions, the identification of regionally significant projects, the treatment of exempt projects, TCMs, and other related items.

Federal Requirements for a State Regulation for Transportation Conformity

Section 51.390 of the federal transportation conformity rule effectively requires the development of a state regulation to govern conformity consultation processes and further provides that the state regulation once approved by EPA effectively governs (over the federal) where they overlap. Therefore, for example, the specific items listed in 93.105(c)(1) as referenced above are to be made enforceable in a corresponding state regulation.

Specifically, Section 51.390 provides in part that the federal requirements apply "until such time" as a requisite state regulation for transportation conformity is approved by EPA as part of a state implementation plan revision, as follows:

> *"§51.390 Implementation plan revision. (a) Purpose and applicability. The federal conformity rules under part 93, subpart A, of this chapter, in addition to any existing applicable state requirements, establish the conformity criteria and procedures necessary to meet the requirements of Clean Air Act section 176(c) until such time as EPA approves the conformity implementation plan revision required by this subpart…"*

The revision to the SIP for the transportation conformity regulation is also commonly referred to as the "Conformity SIP". Section 51.390 then requires that specific sections of the federal transportation conformity rule (including consultation requirements in Section 93.105)[92] must be addressed in a state conformity regulation, as follows:

> *"(b) Conformity implementation plan content. To satisfy the requirements of Clean Air Act section 176(c)(4)(E), the implementation plan revision required by this section must include the following three requirements of part 93, subpart A, of this chapter: §§93.105, 93.122(a)(4)(ii), and 93.125(c)..."*

Finally, Section 51.309 of the federal transportation conformity rule concludes that conformity determinations will be "governed" (where they overlap) by the federally-required state regulation or conformity SIP once it is approved, as follows:

> *"(c) Timing and approval... Following EPA approval of the state conformity provisions (or a portion thereof) in a revision to the state's conformity implementation plan, conformity determinations will be governed by the approved (or approved portion of the) state criteria and procedures as well as any applicable portions of the federal conformity rules that are not addressed by the approved conformity SIP."*

[92] Paragraphs 40 CFR 93.122(a)(4)(ii), and 93.125(c) respectively address commitments needed if any to emission reduction credits taken for control measures in the emissions analysis and any mitigation measures specified in the SIP.

3.1.2 Commonwealth of Virginia Requirements

Requirements in the federal conformity rule at 40 CFR Part 51.390 that certain elements (primarily addressing consultation) of the federal rule be established in state conformity regulations were addressed with the Virginia *Regulation for Transportation Conformity* that was initially developed by the VDEQ in 1997[93]. This version was updated for consistency with EPA requirements in 2007, and amended in 2008. The current version, specified in the Virginia Administrative Code (VAC) at 9 VAC 5-151[94], was approved by EPA via Federal Register notice on November 20, 2009 (effective January 19, 2010)[95].

General requirements for consultation are specified in Subsection 9 VAC 5-151-70 of the Virginia regulation. Subsection A[96] of this section requires that:

> *"The MPOs, LPOs, DEQ, VDOT and VDRPT shall undertake the procedures prescribed in this section for interagency consultation, conflict resolution and public consultation with each other and with local or regional offices of EPA, FHWA, and FTA on the development of control strategy implementation plan revisions, the list of TCMs in the applicable implementation plan, transportation plans, TIPs, and associated conformity determinations required by this chapter."*

Specific requirements in Virginia for inter-agency and public consultation are addressed in turn below.

3.1.2.1 Virginia Inter-Agency Consultation Requirements

Section 9 VAC 5-151-70 subsection C[97] of the Virginia regulation addresses inter-agency consultation. Subdivision C1 requires that:

> *C. The provisions of this subsection shall be followed with regard to general factors associated with interagency consultation.*
>
> *1. Representatives of the MPOs, VDOT, VDRPT, FHWA, and FTA shall undertake an interagency consultation process, in accordance with subdivisions 1 and 3 of this subsection and subsection D of this section, with the LPOs, DEQ and EPA on the development of implementation plans, transportation plans, TIPs, any revisions to the preceding documents, and associated conformity determinations.*"

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93 Specified in the Virginia Administrative Code (VAC) at 9 VAC 5-150. See: http://www.deq.virginia.gov/air/regulations/air150.html.

94 Virginia *Regulation for Transportation Conformity* (9 VAC 5-151): http://www.deq.virginia.gov/air/regulations/air151.html.

95 The state regulation as referenced above was approved by EPA via Federal Register notice effective January 19, 2010. US EPA, 74 FR 60194, 40 CFR Part 52, [EPA-R03-OAR-2009-0674; FRL-8983-1], *Approval and Promulgation of Air Quality Implementation Plans; Virginia; Transportation Conformity Regulations*, Direct Final Rule, November 20, 2009, effective January 19, 2010. See: http://edocket.access.gpo.gov/2009/E9-27814.htm

96 Corresponding to 40 CFR 93.105(a) of the federal rule.

97 Corresponding to 40 CFR 93.105(a)(2) of the federal rule. Subsection 9 VAC 5-151-70B, which also refers to inter-agency consultation, was applicable prior to the approval by EPA of the Virginia regulation. This subsection requires that: "*Until EPA grants approval of this chapter, the MPOs, and VDOT and VDRPT, prior to making conformity determinations, shall provide reasonable opportunity for consultation with LPOs, DEQ and EPA on the issues in subdivision D 1 of this section.*"

The referenced subsection D includes the following requirements under subdivision D1:

> "*D. The provisions of this subsection shall be followed with regard to specific processes associated with interagency consultation.*
>
> *1. An interagency consultation process involving the MPOs, LPOs, DEQ, VDOT, VDRPT, EPA, FHWA, and FTA shall be undertaken for the following:*
> *a. Evaluating and choosing each model (or models) and associated methods and assumptions to be used in hot-spot analyses and regional emission analyses, including vehicle miles traveled (VMT) forecasting, to be initiated by VDOT, in consultation with the MPOs, and conducted in accordance with subdivisions C 1 and 3 of this section.*
> *b. Determining which transportation projects should be considered "regionally significant" for the purpose of regional emission analysis (in addition to those functionally classified as principal arterial or higher; or fixed guideway systems or extensions that offer an alternative to regional highway travel), and which projects should be considered to have a significant change in design concept and scope from the transportation plan or TIP, to be initiated by VDOT, in consultation with the MPOs, and conducted in accordance with subdivisions C 1 and 3 of this section.*
> *c. Evaluating whether projects otherwise exempted from meeting the requirements of 40 CFR 93.126 and 40 CFR 93.127 should be treated as non-exempt in cases where potential adverse emissions impacts may exist for any reason, to be initiated by VDOT, in consultation with the MPOs, and conducted in accordance with subdivisions C 1 and 3 of this section.*
> *d. Making a determination, as required by 40 CFR 93.113(c)(1), whether past obstacles to implementation of TCMs that are behind the schedule established in the applicable implementation plan have been identified and are being overcome, and whether state and local agencies with influence over approvals or funding for TCMs are giving maximum priority to approval or funding for TCMs, to be initiated by VDOT as lead agency, in consultation with the MPOs and VDRPT, and conducted in accordance with subdivisions C 1 and 3 of this section. This consultation process shall also consider whether delays in TCM implementation necessitate revisions to the applicable implementation plan to remove TCMs or substitute TCMs or other emission reduction measures.*
> *e. Notifying all parties to the consultation process of transportation plan or TIP amendments which merely add or delete exempt projects listed in 40 CFR 93.126 or 40 CFR 93.127, to be initiated by VDOT in consultation with the MPOs, and conducted in accordance with subdivisions C 1 and 3 of this section.*
> *f. Choosing conformity tests and methodologies for isolated rural nonattainment and maintenance areas, as required by 40 CFR 93.109(l)(2)(iii), to be initiated by VDOT, in consultation with the MPOs, and in accordance with subdivisions C 1 and 3 of this section.*
> *g. Determining what forecast of vehicle miles traveled (VMT) to use in establishing or tracking emissions budgets, developing transportation plans, TIPs, of control strategy implementation plan revisions, or making conformity determinations, to be initiated by VDOT, in consultation with the MPOs, and in accordance with subdivisions C 1 and 3 of this section.*"

Other subdivisions of subsection D address respectively (paraphrasing) consultation requirements for events that trigger new conformity determinations and for emissions analyses for transportation activities that cross MPO borders or nonattainment areas (D2), for locations where the planning area does not include the entire nonattainment or maintenance area (D3), for the disclosure of regionally significant projects that are not

FHWA or FTA projects (D4), for assumptions for location, design concept and scope for projects identified in D4 but for which decisions have not yet been made on these elements (D5), and for the design, scheduling and funding of research and data collection and model development efforts for regional transportation (D6).

Subdivision C2 addresses consultation requirements for air agencies ("*LPOs, DEQ, and EPA*") in "*control strategy implementation plan revisions, the list of TCMs in the applicable implementation plan, and any revisions to the preceding documents.*" It does not address consultation requirements for conformity directly.

Subdivision C3 addresses the "*specific roles and responsibilities of various participants in the interagency consultation process.*" Note roles and responsibilities for transportation, air quality and related conformity planning activities for the Hampton Roads region specifically, in consideration of applicable federal and state requirements, are addressed in the *Metropolitan Planning Agreement for the Hampton Roads Area* that was executed on July 15, 2009 between VDOT, VDEQ, the HRTPO, the LPO and other parties.

3.1.2.2 Virginia Public Consultation Requirements

Section 9 VAC 5-151-70 subsection F[98] of the Virginia *Regulation for Transportation Conformity* includes the following requirements for public consultation:

> *"F. The provisions of this subsection shall be followed with regard to public consultation.*
>
> *1. The MPOs shall establish a proactive involvement process which provides reasonable opportunity for review and comment by, at a minimum, providing reasonable public access to technical and policy information considered by the MPO at the beginning of the public comment period and prior to taking formal action on a conformity determination for all transportation plans and TIPs, consistent with the requirements of 23 CFR 450.316(a).*
> *2. The MPOs shall specifically address in writing public comments regarding plans for a regionally significant project, not receiving FHWA or FTA funding or approval, and how the project is properly reflected in the emission analysis supporting a proposed conformity finding for a transportation plan or TIP.*
> *3. The MPOs shall also provide an opportunity for public involvement in conformity determinations for projects where otherwise required by law."*

The referenced requirements from the federal transportation planning rule at 23 CFR 450.316(a) are lengthy but include the following general introduction:

> "*§450.316 Interested parties, participation, and consultation. (a) The MPO shall develop and use a documented participation plan that defines a process for providing citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with reasonable opportunities to be involved in the metropolitan transportation planning process….*"

[98] Corresponding to 40 CFR 93.105(e) of the federal rule.

Additionally, for reference, requirements of the *Virginia Freedom of Information Act*[99] and the *Virginia Public Records Ac*[100]*t* also apply.

3.1.3 Local Requirements

In response to the applicable federal and Virginia conformity requirements summarized above, procedures have been established for Hampton Roads for both inter-agency and public consultation. These local procedures are reviewed in turn below.

3.1.3.1 Hampton Roads Inter-Agency Conformity Consultation Procedures

Inter-agency conformity consultation procedures were initially adopted by the MPO in 2001 and updated in 2005[101]. As these procedures reflect the federal regulations in force at the time of adoption, a review and update is being planned to reflect the specific language and requirements of the recently approved Virginia *Regulation for Transportation Conformity*.

In general, the Hampton Roads consultation procedures address the establishment and operation of an inter-agency consultation group (ICG). Membership in the ICG as specified in the Hampton Roads procedures includes representatives of each of the federal, state and local transportation and air agencies required by regulation. More specifically, ICG membership includes representatives of the HRTPO, HRTPO member agencies, VDOT, VDRPT, VDEQ, EPA, FHWA and FTA are represented at ICG meetings.

Although not specifically identified in the current (2005) ICG procedures, but consistent with the new Virginia *Regulation for Transportation Conformity*, a representative of the designated Lead Planning Organization (LPO) for the region is also invited to participate in inter-agency consultation on conformity issues. The LPO for this area is the Hampton Roads Air Quality Committee (HRAQC).

In keeping with the applicable regulatory requirements and approved Hampton Roads conformity consultation procedures, ICG meetings are held to initiate conformity analyses for amendments, revisions and/or updates to the LRTP and/or TIP as appropriate, with consensus sought on the following topics:

- ICG Membership updates,
- Latest emission model(s) selected for the conformity analysis, and associated methods and assumptions for the analysis,
- Regionally significant projects (list of LRTP and TIP project lists to be included in the network modeling for the conformity analysis), and
- Schedule for the conformity analysis.

The review of methods and assumptions covers a broad area and typically addresses the following key items:

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99 §2.2 Chapter 37 of the Code of Virginia. See: http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+TOC02020000037000000000000.

100 §42.1 Chapter 7 of the Code of Virginia. See: http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+TOC42010000007000000000000

101 VDOT, *Consultation Procedures for the Hampton Roads Ozone Nonattainment Area in Support of the Transportation Conformity Regulations*, Revised July 18, 2005. A copy is available at: http://www.hrtpo.org/Documents/Reports/Rev_HR_ICP2005.pdf

- Latest planning assumptions including socioeconomic data and forecasts to be employed in travel demand modeling for the conformity analysis,
- Transportation modeling approach, including the treatment of network and off-network travel, as well as the treatment of travel outside of the planning area but within the (larger) maintenance area,
- Emission modeling approach, including an overview of the inputs to the model(s) selected for the analysis,
- Emission test(s) to be applied (i.e., applicable budgets as specified in the Maintenance Plan, and years to be tested), and
- Key criteria for the conformity determination, based on the table provided in 40 CFR 93.109 of the federal conformity rule but also including fiscal constraint specified at 40 CFR 93.108 as effectively a pre-requisite for the conformity analysis (which does not include any financial analyses or otherwise address fiscal constraint).

Meeting notices and related correspondence are generally handled by email to the ICG with copies to all members of the Transportation Technical Advisory Committee (TTAC) as well as other interested parties[102]. Public notices (reviewed in the next section) are handled by the HRTPO and are typically posted on the Hampton Roads website and also provided to the media or designated outlets for media releases.

In addition to ICG meetings, inter-agency consultation also occurs through other HRTPO meetings including:

- Regularly scheduled HRTPO Board meetings,
- Regularly scheduled TTAC meetings, and
- Other meetings convened by the HRTPO, VDOT and/or VDEQ at which Hampton Roads issues relating to conformity may be one of several topics discussed.

Pending Update to ICG Consultation Procedures

The recent approval by EPA of the *Virginia Regulation for Transportation Conformity* will involve updates to currently established consultation procedures. However, since the consultation requirements specified in the new Virginia regulation generally mirror those in the existing federal regulation, the updates are expected to be largely editorial in nature and not involve significant changes to established consultation processes.

For Hampton Roads, an update to existing consultation procedures is in the planning states. The update is planned to not only reflect changes as appropriate to the applicable regulations for the new Virginia regulation but also to provide the ICG an opportunity to update and streamline existing consultation processes.

3.1.3.2 Hampton Roads Public Participation Plan (PPP)

In December 2009, the HRTPO approved a new "*Public Participation Plan*" (PPP)[103]. The PPP responds to SAFETEA-LU requirements as implemented with the revised planning regulations at 23 CFR Part 450.316, and serves to guide consultation

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[102] Although not a requirement, many HRTPO member agencies are represented on the ICG by one of their TTAC representatives. ICG meetings are usually coordinated with TTAC meetings for convenience both in terms of meeting logistics and also for the TTAC to take action as needed (e.g. for changes to the project lists) as the need may occasionally arise following the ICG meeting, and to help ensure a quorum.

[103] Hampton Roads TPO, *Public Participation Plan*, December 2009: http://www.hrtpo.org/Documents/Reports/HRTPO%20PPP%20-%20December%202009%20(Final).pdf

conducted in support of the development and approval of the amendments, revisions and updates to the LRTP and TIP. Additionally, the processes provided in the PPP were designed to coordinate as appropriate with conformity consultation processes.

Goals and objectives are specified in the PPP as follows[104]:

> *"HRTPO public involvement and community outreach goals:*
> - *Inform Hampton Roads residents and other interested parties about the regional transportation planning and programming process and issues related to transportation.*
> - *Increase awareness of the agency's purpose and function.*
> - *Engage Hampton Roads residents and interested parties in an open dialogue about their transportation priorities and regional planning and programming issues through meaningful public involvement opportunities.*
>
> *HRTPO public involvement and community outreach objectives:*
> - *Provide broad-based access to HRTPO activities, plans, and programs.*
> - *Develop and disseminate information about the transportation planning and programming process through multiple media, with clear, non-technical language.*
> - *Seek to engage all interested parties, including minority, low-income, disabled, and elderly persons in meaningful exchange of ideas related to the transportation planning and programming process.*
> - *Establish working relationships with partner and peer organizations in the region for the purpose of information exchange and regional dialogue."*

Overall, following the procedures specified in the PPP, MPOs are the lead agencies when developing planning work programs, LRTPs, TIPs and any revisions to the preceding documents, and associated conformity determinations. From the PPP, the HRTPO, in conjunction with VDOT as appropriate, conducts consultation in compliance with federal planning requirements to include the follow key features:

- Provide adequate public notice of public participation activities and time for public review and comment at key decision points, including but not limited to a reasonable opportunity to comment on the proposed LRTP and TIP.
- Provide timely notice and reasonable access to information about transportation issues and processes.
- Employ visualization techniques to describe the LRTP and TIP.
- Make public information (technical information and meeting notices) available in electronically accessible formats and means, such as the World Wide Web.
- Hold any public meetings at convenient and accessible locations and times.
- Demonstrate explicit consideration and response to public input received during the development of the LRTP and TIP.
- Seek out and consider the needs of those traditionally underserved by the existing transportation systems, such as low-income and minority households, who may face challenges accessing employment and other services.
- Provide an additional opportunity for public comment if the final LRTP or TIP differs significantly from the version that was made available for public comment by the MPO and raises new material issues which interested parties could not reasonably have foreseen from the public involvement efforts.
- Coordinate with the statewide transportation planning public involvement and

[104] *Ibid*, p.1

consultation processes.
- Periodically review the effectiveness of the procedures and strategies contained in the participation plan to ensure a full and open participation process.

Public consultation relating to air quality conformity analyses is addressed as follows[105]:

"Air Quality Conformity Analysis (Conformity)

- *Conformity means a Clean Air Act (CAA) requirement that ensures that federal funding and approval are given to transportation plans, programs and projects that are consistent with the air quality goals established by a State Implementation Plan (SIP). Air Quality Conformity, to the purpose of the SIP, means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the air quality standards.*

- *Details on the conformity analysis procedures, including the required interagency consultation, are detailed in a separate document developed and updated periodically by the Interagency Consultation Group (ICG), made up of representatives from VDOT, DRPT, HRTPO, FHWA, FTA, EPA and the Virginia Department of Environmental Quality. The current version is entitled "Consultation Procedures for the Hampton Roads Ozone Nonattainment Area In Support of the Transportation Conformity Regulations, Revised July 18, 2005." This document is made available on the HRTPO website.*

  Generally, before the regional conformity analysis process as defined in the ICG Consultation Procedures document begins, the list of applicable projects from the LRTP and TIP are posted on the website to allow for public access and review. A public notice is published on the HRTPO website and distributed to HRTPO committees and interested parties through electronic mailing list to solicit comments from all interested parties on the project lists to be used in the conformity analysis. The project list comment period is typically 14 days and may overlap with the initiation of the conformity analysis process.

  Once the draft regional conformity analysis has been completed, then following the process defined in the ICG Consultation Procedures, the draft report is posted on the HRTPO website to facilitate public access and review. A press release is sent to regional news providers and distributed to HRTPO committees and interested parties to solicit comments. The public review and comment period is typically not less than 14 days or as otherwise defined in the ICG Consultation Procedures document. Comments received are summarized and considered as the final RCA [regional conformity analysis] is developed, with responses as appropriate included with the LRTP, TIP, and/or RCA."

[105] *Ibid*, p.11

3.2 Consultation Record

This section documents the specific consultation activities conducted in support of the development of this conformity analysis. Included in this summary are both inter-agency and public consultation activities.

All consultation was conducted to satisfy the applicable requirements of both the federal regulation and the new Virginia *Regulation for Transportation Conformity.* For example, requirements specified in the new Virginia regulation regarding parties to be consulted (to specifically include the LPO) and matters for consultation (to specifically include VMT forecasts), neither of which were listed requirements of the federal regulation at 40 CFR 93.105, were both satisfied for this analysis. Additional specifics on the consultation conducted for this analysis are provided with the consultation record presented below and in Appendix D.

Interagency and public consultation opportunities relating to this conformity analysis, including the prior development of project lists, were (*or will be*) provided at the following meetings and events:

- November 17, 2010: HRTPO approval of an amendment to the 2030 LRTP. HRTPO meetings are open to the public, with email announcements (including public notices) and agendas posted the week before the meeting.

- December 1, 2010: ICG meeting, marking the beginning of the conformity analysis process. This meeting provided an opportunity for detailed review and comment on all aspects of the proposed analysis, including models, associated methods and assumptions, project lists for the Plan and TIP (including changes), and overall schedule.

  Exhibit 3-2 lists current members of the Hampton Roads ICG. Membership includes all parties identified in the both the federal and state conformity regulations and is consistent with the requirements given in the 2005 Conformity Consultation Procedures for Hampton Roads.

  ICG meeting notices were distributed by email and also posted on the HRTPO web site. The email distribution list included representatives of all of the agencies listed in the Exhibit for the ICG, which includes members of the TTAC, as well as the staff representative for the HRAQC (LPO).

  Comments received from the ICG comments are documented in the minutes for the meeting, which are referenced below and copied in Appendix D. Comments were limited to minor updates to the project lists for modeling and to the proposed schedule for the conformity analysis.

  Public comment was also sought at or in conjunction with the ICG meeting and on the project lists for the conformity finalized at the ICG meeting. The ICG meeting was noted on the TTAC agenda for which the “HRTPO Weekly Update” public notice email was distributed the week before the meeting (on Friday, November 26, 2010). A public announcement for the meeting was posted on or by November 29, 2010 on the HRTPO website.

  An opportunity for public input was provided at the ICG meeting. No comments from the public were received at the meeting. One written comment from a member of the public was received one day in advance of the meeting and was distributed to

meeting participants (and is copied in Appendix D, which addresses consultation). No comments were received that would require a material change to the conformity analysis.

Exhibit 3-2: Hampton Roads Interagency Consultation Group (ICG)

Agency	*Staff*
City/County	
City of Chesapeake	Earl Sorey
City of Hampton	Lynn Allsbrook
City of Newport News	Michael King
City of Norfolk	Jeffrey Raliski
City of Poquoson	Deborah Vest
City of Portsmouth	Richard Hartman
City of Suffolk	Robert Lewis
City of Virginia Beach	Travis Campbell
City of Williamsburg	Reed Nester
Gloucester County	Anne Ducey-Ortiz
Isle of Wight County	Jane Hill
James City County	Steven Hicks
York County	Timothy Cross
Regional	
Hampton Roads Transportation Planning Organization	Andy Pickard
Hampton Roads Transit	Jayne Whitney
Williamsburg Area Transit Authority	Richard Drumwright
State	
Virginia Dept. of Environmental Quality	Sonya Lewis-Cheatham
Virginia Dept. of Rail & Public Transportation	Joseph Swartz
Virginia Dept. of Transportation – C/O Environmental	Jim Ponticello
Virginia Dept. of Transportation – C/O Planning	Jaesup Lee
Federal	
Environmental Protection Agency	Martin Kotsch
Federal Highway Administration	Marisel Lopez-Cruz
Federal Transit Administration	Tony Cho
Alternates / Other (non-voting)	
City of Suffolk *Alternate*	Sherry Earley
Other	Scott Mills
James City County	Allen Murphy
US Navy	Jennifer Tabor

** Listing as of November 23, 2010.*

Following the meeting, the project lists for the conformity analysis were posted on the HRTPO website for a fourteen-day public review period. A notice of the availability of the project lists for the conformity analysis was included in the regular "HRTPO Weekly Update" email issued December 8, 2010 by the HRTPO. The public comment period ended December 20, 2010. No comments were received or none that would require a material change to the conformity analysis.

The presentation given at the ICG meeting included a review of the membership list (including the involvement of the LPO in the consultation process), selection of the latest emission model for the analysis, modeling methodology and assumptions (including the selection of socioeconomic forecasts to meet latest planning assumption requirements), the project lists to be applied in the conformity analysis for the Plan and TIP, and the conformity analysis schedule. The presentation also addressed a planned future update to the ICG Consultation Procedures pursuant to the recent approval of the Virginia Regulation for Transportation Conformity.

Draft meeting minutes (including attachments and an updated ICG Membership list) were distributed for comment. No comments were received.

Copies of all materials distributed for the ICG Meeting are provided in Appendix D, with the exception of the project lists for the Plan and TIP which are presented separately (given their length) in Appendix E. Appendix D includes the meeting agenda, membership list, draft modeling methodology and assumptions (draft chapter of conformity analysis report), draft conformity analysis schedule, presentation (PowerPoint slides), and email/website notices. Comments received are also copied in this appendix. Additionally, email transmittals for both draft and final minutes are copied in this Appendix, with the final minutes attached.

- December 6-20, 2010: Fourteen-day public comment period on the project lists for the Amended 2030 LRTP and FY 2009-2012 TIP. The public review period was initiated following changes agreed at the ICG meeting and noted in the minutes. An announcement of the public review period on the project lists was provided to more than 4,000 email addresses, among them local and regional media and public information officers. No comments requiring a material change to the analysis were received.

- March 2, 2011: TTAC recommendation for approval of the draft Conformity Analysis and proposed finding of conformity for the amended 2030 LRTP and amended FY 2009-2012 TIP, subject to no adverse comments received during the associated public review period that would require their review. No comments requiring a material change to the draft analysis or proposed finding of conformity were received.

- February 23-March 9, 2011: Fourteen-day public review period on the draft Regional Conformity Analysis and its proposed finding of conformity. A public notice with links to copies of the draft Conformity Analysis and its Executive Summary were posted on the HRTPO website, links to which were provided in its regular weekly broadcast email. The public review period was also noted in the agendas for the TTAC and TPO meetings in March 2011. No comments requiring a material change to the draft analysis or proposed finding of conformity were received.

- March 17, 2011: HRTPO approval of the draft Conformity Analysis and finding of conformity for the amended 2030 LRTP and amended FY 2009-2012 TIP, both of which were determined to be fiscally-constrained by the HRTPO. No comments requiring a material change to the draft analysis or proposed finding of conformity were received.

4. Conformity Demonstration & Conclusion

As summarized in Exhibit 4-1, the Plan and Program meet all applicable federal and state conformity requirements and criteria[106]. The conformity analysis was conducted in compliance with the federal transportation conformity rule *(*40 CFR Parts 51 and 93*)*[107] and the corresponding state conformity regulation *(*9 VAC 5-151*)*[108].

Exhibit 4-1: Conformity Analysis Summary*

Section	Criteria	Demonstrated:
93.108	Fiscal constraint	Yes**
93.110	Latest planning assumptions	Yes
93.111	Latest emissions model	Yes
93.112	Consultation	Yes***
93.113(b) & (c)	TCMs	na****
93.118	Emissions Budget	Yes

* *As specified in 40 CFR 93.109, "Table 1 – Conformity Criteria", with the addition of fiscal constraint as required in Section 93.108. Additional requirements apply, e.g. as specified in 93.122, although not specifically listed above.*

** *As indicated by MPO (HRTPO) approval and/or provision of the project lists for the Plan and Program and the supporting information provided with those documents, and subject to federal review consistent with 23 CFR Part 450 as referenced in the conformity rule in Section 93.108.*

*** *Conducted to meet both state and federal requirements.*

**** *The applicable implementation (maintenance) plan (72 FR 30490, effective June 1, 2007) for Hampton Roads does not include transportation control measures (TCMs), which therefore are not required for the conformity analysis or determination.*

A recommendation for a finding of conformity is therefore made, conditional upon any further and separate review as may be required by the US Department of Transportation (US DOT) for the fiscal constraint criterion consistent with Section 93.108[109] of the federal conformity rule and the requirements of the federal planning rule specified at 23 CFR Part 450[110].

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106 Federal Conformity Rule, 40 CFR 93.109 (*Criteria*…). See "*Table 1 - Conformity Criteria*": http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.109.htm

107 Federal Transportation Conformity Regulations (EPA Website): http://www.epa.gov/otaq/stateresources/transconf/conf-regs.htm.

108 Virginia *Regulation for Transportation Conformity* (9 VAC5-151), effective January 19, 2010: http://leg1.state.va.us/000/reg/TOC09005.HTM#C0151

109 Federal Conformity Rule, 40 CFR 93.108 Fiscal Constraints for Transportation Plans and TIPs: http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.108.htm

110 US DOT - Federal Highway Administration (FHWA), 23 CFR Parts 450 and 500 and Federal Transit Administration (FTA), 49 CFR Part 613, *Statewide Transportation Planning; Metropolitan Transportation Planning,* Final Rule effective March 16, 2007. See: http://edocket.access.gpo.gov/2007/07-493.htm.

For reference, the FHWA also provides a compilation of transportation-related legislation, regulations and guidance on their website: http://www.fhwa.dot.gov/hep/legreg.htm.

APPENDICES

Appendix A: Socioeconomic Forecasts by Jurisdiction

2011	Population	Households	Autos	EMP
Chesapeake	231,462	83,061	179,899	126,046
Gloucester Co. (portion)	29,866	11,463	29,362	14,169
Hampton	153,794	57,267	116,576	84,940
Isle of Wight Co.	37,382	14,354	34,326	19,041
James City Co.	64,748	25,859	56,077	34,176
Newport News	195,861	76,145	148,575	129,158
Norfolk	236,055	86,651	154,033	231,998
Poquoson	14,035	5,095	13,357	2,561
Portsmouth	101,531	38,592	68,120	54,785
Suffolk	86,206	31,909	67,999	36,660
Virginia Beach	463,854	169,522	349,441	257,368
Williamsburg	13,134	4,088	11,584	25,658
York Co.	65,173	23,300	53,340	28,489
Total	**1,693,101**	**627,306**	**1,282,689**	**1,045,049**

2018	Population	Households	Autos	EMP
Chesapeake	251,995	91,439	200,205	140,030
Gloucester Co. (portion)	33,916	13,045	34,680	16,457
Hampton	158,474	59,414	128,412	86,211
Isle of Wight Co.	42,252	16,287	39,585	21,642
James City Co.	75,339	30,218	67,952	39,046
Newport News	205,862	80,255	161,849	136,640
Norfolk	237,093	86,921	160,382	234,393
Poquoson	15,606	5,686	15,471	2,610
Portsmouth	102,148	38,847	71,279	55,825
Suffolk	100,528	37,397	80,304	43,078
Virginia Beach	488,395	179,085	376,829	267,181
Williamsburg	13,858	4,388	12,621	26,815
York Co.	70,815	25,401	59,219	31,738
Total	**1,796,281**	**668,383**	**1,408,788**	**1,101,666**

2020	Population	Households	Autos	EMP
Chesapeake	257,856	93,836	206,001	144,015
Gloucester Co. (portion)	35,068	13,499	36,201	17,112
Hampton	159,810	60,031	131,797	86,581
Isle of Wight Co.	43,642	16,840	41,087	22,383
James City Co.	78,366	31,468	71,344	40,439
Newport News	208,714	81,426	165,642	138,795
Norfolk	237,400	86,997	162,206	235,085
Poquoson	16,056	5,856	16,077	2,625
Portsmouth	102,324	38,918	72,184	56,118
Suffolk	104,626	38,963	83,822	44,928
Virginia Beach	495,414	181,822	384,663	269,983
Williamsburg	14,067	4,474	12,920	27,142
York Co.	72,429	26,000	60,899	32,660
Total	**1,825,772**	**680,130**	**1,444,843**	**1,117,866**

2030	Population	Households	Autos	EMP
Chesapeake	287,200	105,800	235,000	164,000
Gloucester Co. (portion)	40,850	15,765	43,800	20,375
Hampton	166,500	63,100	148,700	88,400
Isle of Wight Co.	50,600	19,600	48,600	26,100
James City Co.	93,500	37,700	88,300	47,400
Newport News	223,000	87,300	184,600	149,500
Norfolk	238,900	87,400	171,300	238,500
Poquoson	18,300	6,700	19,100	2,700
Portsmouth	103,200	39,300	76,700	57,600
Suffolk	125,100	46,800	101,400	54,100
Virginia Beach	530,500	195,500	423,800	284,000
Williamsburg	15,100	4,900	14,400	28,800
York Co.	80,500	29,000	69,300	37,300
Total	**1,973,250**	**738,865**	**1,625,000**	**1,198,775**

2011 Summertime VMT and Average Speeds

Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	FC#	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed
Chesapeake											
Urban Interstate	11	311,089	56	365,547	56	655,143	56	503,667	56	1,835,443	56
Urban Freeways and	12	188,342	55	242,749	51	409,628	54	280,630	56	1,121,348	56
Urban Principal	14	164,648	46	225,898	43	403,625	44	249,625	47	1,043,795	47
Urban Minor Arterial	16	214,874	43	290,444	42	517,101	42	333,603	43	1,356,011	43
Urban Collector	17	62,842	20	87,504	20	132,096	20	86,093	20	368,531	20
Urban Local	19	180,824	13	234,351	13	338,243	13	234,162	13	987,572	13
TOTAL		1,122,619		1,446,493		2,455,837		1,687,780		6,712,699	
Gloucester											
Rural Principal Arterial	2	32,969	50	51,743	50	84,738	50	69,922	50	239,372	50
Rural Minor Arterial	6	29,142	52	38,160	52	58,690	52	41,598	52	167,590	52
Rural Major Collector	7	31,537	35	40,078	35	60,551	35	35,737	35	167,903	35
Rural Minor Collector	8	5,688	37	8,392	37	10,627	37	8,003	37	32,710	37
Rural Local	9	10,813	25	17,826	25	21,875	25	21,879	25	72,394	25
Urban Freeways and	12	22,001	55	28,356	55	47,849	55	32,781	55	130,987	55
Urban Principal	14	48,071	51	65,954	49	117,843	50	72,881	51	304,749	51
Urban Collector	17	10,828	27	15,077	27	22,761	27	14,834	27	63,500	27
Urban Local	19	4,018	13	5,207	13	7,516	13	5,203	13	21,943	13
TOTAL		195,067		270,794		432,450		302,838		1,201,148	
Hampton											
Urban Interstate	11	367,529	47	431,866	35	774,003	44	595,046	55	2,168,439	55
Urban Freeways and	12	24,848	51	32,027	50	54,043	50	37,024	51	147,942	51
Urban Principal	14	50,982	42	69,948	42	124,979	42	77,294	42	323,203	42
Urban Minor Arterial	16	169,445	40	229,039	39	407,776	39	263,073	40	1,069,324	40
Urban Collector	17	49,740	26	69,260	26	104,555	26	68,143	26	291,694	26
Urban Local	19	157,429	13	204,030	13	294,480	13	203,865	13	859,796	13
TOTAL		819,972		1,036,168		1,759,836		1,244,445		4,860,398	
Isle of Wight											
Rural Principal Arterial	2	84,695	54	132,925	54	217,687	54	179,626	54	614,936	54
Rural Minor Arterial	6	105,618	47	138,301	46	212,706	47	150,760	47	607,384	47

2011 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	**FC#**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**
Rural Major Collector	7	19,028	38	24,181	38	36,533	38	21,562	38	101,304	38
Rural Minor Collector	8	2,754	43	4,063	43	5,145	43	3,874	43	15,835	43
Rural Local	9	22,129	25	36,480	25	44,766	25	44,774	25	148,149	25
Urban Collector	17	15,211	38	21,181	38	31,975	38	20,840	38	89,206	38
Urban Local	19	14,733	13	19,095	13	27,560	13	19,079	13	80,466	13
TOTAL		264,169		376,226		576,372		440,516		1,657,281	
James City											
Rural Minor Arterial	6	32,875	47	43,048	47	66,207	47	46,925	47	189,054	47
Rural Major Collector	7	20,988	37	26,672	37	40,296	37	23,782	37	111,737	37
Rural Minor Collector	8	3,345	35	4,935	35	6,249	35	4,706	35	19,236	35
Rural Local	9	15,223	25	25,095	25	30,795	25	30,801	25	101,913	25
Urban Interstate	11	207,982	52	244,390	44	438,002	50	336,732	58	1,227,102	58
Urban Freeways and	12	38,344	53	49,421	52	83,395	53	57,133	53	228,293	53
Urban Principal	14	33,725	50	46,271	50	82,675	50	51,131	50	213,803	50
Urban Minor Arterial	16	26,836	45	36,274	44	64,581	44	41,664	45	169,353	45
Urban Collector	17	14,436	35	20,101	35	30,345	35	19,777	35	84,659	35
Urban Local	19	11,240	13	14,567	13	21,025	13	14,555	13	61,386	13
TOTAL		404,992		510,773		863,571		627,207		2,406,536	
Newport News											
Urban Interstate	11	442,504	37	519,967	23	931,899	33	716,435	56	2,610,800	54
Urban Freeways and	12	5,873	46	7,570	46	12,774	46	8,751	46	34,968	46
Urban Principal	14	197,374	44	270,798	42	483,849	44	299,240	45	1,251,259	45
Urban Minor Arterial	16	181,772	39	245,701	36	437,441	38	282,211	40	1,147,116	40
Urban Collector	17	62,778	18	87,415	18	131,962	18	86,005	18	368,157	18
Urban Local	19	128,442	13	166,463	13	240,259	13	166,328	13	701,487	13
TOTAL		1,018,744		1,297,913		2,238,185		1,558,971		6,113,787	
Norfolk											
Urban Interstate	11	571,831	52	671,933	46	1,204,256	51	925,820	55	3,373,833	55
Urban Freeways and	12	5,863	52	7,556	32	12,751	49	8,735	55	34,904	55
Urban Principal	14	286,292	41	392,794	40	701,828	41	434,051	41	1,814,963	41

2011 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	FC#	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed
Urban Minor Arterial	16	173,180	38	234,087	37	416,764	38	268,872	38	1,092,893	38
Urban Collector	17	40,897	12	56,947	12	85,968	12	56,029	12	239,838	12
Urban Local	19	78,890	13	102,243	13	147,569	13	102,160	13	430,860	13
TOTAL		1,156,953		1,465,560		2,569,136		1,795,667		6,987,292	
Poquoson											
Urban Minor Arterial	16	11,924	44	16,118	41	28,696	43	18,513	44	75,251	44
Urban Collector	17	10,273	35	14,305	35	21,594	35	14,074	35	60,245	35
Urban Local	19	10,197	13	13,215	13	19,073	13	13,204	13	55,689	13
TOTAL		32,394		43,638		69,364		45,791		191,185	
Portsmouth											
Urban Interstate	11	67,558	54	79,385	52	142,275	53	109,380	55	398,597	55
Urban Freeways and	12	78,326	55	100,952	54	170,352	55	116,706	56	466,335	56
Urban Principal	14	41,137	43	56,440	43	100,845	43	62,368	43	260,790	43
Urban Minor Arterial	16	65,257	39	88,208	39	157,044	39	101,316	39	411,822	39
Urban Collector	17	27,931	23	38,892	23	58,712	23	38,265	23	163,798	23
Urban Local	19	48,809	13	63,257	13	91,300	13	63,206	13	266,569	13
TOTAL		329,018		427,134		720,528		491,240		1,967,911	
Suffolk											
Rural Principal Arterial	2	80,673	51	126,612	51	207,350	51	171,097	51	585,735	51
Rural Minor Arterial	6	14,566	47	19,074	47	29,335	47	20,792	47	83,767	47
Rural Major Collector	7	2,000	41	2,541	41	3,840	41	2,266	41	10,647	41
Rural Minor Collector	8	0		0		0		0		0	
Rural Local	9	320	25	528	25	647	25	648	25	2,142	25
Urban Interstate	11	80,178	58	94,213	57	168,852	58	129,811	58	473,053	58
Urban Freeways and	12	124,100	55	159,950	54	269,909	55	184,910	56	738,869	56
Urban Principal	14	115,260	50	158,138	50	282,554	50	174,747	50	730,698	50
Urban Minor Arterial	16	106,583	45	144,067	41	256,495	43	165,475	46	672,615	46
Urban Collector	17	15,745	28	21,924	28	33,097	28	21,571	28	92,336	28
Urban Local	19	63,942	13	82,870	13	119,607	13	82,803	13	349,219	13

2011 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	FC#	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed
TOTAL		603,367		809,918		1,371,685		954,120		3,739,081	
Virginia Beach											
Urban Interstate	11	398,791	53	468,601	48	839,840	52	645,661	55	2,352,888	55
Urban Freeways and	12	43,700	55	56,324	55	95,045	55	65,114	55	260,183	55
Urban Principal	14	219,809	42	301,578	41	538,847	41	333,254	42	1,393,487	42
Urban Minor Arterial	16	568,245	40	768,095	38	1,367,502	39	882,232	41	3,586,045	40
Urban Collector	17	184,783	35	257,300	35	388,420	35	253,150	35	1,083,641	35
Urban Local	19	192,558	13	249,558	13	360,192	13	249,357	13	1,051,657	13
TOTAL		1,607,886		2,101,457		3,589,847		2,428,768		9,727,901	
Williamsburg											
Urban Freeways and	12	1,809	42	2,331	42	3,934	42	2,695	42	10,769	42
Urban Principal	14	18,701	46	25,659	43	45,846	44	28,354	46	118,559	46
Urban Minor Arterial	16	20,310	39	27,453	39	48,877	39	31,533	39	128,173	39
Urban Collector	17	5,200	25	7,241	25	10,931	25	7,124	25	30,497	25
Urban Local	19	9,103	13	11,798	13	17,028	13	11,788	13	49,717	13
TOTAL		55,124		74,482		126,616		81,494		337,715	
York											
Rural Minor Arterial	6	3,985	47	5,218	47	8,025	47	5,688	47	22,916	47
Rural Major Collector	7	7,671	32	9,749	32	14,728	32	8,693	32	40,841	32
Rural Local	9	5,876	25	9,687	25	11,887	25	11,889	25	39,339	25
Urban Interstate	11	197,673	56	232,276	50	416,291	54	320,041	58	1,166,279	58
Urban Freeways and	12	15,967	56	20,579	56	34,726	56	23,790	56	95,061	56
Urban Principal	14	140,671	48	193,001	44	344,847	46	213,273	49	891,791	49
Urban Minor Arterial	16	32,878	43	44,441	41	79,121	42	51,044	43	207,482	43
Urban Collector	17	27,426	35	38,189	35	57,650	35	37,573	35	160,835	35
Urban Local	19	34,099	13	44,192	13	63,784	13	44,157	13	186,230	13
TOTAL		466,244		597,331		1,031,059		716,148		2,810,773	
Hampton Roads Total		8,076,549		10,457,887		17,804,487		12,374,985		48,713,705	

2018 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	FC#	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed
Chesapeake											
Urban Interstate	11	357,604	56	420,205	55	753,102	56	578,978	56	2,109,885	56
Urban Freeways and	12	201,408	54	259,591	49	438,047	53	300,099	56	1,199,144	56
Urban Principal	14	191,910	48	263,302	47	470,457	47	290,958	48	1,216,625	48
Urban Minor Arterial	16	240,119	43	324,569	41	577,856	42	372,799	43	1,515,331	43
Urban Collector	17	70,001	20	97,473	20	147,145	20	95,901	20	410,515	20
Urban Local	19	201,424	13	261,049	13	376,777	13	260,838	13	1,100,078	13
TOTAL		1,262,468		1,626,187		2,763,385		1,899,572		7,551,579	
Gloucester											
Rural Principal Arterial	2	35,393	50	55,547	50	90,968	50	75,063	50	256,973	50
Rural Minor Arterial	6	32,921	52	43,108	51	66,300	52	46,992	52	189,321	52
Rural Major Collector	7	37,438	35	47,578	35	71,881	35	42,424	35	199,320	35
Rural Minor Collector	8	6,753	37	9,962	37	12,616	37	9,500	37	38,831	37
Rural Local	9	12,837	25	21,162	25	25,968	25	25,973	25	85,940	25
Urban Freeways and	12	24,551	55	31,644	55	53,397	55	36,582	55	146,174	55
Urban Principal	14	52,619	51	72,194	46	128,993	49	79,777	51	333,583	51
Urban Collector	17	12,854	27	17,899	27	27,020	27	17,610	27	75,382	27
Urban Local	19	4,770	13	6,182	13	8,922	13	6,177	13	26,049	13
TOTAL		220,136		305,276		486,066		340,097		1,351,573	
Hampton											
Urban Interstate	11	389,625	44	457,831	31	820,537	40	630,820	55	2,298,808	55
Urban Freeways and	12	27,027	51	34,834	50	58,781	51	40,270	51	160,912	51
Urban Principal	14	55,065	42	75,549	41	134,988	42	83,484	42	349,086	42
Urban Minor Arterial	16	184,318	39	249,142	38	443,568	39	286,164	40	1,163,183	40
Urban Collector	17	54,824	26	76,340	26	115,243	26	75,109	26	321,513	26
Urban Local	19	173,522	13	224,887	13	324,584	13	224,706	13	947,692	13
TOTAL		884,381		1,118,583		1,897,701		1,340,553		5,241,194	
Isle of Wight											
Rural Principal Arterial	2	93,767	54	147,162	54	241,003	54	198,866	54	680,800	54
Rural Minor Arterial	6	122,154	47	159,955	46	246,009	47	174,364	47	702,480	47

2018 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	**FC#**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**
Rural Major Collector	7	22,006	38	27,966	38	42,251	38	24,936	38	117,159	38
Rural Minor Collector	8	3,185	43	4,698	43	5,950	43	4,480	43	18,313	43
Rural Local	9	25,592	25	42,189	25	51,772	25	51,782	25	171,334	25
Urban Freeways and	12	12,118	58	15,618	58	26,355	58	18,056	58	72,147	58
Urban Collector	17	17,592	38	24,496	38	36,979	38	24,101	38	103,167	38
Urban Local	19	17,039	13	22,083	13	31,873	13	22,065	13	93,059	13
TOTAL		313,453		444,167		682,192		518,650		1,958,460	
James City											
Rural Minor Arterial	6	40,398	47	52,900	47	81,359	47	57,665	47	232,321	47
Rural Major Collector	7	25,642	37	32,587	37	49,233	37	29,057	37	136,518	37
Rural Minor Collector	8	4,087	35	6,030	35	7,635	35	5,750	35	23,502	35
Rural Local	9	18,599	25	30,661	25	37,625	25	37,632	25	124,515	25
Urban Interstate	11	222,720	52	261,708	42	469,040	49	360,594	58	1,314,059	58
Urban Freeways and	12	43,649	53	56,258	52	94,933	53	65,037	53	259,876	53
Urban Principal	14	41,813	50	57,368	49	102,503	50	63,394	50	265,078	50
Urban Minor Arterial	16	29,352	45	39,675	44	70,637	44	45,571	45	185,234	45
Urban Collector	17	17,638	35	24,559	35	37,075	35	24,163	35	103,434	35
Urban Local	19	13,733	13	17,798	13	25,688	13	17,783	13	75,001	13
TOTAL		457,631		579,543		975,727		706,645		2,719,538	
Newport News											
Urban Interstate	11	446,232	37	524,347	22	939,749	32	722,470	56	2,632,792	54
Urban Freeways and	12	6,398	47	8,247	46	13,916	46	9,534	47	38,095	47
Urban Principal	14	213,762	44	293,282	40	524,024	43	324,087	45	1,355,154	45
Urban Minor Arterial	16	197,369	39	266,783	34	474,975	37	306,426	40	1,245,542	40
Urban Collector	17	68,412	18	95,260	18	143,804	18	93,723	18	401,194	18
Urban Local	19	139,968	13	181,401	13	261,820	13	181,254	13	764,437	13
TOTAL		1,072,141		1,369,319		2,358,288		1,637,494		6,437,214	
Norfolk											
Urban Interstate	11	608,864	53	715,448	46	1,282,245	51	985,778	55	3,592,328	55
Urban Freeways and	12	5,613	55	7,234	55	12,207	55	8,363	55	33,416	55

2018 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	FC#	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed
Urban Principal	14	290,961	41	399,200	40	713,274	41	441,130	41	1,844,562	41
Urban Minor Arterial	16	175,121	38	236,711	37	421,436	38	271,885	38	1,105,144	38
Urban Collector	17	42,586	12	59,299	12	89,518	12	58,343	12	249,743	12
Urban Local	19	82,148	13	106,465	13	153,664	13	106,380	13	448,654	13
TOTAL		1,205,293		1,524,357		2,672,343		1,871,878		7,273,846	
Poquoson											
Urban Minor Arterial	16	13,416	43	18,134	39	32,285	42	20,829	44	84,663	44
Urban Collector	17	11,939	35	16,624	35	25,096	35	16,356	35	70,014	35
Urban Local	19	11,850	13	15,358	13	22,166	13	15,345	13	64,718	13
TOTAL		37,204		50,116		79,547		52,530		219,395	
Portsmouth											
Urban Interstate	11	61,186	55	71,897	54	128,856	55	99,063	55	361,002	55
Urban Freeways and	12	84,814	56	109,315	56	184,464	56	126,373	56	504,965	56
Urban Principal	14	42,229	43	57,938	43	103,522	43	64,024	43	267,713	43
Urban Minor Arterial	16	69,506	39	93,951	39	167,268	39	107,912	39	438,633	39
Urban Collector	17	29,227	23	40,696	23	61,435	23	40,040	23	171,396	23
Urban Local	19	51,073	13	66,191	13	95,535	13	66,138	13	278,935	13
TOTAL		338,034		439,989		741,081		503,550		2,022,644	
Suffolk											
Rural Principal Arterial	2	82,270	51	129,119	51	211,455	51	174,484	51	597,331	51
Rural Minor Arterial	6	16,133	47	21,126	47	32,491	47	23,029	47	92,779	47
Rural Major Collector	7	2,373	41	3,016	41	4,557	41	2,690	41	12,636	41
Rural Minor Collector	8	0		0		0		0		0	
Rural Local	9	380	25	626	25	768	25	769	25	2,543	25
Urban Interstate	11	82,054	58	96,418	57	172,804	58	132,850	58	484,126	58
Urban Freeways and	12	149,246	55	192,360	52	324,599	55	222,378	56	888,582	56
Urban Principal	14	124,227	50	170,439	49	304,534	50	188,341	50	787,540	50
Urban Minor Arterial	16	117,868	45	159,322	40	283,654	42	182,997	46	743,835	46
Urban Collector	17	18,687	28	26,021	28	39,281	28	25,601	28	109,590	28
Urban Local	19	75,890	13	98,355	13	141,957	13	98,275	13	414,474	13

2018 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	FC#	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed
TOTAL		669,130		896,803		1,516,102		1,051,413		4,133,437	
Virginia Beach											
Urban Interstate	11	423,034	52	497,089	45	890,896	51	684,912	55	2,495,925	55
Urban Freeways and	12	46,922	55	60,477	55	102,052	55	69,914	55	279,366	55
Urban Principal	14	228,971	42	314,149	40	561,308	41	347,145	42	1,451,571	42
Urban Minor Arterial	16	625,779	40	845,863	38	1,505,960	39	971,557	41	3,949,127	41
Urban Collector	17	199,314	35	277,534	35	418,966	35	273,059	35	1,168,861	35
Urban Local	19	207,701	13	269,184	13	388,519	13	268,966	13	1,134,361	13
TOTAL		1,731,722		2,264,296		3,867,701		2,615,553		10,479,210	
Williamsburg											
Urban Freeways and	12	1,958	42	2,524	42	4,259	42	2,918	42	11,660	42
Urban Principal	14	19,997	46	27,437	43	49,022	45	30,318	46	126,775	46
Urban Minor Arterial	16	22,431	39	30,320	39	53,981	39	34,825	39	141,555	39
Urban Collector	17	5,668	25	7,892	25	11,914	25	7,765	25	33,239	25
Urban Local	19	9,922	13	12,858	13	18,559	13	12,848	13	54,187	13
TOTAL		59,976		81,031		137,736		88,675		367,415	
York											
Rural Minor Arterial	6	4,456	47	5,835	47	8,973	47	6,360	47	25,624	47
Rural Major Collector	7	8,524	32	10,833	32	16,367	32	9,660	32	45,384	32
Rural Local	9	6,530	25	10,764	25	13,209	25	13,212	25	43,715	25
Urban Interstate	11	215,359	54	253,059	45	453,539	52	348,676	58	1,270,630	58
Urban Freeways and	12	18,576	56	23,943	56	40,402	56	27,679	56	110,600	56
Urban Principal	14	169,679	48	232,801	42	415,959	46	257,253	49	1,075,691	49
Urban Minor Arterial	16	36,273	42	49,031	38	87,293	41	56,316	43	228,911	43
Urban Collector	17	30,476	35	42,437	35	64,063	35	41,752	35	178,726	35
Urban Local	19	37,892	13	49,108	13	70,879	13	49,068	13	206,945	13
TOTAL		527,766		677,810		1,170,684		809,977		3,186,226	
Hampton Roads Total		8,779,336		11,377,478		19,348,552		13,436,587		52,941,732	

