

**FISCAL YEAR 2013**  
**JULY 1, 2012 – JUNE 30, 2013**

**UNIFIED WORK PROGRAM**

**FOR THE**

**RICHMOND AREA METROPOLITAN**

**PLANNING ORGANIZATION**

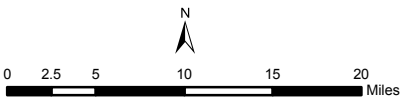
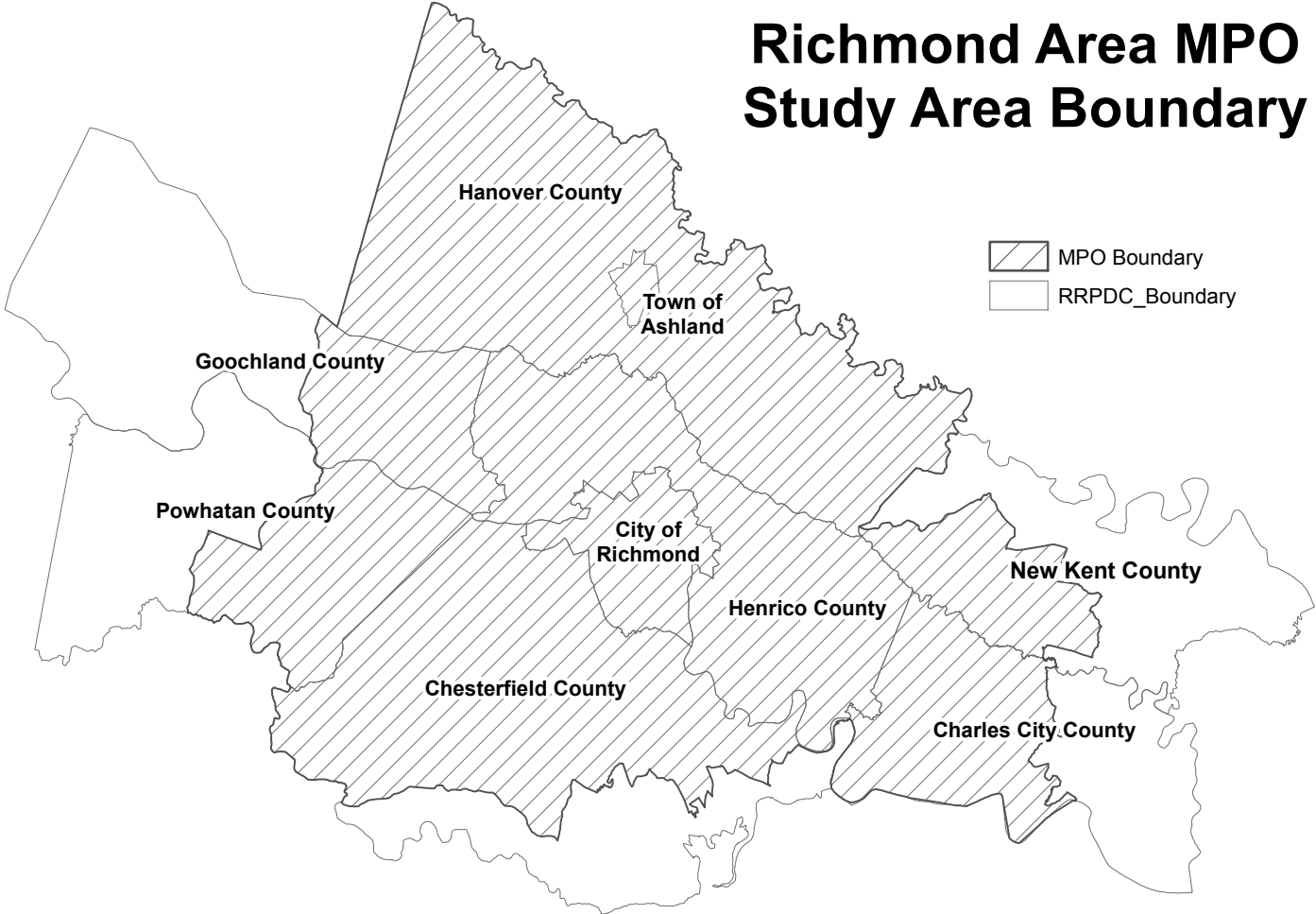
Approved as a Final Report by the Richmond Area Metropolitan Planning Organization, April 12, 2012 subject to FHWA/RSTP funds shown for RRPDC staff support and contingency be replaced with additional FHWA/PL funds (final PL funds allocation for the Richmond Urbanized Area provided by VDOT on April 18, 2012 with condition that funds are to be split between Richmond and Tri-Cities MPOs and as agreed to by the Richmond and Tri-Cities MPOs).

Prepared by the Richmond Regional Planning District Commission staff through a cooperative process involving the City of Richmond, Counties of Charles City, Chesterfield, Goochland, Hanover, Henrico, New Kent, Powhatan, and the Town of Ashland, the Virginia Department of Transportation, the Virginia Department of Rail and Public Transportation, the Virginia Department of Aviation, the Richmond Metropolitan Authority, the Capital Region Airport Commission, the Greater Richmond Transit Company, the Federal Highway Administration, the Federal Transit Administration, and RideFinders, Inc., on behalf of the Richmond Area Metropolitan Planning Organization.

**MPO AMENDMENT ACTIONS**

- 5/10/12: UWP amended to program \$106,330 in additional FHWA/PL funds allocated by VDOT and to delete \$118,000 in RSTP funds previously shown for RRPDC staff support and contingency. Additional FHWA/PL funds programmed for RRPDC staff work tasks 1.1, 1.2, 2.2, 2.3 and 3.1 (replacing RSTP funds proposed for RRPDC support and contingency).
- 9/13/12: UWP Task 2.2, LRTP Update, amended for additional staff work activities (for completion of the RRPDC's Richmond Region Electric Vehicle Infrastructure Strategic Plan).

# Richmond Area MPO Study Area Boundary



Prepared by:  
Richmond Regional Planning District Commission, April 2006

**RICHMOND AREA MPO  
MISSION STATEMENT AND PLANNING PRIORITIES**

**Mission Statement**

The following mission statement was unanimously approved by the MPO on November 18, 2004:

To serve as the federal and state designated regional transportation planning organization that serves as the forum for cooperative transportation decision-making to assure excellence in mobility and safety within and through the Richmond region.