2020 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	FC#	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed
Chesapeake											
Urban Interstate	11	359,191	56	422,069	55	756,443	56	581,546	56	2,119,245	56
Urban Freeways and	12	209,873	54	270,501	48	456,458	53	312,712	56	1,249,543	56
Urban Principal	14	196,264	48	269,275	47	481,130	48	297,558	48	1,244,226	48
Urban Minor Arterial	16	241,668	43	326,662	41	581,584	42	375,204	43	1,525,106	43
Urban Collector	17	72,192	20	100,524	20	151,751	20	98,903	20	423,366	20
Urban Local	19	207,730	13	269,221	13	388,572	13	269,003	13	1,134,516	13
TOTAL		1,286,919		1,658,252		2,815,938		1,934,926		7,696,001	
Gloucester											
Rural Principal Arterial	2	36,070	50	56,611	50	92,710	50	76,500	50	261,892	50
Rural Minor Arterial	6	33,874	52	44,356	51	68,219	52	48,352	52	194,800	52
Rural Major Collector	7	39,319	35	49,967	35	75,491	35	44,555	35	209,332	35
Rural Minor Collector	8	7,092	37	10,463	37	13,249	37	9,977	37	40,781	37
Rural Local	9	13,482	25	22,225	25	27,273	25	27,278	25	90,256	25
Urban Freeways and	12	25,281	55	32,584	55	54,984	55	37,669	55	150,517	55
Urban Principal	14	53,731	51	73,719	45	131,718	49	81,462	51	340,629	51
Urban Collector	17	13,500	27	18,798	27	28,377	27	18,495	27	79,168	27
Urban Local	19	5,009	13	6,492	13	9,370	13	6,487	13	27,358	13
TOTAL		227,357		315,214		501,391		350,774		1,394,733	
Hampton											
Urban Interstate	11	396,311	42	465,687	30	834,618	38	641,646	55	2,338,258	54
Urban Freeways and	12	26,812	51	34,558	50	58,315	51	39,951	51	159,636	51
Urban Principal	14	55,792	42	76,547	41	136,770	42	84,587	42	353,695	42
Urban Minor Arterial	16	187,068	39	252,859	38	450,186	39	290,434	40	1,180,538	40
Urban Collector	17	56,370	26	78,493	26	118,493	26	77,227	26	330,580	26
Urban Local	19	178,416	13	231,229	13	333,738	13	231,042	13	974,417	13
TOTAL		900,770		1,139,373		1,932,120		1,364,886		5,337,123	
Isle of Wight											
Rural Principal Arterial	2	95,852	54	150,435	54	246,363	54	203,288	54	695,941	54
Rural Minor Arterial	6	123,623	47	161,878	45	248,966	47	176,460	47	710,925	47

2020 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	**FC#**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**
Rural Major Collector	7	22,939	38	29,152	38	44,043	38	25,994	38	122,129	38
Rural Minor Collector	8	3,320	43	4,898	43	6,202	43	4,671	43	19,090	43
Rural Local	9	26,678	25	43,979	25	53,968	25	53,978	25	178,602	25
Urban Freeways and	12	12,331	58	15,893	58	26,819	58	18,373	58	73,416	58
Urban Collector	17	18,338	38	25,535	38	38,548	38	25,123	38	107,543	38
Urban Local	19	17,762	13	23,020	13	33,225	13	23,001	13	97,006	13
TOTAL		320,843		454,789		698,134		530,889		2,004,652	
James City											
Rural Minor Arterial	6	42,056	47	55,071	47	84,698	47	60,031	47	241,856	47
Rural Major Collector	7	27,153	37	34,506	37	52,132	37	30,768	37	144,559	37
Rural Minor Collector	8	4,328	35	6,385	35	8,085	35	6,088	35	24,886	35
Rural Local	9	19,694	25	32,467	25	39,841	25	39,848	25	131,849	25
Urban Interstate	11	229,954	48	270,208	39	484,275	45	372,306	58	1,356,741	57
Urban Freeways and	12	45,650	53	58,837	52	99,285	53	68,018	53	271,789	53
Urban Principal	14	39,506	50	54,203	50	96,847	50	59,896	50	250,452	50
Urban Minor Arterial	16	30,179	45	40,793	43	72,628	44	46,855	45	190,454	45
Urban Collector	17	18,676	35	26,006	35	39,259	35	25,587	35	109,526	35
Urban Local	19	14,541	13	18,846	13	27,201	13	18,831	13	79,418	13
TOTAL		471,738		597,322		1,004,250		728,229		2,801,531	
Newport News											
Urban Interstate	11	470,511	31	552,876	18	990,880	27	761,779	56	2,776,042	52
Urban Freeways and	12	6,306	47	8,128	46	13,716	47	9,396	47	37,546	47
Urban Principal	14	209,133	45	286,932	42	512,678	44	317,070	45	1,325,811	45
Urban Minor Arterial	16	198,053	39	267,707	34	476,621	37	307,488	40	1,249,859	40
Urban Collector	17	70,112	18	97,628	18	147,379	18	96,053	18	411,167	18
Urban Local	19	143,448	13	185,910	13	268,328	13	185,760	13	783,439	13
TOTAL		1,097,564		1,399,181		2,409,602		1,677,546		6,583,864	
Norfolk											
Urban Interstate	11	613,683	52	721,111	46	1,292,394	51	993,580	55	3,620,760	55
Urban Freeways and	12	6,867	55	8,851	55	14,936	55	10,232	55	40,886	55

2020 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	**FC#**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**
Urban Principal	14	293,894	41	403,225	40	720,464	41	445,577	41	1,863,158	41
Urban Minor Arterial	16	176,977	38	239,220	37	425,903	38	274,767	38	1,116,858	38
Urban Collector	17	43,081	12	59,989	12	90,559	12	59,021	12	252,647	12
Urban Local	19	83,104	13	107,704	13	155,451	13	107,617	13	453,871	13
TOTAL		1,217,607		1,540,098		2,699,707		1,890,794		7,348,181	
Poquoson											
Urban Minor Arterial	16	14,475	44	19,566	43	34,834	44	22,473	44	91,348	44
Urban Collector	17	12,462	35	17,353	35	26,197	35	17,073	35	73,085	35
Urban Local	19	12,370	13	16,031	13	23,138	13	16,018	13	67,558	13
TOTAL		39,307		52,950		84,170		55,565		231,990	
Portsmouth											
Urban Interstate	11	61,769	55	72,582	55	130,084	55	100,007	55	364,442	55
Urban Freeways and	12	87,395	56	112,642	56	190,078	56	130,219	56	520,333	56
Urban Principal	14	41,849	43	57,416	43	102,589	43	63,447	43	265,301	43
Urban Minor Arterial	16	69,330	39	93,713	39	166,845	39	107,639	39	437,524	39
Urban Collector	17	29,608	23	41,227	23	62,236	23	40,562	23	173,631	23
Urban Local	19	51,739	13	67,054	13	96,781	13	67,000	13	282,572	13
TOTAL		341,690		444,635		748,614		508,875		2,043,804	
Suffolk											
Rural Principal Arterial	2	83,769	51	131,470	51	215,306	51	177,661	51	608,209	51
Rural Minor Arterial	6	16,642	47	21,791	47	33,515	47	23,755	47	95,703	47
Rural Major Collector	7	2,493	41	3,168	41	4,786	41	2,824	41	13,270	41
Rural Minor Collector	8	0		0		0		0		0	
Rural Local	9	399	25	658	25	807	25	807	25	2,670	25
Urban Interstate	11	84,025	58	98,734	57	176,955	58	136,041	58	495,754	58
Urban Freeways and	12	150,766	55	194,319	52	327,905	55	224,642	56	897,632	56
Urban Principal	14	129,401	50	177,538	49	317,218	50	196,186	50	820,342	50
Urban Minor Arterial	16	121,960	45	164,853	40	293,501	42	189,349	46	769,657	46
Urban Collector	17	19,625	28	27,326	28	41,252	28	26,886	28	115,088	28
Urban Local	19	79,697	13	103,289	13	149,078	13	103,205	13	435,266	13

2020 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	FC#	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed
TOTAL		688,776		923,147		1,560,322		1,081,357		4,253,590	
Virginia Beach											
Urban Interstate	11	429,403	52	504,572	44	904,308	50	695,223	55	2,533,500	55
Urban Freeways and	12	48,142	55	62,049	55	104,705	55	71,732	55	286,627	55
Urban Principal	14	232,122	42	318,472	40	569,032	41	351,922	42	1,471,545	42
Urban Minor Arterial	16	646,058	40	873,275	38	1,554,764	39	1,003,042	41	4,077,107	41
Urban Collector	17	203,672	35	283,603	35	428,127	35	279,029	35	1,194,418	35
Urban Local	19	212,243	13	275,069	13	397,013	13	274,847	13	1,159,163	13
TOTAL		1,771,640		2,317,040		3,957,949		2,675,795		10,722,360	
Williamsburg											
Urban Freeways and	12	2,037	42	2,625	42	4,430	42	3,035	42	12,128	42
Urban Principal	14	20,176	46	27,681	42	49,459	44	30,589	46	127,905	46
Urban Minor Arterial	16	23,370	39	31,589	39	56,240	39	36,283	39	147,480	39
Urban Collector	17	5,809	25	8,089	25	12,211	25	7,958	25	34,067	25
Urban Local	19	10,169	13	13,179	13	19,021	13	13,168	13	55,536	13
TOTAL		61,560		83,163		141,362		91,033		377,115	
York											
Rural Minor Arterial	6	4,445	47	5,820	47	8,951	47	6,344	47	25,560	47
Rural Major Collector	7	8,785	32	11,165	32	16,868	32	9,955	32	46,772	32
Rural Local	9	6,729	25	11,094	25	13,613	25	13,616	25	45,052	25
Urban Interstate	11	217,401	54	255,458	44	457,840	52	351,983	58	1,282,680	58
Urban Freeways and	12	18,342	56	23,640	56	39,892	56	27,329	56	109,204	56
Urban Principal	14	170,913	48	234,494	43	418,983	46	259,123	49	1,083,512	49
Urban Minor Arterial	16	37,500	42	50,689	39	90,246	41	58,221	43	236,655	43
Urban Collector	17	31,409	35	43,735	35	66,022	35	43,030	35	184,194	35
Urban Local	19	39,051	13	50,611	13	73,047	13	50,570	13	213,277	13
TOTAL		534,576		686,705		1,185,463		820,172		3,226,905	
Hampton Roads Total		8,960,345		11,611,871		19,739,020		13,710,841		54,021,849	

2030 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	FC#	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed
Chesapeake											
Urban Interstate	11	404,301	55	475,076	52	851,444	55	654,582	56	2,385,399	56
Freeway/Expressway	12	231,433	53	298,289	43	503,349	51	344,836	56	1,377,906	55
Urban Principal	14	221,144	48	303,411	46	542,122	47	335,280	48	1,401,955	48
Urban Minor Arterial	16	279,894	42	378,332	41	673,575	42	434,551	43	1,766,338	43
Urban Collector	17	84,222	20	117,275	20	177,039	20	115,384	20	493,915	20
Urban Local	19	242,345	13	314,082	13	453,322	13	313,829	13	1,323,567	13
TOTAL		1,463,340		1,886,466		3,200,851		2,198,462		8,749,080	
Gloucester											
Rural Principal Arterial	2	39,588	50	62,132	49	101,752	50	83,961	50	287,434	50
Rural Minor Arterial	6	39,331	52	51,502	51	79,209	52	56,141	52	226,182	52
Rural Major Collector	7	50,236	35	63,842	35	96,453	35	56,926	35	267,457	35
Rural Minor Collector	8	9,061	37	13,368	37	16,928	37	12,748	37	52,105	37
Rural Local	9	17,225	25	28,396	25	34,846	25	34,852	25	115,318	25
Freeway/Expressway	12	28,926	55	37,283	55	62,913	55	43,100	55	172,222	55
Urban Principal	14	59,237	50	81,273	38	145,216	45	89,810	51	375,535	51
Urban Collector	17	17,248	27	24,017	27	36,256	27	23,630	27	101,151	27
Urban Local	19	6,400	13	8,295	13	11,972	13	8,288	13	34,954	13
TOTAL		267,253		370,107		585,544		409,456		1,632,357	
Hampton											
Urban Interstate	11	428,109	36	503,052	25	901,583	32	693,128	55	2,525,868	53
Freeway/Expressway	12	30,567	51	39,397	50	66,481	51	45,545	51	181,989	51
Urban Principal	14	61,578	42	84,485	41	150,955	41	93,359	42	390,377	42
Urban Minor Arterial	16	203,273	39	274,764	38	489,184	39	315,593	40	1,282,804	40
Urban Collector	17	64,780	26	90,202	26	136,170	26	88,748	26	379,896	26
Urban Local	19	205,032	13	265,724	13	383,525	13	265,509	13	1,119,781	13
TOTAL		993,339		1,257,625		2,127,898		1,501,883		5,880,715	
Isle of Wight											
Rural Principal Arterial	2	103,707	55	162,763	54	266,553	55	219,949	55	752,976	55
Rural Minor Arterial	6	139,152	47	182,212	43	280,241	47	198,627	47	800,230	47

2030 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	FC#	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed
Rural Major Collector	7	28,235	38	35,882	38	54,211	38	31,995	38	150,323	38
Rural Minor Collector	8	4,086	43	6,028	43	7,634	43	5,749	43	23,497	43
Rural Local	9	32,837	25	54,132	25	66,427	25	66,440	25	219,835	25
Freeway/Expressway	12	23,816	58	30,696	58	51,797	58	35,486	58	141,794	58
Urban Collector	17	22,572	38	31,430	38	47,447	38	30,923	38	132,371	38
Urban Local	19	21,862	13	28,334	13	40,895	13	28,311	13	119,401	13
TOTAL		376,268		531,478		815,206		617,479		2,340,428	
James City											
Rural Minor Arterial	6	56,433	47	73,896	47	113,650	47	80,552	47	324,530	47
Rural Major Collector	7	36,148	37	45,938	37	69,403	37	40,962	37	192,450	37
Rural Minor Collector	8	5,761	35	8,500	35	10,764	35	8,106	35	33,130	35
Rural Local	9	26,219	25	43,222	25	53,040	25	53,050	25	175,530	25
Urban Interstate	11	256,122	41	300,957	31	539,384	38	414,673	58	1,511,133	56
Freeway/Expressway	12	56,806	53	73,216	51	123,549	53	84,641	53	338,212	53
Urban Principal	14	47,670	50	65,403	49	116,860	50	72,273	50	302,205	50
Urban Minor Arterial	16	35,432	44	47,893	41	85,268	43	55,010	44	223,602	44
Urban Collector	17	24,864	35	34,622	35	52,265	35	34,063	35	145,812	35
Urban Local	19	19,359	13	25,089	13	36,212	13	25,069	13	105,729	13
TOTAL		564,813		718,737		1,200,395		868,399		3,352,334	
Newport News											
Urban Interstate	11	515,468	24	605,702	14	1,085,557	20	834,565	56	3,041,286	49
Freeway/Expressway	12	7,344	47	9,466	45	15,973	46	10,943	47	43,726	47
Urban Principal	14	229,400	44	314,738	40	562,360	43	347,796	45	1,454,291	45
Urban Minor Arterial	16	225,687	38	305,060	31	543,124	35	350,392	40	1,424,251	40
Urban Collector	17	79,270	18	110,380	18	166,630	18	108,600	18	464,875	18
Urban Local	19	162,185	13	210,194	13	303,377	13	210,024	13	885,773	13
TOTAL		1,219,354		1,555,540		2,677,021		1,862,320		7,314,203	
Norfolk											
Urban Interstate	11	649,861	51	763,622	42	1,368,584	49	1,052,154	55	3,834,214	55
Freeway/Expressway	12	6,454	55	8,318	55	14,037	55	9,617	55	38,426	55

2030 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	**FC#**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**	**VMT**	**Speed**
Urban Principal	14	307,092	41	421,331	40	752,817	41	465,585	41	1,946,823	41
Urban Minor Arterial	16	186,508	38	252,103	37	448,840	37	289,565	38	1,177,007	38
Urban Collector	17	45,645	12	63,559	12	95,949	12	62,534	12	267,684	12
Urban Local	19	88,050	13	114,114	13	164,703	13	114,022	13	480,884	13
TOTAL		1,283,611		1,623,048		2,844,930		1,993,477		7,745,038	
Poquoson											
Urban Minor Arterial	16	16,458	44	22,246	42	39,606	43	25,551	44	103,860	44
Urban Collector	17	15,447	35	21,509	35	32,469	35	21,162	35	90,585	35
Urban Local	19	15,332	13	19,870	13	28,679	13	19,854	13	83,734	13
TOTAL		47,236		63,624		100,754		66,567		278,179	
Portsmouth											
Urban Interstate	11	72,127	54	84,754	53	151,898	54	116,778	55	425,556	55
Freeway/Expressway	12	96,958	56	124,967	55	210,877	56	144,468	56	577,270	56
Urban Principal	14	43,823	43	60,125	43	107,429	43	66,440	43	277,816	43
Urban Minor Arterial	16	76,508	39	103,416	39	184,119	39	118,783	39	482,822	39
Urban Collector	17	31,589	23	43,986	23	66,402	23	43,277	23	185,252	23
Urban Local	19	55,202	13	71,542	13	103,258	13	71,484	13	301,483	13
TOTAL		376,207		488,790		823,982		561,230		2,250,199	
Suffolk											
Rural Principal Arterial	2	87,401	51	137,171	50	224,642	51	185,365	51	634,582	51
Rural Minor Arterial	6	19,024	47	24,911	47	38,313	47	27,155	47	109,403	47
Rural Major Collector	7	3,184	41	4,046	41	6,113	41	3,608	41	16,950	41
Rural Minor Collector	8	0		0		0		0		0	
Rural Local	9	509	25	840	25	1,031	25	1,031	25	3,411	25
Urban Interstate	11	95,077	57	111,721	55	200,229	57	153,934	58	560,961	58
Freeway/Expressway	12	180,887	55	233,141	48	393,415	54	269,522	56	1,076,965	56
Urban Principal	14	138,628	50	190,198	48	339,837	49	210,175	50	878,837	50
Urban Minor Arterial	16	143,836	42	194,423	37	346,148	39	223,314	46	907,715	45
Urban Collector	17	25,066	28	34,903	28	52,690	28	34,341	28	146,999	28
Urban Local	19	101,795	13	131,928	13	190,415	13	131,822	13	555,956	13

2030 Summertime VMT and Average Speeds Plan

JURISDICTION		AM Period		PM Period		Midday Period		Night Period		24-Hour Total	
Functional Class	FC#	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed	VMT	Speed
TOTAL		795,408		1,063,283		1,792,833		1,240,267		4,891,777	
Virginia Beach											
Urban Interstate	11	455,377	50	535,093	41	959,009	48	737,276	55	2,686,751	55
Freeway/Expressway	12	53,185	55	68,549	55	115,673	55	79,246	55	316,652	55
Urban Principal	14	254,585	42	349,292	39	624,100	41	385,979	42	1,613,954	42
Urban Minor Arterial	16	712,560	40	963,165	38	1,714,802	40	1,106,290	41	4,496,780	41
Urban Collector	17	226,934	35	315,993	35	477,024	35	310,897	35	1,330,833	35
Urban Local	19	236,483	13	306,485	13	442,357	13	306,238	13	1,291,552	13
TOTAL		1,939,124		2,538,578		4,332,964		2,925,926		11,736,522	
Williamsburg											
Freeway/Expressway	12	2,494	42	3,215	41	5,425	42	3,716	42	14,850	42
Urban Principal	14	22,713	45	31,162	41	55,679	43	34,435	46	143,988	46
Urban Minor Arterial	16	27,675	39	37,408	38	66,601	39	42,967	39	174,650	39
Urban Collector	17	6,569	25	9,147	25	13,809	25	9,000	25	38,525	25
Urban Local	19	11,499	13	14,903	13	21,510	13	14,891	13	62,804	13
TOTAL		70,951		95,836		163,024		105,010		434,817	
York											
Rural Minor Arterial	6	4,950	47	6,482	47	9,969	47	7,066	47	28,467	47
Rural Major Collector	7	10,214	32	12,980	32	19,611	32	11,574	32	54,379	32
Rural Local	9	7,824	25	12,898	25	15,827	25	15,830	25	52,378	25
Urban Interstate	11	243,203	47	285,777	30	512,178	43	393,757	58	1,434,912	57
Freeway/Expressway	12	20,298	56	26,162	56	44,147	56	30,245	56	120,852	56
Urban Principal	14	193,687	48	265,739	38	474,811	43	293,651	49	1,227,886	49
Urban Minor Arterial	16	42,118	42	56,931	36	101,358	39	65,390	43	265,795	43
Urban Collector	17	36,516	35	50,847	35	76,759	35	50,027	35	214,148	35
Urban Local	19	45,401	13	58,841	13	84,926	13	58,793	13	247,960	13
TOTAL		604,212		776,657		1,339,587		926,334		3,646,778	
Hampton Roads Total		10,001,116		12,969,768		22,004,990		15,276,809		60,252,427	

Appendix C: MOBILE6.2 Sample Input File

The following table provides a guide to the MOBILE6.2 Input files included in this appendix. A sample portion of a 2030 input file used in the analysis for Chesapeake is provided. Copies of complete input files are available upon request.

Header section of the input file:	
MOBILE6 Input Header	What the header means:
DATABASE OUTPUT	Specifies MOBILE6 to report output in database format for all scenarios.
DAILY OUTPUT	Database output will represent daily rather than hourly time periods.
WITH FIELDNAMES	Directs MOBILE6 to place a row of column names in the first row of the database output table.
AGGREGATE OUTPUT	Database output will represent daily rather than hourly time periods that will reduce the volume of reported output.
Run Segment:	
RUN DATA	Marks the end of the header section and beginning of run section of command input file. Administrative function—no information required.
EXPRESS HC AS VOC	Directs MOBILE6 to output exhaust HC as volatile organic compounds.
REG DIST	Allows user to supply vehicle registration distributions by vehicle age for all 16 composite vehicle types. Command requires an external data file.
NO REFUELING	Directs MOBILE6 not to calculate the refueling emissions from gasoline-fueled vehicles.
94+ LDG IMP	Allows the user to input optional 1994 and later fleet penetration factors for light-duty gasoline vehicles under the Tier 1, NLEV, and Tier 2 standards.
HOURLY TEMPERATURES	Allows entry of 24 hourly temperatures.
FUEL PROGRAM	Designates fuel sulfur level of gasoline and whether RFG use should be assumed
FUEL RVP	Required input of average fuel Reid vapor pressure.
SEASON	Allows users to specify winter or summer RVP independent of evaluation month
RELATIVE HUMIDITY	Allows user to specify hourly relative humidity values and to relate these relative humidity values directly to the hourly temperature.
BAROMETRIC PRES	Allows user to supply a daily average barometric pressure.

Scenario Segment:	
SCENARIO RECORD	Allows MOBILE6 users to label individual scenario results. Marks start of new scenario.
CALENDAR YEAR	Calendar year of the scenario evaluated. Four-digit value for year must be entered. ***Example:*** **CALENDAR YEAR : 2015**
EVALUATION MONTH	Specifies January 1 (*winter RFG rules)* or July 1 (*summer RFG rules)* for calendar year of interest. ***Example:*** **EVALUATION MONTH : 7**
VMT FRACTIONS	Allows user to supply vehicle travel data specific to the geographical location they wish to model. Set of 16 fractional values between 0 and 1 in which all 16 values add up to 1.0 ***Example:*** **VMT FRACTIONS :** **0.354 0.089 0.297 0.092 0.041 0.040 0.004 0.003** **0.002 0.008 0.010 0.012 0.040 0.002 0.001 0.005**
AVERAGE SPEED	Allows the user to enter a single average speed to use for all freeways and/or arterial/collectors for the entire day, rather than an average speed distribution
END OF RUN	Marks the end of each Run section and required to separate multiple runs in command input files.

MOBILE6.2 INPUT FILE EXCERPT

```
MOBILE6 INPUT FILE :
>
>  ------------------------------
>  HAMPTON ROADS MAINTENANCE AREA
>  ------------------------------
>
>  ANALYSIS YEAR: 2030
>
>  ------------------------------
>  FLEET DATA:
>   *  2008 registration data for Hampton Roads member jurisdictions as provided by VDEQ
>   *  2008 VMT Mix for Hampton Roads based on the VDOT 2008 Traffic report (TMS/HPMS data)
>
>  ------------------------------
>  AMBIENT CONDITIONS
>   *  HR Ozone Maintenance Plan (eff. 6/1/07)
>      - Hourly temperature, relative humidity, and barometric pressure
>
>  ------------------------------
>  EMISSION CONTROLS:
>   * RFG (not applicable for Gloucester and Isle of Wight);
>   * 2007 HDDV including LSD;
>   * NLEV; and
>   * Tier 2 emission standards.
>   * Fuel Economy based on MOBILE6.2 model defaults.
>
>  -------------------------------------
>   * REFUELING EMISSIONS NOT INCLUDED *
>  -------------------------------------
>


REPORT FILE        : C:\M6_HR\RC\HR2030.OUT
DATABASE OUTPUT    :
WITH FIELDNAMES    :
POLLUTANTS         : HC NOX
AGGREGATED OUTPUT  :
EMISSIONS TABLE    : C:\M6_HR\RC\HR2030.TXT   REPLACE


RUN DATA           :
EXPRESS HC AS VOC  :
REG DIST           : C:\M6_HR\RC\CHESA08.RDT
NO REFUELING       :
94+ LDG IMP        : C:\M6_HR\RC\NLEVNE.D
HOURLY TEMPERATURES: 71.77 75.20 77.80 81.07 83.04 84.34 85.79 86.59 87.40 87.27 87.60 87.01
                     85.51 83.21 79.39 77.90 77.02 75.38 73.31 72.91 72.71 71.90 71.20 70.73
FUEL PROGRAM       : 4
 150  149  129  120 120  90  30  30
  30   30   30   30  30  30  30  30
1000 1000 1000 1000 303 303  87  87
  80   80   80   80  80  80  80  80
FUEL RVP           : 6.8
OXYGENATED FUELS   : 1.00 0.00 0.021 0.00 1
SEASON             : 1

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 2.5 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 3.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 4.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
```

```
AVERAGE SPEED      : 5.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 6.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 7.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 8.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 9.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 10.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 11.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 12.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 13.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
```

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0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 14.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 15.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 16.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 17.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 18.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 19.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 20.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 21.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 22.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
```

```
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 23.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 24.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 25.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 26.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 27.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 28.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 29.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 30.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 31.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
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VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 32.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 33.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 34.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 35.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 36.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 37.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 38.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 39.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 40.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
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EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 41.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 42.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 43.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 44.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 45.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 46.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 47.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 48.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 49.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
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CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 50.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 51.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 52.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 53.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 54.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 55.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 56.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 57.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 58.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004
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SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 59.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 60.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 61.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 62.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 63.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 64.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004

SCENARIO RECORD    : Chesapeake, ROADFHWA 11, Urban Interstate
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
VMT FRACTIONS      :
0.40916 0.09431 0.31396 0.09560 0.04396 0.01267 0.00125 0.00102
0.00076 0.00283 0.00334 0.00363 0.01294 0.00064 0.00030 0.00363
AVERAGE SPEED      : 65.0 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004
END OF RUN         :



EXPRESS HC AS VOC  :
REG DIST           : C:\M6_HR\RC\CHESA08.RDT
NO REFUELING       :
94+ LDG IMP        : C:\M6_HR\RC\NLEVNE.D
HOURLY TEMPERATURES: 71.77 75.20 77.80 81.07 83.04 84.34 85.79 86.59 87.40 87.27 87.60 87.01
                     85.51 83.21 79.39 77.90 77.02 75.38 73.31 72.91 72.71 71.90 71.20 70.73
FUEL PROGRAM       : 4
 150  149  129  120 120  90  30  30
  30   30   30   30  30  30  30  30
1000 1000 1000 1000 303 303  87  87
  80   80   80   80  80  80  80  80
FUEL RVP           : 6.8
OXYGENATED FUELS   : 1.00 0.00 0.021 0.00 1
SEASON             : 1

SCENARIO RECORD    : Chesapeake, ROADFHWA 12, Urban Freeway/Expressway
CALENDAR YEAR      : 2030
EVALUATION MONTH   : 7
```