**Planning Priorities**

Section 450.308(c) of the Metropolitan Planning regulations states that Transportation Management Area (TMA) designated MPO's shall include a discussion of the planning priorities facing the metropolitan planning area. The following identifies the FY 2013 UWP major planning priorities. Further discussion of these priorities is provided in the various work tasks.

1. Task 1.2, MPO Citizen Participation – The MPO has a strong and active public participation program with two standing citizen advisory committees (Citizens Transportation Advisory Committee/CTAC and Elderly and Disabled Advisory Committee/EDAC) providing for the participation of and representation from individuals and organizations from diverse backgrounds and interests and representing a wide range of citizen views and concerns over regional transportation planning. The MPO also has a number of other areas and methods for obtaining citizen input into the MPO process. For FY 2013, staff will conduct a review of the MPO's current Public Participation Plan (PPP) to examine the effectiveness of current public participation activities, and will also look at revising some of CTAC's current at-large (non-jurisdiction) member organizations (see UWP task 1.2, work element number 11 for further details).
  
2. Task 2.2, Long-Range Transportation Plan (LRTP) Update – The MPO is scheduled to take action at its July 2012 meeting to adopt the 2035 LRTP Update. Work on the next LRTP Update should begin in late FY 2013. To prepare for this effort, staff will prepare an Executive/Citizens Summary Report of the 2035 LRTP/CMP Update. In addition, the new Richmond/Tri-Cities MPO's regional travel demand model (RTDM) should be in place and available to RRPDC staff (by April 2012) to use for conducting scenario and alternatives analysis, transit services analysis, and other types of planning activities that will give the MPO more options and abilities in developing and conducting the 2040 LRTP/CMP Update (see UWP tasks 2.2, LRTP Update and 2.3, Regional Travel Demand Model for further details).

3. Task 3.1, Congestion Management Process (CMP) Update – With the completion of the 2035 LRTP and CMP updates, work will need to be initiated in FY 2013 to establish new travel time data and accident data for the upcoming CMP Update. The MPO will require VDOT's assistance in obtaining data for both of these important CMP elements.

**DOCUMENTATION OF  
RICHMOND AREA MPO AND TRI-CITIES AREA MPO  
TRANSPORTATION PLANNING COORDINATION**

Article I of the “Memorandum of Understanding for Coordination of Regional Transportation and Air Quality Planning and Programming in the Richmond Area MPO and the Tri-Cities Area MPO Study Areas and the Richmond Nonattainment/Maintenance Area for Ozone Air Quality Standards Superseding the Memorandum of Understanding for January 9, 1992” states that the Richmond Area and Tri-Cities Area MPOs “monitor the coordination of Geographic Information System applications use for transportation planning and programming, cooperate in the sharing of information relating to the development of the long-range transportation plans and transportation improvement programs, coordinate estimation and forecasts of socio-economic data at the traffic analysis zone level, coordinate travel demand model development for the two transportation study areas, and participate on projects of mutual interest.” The MOU provides that documentation of cooperation between the Richmond Area and Tri-Cities Area MPOs shall be included in their respective annual planning work programs.

The following documents cooperative work efforts provided for in the MPO’s FY 13 UWP.

- 1.1 MPO Maintenance/Special Studies – Staff for the Richmond Area and Tri-Cities Area MPOs share information of interest including MPO and TAC meeting agendas, work program and TIP documents, correspondence for various work program and study activities, etc. Staffs for these two MPOs also participate on various VDOT and DRPT technical/study advisory committees.
- 1.3 Unified Work Program (UWP) – The Richmond Area and Tri-Cities Area MPOs have an agreed procedure for the distribution of FHWA/PL funds that VDOT allocates to the Richmond Urbanized Area (which includes both MPOs).
- 2.1 Socioeconomic Data – Base year and forecast year data for the Richmond Area and Tri-Cities Area MPOs is jointly developed with common agreed-to base and forecast years and demographic factors.
- 2.2 Long-Range Transportation Plan (LRTP) – The LRTP regional travel demand model developed and maintained by VDOT covers both the Richmond Area and Tri-Cities Area MPO’s study areas. VDOT, the RRPDC and Crater PDC staffs have established an informal users group to coordinate technical work activities and to address any modeling issues that may arise.
- 3.3 Intelligent Transportation Systems (ITS) – VDOT has developed the *Virginia Central Region ITS Architecture Implementation Plan* and the *Virginia Central Region ITS Architecture Maintenance Plan*. Both plans cover all of the Richmond Area MPO and Tri-Cities Area MPO (plus other rural areas). A regional ITS technical work group has been established that covers major roads in the Richmond Region. Coordination with ITS related activities with the Tri-Cities MPO area

should be through VDOT as ITS work activities covered for the VDOT designated Central Region (i.e., includes study areas for both Richmond and Tri-Cities).

- 6.1 Intermodal Planning – The MPO continues to involve the Tri-Cities Area MPO in various freight-related planning activities. Freight related work groups include participation by Crater PDC staff when appropriate. Staff also works with businesses and industries that serve or are located in the Tri-Cities Area and impact the Richmond Region’s highway and rail networks, and may be potential users of the VPA Port of Richmond terminal.
  
- 7.1 Air Quality Plan and Program Activities – As part of VDEQ’s work to develop the State Implementation Plan (SIP) for the Richmond Nonattainment Area, VDEQ serves as lead staff for MRAQC, the CAAA Section 174 lead planning organization. Local elected officials representing each nonattainment area jurisdiction plus representatives from both MPOs, VDOT, and VDEQ also serve on the LPO. RRPDC, VDOT, and Crater PDC staffs also coordinate project reviews when conducting an air quality conformity analysis for a proposed TIP or LRTP amendment, or for the upcoming TIP or LRTP update.