```
VMT FRACTIONS      :
0.40658 0.09372 0.31200 0.09500 0.04369 0.01456 0.00143 0.00118
0.00088 0.00325 0.00384 0.00417 0.01487 0.00074 0.00034 0.00375
AVERAGE SPEED      : 2.5 FREEWAY 92.0 0.0 0.0 8.0
RELATIVE HUMIDITY  : 83.9 78.1 72.7 63.0 58.5 54.5 50.0 48.9 46.6 46.0 44.7 46.7
                     49.1 55.9 69.0 73.3 74.5 78.1 79.8 80.7 81.7 78.1 82.8 84.3
BAROMETRIC PRES    : 30.004
…
```

Appendix D: Consultation

This appendix includes Inter-Agency Consultation Group (ICG) and public consultation materials for the conformity analysis for the Hampton Roads Amended 2030 LRTP and FY 09-12 TIP. Attached in reverse chronological order are:

- March 17, 2011 letter from the HRTPO documenting MPO approval of the draft conformity analysis and its finding of conformity.

- Public notice for the draft conformity analysis (fourteen-day public review).
    - Public Notice Email, and
    - HRTPO Website Notice.

- Minutes of 12/1/2010 ICG Meeting

- Public notice of a fourteen-day public review period for the project lists for modeling for the conformity analysis, issued following the ICG meeting. (The project lists are presented separately, in Appendix E.)
    - Public Notice Email (2), and
    - HRTPO Website Notice (Excerpt).

- December 1, 2010 (date of ICG Meeting)
    - Public notice on the HRTPO website for the meeting (continued posting)
    - ICG Meeting Presentation (PowerPoint slides)

- November 26, 2010 HRTPO Public Notice for the ICG Meeting with the TTAC meeting notice:
    - Public Notice Email for TTAC,
    - HRTPO Website Notice for the TTAC Meeting (including a link to the ICG Agenda), and
    - TTAC agenda including a notice for the ICG meeting.

- November 23, 2010 Transmittal of the ICG Agenda Package:
    - Email Transmittal
    - ICG Agenda Package
        - ICG Agenda Attachment - Membership List
        - ICG Agenda Attachment - Modeling Methodology and Assumptions
        - ICG Agenda Attachment - Project Lists [*attached separately for convenient reference, in Appendix E*]
        - ICG Agenda Attachment - Conformity Analysis Schedule

- November 3, 2010 HRTPO Public Notice of Proposed Amendment

Appendix D – Consultation Record

March 17, 2011 letter from the HRTPO documenting MPO approval of the draft conformity analysis and its finding of conformity.

HAMPTON ROADS TPO
TRANSPORTATION PLANNING ORGANIZATION

WILLIAM D. SESSOMS, JR., CHAIRMAN · MOLLY J. WARD, VICE CHAIR
DWIGHT L. FARMER, EXECUTIVE DIRECTOR/SECRETARY

March 17, 2011

Mr. Dennis W. Heuer, P.E.
Hampton Roads District Administrator
Virginia Department of Transportation
1700 North Main Street
Suffolk, VA 23434

Re: HRTPO Action

Dear Mr. Heuer:

This is to certify that the Hampton Roads TPO Board, at its meeting on March 17, 2011, approved the Hampton Roads, Virginia Eight-Hour Ozone Maintenance Area Transportation Conformity Analysis for the 2030 Long-Range Transportation Plan (LRTP) and the FY 09-12 Transportation Improvement Program (TIP). The 2030 LRTP and FY 2009-2012 TIP, as amended, and project lists for modeling for the conformity analysis were made available for public review for a two week period ending December 20, 2010 and no comments were received. The draft air quality conformity analysis and its recommendation for a finding of conformity was made available for public review from February 23, 2011 until March 8, 2011 and no comments were received.

The Executive Summary of the Hampton Roads, Virginia Eight-Hour Ozone Maintenance Area Transportation Conformity Analysis for the 2030 Long-Range Transportation Plan and FY 09-12 Transportation Improvement Program is available for viewing and printing through the HRTPO website at www.hrtpo.org.

Please advise me of any additional information you may need in regard to the foregoing.

Sincerely,

C. Ravanbakht

Camelia Ravanbakht, Ph.D.
Deputy Executive Director

JDP/kg

MAILED
MAR 17 2011
HRPDC

THE REGIONAL BUILDING ·723 WOODLAKE DRIVE · CHESAPEAKE, VIRGINIA 23320 ·757.420. 8300 · FAX 757.523.4881

JDP

Appendix D – Consultation Record

Public notice for the draft conformity analysis (fourteen-day public review period)

- Public Notice Email, and
- HRTPO Website Notice.

HRTPO Weekly Update - Message (HTML)

File Edit View Insert Format Tools Actions Help Adobe PDF

Reply | Reply to All | Forward

From: HRTPO [news@hrpdcva.ccsend.com] on behalf of HRTPO [news@hrpdcva.gov]
Sent: Wed 2/23/2011 2:06 PM
To: Voigt, Christopher G.
Cc:
Subject: HRTPO Weekly Update

Having trouble viewing this email? Click here

Like

HRTPO Weekly Update

Camelia Ravanbakht
Deputy Executive Director
Tel: (757) 420-8300
Fax: (757) 523-4881
TTY: (757) 390-2578
cravanbakht@hrpdcva.gov
http://www.hrtpo.org

The Hampton Roads Transportation Planning Organization (HRTPO) is happy to provide this Weekly Update about upcoming HRTPO meetings and other transportation-related events. The links below will take you to the HRTPO website, www.hrtpo.org, or other external websites for more information.

Upcoming Meeting Notices/Save the Date!

Below is a list of upcoming meetings. All meetings are at the Regional Building, 723 Woodlake Drive, Chesapeake, VA 23320, unless otherwise indicated. Save the dates!

2034 LRTP Public Meeting, Wednesday, February 23, 2011, 5-7 pm, City Center at Oyster Point, Fountain Plaza 2, 700 Town Center Drive, Newport News VA 23606

2034 LRTP Subcommittee, Thursday, February 24, 2011, 10 am

TTAC, Wednesday, March 2, 2011, 9:30 am

FTAC, Thursday, March 3, 2011, 10:00am, Va. Port Authority, 600 World Trade Center, Norfolk

CTAC, Thursday, March 10, 2011, 5-7 pm

HRTPO Board, Thursday, March 17, 2011, 10:30 am

HRTPO Weekly Update - Message (HTML)

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Reply | Reply to All | Forward

From: HRTPO [news@hrpdcva.ccsend.com] on behalf of HRTPO [news@hrpdcva.gov]
Sent: Wed 2/23/2011 2:06 PM
To: Voigt, Christopher G.
Cc:
Subject: HRTPO Weekly Update

Norfolk

CTAC, Thursday, March 10, 2011, 5-7 pm

HRTPO Board, Thursday, March 17, 2011, 10:30 am

Check out the latest on the CROSSINGS, the HRTPO Blog.

Reducing Congestion Through Value Pricing

Average Fuel Prices Top $3 Per Gallon

Labor, Business Leaders Call for Raising Gas Tax

AASHTO's Annual Legislative Conference Takes Place in 2 Weeks

Hampton Roads Airline Passenger Volumes Decrease in 2010

For Your Information

Below are items of Regional interest:

North American Marine Highway and Logisitics Conference, April 5-6, 2011, CCMIT, Baltimore, Md

2011 International Conference on Ecology and Transportation (ICOET) -- "Sustainability in Motion" August 21-25, 2011, The Westin Seattle Hotel and Conference Center, Seattle, Washington

Brief summary of the 2012 White House budget and Reauthorization

VTA 2011 Annual Conference, June 9 - 10, 2011, Portsmouth, VA

Public Notice

HRTPO Weekly Update - Message (HTML)

File Edit View Insert Format Tools Actions Help Adobe PDF

Reply | Reply to All | Forward

From: HRTPO [news@hrpdcva.ccsend.com] on behalf of HRTPO [news@hrpdcva.gov]
Sent: Wed 2/23/2011 2:06 PM
To: Voigt, Christopher G.
Cc:
Subject: HRTPO Weekly Update

Below are items of Regional interest:

North American Marine Highway and Logisitics Conference, April 5-6, 2011, CCMIT, Baltimore, Md

2011 International Conference on Ecology and Transportation (ICOET) -- "Sustainability in Motion" August 21-25, 2011, The Westin Seattle Hotel and Conference Center, Seattle, Washington

Brief summary of the 2012 White House budget and Reauthorization

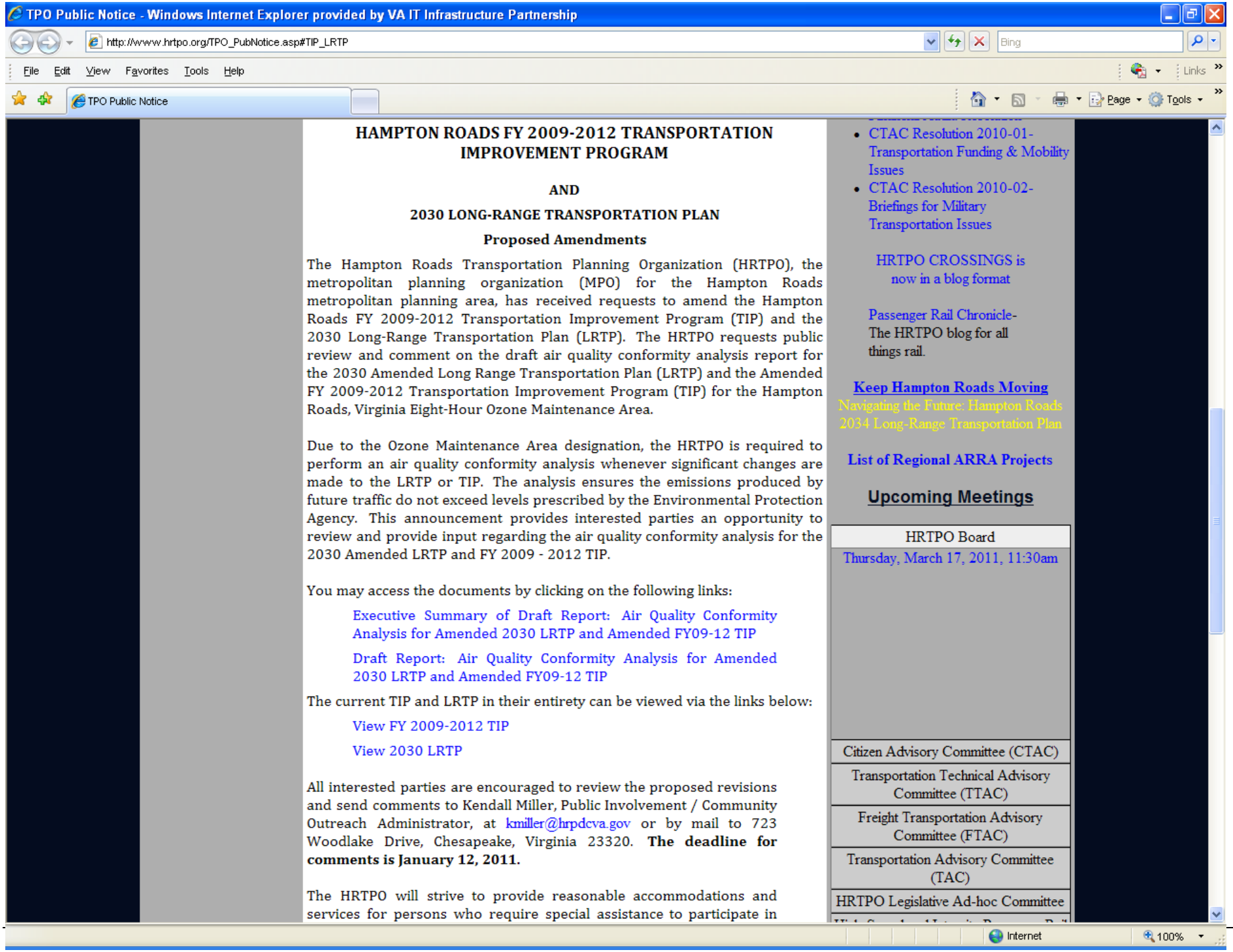
VTA 2011 Annual Conference, June 9 - 10, 2011, Portsmouth, VA

Public Notice

2034 LRTP Public Meetings

Hampton Roads FY 2009-2012 Transportation Improvement Program and 2030 Long-Range Transportation Plan Proposed Amendments

The HRTPO will strive to provide reasonable accommodations and services for persons who require special assistance to participate in this public involvement opportunity. Contact Kendall Miller, Public Involvement / Community Outreach Administrator at (757) 420-8300 for more information.


TPO Public Notice - Windows Internet Explorer provided by VA IT Infrastructure Partnership
http://www.hrtpo.org/TPO_PubNotice.asp#TIP_LRTP
File Edit View Favorites Tools Help
TPO Public Notice
Page Tools
HAMPTON ROADS FY 2009-2012 TRANSPORTATION IMPROVEMENT PROGRAM
AND
2030 LONG-RANGE TRANSPORTATION PLAN
Proposed Amendments
The Hampton Roads Transportation Planning Organization (HRTPO), the metropolitan planning organization (MPO) for the Hampton Roads metropolitan planning area, has received requests to amend the Hampton Roads FY 2009-2012 Transportation Improvement Program (TIP) and the 2030 Long-Range Transportation Plan (LRTP). The HRTPO requests public review and comment on the draft air quality conformity analysis report for the 2030 Amended Long Range Transportation Plan (LRTP) and the Amended FY 2009-2012 Transportation Improvement Program (TIP) for the Hampton Roads, Virginia Eight-Hour Ozone Maintenance Area.
Due to the Ozone Maintenance Area designation, the HRTPO is required to perform an air quality conformity analysis whenever significant changes are made to the LRTP or TIP. The analysis ensures the emissions produced by future traffic do not exceed levels prescribed by the Environmental Protection Agency. This announcement provides interested parties an opportunity to review and provide input regarding the air quality conformity analysis for the 2030 Amended LRTP and FY 2009 - 2012 TIP.
You may access the documents by clicking on the following links:
Executive Summary of Draft Report: Air Quality Conformity Analysis for Amended 2030 LRTP and Amended FY09-12 TIP
Draft Report: Air Quality Conformity Analysis for Amended 2030 LRTP and Amended FY09-12 TIP
The current TIP and LRTP in their entirety can be viewed via the links below:
View FY 2009-2012 TIP
View 2030 LRTP
All interested parties are encouraged to review the proposed revisions and send comments to Kendall Miller, Public Involvement / Community Outreach Administrator, at kmiller@hrpdcva.gov or by mail to 723 Woodlake Drive, Chesapeake, Virginia 23320. The deadline for comments is January 12, 2011.
The HRTPO will strive to provide reasonable accommodations and services for persons who require special assistance to participate in
CTAC Resolution 2010-01- Transportation Funding & Mobility Issues
CTAC Resolution 2010-02- Briefings for Military Transportation Issues
HRTPO CROSSINGS is now in a blog format
Passenger Rail Chronicle- The HRTPO blog for all things rail.
Keep Hampton Roads Moving
Navigating the Future: Hampton Roads 2034 Long-Range Transportation Plan
List of Regional ARRA Projects
Upcoming Meetings
HRTPO Board
Thursday, March 17, 2011, 11:30am
Citizen Advisory Committee (CTAC)
Transportation Technical Advisory Committee (TTAC)
Freight Transportation Advisory Committee (FTAC)
Transportation Advisory Committee (TAC)
HRTPO Legislative Ad-hoc Committee
Internet
100%

Hampton Roads, Virginia Eight-Hour Ozone Maintenance Area

Transportation Conformity Analysis

2030 Long Range Transportation Plan and FY 09-12 Transportation Improvement Program

DRAFT EXECUTIVE SUMMARY

Prepared by: Virginia Department of Transportation

February 2011

Virginia Department of Transportation
VDOT

Hampton Roads, Virginia Eight-Hour Ozone Maintenance Area

Transportation Conformity Analysis

2030 Long Range Transportation Plan and FY 09-12 Transportation Improvement Program

DRAFT REPORT

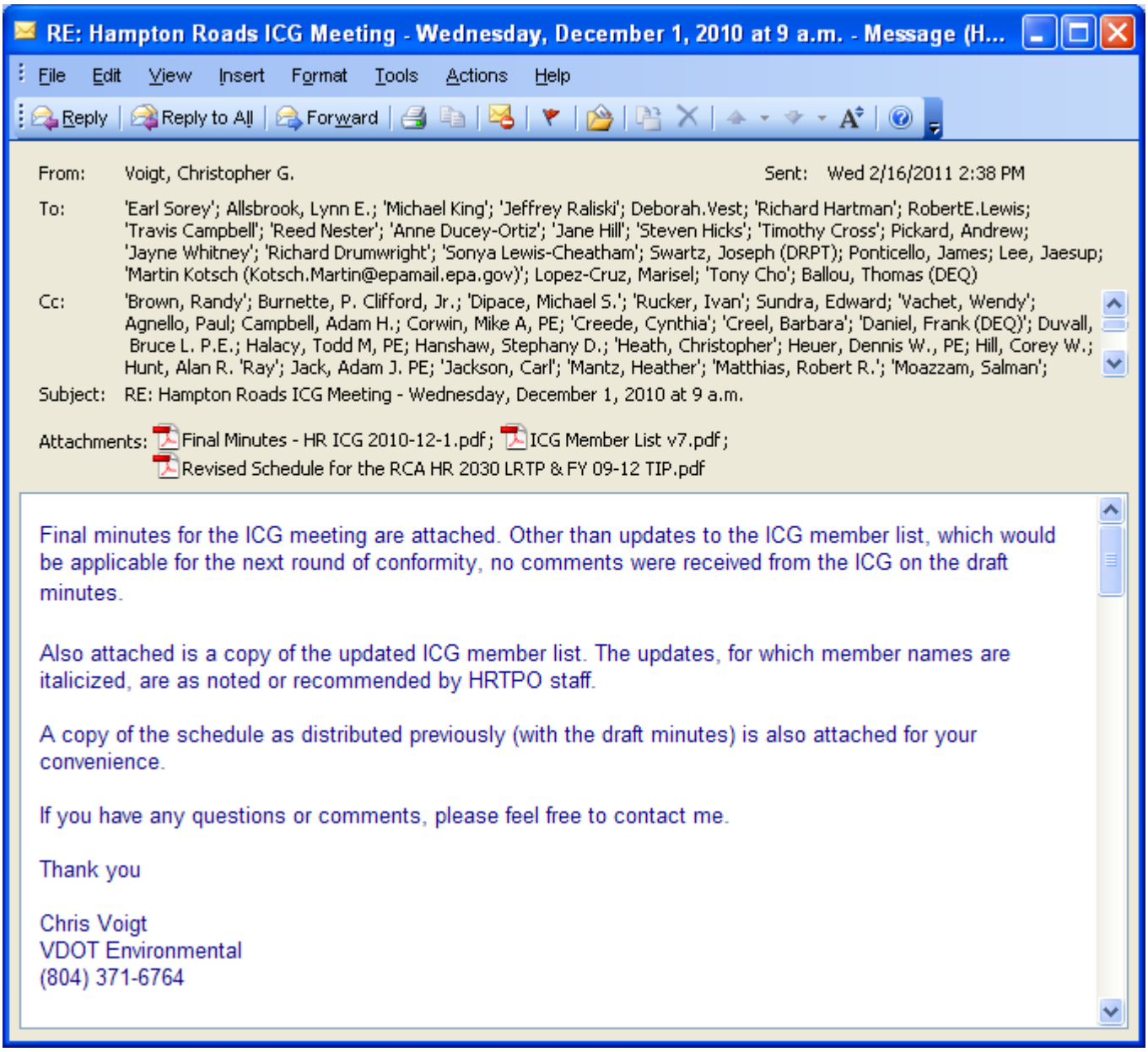
Prepared by: Virginia Department of Transportation

February 2011

Virginia Department of Transportation

Appendix D – Consultation Record

Minutes of 12/1/2010 ICG Meeting



RE: Hampton Roads ICG Meeting - Wednesday, December 1, 2010 at 9 a.m. - Message (H...

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From: Voigt, Christopher G. Sent: Wed 2/16/2011 2:38 PM

To: 'Earl Sorey'; Allsbrook, Lynn E.; 'Michael King'; 'Jeffrey Raliski'; Deborah.Vest; 'Richard Hartman'; RobertE.Lewis; 'Travis Campbell'; 'Reed Nester'; 'Anne Ducey-Ortiz'; 'Jane Hill'; 'Steven Hicks'; 'Timothy Cross'; Pickard, Andrew; 'Jayne Whitney'; 'Richard Drumwright'; 'Sonya Lewis-Cheatham'; Swartz, Joseph (DRPT); Ponticello, James; Lee, Jaesup; 'Martin Kotsch (Kotsch.Martin@epamail.epa.gov)'; Lopez-Cruz, Marisel; 'Tony Cho'; Ballou, Thomas (DEQ)

Cc: 'Brown, Randy'; Burnette, P. Clifford, Jr.; 'Dipace, Michael S.'; 'Rucker, Ivan'; Sundra, Edward; 'Vachet, Wendy'; Agnello, Paul; Campbell, Adam H.; Corwin, Mike A, PE; 'Creede, Cynthia'; 'Creel, Barbara'; 'Daniel, Frank (DEQ)'; Duvall, Bruce L. P.E.; Halacy, Todd M, PE; Hanshaw, Stephany D.; 'Heath, Christopher'; Heuer, Dennis W., PE; Hill, Corey W.; Hunt, Alan R. 'Ray'; Jack, Adam J. PE; 'Jackson, Carl'; 'Mantz, Heather'; 'Matthias, Robert R.'; 'Moazzam, Salman';

Subject: RE: Hampton Roads ICG Meeting - Wednesday, December 1, 2010 at 9 a.m.

Attachments: Final Minutes - HR ICG 2010-12-1.pdf; ICG Member List v7.pdf; Revised Schedule for the RCA HR 2030 LRTP & FY 09-12 TIP.pdf

Final minutes for the ICG meeting are attached. Other than updates to the ICG member list, which would be applicable for the next round of conformity, no comments were received from the ICG on the draft minutes.

Also attached is a copy of the updated ICG member list. The updates, for which member names are italicized, are as noted or recommended by HRTPO staff.

A copy of the schedule as distributed previously (with the draft minutes) is also attached for your convenience.

If you have any questions or comments, please feel free to contact me.

Thank you

Chris Voigt
VDOT Environmental
(804) 371-6764

MINUTES OF THE HAMPTON ROADS
INTER-AGENCY CONSULTATION GROUP (ICG) MEETING

9 a.m., December 1, 2010
The Regional Boardroom
723 Woodlake Drive, Chesapeake, Virginia 23320

MEMBERS ATTENDING:

Richard Drumwright (Chairman), Williamsburg Area Transport Authority
Earl Sorey, City of Chesapeake
Lynn Allsbrook, City of Hampton
Michael King, City of Newport News
Jeffrey Raliski, City of Norfolk
* Deborah Vest, City of Poquoson
Richard Hartman, City of Portsmouth
Robert Lewis, City of Suffolk
Travis Campbell, City of Virginia Beach
Reed Nester, City of Williamsburg
Anne Ducey-Ortiz, Gloucester County
Jane Hill, Isle of Wight County
Steven Hicks, James City County
Tim Cross, York County
Andy Pickard, HRTPO
Jayne Whitney, HRT
Sonya Lewis-Cheatham, VDEQ
* Joseph Swartz, VDRPT
Jim Ponticello, VDOT (C/O Environmental)
Jaesup Lee, VDOT (C/O Planning)
Marisel Lopez-Cruz, US DOT (FHWA)
* Tony Cho, US DOT (FTA)
Martin Kotsch, US EPA

HAMPTON ROADS AIR QUALITY COMMITTEE (LOCAL PLANNING ORGANIZATION FOR AIR QUALITY)*:*

Tom Ballou, Virginia Department of Environmental Quality

OTHER AGENCY:

Mike Kimbrel, HRTPO
Keith Nichols, HRTPO
Benito Pérez, HRTPO
Joe Paulus, HRTPO
Camelia Ravanbakht, HRTPO
Stephanie Shealey, HRTPO
Dale Stith, HRTPO
Kevin Abt, VPA
Tony Gibson, VDOT
Ray Hunt, VDOT
Eric Stringfield, VDOT
Christopher Voigt, VDOT
Ivan Rucker, FHWA
Ed Sundra, US DOT (FHWA)

PUBLIC:

None recorded.

 # Participated by telephone conference call.
** Neither present nor represented by proxy.*

FHWA – Federal Highway Administration
FTA – Federal Transit Administration
HRTPO – Hampton Roads Transportation Planning Organization
HRT – Hampton Roads Transit
US EPA – US Environmental Protection Agency
US DOT – US Dept. of Transportation
VDEQ – Virginia Dept. of Environmental Quality
VDOT – Virginia Dept. of Transportation
VDRPT – Virginia Dept. of Rail and Public Transit
VPA – Virginia Port Authority

Call to Order

The meeting was called to order at approximately 9:10 a.m. by the Mr. Richard Drumwright, Williamsburg Area Transportation Authority, who serves the chairman of the HRTPO Transportation Technical Advisory Committee (TTAC) and agreed to serve as chairman for this meeting of the ICG.

Mr. Tom Ballou of the VDEQ, Mr. Ed Sundra and Ms. Marisel Lopez-Cruz of FHWA, and Mr. Martin Kotsch of the US EPA participated in the meeting via teleconference.

Public Comment Period

Mr. Drumwright provided an opportunity for any members of the public that were present at the meeting to speak for up to three minutes each. No comments were received. He noted that written comments had been received from one individual, and that copies of those comments had been provided on-table. A copy of the written comments is attached to these minutes.

Approval of Agenda

Mr. Drumwright requested comments on the agenda including suggestions for additions or deletions. No comments or requests for changes were received.

Mr. Drumwright then introduced Mr. Christopher Voigt, VDOT, to give a presentation on the main agenda topics. Print copies of the presentation had been provided on-table and distributed beforehand by email to those participating by teleconference.

MAIN AGENDA

1. Inter-Agency Consultation Group (ICG) Membership

Mr. Voigt presented a list of the current members of the ICG, a copy of which was included with the agenda package distributed by email a week before the meeting. An opportunity to make updates to the list was provided to those in attendance. No requests for updates or changes to the membership list were received.

2. Regional Conformity Analysis for the Hampton Roads Amended 2030 Long Range Transportation Plan (LRTP) & FY 09-12 Transportation Improvement Program (TIP)

Mr. Voigt noted that both federal and state regulations require consultation for transportation conformity purposes. Additionally, HRTPO conformity consultation procedures (last updated in 2005) are being followed for this conformity analysis.

The regulations and procedures specifically require consultation for:

- the schedule for the conformity analysis, provided in draft form as Attachment 2a to the agenda. (Consultation on this item is a requirement of the ICG Procedures and not the federal or state regulations).
- the emission model and associated methods and assumptions. More detail is provided in the draft report text, which was included as Attachment 2b to the agenda.

and

- the identification of regionally significant projects, which are noted in the HRTPO project lists for the Amended 2030 LRTP & FY 09-12 TIP that were provided as Attachment 2c to the agenda.

Agenda Item #1: Current ICG Membership

City/County			
City of Chesapeake		Earl	Sorey
City of Hampton		Lynn	Allsbrook
City of Newport News		Michael	King
City of Norfolk		Jeffrey	Raliski
City of Poquoson		Deborah	Vest
City of Portsmouth		Richard	Hartman
City of Suffolk		Robert	Lewis
City of Virginia Beach		Travis	Campbell
City of Williamsburg		Reed	Nester
Gloucester County		Anne	Ducey-Ortiz
Isle of Wight County		Jane	Hill
James City County		Steven	Hicks
York County		Timothy	Cross
Regional			
Hampton Roads Transportation Planning Organization		Andy	Pickard
Hampton Roads Transit		Jayne	Whitney
Williamsburg Area Transit Authority		Richard	Drumwright
State			
Virginia Dept. of Environmental Quality		Sonya	Lewis-Cheatham
Virginia Dept. of Rail & Public Transportation		Joseph	Swartz
Virginia Dept. of Transportation – C/O Environmental		Jim	Ponticello
Virginia Dept. of Transportation – C/O Planning		Jaesup	Lee
Federal			
Environmental Protection Agency		Martin	Kotsch
Federal Highway Administration		Marisel	Lopez-Cruz
Federal Transit Administration		Tony	Cho
Alternates / Other (non-voting)			
City of Suffolk	*Alternate*	Sherry	Earley
	Other	Scott	Mills
James City County		Allen	Murphy
US Navy		Jennifer	Tabor

The federal conformity rule specifies key conformity criteria in section 93.109, including: latest planning assumptions (93.110), latest emissions model (93.111), consultation (93.112), transportation control measures or TCMs (93.113b & c), and emissions budget (93.118).

Mr. Voigt highlighted fiscal constraint (93.108) as a key criterion in the federal conformity rule. Fiscal constraint is effectively a prerequisite for the conformity analysis as it is not assessed or otherwise analyzed in the conformity analysis itself, but is needed in order for the conformity analysis to be approved by the US DOT. To meet the federal criterion for fiscal constraint, the LRTP and TIP project lists provided for the conformity analysis by HRTPO and District planning staff must be fiscally constrained.

2(a). Draft Conformity Analysis Schedule

A copy of the proposed schedule was included in the agenda package. An excerpt (copied below) showing just the steps in the conformity analysis was presented at the meeting. Consultation items and approval steps were highlighted in the presentation.

Draft Conformity Analysis Schedule

December 2010	• **1st: Interagency Consultation Group (ICG) Kickoff Meeting**: Review of methodology, assumptions and the project list for modeling for the conformity analysis. *PROJECT LIST FOR MODELING FINALIZED AT THE ICG. ANY SUBSEQUENT CHANGES MAY REQUIRE RESTARTING THE CONFORMITY PROCESS FROM THIS STEP.* • Initiation of 14-day public review period on the project list(s), as required by the 2009 Hampton Roads Public Participation Plan (PPP)
January 2011	• 5th: Transportation network modeling completed & results transmitted to VDOT Air Quality. ○ Emission modeling and update of associated draft conformity analysis report text initiated. • **19th: Draft conformity analysis completed.** Emission modeling, conformity determination & draft report. • 20th-24th: VDOT/VDEQ/HRTPO staff review of draft conformity analysis. • 25th: Draft Conformity Analysis transmitted to HRTPO for the TTAC meeting agenda. ○ 26th: HRTPO Initiation of 14-day Public Review for the draft conformity analysis & finding (ends 2/9).
February	• 2nd: TTAC reviews & recommends approval of draft conformity analysis & finding, subject to receipt of no adverse comment in public review or none requiring TTAC review. • 10th-14th: VDOT/HRTPO staff review and draft response to comments received (if any) in public review, for consideration by the HRTPO. *HRTPO ANNUAL RETREAT (Approval of the draft conformity analysis is therefore deferred to next month).*
March	**16th (17th): TPO approval of the final draft conformity analysis and finding** (and the response to comments if any). (Consent Agenda) Next Day: • TPO approval letter issued and signed copy emailed to VDOT. • VDOT emails the Final Conformity Analysis with the TPO Letter to FHWA to initiate the federal review and approval process. • VDOT sends Final Report with TPO approval letter to printing. Federal review period (typically 45 days) begins upon receipt of the final report by email. FHWA coordinates the review with FTA and consults with EPA. • 24th: VDOT transmits print copies of the Final Conformity Analysis and TPO Letter to FHWA for their records.
May	• **1st: US DOT Finding of Conformity** (letter from FHWA).

Ms. Camelia Ravanbahkt, HRTPO, confirmed that the HRTPO Board will not be taking actions in their annual meeting scheduled for February 2011. The proposed approval by the HRTPO Board of the draft conformity analysis shown on the draft schedule for February 2011 will therefore have to be delayed to the following month. Mr. Jim Ponticello, VDOT, asked if the Transportation Technical Advisory Committee (TTAC) could be empowered by the HRTPO Board to approve the conformity analysis on their behalf. Ms. Ravanbakht indicated that it was not the usual practice of the HRTPO Board to do so.

Given the delay in approval of the draft conformity analysis from February to March 2011, Mr. Voigt stated that the final approval by the US DOT would therefore be delayed a month from April 2011 as shown on the draft schedule to May 2011.

2(b). Modeling Methodology and Assumptions

Mr. Voigt noted that a detailed review of the methodology and assumptions was included with the agenda package distributed before the meeting. A general overview of the methodology and assumptions to be applied in the analysis was then presented.

The first slide showed that emissions are calculated as the product of estimates for emission factors and vehicle-miles-traveled (VMT). As in previous analyses for Hampton Roads, emissions will be estimated for the primary precursors to ozone formation, namely nitrogen oxides (NO_x) and volatile organic compounds (VOC). The conformity tests to be applied are emission budgets established for these pollutants in the applicable state implementation plan revision, which is the maintenance plan for the eight-hour ozone standard for Hampton Roads approved by EPA in 2007.

The analysis years for the conformity (budget) tests for this analysis will be the same as in the previous conformity analysis for the region. The years listed on the slide as the ones to be tested include those for which budgets have been specified in the applicable implementation plan revision (2011 and 2018, as specified in the maintenance plan), the horizon year of the LRTP (2030), and an interim year such that other analysis years are no more than ten years apart. The year 2020 was selected as an interim year to satisfy this requirement.

The modeling for emission factors and VMT was then reviewed. For emission factors, to meet the requirements of the federal conformity rule at 93.111 for the use of the latest emission model, MOBILE6.2 will be applied for this analysis. This is within the grace period for the transition to the new MOVES2010 model. This selection of the latest emission model is reviewed in more detail later in the presentation.

Sensitivities for emission factors generated with the MOBILE6.2 model were noted generally as including vehicle type and year/mileage, fuel specifications, roadway class and speeds. There were no updates to the inputs for the modeling for emission factors for this analysis since the last analysis, which was completed in June of this year. The modeled emission factors to be applied in this analysis therefore will be the same as in the last analysis.

Updated forecasts for VMT will be developed using the regional transportation model (TP+) along with a post-processor, following the same general approach as applied in the previous conformity analysis. The selection of socioeconomic forecasts and identification of regionally significant projects (i.e., the LRTP and TIP project lists) for the conformity analysis are reviewed in more detail later in the presentation.

It was noted on the slide that separate calculations are done for off-network facilities such as local and collector roads that are not captured in the regional network model. Congested speeds are estimated using standard Bureau of Public Roads (BPR) formulae for signalized and unsignalized facilities.

Additional slides were presented on the selection of the latest emission model, planning assumptions and regionally significant projects. First, the selection of the latest emission model was reviewed. The federal conformity regulation at 40 CFR 93.111(a) requires: "*The conformity determination must be based on the latest emission estimation model available*." A grace period is provided in the regulation at 40 CFR 93.111(c) to provide a window for transitioning to new models when they are released: "*Transportation plan and TIP conformity analyses for which the emissions analysis was begun during the grace period or before the Federal Register notice of availability of the latest emission model may continue to use the previous version of the model*."

EPA provided a two-year grace period with the release of the new Motor Vehicle Emission Simulator model ("MOVES2010") on March 2, 2010. The current EPA model (MOBILE6.2) was selected for application in this analysis pending an orderly transition to the new MOVES model in the coming year, within the grace period permitted by EPA. The transition will involve the development and approval of SIP revisions using MOVES to establish new motor vehicle emission budgets for the region.

Requirements for the use of latest planning assumptions requirements are specified in the federal conformity rule at 40 CFR 93.110(b): "*Assumptions must be derived from the estimates of current and future population, employment, travel, and congestion most recently developed by the MPO or other agency authorized to make such estimates and approved by the MPO...*" For this conformity analysis, the socioeconomic forecasts for 2030 as used in previous conformity analyses for the 2030 LRTP were recommended. A summary tabulation of the 2030 (and associated interim year) forecasts was presented for reference as follows:

Year	Hampton Roads LRTP Study Area			
	Population	Households	Automobiles	Employment
2011	1,693,101	627,306	1,282,689	1,045,049
2018	1,796,281	668,383	1,408,788	1,101,666
2020	1,825,772	680,130	1,444,843	1,117,867
2030	1,973,250	738,865	1,625,000	1,198,775

No other comments were received on the proposed methodology or assumptions.

2(c). Regionally Significant Projects (Draft Project Lists for the Amended 2030 LRTP & FY 09-12 TIP)

Mr. Voigt noted that draft project lists for modeling for the conformity analysis for the amended 2030 LRTP and FY 09-12 TIP were included with the agenda package distributed for the meeting. The lists are as provided by HRTPO and District planning staff.

Key regulatory requirements for the project lists were presented as follows:

- 40 CFR 93.101: "*Regionally significant project means a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel.*"
- 40 CFR 93.108: "*Transportation plans and TIPs must be fiscally constrained consistent with DOT's metropolitan planning regulations at 23 CFR part 450 in order to be found in conformity.*"
- 23 CFR 450.324g: "*Each project or project phase included in the TIP shall be consistent with the approved metropolitan transportation plan.*"

In other words, the project lists for modeling for the conformity analysis need to include all regionally significant projects for the Plan and TIP, which must meet fiscal constraint and consistency requirements. Additionally, any adjustments as specified by District and TPO Planning staff to the LRTP and TIP project lists would need to meet these same requirements.

ICG members requested minor changes to the draft project lists for several projects. Due to the number of changes requested, however, it was requested that the requests be provided (in writing) to TPO and VDOT District staff by Friday, December 3, 2010 for inclusion in the final project lists for the conformity analysis. In general, the changes involved the following projects:

- Skiffes Connector, pending TPO approval, for PE/RW only. (A.Pickard, TPO)
- Mt.Pleasant Road (C. Ravanbakht, TPO, and T. Gibson, VDOT)
- Removal of Va Beach Blvd due to being constructed (J. Raliski, Norfolk)
- Minor changes for transit (T. Gibson, VDOT; R. Drumwright, WATA; and J. Whitney, HRT)

Consensus Items (per ICG Procedures)

ICG consensus for the following items was requested:

- Schedule (Attachment 2a)

- Methodology & Assumptions (See Attachment 2b)
  Latest emission model: MOBILE6.2, within grace period for MOVES2010

- Latest Planning Assumptions (and associated modeling data and assumptions):
  Including the use of 2030 socioeconomic forecasts as previously approved for use with the 2030 LRTP

- Regionally Significant Projects (Attachment 2c)
  2030 LRTP and FY 09-12 TIP Project Lists, with amendments as agreed

Mr. Jim Ponticello, VDOT, made a motion to approve the consensus items as presented with the delay in the schedule as previously noted, and project list changes as discussed. Mr. Hicks, James City County, seconded the motion. The ICG voted unanimously to approve the motion.

3. ICG Conformity Consultation Procedures Update – Advance Notice

Given time constraints, this agenda item was addressed in an abbreviated fashion. A full discussion will be held at a future meeting.

Mr. Voigt noted that the current ICG conformity consultation procedures were last updated in 2005. A copy of the 2005 procedures is available on the HRTPO website at: http://www.hrtpo.org/Documents/Reports/_Rev_HR_ICP2005.pdf. The 2005 Procedures were developed based on federal conformity rule requirements specified in 40 CFR 93.105.

A new state regulation for transportation conformity, 9 VAC 5–151, came into force earlier this year following approval by the US EPA. The state regulation was developed by the VDEQ in response to federal requirements specified in the conformity rule at 40 CFR Part 51. EPA approved the state regulation via Federal Register notice, effective January 19, 2010.

While the new state regulation generally mirrors existing requirements for consultation in the federal conformity rule, one key change is the addition of the Lead Planning Organization (LPO) for air quality to the list of parties to be consulted. For Hampton Roads, the LPO is the Hampton Roads Air Quality Committee (HRAQC). To meet this new requirement, the VDEQ staff representative for the HRAQC was added to the consultation list for this conformity analysis and is participating today by teleconference.

The planned update to the ICG procedures document will be initiated following the completion of this conformity analysis, and will incorporate or otherwise address specific language as appropriate from the new state regulation, process and other changes as may be identified in the course of the review, and editorial changes as needed. A recommended additional change is to transition to the TTAC as the forum for consultation for conformity purposes. This change to a TTAC lead on conformity consultation would eliminate the need for a separate ICG with separate agendas, meeting times, membership etc.

Ms. Ravanbakht indicated that, given other work, TPO staff had not had time to consider this item in detail and therefore were not in a position to respond today. They would need additional time to consider possible implications such as potential updates to other related processes.

Mr. Voigt agreed and noted that VDOT wanted to ensure that everyone was comfortable with the proposed change and had anticipated a need for more time for review by ICG members. An option was therefore included with the recommendations (listed on an upcoming slide) that would defer the discussion and decision on the proposed transition to the TTAC to the February 2011 TTAC meeting.

For background, Mr. Voigt directed the attention of the group to the slide listing advantages and disadvantages for the recommended transition to the TTAC. He noted that the federal regulations did not require a separate group for inter-agency consultation for conformity but only a consultation process involving specified parties.

A significant advantage of having the TTAC handle conformity consultation would be the elimination of the redundancy associated with having two separate committees (ICG and TTAC) involved in inter-agency consultation for conformity, especially given that the current ICG is comprised in large part of members from the TTAC. The consultation process would be streamlined by eliminating the need for a separate ICG meeting in addition to TTAC and TPO meetings.

An additional advantage would be meeting materials (agendas etc) and their means of distribution (email and website) would be standardized to those issued for the TTAC by the TPO.

Transitioning to the TTAC lead on consultation for conformity purposes would be relatively easy to do, involving two key steps: 1) updating the TTAC email list to include the EPA, VDEQ and LPO representatives (nominally a total of three additions), and 2) denoting TIP and LRTP updates, revision and amendments as conformity consultation items on TTAC agendas and involving the EPA, VDEQ and LPO representatives in consultation on those items. Teleconferencing may be needed for this purpose, but this is already being done for TTAC meetings. The key caveat would be that the proposed changes would be for conformity items only (and not the full TTAC agenda) and consultation only (not approvals).

Disadvantages of transitioning to the TTAC for conformity consultation were listed as having to make the two changes noted above (updating the email list and denoting conformity consultation items on the TTAC agenda) as well as making updates as needed to related documents, which may include the Public Participation Plan, TIP (and LRTP) Amendment Procedures, TTAC bylaws, and the Metropolitan Planning Agreement.

ICG members were then presented with recommendations that included two options for proceeding. The first option was for an ICG recommendation (today) for inter-agency consultation for conformity to be assumed by the TTAC. The ICG would be discontinued upon approval of updated Consultation Procedures by ICG, TTAC, and the TPO. There would be a procedural question on the need for ICG review and approval of revised procedures.

The second option for proceeding would be to defer a decision to a joint ICG/TTAC discussion that could be added to the agenda for the February 2011 TTAC meeting. Any comments/suggestions provided by ICG and TTAC members to VDOT by January 14, 2011 would be helpful in preparing for the meeting. This second option was noted as consistent with the request from Ms. Ravanbakht for additional time to review the proposal before making any decisions.

It was also noted that the update of the 2005 Conformity Consultation Procedures document would be initiated following the decision on the TTAC lead on conformity consultation, as the consultation procedures would be written for the specific group (ICG or TTAC) selected for future consultation activities.

The consensus of the group was to select the second option and defer a decision to a joint ICG/TTAC discussion to be held at the February 2011 TTAC. A presentation will therefore be scheduled for that meeting. Comments on the existing procedures and the proposal are requested by January 14, 2011.

4. Next Steps

Mr. Voigt listed next steps as follows:

- For the regional conformity analysis for the 2030 LRTP and FY 09-12 TIP:
  - Initiate modeling
  - Draft report completion targeted for the February 2011 TTAC

- For the planned update to the ICG Consultation Procedures:
  - Proceed with ICG recommendation (as noted above)

- ICG members to send comments on the existing procedures and the proposal to VDOT by 1/14/2011

For more information, contact:

Christopher Voigt,
VDOT Environmental
(804) 371-6764
christopher.voigt@vdot.virginia.gov

The ICG meeting was adjourned shortly after 9:30 a.m.

CV

Attachment – Public Comments

Public comment inputs

November 30, 2010

Interagency Consultation Group meeting agenda

Agenda item #2:

- Why is this current ICG effort addressing air quality conformity for both the recently Amended 2030 Plan and the (not recently amended) 09-12 TIP?
- Recommend using language that refers only to the Amended 2030 Plan.

Agenda item #3: This item indicates that the ICG committee structure and process will be streamlined. The agenda item indicates that the TTAC may be assigned to assume the ICG function(s). Comments and recommendations follow:

- The TTAC probably cannot be the ICG, because the ICG must include VDEQ and probably other representation.
- Recommend adding the ICG as an Advisory Committee to the TPO Bylaws to include a brief on its (limited) roles and mission.
- Recommend adding the ICG as an Advisory Committee to the State-TPO Metropolitan Planning Agreement (MPA) to include a brief on its (limited) roles and mission.
- Recommend clarifying the difference between the LPO, HRAQC and ICG committees in the MPA document.
- Recommend downsizing the membership of the ICG.
- Looking ahead to the coming 2034 Plan, there will be an air quality conformity determination step managed by the ICG that takes place which requires a TPO Board-approved list of projects. The process of public involvement, public awareness and even board awareness about this list of projects needs greater attention. If the list of projects does not have public support and is the list that gets analyzed for air quality (an expensive procedure), then it is hard (maybe not possible) to change the list later without incurring expense and losing time. This issue has caused problems and confusion in the past.

Overall comment:

- The term "Regional Conformity Analysis" is used to open agenda item number 2. History tells us that this term has led to unfortunate confusion in the past. In the past, this term meant (1) conformity with air quality determination analyses, (2) conformity with federal fiscal constraint criteria, (3) conformity with federally required public involvement and public awareness requirements. To some degree, unfortunately, this interpretation lingers. In my judgment, the ICG is responsible for the "regional air quality conformity analysis" process which includes assessments of modeling methods, assumptions that are applied, TAZ data being used, and air quality determination results. In contrast, conformity with federal fiscal constraint criteria is a TPO Board assessment and decision, not an ICG decision. Similarly, determinations of conformity with federal public involvement requirements go well beyond the prerogative of the ICG.

- As an ICG task, recommend using the term "Regional Air Quality Conformity Analysis" instead of the less clear (and sometimes presumptive) term Regional Conformity Analysis. This is not a minor point. In the past, the confusion surrounding the ICG process (still not included in TPO Bylaws or in the State-TPO Metropolitan Planning Agreement) included illegal letter balloting steps as concerns list of projects and the absence of minimum public involvement coordination. That was in the past. Much has already improved, but to continue moving forward, recommend introducing and using clear terminology.

Agenda item #4, Schedule of events:

- In February, recommend placing TPO board approval of the final ICG report on the normal TPO board agenda, not on the Consent Agenda.

Submitted by Ray Taylor

Hampton Roads Interagency Consultation Group

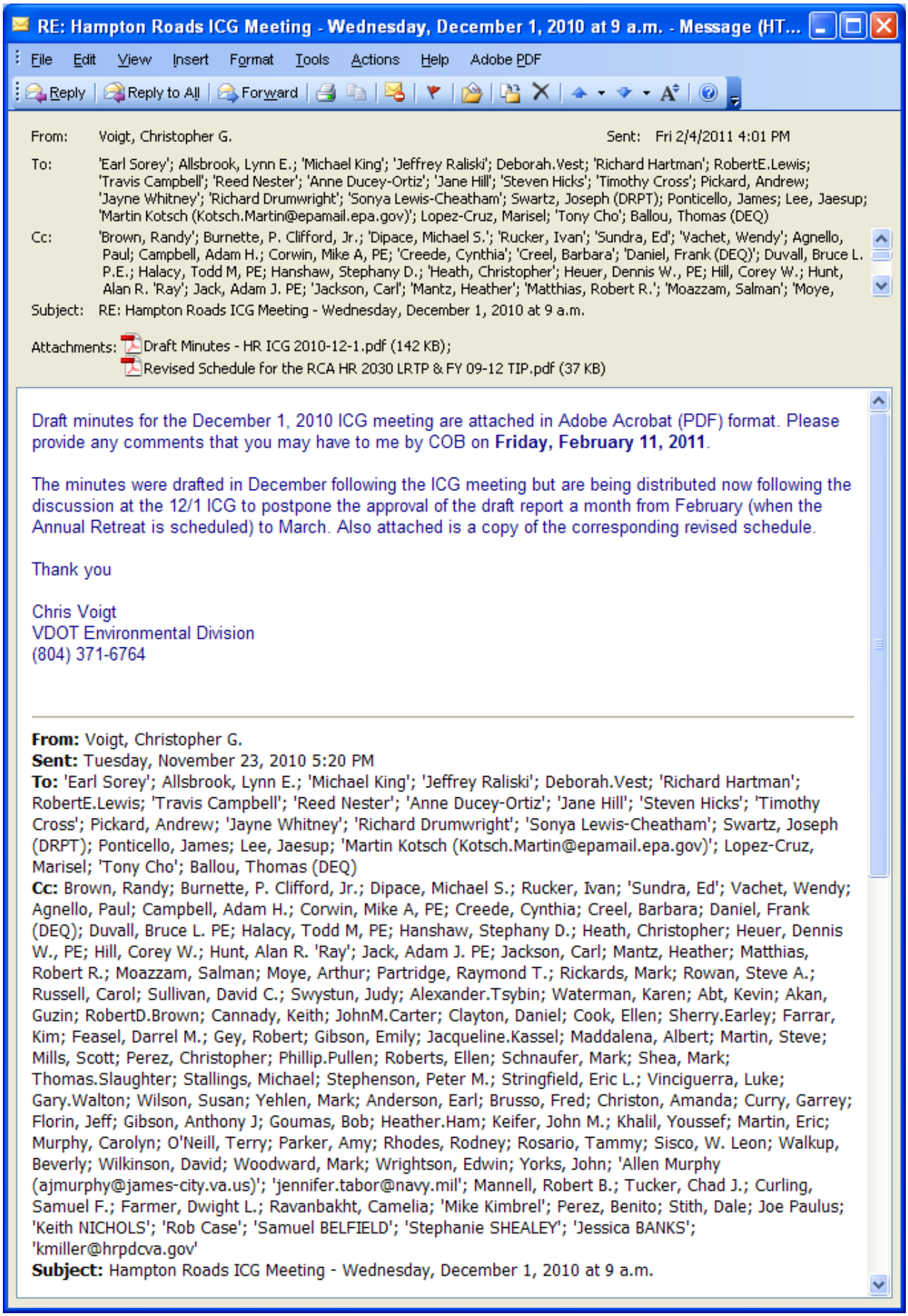
As of February 16, 2011

Agency		*Staff*	
City/County			
City of Chesapeake		Earl	Sorey
City of Hampton		Lynn	Allsbrook
City of Newport News		Michael	King
City of Norfolk		Jeffrey	Raliski
City of Poquoson		Deborah	Vest
City of Portsmouth		Richard	Hartman
City of Suffolk		Robert	Lewis
City of Virginia Beach		Travis	Campbell
City of Williamsburg		Reed	Nester
Gloucester County		Anne	Ducey-Ortiz
Isle of Wight County		Jane	Hill
James City County		Steven	Hicks
York County		Timothy	Cross
Regional			
Hampton Roads Transportation Planning Organization		*Dale*	*Stith*
Hampton Roads Transit		*Karen*	*Waterman*
Williamsburg Area Transit Authority		Richard	Drumwright
State			
Virginia Dept. of Environmental Quality		Sonya	Lewis-Cheatham
Virginia Dept. of Rail & Public Transportation		*Darrel*	*Feasel*
Virginia Dept. of Transportation – C/O Environmental		Jim	Ponticello
Virginia Dept. of Transportation – C/O Planning		Jaesup	Lee
Federal			
Environmental Protection Agency		Martin	Kotsch
Federal Highway Administration		Marisel	Lopez-Cruz
Federal Transit Administration		Tony	Cho
Alternates / Other (non-voting)			
City of Suffolk	*Alternate*	Sherry	Earley
	Other	Scott	Mills
James City County		Allen	Murphy
US Navy		Jennifer	Tabor

Regional Conformity Analysis Schedule (Revised)*
Hampton Roads Amended 2030 LRTP and FY 09-12 TIP

Month	Task
PROJECT LIST DEVELOPMENT	