## FREQUENTLY USED MPO TERMS AND ABBREVIATIONS

<b>Attainment</b>	A term that means an area is in compliance with the National Ambient Air Quality Standards (NAAQS) and/or the Clean Air Act (CAA). There are six atmospheric pollutants covered under the CAA. The Richmond area (i.e., Cities of Richmond, Colonial Heights, Hopewell, and Petersburg, and the counties of Charles City, Chesterfield, Hanover, Henrico and Prince George) is designated as a nonattainment area for ozone air quality standards.
<b>Highway Trust Fund (HTF)</b>	Provides dedicated funding for federal highway and mass transit programs. Revenues placed in the HTF come from the federal gasoline tax plus other user fees. The HTF consists of separate highway and mass transit accounts.
<b>MPO</b>	Metropolitan Planning Organization. The Richmond Area MPO's membership includes the following local governments and agencies: Ashland, Charles City, Chesterfield, Goochland, Hanover, Henrico, New Kent, Powhatan, Richmond, CRAC, GRTC, RMA, RRPDC, VDOT, RideFinders, FHWA, FTA, and VDA; serves as the forum for cooperative transportation decision making in the Richmond area.
<b>NAAQS</b>	National Ambient Air Quality Standards; defined by EPA.
<b>Obligations</b>	Commitments made by USDOT agencies to pay out money for federal-aid transportation projects. The TIP serves as the MPO's program of transportation projects for which federal funds have been obligated.
<b>Regionally Significant</b>	Term used for air quality conformity analysis to define highway and rail facilities covered by this analysis. Regionally significant projects are those projects on a facility that serves regional transportation needs and would normally be included in the modeling of a metropolitan area's transportation network. This includes, as a minimum, all principal arterial highways and all fixed guide-way transit facilities that offer a significant alternative to regional highway travel.
<b>SIP</b>	State Implementation Plan; identifies control measures and process for achieving and maintaining NAAQS; eligible for CMAQ funding.
<b>Study Area</b>	The area projected to become urbanized within the next 20 years; defines the area for MPO plans, programs, and studies.
<b>"3-C" Process</b>	("Continuing, Cooperative and Comprehensive") Language from federal legislation establishing MPOs and used in reference to the regional transportation planning and programming process.
<b>TCM</b>	Transportation Control Measures (for Air Quality Control); eligible for CMAQ funding.

**TDM** Transportation Demand Management; various transportation control strategies and measures used in managing highway demand.

**TIP** Transportation Improvement Program; a staged, multiyear, intermodal program of transportation projects that is consistent with the transportation plan.

**Transportation Plan**

The MPO's adopted Long-Range Transportation Plan (under federal MPO planning regulations, referred to as the Metropolitan Transportation Plan or "MTP"); serves as the initial step and framework in developing a regionally based network of transportation facilities and services that meets travel needs in the most efficient and effective manner possible.

**TAZ (Transportation or Traffic Analysis Zone)**

Generally defined as areas of homogeneous activity served by one or two major highways. TAZs serve as the base unit for socioeconomic data characteristics used in various plans and studies.

**Urbanized Area** Term used by the U.S. Census Bureau to designate urban areas. These areas generally contain overall population densities of at least 1,000 persons per square mile in a continuously built-up area of at least 50,000 persons. Factors such as commercial and industrial development, and other types and forms of urban activity centers are also considered.

**UWP** Unified Work Program; MPO's program of work activities noting planning priorities, assigned staffs, work products, budgets, and funding sources.

**VOC** Volatile Organic Compounds; emissions from cars, power plants, etc; when VOCs react with oxides of nitrogen (NOx) in the presence of heat and sunlight to produce ground level ozone or smog.

**MPO STANDING COMMITTEES**

**CTAC** Citizens Transportation Advisory Committee

**EDAC** Elderly and Disabled Advisory Committee

**TAC** Technical Advisory Committee

**FEDERAL STATE AND REGIONAL AGENCIES**

**CRAC** Capital Region Airport Commission

**DRPT** Virginia Department of Rail and Public Transportation

**EPA** Environmental Protection Agency



<b>FAA</b>	Federal Aviation Administration
<b>FHWA</b>	Federal Highway Administration
<b>FRA</b>	Federal Railroad Administration
<b>FTA</b>	Federal Transit Administration
<b>GRTC</b>	GRTC Transit System (formerly Greater Richmond Transit Company)
<b>MRAQC</b>	Metropolitan Richmond Air Quality Committee
<b>RideFinders</b>	A public nonprofit corporation that provides carpool/vanpool matching and other commuter and transportation services; also, a division of GRTC Transit System
<b>MARAD</b>	Maritime Administration
<b>RMA</b>	Richmond Metropolitan Authority
<b>RRPDC</b>	Richmond Regional Planning District Commission; also referred to as the Richmond Region
<b>USDOT</b>	United States Department of Transportation
<b>VCTIR</b>	Virginia Center for Transportation Innovation and Research
<b>VDA</b>	Virginia Department of Aviation
<b>VDEQ</b>	Virginia Department of Environmental Quality
<b>VDOT</b>	Virginia Department of Transportation
<b>VTRC</b>	Virginia Transportation Research Council

### **FEDERAL LEGISLATION**

<b>ADA of 1990</b>	Americans with Disabilities Act
<b>CAAA of 1990</b>	Clean Air Act Amendments
<b>ISTEA</b>	Intermodal Surface Transportation Efficiency Act; passed in 1991; reauthorized federal surface transportation programs for highways, highway safety and transit for a six-year period, 1992 to 1997. ISTEA provided for significant expansion of MPO planning and programming authority and responsibilities.
<b>TEA-21</b>	Transportation Equity Act for the 21 <sup>st</sup> Century; signed into law on June 9, 1998 (replaced ISTEA). Authorizes federal funds for highways, highway safety,

transit, and other surface transportation programs for the next 6 years. Builds on and continues many of the initiatives established in the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.

**SAFETEA-LU** Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users; federal transportation reauthorization signed into law on August 10, 2005 (replaced TEA-21) and expires September 30, 2009. Congress has passed, and the President has signed, several continuing resolutions that have extended SAFETEA-LU.

## **FUNDING PROGRAMS**

**SPR** State Planning and Research; federal funds allocated to VDOT in support of MPO program activities.

**Local Match** Funds required by recipients of PL and Section 5303 funds for matching federal and state grant funds. Section 5303 and PL funds require a 10% match, with VDOT/DRPT providing 10% and the remaining 80% provided by the federal source.

**RRPDC** Funds from the RRPDC (state appropriations and local dues) provided in addition to required local match funds (sometimes noted as RRPDC overmatch).

**PL** Planning funds available from FHWA for MPO program activities.

**CMAQ** Congestion Mitigation/Air Quality; federal funding program created under ISTEA (1991). Directs funding to projects that contribute to meeting National Ambient Air Quality Standards. CMAQ funds generally may not be used for projects that result in the construction of new highway capacity for single occupant vehicles. CMAQ funds may be available for eligible planning activities that lead to and result in project implementation.

**Section 5303** Planning funds available from the FTA for MPO program activities.

### **Multimodal Planning**

Multimodal Planning Grant; VDOT discretionary grant program (state funds matched by local funds) providing assistance and support for innovative multimodal transportation planning initiatives.

**TEIF** Transportation Efficiency Improvement Fund; purpose of program is to reduce traffic congestion by supporting transportation demand management programs designed to reduce use of single occupant vehicles and increase use of high occupancy vehicle modes; operated by the Commonwealth Transportation Board.

## OTHER TERMS AND ABBREVIATIONS

<b>ADT</b>	Average Daily Traffic; used in conjunction with current and projected traffic volumes.
<b>CAO</b>	Chief Administrative Officer
<b>CARE</b>	Community Assisted Ride Enterprise; program operated by GRTC providing demand-response paratransit service for the elderly and disabled in the City of Richmond and Henrico County.
<b>CMP</b>	Congestion Management Process
<b>CHSMP</b>	Coordinated Human Services Mobility Plan
<b>COA</b>	Comprehensive Operational Analysis (for transit studies)
<b>CTB</b>	Commonwealth Transportation Board
<b>EJ</b>	Environmental Justice
<b>FFY</b>	Federal Fiscal Year (October 1 to September 30)
<b>FY</b>	Fiscal Year (July 1 to June 30).
<b>GIS</b>	Geographic Information System
<b>I/M</b>	Inspection and Maintenance
<b>MSA</b>	Metropolitan Statistical Area. The Richmond/Petersburg MSA includes the cities of Colonial Heights, Hopewell, Petersburg, and Richmond; the counties of Charles City, Chesterfield, Dinwiddie, Goochland, Hanover, Henrico, New Kent, Powhatan, and Prince George; and the Town of Ashland.
<b>NHS</b>	National Highway System
<b>NHTS</b>	National Household Transportation Survey
<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>RFP</b>	Request for Proposals; process used for reviewing and selecting proposals for consultant study activities. (Goods and non-professional services)
<b>RFQ</b>	Request for Qualifications (Consultant Services).
<b>SIP</b>	State Implementation Plan (for attainment and maintenance of air quality standards)
<b>SOV</b>	Single Occupant Vehicles

<b>STP</b>	Surface Transportation Program
<b>SYIP</b>	Six Year Improvement Program; annual document approved by the CTB. Provides the state's list of federal and state funded transportation projects and programs administered by VDOT and DRPT.
<b>TDP</b>	Transit Development Plan; DRPT requirement for all public transit service operators. GRTC Transit System's TDP expected to be completed by December 1, 2011.
<b>TMA</b>	Transportation Management Area (i.e., MPOs greater than 200,000 in population).
<b>VAMPO</b>	Virginia Association of Metropolitan Planning Organizations
<b>VMT</b>	Vehicle Miles Traveled

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**1.0 MAINTENANCE OF THE MPO**

**1.1 MPO Maintenance/Special Studies**

**A. Background**

This task provides the administrative and technical support needed to maintain the MPO and MPO process, and provides for special studies and reports as directed by the MPO. Major work activities include program administration (e.g. agendas, minutes, mailing, monthly reports, program management and administration, etc.); PL/Section 5303 grant administration; pass-through contracts; participation on advisory committees; special studies and projects; review/comment on pass-through work tasks; federal/state regulations and requirements; federal/state legislation review; training, workshops and conferences; and computer program support.

The estimate for all staff direct costs is estimated at \$107,800. Staff direct costs are reported to VDOT and DRPT as part of its submission of quarterly work progress reports.

Under the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, the MPO's planning and programming responsibilities were significantly increased and its scope became broader and more comprehensive. Most of these requirements were continued as part of the Transportation Equity Act for the 21st Century (TEA-21); signed into law on June 9, 1998. On August 10, 2005, President Bush signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU guarantees funding for highways, highway safety, and public transportation totaling \$244.1 billion (as of its signing, does not include additional funding from extensions and represents the largest surface transportation investment in U.S. history. SAFETEA-LU builds on the two landmark bills that brought surface transportation into the 21st century by shaping the highway program to meet the Nation's changing transportation needs—the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21). The planning provisions of SAFETEA-LU retain and revise metropolitan and statewide transportation planning statutory requirements. Most of the provisions mirror previous law, but key statutory changes are included. And, although most of the transportation planning requirements became effective immediately when SAFETEA-LU was signed into law on August 10, 2005, many of these provisions required rulemaking to implement the changes. Draft regulations implementing MPO planning and programming provisions under SAFETEA-LU were published in the Federal Register on June 9, 2006 and the final regulations were published on February 14, 2007. SAFETEA-LU expired on September 30, 2009. Congress has passed and the President has signed several continuing resolutions that have extended SAFETEA-LU.

## FY 13 UWP Task 1.1

The MPO is charged with developing transportation plans and programs, which provide for the development of transportation facilities which function as a “seamless” intermodal system. The process for developing these plans must consider all modes of transportation, and must, to the maximum extent feasible, be continuing, cooperative, and comprehensive (i.e., “3-C” process). As a TMA level MPO, the process must also consider the results of the Congestion Management System in the planning and programming of transportation projects.

Significant work activities for FY 2013 (beyond the usual program management and administrative work activities) include the following:

1. Sustainable Transportation Initiative of Richmond (STIR) – STIR is working to develop projects and programs in the Richmond Region and surrounding counties that provide for the integration of alternative/environmentally friendly vehicles and transportation systems. Participation on STIR includes GRTC Transit System, VCU, Greater Richmond Partnership, Dominion Resources, RRPDC, Richmond Times-Dispatch, Southeastern Institute of Research, Inc., and others. Through the efforts of STIR, the Richmond Region was named one of 19 metropolitan areas in the country where Ford Motor Company will introduce its all electric Ford Focus vehicles. In the fall of 2012, a \$429,000 grant from the U.S. Department of Energy was awarded to the Richmond Electric Vehicle Initiative (REVi). Included in this grant was an award of \$99,000 to the RRPDC for a one-year term (until mid-September 2012) to work with area local governments, Dominion Resources, Virginia Clean Cities, and other partners in a collaborative process to develop a strategic plan for preparing the Richmond Region’s infrastructure for the introduction of electric vehicles into the fabric of the community. Staff will also include a section in the MPO’s 2035 LRTP Update on the development of sustainable transportation initiatives in the Richmond Region. Note the REVi initiative is being conducted without MPO planning grant funds (other than minimal staff time for meetings and coordination).
2. Virginia Association of Metropolitan Planning Organizations (VAMPO) – VAMPO was formally established in mid-FY 2011 with the MPO taking action at its December 9, 2010 meeting to join. Staff will be an active participant and assist in various upcoming VAMPO activities that are currently being developed. Membership dues for each MPO are set at \$500 per year; VAMPO is currently planning to hold three meetings a year. The RRPDC Executive Director was recently appointed to be chair of VAMPO. VAMPO provides an opportunity for Virginia’s MPOs to exchange information and ideas, and to develop consensus recommendations on approaches to improve transportation planning and programming.