November 2010	• 17th: TPO approval of amendment to the 2030 LRTP. • *Development of Plan and TIP project list for modeling initiated by TPO and VDOT staff.*
CONFORMITY ANALYSIS & APPROVALS	
December 2010	• 1st: Interagency Consultation Group (ICG) Kickoff Meeting: Review of methodology, assumptions and the project list for modeling for the conformity analysis. *PROJECT LIST FOR MODELING FINALIZED AT THE ICG. ANY SUBSEQUENT CHANGES MAY REQUIRE RESTARTING THE CONFORMITY PROCESS FROM THIS STEP.* • Initiation of 14-day public review period on the project list(s), as required by the 2009 Hampton Roads Public Participation Plan (PPP)
January 2011	• 5th: Transportation network modeling completed & results transmitted to VDOT Air Quality. o Emission modeling and update of associated draft conformity analysis report text initiated. • 28th: Draft conformity analysis completed. Emission modeling, conformity determination & draft report.
February	• 2/4-2/11: VDOT/VDEQ/HRTPO staff review of draft conformity analysis. • *17th: HRTPO ANNUAL RETREAT** • 18th: Draft Conformity Analysis transmitted to HRTPO for the TTAC meeting agenda. • 23rd: HRTPO Initiation of 14-day Public Review for the draft conformity analysis & finding.
March	• 2nd: TTAC reviews & recommends approval of draft conformity analysis & finding, subject to receipt of no adverse comment in public review or none requiring TTAC review. o 10th–15th: VDOT/HRTPO staff review and draft response to comments received (if any) in public review, for consideration by the HRTPO. • 17th: TPO approval of the final draft conformity analysis and finding (and the response to comments if any). (Consent Agenda) Next Day: • TPO approval letter issued and signed copy emailed to VDOT. • VDOT emails the Final Conformity Analysis with the TPO Letter to FHWA to initiate the federal review and approval process. • VDOT sends Final Report with TPO approval letter to printing. Federal review period (typically 45 days) begins upon receipt of the final report by email. FHWA coordinates the review with FTA and consults with EPA. • 24th: VDOT transmits print copies of the Final Conformity Analysis and TPO Letter to FHWA for their records.
May	• 1st: US DOT Finding of Conformity (letter from FHWA).

** HRTPO approval deferred at the ICG meeting from Feb. to March 2011 due to the Annual Retreat. Schedule adjusted to suit.*



RE: Hampton Roads ICG Meeting - Wednesday, December 1, 2010 at 9 a.m. - Message (HT...

File Edit View Insert Format Tools Actions Help Adobe PDF

Reply | Reply to All | Forward

From: Voigt, Christopher G. Sent: Fri 2/4/2011 4:01 PM

To: 'Earl Sorey'; Allsbrook, Lynn E.; 'Michael King'; 'Jeffrey Raliski'; Deborah.Vest; 'Richard Hartman'; RobertE.Lewis; 'Travis Campbell'; 'Reed Nester'; 'Anne Ducey-Ortiz'; 'Jane Hill'; 'Steven Hicks'; 'Timothy Cross'; Pickard, Andrew; 'Jayne Whitney'; 'Richard Drumwright'; 'Sonya Lewis-Cheatham'; Swartz, Joseph (DRPT); Ponticello, James; Lee, Jaesup; 'Martin Kotsch (Kotsch.Martin@epamail.epa.gov)'; Lopez-Cruz, Marisel; 'Tony Cho'; Ballou, Thomas (DEQ)

Cc: 'Brown, Randy'; Burnette, P. Clifford, Jr.; 'Dipace, Michael S.'; 'Rucker, Ivan'; 'Sundra, Ed'; 'Vachet, Wendy'; Agnello, Paul; Campbell, Adam H.; Corwin, Mike A, PE; 'Creede, Cynthia'; 'Creel, Barbara'; 'Daniel, Frank (DEQ)'; Duvall, Bruce L. P.E.; Halacy, Todd M, PE; Hanshaw, Stephany D.; 'Heath, Christopher'; Heuer, Dennis W., PE; Hill, Corey W.; Hunt, Alan R. 'Ray'; Jack, Adam J. PE; 'Jackson, Carl'; 'Mantz, Heather'; 'Matthias, Robert R.'; 'Moazzam, Salman'; 'Moye,

Subject: RE: Hampton Roads ICG Meeting - Wednesday, December 1, 2010 at 9 a.m.

Attachments: Draft Minutes - HR ICG 2010-12-1.pdf (142 KB);
Revised Schedule for the RCA HR 2030 LRTP & FY 09-12 TIP.pdf (37 KB)

Draft minutes for the December 1, 2010 ICG meeting are attached in Adobe Acrobat (PDF) format. Please provide any comments that you may have to me by COB on **Friday, February 11, 2011**.

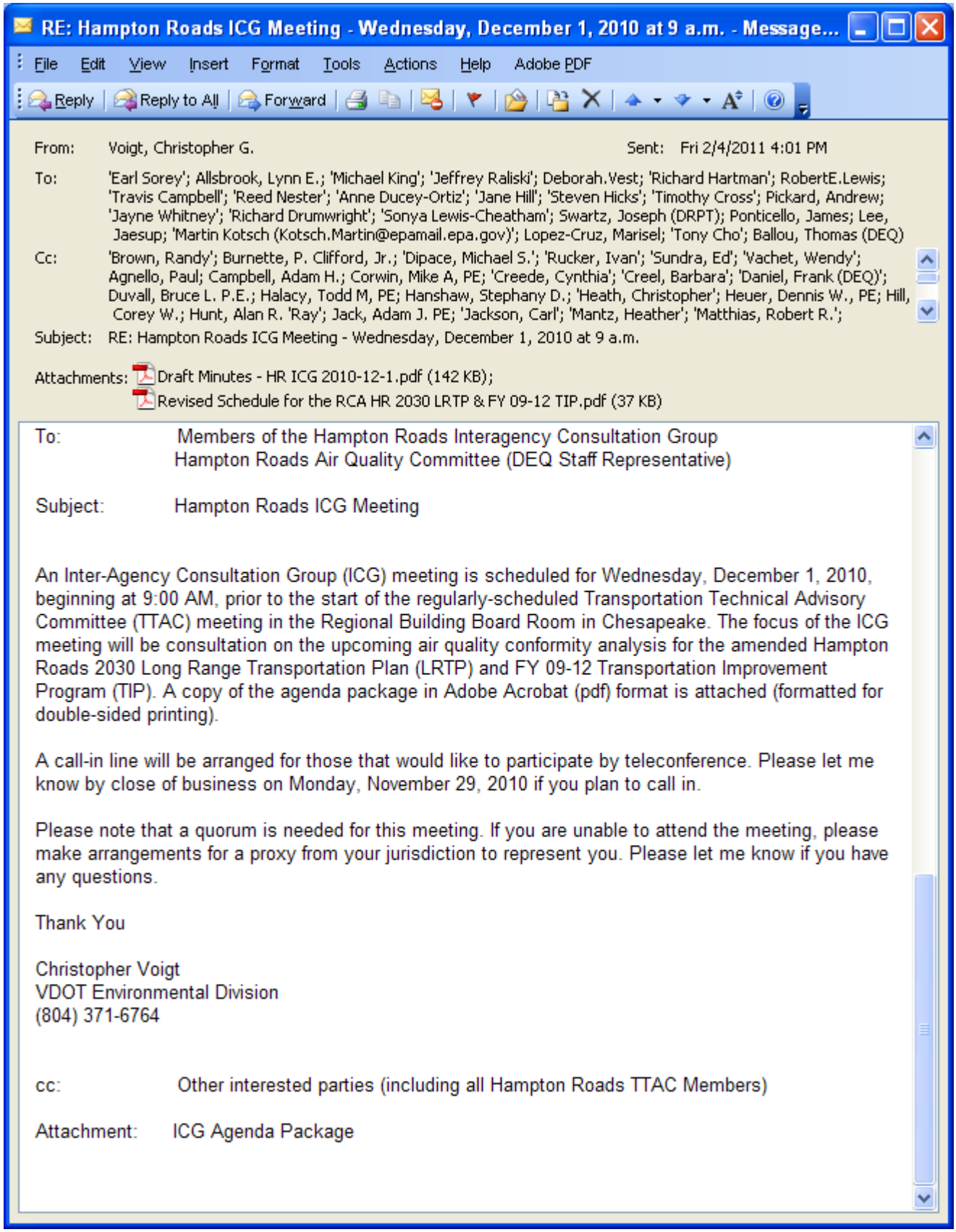
The minutes were drafted in December following the ICG meeting but are being distributed now following the discussion at the 12/1 ICG to postpone the approval of the draft report a month from February (when the Annual Retreat is scheduled) to March. Also attached is a copy of the corresponding revised schedule.

Thank you

Chris Voigt
VDOT Environmental Division
(804) 371-6764

From: Voigt, Christopher G.
Sent: Tuesday, November 23, 2010 5:20 PM
To: 'Earl Sorey'; Allsbrook, Lynn E.; 'Michael King'; 'Jeffrey Raliski'; Deborah.Vest; 'Richard Hartman'; RobertE.Lewis; 'Travis Campbell'; 'Reed Nester'; 'Anne Ducey-Ortiz'; 'Jane Hill'; 'Steven Hicks'; 'Timothy Cross'; Pickard, Andrew; 'Jayne Whitney'; 'Richard Drumwright'; 'Sonya Lewis-Cheatham'; Swartz, Joseph (DRPT); Ponticello, James; Lee, Jaesup; 'Martin Kotsch (Kotsch.Martin@epamail.epa.gov)'; Lopez-Cruz, Marisel; 'Tony Cho'; Ballou, Thomas (DEQ)
Cc: Brown, Randy; Burnette, P. Clifford, Jr.; Dipace, Michael S.; Rucker, Ivan; 'Sundra, Ed'; Vachet, Wendy; Agnello, Paul; Campbell, Adam H.; Corwin, Mike A, PE; Creede, Cynthia; Creel, Barbara; Daniel, Frank (DEQ); Duvall, Bruce L. PE; Halacy, Todd M, PE; Hanshaw, Stephany D.; Heath, Christopher; Heuer, Dennis W., PE; Hill, Corey W.; Hunt, Alan R. 'Ray'; Jack, Adam J. PE; Jackson, Carl; Mantz, Heather; Matthias, Robert R.; Moazzam, Salman; Moye, Arthur; Partridge, Raymond T.; Rickards, Mark; Rowan, Steve A.; Russell, Carol; Sullivan, David C.; Swystun, Judy; Alexander.Tsybin; Waterman, Karen; Abt, Kevin; Akan, Guzin; RobertD.Brown; Cannady, Keith; JohnM.Carter; Clayton, Daniel; Cook, Ellen; Sherry.Earley; Farrar, Kim; Feasel, Darrel M.; Gey, Robert; Gibson, Emily; Jacqueline.Kassel; Maddalena, Albert; Martin, Steve; Mills, Scott; Perez, Christopher; Phillip.Pullen; Roberts, Ellen; Schnaufer, Mark; Shea, Mark; Thomas.Slaughter; Stallings, Michael; Stephenson, Peter M.; Stringfield, Eric L.; Vinciguerra, Luke; Gary.Walton; Wilson, Susan; Yehlen, Mark; Anderson, Earl; Brusso, Fred; Christon, Amanda; Curry, Garrey; Florin, Jeff; Gibson, Anthony J; Goumas, Bob; Heather.Ham; Keifer, John M.; Khalil, Youssef; Martin, Eric; Murphy, Carolyn; O'Neill, Terry; Parker, Amy; Rhodes, Rodney; Rosario, Tammy; Sisco, W. Leon; Walkup, Beverly; Wilkinson, David; Woodward, Mark; Wrightson, Edwin; Yorks, John; 'Allen Murphy (ajmurphy@james-city.va.us)'; 'jennifer.tabor@navy.mil'; Mannell, Robert B.; Tucker, Chad J.; Curling, Samuel F.; Farmer, Dwight L.; Ravanbakht, Camelia; 'Mike Kimbrel'; Perez, Benito; Stith, Dale; Joe Paulus; 'Keith NICHOLS'; 'Rob Case'; 'Samuel BELFIELD'; 'Stephanie SHEALEY'; 'Jessica BANKS'; 'kmiller@hrpdcva.gov'
Subject: Hampton Roads ICG Meeting - Wednesday, December 1, 2010 at 9 a.m.

(continued)



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Cc: 'Brown, Randy'; Burnette, P. Clifford, Jr.; 'Dipace, Michael S.'; 'Rucker, Ivan'; 'Sundra, Ed'; 'Vachet, Wendy'; Agnello, Paul; Campbell, Adam H.; Corwin, Mike A, PE; 'Creede, Cynthia'; 'Creel, Barbara'; 'Daniel, Frank (DEQ)'; Duvall, Bruce L. P.E.; Halacy, Todd M, PE; Hanshaw, Stephany D.; 'Heath, Christopher'; Heuer, Dennis W., PE; Hill, Corey W.; Hunt, Alan R. 'Ray'; Jack, Adam J. PE; 'Jackson, Carl'; 'Mantz, Heather'; 'Matthias, Robert R.';

Subject: RE: Hampton Roads ICG Meeting - Wednesday, December 1, 2010 at 9 a.m.

Attachments: Draft Minutes - HR ICG 2010-12-1.pdf (142 KB);
Revised Schedule for the RCA HR 2030 LRTP & FY 09-12 TIP.pdf (37 KB)

To: Members of the Hampton Roads Interagency Consultation Group
Hampton Roads Air Quality Committee (DEQ Staff Representative)

Subject: Hampton Roads ICG Meeting

An Inter-Agency Consultation Group (ICG) meeting is scheduled for Wednesday, December 1, 2010, beginning at 9:00 AM, prior to the start of the regularly-scheduled Transportation Technical Advisory Committee (TTAC) meeting in the Regional Building Board Room in Chesapeake. The focus of the ICG meeting will be consultation on the upcoming air quality conformity analysis for the amended Hampton Roads 2030 Long Range Transportation Plan (LRTP) and FY 09-12 Transportation Improvement Program (TIP). A copy of the agenda package in Adobe Acrobat (pdf) format is attached (formatted for double-sided printing).

A call-in line will be arranged for those that would like to participate by teleconference. Please let me know by close of business on Monday, November 29, 2010 if you plan to call in.

Please note that a quorum is needed for this meeting. If you are unable to attend the meeting, please make arrangements for a proxy from your jurisdiction to represent you. Please let me know if you have any questions.

Thank You

Christopher Voigt
VDOT Environmental Division
(804) 371-6764

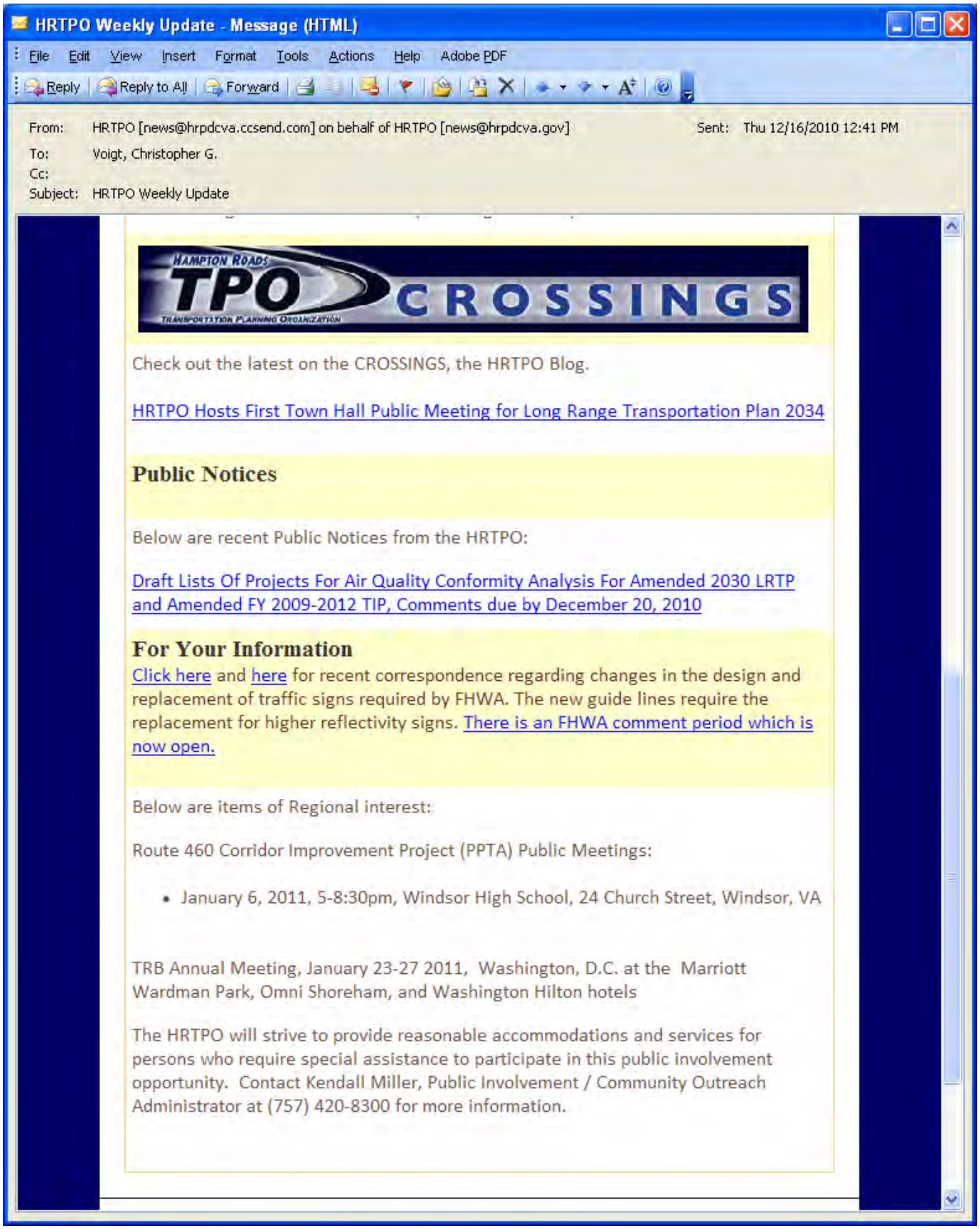
cc: Other interested parties (including all Hampton Roads TTAC Members)

Attachment: ICG Agenda Package

Appendix D – Consultation Record

Public notice of a fourteen-day public review period for the project lists for modeling for the conformity analysis, issued following the ICG meeting. (The project lists are presented separately, in Appendix E.).

- Public Notice Email (2), and
- HRTPO Website Notice (Excerpt).



HRTPO Weekly Update - Message (HTML)

File Edit View Insert Format Tools Actions Help Adobe PDF

Reply Reply to All Forward

From: HRTPO [news@hrpdcva.ccsend.com] on behalf of HRTPO [news@hrpdcva.gov] Sent: Thu 12/16/2010 12:41 PM

To: Voigt, Christopher G.

Cc:

Subject: HRTPO Weekly Update

HAMPTON ROADS TPO CROSSINGS

TRANSPORTATION PLANNING ORGANIZATION

Check out the latest on the CROSSINGS, the HRTPO Blog.

HRTPO Hosts First Town Hall Public Meeting for Long Range Transportation Plan 2034

Public Notices

Below are recent Public Notices from the HRTPO:

Draft Lists Of Projects For Air Quality Conformity Analysis For Amended 2030 LRTP and Amended FY 2009-2012 TIP, Comments due by December 20, 2010

For Your Information

Click here and here for recent correspondence regarding changes in the design and replacement of traffic signs required by FHWA. The new guide lines require the replacement for higher reflectivity signs. There is an FHWA comment period which is now open.

Below are items of Regional interest:

Route 460 Corridor Improvement Project (PPTA) Public Meetings:

- January 6, 2011, 5-8:30pm, Windsor High School, 24 Church Street, Windsor, VA

TRB Annual Meeting, January 23-27 2011, Washington, D.C. at the Marriott Wardman Park, Omni Shoreham, and Washington Hilton hotels

The HRTPO will strive to provide reasonable accommodations and services for persons who require special assistance to participate in this public involvement opportunity. Contact Kendall Miller, Public Involvement / Community Outreach Administrator at (757) 420-8300 for more information.

HRTPO Weekly Update - Message (HTML)

File Edit View Insert Format Tools Actions Help Adobe PDF

Reply | Reply to All | Forward

From: HRTPO [news@hrpdcva.ccsend.com] on behalf of HRTPO [news@hrpdcva.gov] Sent: Wed 12/8/2010 3:56 PM

To: Voigt, Christopher G.

Cc:

Subject: HRTPO Weekly Update

TPO Meeting January 20, 2011, 10:30am -12:30pm (Note this is the first meeting with the new Thursday meeting schedule)

Check out the latest on the CROSSINGS, the HRTPO Blog.

State of Transportation Draft Report Released

HRTPO Staff to Participate in Kick-off Meeting for the Next VDOT Six-Year Improvement Program

Governor's Transportation Conference to be Held in Roanoke December 8-10, 2010

Virginia Association of Metropolitan Planning Organizations (VAMPO) Formed

Southeast High-Speed Rail Association Conference

Roadway Safety Improves in Hampton Roads

Public Notices

Below are recent Public Notices from the HRTPO:

Draft Hampton Roads State of Transportation Report, Comments due by December 15, 2010

Draft Lists Of Projects For Air Quality Conformity Analysis For Amended 2030 LRTP and Amended FY 2009-2012 TIP, Comments due by December 20, 2010

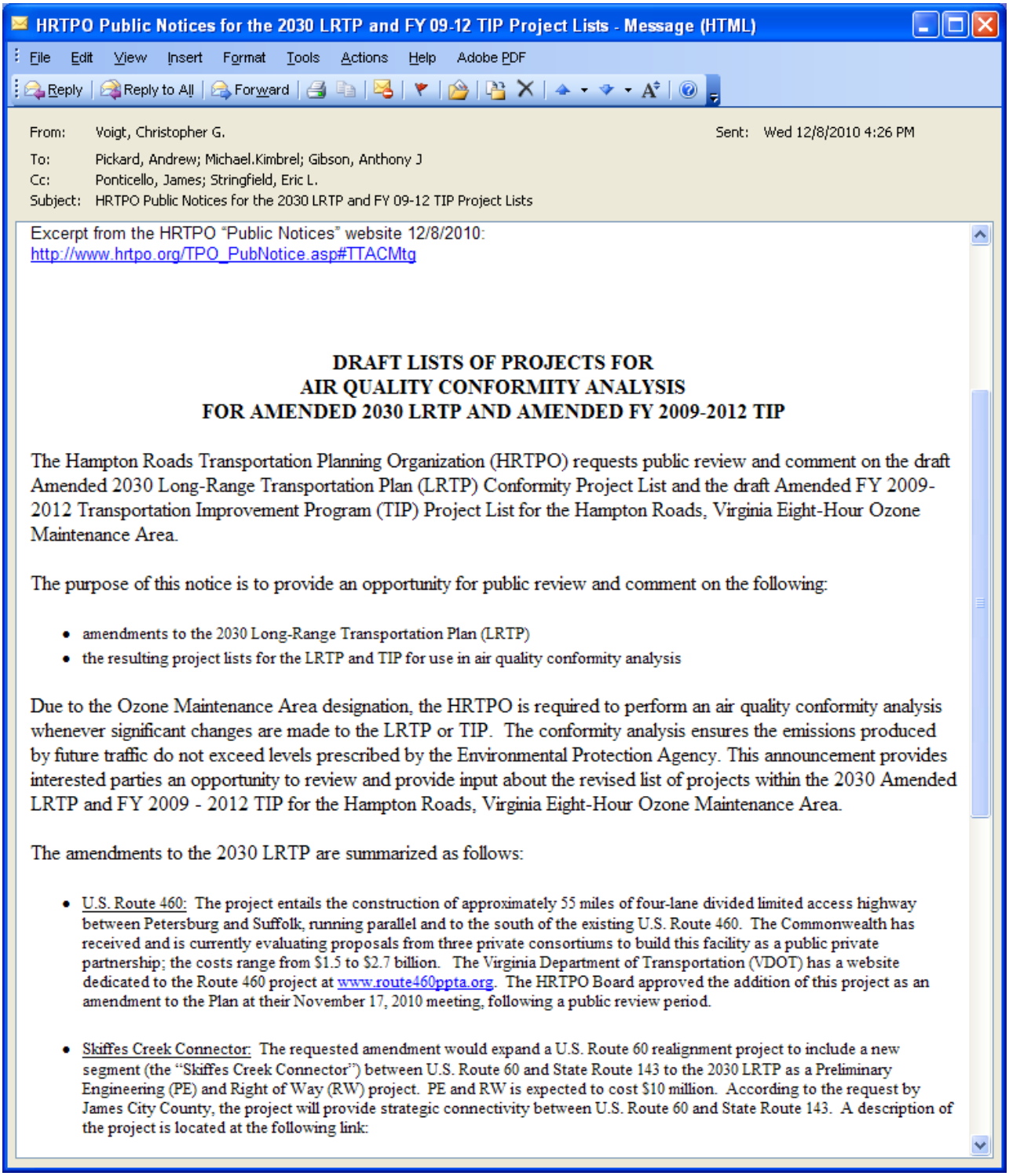
For Your Information

Below are items of Regional interest:

Route 460 Corridor Improvement Project (PPTA) Public Meetings:

- January 6, 2011, 5-8:30pm, Windsor High School, 24 Church Street, Windsor, VA

Email with 12/8/2010 website posting excerpt for the draft conformity project lists:



HRTPO Public Notices for the 2030 LRTP and FY 09-12 TIP Project Lists - Message (HTML)

File Edit View Insert Format Tools Actions Help Adobe PDF

Reply | Reply to All | Forward

From: Voigt, Christopher G. Sent: Wed 12/8/2010 4:26 PM

To: Pickard, Andrew; Michael.Kimbrel; Gibson, Anthony J

Cc: Ponticello, James; Stringfield, Eric L.

Subject: HRTPO Public Notices for the 2030 LRTP and FY 09-12 TIP Project Lists

Excerpt from the HRTPO "Public Notices" website 12/8/2010:
http://www.hrtpo.org/TPO_PubNotice.asp#TTACMtg

DRAFT LISTS OF PROJECTS FOR
AIR QUALITY CONFORMITY ANALYSIS
FOR AMENDED 2030 LRTP AND AMENDED FY 2009-2012 TIP

The Hampton Roads Transportation Planning Organization (HRTPO) requests public review and comment on the draft Amended 2030 Long-Range Transportation Plan (LRTP) Conformity Project List and the draft Amended FY 2009-2012 Transportation Improvement Program (TIP) Project List for the Hampton Roads, Virginia Eight-Hour Ozone Maintenance Area.

The purpose of this notice is to provide an opportunity for public review and comment on the following:

- amendments to the 2030 Long-Range Transportation Plan (LRTP)
- the resulting project lists for the LRTP and TIP for use in air quality conformity analysis

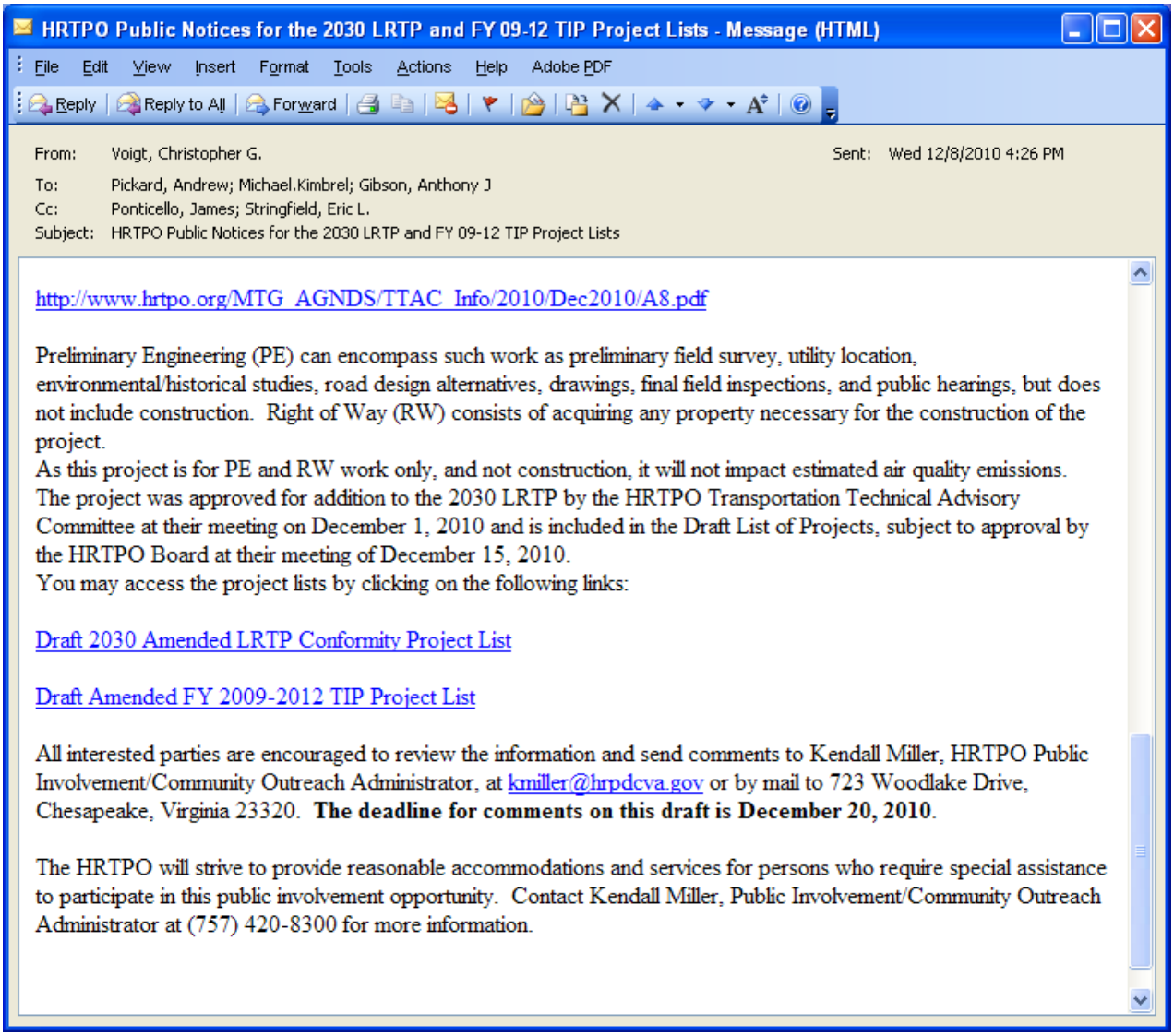
Due to the Ozone Maintenance Area designation, the HRTPO is required to perform an air quality conformity analysis whenever significant changes are made to the LRTP or TIP. The conformity analysis ensures the emissions produced by future traffic do not exceed levels prescribed by the Environmental Protection Agency. This announcement provides interested parties an opportunity to review and provide input about the revised list of projects within the 2030 Amended LRTP and FY 2009 - 2012 TIP for the Hampton Roads, Virginia Eight-Hour Ozone Maintenance Area.

The amendments to the 2030 LRTP are summarized as follows:

- U.S. Route 460: The project entails the construction of approximately 55 miles of four-lane divided limited access highway between Petersburg and Suffolk, running parallel and to the south of the existing U.S. Route 460. The Commonwealth has received and is currently evaluating proposals from three private consortiums to build this facility as a public private partnership; the costs range from $1.5 to $2.7 billion. The Virginia Department of Transportation (VDOT) has a website dedicated to the Route 460 project at www.route460ppta.org. The HRTPO Board approved the addition of this project as an amendment to the Plan at their November 17, 2010 meeting, following a public review period.

- Skiffes Creek Connector: The requested amendment would expand a U.S. Route 60 realignment project to include a new segment (the "Skiffes Creek Connector") between U.S. Route 60 and State Route 143 to the 2030 LRTP as a Preliminary Engineering (PE) and Right of Way (RW) project. PE and RW is expected to cost $10 million. According to the request by James City County, the project will provide strategic connectivity between U.S. Route 60 and State Route 143. A description of the project is located at the following link:

(continued from above)



HRTPO Public Notices for the 2030 LRTP and FY 09-12 TIP Project Lists - Message (HTML)

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Subject: HRTPO Public Notices for the 2030 LRTP and FY 09-12 TIP Project Lists

http://www.hrtpo.org/MTG_AGNDS/TTAC_Info/2010/Dec2010/A8.pdf

Preliminary Engineering (PE) can encompass such work as preliminary field survey, utility location, environmental/historical studies, road design alternatives, drawings, final field inspections, and public hearings, but does not include construction. Right of Way (RW) consists of acquiring any property necessary for the construction of the project.
As this project is for PE and RW work only, and not construction, it will not impact estimated air quality emissions.
The project was approved for addition to the 2030 LRTP by the HRTPO Transportation Technical Advisory Committee at their meeting on December 1, 2010 and is included in the Draft List of Projects, subject to approval by the HRTPO Board at their meeting of December 15, 2010.
You may access the project lists by clicking on the following links:

Draft 2030 Amended LRTP Conformity Project List

Draft Amended FY 2009-2012 TIP Project List

All interested parties are encouraged to review the information and send comments to Kendall Miller, HRTPO Public Involvement/Community Outreach Administrator, at kmiller@hrpdcva.gov or by mail to 723 Woodlake Drive, Chesapeake, Virginia 23320. **The deadline for comments on this draft is December 20, 2010**.

The HRTPO will strive to provide reasonable accommodations and services for persons who require special assistance to participate in this public involvement opportunity. Contact Kendall Miller, Public Involvement/Community Outreach Administrator at (757) 420-8300 for more information.

Appendix D – Consultation Record

December 1, 2010 (date of ICG Meeting):

- Public notice on the HRTPO website for the meeting (continued posting)
- ICG Meeting Presentation (PowerPoint slides)

HRTPO Website, December 1, 2010

Virginia Department of Transportation

Hampton Roads Regional Conformity Analysis

Amended 2030 Long Range Transportation Plan and FY 09-12 Transportation Improvement Program

Interagency Consultation Group Meeting

December 1, 2010 – 9:00 a.m.
Regional Boardroom
723 Woodlake Drive, Chesapeake, Va

christopher.voigt@vdot.virginia.gov **(804) 371-6764**

Public Comment Period

Three minute limit per individual

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Agenda

1. ICG Membership Update
2. Regional Conformity Analysis: Amended 2030 LRTP & FY 09-12 TIP
   a) Schedule
   b) Modeling Methodology & Assumptions
   c) Regionally Significant Projects
      (Project lists for conformity analysis)
3. ICG Conformity Consultation Procedures Update
4. Next Steps

1. ICG Membership

Current Members

(Attachment #1 to the agenda)

Agency listing per the 2005 ICG "Consultation Procedures for the Hampton Roads Ozone Nonattainment Area in Support of the Transportation Conformity Regulations"

City/County		
City of Chesapeake	Earl	Sorey
City of Hampton	Lynn	Allsbrook
City of Newport News	Michael	King
City of Norfolk	Jeffrey	Raliski
City of Poquoson	Deborah	Vest
City of Portsmouth	Richard	Hartman
City of Suffolk	Robert	Lewis
City of Virginia Beach	Travis	Campbell
City of Williamsburg	Reed	Nester
Gloucester County	Anne	Ducey-Ortiz
Isle of Wight County	Jane	Hill
James City County	Steven	Hicks
York County	Timothy	Cross
Regional		
Hampton Roads Transportation Planning Organization	Andy	Pickard
Hampton Roads Transit	Jayne	Whitney
Williamsburg Area Transit Authority	Richard	Drumwright
State		
Virginia Dept. of Environmental Quality	Sonya	Lewis-Cheatham
Virginia Dept. of Rail & Public Transportation	Joseph	Swartz
Virginia Dept. of Transportation – C/O Environmental	Jim	Ponticello
Virginia Dept. of Transportation – C/O Planning	Jaesup	Lee
Federal		
Environmental Protection Agency	Martin	Kotsch
Federal Highway Administration	Marisel	Lopez-Cruz
Federal Transit Administration	Tony	Cho
Alternates / Other (non-voting)		
City of Suffolk *Alternate*	Sherry	Earley
Other	Scott	Mills
James City County	Allen	Murphy
US Navy	Jennifer	Tabor

2. Regional Conformity Analysis: Consultation Requirements

- **Regulations & Guidance**
  - Federal and State Transportation Conformity Rules
    - MPO approved ICG Conformity Consultation Procedures in September 2005.
  - Public Consultation per Hampton Roads Public Participation Plan (2009)
- **Consultation specifically required for:**
  - Schedule (ICG Procedural requirement)
    - **Draft: Attachment 2a**
  - Emission Model and "Associated Methods and Assumptions"
    - **Draft report text: Attachment 2b**
  - Regionally Significant Projects
    - **Plan & TIP lists: Attachment 2c**
- **Key conformity criteria as identified in the conformity rule**

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2(a). Conformity Analysis Schedule (Att.2a)

Consultation Events	December 2010	• 1st: **Interagency Consultation Group (ICG) Kickoff Meeting**. Review of methodology, assumptions and the project list for modeling for the conformity analysis.
		PROJECT LIST FOR MODELING FINALIZED AT THE ICG. ANY SUBSEQUENT CHANGES MAY REQUIRE RESTARTING THE CONFORMITY PROCESS FROM THIS STEP.
		• Initiation of 14-day public review period on the project list(s), as required by the 2009 Hampton Roads Public Participation Plan (PPP)
	January 2011	• 5th: Transportation network modeling completed & results transmitted to VDOT Air Quality. ○ Emission modeling and update of associated draft conformity analysis report text initiated. • **19th: Draft conformity analysis completed.** Emission modeling, conformity determination & draft report. • 20th-24th: VDOT/VDEQ/HRTPO staff review of draft conformity analysis. • 25th: Draft Conformity Analysis transmitted to HRTPO for the TTAC meeting agenda.
		○ 26th: HRTPO Initiation of 14-day Public Review for the draft conformity analysis & finding (ends 2/9).
	February	• 2nd: TTAC reviews & recommends approval of draft conformity analysis & finding, subject to receipt of no adverse comment in public review or none requiring TTAC review.
		• 10th-14th: VDOT/HRTPO staff review and draft response to comments received (if any) in public review, for consideration by the HRTPO.
		• **16th (17th): TPO approval of the final draft conformity analysis and finding** (and the response to comments if any). (Consent Agenda)
Approvals: HRTPO		Next Day: • TPO approval letter issued and signed copy emailed to VDOT. • VDOT emails the Final Conformity Analysis with the TPO Letter to FHWA to initiate the federal review and approval process. • VDOT sends Final Report with TPO approval letter to printing.
Approvals: US DOT		Federal review period (typically 45 days) begins upon receipt of the final report by email. FHWA coordinates the review with FTA and consults with EPA. • 24th: VDOT transmits print copies of the Final Conformity Analysis and TPO Letter to FHWA for their records.
	April	• 4th: **US DOT Finding of Conformity** (letter from FHWA).

2. Regional Conformity Analysis: Key Conformity Criteria

Federal Conformity Rule Requirement 40 CFR Section:	Criteria (40 CFR 93.109+)	Demonstrated for the:	
		LRTP	TIP
93.108	Fiscal constraint (*Prerequisite*) (Final Determination with TPO)		
93.110	Latest planning assumptions		
93.111	Latest emissions model		
93.112	Consultation		
93.113(b) & (c)	TCMs	*na*	*na*
93.118	Emissions Budget		

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2(b) Methodology & Assumptions: General

Emissions = Emission Factor * VMT

- NO_x and VOC (ozone precursors)
- Conformity tests: (40 CFR 93.118) Emission budgets set in applicable SIP revision (2007 Maintenance Plan)*
- Analysis Years: 2011 & 2018 (budgets from MP), 2030 (LRTP horizon year), and 2020 (EPA 10 year rule).

**See Exhibit 2-2 in Att.2b*

- 93.111 Latest emission model: MOBILE6.2, within grace period for transition to new MOVES2010 model
- Sensitivities:
  - vehicle type & age/ mileage,
  - fuel specifications,
  - roadway class,
  - speeds, and
  - meteorological data.
- No major updates to input data since the previous conformity analysis (June 2010)

- Regional transportation model (TP+)

  93.110 Latest Planning Assumptions:
  - socioeconomic forecasts
  - regionally significant projects (Plan/TIP lists)
- Post-Processor:
  - VMT projections for off-network facilities (local & collector roads)
  - Congested speeds using BPR formulae (signalized & non-signalized roadways)
  - Emission calculations
    - **Military base contributions**

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2(b) Methodology & Assumptions: 40 CFR 93.111
Latest Emission Model

- **Conformity Rule:**
  - 40 CFR 93.111(a): "The conformity determination must be based on the *latest emission estimation model* available."
  - 40 CFR 93.111(c): "Transportation plan and TIP conformity analyses for which the emissions analysis was begun during the *grace period* or before the Federal Register notice of availability of the latest emission model may continue to use the previous version of the model."
- **Selection of emission model for this analysis:**
  - March 2, 2010: EPA officially released the new Motor Vehicle Emission Simulator ("MOVES2010") model* for use in SIP development & regional conformity.
  - Two-Year Grace Period (ending March 2, 2012): provided by EPA for use of the new model in regional emissions analyses for conformity determinations.
  - Model selected for this analysis: MOBILE6.2 (the current model), pending an orderly transition to the new MOVES model within the grace period
- ***Transition planning for the new MOVES model:***
  - *Local data inputs to be established (replacing EPA default data) (in process).*
  - *SIP revisions to establish new motor vehicle emission budgets.*

**MOVES website: http://www.epa.gov/otaq/models/moves/index.htm*

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2(b) Methodology & Assumptions: 40 CFR 93.110
Latest Planning Assumptions – Socioeconomic Forecasts

- **40 CFR 93.110(b), following CAA 176(c)(1):** "*Assumptions must be derived from the estimates of current and future population, employment, travel, and congestion most recently developed by the MPO or other agency authorized to make such estimates and approved by the MPO...*"
- **Recommendation:**
  Continue to use the socioeconomic forecasts approved for 2030

Year	Hampton Roads LRTP Study Area			
	Population	Households	Automobiles	Employment
2011	1,693,101	627,306	1,282,689	1,045,049
2018	1,796,281	668,383	1,408,788	1,101,666
2020	1,825,772	680,130	1,444,843	1,117,867
2030	1,973,250	738,865	1,625,000	1,198,775

**See Exhibit 2-3 in Att.2b*

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2(c). Methodology & Assumptions: Regionally Significant Projects

- **Amended 2030 Plan & FY 09-12 TIP project lists included with the agenda package (Attachment #2c)**
  - Lists are as provided by District planning staff working with TPO staff
- **Keys: Regional Significance, Fiscal Constraint and TIP & Plan Consistency**
  - 40 CFR 93.101: *"Regionally significant project means a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel."*
  - 40 CFR 93.108: *"Transportation plans and TIPs must be fiscally constrained consistent with DOT's metropolitan planning regulations at 23 CFR part 450 in order to be found in conformity."*
  - 23 CFR 450.324g: *"Each project or project phase included in the TIP shall be consistent with the approved metropolitan transportation plan."*
- **Project List Adjustments (*if any*):**
  - *changes subject to approvals by the TTAC and/or TPO as needed*
  - *may require restarting the conformity analysis from this point if not approved by the TTAC and TPO without further change*

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2. Regional Conformity Analysis: Consensus Items *(per ICG Procedures)*

- **Schedule (Attachment 2a)**
- **Methodology & Assumptions (See Attachment 2b)**
  - **Latest Emission Model:**
    MOBILE6.2 (within grace period for MOVES2010)
  - **Latest Planning Assumptions & Associated Modeling Data and Assumptions:**
    Including the use of 2030 socioeconomic forecasts as previously approved for use with the 2030 LRTP
- **Regionally Significant Projects* (Attachment 2c)**
  2030 LRTP and FY 09-12 TIP Project Lists

** With any changes subject to approvals by the TTAC and/or TPO as needed.*

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3. Conformity Consultation Procedures Update

- **Current Procedures last updated in 2005**
  - Available on HRTPO website: *http://www.hrtpo.org/Documents/Reports/Rev_HR_ICP2005.pdf*
  - Based on requirements in the federal conformity rule (40 CFR 93.105)
- **New State Regulation for Transportation Conformity (9 VAC 5–151)**
  - Federally-required (40 CFR Part 51) state regulation developed by the VDEQ
  - EPA approval effective January 19, 2010
  - Generally mirrors existing federal consultation requirements
    - *Key change: Adds consultation with the Lead Planning Organization (LPO)*
      - *LPO: Hampton Roads Air Quality Committee (HRAQC)*
      - *HRAQC Staff (VDEQ) have been added to the consultation list for this analysis.*
- **Update Planned for the Conformity Consultation Procedures:**
  - Schedule: To be initiated following the completion of the draft report for this conformity analysis
  - Planned Changes:
    - Incorporate or address specific language from the state regulation
    - Editorial changes such as SAFETEA-LU references, references to current HRTPO committees and processes etc.
    - Process and other changes as desired by the ICG
  - **Recommended additional change: Transition to TTAC lead on inter-agency consultation**
    - ***Eliminates the need for a separate ICG with separate meeting times, agendas, notices etc***

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Why have the TTAC lead inter-agency consultation for conformity?

Answer: Federal and state conformity consultation regulations require inter-agency consultation but <u>not</u> necessarily a separate group (ICG)...

Federal Conformity Rule, Section 93.105 Consultation:
http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.105.htm

§ 93.105 Consultation.

(b) *Interagency consultation procedures: General factors.*

(1) States shall provide well-defined consultation procedures in the implementation plan whereby representatives of the MPOs, State and local air quality planning agencies, State and local transportation agencies, and other organizations with responsibilities for developing, submitting, or implementing provisions of an implementation plan required by the CAA must consult with each other and with local or regional offices of EPA, FHWA, and FTA on the development of the implementation plan, the transportation plan, the TIP, and associated conformity determinations.

(c) *Interagency consultation procedures: Specific processes.* Interagency consultation procedures shall also include the following specific processes:

(1) A process involving the MPO, State and local air quality planning agencies, State and local transportation agencies, EPA, and DOT for the following:

(i) Evaluating and choosing a model (or models) and associated methods and assumptions to be used in hot-spot analyses and regional emissions analyses;

(ii) Determining which minor arterials and other transportation projects should be considered "regionally significant" for the purposes of regional emissions analysis (in addition to those functionally classified as

Virginia Regulation, Consultation:
http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+9VAC5-151-70

<u>Excerpt from the introduction to 9 VAC 5-151-70(c)(1)(emphasis added):</u>

*"…Representatives of the **MPOs, VDOT, VDRPT, FHWA, and FTA** shall undertake an interagency consultation process, in accordance with subdivisions 1 and 3 of this subsection and subsection D of this section, with the **LPOs, DEQ and EPA** on the development of implementation plans, transportation plans, TIPs, any revisions to the preceding documents, and associated conformity determinations …"*

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*... **If** the conformity regulations had just been passed and implementation were to start now, the TTAC would be the obvious first choice as the forum for inter-agency consultation on technical topics*:*

- **It is a standing committee that already conducts inter-agency consultation for amendments or revisions to the transportation plan and program,**
- **Its membership includes local, state and (non-voting) federal agencies, i.e. most of the agencies needed to meet the requirements of the federal and state conformity regulations (*and the missing ones can easily be added with a specific and limited mandate of consulting on conformity items only*),**
- **It meets on a regular basis (monthly) and the meeting dates, times and location are specified in public notices,**
- **It distributes meeting agendas and minutes for all meetings,**
- **It has (recently) established bylaws addressing chairmanship, membership, voting, quorums, taking of minutes, etc., and**
- **Its meetings are open to the public.**

**** Original ICG concept and Consultation Procedures were developed for concurrent implementation at multiple MPOs in Virginia at the time that the federal conformity requirements for consultation were first being implemented***

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Why transition to a TTAC lead on inter-agency consultation for conformity at this time?

- **Answer: The advantages are significant, and the disadvantages minor:**
  - **Advantages of transitioning to a TTAC lead:**
    - Eliminates redundancy in having two separate committees (ICG and TTAC) in which the membership of one (the ICG) is largely drawn from the other (TTAC)
      - The TTAC in effect is already involved in inter-agency consultation for conformity
      - Streamlines the conformity consultation process (TTAC-TPO vs ICG-TTAC-TPO)
    - Standardizes meeting materials to that provided for the TTAC (agendas, meeting notices and minutes)
    - Standardizes the means of distribution for meeting materials (HRTPO email and website)
    - Relatively easy to do, involving two key steps:
      1. Update TTAC Email List: Add EPA, LPO (DEQ staff member) and DEQ representatives to the email list for TTAC meeting notices (nominally a total of three additions)
      2. Denote TIP & Plan Updates, Revisions and Amendments on TTAC Agendas as Conformity Consultation Items:
         - Have EPA, LPO and DEQ representatives participate in TTAC consultation on these items.
         - Teleconference as needed (already being done for ICG meetings)

      Key Caveats: The proposed changes are for conformity items only (and not the full TTAC agenda), and consultation only (not approvals)

  - **Disadvantages of transitioning to a TTAC lead:**
    - Need to update TTAC email notices and agendas to involve EPA, LPO and DEQ representatives on conformity consultation items
    - Related Updates (as needed): PPP, Amendment Procedures and/or TTAC Bylaws

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3. Conformity Consultation Procedures Update

- **Recommended Actions:**

1. **Decision on recommendation for TTAC lead on inter-agency consultation for conformity.**

   Options:

   a) *ICG recommendation (today) for inter-agency consultation for conformity to be assumed by the TTAC*
      - ICG discontinued upon approval of updated Consultation Procedures by ICG*, TTAC, and the TPO

      * *Procedural question on need for ICG review and approval of revised procedures*

   or

   b) *Defer decision to a joint ICG/TTAC discussion that could be added to the agenda for the February 2011 TTAC meeting*
      - ICG Members provide comments/suggestions to VDOT by January 14, 2011

2. **Update the 2005 Conformity Consultation Procedures document**
   - Following a decision on the TTAC lead on conformity consultation

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4. Next Steps

- **Conformity Analysis:**
  - **Initiate modeling**
  - **Draft report completion for February 2011 TTAC**
- **ICG Consultation Procedures:**
  - **Proceed with ICG recommendation**
  - **Send comments on the existing procedures to VDOT by 1/14/2011**

For more information, contact:

Christopher Voigt
VDOT Environmental
(804) 371-6764
christopher.voigt@vdot.virginia.gov

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APPENDIX A:
Interagency Consultation Group

Chairmanship responsibility will be rotated among each component of the ICG (Federal agencies, State agencies, Regional agencies, and localities comprising the Hampton Roads MPO) and is rotated at the beginning of each conformity analysis. Chairmanship responsibilities include conducting meetings of the ICG. A quorum of 11 of the 20 voting ICG members must be present for votes to be taken. If a vote is taken the decision is based on the majority opinion. The following are the voting members of the ICG with one vote given to each member.

Federal Agencies
Environmental Protection Agency – Region 3
Federal Highway Administration – Virginia Division
Federal Transit Administration

State Agencies
Virginia Department of Environmental Quality – Headquarters
Virginia Department of Rail and Public Transportation
Virginia Department of Transportation – Central Office Transportation Planning & Environmental

Regional Agencies
Hampton Roads Planning District Commission
Hampton Roads Transit
James City County Transit

Hampton Roads Metropolitan Planning Organization
James City County
York County
City of Chesapeake
City of Hampton
City of Newport News
City of Norfolk
City of Poquoson
City of Portsmouth
City of Suffolk
City of Virginia Beach
City of Williamsburg
Isle of Wight County (including the Town of Smithfield)
Gloucester County

ARTICLE III
MEMBERSHIP

3.01 VOTING MEMBERSHIP

Voting Members of the TTAC are as follows:

City of Chesapeake	3 Members/2 Alternates
Gloucester County	3 Members/2 Alternates
City of Hampton	3 Members/2 Alternates
Isle of Wight County	3 Members/2 Alternates
James City County	3 Members/2 Alternates
City of Newport News	3 Members/2 Alternates
City of Norfolk	3 Members/2 Alternates
City of Poquoson	3 Members/2 Alternates
City of Portsmouth	3 Members/2 Alternates
City of Suffolk	3 Members/2 Alternates
City of Virginia Beach	3 Members/2 Alternates
City of Williamsburg	3 Members/2 Alternates
York County	3 Members/2 Alternates
Williamsburg Area Transit Authority (WATA)	1 Member/1 Alternate
Transportation District Commission of Hampton Roads (TDCHR), which does business as Hampton Roads Transit (HRT)	1 Member/1 Alternate
Virginia Department of Transportation (VDOT)*	3 Members/2 Alternates
Virginia Department of Rail and Public Transportation (DRPT)	1 Member/1 Alternate
Virginia Port Authority (VPA)	1 Member/1 Alternate

* One of VDOT's voting members shall be from the VDOT Central Office.

3.02 NON-VOTING MEMBERSHIP

Non-Voting Members of the TTAC are as follows:

Federal Highway Administration (FHWA)
Federal Transit Administration (FTA)
Liaisons of the branches of the Military

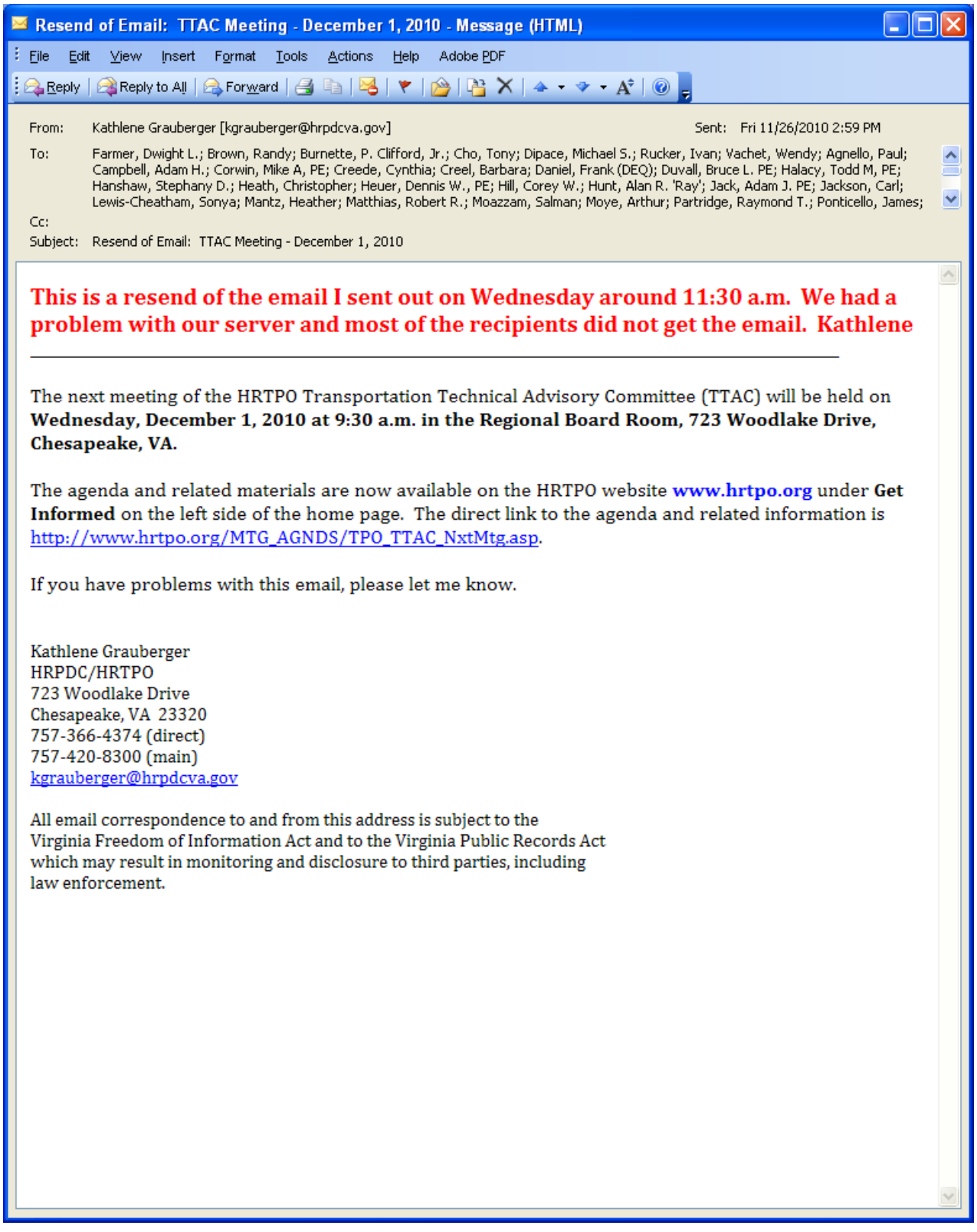
EXTRA SLIDE – ICG & TTAC Membership Requirements

Appendix D – Consultation Record

November 26, 2010 HRTPO Public Notice for the ICG Meeting with the TTAC meeting notice:

- Public Notice Email for TTAC,
- HRTPO Website Notices for the ICG and TTAC Meetings (including a link to the ICG Agenda), and
- TTAC agenda including a notice for the ICG meeting.

HRTPO Email Notice for TTAC (which included an ICG notice on the website and agenda)



Resend of Email: TTAC Meeting - December 1, 2010 - Message (HTML)

File Edit View Insert Format Tools Actions Help Adobe PDF

Reply | Reply to All | Forward

From: Kathlene Grauberger [kgrauberger@hrpdcva.gov] Sent: Fri 11/26/2010 2:59 PM

To: Farmer, Dwight L.; Brown, Randy; Burnette, P. Clifford, Jr.; Cho, Tony; Dipace, Michael S.; Rucker, Ivan; Vachet, Wendy; Agnello, Paul; Campbell, Adam H.; Corwin, Mike A, PE; Creede, Cynthia; Creel, Barbara; Daniel, Frank (DEQ); Duvall, Bruce L. PE; Halacy, Todd M, PE; Hanshaw, Stephany D.; Heath, Christopher; Heuer, Dennis W., PE; Hill, Corey W.; Hunt, Alan R. 'Ray'; Jack, Adam J. PE; Jackson, Carl; Lewis-Cheatham, Sonya; Mantz, Heather; Matthias, Robert R.; Moazzam, Salman; Moye, Arthur; Partridge, Raymond T.; Ponticello, James;

Cc:

Subject: Resend of Email: TTAC Meeting - December 1, 2010

This is a resend of the email I sent out on Wednesday around 11:30 a.m. We had a problem with our server and most of the recipients did not get the email. Kathlene

---

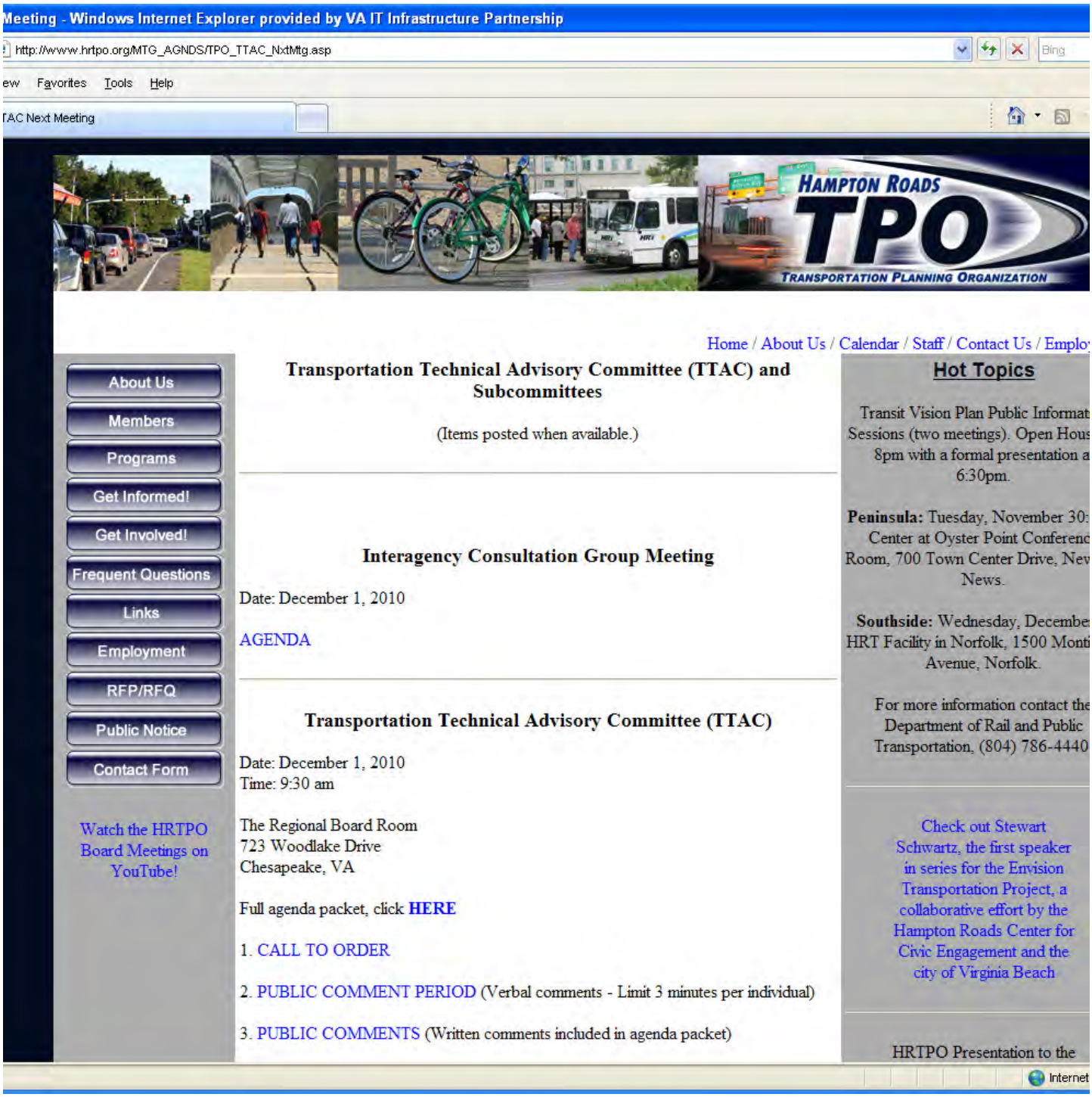
The next meeting of the HRTPO Transportation Technical Advisory Committee (TTAC) will be held on **Wednesday, December 1, 2010 at 9:30 a.m. in the Regional Board Room, 723 Woodlake Drive, Chesapeake, VA.**

The agenda and related materials are now available on the HRTPO website **www.hrtpo.org** under **Get Informed** on the left side of the home page. The direct link to the agenda and related information is http://www.hrtpo.org/MTG_AGNDS/TPO_TTAC_NxtMtg.asp.

If you have problems with this email, please let me know.

Kathlene Grauberger
HRPDC/HRTPO
723 Woodlake Drive
Chesapeake, VA 23320
757-366-4374 (direct)
757-420-8300 (main)
kgrauberger@hrpdcva.gov

All email correspondence to and from this address is subject to the Virginia Freedom of Information Act and to the Virginia Public Records Act which may result in monitoring and disclosure to third parties, including law enforcement.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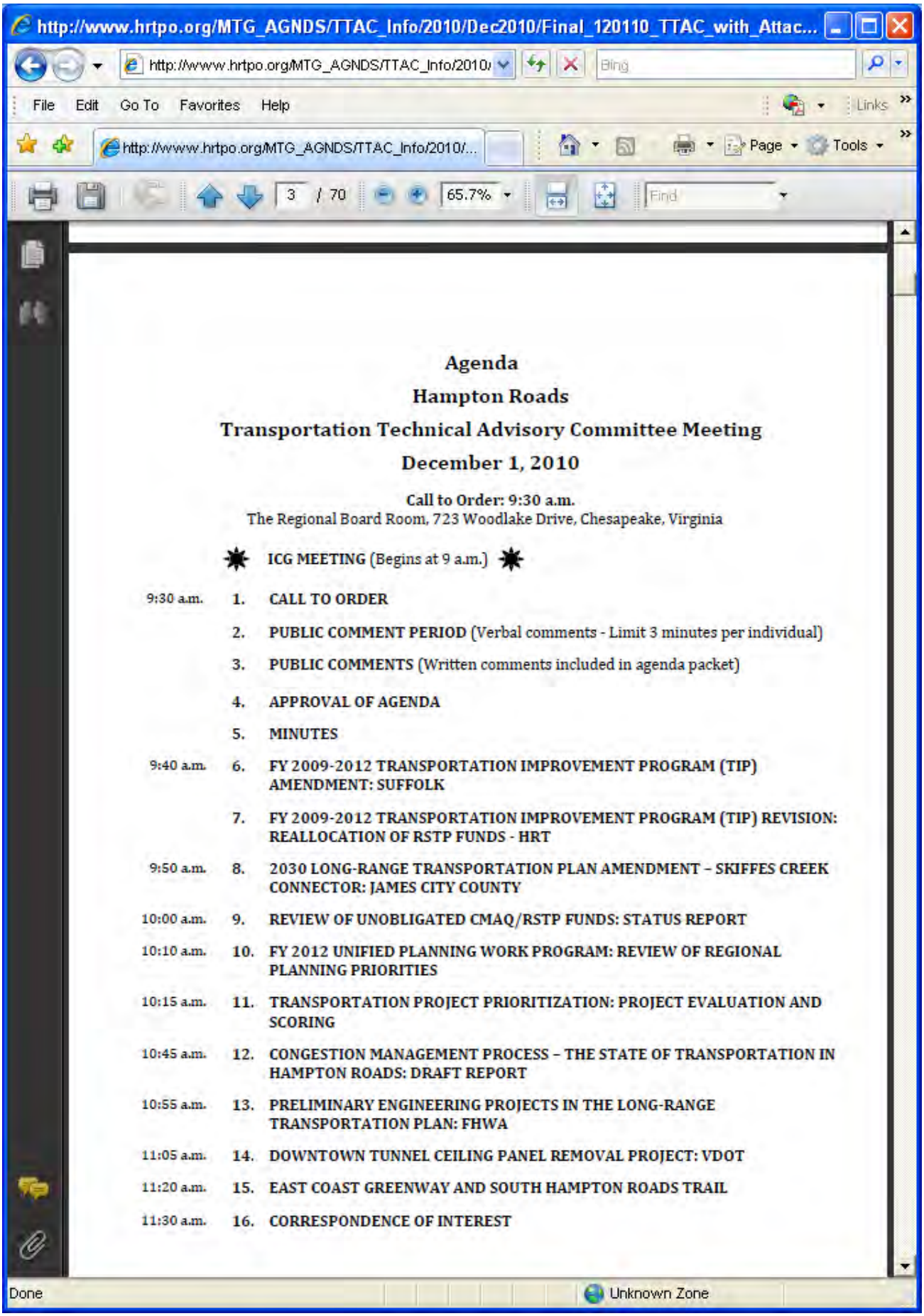
Transportation Technical Advisory Committee (TTAC) and Subcommittees
(Items posted when available.)
Interagency Consultation Group Meeting
Date: December 1, 2010
AGENDA
Transportation Technical Advisory Committee (TTAC)
Date: December 1, 2010
Time: 9:30 am
The Regional Board Room
723 Woodlake Drive
Chesapeake, VA
Full agenda packet, click HERE
1. CALL TO ORDER
2. PUBLIC COMMENT PERIOD (Verbal comments - Limit 3 minutes per individual)
3. PUBLIC COMMENTS (Written comments included in agenda packet)
Hot Topics
Transit Vision Plan Public Informat
Sessions (two meetings). Open Hous
8pm with a formal presentation a
6:30pm.
Peninsula: Tuesday, November 30:
Center at Oyster Point Conferenc
Room, 700 Town Center Drive, Nev
News.
Southside: Wednesday, Decembe
HRT Facility in Norfolk, 1500 Monti
Avenue, Norfolk.
For more information contact the
Department of Rail and Public
Transportation, (804) 786-4440
Check out Stewart Schwartz, the first speaker in series for the Envision Transportation Project, a collaborative effort by the Hampton Roads Center for Civic Engagement and the city of Virginia Beach
HRTPO Presentation to the
Internet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Agenda
Hampton Roads
Transportation Technical Advisory Committee Meeting
December 1, 2010
Call to Order: 9:30 a.m.
The Regional Board Room, 723 Woodlake Drive, Chesapeake, Virginia
ICG MEETING (Begins at 9 a.m.)
9:30 a.m. 1. CALL TO ORDER
2. PUBLIC COMMENT PERIOD (Verbal comments - Limit 3 minutes per individual)
3. PUBLIC COMMENTS (Written comments included in agenda packet)
4. APPROVAL OF AGENDA
5. MINUTES
9:40 a.m. 6. FY 2009-2012 TRANSPORTATION IMPROVEMENT PROGRAM (TIP) AMENDMENT: SUFFOLK
7. FY 2009-2012 TRANSPORTATION IMPROVEMENT PROGRAM (TIP) REVISION: REALLOCATION OF RSTP FUNDS - HRT
9:50 a.m. 8. 2030 LONG-RANGE TRANSPORTATION PLAN AMENDMENT – SKIFFES CREEK CONNECTOR: JAMES CITY COUNTY
10:00 a.m. 9. REVIEW OF UNOBLIGATED CMAQ/RSTP FUNDS: STATUS REPORT
10:10 a.m. 10. FY 2012 UNIFIED PLANNING WORK PROGRAM: REVIEW OF REGIONAL PLANNING PRIORITIES
10:15 a.m. 11. TRANSPORTATION PROJECT PRIORITIZATION: PROJECT EVALUATION AND SCORING
10:45 a.m. 12. CONGESTION MANAGEMENT PROCESS – THE STATE OF TRANSPORTATION IN HAMPTON ROADS: DRAFT REPORT