## **FY 13 UWP Task 1.1**

3. Title VI Training – As part of the FHWA/FTA Joint Certification Review of the MPO’s planning and programming process, a corrective action was noted that staff attend Title VI training offered by VDOT, and that VDOT is strongly recommended to partner with the MPO to ensure that staff receives Title VI training. Note that the UWP has identified other Title VI activities (including identification of Environmental Justice (EJ)/Limited English Proficiency (LEP) populations) in the UWP (see UWP tasks 1.2 MPO Citizen Participation, 2.1 Socioeconomic Data Development, and 2.2 Long-Range Transportation Plan (LRTP) Update).

### **B. End Products**

A well functioning MPO process which involves the MPO as the policy body for transportation planning in the Richmond Area and provides for a multi-modal, continuing, comprehensive, and cooperative transportation planning and programming process.

### **C. Work Elements**

Work activities include the following:

1. Provide for general maintenance and administration of the MPO “3-C” process, MPO, and MPO committees and work groups, including direct costs to support the process.
2. Provide for the preparation and documentation of MPO meetings and other committee meetings as appropriate.
3. Perform review activities under various local, state, and federal programs including Commonwealth Intergovernmental Review Process, State Route projects and Environmental Impact Statements and Assessments.
4. Coordinate review and presentation activities with RRPDC and other regional, local and state agencies involved with transportation planning and programming.
5. Prepare various reports including VDOT and DRPT Quarterly Progress Reports, and MPO financial and work progress reports.
6. Provide for contract administration of PL, Section 5303, state program funds, and third party agreements.
7. Participate in consultant staffed work tasks including preparation (if designated as lead administrative staff) and/or review and comment on Request for Proposals,



## **FY 13 UWP Task 1.1**

consultant review selection, and documentation (no such activities currently planned for FY 2013).

8. Maintain up-to-date information and literature on transportation planning and programming in the Richmond area.
9. Review and comment as appropriate on legislative and regulatory activities affecting transportation planning and programming, and perform activities necessary to ensure MPO compliance with applicable state and federal rules and regulations.
10. Attend seminars, meetings, webinars/webcasts, workshops, and conferences related to MPO activities. Attend and participate on various VDOT, VCTIR, and other advisory committees, task forces, regional and transportation planning associations (e.g., VAPDC, VASITE, ITSVA), etc. Attend Title VI training courses offered by VDOT.
11. Provide for use of legal counsel and audit services, under the direction of the RRPDC Executive Director, for administering federal and state contracts, meeting reporting requirements, and other activities and services necessary and appropriate for staffing the MPO.
12. Provide staff assistance for and participation in special studies, projects and programs in response to requests by area local government, the RRPDC, MPO member organizations, and others as determined by the RRPDC Executive Director. Also, attend CTB, CRAC and RMA board meetings to monitor current programs and activities.
13. Collect and update files and reports as necessary.
14. Staff support for purchase, maintenance, upgrading, and repair of computers. Also, share in attributable costs for support of computer network and support activities. RRPDC computer support services (for office network, servers, and other computer equipment) are provided by Convergent Technologies Group under contract for services with the RRPDC.
15. Develop various maps in GIS format for MPO special studies/major projects and presentations.
16. Respond to information requests from area local governments, VDOT, DRPT, GRTC, and other government agencies.
17. Maintain current highway facilities inventory and monitor regional travel patterns [VDOT].
18. Provide traffic data forecasts for design of highway facilities [VDOT].

## **FY 13 UWP Task 1.1**

19. Provide technical assistance to RRPDC, local jurisdictions, and other agencies concerning transportation [VDOT].
20. Review site plans as requested [VDOT].
21. Perform and/or assist in special projects, studies, evaluations, and other activities upon direction of MPO and MPO Committees.
22. Review federal regulations and guidance related to MPO planning and programming requirements and update/revise the MPO's work program, procedures and activities as appropriate addressing SAFETEA-LU and other federal requirements.
23. Sustainable Transportation Initiative of Richmond (STIR) – STIR is working to develop projects and programs in the City of Richmond and surrounding counties that provide for the integration of alternative/environmentally friendly vehicles and transportation systems. Membership on the STIR board includes City of Richmond, GRTC Transit System, VCU, Greater Richmond Partnership, Venture Richmond, RRPDC, Richmond Times-Dispatch, J. Sargeant Reynolds Community College, Southeastern Institute of Research, Inc., and others. RRPDC staff participation on STIR is focused on developing proposed projects and activities to encourage regional dialogue and discussion. Staff is working with local jurisdictions to discuss infrastructure needs related to electric vehicles.
24. Virginia Association of Metropolitan Planning Organizations (VAMPO) – VAMPO was formally established in mid-FY 2011 with the MPO taking action at its December 9, 2010 meeting to join. Staff will be an active participant and assist in various upcoming VAMPO activities that are currently being developed. Membership dues for each MPO are set at \$500 per year; VAMPO is currently planning to hold two to three meetings a year. In addition, the RRPDC Executive Director is currently serving as VAMPO's Chairman (elected Chairman at the February 10, 2012 VAMPO Board meeting).
25. Title VI Report – Prepare and submit to FTA's Regional Civil Rights Officer the MPO's report on compliance with Title VI requirements. Work to review and report demographic data available from the census will be conducted under both UWP tasks 1.1 and 2.1.

### **D. Agency Participation**

RRPDC, VDOT, DRPT, local governments, GRTC, CRAC, RMA, FHWA, FTA, FRA, EPA, VDEQ, VDA, RideFinders.