10:55 a.m. 13. PRELIMINARY ENGINEERING PROJECTS IN THE LONG-RANGE TRANSPORTATION PLAN: FHWA
11:05 a.m. 14. DOWNTOWN TUNNEL CEILING PANEL REMOVAL PROJECT: VDOT
11:20 a.m. 15. EAST COAST GREENWAY AND SOUTH HAMPTON ROADS TRAIL
11:30 a.m. 16. CORRESPONDENCE OF INTEREST
Done
Unknown Zone

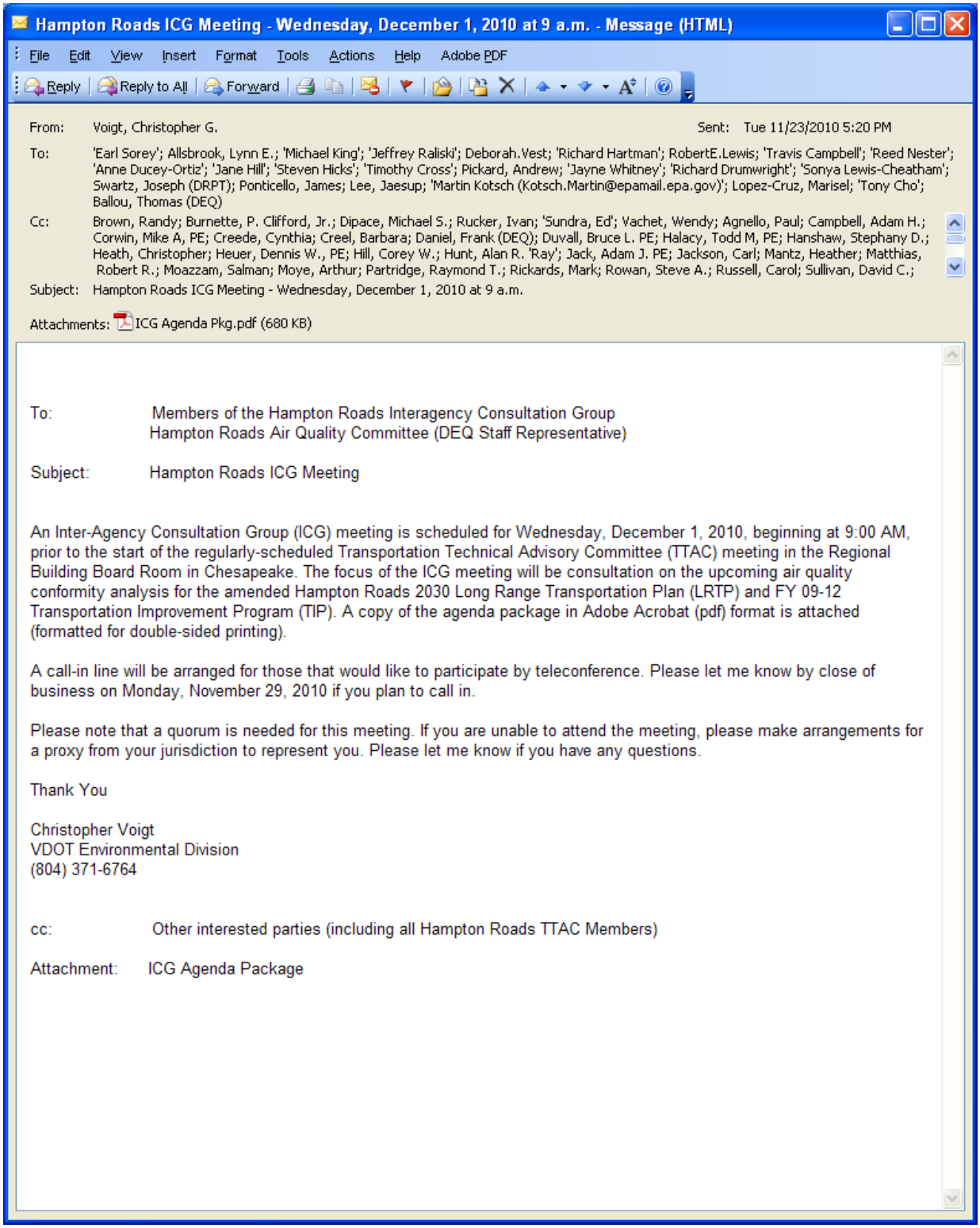
Appendix D – Consultation Record

November 23, 2010 Transmittal of the ICG Agenda Package

- Email Transmittal with ICG Agenda Package attached

- ICG Agenda Package:
  - ICG Agenda Attachment - Membership List
  - ICG Agenda Attachment - Modeling Methodology and Assumptions
  - ICG Agenda Attachment - Project Lists [*attached separately for convenient reference, in Appendix E*]
  - ICG Agenda Attachment - Conformity Analysis Schedule

ICG Meeting Notice Transmittal (with agenda package attached)



Hampton Roads ICG Meeting - Wednesday, December 1, 2010 at 9 a.m. - Message (HTML)

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From: Voigt, Christopher G. Sent: Tue 11/23/2010 5:20 PM

To: 'Earl Sorey'; Allsbrook, Lynn E.; 'Michael King'; 'Jeffrey Raliski'; Deborah.Vest; 'Richard Hartman'; RobertE.Lewis; 'Travis Campbell'; 'Reed Nester'; 'Anne Ducey-Ortiz'; 'Jane Hill'; 'Steven Hicks'; 'Timothy Cross'; Pickard, Andrew; 'Jayne Whitney'; 'Richard Drumwright'; 'Sonya Lewis-Cheatham'; Swartz, Joseph (DRPT); Ponticello, James; Lee, Jaesup; 'Martin Kotsch (Kotsch.Martin@epamail.epa.gov)'; Lopez-Cruz, Marisel; 'Tony Cho'; Ballou, Thomas (DEQ)

Cc: Brown, Randy; Burnette, P. Clifford, Jr.; Dipace, Michael S.; Rucker, Ivan; 'Sundra, Ed'; Vachet, Wendy; Agnello, Paul; Campbell, Adam H.; Corwin, Mike A, PE; Creede, Cynthia; Creel, Barbara; Daniel, Frank (DEQ); Duvall, Bruce L. PE; Halacy, Todd M, PE; Hanshaw, Stephany D.; Heath, Christopher; Heuer, Dennis W., PE; Hill, Corey W.; Hunt, Alan R. 'Ray'; Jack, Adam J. PE; Jackson, Carl; Mantz, Heather; Matthias, Robert R.; Moazzam, Salman; Moye, Arthur; Partridge, Raymond T.; Rickards, Mark; Rowan, Steve A.; Russell, Carol; Sullivan, David C.;

Subject: Hampton Roads ICG Meeting - Wednesday, December 1, 2010 at 9 a.m.

Attachments: ICG Agenda Pkg.pdf (680 KB)

To: Members of the Hampton Roads Interagency Consultation Group
Hampton Roads Air Quality Committee (DEQ Staff Representative)

Subject: Hampton Roads ICG Meeting

An Inter-Agency Consultation Group (ICG) meeting is scheduled for Wednesday, December 1, 2010, beginning at 9:00 AM, prior to the start of the regularly-scheduled Transportation Technical Advisory Committee (TTAC) meeting in the Regional Building Board Room in Chesapeake. The focus of the ICG meeting will be consultation on the upcoming air quality conformity analysis for the amended Hampton Roads 2030 Long Range Transportation Plan (LRTP) and FY 09-12 Transportation Improvement Program (TIP). A copy of the agenda package in Adobe Acrobat (pdf) format is attached (formatted for double-sided printing).

A call-in line will be arranged for those that would like to participate by teleconference. Please let me know by close of business on Monday, November 29, 2010 if you plan to call in.

Please note that a quorum is needed for this meeting. If you are unable to attend the meeting, please make arrangements for a proxy from your jurisdiction to represent you. Please let me know if you have any questions.

Thank You

Christopher Voigt
VDOT Environmental Division
(804) 371-6764

cc: Other interested parties (including all Hampton Roads TTAC Members)

Attachment: ICG Agenda Package

AGENDA

HAMPTON ROADS
INTERAGENCY CONSULTATION GROUP MEETING

December 1, 2010 -- 9:00 a.m.

The Regional Building, 723 Woodlake Drive, Chesapeake, VA 23320

CALL TO ORDER

PUBLIC COMMENT PERIOD (Limit 3 minutes per individual)

APPROVAL OF AGENDA

1. Interagency Consultation Group (ICG) Membership (Attachment #1): Current members of the ICG are listed in Attachment #1. All members are invited to review the list and advise VDOT of any changes. Updates will be incorporated into a revised membership list to be distributed with the draft minutes.

2. Regional Conformity Analysis for the Hampton Roads Amended 2030 Long Range Transportation Plan (LRTP) & FY 09-12 Transportation Improvement Program (TIP)(Attachments #2a-c): Comments are requested on the following:
   a) The draft schedule for the conformity analysis (Attachment #2a),
   b) Modeling Methodology & Assumptions, including latest planning assumptions as well as the selection of MOBILE6.2 for emission factor modeling (within the grace period for the MOVES model released 3/2/2010 by EPA) (Attachment #2b), and
   c) Regionally Significant Projects (Draft 2030 LRTP & FY 09-12 TIP Project Lists for Modeling)(Attachment #2c): *Any changes requested subsequent to today's meeting may require restarting the conformity analysis from this point.*

3. ICG Conformity Consultation Procedures Update (Attachment #3): An update to the 2005 ICG Conformity Consultation Procedures is being initiated following the completion of the draft report for the conformity analysis. While the primary focus of the update is to reflect changes in regulatory requirements, the potential for streamlining the committee structure and process by having the TTAC (with which the ICG has largely common membership) fulfill the federal and state conformity requirements for inter-agency consultation will also be discussed and be the subject of a recommendation. Other suggestions for streamlining or improving the conformity consultation process will be requested from the ICG and TTAC as part of this review. The process for completing the update will be outlined.

   A Virginia conformity regulation (9 VAC 5-151) was developed by the Department of Environmental Quality in response to federal conformity requirements at 40 CFR Part 51. The Virginia regulation, which was approved by the US Environmental Protection Agency effective January 19, 2010, primarily addresses consultation and is generally consistent with the federal requirements for which the current ICG Procedures were originally developed. As is standard practice, this conformity analysis will comply with all applicable federal and state requirements including the new state regulation. Links to the applicable conformity regulations and procedures including inter-agency consultation requirements are provided on the attached.

4. Next Steps
   - Modeling for the conformity analysis for the LRTP and TIP will be initiated.
   - ICG Chair Update to the TTAC on the ICG Recommendation for Inter-Agency Consultation

ADJOURNMENT

Attachment #1

Hampton Roads Interagency Consultation Group

As of November 23, 2010

Agency		*Staff*	
City/County			
City of Chesapeake		Earl	Sorey
City of Hampton		Lynn	Allsbrook
City of Newport News		Michael	King
City of Norfolk		Jeffrey	Raliski
City of Poquoson		Deborah	Vest
City of Portsmouth		Richard	Hartman
City of Suffolk		Robert	Lewis
City of Virginia Beach		Travis	Campbell
City of Williamsburg		Reed	Nester
Gloucester County		Anne	Ducey-Ortiz
Isle of Wight County		Jane	Hill
James City County		Steven	Hicks
York County		Timothy	Cross
Regional			
Hampton Roads Transportation Planning Organization		Andy	Pickard
Hampton Roads Transit		Jayne	Whitney
Williamsburg Area Transit Authority		Richard	Drumwright
State			
Virginia Dept. of Environmental Quality		Sonya	Lewis-Cheatham
Virginia Dept. of Rail & Public Transportation		Joseph	Swartz
Virginia Dept. of Transportation – C/O Environmental		Jim	Ponticello
Virginia Dept. of Transportation – C/O Planning		Jaesup	Lee
Federal			
Environmental Protection Agency		Martin	Kotsch
Federal Highway Administration		Marisel	Lopez-Cruz
Federal Transit Administration		Tony	Cho
Alternates / Other (non-voting)			
City of Suffolk	*Alternate*	Sherry	Earley
	Other	Scott	Mills
James City County		Allen	Murphy
US Navy		Jennifer	Tabor

Attachment #2(a)

Regional Conformity Analysis Schedule (Draft 11/19/2010)
Hampton Roads Amended 2030 LRTP and FY 09-12 TIP

Month	Task
PROJECT LIST DEVELOPMENT	
November 2010	• 17th: TPO approval of amendment to the 2030 LRTP. • *Development of Plan and TIP project list for modeling initiated by TPO and VDOT staff.*
CONFORMITY ANALYSIS & APPROVALS	
December 2010	• 1st: Interagency Consultation Group (ICG) Kickoff Meeting: Review of methodology, assumptions and the project list for modeling for the conformity analysis. *PROJECT LIST FOR MODELING FINALIZED AT THE ICG. ANY SUBSEQUENT CHANGES MAY REQUIRE RESTARTING THE CONFORMITY PROCESS FROM THIS STEP.* • Initiation of 14-day public review period on the project list(s), as required by the 2009 Hampton Roads Public Participation Plan (PPP)
January 2011	• 5th: Transportation network modeling completed & results transmitted to VDOT Air Quality. o Emission modeling and update of associated draft conformity analysis report text initiated. • 19th: Draft conformity analysis completed. Emission modeling, conformity determination & draft report. • 20th-24th: VDOT/VDEQ/HRTPO staff review of draft conformity analysis. • 25th: Draft Conformity Analysis transmitted to HRTPO for the TTAC meeting agenda. o 26th: HRTPO Initiation of 14-day Public Review for the draft conformity analysis & finding (ends 2/9).
February	• 2nd: TTAC reviews & recommends approval of draft conformity analysis & finding, subject to receipt of no adverse comment in public review or none requiring TTAC review. • 10th-14th: VDOT/HRTPO staff review and draft response to comments received (if any) in public review, for consideration by the HRTPO. • 16th (17th): TPO approval of the final draft conformity analysis and finding (and the response to comments if any). (Consent Agenda) Next Day: • TPO approval letter issued and signed copy emailed to VDOT. • VDOT emails the Final Conformity Analysis with the TPO Letter to FHWA to initiate the federal review and approval process. • VDOT sends Final Report with TPO approval letter to printing. Federal review period (typically 45 days) begins upon receipt of the final report by email. FHWA coordinates the review with FTA and consults with EPA. • 24th: VDOT transmits print copies of the Final Conformity Analysis and TPO Letter to FHWA for their records.
April	• 4th: US DOT Finding of Conformity (letter from FHWA).

2. Modeling

A review of the modeling methodology and assumptions applied in the conformity analysis is presented in this chapter, beginning with an overview of the general approach and the determination of the analysis years and motor vehicle emission budgets applicable for Hampton Roads. Then, in turn, reviews of the key input data and specific assumptions applied in each step of the modeling process (transportation modeling, emission factor modeling, and emission modeling) are presented.

2.1 General Approach

Emissions are generally calculated as the product of vehicle activity and an emission factor corresponding to that vehicle class and activity. Emission factors are typically expressed in units of grams per mile (effectively, grams of pollutant emitted per vehicle-mile-traveled), consistent with federal new vehicle exhaust emission standards that are expressed on a grams per mile basis. Estimates for regional emissions, therefore, typically are generated as the product of VMT (by speed, roadway class, vehicle class etc.) estimated with corresponding emission factors.

Three separate models are typically applied in the development of the regional emission forecasts for conformity analyses:

1) a regional travel demand forecasting model,
2) the latest EPA-approved model to generate forecasts for regional fleet-average emission factors, and
3) a post-processor designed to combine the results from the first two models and generate estimates for regional total emissions for each pollutant and year as required for the conformity analysis.

Exhibit 2-1 below presents the key steps in this process.

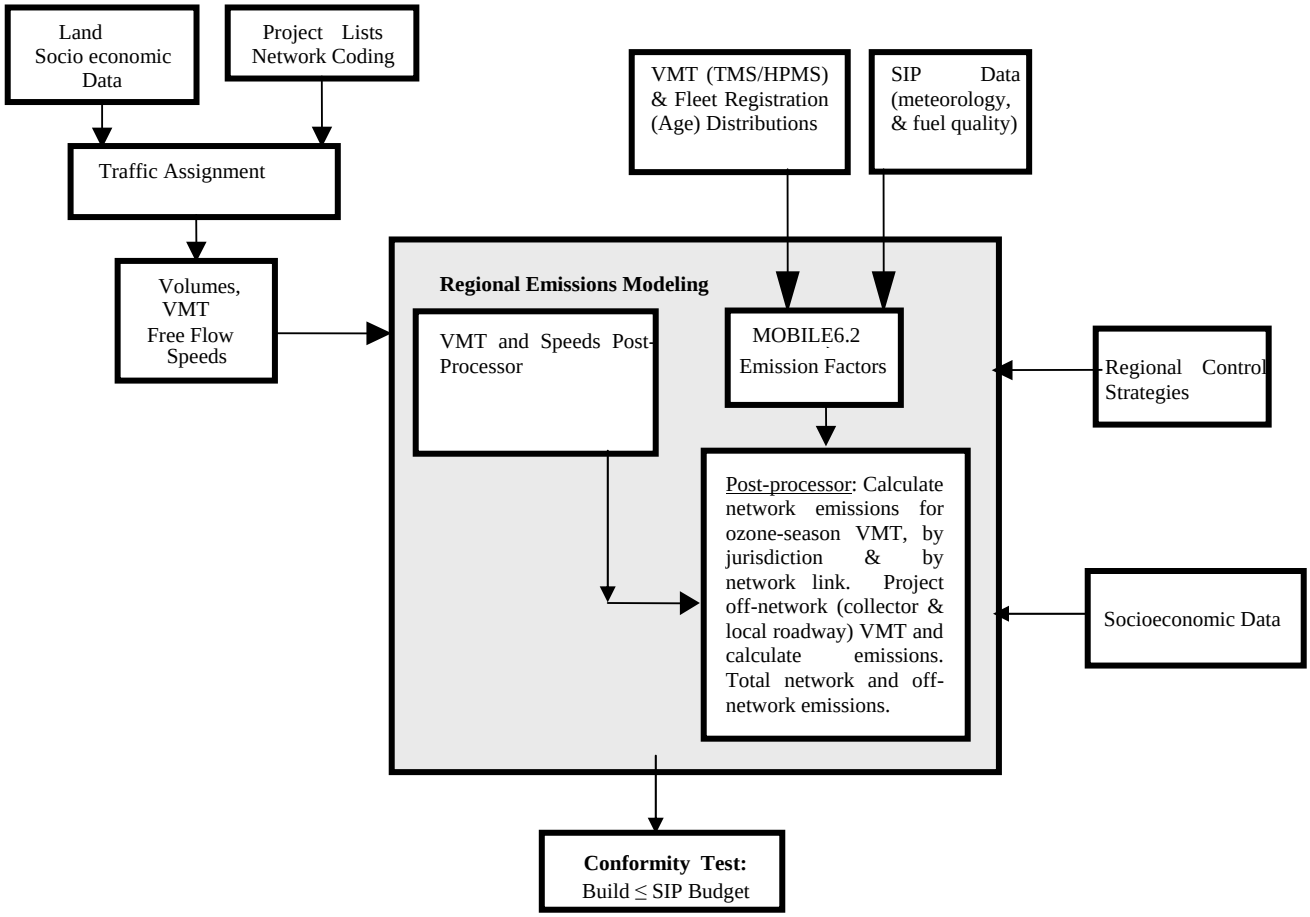
First, as shown on the left side of the exhibit, forecasts for travel demand for each year being modeled in the conformity analysis are developed. Key inputs for this step include the latest available socioeconomic forecasts and project lists. The latter are applied to update the regional transportation networks as appropriate for changes to the Plan and Program. The regional transportation networks include both existing and new regionally significant facilities, i.e. all interstates, freeways, expressways, principal arterials, and minor arterials as specified in the Plan and Program and expected to be open to traffic by the forecast year to be modeled for the conformity analysis. Separate networks are developed for each of the specific forecast years needed for the conformity analysis.

Concurrent with the development of travel demand forecasts, and as shown on the right side of the exhibit, emission factors (in unit of grams per mile) are generated using the latest EPA-approved emission factor model (MOBILE6.2)[74] for each pollutant and

[74] As noted later in this chapter, on March 2, 2010, EPA has released a next generation emission model (MOVES2010) that is intended to replace the MOBILE6.2 model that is currently in use. EPA indicated with the release that a two-year grace period will apply for conformity. Therefore, the MOBILE6.2 model was selected for application in this analysis.

forecast year. The factors are generally tabulated by speed, vehicle class, roadway class (or facility type), and, to allow for possible differences in fuel quality or emission control programs, jurisdiction. Key region-specific inputs include vehicle age distributions, VMT distributions, fuel quality data and meteorological data.

Exhibit 2-1: Conformity Analysis Process



Next, regional total emissions are calculated in the post-processor in three steps: 1) regional network emission, 2) off-network emissions, and 3) military base contributions are combined with the results from network and off-network emissions.

In the first step in the post-processor, regional network emissions are calculated using the traffic forecasts generated for the regional network by the travel demand model and the fleet-average emission factors as described above.

In the second step in the post-processor, emissions for traffic operating on “off-network” facilities (collectors and local streets) not included in the regional transportation model networks are estimated based on VMT generated by a simple growth model to the modeled year from base year traffic counts. Estimates for vehicle travel were also developed for the portion of Gloucester County that are within the designated maintenance area but are not (at least as yet) included in the regional network model.

In the third and last step in the post-processor, estimated contributions to regional emissions from mobile sources operating on military facilities (as specified in the maintenance plan[75]) are added to the estimates for emissions for network and off-network emissions to obtain estimates for regional total emissions for the maintenance area.

The post-processor calculations are repeated for each analysis year as needed. Conformity (emission budget) tests as described in the previous chapter are then applied for each analysis year.

2.2 Analysis Years and Budgets

Exhibit 2-2 presents the years selected for modeling for this conformity analysis and the associated motor vehicle emission budgets as specified in the maintenance plan.

Exhibit 2-2: Analysis Years and Budgets

Year	Regional Emission Budgets *(tons per ozone season weekday)*	
	NOx	**VOC**
2011*	50.387	37.846
2018*	31.890	27.574
2020	31.890	27.574
2030	31.890	27.574

** Budgets specified in 72 FR 30490, effective June 1, 2007.*

The years selected for analysis are consistent with the requirements of Section 93.118 of the conformity rule, which requires that years selected for the regional conformity analysis include the years for which budgets are established, the horizon year of the transportation plan, and an interim year such that analysis years are no more than ten years apart.

For this analysis, the years 2011 and 2018 were selected as they are years for which the maintenance plan specifies budgets. The year 2030 was selected as the horizon year for the transportation plan. To meet the interim year requirement (ten-year limit), the year 2020 was also selected.

Since Section 93.118 the conformity rule requires budgets established "for the most recent prior year" to apply for years for which budgets have not been "specifically established", the 2018 budgets as listed above are also applicable for the subsequent years (2020 and 2030).

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[75] Hampton Roads Maintenance Plan for the 1997 Eight-Hour Ozone Standard, as previous referenced. See US EPA, 72 FR 30490, 40 CFR Parts 52 and 81 [EPA–R03–OAR–2006–0919; FRL–8320–9], *Approval and Promulgation of Air Quality Implementation Plans; Virginia; Redesignation of the Hampton Roads 8-Hour Ozone Nonattainment Area to Attainment and Approval of the Area's Maintenance Plan and 2002 Base-Year Inventory*, Final Rule, effective June 1, 2007.
See: http://edocket.access.gpo.gov/2007/E7-10581.htm.

2.3 Transportation Demand Forecasting (TP+ Model)

The Hampton Roads regional traffic model is based on the TP+ transportation model, which is a suite of programs implementing a traditional four-step transportation model that includes trip generation, trip distribution, mode split and traffic assignment. The Hampton Roads regional traffic model covers the Counties of Gloucester (southern portion), Isle of Wight, James City, and York, as well as the Cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Williamsburg, and Virginia Beach. The model satisfies the requirements enumerated in 40 CFR 93.110 as well as the related requirements in 40 CFR 93.122 as summarized below.

The model was validated and calibrated for 2000 traffic volumes and land use conditions [40 CFR 93.122(b)(1)(i)][76]. Additional documentation on the calibration process is provided in the User Guide for the model[77].

Consistent with the requirements of federal conformity rule, all regionally significant projects in service or open to traffic in the year of analysis are included in the modeling [40 CFR 93.122(a)]. Roadway data input by the user (e.g., road segment length, capacity, number of lanes, and free-flow speeds by facility type) are used to create a representation of the regional transportation system for each analysis year, which includes all regionally significant projects identified for the Plan and TIP. A transportation system network is developed for all motorized modes of travel including single-occupant vehicle, high or multi-occupant vehicle (HOV), bus transit, and light rail transit. Following network development, travel time and cost estimates for all networks modeled are tabulated for use in subsequent model steps.

Trip making activity is estimated in the trip generation and trip distribution steps. Trip generation uses land use information aggregated by traffic analysis zone (TAZ), estimated trip rates, and standard equations to estimate the number of trips that will be generated by and attracted to each TAZ. The TAZ trip data are then used in the trip distribution step that links trip origins with trip destinations to create trip tables, which are disaggregated for work and non-work trip purposes. Trips that leave or pass through the Hampton Roads region were also estimated, using observed 2000 traffic counts at major exit points of the region, and expanded based on forecast traffic counts at those locations in future years.

Trip tables from trip distribution along with network-based travel time and cost data [40 CFR 93.122(b)(1)(v, vi)] are input to the mode split step to estimate trip tables by trip purpose and mode. In the mode split step, nested-logit equations are applied to allocate trips between auto and transit modes. Individual trip tables are created for auto and transit modes. Prior to traffic assignment, trip tables are processed to apply standard auto occupancy rates, convert the tables from model-based production-attraction format to standard origin-destination format, and aggregate results.

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[76] Michael Baker, Jr., Inc., *2000 Hampton Roads Model Validation Memorandum*, May 2004

[77] Michael Baker, Jr., Inc., *2000 Hampton Roads Model Users Guide*, August 2004

Finally, in the traffic assignment step, the trip tables are loaded onto the appropriate highway or transit network and the model run to produce forecasts for traffic volumes for each roadway or transit link. Highway assignment utilizes a capacity restraint formula to simulate congestion effects on the roadway system [40 CFR 93.122(b)(1)(iv)]. The model makes route decisions based upon the estimated level of roadway congestion, redirecting trips to less congested routes until equilibrium is achieved (i.e., when shifting trips to alternative routes will no longer realize any time savings).

Output from the highway assignment is a network file that includes the assigned roadway volumes for each roadway link. Transit assignment is based upon best available route and does not have a modeled congestion process. The assigned volumes are applied to generate VMT estimates.

This overall modeling process is applied for each analysis year. Appendix B presents resulting forecasts by jurisdiction. Key inputs to the network model are reviewed below.

2.3.1 Socioeconomic Forecasts

The HRTPO developed the socioeconomic data to be used in the conformity analysis using the Regional Economic Models, Inc. (REMI) econometric model. The REMI model is a conjoined input-output and econometric model widely used by local, state and federal governments, colleges and universities, consulting firms and others for economic forecasting including impact analyses.

Following standard practice for the development of socioeconomic forecasts, the REMI model was applied to develop "control totals" for key parameters such as population and employment for the Hampton Roads area. The HRTPO then sub-allocated the regional control totals generated with the REMI model to the local or jurisdiction level for the Hampton Roads area. The sub-allocations were reviewed by each locality and adjustments were made where appropriate [40CFR93.110; 40CFR93.122(b)(1)(iiii)].

Participants in this process included the Counties of Gloucester, Isle of Wight, James City, and York, as well as the Cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Williamsburg, and Virginia Beach. Representatives of these jurisdictions distributed the regional population and employment projections to the TAZs used in the transportation model, covering the LRTP Study Area.

Exhibit 2-3 presents the socioeconomic forecasts underlying the travel demand forecasts developed for this conformity analysis. The forecasts (including interim years and sub-allocations as appropriate) represent the latest projections available and approved for use with the 2030 LRTP[78] [40CFR93.110(a,b); 40CFR93.122(b)(1)(ii)]. More detailed data are presented in Appendix A.

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[78] While socioeconomic forecasts for 2034 have more recently been adopted for use in the pending development of the 2034 LRTP, they were not intended nor approved by the TPO for use with the existing and approved 2030 LRTP. *Consistent with the consultation requirements of the federal conformity rule at 93.105 and the corresponding state regulation at 9 VAC 5-151-70 that is now in effect, the use of the 2030 versus the 2034 socioeconomic forecasts for this analysis was reviewed by the Hampton Roads Interagency Consultation Group at the beginning of the conformity analysis process, as documented with the minutes for that meeting (which are included in Appendix E). The*

Exhibit 2-3: Socioeconomic Forecasts*

Year	Hampton Roads LRP Study Area			
	Population	Households	Automobiles	Employment
2011	1,693,101	627,306	1,282,689	1,045,049
2018	1,796,281	668,383	1,408,788	1,101,666
2020	1,825,772	680,130	1,444,843	1,117,867
2030	1,973,250	738,865	1,625,000	1,198,775

** The projections for 2030 were adopted by the Hampton Roads TPO in December 2004. The projections for other years were obtained by interpolation, by TAZ, between 2000 and 2030.*

2.3.2 Transit Service

Transit operating policies (including fares and service levels) and modeling for transit (ridership) have not changed significantly since the previous conformity determination [40 CFR 93.110(c) and (d)]. Proposed light rail service is included in future networks for the region. Transit service and fares as well as road and bridge tolls are addressed in more detail in supporting documentation for the Plan and associated modeling. While future transit ridership is effectively determined in the course of modeling for the conformity analysis, details on current transit operating policies including fares and service levels may be found on the Hampton Roads Transit (HRT) and Williamsburg Area Transportation Authority (WATA) websites[79].

In brief, while local transit fares have not changed since the last conformity analysis for either HRT or the WATA, express bus service has been augmented. For Hampton Roads Transit, the current single ticket fare for local bus service is $1.50. A day pass (the Go Pass) was introduced in 2008 with a fare of $3.50 for a one-day pass. For Williamsburg Area Transit, the fare for a one-way trip is $1.25; for seniors (60 and over) and disabled, a reduced fare of $0.50 applies. An all-day pass (for unlimited trips) is also available for a fare of $1.50. In keeping with the Americans with Disabilities Act (ADA), door-to-door service is also available for those unable to use bus at a fare of $2.00 per one-way trip. Finally, new ("Max") express bus service was added to the current service in the model (with fares converted to constant 2000 dollars).

2.3.3 Project Lists & Regional Network Development

The federal conformity rule at 40 CFR 93.122(a) requires that "*General requirements. (1) The regional emissions analysis … for the transportation plan, TIP… must include all regionally significant projects expected in the nonattainment or maintenance area. The analysis shall include FHWA/FTA projects proposed in the transportation plan and TIP*

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consensus of the ICG was to apply the approved 2030 socioeconomic forecasts for this analysis.

[79] See www.hrtransit.org and www.williamsburgtransport.com, respectively.

and all other regionally significant projects which are disclosed to the MPO as required by Sec. 93.105."

All regionally significant and/or federally funded or approved projects identified in the Plan and Program were incorporated into the respective highway networks for each analysis year. The project list for the Plan and TIP was subjected to Interagency Consultation Group review (pursuant to Section 93.105 and the corresponding state regulation) as documented in the chapter on consultation.

Each network is a representation of the region's highway system as it is likely to appear by the specified year. Similarly, the transit network for each scenario and analysis year is coded to estimate transit volumes and ridership.

Regionally significant projects are defined in the federal conformity rule and generally include arterials and higher level facilities (freeways, expressways, interstates) that serve a regional function and are typically coded in the transportation model network for transportation analyses. Minor arterials, collectors, or local streets are usually only coded in the model if they enhance the capability of the traffic model to route trips on the network.

Since regional emission analyses are performed for a number of analysis years as needed for the conformity determination, the transportation networks were coded to include all regionally significant projects specified or included in the Plan and Program and open to traffic in each of the selected analysis years. Appendix F presents the project list for modeling (i.e., regionally significant changes to the existing roadway and transit system) including years modeled as open to traffic.

Projects were coded in the networks based on the first analysis year in which the project would be open to traffic or operational. For the most part, project opening dates were determined at the District level based upon detailed project information provided by either the localities or the associated VDOT project manager. In cases where that level of detail in scheduling was not available, assumptions were made. For example, completion dates where otherwise not available were estimated by adding three years to the advertisement date for major projects and shorter timeframes as appropriate for minor projects.

2.3.4 Adjustments for Gloucester County

The federal conformity rule at 40 CFR 93.122(a)(7) requires that "*Reasonable methods shall be used to estimate nonattainment or maintenance area VMT on off-network roadways within the urban transportation planning area, and on roadways outside the urban transportation planning area.*"

The Hampton Roads TP+ travel demand model covers the Hampton Roads MPO (TPO) study area. Although only a portion of Gloucester County is within the study area, the remainder of the county is also in the maintenance area and must be included in the conformity analysis. Therefore, for the off-network area within Gloucester County, traffic counts and forecasts as needed were extracted from the VDOT Statewide Planning System database.

The specific data extracted included the roadway functional class, posted speed, link distance, and traffic count / forecast for each analysis year for all links that were not inside the network area. Estimates of vehicle-miles-traveled (VMT) were computed by multiplying link length by the traffic count forecast for each link. These off-network results were then added to the network VMT estimates produced by the regional travel demand model to obtain the regional forecasts needed, covering the entire County.

2.3.5 Treatment of Off-Network Facilities (Local and Collector Roads)

Local and collector roadways are not typically coded in regional transportation model networks and, consistent with that practice, are not coded in the TP+ regional network developed for Hampton Roads. However, the travel demand model output is not directly adjusted to account for traffic on these facilities. Instead, traffic and emissions for these facilities are addressed in the post-processor and, accordingly, documented with the post-processor.

See Section 2.5 on post-processing for more information on the adjustments for off-network facilities.

2.3.6 Optional Off-line Analyses

Some transportation projects that have a potentially significant impact on regional air quality cannot be coded into the transportation modeling network. These are categorized as "off-line projects" and are analyzed using a variety of methodologies that include elasticity/pivot-point analysis and the use of traffic engineering principles to estimate their traffic and emission impacts.

Off-line analyses for Hampton Roads would include transit bus replacements, Congestion Mitigation and Air Quality (CMAQ) funded projects, van pools, and park-and-ride lots. However, since these adjustments were not needed to demonstrate conformity for this conformity analysis, they were not applied.

2.4 Emission Factor Forecasting

This section presents the selection of the latest emission model as well as key inputs for that model.

2.4.1 Latest Emission Model

The federal conformity rule at 93.111(a) requires the use of the latest emission model as follows: "*The conformity determination must be based on the latest emission estimation model available.*"[80] However, when EPA issues a new model, a grace or transition period applies in which the previous version of the model may still be applied, per the federal conformity rule at 93.111(c) which states: "*Transportation plan and TIP conformity analyses for which the emissions analysis was begun during the grace period or before*

[80] Federal Conformity Rule, 40 CFR 93.111 *Criteria and Procedures: Latest Emissions Model* http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.111.htm

the Federal Register notice of availability of the latest emission model may continue to use the previous version of the model."

On March 2, 2010, EPA officially released the next generation Motor Vehicle Emission Simulator (MOVES) model for use in SIP development and regional conformity applications[81]. The EPA notice indicated that a two-year grace period (ending March 2, 2012) applies for use of the new model in regional emissions analyses for transportation conformity determinations. Therefore, for regional conformity analyses initiated before or within the two-year grace period, the MOBILE6.2 model (the model previously designated as the official model by EPA) may continue to be applied.

Since this conformity analysis for Hampton Roads is being initiated within the two-year grace period, the MOBILE6.2 model may be applied. Given that the applicable budgets for the Hampton Roads region were developed based on the MOBILE6.2 model, and that this model has been applied successfully to meet those budgets in previous conformity analyses for the region, it was selected for application for this conformity analysis. The MOVES model may be applied in future analyses once appropriate steps have been taken, within the two-year grace period, to review and update as needed the applicable budgets[82].

2.4.2 MOBILE Model Inputs

The MOBILE6.2 model may be applied to generate estimates for historic, current and future emission factors for regional on-road motor vehicle fleets. Fleet average emission factors may be generated for:

- multiple pollutants, including hydrocarbons, carbon monoxide, nitrogen oxides, exhaust particulate, hazardous air pollutants (HAPs), and carbon dioxide,
- multiple vehicle and fuel-types, including gasoline, diesel, and natural gas-fueled cars, trucks, buses and motorcycles, and
- calendar years between 1952 and 2050.

Modeled emission factors also vary with age (registration distribution by vehicle class), humidity, ambient temperatures, detailed fuel specifications, and operation (speed, by roadway functional class).

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[81] US EPA, 75 FR 9411, [FRL–9121–1], *Official Release of the MOVES2010 Motor Vehicle Emissions Model for Emissions Inventories in SIPs and Transportation Conformity*, Notice of Availability, March 2, 2010. Available at: http://edocket.access.gpo.gov/2010/2010-4312.htm. While the official name of the new model is "MOVES2010", with the year of release incorporated into the model name, it is abbreviated here as "MOVES" to allow for pending future revisions to the model and any associated revisions to the model name. EPA also uses the abbreviated name (without the reference to year) in its website address for the model. For additional information, see:

- EPA website for MOVES: http://www.epa.gov/otaq/models/moves/index.htm.
- US EPA, *Policy Guidance on the Use of MOVES2010 for State Implementation Plan Development, Transportation Conformity, and Other Purposes*, EPA-420-B-09-046, December 2009. Direct link: http://www.epa.gov/otaq/models/moves/420b09046.pdf.

[82] A separate process to review and update as appropriate (using MOVES) the motor vehicle emission budgets specified in the currently applicable SIP revision (maintenance plan) is planned. This budget review and update process would need to be completed before the new or revised budgets could be applied for the region in future conformity analyses to be conducted using MOVES, and would need to be targeted therefore for completion by the end of the two-year grace period ending March 2, 2012.

Emission factors are generated by the model in units of grams of pollutant per vehicle mile of travel. Emission forecasts are obtained (as noted previously) as the product of these estimated emission factors with corresponding VMT forecasts.

For this analysis, both national default data and region-specific inputs were used with MOBILE6.2. Region-specific inputs include meteorological data, emission control programs, and on-road fleet registration and traffic distribution data, which are summarized in turn below. A sample of a MOBILE6.2 input file applied in this conformity analysis is provided in Appendix C.

2.4.2.1 Ambient Conditions

The federal conformity rule at 93.122(a)(6) requires that "*The ambient temperatures used for the regional emissions analysis shall be consistent with those used to establish the emissions budget in the applicable implementation plan.…*" [83].

Exhibit 2-4 presents average hourly ambient temperatures, hourly relative humidities, and barometric pressure data as presented in the Technical Support Document for the applicable implementation (maintenance) plan. The hourly data for ambient temperature and relative humidity along with the average daily value for barometric pressure were applied in this conformity analysis, consistent with the maintenance plan.

2.4.2.2 Emission Control Programs

Exhibit 2-5 lists emission control programs in effect for the Hampton Roads area as input to the MOBILE6.2 model. The locality-specific MOBILE input parameters are consistent with the approved maintenance SIP and based on the latest planning assumptions.

Emission control programs for Hampton Roads as modeled for this analysis include:

- Reformulated Gasoline (RFG), and Gasoline Reid Vapor Pressure (RVP): RFG was modeled for all jurisdictions within the maintenance area with the exception of the Counties of Gloucester and Isle of Wight, which use conventional gasoline. RFG benefits were modeled for all analysis years after 1996, consistent with Virginia regulations requiring RFG and the Maintenance Plan.

  RFG Phase 2, which is currently in effect, has an approximate Reid vapor pressure (RVP) of 6.8 pounds per square inch (PSI). For the Counties of Gloucester and Isle of Wight, the RVP for conventional gasoline was taken as 8.4 PSI.

- 2007 Heavy Duty Diesel Vehicle (HDDV): The 2007 Heavy Duty Diesel Vehicle (HDDV) program including the implementation of ultra low sulfur diesel was included in the generation of emission factors for the conformity analysis. From the regulatory announcement[84]:

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[83] Federal Conformity Rule, 40 CFR 93.122 *Procedures for Determining Regional Transportation-Related Emissions*: http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.122.htm

[84] US EPA, *Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control*

Exhibit 2-4: Ambient Conditions - Ozone Season

Average Hourly Meteorological Data				
Time (EDT)	Temperature (F)	Dew Point (F)	Relative Humidity (%)	Pressure (In)
6:00 AM	71.77	66.4	83.9	30.017
7:00 AM	75.2	67.7	78.1	30.029
8:00 AM	77.8	68.09	72.7	30.033
9:00 AM	81.07	67.22	63	30.034
10:00 AM	83.04	66.91	58.5	30.034
11:00 AM	84.34	65.99	54.5	30.027
12:00 PM	85.79	65.04	50	30.019
1:00 PM	86.59	64.81	48.9	30.009
2:00 PM	87.4	64.09	46.6	29.996
3:00 PM	87.27	63.82	46	29.985
4:00 PM	87.6	63.22	44.7	29.978
5:00 PM	87.01	63.86	46.7	29.974
6:00 PM	85.51	63.99	49.1	29.973
7:00 PM	83.21	65.42	55.9	29.982
8:00 PM	79.39	68.16	69	29.99
9:00 PM	77.9	68.5	73.3	30.004
10:00 PM	77.02	68.08	74.5	30.006
11:00 PM	75.38	67.87	78.1	30.007
12:00 AM	73.31	66.4	79.8	30.006
1:00 AM	72.91	66.31	80.7	30.004
2:00 AM	72.71	66.49	81.7	29.997
3:00 AM	71.9	63.8	78.1	29.995
4:00 AM	71.2	65.5	82.8	29.995
5:00 AM	70.73	65.49	84.3	30.006
	Avg Min T	70.51		
	Avg Max T	88.01		
	Avg Pres	30.004		

Source: VDEQ, "Technical Support Document for the Redesignation Request and Maintenance Plan for Hampton Roads 8-Hour Ozone Nonattainment Area, Final", as approved June 1, 2007, 72 FR 30490. See Table 4.1-2 on age 64. Reproduced with permission.

Exhibit 2-5: Emission Control Programs

Programs	**2011**	**2018**	**2020**	**2030**
Reformulated Gasoline*	Yes	Yes	Yes	Yes
RVP (PSI):				
• All jurisdictions but Gloucester and Isle of Wight	6.8	6.8	6.8	6.8
• Gloucester and Isle of Wight	8.4	8.4	8.4	8.4
2007 HDDV Program	Yes	Yes	Yes	Yes
NLEV Early Implementation	Yes	Yes	Yes	Yes
Tier 2 Standards	Yes	Yes	Yes	Yes

**Except for the counties of Gloucester and Isle of Wight, which use conventional gasoline.*

Requirements, EPA420-F-00-057, Office of Transportation and Air Quality, December 2000.

New Standards for Heavy-Duty Highway Engines and Vehicles

[EPA is] finalizing a PM emissions standard for new heavy-duty engines of 0.01 grams per brake-horsepower-hour (g/bhp-hr), to take full effect for diesels in the 2007 model year. [EPA is] also finalizing standards for NOx and non-methane hydrocarbons (NMHC) of 0.20 g/bhp-hr and 0.14 g/bhp-hr, respectively. These NOx and NMHC standards will be phased in together between 2007 and 2010, for diesel engines. The phase-in will be on a percent of-sales basis: 50 percent from 2007 to 2009 and 100 percent in 2010. Gasoline engines will be subject to these standards based on a phase in requiring 50 percent compliance in the 2008 model year and 100 percent compliance in the 2009 model year.

The program includes flexibility provisions to facilitate the transition to the new standards and to encourage the early introduction of clean technologies, and adjustments to various testing and compliance requirements to address differences between the new technologies and existing engine based technologies.

New Standards for Diesel Fuel

Refiners will be required to start producing diesel fuel for use in highway vehicles with a sulfur content of no more than 15 parts per million (ppm), beginning June 1, 2006. At the terminal level, highway diesel fuel sold as low sulfur fuel will be required to meet the 15 ppm sulfur standard as of July 15, 2006. For retail stations and fleets, highway diesel fuel sold as low sulfur fuel must meet the 15 ppm sulfur standard by September 1, 2006.

This program includes a combination of flexibilities available to refiners to ensure a smooth transition to low sulfur highway diesel fuel.

- National Low Emission Vehicle (NLEV) Program Early Implementation: Early implementation of the NLEV program was included in the modeling for the conformity analysis. The NLEV program, finalized by EPA in March 1998, implemented cleaner light-duty gasoline vehicles beginning in model year 1999 throughout Virginia.

- Tier 2 Vehicle Emission Standards: EPA Tier 2 vehicle emission standards implementation beginning with the 2004 model year was specified for the modeling for the conformity analysis. Gasoline sulfur levels as required for the Tier 2 standards were incorporated into the modeling. From the supplementary information included with the final Tier 2 rule[85]:

Highlights of the Tier2/Gasoline Sulfur Program
For cars, and light trucks, and larger passenger vehicles, the program will—
o *Starting in 2004, through a phase in, apply for the first time the same set of emission standards covering passenger cars, light trucks, and large SUVs and passenger vehicles. …*