**FY 13 UWP Task 1.1**

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>SPR<sup>①</sup></u>	FY 12 CO <u>5303</u>	<u>TOTAL</u>
RRPDC	460,881	19,274	-	3,821	483,976
VDOT	<u>-</u>	<u>-</u>	<u>220,000</u>	<u>-</u>	<u>220,000</u>
<b>TOTAL</b>	<u>460,881</u>	<u>19,274</u>	<u>220,000</u>	<u>3,821</u>	<u>\$703,976</u>

① Provides for VDOT Richmond District support on all MPO work tasks

**F. Schedule**

Ongoing activity.

## 1.2 MPO Citizen Participation

### A. Background

This task provides staff support to ensure an active and involved citizen participation program, which meets federal and state requirements for public involvement in the transportation planning process. SAFETEA-LU requires a high level of citizen involvement in the MPO process, including public meetings to review the TIP and transportation plan documents.

The MPO's citizen participation process includes the use of two active and involved committees (i.e. CTAC and EDAC); annual public meetings for the TIP and LRTP; posting of MPO/MPO committee meetings and agendas and plan/document summaries on the RRPDC/MPO web site; submitting draft TIP's and other documents as directed by the MPO for public review and making these documents accessible to the public at various locations (e.g., local libraries); providing opportunity for open public comment at all regularly scheduled MPO, TAC, CTAC and EDAC meetings; and other activities documented in the *MPO Public Participation Plan*.

SAFETEA-LU expanded public participation requirements for the TIP and LRTP (i.e., additional consultations, development of public participation plan, employing visualization techniques, etc.). In response to these new requirements, the MPO took action at its April 12, 2007 MPO meeting to adopt the *MPO Public Participation Plan*. This plan builds on the MPO's previously adopted "Guidelines for Public Participation." The plan includes activities for consultation with interested parties and federal, state, and local agencies as part of the LRTP and TIP development process. It also provides for outreach activities that include activities to inform and seek comments from minority and low-income groups and limited English-speaking population groups. It also provides for information, (meeting agendas and notices, reports, studies, etc.) to be made available in an electronically accessible format. Staff currently posts MPO plans, programs, reports, and other materials on the RRPDC web site and submits agendas, correspondence and other information by e-mail.

Under the RRPDC and Greater Richmond Chamber of Commerce, RRPDC and Chamber staffs initiated the development of The Capital Region Collaborative (CRC) Strategic Plan for the Richmond Region (i.e., Planning District 15). RRPDC and Chamber staffs held 85 meetings during 2011 with groups, organizations and officials from throughout the Richmond Region to gain their input to identifying important regional issues. One of the issue categories being addressed in the findings from this extensive public input process will be the region's transportation systems. In addition to these meetings with various groups, organizations and officials, the CRC conducted a scientific survey of regional attitudes (work conducted by the Southeast Institute of Research). Findings from the CRC Strategic Plan will be considered as part of the public input process for the 2035 LRTP and CMP Update and for the 2040 LRTP Update. RRPDC staff also established a separate section to the RRPDC's website for

the 2035 LRTP and CMP updates to provide ongoing status reports and to solicit citizen feedback throughout the LRTP/CMP development process.

**B. End Products**

A functional and viable citizen participation program, which provides for a well informed public and for public input to the “3-C” transportation planning and programming process.

**C. Work Elements**

Work activities include the following:

1. Citizens Transportation Advisory Committee (CTAC) – Provide administrative and technical support of the MPO CTAC.
2. Web Site – Post meeting agendas and minutes, notices, reports, newsletters, plan documents, and other information on the RRPDC web site.
3. Information Requests – Respond to requests for information on plans, studies, reports, and data.
4. Public Reviews – Conduct annual MPO review meetings providing initial citizen input for MPO plans and programs. Also, conduct other public review meetings as necessary for the LRTP/CMS and TIP. Review meetings include outreach activities for low-income and minority communities and Limited English Proficiency (LEP) populations. Prepare notice for public reviews advertised in newspapers, posted on web site, and submitted to interested parties and others. Draft documents or summaries distributed to area libraries and posted on web site.
5. Visualization Techniques – Provide for use of appropriate visualization techniques when presenting and describing MPO plans and programs.
6. Consultation with Interested Parties/Agencies – Conduct consultation activities with various interested parties and government agencies as part of the TIP and LRTP development process.
7. Evaluations – Identify measures to evaluate the effectiveness of public involvement and outreach efforts, including efforts to ensure that public outreach efforts are addressing the diverse needs of the community.
8. MPO Orientation Meeting – Conduct periodic orientation meeting for new RRPDC, MPO and MPO committee members.

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9. MPO Background Information – Develop, publish, and distribute/post on web site, background information materials on the MPO.
10. Notices – Provide/distribute notice for all MPO and MPO committee meetings to area news media and interested parties. When appropriate, prepare and distribute press releases.
11. MPO Public Participation Plan (PPP) Review – The MPO’s current PPP (last reviewed and modified in April 2007) will be reviewed to examine the effectiveness of current public participation activities, and will also look at revising some of CTAC’s current at-large (i.e., non-jurisdiction) member organizations. This review will also include possibly expanding CTAC’s membership to include representation from the region’s Hispanic and Asian communities (to help address federal corrective actions related to Title VI requirements). Note that “**...specific and separate outreach practices should be documented in the PPP...**” (see page 11, Public Involvement section of the March 25-26, 2009 FHWA/FTA Joint Certification Review of the MPO planning and programming process). The MPO must also “**...submit a plan to identify the location and needs of limited English proficiency (LEP) population and how it will engage those individuals in the transportation planning process...**” (see page 11, Public Involvement section of the FHWA/FTA Joint Certification Review). The PPP review should also examine current practices to evaluate the effectiveness of public involvement and outreach efforts and consider proposed new measures (consideration should include the amount of staff time required and staff assigned to conducting carrying out such evaluation assessments). The PPP review should also include consideration for establishing a separate website for the MPO.
12. 2035 LRTP and CMP Updates – High level of public participation activities to be conducted in developing the 2035 LRTP and CMP updates. This will include consideration of findings from the Capital Region Collaborative (CRC) Regional Strategic Plan that address transportation (note that 85 input meetings were conducted in 2011 by RRPDC and Greater Richmond Chamber of Commerce staffs with groups, organizations, and officials from throughout the Richmond Region; in addition, a scientific survey of regional attitudes has been conducted by the Southeast Institute of Research). The results of the CRC’s public participation effort will be used as input into the LRTP process. RRPDC staff will also established a separate section to the RRPDC’s website for the 2035 LRTP and CMP updates to provide ongoing status reports and to solicit citizen feedback throughout the LRTP/CMP Update development process.
13. MPO Board Meeting Reports – RRPDC staff prepares and distributes to the MPO, MPO committees and interested parties, reports summarizing recent MPO board meetings.

**FY 13 UWP Task 1.2**

14. Annual Public Review Meeting – Conduct series of public review meetings for citizen input on MPO plans, programs and activities. In FY 2011, input on regional transportation needs was provided as part of the CRC Regional Strategic Plan development process. One public review meeting was held on May 11, 2011 at the RRPDC offices to review the draft FY 2012 – FY 2015 TIP (draft TIP was adopted at the June 9, 2011 MPO meeting). Staff also to give consideration to holding these meetings at a regularly scheduled time every year.
15. MPO Information Fact Sheets – Prepare informational fact sheets on MPO plans, studies, programs, activities and processes (for use at public information/outreach meetings and responding to information requests). Fact sheets will be posted on the RRPDC website. Note that in FY 2012, the MPO overview/background fact sheet was translated into Spanish and made available. [Anticipate additional staff work on this activity in FY 2013.]
16. MPO Meeting Reports – Summaries of MPO meetings prepared and provided to CTAC and EDAC.
17. CTAC and EDAC Meeting Reports – CTAC and EDAC meeting summaries and resolutions prepared and reported at MPO meetings.

**D. Agency Participation**

RRPDC, VDOT, DRPT, local governments, GRTC, CRAC, FHWA, FTA, VDEQ, RMA, RideFinders, CTAC at-large organizations.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>FY 12 CO</u> <u>5303</u>	<u>TOTAL</u>
RRPDC	95,000	20,000	10,000	\$125,000

**F. Schedule**

Ongoing activity.

### 1.3 Unified Work Program (UWP)

#### A. Background

This task provides for the maintenance of the adopted UWP and for the annual preparation of the MPO's work program for the upcoming fiscal year (i.e., FY 2014, from July 1, 2013 to June 30, 2014). The UWP also identifies the region's planning priorities, documents cooperation between the Richmond Area and Tri-Cities Area MPOs on various work activities and notes various transportation study activities as informational items.

In developing the FY 2013 UWP, there were several significant changes made between late February and late April as to the amount of new FHWA/PL funds being allocated to MPOs. On February 29, 2012, VDOT central office advised that the MPO's allocation of FY 2013 FHWA/PL funds will be reduced by approximately 40 percent. This was the result of three to four year's worth of reconciliations (reconciling the actual amount of PL funds allocated to the estimated amount that was used to develop the MPO's budget) not being conducted. With the estimates used to develop these budgets exceeding the actual amounts available, and with this taking place for the last three to four years without the annual reconciliation being conducted and the budgets being adjusted, the result has been that available PL funds need to be reduced to balance past over-allocations to actual funds that were available. A conference call was held with VDOT central office staff and MPOs across the state on March 2 and it was recommended that the reductions be spread out over the next four years rather than having the total reduction take place in FY 2013. VDOT staff indicated its agreement with spreading this reduction and provided the MPO with a revised FY 2013 PL funds allocation estimate (staff received the revised FY 2013 PL funds allocation estimate on March 9, 2012). VDOT staff indicated that in the future, it will hold a webinar/teleconference to discuss the financial planning of PL funding projections for the upcoming fiscal year when these estimates are being developed. VDOT expects this to be an annual event and occur sometime in February. The MPO took action at its March 8, 2012 meeting to request that VDOT and FHWA provide a full report at its April 12, 2012 meeting on FHWA's and VDOT's respective responsibilities for determining estimated and actual allocations of PL funds and PL funds reconciliation, and steps they will take in the future so this will not occur again. The MPO action also requested the CTB to allocate additional funds from another federal program (such as Equity Bonus or Surface Transportation Program) as part of next year's SYIP to make up for this reduction. The MPO action also authorized the use of RSTP funds for RRPDC staff support of the MPO. However, on April 11, 2012 VDOT advised that based on new 2010 Urbanized Area Census data (that was released by the Census Bureau on March 27, 2012), Virginia's allocation of FHWA/PL funds was significantly higher and MPOs were advised to program these additional funds for the upcoming FY 13 UWP. While staff was not provided with the final PL funds allocation number, staff reported at the April 12 MPO meeting that the additional PL funds should come close to the amount staff had proposed for use of RSTP funds and as a result, RSTP funds would not be needed for staff support in FY 13. The MPO took action to adopt the FY 13 UWP with the condition that FHWA/RSTP funds shown for RRPDC staff support and



contingency be replaced with additional FHWA/PL funds that are being allocated by VDOT, and with the condition that proposed out-year allocations of RSTP funds (as shown in the MPO's FY 13 – FY 18 list of RSTP projects) for RRPDC staff support also be eliminated. Staff received the final Richmond Urbanized Area PL funds allocation on April 18 with the provision that Richmond and Tri-Cities MPOs need to determine how to split these funds between the two MPOs. Staff proposed that Richmond and Tri-Cities follow the same process currently in place (based on the 2000 census) for the 2013 UWP with updated urbanized area population numbers for within each respective MPO used and applied for future allocations.

**B. End Products**

1. Maintain/amend the FY 13 UWP.
2. FY 14 UWP document.
3. Prepare/update staff work assignments, budgets, cost estimates and schedules.

**C. Work Elements**

Work activities include the following:

1. Review VDOT, DRPT, FHWA, FTA, EPA, and other state and federal agency information and requirements, plus other materials relating to UWP preparation.
2. Solicit input for proposed work tasks through the MPO's annual public information and outreach meetings and based on comments and suggestions offered as part of regular CTAC and EDAC meetings.
3. Prepare a preliminary staff budget and list of proposed work tasks for the Commission's current and upcoming work programs.
4. Provide for consideration of local government, GRTC, VDOT, and DRPT input on proposed transportation planning studies of interest to the MPO (funded with federal transportation funds other than FHWA/PL and FTA Section 5303). Includes studies programmed in the Transportation Improvement Program (TIP).
5. Identify and document planning priorities.
6. Prepare work tasks and budgets.
7. Identify funding sources and amounts.
8. Prepare final work program document.

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9. Secure needed approvals from MPO, VDOT, DRPT, FHWA, FTA, and other agencies/organizations as appropriate.
10. Secure commitments for local match funds as appropriate.
11. Conduct State and Regional Intergovernmental Review process and submit grant applications (for both state and federal grant programs).
12. Distribute final UWP document and post on RRPDC web site.
13. Amend adopted UWP as per MPO action.
14. Prepare and update staff work assignments, direct costs, and schedule.