[85] US EPA, 65 FR 6698, 40 CFR Parts 80, 85, and 86, *Control of Air Pollution From New Motor Vehicles: Tier 2 Motor Vehicle Emissions Standards and Gasoline Sulfur Control Requirements; Final Rule*, February 10, 2000. Published in four sections spanning pages 6697-6870. See:
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&docid=page+6697-6746
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&docid=page+6747-6796
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&docid=page+6797-6846
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&docid=page+6847-6870

- o *Introduce a new category of vehicles, ''medium-duty passenger vehicles,'' thus bringing larger passenger vans and SUVs into the Tier 2 program.*
- o *During the phase-in, apply interim fleet emission average standards that match or are more stringent than current federal and California ''LEV I'' (Low-Emission Vehicle, Phase I) standards.*
- o *Apply the same standards to vehicles operated on any fuel.*
- o *Allow auto manufacturers to comply with the very stringent new standards in a flexible way while ensuring that the needed environmental benefits occur.*
- o *Build on the recent technology improvements resulting from the successful National Low-Emission Vehicles (NLEV) program and improve the performance of these vehicles through lower sulfur gasoline.*
- o *Set more stringent particulate matter standards.*
- o *Set more stringent evaporative emission standards.*

For commercial gasoline, the program will—

- o *Significantly reduce average gasoline sulfur levels nationwide as early as 2000, fully phased-in in 2006. Refiners will generally add refining equipment to remove sulfur in their refining processes. Importers of gasoline will be required to import and market only gasoline meeting the sulfur limits.*

…

- o *Enable the new Tier 2 vehicles to meet the emission standards by greatly reducing the degradation of vehicle emission control performance from sulfur in gasoline. Lower sulfur gasoline also appears to be necessary for the introduction of advanced technologies that promise higher fuel economy but are very susceptible to sulfur poisoning (for example, gasoline direct injection engines).*
- o *Reduce emissions from NLEV vehicles and other vehicles already on the road.*

Consistent with the modeling presented in the Technical Support Document for the maintenance plan, inspection and maintenance or anti-tampering programs were not included in the modeling for this analysis.

2.4.2.3 Fleet Distribution Data

Fleet data are input into the MOBILE6.2 model for vehicle age distributions by vehicle class and VMT distributions by vehicle and roadway class. Separate distributions are applied for each jurisdiction in the region.

Exhibit 2-6 presents a sample of vehicle registration distribution data (relative vehicle population by vehicle "age"[86] and class). The sample is for the entire regional on-road motor vehicle fleet in Hampton Roads in 2008, which is not applied directly in the conformity analysis. For greater accuracy, the conformity analysis was instead conducted using the corresponding age distributions developed for each individual jurisdiction within the Hampton Roads region.

[86] Defined by EPA as the calendar year minus model year, plus one. See: US EPA, *User's Guide to MOBILE6.1 and MOBILE6.2 Mobile Source Emission Factor Model*, EPA420-R-03-010, August 2003, p.95 (Section 2.8.7.1 *Distribution of Vehicle Registrations*)

Exhibit 2-6: 2008 Vehicle Registration Distributions for Hampton Roads

MOBILE Model	Vehicle Age (Calendar Year - Model Year +1)									
Composite Vehicle Class*	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
	11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
(Number, Abbreviation, Description)	**21**	**22**	**23**	**24**	**25+**					
1. LDV - Light-Duty Vehicles (Passenger Cars)	0.0471	0.0672	0.0626	0.0638	0.0646	0.0677	0.0669	0.0637	0.0698	0.0575
	0.0518	0.0505	0.0424	0.0441	0.0357	0.0298	0.0244	0.0194	0.0164	0.0132
	0.0109	0.0094	0.0073	0.0053	0.0084					
2. LDT1 - Light-Duty Trucks 1	0.0348	0.0000	0.0559	0.0722	0.0227	0.0646	0.0589	0.0546	0.0378	0.0355
(0-6,000 lbs. GVWR, 0-3,750 lbs. LVW)	0.0305	0.0311	0.0540	0.0244	0.0178	0.0175	0.0181	0.0187	0.0162	0.0418
	0.0793	0.0814	0.0511	0.0277	0.0534					
3. LDT2 - Light-Duty Trucks 2	0.0395	0.0653	0.0626	0.0749	0.0781	0.0722	0.0774	0.0649	0.0695	0.0556
(0-6,000 lbs. GVWR, 3,751-5,750 lbs. LVW)	0.0542	0.0477	0.0372	0.0349	0.0315	0.0252	0.0178	0.0159	0.0132	0.0135
	0.0123	0.0105	0.0094	0.0060	0.0108					
4. LDT3 - Light-Duty Trucks 3	0.0443	0.0676	0.0759	0.0795	0.0985	0.0952	0.0796	0.0669	0.0610	0.0624
(6,001-8,500 lbs. GVWR, 0-5,750 lbs. ALVW*)	0.0364	0.0339	0.0329	0.0363	0.0285	0.0185	0.0139	0.0087	0.0117	0.0122
	0.0098	0.0073	0.0070	0.0047	0.0076					
5. LDT4 - Light-Duty Trucks 4	0.0472	0.1382	0.0806	0.1090	0.1361	0.0843	0.0471	0.0543	0.0572	0.0730
(6,001-8,500 lbs. GVWR, 5,751 lbs. and greater ALVW)	0.0501	0.0431	0.0162	0.0131	0.0121	0.0083	0.0042	0.0026	0.0043	0.0048
	0.0056	0.0029	0.0015	0.0014	0.0031					
6. HDV2B Class 2b Heavy-Duty Vehicles	0.0432	0.0602	0.0913	0.0764	0.0957	0.0933	0.0660	0.0678	0.0691	0.0568
(8,501-10,000 lbs. GVWR)	0.0274	0.0428	0.0324	0.0342	0.0209	0.0166	0.0143	0.0093	0.0120	0.0152
	0.0112	0.0080	0.0113	0.0092	0.0155					
7. HDV3 - Class 3 Heavy-Duty Vehicles	0.0557	0.0591	0.1320	0.1044	0.0719	0.0636	0.0619	0.0620	0.0614	0.0638
(10,001-14,000 lbs. GVWR)	0.0266	0.0270	0.0186	0.0277	0.0192	0.0137	0.0125	0.0077	0.0148	0.0146
	0.0197	0.0154	0.0156	0.0111	0.0197					
8. HDV4 - Class 4 Heavy-Duty Vehicles	0.0296	0.0559	0.0531	0.0480	0.0432	0.0613	0.0527	0.0596	0.0722	0.0754
(14,001-16,000 lbs. GVWR)	0.0341	0.0765	0.0391	0.0490	0.0475	0.0223	0.0240	0.0195	0.0249	0.0289
	0.0220	0.0168	0.0121	0.0110	0.0214					
9. HDV5 - Class 5 Heavy-Duty Vehicles	0.0517	0.0848	0.1079	0.1326	0.0919	0.0693	0.0369	0.0369	0.0567	0.0649
(16,001-19,500 lbs. GVWR)	0.0193	0.0815	0.0226	0.0341	0.0270	0.0149	0.0110	0.0088	0.0072	0.0077
	0.0061	0.0094	0.0061	0.0044	0.0066					
10. HDV6 - Class 6 Heavy-Duty Vehicles	0.0329	0.0815	0.0778	0.0790	0.0787	0.0440	0.0544	0.0505	0.0774	0.0697
(19,501-26,000 lbs. GVWR)	0.0508	0.0350	0.0282	0.0463	0.0167	0.0217	0.0178	0.0178	0.0171	0.0144
	0.0124	0.0178	0.0153	0.0151	0.0275					
11. HDV7 - Class 7 Heavy-Duty Vehicles	0.0204	0.0527	0.0429	0.0422	0.0468	0.0281	0.0404	0.0408	0.0556	0.0492
(26,001-33,000 lbs. GVWR	0.0601	0.0348	0.0334	0.0745	0.0440	0.0222	0.0267	0.0366	0.0482	0.0323
	0.0411	0.0390	0.0274	0.0260	0.0345					
12. HDV8 - Class 8a Heavy-Duty Vehicles	0.0267	0.0768	0.0382	0.0398	0.0330	0.0298	0.0485	0.0605	0.0633	0.0700
(33,001-60,000 lbs. GVWR)	0.0633	0.0569	0.0374	0.0676	0.0378	0.0334	0.0227	0.0231	0.0302	0.0283
	0.0267	0.0251	0.0175	0.0231	0.0203					
13. HDV8B Class 8b Heavy-Duty Vehicles	0.0215	0.0786	0.0772	0.0664	0.0580	0.0458	0.0348	0.0776	0.0945	0.0723
(>60,000 lbs. GVWR)	0.0647	0.0510	0.0502	0.0481	0.0363	0.0230	0.0154	0.0160	0.0131	0.0143
	0.0120	0.0078	0.0072	0.0076	0.0067					
14. HDBS - School Buses	0.0026	0.0068	0.0047	0.0047	0.0350	0.0575	0.0178	0.0606	0.0721	0.0669
	0.0789	0.0418	0.0706	0.0664	0.0235	0.0355	0.0382	0.0486	0.0805	0.0711
	0.0105	0.0303	0.0314	0.0256	0.0183					
15. HDBT - Transit and Urban Buses	0.0324	0.0333	0.0182	0.0373	0.0280	0.0266	0.0506	0.0235	0.0200	0.0337
	0.0258	0.0129	0.0222	0.0706	0.0448	0.0608	0.0249	0.0262	0.0324	0.0626
	0.0710	0.0870	0.0586	0.0435	0.0528					
16. MC - Motorcycles (All)	0.0578	0.1231	0.1274	0.1053	0.0847	0.0957	0.0705	0.0555	0.0447	0.0362
	0.0249	0.0196	0.0203	0.0157	0.0146	0.0120	0.0087	0.0063	0.0060	0.0065
	0.0053	0.0073	0.0109	0.0111	0.0297					

* *EPA footnote for the vehicle class definitions*: ALVW = Alternative Loaded Vehicle Weight: The adjusted loaded vehicle weight is the numerical average (GVWR) of the vehicle curb weight and the gross vehicle weight rating (GVWR)

Source for the vehicle registration data: VDEQ Email to VDOT regarding "2008 Vehicle Registration Data (more)", September 9, 2009. Sums normalized in MOBILE model execution.

Source for the vehicle class definitions: *Appendix B, MOBILE6 Input Data Format Reference Tables, Table 1 - Composite Vehicle Classes for Vehicle Registration Data and Vehicle Miles Traveled Fractions (REG DIST and VMT FRACTIONS Commands)* from US EPA, *User's Guide to MOBILE6.1 and MOBILE6.2 Mobile Source Emission Factor Model,* EPA420-R-03-010, August 2003

The data for each jurisdiction in the region as well as the regional set presented here were developed by the VDEQ in support of the preparation of the federally-required 2008 Periodic Emission Inventory ("2008 PEI"). The VDEQ developed the update to the registration distribution data using detailed vehicle identification number (VIN) data for July 1, 2008 for all jurisdictions in the Commonwealth. The jurisdictional data for Hampton Roads so developed were incorporated into the MOBILE6.2 input files for this conformity analysis, consistent with but updating the data applied in the 2007 maintenance plan for the region.

Exhibit 2-7 presents VMT distributions by vehicle and federal roadway functional class. The distributions were generated using TMS/HPMS data compiled by VDOT[87]. Similar to the registration distribution data, the VMT distribution data were developed in support of the preparation of the federally-required 2008 PEI.

2.5 Post-Processing

The post-processor generates regional total emission forecasts based on estimates developed for three separate sub-categories, namely:

1) regional network VMT and emissions, which are generated using the VMT and emission factor output from the regional travel demand and emission factor modeling steps as described above,

2) "off-network" VMT and emissions, for which traffic (VMT and speeds) expected for roadways that are not typically coded in regional transportation model networks (i.e., local and collector roadways) are first projected and the results combined with the emission factors generated previously to generate emission estimates for these minor facilities, and

3) military base contributions to emissions, as specified in the maintenance plan (referenced earlier). Following the procedure in the maintenance plan, the military base contributions are added without adjustment in the post-processor to the estimate for total regional emissions.

The post-processor is based upon transportation engineering methods presented in the 2000 *Highway Capacity Manual (HCM)* and *National Cooperative Highway Research Program (NCHRP) Report 387*.

While the development of estimates for VMT and emissions factors for traffic on the regional network has been presented, the calculation of emissions for the regional network involves two additional adjustments: i) for congested speeds, and ii) for seasonal traffic levels. These are reviewed in turn below.

The development of estimates for traffic and emissions on off-network facilities is then reviewed. This section concludes with a presentation of the hourly profiles that were applied for the VMT tables included in the appendices.

[87] VDOT, *Traffic Data for the 2008 Highway Emissions Inventory. Air Quality Planning Areas: Fredericksburg, Hampton Roads, Northern Virginia, Richmond, Roanoke & Winchester*, September 2009.

Exhibit 2-7: 2008 VMT Distribution by Roadway Functional Class for Hampton Roads

FHWA Roadway Functional Class		Hampton Roads Ozone Maintenance Area Daily VMT Distribution																
		LDV	LDT1	LDT2	LDT3	LDT4	HDV2b	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8a	HDV8b	HDBS	HDBT	MC	SUM
1	Rural Interstate	0.38141	0.08791	0.29267	0.08912	0.04098	0.03405	0.00335	0.00275	0.00205	0.00760	0.00897	0.00975	0.03477	0.00172	0.00079	0.00211	1.00
2	Rural Principal Arterial	0.37691	0.08688	0.28923	0.08807	0.04050	0.03785	0.00373	0.00306	0.00228	0.00844	0.00997	0.01083	0.03865	0.00192	0.00088	0.00080	1.00
6	Rural Minor Arterial	0.38059	0.08773	0.29205	0.08893	0.04089	0.03373	0.00332	0.00273	0.00203	0.00753	0.00889	0.00965	0.03445	0.00171	0.00079	0.00498	1.00
7	Rural Major Collector	0.41055	0.09464	0.31505	0.09593	0.04411	0.01177	0.00116	0.00095	0.00071	0.00263	0.00310	0.00337	0.01202	0.00060	0.00027	0.00314	1.00
8	Rural Minor Collector	0.41590	0.09587	0.31915	0.09718	0.04469	0.00805	0.00079	0.00065	0.00049	0.00180	0.00212	0.00231	0.00822	0.00041	0.00019	0.00218	1.00
9	Rural Local	0.39413	0.09085	0.30245	0.09209	0.04235	0.02347	0.00231	0.00190	0.00142	0.00524	0.00619	0.00672	0.02397	0.00119	0.00055	0.00517	1.00
11	Urban Interstate	0.40916	0.09431	0.31396	0.09560	0.04396	0.01267	0.00125	0.00102	0.00076	0.00283	0.00334	0.00363	0.01294	0.00064	0.00030	0.00363	1.00
12	Urban Freeway/Expressway	0.40658	0.09372	0.31200	0.09500	0.04369	0.01456	0.00143	0.00118	0.00088	0.00325	0.00384	0.00417	0.01487	0.00074	0.00034	0.00375	1.00
14	Urban Principal Arterial	0.41686	0.09609	0.31989	0.09740	0.04479	0.00645	0.00064	0.00052	0.00039	0.00144	0.00170	0.00185	0.00658	0.00033	0.00015	0.00492	1.00
16	Urban Minor Arterial	0.41215	0.09500	0.31625	0.09630	0.04428	0.01000	0.00098	0.00081	0.00060	0.00223	0.00263	0.00286	0.01021	0.00051	0.00023	0.00496	1.00
17	Urban Collector	0.41485	0.09563	0.31835	0.09694	0.04458	0.00823	0.00081	0.00066	0.00050	0.00184	0.00217	0.00236	0.00840	0.00042	0.00019	0.00407	1.00
19	Urban Local	0.39980	0.09215	0.30678	0.09341	0.04296	0.01887	0.00186	0.00152	0.00114	0.00421	0.00497	0.00540	0.01926	0.00096	0.00044	0.00627	1.00
All Functional Classes		**0.41064**	**0.09465**	**0.31509**	**0.09594**	**0.04412**	**0.01129**	**0.00111**	**0.00091**	**0.00068**	**0.00252**	**0.00298**	**0.00323**	**0.01153**	**0.00057**	**0.00026**	**0.00448**	**1.00**

Source: *VDOT, "Traffic Data for the 2008 Highway Emissions Inventory. Air Quality Planning Areas: Fredericksburg, Hampton Roads, Northern Virginia, Richmond, Roanoke & Winchester", September 2009, Exhibit 29.*

2.5.1 Congested Speed Calculation

The post-processor estimates congested speeds using standard Bureau of Public Roads (BPR) formulae that are based upon free flow speeds, volumes and capacity[88]. Two forms of the BPR equation are applied:

1) for non-signalized roadway segments:

$$speed\ \ for\ unsignalized\ \ facilities = \frac{corridor\ \ free\ \ flow\ speed}{1 + 0.2\left(volume / capacity\right)^{10}}$$

2) for signalized roadway segments, defined as facilities on which traffic signals are spaced two miles or less apart:

$$speed\ \ for\ signalized\ \ facilities = \frac{corridor\ \ free\ \ flow\ speed}{1 + 0.05\left(volume / capacity\right)^{10}}$$

2.5.2 Seasonal Adjustments to Traffic

Exhibit 2-8 presents average ozone season weekday adjustment factors for the Hampton Roads area. The factors are applied to the forecast VMT to more accurately account for observed ozone (summer) season traffic levels.

The tabulated factors were obtained as the average for the TMS/HPMS values reported for May through September (the summer ozone season) for the Hampton Roads area for 2008.

2.5.3 Adjustments for Off-Network Facilities (Local and Collector Roads)

The federal conformity rule at 40 CFR 93.122(a) requires that "*…Projects which are not regionally significant are not required to be explicitly modeled, but vehicle miles traveled (VMT) from such projects must be estimated in accordance with reasonable professional practice.*"

All regionally significant projects are included in the network modeling as summarized previously. However local and collector roadways are not typically coded in regional transportation model networks and are not coded in the TP+ regional network developed for Hampton Roads.

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[88] Generally, free flow speed is taken here as the speed at which a vehicle on the roadway segment would travel given no conflict with other traffic, i.e., no congestion. As traffic volumes increase and the carrying capacity of the roadway is reached (i.e. congestion increases), average speeds would be expected to be reduced. The free flow speeds used are consistent with those used in the TP+ model.

Exhibit 2-8: Ozone Season Traffic Adjustment Factors

FHWA Roadway Functional Class		Average Ozone Season Weekday VMT Adjustment Factor
1	Rural Interstate	1.0582
2	Rural Principal Arterial	1.0602
6	Rural Minor Arterial	1.0765
7	Rural Major Collector	1.0798
8	Rural Minor Collector	1.0751
9	Rural Local	1.0004
11	Urban Interstate	1.0902
12	Urban Freeway/Expressway	1.0786
14	Urban Principal Arterial	1.0851
16	Urban Minor Arterial	1.1001
17	Urban Collector	1.1008
19	Urban Local	1.0854

Source: VDOT, "Traffic Data for the 2008 Highway Emissions Inventory. Air Quality Planning Areas: Fredericksburg, Hampton Roads, Northern Virginia, Richmond, Roanoke & Winchester", September 2009.

The post-processor was therefore designed to generate estimates for VMT for these minor facilities, projecting future traffic volumes using traffic count data for a base year and average annual growth rates applicable through the horizon year of the LRTP for the region. Speeds are taken from the VDOT Statewide Planning System (SPS) database or MOBILE model defaults. Exhibit 2-9 presents forecast annual average growth rates for local and collector road VMT for the Hampton Roads area.

As an approximation, the rates were taken as equivalent to the annual average growth rates reported with the socioeconomic data for auto ownership in Hampton Roads. The base year VMT data for local and collector roads were obtained for 2009 from the VDOT TMS/HPMS database previously referenced. Tabulations of the VMT forecasts generated are presented in Appendix B.

2.5.4 Hourly Traffic Volumes

Exhibit 2-10 presents the hourly VMT distributions by vehicle class for the region. These profiles were applied in the generation of the VMT tables that are presented in Appendix B.

Exhibit 2-9: Annual Average Growth Rates for Local and Collector Road VMT

Jurisdiction	Annual Average Growth Rate
Chesapeake	1.55%
Gloucester	2.48%
Hampton	1.40%
Isle of Wight	2.10%
James City	2.90%
Newport News	1.24%
Norfolk	0.58%
Poquoson	2.17%
Portsmouth	0.65%
Suffolk	2.48%
Virginia Beach	1.09%
Williamsburg	1.24%
York	1.52%

Exhibit 2-10: Hourly Traffic Distribution by Roadway Functional Class

Hampton Roads Hourly VMT Distributions by Vehicle Class All FHWA Roadway Functional Classes																		
Hour	**LDV**	**LDT1**	**LDT2**	**LDT3**	**LDT4**	**HDV2b**	**HDV3**	**HDV4**	**HDV5**	**HDV6**	**HDV7**	**HDV8a**	**HDV8b**	**HDBS**	**HDBT**	**MC**	**Total for Hour**	**Percent of Daily**
0	0.41459	0.09557	0.31814	0.09687	0.04455	0.00842	0.00083	0.00068	0.00051	0.00188	0.00222	0.00241	0.00860	0.00043	0.00020	0.00410	1.00000	0.9552%
1	0.41017	0.09455	0.31476	0.09584	0.04407	0.01195	0.00118	0.00097	0.00072	0.00267	0.00315	0.00342	0.01220	0.00061	0.00028	0.00346	1.00000	0.6143%
2	0.40472	0.09329	0.31057	0.09457	0.04349	0.01626	0.00160	0.00131	0.00098	0.00363	0.00428	0.00465	0.01660	0.00082	0.00038	0.00285	1.00000	0.5130%
3	0.39574	0.09122	0.30366	0.09246	0.04252	0.02286	0.00225	0.00185	0.00138	0.00510	0.00603	0.00654	0.02335	0.00116	0.00053	0.00335	1.00000	0.4410%
4	0.39983	0.09217	0.30682	0.09343	0.04296	0.01941	0.00191	0.00157	0.00117	0.00433	0.00512	0.00556	0.01982	0.00098	0.00045	0.00447	1.00000	0.8194%
5	0.41000	0.09450	0.31461	0.09580	0.04405	0.01144	0.00113	0.00092	0.00069	0.00255	0.00301	0.00327	0.01168	0.00058	0.00027	0.00550	1.00000	2.3098%
6	0.41031	0.09457	0.31483	0.09587	0.04408	0.01130	0.00111	0.00091	0.00068	0.00252	0.00298	0.00323	0.01154	0.00057	0.00026	0.00524	1.00000	4.6178%
7	0.40881	0.09423	0.31369	0.09552	0.04392	0.01288	0.00127	0.00104	0.00078	0.00287	0.00339	0.00369	0.01316	0.00065	0.00030	0.00380	1.00000	5.9858%
8	0.40355	0.09303	0.30968	0.09430	0.04336	0.01702	0.00168	0.00138	0.00103	0.00380	0.00449	0.00487	0.01738	0.00086	0.00040	0.00317	1.00000	5.4590%
9	0.40099	0.09243	0.30770	0.09369	0.04309	0.01879	0.00185	0.00152	0.00113	0.00419	0.00495	0.00538	0.01919	0.00095	0.00044	0.00371	1.00000	4.9462%
10	0.40189	0.09265	0.30842	0.09391	0.04319	0.01809	0.00178	0.00146	0.00109	0.00404	0.00477	0.00518	0.01847	0.00092	0.00042	0.00372	1.00000	5.1546%
11	0.40365	0.09304	0.30974	0.09431	0.04337	0.01659	0.00163	0.00134	0.00100	0.00370	0.00437	0.00475	0.01694	0.00084	0.00039	0.00434	1.00000	5.6473%
12	0.40647	0.09370	0.31192	0.09498	0.04368	0.01440	0.00142	0.00116	0.00087	0.00321	0.00380	0.00412	0.01471	0.00073	0.00034	0.00449	1.00000	6.1765%
13	0.40601	0.09359	0.31155	0.09487	0.04362	0.01473	0.00145	0.00119	0.00089	0.00329	0.00388	0.00422	0.01504	0.00075	0.00034	0.00458	1.00000	6.1112%
14	0.40635	0.09366	0.31181	0.09494	0.04366	0.01431	0.00141	0.00116	0.00086	0.00319	0.00377	0.00409	0.01461	0.00072	0.00033	0.00513	1.00000	6.5444%
15	0.41017	0.09455	0.31474	0.09584	0.04407	0.01135	0.00112	0.00092	0.00068	0.00253	0.00299	0.00325	0.01158	0.00057	0.00026	0.00538	1.00000	7.3457%
16	0.41438	0.09552	0.31798	0.09682	0.04452	0.00820	0.00081	0.00066	0.00049	0.00183	0.00216	0.00235	0.00837	0.00042	0.00019	0.00530	1.00000	7.7849%
17	0.41846	0.09645	0.32110	0.09777	0.04496	0.00536	0.00053	0.00043	0.00032	0.00120	0.00141	0.00153	0.00547	0.00027	0.00012	0.00462	1.00000	7.7010%
18	0.41961	0.09672	0.32198	0.09804	0.04508	0.00445	0.00044	0.00036	0.00027	0.00099	0.00117	0.00127	0.00455	0.00023	0.00010	0.00474	1.00000	6.0557%
19	0.42016	0.09685	0.32240	0.09817	0.04514	0.00409	0.00040	0.00033	0.00025	0.00091	0.00108	0.00117	0.00418	0.00021	0.00010	0.00456	1.00000	4.4681%
20	0.42054	0.09694	0.32270	0.09826	0.04519	0.00386	0.00038	0.00031	0.00023	0.00086	0.00102	0.00110	0.00394	0.00020	0.00009	0.00438	1.00000	3.6562%
21	0.42062	0.09696	0.32276	0.09828	0.04519	0.00394	0.00039	0.00032	0.00024	0.00088	0.00104	0.00113	0.00402	0.00020	0.00009	0.00394	1.00000	3.0277%
22	0.41983	0.09678	0.32217	0.09810	0.04511	0.00457	0.00045	0.00037	0.00028	0.00102	0.00120	0.00131	0.00466	0.00023	0.00011	0.00381	1.00000	2.1751%
23	0.41823	0.09641	0.32094	0.09772	0.04494	0.00585	0.00058	0.00047	0.00035	0.00131	0.00154	0.00167	0.00597	0.00030	0.00014	0.00358	1.00000	1.4900%
Daily	**0.41064**	**0.09465**	**0.31509**	**0.09594**	**0.04412**	**0.01129**	**0.00111**	**0.00091**	**0.00068**	**0.00252**	**0.00298**	**0.00323**	**0.01153**	**0.00057**	**0.00026**	**0.00448**	**1.00000**	**100.00%**

Source: VDOT, "Traffic Data for the 2008 Highway Emissions Inventory. Air Quality Planning Areas: Fredericksburg, Hampton Roads, Northern Virginia, Richmond, Roanoke & Winchester", September 2009.

Attachment #3

TRANSPORTATION CONFORMITY REGULATIONS & GUIDANCE

US Environmental Protection Agency

Home Page for Transportation Conformity
http://www.epa.gov/otaq/stateresources/transconf/index.htm

Regulation Home Page:
http://www.epa.gov/otaq/stateresources/transconf/conf-regs.htm

EPA Compilation current as of March 24, 2010 (PDF file):
http://www.epa.gov/otaq/stateresources/transconf/regs/420b10006.pdf

Federal Conformity Rule, Section 93.105 Consultation:
http://edocket.access.gpo.gov/cfr_2009/julqtr/40cfr93.105.htm

> Excerpt relating to requirements for a state regulation for inter-agency consultation (93.105b):
> *"… (b) Interagency consultation procedures: General factors. (1) States shall provide well-defined consultation procedures in the implementation plan whereby representatives of the MPOs, State and local air quality planning agencies, State and local transportation agencies, and other organizations with responsibilities for developing, submitting, or implementing provisions of an implementation plan required by the CAA must consult with each other and with local or regional offices of EPA, FHWA, and FTA on the development of the implementation plan, the transportation plan, the TIP, and associated conformity determinations…."*

> Excerpt relating to specific requirements for inter-agency consultation (93.105b)(emphasis added):
> *"…(c) Interagency consultation procedures: Specific processes. Interagency consultation procedures shall also include the following specific processes: (1)* ***A process involving the MPO, State and local air quality planning agencies, State and local transportation agencies, EPA, and DOT*** *for the following (i) Evaluating and choosing a model (or models) and associated methods and assumptions to be used in hot-spot analyses and regional emissions analyses; (ii) Determining which minor arterials and other transportation projects should be considered ``regionally significant'' for the purposes of regional emissions analysis (in addition to those functionally classified as principal arterial or higher or fixed guideway systems or extensions that offer an alternative to regional highway travel), and which projects should be considered to have a significant change in design concept and scope from the transportation plan or TIP; …"*

Commonwealth of Virginia:

Regulation for Transportation Conformity (9 VAC 5-151):
http://www.deq.virginia.gov/air/regulations/air151.html

Virginia Regulation, Consultation:
http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+9VAC5-151-70

> Excerpt from the introduction to 9 VAC 5-151-70(c)(1)(emphasis added):
> *"…Representatives of the* ***MPOs, VDOT, VDRPT, FHWA, and FTA*** *shall undertake an interagency consultation process, in accordance with subdivisions 1 and 3 of this subsection and subsection D of this section, with the* ***LPOs, DEQ and EPA*** *on the development of implementation plans, transportation plans, TIPs, any revisions to the preceding documents, and associated conformity determinations …"*

Hampton Roads TPO:

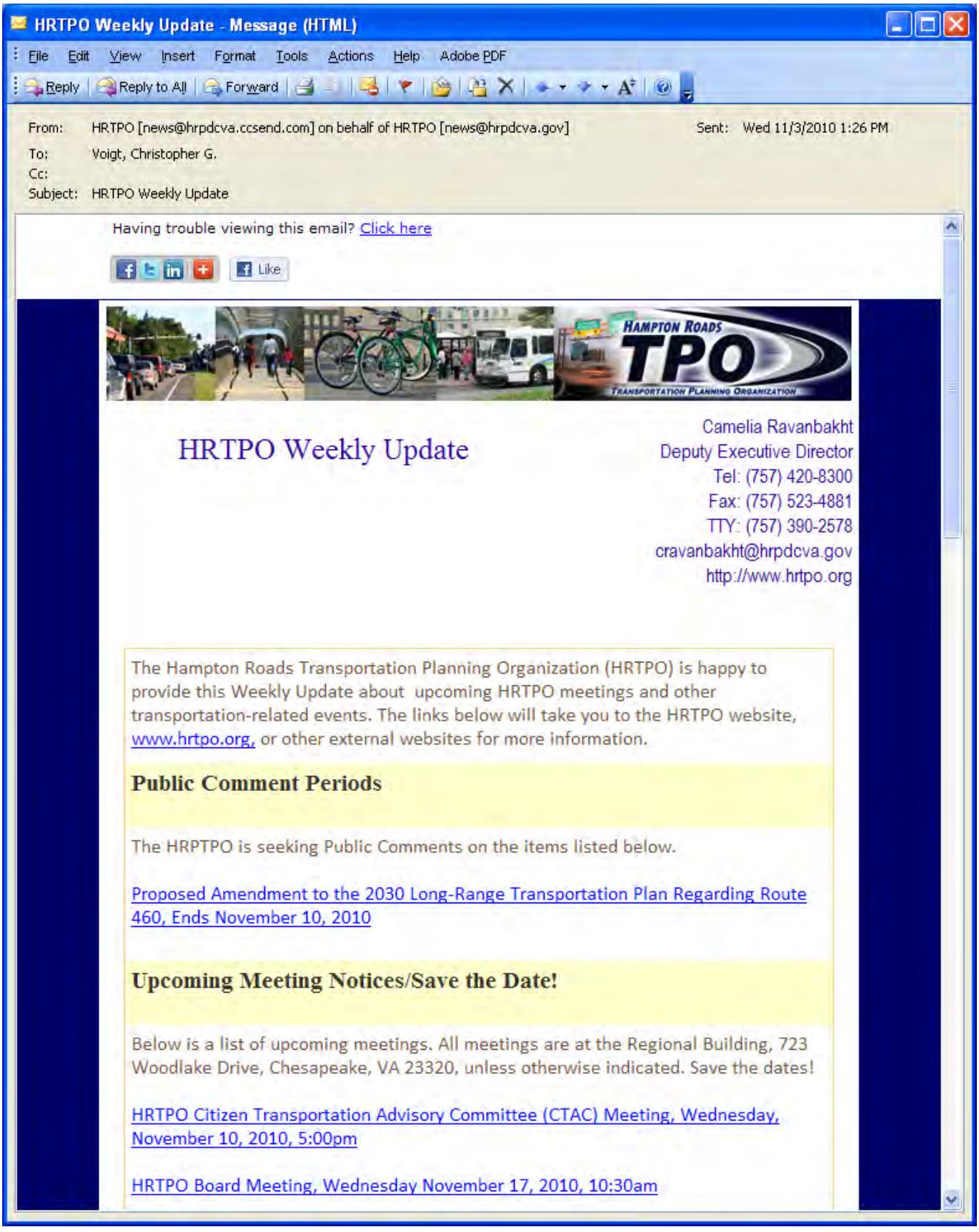
Consultation Procedures for the Hampton Roads Ozone Nonattainment Area in Support of the Transportation Conformity Regulations, Revised July 18, 2005:
http://www.hrtpo.org/Documents/Reports/Rev_HR_ICP2005.pdf

Public Participation Plan, December 2009:
http://www.hrtpo.org/Documents/Reports/HRTPO%20PPP%20-%20December%202009%20(Final).pdf

Appendix D – Consultation Record

November 3, 2010 HRTPO Public Notice of Proposed Amendment

HRTPO Public Notice of Proposed Amendment



HRTPO Weekly Update - Message (HTML)

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From: HRTPO [news@hrpdcva.ccsend.com] on behalf of HRTPO [news@hrpdcva.gov] Sent: Wed 11/3/2010 1:26 PM

To: Voigt, Christopher G.

Cc:

Subject: HRTPO Weekly Update

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HAMPTON ROADS TPO TRANSPORTATION PLANNING ORGANIZATION

HRTPO Weekly Update

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The Hampton Roads Transportation Planning Organization (HRTPO) is happy to provide this Weekly Update about upcoming HRTPO meetings and other transportation-related events. The links below will take you to the HRTPO website, www.hrtpo.org, or other external websites for more information.

Public Comment Periods

The HRPTPO is seeking Public Comments on the items listed below.

Proposed Amendment to the 2030 Long-Range Transportation Plan Regarding Route 460, Ends November 10, 2010

Upcoming Meeting Notices/Save the Date!

Below is a list of upcoming meetings. All meetings are at the Regional Building, 723 Woodlake Drive, Chesapeake, VA 23320, unless otherwise indicated. Save the dates!

HRTPO Citizen Transportation Advisory Committee (CTAC) Meeting, Wednesday, November 10, 2010, 5:00pm

HRTPO Board Meeting, Wednesday November 17, 2010, 10:30am

Appendix E: Final Project List

Attached are the project lists for the conformity analysis for the amended 2030 LRTP and FY 09-12 TIP.

Hampton Roads
DRAFT 2030 Amended LRTP
Conformity Project List

Project Type	Facility	Project Location		Improvement Type	# Lanes		FY09 TIP	UPC	Analysis Years			
		From	To		From	To			2011	2018	2020	2030
REGIONAL												
I	**I-64 Peninsula- PE only**	Jefferson Ave (exit 255)	Rte. 199(Exit 242)	Widen	4	6+2	Partial	57313/57580	n/a	n/a	n/a	n/a
P	**U.S. 460- HR portion**	Bowers Hill	S'hamp. Co. at Zuni	New Alignment	0	4	Partial	56638/84272		x		
U	**Southeastern Parkway- PE only**	I-264	Oak Grove Connector	Construct/Widen	see note 1		Partial	16556/64058	n/a	n/a	n/a	n/a
U	**Dominion Blvd**	South of Cedar Rd	Oak Grove Interchange	Widen	2	4	Y	56187/84354		x		
I	**HR Third Crossing - Phase I(I-664)- PE Only**	I-264/ I-64 at Bowers Hill	I-64 at Hampton Col	Construct		8	Partial	12834	n/a	n/a	n/a	n/a
P	**Rte. 60 relo. - PE/RW only - JCC; includes Skiffes Crk Connector**	Newport News CL	I-64	New Alignment	n.a.	n.a.	Partial	13496/87201	n/a	n/a	n/a	n/a
P	**Rte. 60 relo. -PE/RW only - NN**	JCC CL	Ft. Eustis Blvd.	New Alignment	n.a.	n.a.	Partial	14598/87201	n/a	n/a	n/a	n/a
I	**I-264 EB Ramp from I-64 WB**	Curlew Dr	thru Witchduck Rd	Modify Interchange	n.a.	n.a.	Y	57048		x		
I	**I-264 / Witchduck Rd Interchange**	n.a.	n.a.	Int. Imp.	n.a.	n.a.	Y	17630		x		
P	**Midtown Tunnel/ MLK/Downtown Tunnel**	Hampton Blvd	I-264	Widen/ New Alignment	2,0	4	Partial	95149/76642/77245		x		
P	**Ft Eustis Blvd**	0.54 mi. E of Jefferson Ave	Rte 17	Widen	2	4	Y	13497	x			
R	**High Speed & Intercity Passenger Rail**	Richmond	Hampton Roads	Conventional rail, Norf. to Rich.	n.a.	n.a.	Y			x		
I	**I-564 Intermodal Connector**	I-564	Norfolk Naval Base/N.I.T	New Alignment	0	4	Y	18968		x		
P	**Lesner Bridge**	East Stratford Road	Vista Circle	Bridge Replacement	4	4	N	n.a.		x		
R	**Naval Station Norfolk Transit Extension- PE only**	Newtown Road	NOB Norfolk	New Alignment	n.a.	n.a.	N	T7547	n/a	n/a	n/a	n/a
P	**Route 58- PE only**	Route 58 Bypass	0.7 mi. W of Manning Bridge Road	Widen	4	6	N	n.a.	n/a	n/a	n/a	n/a
R	**Virginia Beach Transit Extension**	Newtown Road	Oceanfront	New Alignment	n.a.	n.a.	N	T137		x		
CHESAPEAKE												
U	**Cedar Rd**	Albemarle Dr	Battlefield Blvd	Widening	3	4	N	n.a.				x
U	**GW Hwy (in Deep Creek, south)**	Sawyers Arch	Cedar Rd	New Alignment	0	4	N	city proj.		x		
U	**Hanbury Rd**	Johnstown Rd	Battlefield Blvd	Widening	2	4	N	n.a.		x		
I	**I-64**	I-464	Greenbrier Pkwy	Widening	6	6+2	Y	12379	x			
U	**Lynnhaven Pkwy - Volvo Pkwy**	Kempsville Rd	VB CL	New Alignment	0	4	Y	13485	x			
U	**Military Hwy (Gilmerton Bridge)**	n.a.	n.a.	Replacement	4	4	Y	1904		x		
U	**Mt Pleasant Rd (incl'g Byp intx impr'ts)**	Great Bridge Bypass	Centerville Tnpk	Widening	2	4	N	n.a.				x
U	**Nansemond Pkwy - Portsmouth Blvd**	Suff CL	Joliff Rd	Widening	2	4	Y	18591		x		
U	**Greenbrier Pkwy**	Volvo Pkwy	Eden Way	Widening	5	6	Y	72796	x			
U	**GW Hwy**	Mill Creek Pkwy	Willowood Dr	Widening	2	4	N	local		x		
U	**Long Bridge (GW Hwy, near fire station)**	n.a.	n.a.	Widening	2	4	Y	83509 (T4154)	x			
HAMPTON												
U	**Cmdr Shepard Blvd Ext- Phase I**	Middle Rd	Magruder Blvd	New Alignment	0	4	N	66846	x			
U	**Cmdr Shepard Blvd Ext- Phase II**	Big Bethel Rd	Middle Rd	New Alignment	0	4	Y	60970		x		
I	**I-64 @ LaSalle Ave**	n.a.	n.a.	Add Movement	n.a.	n.a.	Y	76682	x			
U	**Saunders Rd**	NN CL	Big Bethel Rd	Widening	2	4	Y	57047		x		
U	**Armistead Ave**	Pine Chapel Rd	Mercury Blvd	Widening	2	4	Y	67200	x			
U	**Armistead Ave Conn**	Armistead Ave	Coliseum Dr/ Pine Ch Rd	New Alignment	0	4	Y	71697	x			
U	**Wythe Creek Rd (including bridge widening)**	Comm Shepard Blvd	Poquoson CL	Widening	2	4	N	n.a.			x	
Isle of Wight												
P	**Blackwater Bridge Replacement**	near IW/Franklin CL	Near IW/Franklin CL	Replacement	n.a.	n.a.	Y	17142	x			
JAMES CITY CO.												
U	**Ironbound Rd**	Longhill Conn Rd	Strawberry Plains	Widening	2	4	Y	50057		x		
P	**Chickahominy Bridge Replacement**	near JCC/ CCC CL	near JCC/ CCC CL	Replacement	n.a.	n.a.	Y	71883	x			
NEWPORT NEWS												
U	**Atkinson Blvd**	Warwick Blvd	Jefferson Ave	New Alignment	0	4	Partial	4483				x
U	**Jefferson Ave**	Buchanan Dr	Green Grove Ln	Widening	4	6	Y	13429	x			
U	**Middleground Blvd**	Jefferson Ave	Warwick Blvd	New Alignment	0	4	Y	11816		x		
U	**Warwick Blvd**	Nettles Dr	J Clyde Morris Blvd	Widening	4	6	Y	10797	x			
U	**Jefferson Ave**	Grn Grove Ln/ Atkinson	Ft. Eustis Blvd	Widening	4	6	N	67673				x

Hampton Roads
DRAFT 2030 Amended LRTP
Conformity Project List

Project Type	Facility	Project Location		Improvement Type	# Lanes		FY09 TIP	UPC	Analysis Years			
		From	To		From	To			2011	2018	2020	2030
	Peninsula Fixed Guideway (Transit)	Christopher Newport Univ.	Mary Immaculate Hosp.	Capital Cost	n.a	n.a	N	T1821				x
U	**Rte 17 (J Clyde Morris Blvd)**	I-64	Harpersville Rd	Widening	4	6	N	city project				x
NORFOLK												
U	**Light Rail**	Newtown Rd	Norfolk General	Capital Cost	n.a.	n.a.	Y	T1822	x			
U	**Little Creek Rd**	Tidewater Dr	Military Hwy	Widening	4	6	N	n.a.				x
U	**Military Hwy**	Lowery Rd	Northampton Blvd	Widening	4	8	Y	9783		x		
U	**Military Hwy**	Northampton Blvd	Robin Hood Rd	Widening	4	6	Y	1765/84243		x		
U	**Wesleyan Dr**	Northampton Blvd	VB CL	Widening	2	4	Y	52147		x		
U	**Intermodal/ Chambers Interchange on I-564**	n.a.	n.a.	New Interchange	n.a.	n.a.	Y	59175		x		
U	**Hampton Blvd & R/R Grade Separation**	Rogers Ave	B Ave	Reconstruct underpass	n.a.	n.a.	Y	14672		x		
I	**I-64/ Norview Ave Interchange**	n.a.	n.a.	Add Movement	n.a.	n.a.	Y	17824		x		
U	**Navy Recreational Facilities**	n.a.	n.a.	Env. Related	n.a.	n.a.	Y	61322	x			
POQUOSON												
U	**Wythe Creek Road (w/o br. Widening)**	Alphus Street	Hampton CL	Widening	2	4	Y	13427			x	
PORTSMOUTH												
U	**Maersk Interchange (Western Frwy.)**	n.a.	n.a.	New Interchange	n.a.	n.a.	Y	70552	x			
U	**Craney Island Access Road**	Rte 164	Craney Island	New Roadway	0	2				x		
U	**Turnpike Road**	W. of Frederick Blvd	Constitution Ave	Widening	2	4	Y	65655/3950		x		
SUFFOLK												
U	**Finney Ave.**	East Washington Street	Finney Ave.				Y	15826				x
U	**Nansemond Pkwy.**	ECL Suffolk	Shoulders Hill Rd	Widen	2	4	Y	17568		x		
VIRGINIA BEACH												
I	**I-264/Lynnhaven Pkwy Interchange**	Add Ramps at Great Neck		Add Ramps/Reconstruct			Y	80157/94544/95554		x		
U	**Birdneck Rd**	Gen Booth Blvd	Southern Blvd	Widening	2	4	Y	11754	x			
U	**Centerville Tnpk**	Ches CL	Kempsville Rd	Widening	2	4	N	n.a.			x	
U	**Centerville Tnpk**	Kempsville Rd	Indian River Rd	Widening	2	6	N	n.a.			x	
U	**Constitution Dr ext'd**	Columbus St	Bonney Rd	New Alignment	0	4	N	n.a.		x		
U	**Elbow Rd / Dam Neck Rd**	Indian River Rd	GTE VB Amphitheater	Widening	2	4	Y	15828		x		
U	**First Colonial Rd**	Old Donation Rd	Republic Rd	Widening	4	6	N	n.a.		x		
U	**Holland Rd**	Nimmo Pkwy	Dam Neck Rd	Widening	2	4	Y	15827		x		
U	**Holland Rd**	Dam Neck Rd	Rosemont Rd	Widening	4	6	N	n.a.				x
U	**Indian River Rd**	Centerville Tnpk	Ferrell Pkwy	Widening	6	8	N	City				x
U	**Indian River Rd**	Lynnhaven Pkwy	Elbow Rd	Widening	2	4	Y	15829		x		
U	**Indian River Rd**	Elbow Rd	North Landing Rd	Widening	2	4	N	n.a.			x	
U	**Jeanne St**	Constitution Dr	Independence Blvd	Widening	2	4	N	n.a.			x	
U	**Kempsville Rd / PA Rd Intersection**	n.a.	n.a.	New Alignment	n.a.	n.a.	Y	51866		x		
U	**Laskin Rd**	First Colonial Rd	Birdneck Rd	Widening	4	6	Y	12546		x		
U	**Laskin Rd**	Birdneck Rd	Pacific Ave	Widening	4	6	Y	14601			x	
U	**Lynnhaven Pkwy**	Holland Rd	Lishelle Pl	Widening	4	6	Y	12549	x			
U	**Lynnhaven Pkwy - Volvo Pkwy**	Ches CL	Centerville Tnpk	New Alignment	0	4	N	13487	x			
U	**Lynnhaven Pkwy**	Centerville Tnpk	Indian River Rd	New Alignment	0	4	Y	14603		x		
U	**Nimmo Pkwy**	Indian River Rd @ N. Landing R	West Neck Rd ext'd	New Alignment	0	4	N	n.a.			x	
U	**Nimmo Pkwy**	Holland Rd	Gen Booth Blvd	New Alignment	0	4	Y	52058		x		
U	**Princess Anne Rd and Nimmo Pkwy**	Dam Neck Rd	Holland Rd	Widening	2,0	4	Y	13482		x		
U	**Princess Anne Rd**	Upton Dr	General Booth Blvd	Widening	2	4	N	n.a.		x		
U	**Providence Rd**	Kempsville Rd	Princess Anne Rd	Widening	2	4	N	n.a.				x
U	**Rosemont Rd**	VB Blvd	Holland Rd	Widening	4	6	N	n.a.				x
U	**Salem Rd**	Elbow Rd	Independence Blvd	Widening	2	4	N	n.a.				x
U	**Sandbridge Rd**	Princess Anne Rd	Atwoodtown Rd	Widening	2	4	N	n.a.				x
U	**Seaboard Rd**	Nimmo Pkwy	PA Rd (near PA Elem Sch)	Widening	2	4	Y	City		x		
U	**Wesleyan Dr**	Norf CL	Baker Rd	Widening	2	4	Y	52148		x		
U	**West Neck Pkwy ext'd**	Elbow Rd	North Landing Rd	New Alignment	0	4	N	n.a.			x	
U	**West Neck Pkwy ext'd**	North Landing Rd	Indian River Rd	New Alignment	0	4	N	n.a.			x	
U	**West Neck Rd**	North Landing Rd	Indian River Rd	Widening	2	4	N	n.a.			x	
U	**Witchduck Rd**	I-264	VB Blvd	Widening	4	6	Partial	55202			x	

Hampton Roads
DRAFT 2030 Amended LRTP
Conformity Project List

Project Type	Facility	Project Location		Improvement Type	# Lanes		FY09 TIP	UPC	Analysis Years			
		From	To		From	To			2011	2018	2020	2030
U	**Witchduck Rd**	Princess Anne Rd	I-264	Widening	4	6	Y	55200		x		
U	**General Booth Blvd**	Princess Anne Rd	Dam Neck Rd	Widening	4	6	N	n.a.				x
U	**Holland Rd**	Rosemont Rd	Independence Blvd	Widening	4	6	N	n.a.				x
I	**I-264/ Independence Blvd Interchange**	n.a.	n.a.	Interchange Imp.	n.a.	n.a.	N	n.a.				x
I	**I-264/ Lynnhaven Pkwy Interchange**	n.a.	n.a.	Interchange Imp.	n.a.	n.a.	Y	19005				x
I	**I-64/ City Line Interchange & Arterial**	I-64	Centerville Tnpk	New Interchange & Road	0	4	Y	80029				x
U	**Independence Blvd**	Haygood Rd	Northampton Blvd	Widening	4	6	N	n.a.				x
U	**Northampton Blvd/ Shore Drive Interchange**	n.a.	n.a.	Interchange Imp.	n.a.	n.a.	N	n.a.				x
WILLIAMSBURG												
U	**Richmond Rd**	Brooks St	New Hope Rd.	Reconstruct/ Widening	2	4	Y	14750	x			
U	**Treyburn Dr Ext**	Monticello Ave	Ironbound Rd	New Alignment	0	2	Y	16054	x			
YORK COUNTY												
S	**Ft Eustis Blvd Ext (Rte 1050)**	Rte 17	Old York-Hampton Hwy	New Alignment	0	4	N	14627	x			
P	**Rte 17 (York Co.)**	Hampton Hwy	Goodwin Neck/ Denbigh Blvd	Widening	4	6	Y	60843		x		

1) SP&G design- I-264 to Great Bridge Bypass: 4 lanes; Oak Grove Conn: 8 lanes

2) PE and Right of Way only projects are not run for air quality conformity because funding for Construction is not identifiable

DRAFT Amended FY 09 -12 TIP Conformity Project List

UPC	Jurisdiction	Facility	From	To	Improvement Type	Exist.	Prop.	Analysis Year 1st	TIP	LRP	Reg. Sig.
1765	Norfolk	MILITARY HIGHWAY	0.307 MILES SOUTH OF NORTHAMPTON BOULEVARD	0.289 MILES NORTH OF NORTHAMPTON	MAJOR WIDENING	4	6	2018	x	x	YES
1877	York County	RTE 646 - RECONSTRUCTION -	0.16 KILOMETER NORTH I-64	0.16 KILOMETER SOUTH OF JAMES CITY COUNTY LINE	RECONSTRUCTION		x	Exempt	x		NO
1904	Chesapeake	MILITARY HIGHWAY-GILMERTON BRIDGE	0.417 MILE WEST OF GILMERTON BRIDGE	0.356 MILE EAST OF GILMERTON BRIDGE	BRIDGE REPLACEMENT	4	4	2018	x	x	YES
1926	Suffolk (rural)	RTE 651-BARNES ROAD	ROUTE 655	ROUTE 58	RECONSTRUCTION		x	Exempt	x		NO
2024	Norfolk	RTE 264 - WIDEN FOR HOV LANES	0.442 MILE WEST OF BRAMBLETON AVENUE (ROUTE 460)	0.352 MILE WEST OF MILITARY HIGHWAY (ROUTE 13)	SAFETY/TRAFFIC OPERS/TSM	x		Complete		x	YES
2058	James City County	RTE 64 - CONSTRUCT INTERCHANGE	GROVE INTERCHANGE	AT ROUTES 143 AND 60	NEW CONSTRUCTION	x		Complete			NO
2067	Hampton	ARMISTEAD AVENUE-PE FOR PHASES 1A & 1B; A	MERCURY BOULEVARD	CROSSROADS PARKWAY	NEW CONSTRUCTION		x	Exempt			NO
3000	Isle of Wight County	WHISPERING PINES TRAIL	2.2 MILES WEST OF ROUTE 637	ROUTE 637	RESURFACING	x		Complete			NO
3089	James City County	CROAKER ROAD	0.05 MILE SOUTH OF ROUTE 1601 (WOODLAND ROAD)	0.05 MILE NORTH OF ROUTE 605 (CROAKER LANDING ROAD)	RECONSTRUCTION		x	Exempt			NO
3582	Gloucester County	HICKORY FORK RD	ROUTE 631	ROUTE 633	RECONSTRUCTION	x		Complete			NO
3811	Hampton	EAST-WEST EXPW	WCL HAMPTON	BIG BETHEL ROAD	NEW CONSTRUCTION	x		Complete	x		NO
3812	Newport News	EAST-WEST EXPW.	JEFFERSON AVENUE	WCL HAMPTON/ECL NEWPORT NEWS	NEW CONSTRUCTION	x		Complete			NO
3950	Portsmouth	RTE 337 (TURNPIKE ROAD)	PORTSMOUTH BOULEVARD	CONSTITUTION AVENUE (INCLUDING OUTFALL)	MAJOR WIDENING		x	Exempt			NO
4018	Hampton Roads District-wide	DISTRICTWIDE BRIDGE STRENGTHENING AND WIDENING	PRIMARY SYSTEM	SUFFOLK DISTRICT	PROGRAMMING ITEM		x	Exempt			NO
4024	Fredericksburg District-wide	DISTRICTWIDE BRIDGE STRENGTHENING AND WIDENING	AT GLOUCESTER COURTHOUSE		PROGRAMMING ITEM		x	Exempt			NO
4139	Isle of Wight County	MUDDY CROSS ROAD	ROUTE 644 (TURNER DRIVE)	0.2 MILE WEST OF ROUTE 10	RECONSTRUCTION		x	Exempt	x		NO
4388	Norfolk	SHORE DRIVE	0.094 MILE NORTH OF DUNNING ROAD	0.069 MILE SOUTH OF PLEASANT AVENUE	BRIDGE REPLACEMENT	x		Complete			NO
4464	Chesapeake	RTE 64 - WIDEN TO 6 LANES WITH HOV LANES	VIRGINIA BEACH/CHESAPEAKE CORPORATE LIMITS	BATTLEFIELD BOULEVARD	MAJOR WIDENING	x		Complete	x		NO
4483	Newport News	ATKINSON BLVD.	WARWICK BOULEVARD (ROUTE 60)	JEFFERSON AVENUE (ROUTE 143)	NEW CONSTRUCTION	0	4	2030	x	x	YES
4577	Suffolk	RTE 13/32 - 4 LANES ON 4-LANE RIGHT OF WAY	0.071 MILE EAST ROUTE 13/32 SOUTH (CAROLINA ROAD)	BUSINESS/BYPASS (HOLLAND ROAD)	NEW CONSTRUCTION	x		Complete			NO
4695	Isle of Wight County	DUCK TOWN ROAD	0.40 MILE NORTH ROUTE 643	ROUTE 641	RECONSTRUCTION	x		Complete			NO
4702	Isle of Wight County	CAMPBELL'S CHAPEL DRIVE	ROUTE 258	ROUTE 711	RESURFACING	x		Complete			NO
4710	Suffolk (rural)	COPELAND ROAD	ROUTE 643	ROUTE 13	RECONSTRUCTION	x		Complete			NO
6764	York County	BURTS RD	ROUTE 621	0.3 MILE SOUTH ROUTE 17 ON ROUTE 709	NEW CONSTRUCTION		x	Exempt	x		NO
7913	Gloucester County	CAPPAHOSIC RD.	END OF MAINTENANCE	ROUTE 614	RECONSTRUCTION		x	Exempt	x		NO
8314	Isle of Wight County	SANDY RIDGE ROAD	ROUTE 602	SUFFOLK CORPORATE LIMITS		x		Complete			NO

DRAFT Amended FY 09 -12 TIP Conformity Project List

UPC	Jurisdiction	Facility	From	To	Improvement Type	Exist.	Prop.	Analysis Year 1st	TIP	LRP	Reg. Sig.
8321	Isle of Wight County	ROUTE 647 - Pope Swamp Trail	ROUTE 645	ROUTE 644			x	Exempt	x		NO
8322	Isle of Wight County	RTE 704 - RESCUE RD OVER JONES CREEK	0.456 MILE WEST ROUTE 1005	ROUTE 1005	BRIDGE REPLACEMENT	x		Complete			NO
8327	Suffolk (rural)	RTE 629 - Sleepy Hole Road	ROUTE 125	ROUTE 337	RECONSTRUCTION	x		Complete			NO
8338	Suffolk (rural)	RTE 759	0.038 MILE NORTH ROUTE 666 (GATES ROAD)	0.002 MILE NORTH ROUTE 668 (PITTMANTOWN ROAD)	MINOR WIDENING	x		Complete			NO
8815	Chesapeake	BATTLEFIELD BLVD	3.122 MILES NORTH OF INDIAN CREEK RD	0.253 MILE SOUTH OF INDIAN CREEK RD	NEW CONSTRUCTION	x		Complete	x		NO
9783	Norfolk	RTE 13 - MILITARY	0.012 MILE SOUTH OF LOWERY ROAD	0.307 MILE SOUTH OF NORTHAMPTON BOULEVARD	NEW CONSTRUCTION	4	8	2018	x	x	YES
9786	Smithfield	RTE 10 - SOUTH CHURCH ST	0.054 MI. NORTH OF TALBOT DRIVE	BATTERY PARK ROAD (ROUTE 704)	RECONSTRUCTION		x	Exempt	x		NO
9799	James City County	RTE 199	0.006 MILE SOUTH ROUTE 615	0.158 MILE SOUTH ROUTE 612	NEW CONSTRUCTION	x		Complete			NO
9865	Isle of Wight County	RTE 58/258 CONNECTOR	2.689 KILOMETERS SOUTH OF ROUTE 58 & ROUTE 258	ROUTE 58 & ROUTE 258	NEW CONSTRUCTION	x		Complete			NO
10797	Newport News	RTE 60 WARWICK BLVD	0.304 KM SOUTH OF ROUTE 312	0.319 KM NORTH OF NETTLES DRIVE	MAJOR WIDENING	2	6	2011	x	x	YES
10798	York County	RTE 603 - INTERNATIONAL PK	ROUTE 199 (ROCHAMBEAU DRIVE)	1.54 MILES NORTH ROUTE 645	NEW CONSTRUCTION	x		Complete	x		NO
11267	York County	BIG BETHEL ROAD	INTERSECTION IMPROVEMENTS AT ROUTES 134 & 171	(CONSTRUCT TURN LANES WITH 1.2 METER BICYCLE LANES)	SAFETY/TRAFFIC OPERS/TSM	x		Complete	x		NO
11475	Isle of Wight County	BLUERIDGE TRAIL	ROUTE 606	0.4 MILE WEST OF ROUTE 637 (ORBIT ROAD)	RESURFACING	x		Complete			NO
11480	Isle of Wight County	RTE 620 - WIDENING	0.070 KILOMETER WEST ROUTE 647	0.101 KILOMETER EAST ROUTE 652 EAST	RECONSTRUCTION	x		Complete			NO
11481	Isle of Wight County	FOURSQUARE ROAD	ROUTE 637	0.039 KILOMETER WEST OF ROUTE 647	MINOR WIDENING	x		Complete			NO
11750	Portsmouth	PINNER'S POINT	0.616 MILE WEST OF EAST END OF WEST NORFOLK BRIDGE	0.060 MILE EAST OF WEST END OF MIDTOWN TUNNEL	NEW CONSTRUCTION	x		Complete	x	x	YES
11752	Portsmouth	LEE AVE./VA. AVE	LEE AVENUE	VIRGINIA AVENUE	NEW CONSTRUCTION	x		Complete	x		NO
11754	Virginia Beach	BIRDNECK ROAD	0.011 MILE EAST OF GENERAL BOOTH BOULEVARD	0.016 MILE NORTH OF SOUTHERN BOULEVARD	MAJOR WIDENING	2	4	2011	x	x	YES
11756	Virginia Beach	LONDON BRIDGE ROAD	INTERNATIONAL PARKWAY	VIRGINIA BEACH BOULEVARD (ROUTE 58)	MAJOR WIDENING	x		Complete	x		NO
11816	Newport News	MIDDLE GROUND BLVD	0.1929 KILOMETERS EAST OF JEFFERSON AVENUE	0.1239 KILOMETERS WEST OF WARWICK BOULEVARD	NEW CONSTRUCTION	0	4	2018	x	x	YES
12379	Chesapeake	I-64	1.17 MILES EAST BATTLEFIELD BLVD	.77 MILE WEST BATTLEFIELD BLVD	MAJOR WIDENING	4	8	2011	x	x	YES
12542	Chesapeake	KEMPSVILLE ROAD	0.210 MILE EAST OF GREENBRIER PARKWAY	0.151 MILE WEST OF VOLVO PARKWAY	RECONSTRUCTION	x		Complete			NO
12543	Chesapeake	KEMPSVILLE ROAD	BATTLEFIELD BOULEVARD	0.210 MILE EAST OF GREENBRIER PARKWAY	RECONSTRUCTION	x		Complete			NO
12546	Virginia Beach	LASKIN ROAD	0.449 KILOMETER WEST OF FIRST COLONIAL ROAD	0.515 KILOMETER EAST OF BIRDNECK ROAD	MAJOR WIDENING	4	6	2018	x	x	YES
12549	Virginia Beach	LYNNHAVEN PKWY	0.2179 KM WEST OF HOLLAND ROAD	0.0632 KM EAST OF LISHELLE PLACE	RECONSTRUCTION	4	6	2011	x	x	YES
12827	Hampton	RTE 64 - BRIDGE DECK REHABILITATION	HAMPTON ROADS BRIDGE TUNNEL	SOUTHWEST AND NORTHWEST APPROACH STRUCTURES	MAJOR BRIDGE REHAB	x		Complete			NO

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UPC	Jurisdiction	Facility	From	To	Improvement Type	Exist.	Prop.	Analysis Year 1st	TIP	LRP	Reg. Sig.
12962	York County	RTE 17	INTERSECTION ROUTES 17 & 620 (LAKESIDE DRIVE)		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
12970	Newport News	RTE 60	AT OYSTER POINT ROAD		MAJOR WIDENING	x		Complete			NO
13199	Isle of Wight County	WEST BLACKWATER ROAD	0.098 KILOMETERS WEST ROUTE 641	0.027 KILOMETERS WEST ROUTE 657	RECONSTRUCTION	x		Complete			NO
13272	Norfolk	EXTENSION OF TRAFFIC MANAGEMENT SYSTEM	BAY VIEW BOULEVARD	4TH VIEW STREET	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
13325	Suffolk (rural)	WHITE MARSH ROAD	ROUTE 337	0.1 MILE SOUTH ROUTE 1332	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
13326	Suffolk (rural)	CYPRESS CHAPEL ROAD	ROUTE 32	ROUTE 642 SOUTH	RECONSTRUCTION		x	Complete	x		NO
13427	Poquoson	RTE 172 (WYTHE CREEK ROAD) -	ALPHUS STREET	SCL POQUOSON	MAJOR WIDENING	2	4	2020	x	x	YES
13428	Hampton	RTE 172 (WYTHE CREEK ROAD) -	0.258 KILOMETER EAST OF NASA'S MAIN GATE	INTERSECTION MAGRUDER BOULEVARD (ROUTE 134)	RECONSTRUCTION	2	4	2020	x	x	YES
13429	Newport News	RTE 143 (JEFFERSON AVENUE)	0.077 KILOMETERS NORTH OF BUCHANAN DRIVE	0.126 KILOMETERS NORTH OF GREEN GROVE LANE	MAJOR WIDENING	4	6	2011	x	x	YES
13431	Hampton	RTE 351 (PEMBROKE AVENUE)	0.041 KILOMETER EAST MARSHALL STREET	HOLLY STREET	BRIDGE REPLACEMENT	x		Complete			NO
13478	Newport News	J. CLYDE MORRIS BOULEVARD CORRIDOR - BIKE TRAIL	JEFFERSON AVENUE	MARINERS MUSEUM	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
13482	Virginia Beach	PRINCESS ANNE ROAD - 4 LANES ON 8-LANE RW	0.17 MILE EAST OF DAMNECK ROAD	0.02 MILE EAST OF HOLLAND ROAD	RECONSTRUCTION	2,0	4	2018	x	x	YES
13485	Chesapeake	VOLVO PARKWAY	0.128 KILOMETER EAST OF KEMPSVILLE ROAD	EAST CORPORATE LIMITS CHESAPEAKE	MAJOR WIDENING	0	4	2011	x	x	YES
13486	Suffolk	RTE 460 (NORTH MAIN STREET)	0.294 KILOMETER NORTH ROUTE 58 BUS.(CONSTANCE ROAD)	1.084 KILOMETERS NORTH ROUTE 58 BUS.(CONSTANCE ROAD)	MAJOR WIDENING	x		Complete			NO
13487	Virginia Beach	LYNNHAVEN PARKWAY	WEST CORPORATE LIMITS OF VIRGINIA BEACH	0.736 KILOMETER EAST OF CENTERVILLE TURNPIKE	MAJOR WIDENING	0	4	2011		x	YES
13496	James City County	POCAHONTAS TRAIL	WEST APPROACH OF SKIFFES CREEK BRIDGE	1.9 MILE WEST OF WCL CITY OF NEWPORT NEWS	NEW CONSTRUCTION	na	na	Exempt	x	x	YES
13497	York County	RTE 105 FT. EUSTIS BOULEVARD	0.721 KILOMETER EAST OF ROUTE 143	0.235 KILOMETER WEST OF ROUTE 17	MAJOR WIDENING	2	4	2011	x	x	YES
13500	Multi-jurisdictional: Hampton Roads MPO	MONTICELLO AVE.- REGIONAL BIKEWAY NETWORK	ROUTE 615	COMPTON DRIVE (ENTRANCE TO WILLIAM & MARY COLLEGE)	ENVIRONMENTALLY RELATED	x		Complete			NO
13714	York County	LAKESIDE DRIVE	0.021 KILOMETER EAST INTERSECTION ROUTE 17	0.003 KILOMETER SOUTH INTERSECTION ROUTE 621	MAJOR WIDENING		x	Exempt	x		NO
13718	James City County	RTE 615-IRONBOUND	ROUTE 612	ROUTE 322	MAJOR WIDENING		x	Exempt			NO
13719	James City County	RTE 612 - TRAIL	ROUTE 614 (CENTERVILLE RD)	ROUTE 199	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
13731	Norfolk	RTE 264 - WIDEN FOR HOV LANES	0.352 MILE WEST MILITARY HIGHWAY (ROUTE 13)	0.744 MILE EAST MILITARY HIGHWAY (ROUTE 13)	MAJOR WIDENING	x		Complete			NO
13765	Hampton Roads District-wide	PHASE I:CONSTR BIKEWAYS & INST.BIKE LOCKERS-WALLER MILL TR.	BARLOW ROAD - MOORETOWN ROAD	ROUTE 143 - ROCHAMBEAU DRIVE	MINOR WIDENING	x		Complete	x		NO
13979	Newport News	RTE 143 (JEFFERSON AVE)	FROM DENBIGH BOULEVARD TO FORT EUSTIS BOULEVARD	& INTERSECTION REALIGNMENT AT INDUSTRIAL PARK DRIVE	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
14598	Newport News	WARWICK BOULEVARD (PE ONLY IN SYP)	ROUTE 105 (FORT EUSTIS BOULEVARD)	EAST END OF BRIDGE OVER SKIFFES CREEK	NEW CONSTRUCTION	na	na	Exempt	x	x	YES
14600	Virginia Beach	LASKIN ROAD (PE/RW Only)	0.66 MILES EAST GREAT NECK ROAD	0.279 MILES WEST FIRST COLONIAL ROAD	MAJOR WIDENING	na	na	Exempt	x		NO

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14601	Virginia Beach	LASKIN ROAD	0.32 MILES EAST OF BIRDNECK ROAD	0.247 MILES WEST OF PACIFIC AVENUE	MAJOR WIDENING	4	6	2020	x	x	YES
14603	Virginia Beach	LYNNHAVEN PARKWAY	0.736 KILOMETER EAST OF CENTERVILLE TURNPIKE	0.262 KILOMETER WEST OF INDIAN RIVER ROAD	MAJOR WIDENING	0	4	2018	x	x	YES
14625	Newport News	RTE 17 - OYSTER POINT BUSINESS PARK SIDEWALK (PHASE 3)	ROCK LANDING DRIVE/DILIGENCE DRIVE INTERSECTION	CANNON BOULEVARD	SAFETY/TRAFFIC OPERS/TSM	x		Complete	x		NO
14627	York County	RTE 1050 - EXTENSION OF FORT EUSTIS BOULEVARD	INTERSECTION ROUTE 17	INTERSECTION ROUTE 634	NEW CONSTRUCTION	0	4	2011		x	YES
14672	Norfolk	RTE 337(HAMPTON BLVD)	0.005 KILOMETER NORTH OF ROGERS AVENUE	0.011 KILOMETER SOUTH OF "B" AVENUE	RECONSTRUCTION	na	na	2018	x	x	YES
14746	Norfolk	EXPANSION OF COMPUTERIZED SIGNAL SYSTEM	PHASE II		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
14750	Williamsburg	RTE 60 (RICHMOND ROAD) - WIDENING TO 4 LANES W/C, G, & S	0.097 KILOMETER SOUTH OF BROOKS STREET	0.070 KILOMETER NORTH OF NEW HOPE ROAD	RECONSTRUCTION	2	4	2011	x	x	YES
14952	Newport News	WARWICK BOULEVARD	AT CSX RAILROAD - DOT #224-170P	INTERSECTION OF FORT EUSTIS BOULEVARD	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
14989	Isle of Wight County	RTE 603 - W. BLACKWATER RD	3.026 KILOMETER WEST ROUTE 258	ROUTE 258	RECONSTRUCTION	x		Complete			NO
14990	Isle of Wight County	RTE 603 - W. BLACKWATER RD	0.045 MILE WEST OF ROUTE 642 (PEAR TREE ROAD)	0.049 MILE WEST OF ROUTE 641 (BARRET TOWN ROAD)	MINOR WIDENING	x		Complete	x		NO
14991	Isle of Wight County	RTE 603 - W. BLACKWATER RD	ROUTE 642 (PEAR TREE ROAD)	ROUTE 643(WOOD DUCK DRIVE)	RECONSTRUCTION		x	Exempt	x		NO
14992	Isle of Wight County	RTE 603 - W. BLACKWATER RD	ROUTE 643	SOUTHAMPTON COUNTY LINE	RECONSTRUCTION		x	Exempt	x		NO
14994	Isle of Wight County	BROADWATER ROAD	ROUTE 681	ROUTE 637	RECONSTRUCTION		x	Exempt	x		NO
15123	Suffolk (rural)	MINERAL SPRING ROAD	INTERSECTION ROUTE 13	0.4 MILE WEST OF INTERSECTION RTE 13	MINOR WIDENING		x	Exempt	x		NO
15128	Newport News	RTE 64 - WIDEN FROM 4 TO 6 LANES W/NOISE ABATEMENT WALL	1.471 MILES WEST OF ROUTE 143 (JEFFERSON AVENUE)	0.911 MILE EAST OF ROUTE 143 (JEFFERSON AVENUE)	MAJOR WIDENING	x		Complete			NO
15148	Chesapeake	5' PAVED BIKE LANES	PORTSMOUTH BLVD TO NEAR DEVON DRIVE;	DRIVE TO PORTSMOUTH BOULEVARD	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
15149	Virginia Beach	RESTORATION OF CAPE HENRY LIGHTHOUSE			ENVIRONMENTALLY RELATED		x	Exempt	x		NO
15150	Virginia Beach	ARTS CENTER/OCEANFRONT CONNECTOR TRAIL	TRAIL ALONG EXISTING SALT-MARSH ENVIRONMENT		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
15246	Gloucester County	HICKORY FORK RD	ROUTE 616	ROUTE 631	RECONSTRUCTION		x	Exempt	x		NO
15791	Norfolk	RTE 264 - WIDEN FOR HOV LANES	0.5 MILE WEST ROUTE 64	0.7 MILE EAST ROUTE 64	RECONSTRUCTION		x	Exempt			NO
15822	Newport News	JEFFERSON AVENUE	AT INTERSECTION OF SHIELDS ROAD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
15826	Suffolk	FINNEY AVENUE	EAST WASHINGTON STREET	FINNEY AVENUE	NEW CONSTRUCTION	0	2	2030	x	x	YES
15827	Virginia Beach	HOLLAND ROAD	0.207 MILE NORTH OF DAM NECK ROAD	0.152 MILE SOUTH OF NIMMO PARKWAY	MAJOR WIDENING	2	4	2018	x	x	YES
15828	Virginia Beach	ELBOW ROAD	INDIAN RIVER ROAD	0.5 MILE WEST OF PRINCESS ANN ROAD	NEW CONSTRUCTION	2	4	2018	x	x	YES
15829	Virginia Beach	INDIAN RIVER ROAD	LYNNHAVEN PARKWAY	ELBOW ROAD	MAJOR WIDENING	2	4	2018	x	x	YES
16042	Hampton	RTE 64 - TRAFFIC MANAGEMENT SYSTEM	MAGRUDER BOULEVARD	ROUTE 199(INCLUDES NEWPORT NEWS, HAMPTON & YORK COUNTY)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO

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16043	Chesapeake	RTE 64 - TRAFFIC MANAGEMENT SYSTEM	ROUTE 264 (BOWERS HILL)	ROUTE 464	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
16045	Hampton Roads District-wide	RTE 264 - TRAFFIC MANAGEMENT SYSTEM	BRAMBLETON AVENUE	ROUTE 64 (BOWERS HILL)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
16046	Hampton Roads District-wide	RTE 464 - TRAFFIC MANAGEMENT SYSTEM	ROUTE 64	ROUTE 264	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
16047	Hampton Roads District-wide	RTE 664 - TRAFFIC MANAGEMENT SYSTEM	NORTH END MONITOR-MERRIMAC TUNNEL	ROUTE 264 (BOWERS HILL)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
16054	Williamsburg	THREE LANES, BIKEWAY, SIDEWALKS, CURB & GUTTER	MONTICELLO AVENUE	IRONBOUND ROAD	NEW CONSTRUCTION	0	2	2011	x	x	YES
16102	Hampton	SIGNAL SYSTEM UPGRADE	CITYWIDE		SAFETY/TRAFFIC OPERS/TSM	x		Complete	x		NO
16103	Newport News	J CLYDE MORRIS BOULEVARD CORRIDOR (BIKEWAY PHASE IV)	CANNON BOULEVARD	OYSTER POINT ROAD	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
16106	Virginia Beach	SIGNAL RE-TIMING AT 70 LOCATIONS	AT 70 LOCATIONS IN THE CITY		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
16109	Chesapeake	SIGNAL INTERCONNECT	CEDAR LANE	STEEL BRIDGE	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
16110	Chesapeake	BIKEWAY	DOCK LANDING ROAD	JOLLIFF ROAD	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
16196	Portsmouth	SIGNAL SYSTEM UPGRADE - PHASE II	PORTSMOUTH CITYWIDE		SAFETY/TRAFFIC OPERS/TSM	x		Complete	x		NO
16218	Norfolk	RTE I-264 - URBAN INTERSTATE LANDSCAPING	MILITARY HIGHWAY		ENVIRONMENTALLY RELATED	x		Complete			NO
16314	York County	RTE 641 - PENNIMAN ROAD	ROUTE 723	INTERSECTION OF ALEXANDER LEE PARKWAY	RECONSTRUCTION		x	Exempt	x		NO
16316	York County	COOK ROAD	ROUTE 634	ROUTE 238	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
16403	Norfolk	AZALEA GARDEN ROAD	AT NORFOLK SOUTHERN RAILROAD -- DOT #735343N	(0.09 MILE SOUTH WEST ROUTE 194)	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
16414	Virginia Beach	LONDON BRIDGE ROAD	INTERNATIONAL PARKWAY	VIRGINIA BEACH BOULEVARD (ROUTE 58)	MAJOR WIDENING	x		Complete	x		NO
16463	Multi-jurisdictional: Hampton Roads MPO	SIGNAGE FOR BIKEWAY NETWORK	JAMES CITY AND YORK COUNTIES		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
16531	Virginia Beach	COMPUTER SYSTEM UPGRADE			SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
16554	Gloucester County	COLONIAL COURTHOUSE VILLAGE ENHANCEMENT	BEGINS AT HISTORIC COURT CIRCLE AND CONTINUES FOR	APPROXIMATELY 1200 LINEAR FEET ALONG MAIN STREET			x	Exempt	x		NO
16556	Virginia Beach	SOUTHEASTERN PARKWAY AND GREENBELT - 4 LANES-PHASE I	I-64 (AT OAK GROVE CONNECTOR)	I-264	NEW CONSTRUCTION	0	4	Exempt	x	x	NO
16557	Norfolk	BLVD.INTERCHANGE/INTERNAT.TERMINAL BLVD.	TROUTVILLE AVENUE	PORTOR STREET	NEW CONSTRUCTION			Exempt	x		NO
16843	Hampton Roads District-wide	RUMBLE STRIPS					x	Exempt	x		NO
17142	Isle of Wight County	ROUTE 58 - BRIDGE & APPROACH OVER BLACKWATER RIVER	0.32 KILOMETER W.CORP. LIMITS CITY OF FRANKLIN	0.32 KILOMETER EAST ISLE OF WIGHT COUNTY LINE	BRIDGE REPLACEMENT	na	na	2011	x	x	YES
17365	York County	RTE 60 (BOTH DIRECTIONS)	0.10 MI. W. JAMES CITY CO. LINE	(DOT #224-178U)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
17368	Hampton	RTE 64 - WIDEN FROM 6 TO 8 LANES	HAMPTON ROADS CENTER PARKWAY	RAMP B - ROUTE I-664	MAJOR WIDENING	6	8	Complete			NO
17522	Newport News	CHESTNUT AVENUE	AT INTERSECTION WITH BRIARFIELD ROAD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO

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17545	Portsmouth	CLIFFORD ST - BRIDGE REPLACEMENT & APPROACHES	INTERSECTION OF CITY PARK AVENUE & CLIFFORD STREET	INTERSECTION OF CLIFFORD STREET & POWHATAN STREET	BRIDGE REPLACEMENT	x		Complete			NO
17546	Norfolk	RTE 58	0.023 KM West of JETT STREET	0.216 KM East of BRIAR HILL ROAD	MAJOR WIDENING	4	6	2011	x	x	YES
17568	Suffolk	RTE 337 - DEVELOP TO 4 LANE DIVIDED FACILITY	0.278 Mile W. of Shoulder Hill Road (Rte. 626)	0.398 Mile E. of Shoulder Hill Road (Rte. 626)	RECONSTRUCTION	2	4	2018	x	x	YES
17591	Norfolk	ATTUCKS HISTORIC PEDESTRIAN WALKWAY	PEDESTRIAN WALKWAY ALONG CHURCH STREET, HENRY STREET,	VIRGINIA BEACH BOULEVARD AND PRINCESS ANNE ROAD			x	Exempt	x		NO
17630	Virginia Beach	RTE 264 - INTERCHANGE IMPROVEMENT	0.426 MILE EAST OF WBL I-64	0.473 MILE EAST OF WITCHDUCK RD	MAJOR WIDENING		x	2018	x	x	YES
17632	James City County	BIKEWAY - COLONIAL PARKWAY CONNECTION	COLONIAL PARKWAY	RD(RTE.682)&TREASURE ISL.RD(RTE.617)	R/W OR ENG	x		Complete			NO
17633	James City County	CLASS I BIKEWAY/PEDESTRIAN ROUTE 60 & CROAKER ROAD	Croaker Rd: Norge Library to Richmond Rd	Richmond Rd: Croaker Rd to Old Church Rd	R/W OR ENG		x	Exempt	x		NO
17635	York County	GOODWIN NECK BIKE LANES	FREEDOM BOULEVARD	BACK CREEK ROAD	R/W OR ENG	x		Exempt			NO
17636	Chesapeake	RTE 13 MILITARY HWY	AT GREENBRIER PARKWAY		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
17637	Chesapeake	GREENBRIER PARKWAY - INTERSECTION IMPROVEMENTS	EDEN WAY NORTH	CROSSWAY BOULEVARD	MINOR WIDENING	x		Complete	x		NO
17736	Hampton	MERCURY BLVD	AT JEFFERSON AVENUE AND	NEW MARKET BOULEVARD	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
17821	Norfolk	I-564 - LANDSCAPING	AT TERMINAL BOULEVARD INTERCHANGE		ENVIRONMENTALLY RELATED	x		Complete			NO
17824	Norfolk	I-64 EB RAMP IMPROVEMENT	0.313 MI. WEST OF NORVIEW AVENUE	0.215 MI. EAST OF NORVIEW AVENUE	MINOR WIDENING	na	na	2018	x	x	YES
17827	Chesapeake	RTE 165 - BIKE PATH ON CEDAR ROAD	ROUTE 104	ALBERMARLE DRIVE	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
17828	Chesapeake	CITY WIDE CLOSED LOOP SIGNAL UPGRADE			SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
17935	York County	RTE 782 - INTERSECTION IMPROVEMENTS	0.285 KILOMETER SOUTH ROUTE 171	0.271 KILOMETER NORTH ROUTE 171	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
18190	Hampton Roads District-wide	SOFTWARE/HARDWARE DEVELOPMENT & INTEGRATION	AT HAMPTON ROADS SMART TRAVEL CENTER		SAFETY/TRAFFIC OPERS/TSM	x		Exempt	x		NO
18202	James City County	IRONBOUND ROAD			NEW CONSTRUCTION	x		Complete			NO
18207	Virginia Beach	OCEANA BOULEVARD & FIRST COLONIAL ROAD EXTENSION - 4 LANES	0.80 MILE SOUTH OF VIRGINIA BEACH BOULEVARD	VIRGINIA BEACH BOULEVARD	NEW CONSTRUCTION	x		Complete			NO
18591	Chesapeake	RTE 337 - WIDEN TO 4 LANES	WCL CHESAPEAKE	JOLLIFF ROAD	MAJOR WIDENING	2	4	2018	x	x	YES
18592	Chesapeake	BRIDGE AND APPROACHES OVER INTERCOASTAL WATERWAY - 5 LANE	WAYNE AVENUE	ALBEMARLE DRIVE	BRIDGE REPLACEMENT		x	Exempt	x		NO
18705	Newport News	RTE 238 -	YORKTOWN ROAD	(0.03 MILE NORTHEAST ROUTE 60-WARWICK RD-DOT# 224-171W CSX)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
18708	Norfolk	BOUSH ST. - RECONSTRUCTION - 4 LANE	CITY HALL AVENUE	BRAMLETON AVENUE	MAJOR WIDENING	x		Complete			NO
18824	Chesapeake	ROUTE 13	AT RAILROAD - DOT #643-352G	(0.01 MILE SOUTHWEST OF MILITARY HIGHWAY	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
18825	Chesapeake	DEEP CREEK BOULEVARD	AT RAILROAD CROSSING - DOT #467-707W	(0.60 MILE NORTH OF GUST LANE)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
18827	Newport News	ROUTE 143	0.01 MILE SOUTH INDUSTRIAL AVENUE	DOT# 224-164L	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO

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18830	Suffolk	LIBERTY ST	AT RAILROAD - DOT #467-399T	(0.08 MILE NORTH OF WASHINGTON STREET)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
18968	Norfolk	I-564 INTERMODAL CONNECTOR	I-564	NORFOLK NAVAL BASE/N.I.T.	NEW CONSTRUCTION	0	4	2018	x	x	YES
18969	Hampton Roads District-wide	AREA TUNNELS HURRICANE PREPAREDNESS	REGIONWIDE HAMPTON ROADS		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
18970	Virginia Beach	RTE 264 - INTERCHANGE IMPROVEMENTS (PE & RW ONLY)	AT ROSEMONT ROAD		RECONSTRUCTION		x	Exempt			NO
19005	Virginia Beach	RTE 264 - INTERCHANGE IMPROVEMENTS - PHASE II	LYNNHAVEN		NEW CONSTRUCTION	na	na	2030	x	x	YES
19008	Newport News	ROUTE 60 (WARWICK BLVD) - CHANNELIZATION	INTERSECTION OF 37TH STREET		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
19010	Newport News	CANON BOULEVARD - LEFT TURN LANE & MODIFY EXISTING SIGNAL	INTERSECTION MIDDLE GROUND BOULEVARD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
19011	Suffolk	RTE 460 - PEDESTRIAN AND BIKE PATH	1.1 KILOMETERS NORTH OF ROUTE 58	ROUTE 10 AND ROUTE 32	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
19012	Virginia Beach	INTERSECTION IMPROVEMENTS	AT DAM NECK ROAD AND GENERAL BOOTH BOULEVARD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
19013	Virginia Beach	RTE 58 - INTERSECTION IMPROVEMENTS	AT ROSEMONT ROAD		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
19014	Virginia Beach	RTE 165 - INTERSECTION IMPROVEMENTS	AT WITCHDUCK ROAD AND PRINCESS ANNE ROAD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
19015	Virginia Beach	INTERSECTION IMPROVEMENTS	0.0350 KM SOUTH OF LYNNHAVEN PKWY CONSTR. B/L	0.1660 KM SOUTH OF LYNNHAVEN PKWY CONSTR. B/L	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
19022	Newport News	J. CLYDE MORRIS BLVD - INTERSECTION IMPROVEMENT	AT DILIGENCE DRIVE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
19023	Newport News	RTE 143 - INTERSECTION IMPROVEMENT	0.128 MILES SOUTH OF THIMBLE SHOALS BOULEVARD	0.188 MILES NORTH OF THIMBLE SHOALS BOULEVARD	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
31665	Isle of Wight County	BUDGET ITEM	DRAINAGE AT WINDSOR	YEARLY PROJECT FOR ISLE OF WIGHT	ENVIRONMENTALLY RELATED		x	Exempt			NO
50012	Suffolk	SIGNAL COORDINATION IN DOWNTOWN (PE ONLY)	DOWNTOWN AREA		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
50013	Virginia Beach	CITYWIDE SIGNAL RETIMING			SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
50015	York County	GRAFTON DRIVE BIKEWAY (BIKEWAY AND SIDEWALK)	GRAFTON DRIVE		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
50041	Hampton Roads District-wide	CONSTRUCT/INSTALL BUS SHELTERS	BUS SHELTERS		NEW CONSTRUCTION		x	Exempt	x		NO
50057	James City County	RTE 615 - RECONSTRUCT TO 4 LANES	0.052 MILE SOUTH OF INTERSECTION ROUTE 616	0.303 MILES NORTH OF ROUTE 747	RECONSTRUCTION	2	4	2018	x	x	YES
50119	Newport News	CONSTRUCTION OF PEDESTRIAN IMPROVEMENTS	WARWICK BOULEVARD		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
50519	Williamsburg	TRANSPORTATION STUDY	WILLIAMSBURG 2007		STUDY		x	Exempt	x		NO
50651	Hampton Roads District-wide	HOV MARKETING & ANALYSIS - REGIONWIDE	HOV MARKETING & ANALYSIS		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
51803	Isle of Wight County	RTE 1603 -	AT CSX RAILROAD - DOT # 623-810N	(0.01 MILE SOUTH OF ROUTE 58)	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
51863	Portsmouth	VICTORY BLVD	GREENWOOD DRIVE	CAVALIER BOULEVARD	RECONSTRUCTION		x	Exempt	x		NO
51866	Virginia Beach	RTE 165 PRINCESS ANNE	0.389 MILES WEST OF KEMPSVILLE ROAD	0.275 MILES EAST OF KEMPSVILLE ROAD	RECONSTRUCTION	na	na	2018	x	x	YES

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52005	Chesapeake	CONSTRUCTION OF 1.4 MILE MULTI-USE PATH IN WESTERN BRANCH	Portsmouth Boulevard (Rte 337)	Deerfield Crescent	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52006	Suffolk	DOWNTOWN SUFFOLK INITIATIVES	DOWNTOWN AREA		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52008	York County	RESTORE WHARF WAREHOUSE/FERRY TERMINAL			ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52015	Gloucester County	GLOUCESTER COUNTY - PHASE II ENHANCEMENTS	IMPLEMENTATION OF AN ON-GOING PROJECT TO PROVIDE HISTORIC	STREETSCAPE ENHANCEMENTS	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52058	Virginia Beach	NIMMO PARKWAY(R/W & CONST ONLY)	0.02 Miles East of Holland Road	0.43 Miles West of General Booth Boulevard	NEW CONSTRUCTION	0	4	2018	x	x	YES
52059	Norfolk	ROUTE 337 - LANDSCAPING	AT MIDTOWN TUNNEL		ENVIRONMENTALLY RELATED		x	Exempt			NO
52074	Hampton	RTE 134 - (ARMISTEAD AVENUE) 4 LANE	0.25 MILE WEST OF ROUTE 167 (LASALLE AVENUE)	0.09 MILE EAST OF ROUTE 167 (LASALLE AVENUE)	BRIDGE REPLACEMENT	x		Complete			NO
52075	Suffolk	RTE 1003 - BATTERY AVENUE	ROUTE 1007	END OF STATE MAINTENANCE	RECONSTRUCTION		x	Exempt			NO
52080	James City County	BARNES ROAD	0.50 MILE EAST ROUTE 60	0.85 MILE EAST ROUTE 60	RECONSTRUCTION		x	Exempt			NO
52081	James City County	MOUNT LAUREL ROAD	0.20 Mi SOUTH ROUTE 606	0.90 MILE SOUTH 606	RECONSTRUCTION	x		Complete	x		NO
52082	York County	YORKVILLE RD	0.2 MILE WEST ROUTE 1522	0.3 MILE EAST ROUTE 620	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
52147	Norfolk	WESLEYAN DRIVE - 4 LANE	NORTHAMPTON BOULEVARD	ECL	MAJOR WIDENING	2	4	2018	x	x	YES
52148	Virginia Beach	WESLEYAN DRIVE - 4 LANE	WCL	BAKER ROAD	MAJOR WIDENING	2	4	2018	x	x	YES
52149	Norfolk	CITYWIDE URBAN TRANSPORTATION			ENVIRONMENTALLY RELATED		x	Exempt			NO
52150	Norfolk	RTE 166 - PRINCESS ANNE RD	0.07 MILE EAST OF INT PRINCESS ANNE RD/KILMER LANE	0.107 MILE WEST OF INT PRINCESS ANNE RD/KILMER LANE	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
52151	Chesapeake	RTE 165 - MOUNT PLEASANT ROAD - LEFT TURN LANE	AT FENTRESS AIRFIELD ROAD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
52152	Chesapeake	RTE 13 -MILITARY HWY	AT BAINBRIDGE BOULEVARD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
52303	Isle of Wight County	RTE 460 - CONSTRUCT TURN LANES	INTERSECTION ROUTE 258	0.87 MILE EAST INTERSECTION ROUTE 258	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
52305	Virginia Beach	RTE 44/264 - SURFACE REPAIR & REHABILITATION OF ROADWAY			RESTORATION & REHAB		x	Exempt	x		NO
52324	Hampton Roads District-wide	SMART TRAFFIC CENTER	REGIONAL ROADWAY INFORMATION SYSTEM	(COMPUTER SYSTEM)	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52342	York County	GRAFTON DRIVE	0.486 MILES SOUTH OF ROUTE 630 (AMORY LANE)	0.298 MILES SOUTH OF ROUTE 630 (AMORY LANE)	RECONSTRUCTION		x	Exempt	x		NO
52343	Newport News	RIVERMONT BIKE TRAIL			ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52346	Newport News	ITS FIBER LINK	TRAFFIC OPERATIONS CENTER	I-64 AT JEFFERSON AVENUE	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52347	Newport News	ITS FIBER LINK	CITY HALL	I-664	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52348	Newport News	CITYWIDE SIGNAL RETIMING (PE ONLY)	AT SIGNALIZED INTERSECTIONS		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52349	Newport News	OAKLAND INDUSTRIAL PARK/SIDEWALK			SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO

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52350	Newport News	CITYWIDE SIGNAL SYSTEM UPGRADE	225 INTERSECTIONS		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52351	Multi-jurisdictional: Hampton Roads MPO	RTE 17 - ARTERIAL SIGNAL SYSTEM UPGRADE	I-64 (NEWPORT NEWS)	ROUTE 105 (YORK COUNTY)	ENVIRONMENTALLY RELATED		x	Exempt			NO
52353	Norfolk	STC OPERATIONS	CITYWIDE		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52355	Virginia Beach	CITYWIDE SIGNAL SYSTEM UPGRADE (PHASE I)	NEW ADDITION FOR TRAFFIC MANAGEMENT CENTER		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52357	Chesapeake	I-64 RAMP CONNECTION	I-64 EAST OFF RAMP	WOODLAKE DRIVE	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52360	Hampton	CITY TMS/VDOT CONNECTION	CITY TMS CONTROL CENTER	VDOT SMART TRAVEL CENTER	ENVIRONMENTALLY RELATED		x	Exempt			NO
52363	Hampton	SIGNAL SYSTEM RETIMING	AT VARIOUS INTERSECTIONS		ENVIRONMENTALLY RELATED		x	Exempt			NO
52364	Hampton	INTERSECTION IMPROVEMENTS	AT FOX HILL ROAD & WOODLAND ROAD		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52365	Norfolk	NORVIEW AVENUE - INTERSECTION IMPROVEMENT	AT AZALEA GARDEN ROAD	ADD EASTBOUND LEFT TURN LANE	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52366	Norfolk	CCTV LINKS	NORFOLK STC	VDOT STC	ENVIRONMENTALLY RELATED		x	Exempt			NO
52367	Norfolk	SIGNAL OPTIMIZATION - HAMPTON BOULEVARD	REDGATE AVENUE	TAUSSIG BOULEVARD	ENVIRONMENTALLY RELATED		x	Exempt			NO
52368	Norfolk	SIGNAL OPTIMIZATION - VA BEACH BOULEVARD(PE ONLY)	BALLENTINE BOULEVARD	NEWTOWN ROAD	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52370	Suffolk	ARTERIAL SIGNAL SYSTEM - ROUTE 58 BUSINESS	ECL	SUBURBAN DRIVE	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52371	Suffolk	RTE 58 - ARTERIAL SIGNAL SYSTEM	WCL	KENYON ROAD	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52372	Suffolk	ARTERIAL SIGNAL SYSTEM - ROUTE 10	ROUTE 460	KINGS FORD ROAD	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52373	Suffolk	RTE 460 - ARTERIAL SIGNAL SYSTEM	WCL	KINGS FORD ROAD	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52378	HRT - DRPT	ATLANTIC AVENUE TROLLEY, ITS, SPECIAL EVENT SIGNALS			ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52381	Suffolk	RTE 13 - CAROLINA RD ARTERIAL SIGNAL SYSTEM	SCL	TURLINGTON ROAD	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52382	Suffolk	RTE 337 - ARTERIAL SIGNAL SYSTEM	ECL	PORTSMOUTH BLVD.	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
52387	Hampton	ADDITIONAL LANES	CASH DRIVE/ENTERPRISE PARKWAY		ENVIRONMENTALLY RELATED	x		Complete			NO
52389	Newport News	ARTERIAL SIGNAL SYSTEM UPGRADE	HAMPTON	NEWPORT NEWS	ENVIRONMENTALLY RELATED		x	Complete	x		NO
52521	York County	RTE 143 - REPLACE WARNING SIGNS & INSTALL LTL	0.007 MILE NORTH INTERSECTION ROUTE F-137	0.076 MILE NORTH INTERSECTION ROUTE F-137	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
52523	Newport News	ROUTE 143 - JEFFERSON AVE SIGNAL MODIFICATION	AT INTERSECTION OF DRESDEN DRIVE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
52524	Newport News	ROUTE 143 -JEFFERSON AVE INSTALL TRAFFIC SIGNAL	AT INTERSECTION OF ST THOMAS DRIVE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
52525	Norfolk	RTE 165 - LITTLE CREEK RD INST SUPPL SIGNAL DISPLAY	AT I-564/I-64		SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
52526	Newport News	ROUTE 173 -DENBIGH BLVD INSTALL TRAFFIC SIGNAL	AT INTERSECTION WOODSIDE DRIVE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO

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52528	Newport News	ROUTE 312 - J CLYDE MORRIS INSTALL TRAFFIC SIGNAL	AT WEST ENTRANCE TO RIVERSIDE REGIONAL HOSPITAL		SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
52530	Norfolk	BALLENTINE BLVD - INSTALL OVERHEAD SIGN & SUPPL SIGNING	AT INTERSECTION VIRGINIA BEACH BOULEVARD	(HAZARD ELIMINATION SAFETY PROJECT)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
52557	Chesapeake	CHESAPEAKE AVE	0.01 MILE SOUTH SEABOARD	(DOT# 467-699G)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
52559	Newport News	CHESTNUT AVE	0.03 MILE EAST 39TH STREET	(DOT# 224-891P)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
52560	Newport News	39TH ST	0.13 MILE EAST CHESTNUT AVENUE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
52562	Portsmouth	LEE AVE	0.07 MILE SOUTH CLEVELAND	(DOT# 626-080C)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
52563	Portsmouth	WOODROW ST	AT RAILROAD CROSSING - DOT # 856-091Y	(0.03 MILE EAST VIRGINIA)	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
53008	Hampton	SANDY BOTTOM WETLAND COMPENSATION SITE	WCL HAMPTON	BIG BETHEL ROAD	ENVIRONMENTALLY RELATED		x	Exempt			NO
53107	Chesapeake	PLAZA & APPROACHES, ADMIN BLD & ACCESS RD	0.253 MILE SOUTH INDIAN CREEK ROAD	0.329 MILE SOUTH INDIAN CREEK ROAD	NEW CONSTRUCTION		x	Exempt	x		NO
54277	Suffolk	RTE 1004 - RECONSTRUCTION	ROUTE 1008	END OF STATE MAINTENANCE	MAINTENANCE		x	Exempt			NO
54310	Fredericksburg District-wide	STOSIP ALLOCATIONS	ROUTE 1205 MP 70.18	ROUTE 1306 MP 73.21	MONITORING		x	Exempt			NO
54759	James City County	RTE 5 - GREENSPRINGS TRAIL	ROUTE 1190/EAGLE WAY ROAD	ROUTE 359/ENTRANCE TO JAMESTOWN FESTIVAL PARK	NEW CONSTRUCTION	x		Complete			NO
54868	Chesapeake	RTE 17 - CONSTRUCT FROM 2 TO 4 LANES	NORTH CAROLINA STATE LINE	ROUTE 104 (DOMINION BLVD.)	MAJOR WIDENING	2	4	Complete			NO
55039	Gloucester County	RTE 17 - BRIDGE REPLACEMENT OVER FOX MILL RUN			BRIDGE REPLACEMENT		x	Exempt	x		NO
55051	Statewide	RTE 5 - VIRGINIA CAPITAL TRAIL-EASTERN SECTION	CHICKAHOMINY RIVER BRIDGE, SOUTH OF EXISTING ROUTE 5	GREENSPRING TRAIL, 1000' EAST OF ROUTE 614	NEW CONSTRUCTION	x		Complete	x		NO
55200	Virginia Beach	WITCH DUCK RD - 6 LANES (PE ONLY IN SYIP)	BONNEY ROAD	GRAYSON ROAD	RECONSTRUCTION	4	6	2018	x	x	YES
55202	Virginia Beach	WITCH DUCK RD - 6 LANES (PE ONLY)	I-264	VIRGINIA BEACH BLVD	RECONSTRUCTION	4	6	2020	x	x	YES
56187	Chesapeake	RTE 17 - REPLACE BRIDGE OVER SO. BRANCH ELIZABETH RIVER	INTERSECTION OF CEDAR RD (RT 165)(ENV DOC FOR 5.6 MI)	OAK GROVE INTERCHANGE	BRIDGE REPLACEMENT	2	4	2018	x	x	YES
56430	Norfolk	CONSTRUCT A PEDESTRIAN/BICYCLE PATH	RIGHT OF WAY IN THE ATLANTIC CITY	SECTION OF SOUTHWEST NORFOLK	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
56432	Chesapeake	LANDSCAPING, UTILITY AND GENERAL SIDEWALK	I-464	LIBERTY STREET	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
56433	Suffolk	PROPOSAL TO STUDY LANDSCAPING TO ROUTE 58 CORRIDOR - PE ONLY	BETWEEN THE CITY LINE	DOWNTOWN SUFFOLK EXIT	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
56466	Portsmouth	LONDON BLVD - BRIDGE PAINTING AND REPAIR	0.1 MILE WEST OF VIRGINIA AVENUE	0.1 MILE EAST OF CONSTITUTION AVENUE	MINOR BRIDGE REHAB		x	Exempt	x		NO
56604	Newport News	WARWICK BLVD.	AT CSX RAILROAD - DOT #224-173K	(0.24 MILE NORTH OF ROUTE 238)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
56606	Chesapeake	KEATON WAY	AT CSX RAILROAD - DOT # 633-923W	(0.16 MILE SOUTH OF AIRLINE)	SAFETY/TRAFFIC OPERS/TSM	x		Complete	x		NO
56607	Chesapeake	PROVIDENCE ROAD	AT NORFOLK SOUTHERN RAILROAD - DOT # 465-445K	(0.17 MILE EAST OF ROUTE 168)	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
56608	Norfolk	WYOMING AVENUE	AT ESHR RAILROAD - DOT #465-207S	(0.02 MILE SOUTHEAST OF CAPE HENRY DRIVE)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO

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56610	Chesapeake	POINDEXTER STREET -	AT NPB CROSSING - DOT # 856-075P	(0.36 MILE WEST OF ROUTE 460)	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
56611	Norfolk	HANBURY STREET	AT NORFOLK SOUTHERN RAILROAD - DOT #467-670J	(0.04 MILE EAST OF CROMWELL)	SAFETY/TRAFFIC OPERS/TSM	x		Complete	x		NO
56623	Chesapeake	LIBERTY ST	AT NPB RAILROAD - DOT #856-069L	(0.01 MILE NORTH OF SEABOARD STREET)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
56638	Hampton Roads District-wide	RTE 460 - LOCATION & ENVIRONMENTAL STUDY (PE ONLY)	SUFFOLK BYPBASS (ROUTE 58)	INTERSTATE 295	STUDIES ONLY		x	Exempt	x		NO
56656	Portsmouth	RTE 337 - CONSTRUCTION OF OUTFALL	CONSTITUTION AVE	SCOTT'S CREEK	RECONSTRUCTION	x		Complete			NO
56775	Hampton Roads District-wide	SMART TRAFFIC CENTER	ADVANCED TRAVELER INFORMATION SYSTEM (ATIS)		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
56788	Newport News	RTE 173 - DENBIGH BLVD	AT INTERSECTION OF OLD DENBIGH BOULEVARD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
56789	Hampton	RTE 258 - MERCURY BLVD	AT INTERSECTION SELDENDALE ROAD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
56791	Hampton	RTE 258 - MERCURY BLVD	AT INTERSECTION WICKHAM AVENUE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
56793	Newport News	48TH STREET-INSTALL HAZ. WARNING BEACON & "STOP SIGN AHEAD"	AT ROANOKE AVE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
56795	Hampton	INSTALL TRAFFIC SIGNAL	AT INTERSECTION OF HAMPTON HARBOR AVENUE		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
56798	Hampton	INT. BIG BETHEL RD INSTALL TRAFFIC SIGNAL	AT OLD BIG BETHEL RD.		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
56832	York County	Water Country Drive	ROUTE 199	ROUTE 641	RECONSTRUCTION		x	Exempt			NO
56934	Gloucester County	RTE 17 - WIDENING & INSTALL RAISED CONCRETE MEDIAN	0.686 MILE NORTH YORK COUNTY LINE	1.330 MILE NORTH YORK COUNTY LINE	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
56942	Gloucester County	RTE 17 - CONSTRUCT 2ND LEFT TURN LANE ON SOUTHBOUND LANE	RECEIVER LANE & RIGHT TURN LANE ON RTE. 216.	AT ROUTE 216	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
57022	York County	RTE 603 - INSTALL LTL & TRAFF. SIGNAL	0.100 MILE NORTH ROUTE 645	0.103 MILE SOUTH ROUTE 645	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
57047	Hampton	SAUNDERS ROAD	BIG BETHEL ROAD	CITY OF HAMPTON WCL	NEW CONSTRUCTION	2	4	2018	x	x	YES
57048	Norfolk	RTE 264 - INTERCHANGE IMPROVEMENTS 64WB RAMP TO 264EB	0.4 MILE SOUTH OF CURLEW DRIVE	0.426 MILE EAST OF WBL I-64	RECONSTRUCTION	na	na	2018	x	x	YES
57204	Suffolk (rural)	RTE 645	AT NORFOLK SOUTHERN RAILROAD - DOT # NS 464-160V	(1.50 MILES SOUTHWEST ROUTE 58)	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
57213	Suffolk (rural)	RTE 613	AT NORFOLK SOUTHERN RAILROAD - DOT # NS 464-182V	(0.40 MILE NORTH ROUTE 651)	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
57364	James City County	RTE 614 - BIKEWAY - CMAQ	1.03 MILE SOUTH OF ROUTE 612 (LONGHILL ROAD)	0.02 MILE NORTH OF ROUTE 612 (LONGHILL ROAD)	ENVIRONMENTALLY RELATED	x		Complete			NO
57546	York County	RTE 64 - KING CREEK RESTORATION	1.048 MILES EAST INT EBL ROUTE 64 & ROUTE 199		RESTORATION & REHAB	x		Complete			NO
57580	Hampton Roads District-wide	ROUTE 64 - WIDEN FROM 4 TO 8 LANES WITH PEAK HOV	WEST ROUTE 143 INTERCHANGE	ROUTE 199	RECONSTR. WITH ADDED CAPACITY	4	8	Exempt	x	x	NO
58297	Isle of Wight County	RTE 258 - WIDENING 2 TO 3 LANES WITH CURB & GUTTER	0.20 MILE WEST OF ROUTE 620	SMITHFIELD MIDDLE SCHOOL	RECONSTRUCTION		x	Exempt	x		NO
58428	Chesapeake	RTE 17 - GEORGE WASHINGTON HWY-	AT NORFOLK SOUTHERN RAILROAD - DOT #467-706P	(0.14 MILE NORTH OF SPRINGDALE)			x	Exempt	x		NO
58456	York County	RTE 171 - VICTORY BOULEVARD REPLACE CULVERT	0.18 MILE WEST RTE 134	0.21 MILE WEST RTE 134	ENVIRONMENTALLY RELATED		x	Exempt			NO

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58481	Newport News	RTE 143 - INSTALL TRAFFIC SIGNAL W/PEDESTRIAN INDICATORS	AT INTERSECTION OF 74TH STREET		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
58482	Norfolk	RTE 194 - IMPROVE SIGNING AND PAVEMENT MARKINGS	5 POINTS INTERSECTION AT CHESAPEAKE BOVD	(CHESAPEAKE BLVD, SEWELLS POINT ROAD & NORVIEW AVENUE)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
58483	Chesapeake	RTE 168 - INSTALL TRAFFIC SIGNALS	BATTLEFIELD BOULEVARD		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
58484	Chesapeake	VOLVO PARKWAY - INSTALL TRAFFIC SIGNAL W/VIDEO DET	AT PROGRESSIVE DRIVE		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
59175	Norfolk	INTERMODAL CONNECTOR - PROPOSED INTERCHANGE	AT CHAMBERS FIELD AIR STATION		NEW CONSTRUCTION	na	na	2018	x	x	YES
59228	Newport News	RTE 60 - RELOCATE SHOE LANE	ROUTE 60 & ROUTE 312 INTERSECTION	0.064 KILOMETER NORTH OF EXISTING SHOE LANE	RELOCATION	x		Complete			NO
59767	James City County	RELOCATE AND RESTORATE NORGE DEPOT FOR USE AS COMMUNITY CNTR			ENVIRONMENTALLY RELATED		x	Exempt	x		NO
59768	James City County	CONSTRUCT PATHWAYS AT JAMESTOWN SETTLEMENT					x	Exempt			NO
59769	Newport News	RELOCATE AND RESTORE LEE HALL DEPOT	LEE HALL DEPOT		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
59770	Norfolk	CONSTRUCT HULL FOR THE PILOT SCHOONER VIRGINIA					x	Exempt	x		NO
59771	Suffolk	DESIGN MULTI-MODAL TRAIL SYSTEM IN ABANDONED RAILROAD R/W	TRAIL TO CONNECT DOWNTOWN SUFFOLK TO AN EXISTING FACILITY	IN CHESAPEAKE	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
59772	Virginia Beach	CONSTRUCT MULTI-USE TRAIL	Treasure Island Road	Marlin Bay Drive	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
60003	Chesapeake	RTE 168 - APPROACHES OVER INTERCOASTAL WATERWAY - 5 LANE	WAYNE AVENUE	ALBEMARLE DRIVE		x		Complete	x		NO
60034	James City County	RTE 321 - WIDEN APPROACHES FROM 2 TO 4 LANES	AT INTERSECTION WITH ROUTE 615 (IRONBOUND ROAD)		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
60408	James City County	RTE 60 - ADD RIGHT TURN LANE ON ROUTE 607 APPROACH	AT ROUTE 607		NEW CONSTRUCTION	x		Complete			NO
60670	Suffolk (rural)	RTE 647	AT NORFOLK SOUTHERN RAILROAD - DOT # 464-166L	(0.17 MILE SOUTHEAST ROUTE 649)	SAFETY/TRAFFIC OPERS/TSM	x		Complete	x		NO
60843	York County	RTE 17 - WIDEN FROM 4 TO 6 LANES	1.267 MILE SOUTH ROUTE 620 (LAKESIDE DRIVE)	1.517 MILE NORTH ROUTE 620 (LAKESIDE DRIVE)	MAJOR WIDENING	4	6	2018	x	x	YES
60852	Portsmouth	RTE 164 - PINNER'S POINT	0.616 MILE WEST EAST END OF WEST NORFOLK BRIDGE	MIDTOWN TUNNEL (TMS SOFTWARE)	NEW CONSTRUCTION	x		Complete	x		NO
60912	Chesapeake	RTE 168 - TOLL PLAZA EXPANSION	INDIAN CREEK ROAD	0.13 MILE NORTH OF SAINT BRIDES ROAD	MAJOR WIDENING	x		Complete			NO
60970	Hampton	COMMANDER SHEPARD BOULEVARD PHASE II 4 LANE DIVIDED	NORTH CAMPUS PARKWAY	BIG BETHEL ROAD	NEW CONSTRUCTION	0	4	2018	x	x	YES
61322	Norfolk	NAVY RECREATIONAL FACILITY	NAVY RECREATIONAL FACILITY		ENVIRONMENTALLY RELATED	na	na	2011	x	x	YES
61407	Suffolk	RTE 337 - WIDEN TO 4 LANES	0.37 Mile E. of Shoulder Hill Road (Rte. 626)	0.748 Mile E. of Shoulder Hill Road (Rte. 626)	RECONSTRUCTION	2	4	2018	x	x	YES
61447	Newport News	SAUNDERS RD - INSTALL LIGHTING, PAVEMENT MARKERS	WEST OF EAPHIA CIRCLE	EAST OF SPRING TRACE LANE	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
61451	Newport News	25TH, 26TH, 27TH & 28TH STS - UPGRADE TRAFFIC SIGNALS	MADISON AVENUE	OAK AVENUE	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
61452	Chesapeake	MILITARY HWY - INSTALL DIRECTIONAL MEDIAN OPENING	AT SMITH AVENUE		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
61453	Norfolk	RTE 58 (BRAMBLETON AVE)-IMPROVE ALIGNMENT & INCREASE RADIUS	AT SAINT PAUL'S BOULEVARD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO

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61455	Poquoson	WYTHE CREEK ROAD	AT CARY'S CHAPEL ROAD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
62308	Chesapeake	ADD GATES, INSTALL LED LENS & HI-TYPE CROSSING SURFACE	0.93 MILE EAST ROUTE 190	(DOT #465438A)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
62312	Norfolk	BARRE STREET	AT RAILROAD CROSSING - DOT #467-356A	(31 FEET NORTHEAST OF GALT STREET)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
62325	Chesapeake	VOLVO PKWY	SIMULTANEOUS PRE-EMPTION INTERCONNECT AT RR CROSSING	(0.40 MILE EAST ROUTE 168) - DOT #465-440B	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
62326	Chesapeake	RTE 13	AT NPB RAILROAD CROSSING - DOT #855-986P	(0.19 MILE WEST ROUTE 166)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
62327	Portsmouth	DEEP CREEK BLVD	FREDERICK BLVD - DOT # NPB 856-051B		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
62328	Portsmouth	RTE 337-	AT RAILROAD CROSSING - DOT # 856-101C	(0.65 MILE EAST OF FREDERICK BOULEVARD)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
62329	Portsmouth	RTE 337	AT RAILROAD CROSSING - DOT # 856-052H	(49 FEET EAST OF FREDERICK BOULEVARD)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
62410	Isle of Wight County	RTE 669	AT ROUTE 704		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
62438	Chesapeake	RTE 13 - MILITARY HWY - INSTALL TRAFFIC SIGNAL	AT ROUTE I-64 RAMP		SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
62854	Chesapeake	ROUTE 64 - VARIABLE MESSAGE SIGNS	ROUTE 464	ROUTE 17	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
63564	Chesapeake	GREAT BRIDGE BATTLEFIELD & WATERWAY VISITOR CENTER & TRAIL	CONSTRUCTION OF A VISITOR CENTER AND TRAIL		ENVIRONMENTALLY RELATED		x	Exempt			NO
63568	Suffolk	HOLLAND HISTORIC DISTRICT TRAIN STATION	ACQUISITION & RESTORATION OF TRAIN STATION		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
63569	Suffolk	STREETSCAPING IMPROVEMENTS	NORTH MAIN STREET	EAST WASHINGTON STREET	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
63840	Hampton Roads District-wide	GENERAL R/W EXPENSES, VARIOUS LOCATIONS DISTRICTWIDE	DISTRICTWIDE				x	Exempt	x		NO
64058	Chesapeake	SOUTHEASTERN EXPRESSWAY - 4 LANE	OAK GROVE CONNECTOR	ECL	NEW CONSTRUCTION		x	Exempt	x	x	NO
64113	Gloucester County	PLANTATION ROAD	ROUTE 610	END OF STATE MAINTENANCE	RESURFACING	x		Complete			NO
64196	Isle of Wight County	MAPLE LANE	0.11 MILE SOUTH ROUTE T-603	ROUTE T-603	RECONSTRUCTION	x		Complete			NO
64216	Norfolk	RTE 168 - TIDEWATER DRIVE	AT WEBSTER AVENUE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
65146	James City County	RTE 603	AT CSX RAILROAD - DOT# 224-249N	(0.49 MILE SOUTH ROUTE 601)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
65191	James City County	RTE 199 - JAMESTOWN CORRIDOR - PARALLEL LANE - PPTA SEGMT #1	3.2 KILOMETERS WEST ROUTE 60	0.5 KILOMETER WEST ROUTE 60	MAJOR WIDENING	x		Complete	x		NO
65273	James City County	RTE 199 - PARALLEL LANE (PPTA SEGMENT # II)	1.0 KM EAST ROUTE 31 (JAMESTOWN ROAD)	2.8 KM EAST ROUTE 31 (JAMESTOWN ROAD)	MAJOR WIDENING	x		Complete	x		NO
65275	Williamsburg	RTE 199 - INTERSECTION IMPROVEMENT (PPTA SEGMENT # III)	ROUTE 5	BROOKWOOD DRIVE	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
65276	James City County	RTE 359 - RELOCATION (PPTA SEGMENT # IV)	ENTRANCE TO JAMESTOWN SETTLEMENT		RELOCATION	x		Complete			NO
65370	Gloucester County	COLONIAL COURTHOUSE VILLAGE STREETSCAPE IMPROVEMENTS			ENVIRONMENTALLY RELATED		x	Exempt	x		NO
65655	Portsmouth	RTE 337 - 4 LANE	0.134 MILES EAST OF FREDERICK BOULEVARD	CONSTITUTION AVENUE	RECONSTRUCTION		x	Exempt	x		NO

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66846	Hampton	COMMANDER SHEPARD BOULEVARD PHASE 1	MIDDLE ROAD	0.205 MI EAST MAGRUDER BLVD NBL	NEW CONSTRUCTION	0	4	2011	x	x	YES
67134	James City County	RACEFIELD ROAD	0.56 MILE WEST ROUTE 1040	1.00 MILE WEST ROUTE 1040	RECONSTRUCTION		x	Exempt	x		NO
67200	Hampton	ARMISTEAD AVENUE - WIDENING (PHASE 1B)	CROSSROADS PARKWAY	MERCURY BLVD	MINOR WIDENING	2	4	2011	x	x	YES
67584	James City County	RTE 612 - PEDESTRIAN SIGNALS, CROSSWALKS, ISLANDS	AT INTERSECTION OF ROUTE 612	ROUTE 658 (OLD TOWNE ROAD)	SAFETY/TRAFFIC OPERS/TSM	x		Complete	x		NO
67595	Chesapeake	ROBERT HALL BLVD - MID-BLOCK PEDESTRIAN CROSSING,MODIFY MED	AT ENTRANCE TO CHESAPEAKE SENIORS CROSSING #2		SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
67637	James City County	ROUTE 5 - INSTALL PEDESTRIAN SIGNALS,CROSSWALKS & ISLANDS	AT INTERSECTION OF ROUTE 5	KINGS WAY	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
67638	James City County	ROUE 321 - INSTALL PEDESTRIAN SIGNALS, CROSSWALKS & ISLANDS	AT INTERSECTION OF ROUTE 321	ROUTE 613 (NEWS ROAD)	SAFETY/TRAFFIC OPERS/TSM	x		Complete			NO
67673	Newport News	RTE 143 - JEFFERSON AVE (PE)	GROVE LANE	FORT EUSTIS BOULEVARD	MAJOR WIDENING	4	6	2030		x	YES
67744	Chesapeake	RELOCATE SOUTHBOUND RIGHT TURN LANE	AT WATERS ROAD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
67746	Newport News	JEFFERSON AVENUE - ADD LEFT TURN LANE	39TH STREET	35TH STREET	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
67912	James City County	ROUTE 64 - PAVEMENT REHABILITATION AT SELECTED LOCATIONS	MILEPOST 237.2	MILEPOST 253.5	RESURFACING		x	Exempt	x		NO
68067	Chesapeake	DEEP CREEK BLVD.	0.60 MILE NORTH GUST LANE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
68068	Chesapeake	GEORGE WASHINGTON HWY	FLASHING LIGHTS AND GATES	0.14 MILE NORTH SPRINGDALE	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
68069	Chesapeake	MILITARY HWY	INTERCONNECTION WITH TRAFFIC SIGNAL	0.50 MILE NORTH CANAL DRIVE	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
68071	Norfolk	LAFAYETTE BLVD -	0.05 MILE EAST CROMWELL		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
68072	Norfolk	NORVIEW AVE	0.11 MILE EAST SUNSHINE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
68073	Portsmouth	HIGH ST. -	LIGHTS WITH LED LENS	66 FEET EAST VIRGINIA AVENUE	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
68074	Williamsburg	HENRY ST. -	LOCATION 202 FEET NORTH LAFAYETTE STREET		SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
68099	Hampton	BIG BETHEL ROAD - INSTALL FULLY ACTUATED, INTERCONNECTED	AT ROBERTA ROAD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
68118	Norfolk	ELIZABETH RIVER TRAIL - PHASE II					x	Exempt	x		NO
68128	Chesapeake	PORTLOCK ROAD	0.39 MILE EAST FRANKLIN		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
68265	Williamsburg	PEDESTRIAN CROSSWALK IMPROVEMENTS	AT ROUTE 31		SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
68346	Chesapeake	BARNES ROAD	WITH LED LENS	0.45 MILE WEST BAINBRIDGE	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
68684	Hampton Roads District-wide	RTE 199 - PPTA MONITORING OF FUNDS-DEVELOPMENT & MANAGEMENT	DISTRICTWIDE				x	Exempt	x		NO
68877	Chesapeake	PORTLOCK RD	0.39 MILE EAST OF FRANKLIN	(DOT# 467381H)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
69008	Hampton Roads District-wide	FY04 WILDFLOWER MANAGEMENT PROJECT	AT VARIOUS LOCATIONS ON VARIOUS ROUTES	HAMPTON ROADS DISTRICTWIDE			x	Exempt			NO

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69050	Suffolk (rural)	SHOULDERS HILL ROAD	ROUTE 337	ROUTE 17	RECONSTRUCTION		x	Exempt	x		NO
70030	Hampton Roads District-wide	RTE 58 - EMERGENCY REPAIRS TO MIDTOWN TUNNEL			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
70276	Norfolk	RTE 58 - CONSTRUCT EASTBOUND LEFT TURN LANE ON RTE 58	VIRGINIA BEACH BOULEVARD AT NEWTOWN ROAD		MINOR WIDENING		x	Exempt	x		NO
70277	Hampton Roads District-wide	COMMUTER PARKING LOT IMPROVEMENTS (REGION WIDE)	SMITHFIELD LOT(ISLE OF WIGHT CO)	MAGNOLIA LOT (CITY OF SUFFOLK) AND VARIOUS (DISTRICTWIDE)	RESTORATION & REHAB		x	Exempt			NO
70278	Hampton Roads District-wide	TELECOMMUTING	REGIONWIDE		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
70279	Hampton Roads District-wide	HAMPTON/NORFOLK SERVICE	REGIONWIDE		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
70280	Hampton Roads District-wide	NEWPORT NEWS/WILLIAMSBURG COMMUTER SERVICE	REGIONWIDE		ENVIRONMENTALLY RELATED		x	Exempt			NO
70281	Hampton Roads District-wide	NEWPORT NEWS/SMITHFIELD COMMUTER SERVICE	REGIONWIDE		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
70282	Hampton Roads District-wide	HRT BIKE RACKS FOR HRT BUS PROJECT	REGIONWIDE		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
70284	Hampton Roads District-wide	HART VAN REPLACEMENT	REGIONWIDE		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
70285	Hampton Roads District-wide	CROSSROADS COMMUTER SERVICE CAPITAL AND OPERATING	REGIONWIDE		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
70305	Virginia Beach	FERRY PLANTATION HOUSE RESTORATION			ENVIRONMENTALLY RELATED		x	Exempt	x		NO
70306	Smithfield	SMITHFIELD DOWNTOWN REVITALIZATION	STREETSCAPING		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
70322	James City County	REPLICA SHIPS - LIVING MUSEUMS			ENVIRONMENTALLY RELATED		x	Exempt	x		NO
70494	Chesapeake	BALANCE ENTRY ACCOUNT			BALANCE ENTRY		x	Exempt			NO
70516	Hampton	BALANCE ENTRY ACCOUNT			BALANCE ENTRY		x	Exempt			NO
70552	Portsmouth	RTE 164 - NEW MARINE TERMINAL APM			NEW CONSTRUCTION	na	na	2011	x	x	YES
70560	Suffolk	BALANCE ENTRY ACCOUNT			BALANCE ENTRY		x	Exempt			NO
70564	Portsmouth	RTE 164 - REIMBURSEMENT OF TOLL FACILITIES REVOLVING	FUNDS FOR PROJECT UPC 11750		MISC FUNDS/MONITORING		x	Exempt	x		NO
70569	Williamsburg	BALANCE ENTRY ACCOUNT			BALANCE ENTRY		x	Exempt			NO
70615	Hampton Roads District-wide	HAMPTON ROADS INTERSTATE DISTRICTWIDE GUARDRAIL	VARIOUS ROUTES		MISC FUNDS/MONITORING		x	Exempt	x		NO
70618	Hampton Roads District-wide	HAMPTON ROADS INTERSTATE DISTRICTWIDE SIGNS	VARIOUS ROUTES		MISC FUNDS/MONITORING		x	Exempt	x		NO
70619	Hampton Roads District-wide	HAMPTON ROADS PRIMARY DISTRICTWIDE GUARDRAIL	VARIOUS ROUTES		MISC FUNDS/MONITORING		x	Exempt			NO
70620	Hampton Roads Districtwide	HAMPTON ROADS PRIMARY DISTRICTWIDE PAVEMENT MARKERS			MISC FUNDS/MONITORING		x	Exempt			NO
70621	Hampton Roads District-wide	HAMPTON ROADS PRIMARY DISTRICTWIDE SIGNALS	VARIOUS ROUTES		MISC FUNDS/MONITORING		x	Exempt	x		NO
70622	Hampton Roads District-wide	HAMPTON ROADS PRIMARY DISTRICTWIDE SIGNS	VARIOUS ROUTES		MISC FUNDS/MONITORING		x	Exempt			NO

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70642	Fredericksburg District-wide	FREDERICKSBURG INTERSTATE DISTRICTWIDE SIGNS	CAROLINE COUNTY LINE	PRINCE WILLIAM COUNTY LINE	MISC FUNDS/MONITORING		x	Exempt			NO
70665	Hampton Roads Districtwide	HAMPTON ROADS INTERSTATE DISTRICTWIDE ITS			MISC FUNDS/MONITORING		x	Exempt			NO
70666	Hampton Roads District-wide	HAMPTON ROADS PRIMARY DISTRICTWIDE TECHNOLOGY	VARIOUS ROUTES		MISC FUNDS/MONITORING		x	Exempt	x		NO
70714	Hampton Roads District-wide	HAMPTON ROADS DISTRICT CMAQ BALANCE ENTRY			BALANCE ENTRY		x	Exempt			NO
70715	Hampton Roads District-wide	HAMPTON ROADS DISTRICT REGIONAL STP (RSTP) BALANCE ENTRY			MISC FUNDS/MONITORING		x	Exempt			NO
70765	Hampton Roads District-wide	Operation and Maintenance of George P. Coleman Bridge			PROJECT		x	Exempt			NO
70766	York County	MULTI-MODAL LOT			PROJECT		x	Exempt	x		NO
70821	Suffolk (rural)	RTE 632 - OLD MYRTLE ROAD	AT NORFOLK SOUTHERN RAILROAD - DOT # 467-415A	(0.29 MILE WEST ROUTE 636)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71393	Norfolk	ROUTE 165 (LITTLE CREEK ROAD)	AT NORFOLK SOUTHERN RAILROAD DOT #467-661K	(0.10 MILE EAST OF GRANBY STREET)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71394	Chesapeake	ROUTE 165 (MILITARY HIGHWAY -	AT NPB RAILROAD DOT # 855-986P	(0.19 MILE WEST OF ROUTE 166)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71398	Chesapeake	ROUTE 165 (MOUNT PLEASANT ROAD)	AT CA RAILROAD DOT # 465-436L	(0.27 MILE NORTH OF BACK ROAD)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71399	Norfolk	ROUTE 166 (PARK AVENUE) -	AT NORFOLK SOUTHERN RAILROAD DOT # 467-368U	(62 FEET EAST OF HOLT STREET)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71400	Norfolk	ROUTE 166 (PRINCESS ANNE ROAD)	AT NORFOLK SOUTHERN RAILROAD DOT # 467-360P	(0.14 MILE EAST OF TIDEWATER DRIVE)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71401	Norfolk	ROUTE 460 (GRANBY STREET)	AT NORFOLK SOUTHERN RAILROAD DOT # 467-660D	(0.10 MILE NORTH OF LITTLE CREEK ROAD)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71402	Norfolk	INDIAN RIVER ROAD -	AT NORFOLK SOUTHERN RAILROAD DOT # 467-371C	(121 FEET WEST OF LANSING STREET)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71403	Norfolk	LLEWELLYN AVENUE	AT NORFOLK SOUTHERN RAILROAD DOT # 467-339J	(25 FEET SOUTH OF 23RD STREET)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71405	Norfolk	OLNEY ROAD -	AT NORFOLK SOUTHERN RAILROAD DOT # 467-365Y	(74 FEET EAST OF MAY STREET)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71406	Norfolk	THOLE STREET	AT NORFOLK SOUTHERN RAILROAD DOT # 467-662S	(0.06 MILE EAST OF VIRGINIA AVENUE)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71407	Portsmouth	ELM AVENUE	AT NPB RAILROAD DOT # 856-058Y	(0.20 MILE WEST OF VICTORY BOULEVARD)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71408	Hampton	ABERDEEN ROAD -	AT CSX RAILROAD DOT # 224-884E	(0.01 MILE NORTH OF PEMBROKE AVENUE)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71409	Hampton	POWHATAN PARKWAY	AT CSX RAILROAD DOT # 228-395H	(0.01 MILE NORTH OF PEMBROKE AVENUE)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71410	Chesapeake	FENTRESS ROAD -	AT CA RAILROAD DOT # 465-435E	(0.27 MILE WEST OF CENTERVILLE ROAD	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71411	Chesapeake	GUST LANE	AT NORFOLK SOUTHERN RAILROAD DOT # 467-708D	(0.45 MILE NORTH OF DEEP CREEK)	SAFETY/TRAFFIC OPERS/TSM	x		Complete	x		NO
71453	Newport News	RTE 17 -J CLYDE MORRIS CHANNELIZATION	AT IMPALA DRIVE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71455	Hampton	BIG BETHEL ROAD - INSTALL INTERCONNECTED TRAFFIC SIGNAL	AT JOYNES ROAD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71456	Newport News	HARPERSVILLE ROAD - ADD LEFT TURN LANE	AT HUBER ROAD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO

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71534	Suffolk (rural)	WEST CONSTANCE	AT CSX RAILROAD - DOT # 623-793A	(233 FEET SOUTH OF ROUTE 604)	SAFETY/TRAFFIC OPERS/TSM	x		Complete	x		NO
71535	Suffolk (rural)	RTE 337 -	AT CSX RAILROAD - DOT #623-783U	(157 FEET SOUTH ROUTE 58)	SAFETY/TRAFFIC OPERS/TSM	x		Complete	x		NO
71564	Hampton Roads Districtwide	HIGHWAY ADVISORY RADIO TRANSMITTER INSTALLATIONS	HAMPTON ROADS DISTRICTWIDE				x	Exempt	x		NO
71598	Hampton Roads District-wide	AREA TUNNEL IMPROVEMENTS	HAMPTON ROADS BRIDGE TUNNEL		RESTORATION & REHAB		x	Exempt	x		NO
71616	James City County	RTE 615 - PAVED SHOULDER ALONG ROUTE 615 & ROUTE 618	ROUTE 31 (JAMESTOWN ROAD)	ROUTE 613 (NEWS ROAD)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71617	James City County	RTE 612 - PAVED SHOULDER ALONG LONGHILL ROAD	ROUTE 614 (CENTERVILLE ROAD)	ROUTE 199	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71690	Newport News	RTE 60 - UTILITY WORK & 6 LANES	0.304 KM SOUTH OF ROUTE 312	1.479 KM NORTH OF ROUTE 312			x	Exempt (1)	x	x	YES
71691	Newport News	RTE 60 - UTILITY WORK & 6 LANES	1.479 KM NORTH OF ROUTE 312	0.319 KM NORTH OF NETTLES DRIVE			x	Exempt (1)	x	x	YES
71697	Hampton	ARMISTEAD AVENUE CONNECTOR - PHASE 1A	ARMISTEAD AVENUE	COLISEUM DRIVE	NEW CONSTRUCTION	0	4	2011	x	x	YES
71726	Norfolk	SEWELLS PT RD - PED PUSHBUTTONS, SIGNALS, SIDEWALKS, ETC.	WIDGEON ROAD	MIDDLETON PLACE	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71732	Norfolk	THOLE STREET - INSTALL NEIGHBORHOOD GATEWAY ISLANDS	IN 300 AND 600 BLOCKS OF THOLE STREET		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71736	Norfolk	LIBERTY STREET - RAISED REFUGE ISLAND	AT 552 LIBERTY STREET (MID-BLOCK)		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71747	Hampton	PEDESTRIAN INDICATORS & CROSSWALKS	AT MARTHA LEE DRIVE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71748	Hampton	PEDESTRIAN INDICATORS & CROSSWALKS	AT ROUTE 351 (PEMBROKE)		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71749	Hampton	RTE 258 (MERCURY BLVD) - INSTALL 4 FOOT RAISED MEDIANS	AT ROUTE 351 (PEMBROKE)		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71750	Hampton	RTE 258 (MERCURY BLVD) - RED LT CAMERA COLLISION AVOID SYS	AT CUNNINGHAM DRIVE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
71787	Virginia Beach	FORMULA CITY PAYMENT					x	Exempt			NO
71789	Hampton	FORMULA CITY PAYMENT					x	Exempt			NO
71883	James City County	RTE 5 - BRIDGE REPLACEMENT	0.06 MILE EAST OF EAST BANK OF CHICKAHOMINY RIVER	0.20 MILE EAST OF EAST BANK OF CHICKAHOMINY RIVER	BRIDGE REPLACEMENT	na	na	2011	x	x	YES
72697	Williamsburg	ACQUISITION & INSTALLATION OF 1 BUS STOP SHELTER	WILLIAMSBURG SHOPPING CENTER		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
72796	Chesapeake	GREENBRIER PARKWAY - 3RD LANE NORTHBOUND	Volvo Parkway	Eden Way North	MINOR WIDENING	5	6	2011	x	x	YES
72797	Chesapeake	NORTHBOUND LEFT TURN LANE EXTENSION	AT WOODLAKE DRIVE		MINOR WIDENING		x	Exempt	x		NO
72798	Chesapeake	HANBURY ROAD - INTERSECTION & RAMP IMPROVEMENTS			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
72799	Chesapeake	CITYWIDE	FIBER OPTIC/CABLE COMMUNICATIONS RING - PHASE II		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
72800	Chesapeake	CITYWIDE	FIBER OPTIC/CABLE COMMUNICATIONS RING - PHASE III		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
73001	Newport News	ITS PORTABLE DYNAMIC MESSAGE DISPLAYS	(PE ONLY)		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO

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73002	Newport News	OYSTER PT SUBAREA CCTV & STATIC SIGNS	AT OYSTER POINT ROAD, J CLYDE MORRIS BOULEVARD,	AND JEFFERSON AVENUE CORRIDORS	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
73004	Hampton	INTERSECTION IMPROVEMENTS AROUND THE I-64/MERCURY CORRIDOR	ARMISTEAD & HAMPTON RDS CTR PKWY, ARMISTEAD & TIDE MILL,	ARMISTEAD & MERCURY, EXECUTIVE & TOWER	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
73006	Hampton	SIGNAL RETIMING AROUND I-64/MERCURRY CORR	VARIOUS LOCATIONS		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
73234	Hampton	CITY WIDE CCTV CAMERA INSTALLATIONS	VARIOUS LOCATIONS		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
73235	Newport News	WAYWARD STATIC MESSAGE SIGNS	VARIOUS LOCATIONS		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
75266	Virginia Beach	LYNNHAVEN HOUSE TRANSP. MUSEUM	CREATE EXHIBIT ON WATER TRANSPORTATION				x	Exempt	x		NO
75267	Poquoson	POQUOSON MUSEUM					x	Exempt	x		NO
75651	Suffolk (rural)	CYPRESS CHAPEL			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
75657	Suffolk (rural)	RTE 651 - ADD GATES & UPGRADE FLASHING LIGHTS TO 12" LENSES	AT NORFOLK SOUTHERN RAILROAD - DOT 464181N	(16 FT NE ROUTE 655)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
75911	Gloucester County	RTE 614 - RECONSTRUCTION OF ROADWAY	ROUTE 17	ROUTE 633	RECONSTRUCTION		x	Exempt	x		NO
76196	Isle of Wight County	RTE 630 - RURAL RUSTIC SURFACE TREAT NON-HARDSURFACE ROAD	ROUTE 258	ROUTE 611	RECONSTRUCTION		x	Exempt	x		NO
76475	Virginia Beach	BUS SHELTER EXPANSION FOR TICKET BOOTH	AT INDIAN RIVER ROAD COMMUTER LOT		RECONSTR. WITH ADDED CAPACITY		x	Exempt	x		NO
76642	Hampton Roads District-wide	RTE 58 - PPTA PROJECT DEVELOPMENT & MANAGEMENT	MIDTOWN TUNNEL CORRIDOR		R/W OR ENG	2	4	2018	x	x	YES
76680	Hampton	LANDSCAPING OF THE I-64 MERCURY BOULEVARD INTERCHANGE	AT ROUTE 64 INTERCHANGE		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
76682	Hampton	LASALLE AVENUE/I-64 RAMP MODIFICATION	AT LASALLE AVENUE AND I-64 INTERCHANGE		NEW CONSTRUCTION	na	na	2011	x	x	YES
76725	Chesapeake	RTE 64 - SOUND WALL STUDY	Ramp terminal at Rte 190	East side of high rise bridge @Rte 166	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
76952	Newport News	48TH STREET - INSTALL HAZARD WARNING BEACON	AT ROANOKE AVENUE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
76970	Chesapeake	DORDON STREET	AT COMMONWEALTH RAILWAY CROSSING DOT# 464119D	0.07 MILE SOUTH OF TAYLOR			x	Exempt	x		NO
76971	Portsmouth	WESTERN BRANCH	AT COMMONWEALTH RAILWAY CROSSING DOT # 464116H				x	Exempt	x		NO
76972	Portsmouth	TYRE NECK RD.	AT COMMONWEALTH RAILWAY CROSSING DOT# 464114U	0.05 MILES SOUTH OF CHURCHLAND BLVD.			x	Exempt	x		NO
76973	Portsmouth	CHURCHLAND BLVD.	AT COMMONWEALTH RAILWAY CROSSING DOT#464113M	0.20 MILE SOUTH OF NORFOLK			x	Exempt	x		NO
76974	Portsmouth	CEDAR LANE	AT COMMONWEALTH RAILWAY CROSSING DOT# 464108R	385 FEET SOUTH OF WEST NORFOLK			x	Exempt	x		NO
76975	Portsmouth	WYATT DRIVE	AT COMMONWEALTH RAILWAY CROSSING DOT# 464102A	17 FEET WEST OF NORFOLK BYPASS			x	Exempt	x		NO
76976	Portsmouth	LILAC DRIVE	AT COMMONWEALTH RAILWAY CROSSING DOT# 464110S	29 FEET NORTHWEST OF NORFOLK			x	Exempt	x		NO
77019	Newport News	RTE 143 - INTERSECTION IMPROVEMENTS	0.009 MILE EAST JEFFERSON AVENUE	CHANNEL DRIVE	NEW CONSTRUCTION		x	Exempt	x		NO
77065	James City County	RTE 5 - INSTALL SB RTL ON RTE 615 & EB RTL ON RTE 5	INSTALL RTL FROM NB RTE 615 ONTO EB RTE 5		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO

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77067	Isle of Wight County	RTE 17 - EXTEND LTL ON NBL	AT ROUTE 661 (CEDAR GROVE ROAD)		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
77068	York County	RTE 171 - CONSTRUCT ADDITIONAL THROUGH LANE WESTBOUND	ROUTE 17 (GEORGE WASHINGTON HIGHWAY)	ROUTE 134 (MAGRUDER BOULEVARD)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
77125	York County	RTE 646 - INSTALL TRAFFIC SIGNAL	AT ROUTE 603		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
77144	Gloucester County	RTE 17 - TRENCH WIDN/PAV SHLDRS MIN 4' OUTSIDE, 2' INSIDE	ROUTE 33/198	ROUTE 614			x	Exempt	x		NO
77152	Chesapeake	RTE 168 - INSTALL 5100 LINEAR FEET OF GUARDRAIL	KEMPSVILLE ROAD	NORTH SIDE OF CHESAPEAKE AND ALBERMARLE HIGH RISE BRIDGE	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
77153	Chesapeake	TRAFFIC SIGNAL INSTALLATION	JOHNSTOWN ROAD AT WATERS ROAD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
77245	Hampton Roads District-wide	RTE 58 - PPTA PROJECT DEVELOPMENT & MANAGEMENT	MARTIN LUTHER KING EXTENSION	INTERSTATE 264 - LONDON BOULEVARD	R/W OR ENG	0	4	2018	x	x	YES
77277	Virginia Beach	CITYWIDE SIGNAL SYSTEM UPGRADE PHASE II	VARIOUS LOCATIONS		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
77382	Chesapeake	RTE 17 - DOMINION BOULEVARD CORRIDOR STUDY	NORTH CAROLINA LINE	DOMINION BOULEVARD - CEDAR ROAD	STUDIES ONLY		x	Exempt	x		NO
77399	Hampton Roads District-wide	FERRY FOR JAMESTOWN 2007 FESTIVITIES	At ferry pier on Scotland side		SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
77400	Hampton Roads District-wide	MID-CHESAPEAKE BAY FERRY	MID-CHESAPEAKE BAY FERRY		SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
77403	Chesapeake	DISMAL SWAMP CREEK TRAIL			ENVIRONMENTALLY RELATED		x	Exempt	x		NO
77428	Newport News	WARWICK BLVD	0.312 KM SOUTH OF J. CLYDE MORRIS BOULEVARD (RTE.312)	INTERSECTION OF NETTLES DRIVE	MAJOR WIDENING		x	Exempt (1)	x	x	YES
77430	Newport News	RTE 60 - WARWICK BLVD	INTERSECTION OF NUTMEG QUARTER	INTERSECTION OF NETTLES DRIVE	MAJOR WIDENING		x	Exempt (1)	x	x	YES
77432	Newport News	RTE 60 - WARWICK BLVD	INTERSECTION OF NUTMEG QUARTER	INTERSECTION OF NETTLES DRIVE	MAJOR WIDENING		x	Exempt (1)	x	x	YES
77566	Suffolk	RTE 125 - DEMO OF EXISTING BRIDGE	1.15 MILES WEST OF RTE 629	1.10 MILES SOUTH OF RTE 620	DEMOLITION OF BLDGS, BRIDGES, ETC		x	Exempt	x		NO
78243	Newport News	USS "MONITOR" CENTER WITHIN THE MARINERS' MUSEUM	Route 60	Mariners Museum/USS Monitor Center	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
78637	Hampton Roads District-wide	Retrofit/upgrade Overhead Sign Structures	OVERHEAD SIGNS/STRUCTURES ON THE NHS		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
78719	Gloucester County	COLONIAL C.H. VILLAGE STREETSCAPE IMPROVEMENTS - PHASE IV	SMITH STREET	EDGE HILL SHOPPING CENTER	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
79114	Norfolk	PHASE III EXPANSION OF COMPUTERIZED SIGNAL SYSTEM	CITYWIDE		NEW CONSTRUCTION		x	Exempt	x		NO
79658	Norfolk	SOUND WALLS PROJECT, PHASE II	0.11 MI SOUTH OF FOURTH VIEW ST.	0.03 MI NORTH OF FIRST VIEW ST.	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
79836	Isle of Wight County	PAVE IN PLACE, FROM RT 258/32 TO .12 MI WEST OF RT 258/32	ROUTE 258/32	0.12 MILE WEST ROUTE 258/32	RESURFACING		x	Exempt	x		NO
79845	Isle of Wight County	RET 1931 MILL GRADE AND PAVE IN PLACE	ROUTE 258/32	0.25 MILE WEST ROUTE 258/32	RESURFACING		x	Exempt	x		NO
80029	Virginia Beach	INTERCHANGE CHESAPEAKE/VIRGINIA BEACH	AT CITY LINE ROAD		NEW CONSTRUCTION	na	na	2030	x	x	YES
80157	Virginia Beach	I-264/LYNNHAVEN INTERCHANGE IMPROVEMENTS - PHASE II (PART 1)	0.37 Mi. east of Lynnhaven Parkway along I-264	0.15 Mi. south of I-264 along London Bridge Road	NEW CONSTRUCTION	0	2	2018	x	x	YES
80382	York County	ELECTRONIC TOLL COLLECTION & VIOL ENFORCE SYSTEM	GEORGE P. COLEMAN BRIDGE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO

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80480	Norfolk	CATHODIC BRDG PROTECTION FOR VETERANS MEMORIAL BR & BERKLEY			MINOR BRIDGE REHAB		x	Exempt	x		NO
80481	Hampton	PURCHASE SPECIALIZED TUNNEL FIRE SAFETY EQUIP			STUDIES ONLY		x	Exempt	x		NO
80487	Norfolk	ATTUCKS HISTORIC PEDESTRIAN WALKWAY - PHASE II	PRINCESS ANNE ROAD - SIDEWALK IMPROVEMENTS		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
80494	Norfolk	NORVIEW AVENUE - INSTALL CONSTANT WARNING TIME DEVICES	0.11 MILE EAST SUNSHINE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
80496	Norfolk	RTE 165 - LITTLE CREEK ROAD	AT NORFOLK SOUTHERN RAILROAD DOT #467-661K	0.10 MILE EAST OF GRANBY STREET	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
80498	Norfolk	THOLE STREET - INSTALL CONSTANT WARNING TIME DEVICES	AT NORFOLK SOUTHERN RAILROAD DOT #467-662S	(0.06 MILE EAST OF VIRGINIA AVENUE)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
80553	Hampton Roads District-wide	VIRGINIA SCENIC BYWAY			ENVIRONMENTALLY RELATED		x	Exempt	x		NO
81080	Newport News	ROANOKE AVE	101 FT S OF 38TH STREET		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
81081	Chesapeake	HEAD OF RIVER RD	.34 MI EAST OF CENTERVILLE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
81082	Newport News	SHIELDS RD	524 FT E OF INDUSTRIAL PARK DR		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
81441	Hampton	RTE 351 -Pembroke Avenue ADD TURN LANE	AT ROUTE 134		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
81442	Norfolk	RTE 165 -	RTE 165	Chesapeake Blvd	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
81443	Norfolk	RTE 13 - VIRGINIA BEACH BLVD. / MILITARY HWY	VIRGINIA BEACH BOULEVARD	MILITARY HIGHWAY (INTERSECTION)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
81446	Chesapeake	INSTALL PEDESTRIAN CONTROL TRAFFIC SIGNAL HEADS	INTERSECTION OF GREENBRIER RD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
81447	Virginia Beach	RTE 60 - INSTALL SOLAR POWER FLASHING LIGHTS	5TH STREET	43RD STREET	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
81448	Virginia Beach	RTE 60 - INSTALL SOLAR POWER FLASHING LIGHTS	KENDILL STREET	VISTA CIRCLE	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
81559	Portsmouth	RTE 164 -CONSTRUCT MAERSK TERMINAL INTERCHANGE	AT MAERSK TERMINAL IN PORTSMOUTH		NEW CONSTRUCTION	na	na	2011	x	x	YES
82111	Hampton Roads District-wide	STUDY - PROJECT DEVELOPMENT SO.EAST PKY GREENBELT	I-464/I-64 - CHESAPEAKE	I-264 SOUTH OF LASKIN RD - VA BEACH	R/W OR ENG	na	na	Exempt	x	x	NO
82112	Virginia Beach	ITS CITY WIDE SIGNAL SYSTEM UPGRADE	CITYWIDE		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
82130	Multi-jurisdictional: Hampton Roads MPO	EASTERN SEABOARD INTERMODAL TRANSP APPLICATIONS CENTER					x	Exempt	x		NO
82858	Portsmouth	US 58 - AIRLINE BLVD COORDINATED SIGNAL UPGRADE	VICTORY BLVD	GREENWOOD DRIVE	RECONSTRUCTION		x	Exempt	x		NO
82961	James City County	ADD L&RR TURN LANES ON MONTICELLO AVE IRONBOUND RD	ROUTE 199	NEWS ROAD	RECONSTRUCTION		x	Exempt	x		NO
83197	Chesapeake	CONSTRUCT EB RTL ON PUGHSVILLE RD @ TAYLOR RD WITHIN R/W			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
83199	Hampton	ADDING FREE FLW ACCEL LA FR NB BIG BETHEL TO EB HRCP	NORTHBOUND BIG BETHEL	EASTBOUND HAMPTON RDS CENTER PARKWAY	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
83200	Hampton	INSTALL TRAFFIC SIGNAL W PROV FOR COMMUNICATION TO CITY'S CO	BIG BETHEL RD	AT RADFORD DR	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
83246	Chesapeake	COUNTS & DETERM SIGNAL TIM & OFFSET	BATTLEFIELD BLVD PORTSMOUTH BLVD TAYLOR RD		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO

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83252	Newport News	JEFFERSON AVE SIDEWALK PROJECT			RECONSTRUCTION		x	Exempt	x		NO
83254	Newport News	MARINER'S MUSEUM MULTI-PURPOSE TRAIL			RECONSTRUCTION		x	Exempt			NO
83352	Hampton	CITYWIDE TRAFFIC SIGNAL SYSTEM UPGRADE PHASE II			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
83359	Hampton	CITYWIDE SIGNAL SYSTEM RETIMING 6 CORRIDORS			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
83362	Hampton	INTERSECTION IMPROVEMENTS AT COLISEUM DR	AT CUNNINGHAM DR		RECONSTRUCTION		x	Exempt	x		NO
83370	Hampton	INTERSECTION IMPROVEMENTS AT MERCURY BLVD	AT FOX HILL RD		RECONSTRUCTION		x	Exempt	x		NO
83395	Norfolk	DATA COLLECTION TO COMPLETE RETIMING PLAN CITYWIDE SIGNAL			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
83435	Newport News	J CLYDE MORRIS BLVD CORRIDOR BIKE TRAIL PHASE V			RECONSTRUCTION		x	Exempt	x		NO
83436	Newport News	PERIODIC CITYWIDE SIGNAL SYSTEM RETIMING			RECONSTRUCTION		x	Exempt	x		NO
83437	Newport News	WARWICK BLVD SIDEWALK WIDENING	ALONG WARWICK BLVD FROM J CLYDE MORRIS	LUCAS CREEK	RECONSTRUCTION		x	Exempt	x		NO
83438	Portsmouth	ALEXANDER'S CORNER INTERSECTION SIGNAL UPGRADES	PORTSMOUTH BLVD	AIRLINE BLVD	RECONSTRUCTION		x	Exempt	x		NO
83454	Hampton	WIDEN TODDS LN -ADDITION RIGHT TURN LA LEFT TURN BIG BETHEL			RECONSTRUCTION		x	Exempt	x		NO
83462	James City County	CONSTRUCT SHOULDER BIKEWAY ALONG AIRPORT RD	RICHMOND RD (RTE 60)	MOORETOWN RD (RTE 603)	MINOR WIDENING		x	Exempt	x		NO
83509	Chesapeake	BRIDGE REPLACEMENT	LONG BRIDGE REPLACEMENT		BRIDGE REPLACEMENT	2	4	2011	x	x	YES
83512	York County	ROUTE 17 INTERSECTION IMPROVEMENTS	ROUTE 17 AT RTE 620 (ORIANA RD/LAKESIDE DR)		WIDENING		x	Exempt			NO
83526	Hampton Roads District-wide	REGIONAL CONCEPT OF TRANSPORTATION OPERATIONS (RCTO)	Regional Concept of Transportation Operations	Regional Concept of Transportation Operations	STUDIES ONLY		x	Exempt	x		NO
84120	Virginia Beach	Citywide Retiming Project, Phase 2	Various Locations		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
84132	Virginia Beach	Intersection Improvements - Princess Anne Rd	Intersection of Salem Rd		RECONSTRUCTION		x	Exempt	x		NO
84243	Norfolk	Robin Hood Rd & Military Hwy Phase 1, link w/ UPC 1765 &9783	0.289 mi. North of Northampton Blvd	0.230 mi North of Rte I-64	MAJOR WIDENING	4	8	2018 (2)	x	x	YES
84330	Hampton	Citywide AVL for Emergency Services Vehicles			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
84331	Hampton	Wayfinder Signs			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
84332	Norfolk	Incident Management Diversion System					x	Exempt	x		NO
84333	Norfolk	Research Partnership w/ Virginia Universities (Regional ITS					x	Exempt	x		NO
84335	Virginia Beach	Intersection Improvements - Rosemont Rd	at Lynnhaven Pkwy		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
84338	Virginia Beach	Intersection Improvements - S. Independence Blvd	at Dahlia Dr		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
84341	Virginia Beach	Intersection Improvement - General Booth Blvd	at London Bridge Rd		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO

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84346	Virginia Beach	Intersection Improvements S. Independence Blvd	at Lynnhaven Pkwy		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
84354	Chesapeake	US 17 (Dominion Blvd) Widen to 4 lanes	Existing Improved US 17 (2.6 Mi. S. of Cedar Rd)	South of Cedar Road Interchange	WIDENING	2	4	2018	x	x	YES
84359	Chesapeake	Mount Pleasant Rd - Widen to 4-lanes	Chesapeake Expressway (RT 168)	Etheridge Rd	MAJOR WIDENING	2	4	2030	x	x	YES
84361	Norfolk	Intersection Improvements - Princess Anne Rd & Sewells Point	Intersection w/ Sewells Point Rd				x	Exempt	x		NO
84364	Hampton	Citywide CCTV Camera Locations - Phase 2 (10 Locations)			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
84365	Newport News	Wayfinding Signs, Phase 2	Cultural & Business District		NEW CONSTRUCTION		x	Exempt	x		NO
84366	Virginia Beach	Intersection Improvements - Indian River Rd & Kempsville Rd	Indian River Rd at Kempsville Rd				x	Exempt	x		NO
84474	Hampton	Coliseum Central Transit Shelters			ENVIRONMENTALLY RELATED		x	Exempt	x		NO
84475	Portsmouth	Equipment Support for Shuttle Bus Service	Equipment support for shuttle Bus Serv. City of Portsmouth	N/A	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
84478	Gloucester County	Access Management - Crossover Improvements	Gloucester Point Area	Gloucester Courthouse Area	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
84482	York County	Lightfoot Rd Bikeway	Mooretown Rd (Rt 603)	Richmond Rd (Rt 60)	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
84484	York County	Capitol Landing Rd Bikeway	E Rochambeau Dr	Queens Creek Br (York/Wmbg CL)			x	Exempt	x		NO
84834	James City County	Bridge - SSYP 08			SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
84905	Williamsburg	Install Traffic Signal - Int. Waltz Farm Dr.	at Richmond Rd.		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
84906	Williamsburg	Install Traffic Signal - Intersection 2nd St	at Parkway Drive		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
84908	Williamsburg	Install Traffic Signal - Int. York St	at Quarterpath Road		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
85024	Isle of Wight County	BRIDGE AND APPROACHES OVER PAGAN CREEK	FR: 1.0 MI. N. RTE 600	TO: 1.4 MI. N. RTE.600	BRIDGE REPLACEMENT		x	Exempt	x		NO
85159	Isle of Wight County	RTE620-RECONSTRUCTION	SOUTHAMPTON CL	ROUTE 681	RECONSTRUCTION		x	Exempt	x		NO
85160	Virginia Beach	DEMOLITION OF BUILDINGS			DEMOLITION OF BLDGS, BRIDGES, ETC	x		Complete	x		NO
85554	James City County	JAMESTOWN 2007 TRANSPORTATION SYSTEM	[illegible] PARKING MGMT & FACS, TRAFFIC MGMT		SAFETY/TRAFFIC OPERS/TSM	x		Complete	x		NO
85732	Gloucester County	Upgrade signal system.	1000' North of Int. of Route 17 & Rte 606	1000' South of Int. of Rte 17 & Rte 1206	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
85793	Norfolk	Install type B, class VI pavement line markings on I-state	.01 Mi E of Downtown Tunnel	WCL City of VA Beach	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
85942	Newport News	Warwick Blvd over Lake Maury Va struc 1806			BRIDGE REPLACEMENT		x	Exempt	x		NO
85945	Chesapeake	22nd Street over Seaboard Av Va struc 1820			BRIDGE REPLACEMENT		x	Exempt	x		NO
85954	Chesapeake	Fentress Airfld Rd over Pocaty Creek Va struc 8017			BRIDGE REPLACEMENT		x	Exempt	x		NO
85955	Newport News	Washington Ave over NNS and DD RWY Va struc 8009	0.04 Mi to Rte. 351	0.04 Mi 41st Street	BRIDGE REPLACEMENT		x	Exempt	x		NO

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86283	Isle of Wight County	Freeman Dr (Rte 612) over stream Va struc 6015			BRIDGE REPLACEMENT		x	Exempt	x		NO
86462	Hampton	Old Aberdeen Rd	38 FT N of Pembroke Ave.		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86464	Newport News	Jefferson Ave	321 FT N of 36th Street		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86478	Hampton	Add Left Turn Lane			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86480	Hampton	Existing Traffic Signal SR351 Pembroke Ave.	at Grimes/Shelton Rd.		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86488	Hampton	Construct Left Turn Lane SR169 Fox Hill Rd	at Clemwood Parkway		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86489	Hampton	Add Left Turn Lane Andrews Blvd	at Woodland Rd.		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86490	Hampton	Construct Left Turn Lane SR 167 (LaSalle Avenue)	West Queen Street		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86491	Norfolk	Upgrade Existing Traffic Signal	Military Highway	Norview Avenue	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86492	Norfolk	Upgrade Existing Traffic Signal	26th Street	Colley Avenue	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86494	Hampton	Increase Left Turn Lane Length Big Bethel Rd	Thomas Nelson Drive	Westpark Lane	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86496	Norfolk	Upgrade Existing Signal and Pavement Markings	26th Street	Intersection	SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
86497	Hampton	Increase Left Turn Lane Length	Armistead Ave	Tide Mill Ln	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86499	Norfolk	Modify Existing Traffic Signal	Military Highway	Azalea Garden Rd	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86500	Hampton	Widen Pavement Executive Dr	at Marcella Rd		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86501	Hampton	Install Traffic Signal Coliseum Drive	at Coliseum Mall		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86502	Chesapeake	Install Left Turn Lane RT 13 Military Highway	at Galberry Rd		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86503	Chesapeake	Construct Sidewalk along Margaret Booker Drive	Galberry Road	George Washington Hwy	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86504	Virginia Beach	Construct sidewalk to existing sidewalk along VA Beach Blvd	First Colonial Road	Birdneck Road	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86505	Virginia Beach	Construct sidewalk along Mill Dam Road			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86506	Virginia Beach	Install Pedestrian Signals and Crosswalk on VA Beach Blvd			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86508	Virginia Beach	Install Pedestrian Signals and Crosswalk on General Booth	London Bridge Rd. & Red Mill Blvd.		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86509	Virginia Beach	Construct sidewalk along Norfolk Ave	9th Street & Pacific Ave		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86607	Chesapeake	Redesign Intersection	Oak Grove Road	at Green Tree Rd.	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86608	Hampton Roads District-wide	HSIP District-wide High Risk Rural Roads Hampton Roads			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86610	Suffolk	HSIP Proactive Safety Projects City of Suffolk			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO

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86612	Portsmouth	HSIP Proactive Safety Projects City of Portsmouth			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86613	Hampton	HSIP Proactive Safety Projects City of Hampton	City-Wide		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86614	Chesapeake	HSIP Proactive Safety Projects City of Chesapeake			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86615	Newport News	HSIP Proactive Safety Projects City of Newport News	City-Wide		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86616	Norfolk	HSIP Proactive Safety Projects City of Norfolk			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86617	Virginia Beach	HSIP Proactive Safety Projects City of VA Beach			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
86678	Hampton	Lengthen Acceleration Lane for WB Rt Turn Traffic SR134 Magruder Blvd	at Butler Farm Road		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
87007	James City County	Grade-Separated Crossing for Va Capital	eastern end of Judith S. Dresser Memorial Bridge on Rte. 5		ENVIRONMENTALLY RELATED		x	Exempt	x		NO
87010	Hampton	Pine Chapel Road Pedestrian/Bicycle Trail	Design and construction of the	Pine Chapel Road Pedestrian/Bicycle Trail	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
87011	Suffolk	Multi-Modal Trail along Eclipse Drive	Intersection with Bridge Rd	End at James River	ENVIRONMENTALLY RELATED		x	Exempt	x		NO
87091	Virginia Beach	Citywide Retiming Project - Phase 2	Various Locations		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
87438	Chesapeake	Intersection Improvements - Volvo Pkwy	at Executive Blvd		MINOR WIDENING		x	Exempt	x		NO
87439	Chesapeake	Intersection Improvements - Volvo Pkwy	at Progressive Dr		MINOR WIDENING		x	Exempt	x		NO
87944	James City County	Mooretown Rd Bikeway	Airport Rd	Rain Tree Way			x	Exempt	x		NO
94421	Chesapeake	Citywide LED Conversion	Various Locations		SAFETY/TRAFFIC OPERS/TSM	x		Exempt	x		NO
94428	Chesapeake	Citywide Pavement Resurfacing	Various Locations		Prev Maintenance/System Pres	x		Exempt	x		NO
94429	Chesapeake	Bridge Deck Sealing & Rehab	Various Locations		Bridge Rehab/Replacement/Reconstruction	x		Exempt	x		NO
94459	York County	LTL at Rte 134	Tabb Smith Trail		Prev Maintenance/System Pres	x		Exempt	x		NO
94460	York County	Road Rehab/ Repaving	Various Locations		Prev Maintenance/System Pres	x		Exempt	x		NO
94541	James City County	Intersection Improvements at Rte 199 & Rte 5	Rte 199	Rte 5	SAFETY/TRAFFIC OPERS/TSM	x		Exempt	x		NO
94543	York County	Sidewalk Improvements	Various Locations		Trans EN/Byway/Non-Traditional		x	Exempt	x		NO
95025	Isle of Wight County	Feasibility Study: Ped access to Windsor MS			SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
95026	Isle of Wight County	Add LTL: Rte 17	Kings Cove Way		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
95027	Isle of Wight County	Installation of UPS battery back-up	at Rte 460		SAFETY/TRAFFIC OPERS/TSM	x		Exempt	x		NO
95029	Isle of Wight County	Sidewalk Repairs throughout the Town of Windsor	Various Locations		SAFETY/TRAFFIC OPERS/TSM	x		Exempt	x		NO
95032	Isle of Wight County	Repaving	Bus Rte 58	Carrsville Hwy	SAFETY/TRAFFIC OPERS/TSM	x		Exempt	x		NO

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UPC	Jurisdiction	Facility	From	To	Improvement Type	Exist.	Prop.	Analysis Year 1st	TIP	LRP	Reg. Sig.
95044	James City County	Roadway Resurfacing	Various Locations		SAFETY/TRAFFIC OPERS/TSM	x		Exempt	x		NO
95983	Virginia Beach	Dynamic Message Sign & System Detectors	Various Locations		SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO
T118	HRT - DRPT	Bus Route 45 (FY 96 Operations)					x	Exempt			NO
T132	HRT - DRPT	Regional TDM Program: Traffix					x	Exempt	x		NO
T133	HRT - DRPT	Paratransit Transition Project					x	Exempt			NO
T135	HRT - DRPT	Replacement Buses					x	Exempt			NO
T136		Transportation Complex					x	Exempt	x		NO
T137	HRT - DRPT	Light Rail Transit PE/DEIS				na	na	Exempt			NO
T138	HRT - DRPT	New Buses (22) Implement Enhanced Bus Altern/CSX/MIS					x	Exempt			NO
T140	HRT - DRPT	Programmable Fare Boxes					x	Exempt			NO
T141	HRT - DRPT	Facility Improvements Trans. Centers at Hampton/Newport News					x	Exempt			NO
T142	HRT - DRPT	CSX LRT PE & Land Acquisition for Stations					x	Exempt	x		NO
T146	HRT - DRPT	Purchase New Buses (8) for New Transit Service					x	Exempt			NO
T147	HRT - DRPT	Purchase 12 Buses for New Service (5 Routes from TDP)					x	Exempt			NO
T148	HRT - DRPT	Purchase 13 Buses for New Service (3 Routes from TDP)					x	Exempt			NO
T149	HRT - DRPT	Purchase 8 Buses for New Service (4 Routes from TDP)					x	Exempt			NO
T162	HRT - DRPT	New Park & Ride Service between Virginia Beach & Downtown No					x	Exempt			NO
T171	HRT - DRPT	Purchase 5 New Buses for York County and X-Roads Service					x	Exempt			NO
T172	HRT - DRPT	Sunday Transit Service					x	Exempt			NO
T175	HRT - DRPT	Transit Service to York County					x	Exempt			NO
T176	HRT - DRPT	Mercury/Central Shuttle					x	Exempt			NO
T177	HRT - DRPT	Purchase 8 Buses for New Service					x	Exempt			NO
T178	HRT - DRPT	Oyster Point Shuttle Service					x	Exempt			NO
T179	HRT - DRPT	Bus Rte #44 thru Midtown Tunnel: Van/Buspool Service from Ch					x	Exempt			NO
T1818	WAT - DRPT	WAT Project - Bus on chassis vehicles - 5 new replacement vehicles					x	Exempt	x		NO
T1819	WAT - DRPT	WAT Project - Mooretown Rd - 2 new buses for the new transit route					x	Exempt	x		NO

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UPC	Jurisdiction	Facility	From	To	Improvement Type	Exist.	Prop.	Analysis Year 1st	TIP	LRP	Reg. Sig.
T1821	HRT - DRPT	HRT Project - Peninsula LRT Project - Prepare EIS					x	Exempt	x		NO
T1822	HRT - DRPT	HRT Project - Norfolk LRT - 8 mile/11 stations - PE Phase				na	na	2011	x	x	YES
T1823	HRT - DRPT	HRT Project - Regional TDM Program: TRAFFIX					x	Exempt	x		NO
T1824	HRT - DRPT	HRT Project - Replacement of HRT Southside Bus Facility					x	Exempt	x		NO
T1825	HRT - DRPT	HRT Project - Purchase replacement buses					x	Exempt	x		NO
T1829	WAT - DRPT	WAT Project - Mooretown Rd corridor new transit service (Operating funds)					x	Exempt	x		NO
T183	HRT - DRPT	Hampton Roads Center/Magruder Boulevard Corridor Route Servi					x	Exempt			NO
T1831	Newport News	SHUTTLE VEHICLES AND OPERATE A SHUTTLE	PORT WARWICK	OYSTER POINT CITY CENTER			x	Exempt	x		NO
T184	HRT - DRPT	Silverleaf HOV Express Bus Service					x	Exempt			NO
T1849	Hampton Roads District-wide	Outstanding Cost for TMS Consultant Inspections					x	Exempt			NO
T185	HRT - DRPT	HOV Express Bus Service/I-64 Corridor from Hampton to Willia					x	Exempt			NO
T186	HRT - DRPT	Sam's Club HOV Express Bus Service					x	Exempt			NO
T190	HRT - DRPT	Indian River HOV Express Bus Service					x	Exempt			NO
T191	HRT - DRPT	Park and Sail Shuttle Service					x	Exempt			NO
T193	WAT - DRPT	James City County Transit Shopping Circulator					x	Exempt			NO
T195	HRT - DRPT	Purchase 20 Transit Coaches for New HOV Express Bus Service					x	Exempt			NO
T196	HRT - DRPT	Ridesharing and TDM Program					x	Exempt			NO
T202	HRT - DRPT	Route Deviation/Enhanced Bus Service Hampton and Newport New					x	Exempt			NO
T218	Hampton Roads District-wide	High Speed Rail Study					x	Exempt	x		NO
T283	Hampton Roads District-wide	511 Virginia - Travel Information					x	Exempt	x		NO
T3890	Norfolk	TUNNELS ON THE NORFOLK WESTERN MAI					x	Exempt	x		NO
T4162	WAT-DRPT	Purchase 8 electric/diesel buses to expand Sunday service					x	Exempt	x		NO
T4179	HRT - DRPT	Commuter Route 62, Phase 1					x	Exempt	x		NO
T4182	HRT - DRPT	Commuter Route 62, Phase 2					x	Exempt	x		NO
T4183	HRT - DRPT	Bus Purchase - (13) 40' coach style passenger buses	Bus Purchase - (13) 40ft. Coach Style Passenger				x	Exempt	x		NO
T4184	HRT - DRPT	Norfolk LRT - Operating Assistance					x	Exempt	x		NO

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T4186	HRT - DRPT	Route 60 Rapid Express, Phase 1					x	Exempt	x		NO
T4188	HRT - DRPT	Route 60 Rapid Express, Phase 2					x	Exempt	x		NO
T4189	HRT - DRPT	Purchase 15 vans for TRAFFIX vanpool program	Purchase 15 Vans for Traffix vanpool program				x	Exempt	x		NO
T4196	Newport News	Citywide Bus Shelter Program					x	Exempt	x		NO
T4200	Newport News	Newport News Shuttle, Phase 2 Purchase (2) 29' buses					x	Exempt	x		NO
T4210	Portsmouth	Downtown Portsmouth Shuttle Service, Phase 1					x	Exempt	x		NO
T4211	Portsmouth	Downtown Portsmouth Shuttle Service, Phase 2					x	Exempt	x		NO
T4222	WAT-DRPT	Newport News/James City Co Employee Connection, Phase 1	Newport News/James City Co. Employee Connection Phase I				x	Exempt	x		NO
T4223	WAT-DRPT	Newport News/James City Co Employee Connection, Phase 2					x	Exempt	x		NO
T4224	WAT-DRPT	Increase Service Frequency and Add Sunday Service, Phase 1					x	Exempt	x		NO
T4225	WAT-DRPT	Increase Service Frequency and Add Sunday Service, Phase 2					x	Exempt	x		NO
T4226	WAT-DRPT	Mooretown Rd Corridor Service					x	Exempt	x		NO
T4241	Hampton	Coliseum Central Transit Shuttle					x	Exempt	x		NO
T4313	Hampton Roads District-wide	HRT - PURCHASE OF 20 TRANSIT BUSES	HRT - PURCHASE OF 20 TRANSIT BUSES				x	Exempt	x		NO
T4316	DRPT	YORKTOWN 225th TRANSPORTATION SYSTEM					x	Exempt	x		NO
T4852	Hampton Roads District-wide	System Operations Improvements			SAFETY/TRAFFIC OPERS/TSM		x	Exempt			NO
T5017	Hampton Roads District-wide	Infrastructure improvements for Jamestown 2007				x		Exempt	x		NO
T5018	Hampton Roads District-wide	Transportation improvements to Historic Jamestown 2007				x		Exempt	x		NO
T5713	Williamsburg	IRONBOUND ROAD CORRIDOR STUDY	ROUTE 60	LONGHILL CONNECTOR	STUDY		x	Exempt			NO
T7547	HRT-DRPT	Fixed Guideway Alternatives Study	Virginia Beach	Naval Station Norfolk	Study		x	Exempt	x		NO
T8480	WAT-DRPT	GPS/AVL Tracking System					x	Exempt	x		NO
T9149	WAT-DRPT	Trolley Replacement					x	Exempt	x		NO
T9853	HRT-DRPT	Norfolk LRT- Enhance facilities/stations	Va Medical Center	Newtown Rd	SAFETY/TRAFFIC OPERS/TSM		x	Exempt	x		NO

Footnotes:

1 UPC 71690, UPC 71691, UPC 77428, UPC 77430 and UPC 77432 are covered under UPC 10797

2 UPC 84243 is covered under UPC 1795 and UPC 9783