**D. Agency Participation**

RRPDC, VDOT, DRPT, local governments, CRAC, GRTC, RMA, RideFinders, FHWA, FTA.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>TOTAL</u>
RRPDC	85,000	10,000	\$95,000

**F. Schedule**

On-going activity for adopted UWP/RRPDC Work Programs

November 2012 to May 2013 for FY 14 RRPDC Work Program.

January 2013 to April 2013 for FY 14 UWP.

## 2.0 LONG RANGE PLANNING AND SURVEILLANCE

### 2.1 Socioeconomic Data Development

#### A. **Background**

As part of the MPO's regional transportation planning process, socioeconomic data is developed by area local governments and RRPDC staff for use in various VDOT, MPO, and local plan and study activities. For instance, socioeconomic data provides input for planning models, EIS, corridor studies, air quality conformity analysis, transit studies, etc., and is used to respond to information requests for market and other demographic studies.

The RRPDC staff works with area local governments to coordinate the development of socioeconomic data and forecasts. Data prepared by area local governments (or by RRPDC staff if local government requests such assistance) is as follows:

- Total population
- Group quarters population
- Population in housing units
- Total housing units
- Total students
- Students grades K-12 (by location of school)
- College students (by location of school)

Data prepared by RRPDC staff is as follows:

- Total households
- Total employment
- Retail employment
- Non-retail employment
- Automobiles

The RRPDC staff is responsible for developing a final socioeconomic data report which is submitted for TAC review and recommendation, and for MPO review and action. The methodology for base year and forecast year socioeconomic data is developed in consultation with a work group of area local planners and demographers, VDOT, and Crater PDC staff (i.e., Socioeconomic Data work group).

Staff work to develop base year 2008 data and year 2035 forecasts was completed in early FY 2011 with the MPO taking action to approve revised 2008 data and 2035 forecasts at the September 9, 2010 MPO meeting. Staff also prepared the Socioeconomic Data Analysis report and it was approved at the February 10, 2011 TAC meeting (action by TAC on behalf of the MPO). Revisions to 61 Transportation Analysis Zones (TAZs) were needed due to inconsistencies in demographic base year data for these TAZs that became apparent as VDOT consultants were applying this data to the regional travel demand model (RTDM). Note that the RTDM, which

## **FY 13 UWP Task 2.1**

covers all of the Richmond Region (except for the rural area portions of Goochland and Powhatan counties) and the Tri-Cities MPO study area, contains 712 TAZs (in the Richmond Region) with 11 separate demographic factors (22 factors to cover both the base and forecast years; total of 15,664 separate data cells for the Richmond Region's base and forecast years). At the March 17, 2011 TAC meeting, action was taken by TAC on behalf of the MPO to approve revised 2008 base year data and 2035 forecasts for the 61 identified TAZs. Further work to revise 2008 base year data and 2035 forecasts continued into FY 2012, as VDOT's RTDM consultant continued work to develop the new Richmond/Tri-Cities MPOs' RTDM. In FY 2012, staff received ongoing comments and questions on base year data and forecasts resulting in mostly minor changes to demographic data and forecasts (except for significant revisions to several City of Richmond demographic factors/forecasts). As a result, staff continued to conduct work under this work task, with agreed to changes in TAZ level data and forecasts completed in October 2011. As part of VDOT's approval, the MPO was advised that it should proceed with population projections based on updated years 2020 and 2030 Virginia Employment Commission (VEC) projections that will be developed based on 2010 census data. Note that staff continued to receive comments from VDOT staff on proposed changes to the RTDM (between November 2011 and March 2012) but staff has not been able to make any further changes to 2008 data and 2035 forecasts due to other work priorities, lack of staff time and funds to conduct this work, and the need for a final RTDM to run the air quality conformity analysis for the 2035 LRTP list of projects (the ICG kick-off meeting was held on March 15, 2012 with criteria established and no further modification allowed).

In FY 2013, staff work under UWP task 2.1 will include utilization and application of 2010 census data. Work to review the zone structure of current TAZs and how they align to 2010 census boundaries (i.e., tracts and block groups) was completed in late FY 2011. These new TAZs were submitted on June 20, 2011 for the Census Transportation Planning Package (CTPP), which will provide data from the 2010 census that can be applied and used for various transportation planning activities. Data from the American Community Survey (ACS), which provides ongoing samples for regions averaged over a five-year period, will also utilize these new TAZs. It is important to note that the new TAZs will be used for the MPO's next LRTP Update (i.e., the 2040 LRTP). The MPO's 2035 LRTP Update (due to be completed by August 2012) will use TAZs that provide for the MPO's recently approved 2008 base year data and 2035 forecasts.

In late FY 2011, staff also developed and submitted Census Transportation Analysis Districts (TADs). This new geographic structure is designated to allow for reporting of various demographic factors that are done through rolling three-year periods reported under the ACS. Due to the large size of TADs, their use and value for regional level analysis will be very limited. TADs should have a minimum of 20,000 residents.

In late FY 2011/early FY 2012, staff initiated work to create a repository for selected 2010 Census data and ongoing American Community Survey (ACS) data. This repository consists of several databases (including GIS) and can be expanded to

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accommodate additional demographic characteristics as new data is released by the Census Bureau and as ACS data becomes available. Work to develop the repository structure and function is continuing in FY 2012 and its use and application may start in FY 2013.

Note that the MPO's most recent federal certification review identified the following corrective action recommendations:

1. Identify the needs of and engage the Limited English Proficiency populations in the transportation planning process. Document specific and separate practices in the MPO's Public Participation Plan (see UWP task 1.2).
2. Develop a process to assess the distribution of benefits and impacts of transportation investments by socioeconomic group (see UWP tasks 2.2 and 4.1).
3. Ensure that the products of the transportation process, i.e., LRTP, TIP, and UWP, demonstrate consistency with the Title VI and related requirements and principles (includes addressing the LEP population in the LRTP so that this population can be considered and benefit from services; see UWP task 2.2).

Staff is developing regional demographic profiles of the Richmond Region to identify areas of significant minority, low-income, and LEP population groups and is utilizing this information in developing the 2035 LRTP Update. Staff has also utilized TAZ level employment data and census tract income data to compile a comprehensive analysis showing the relationship between employment and public transit (i.e., GRTC service area) and how the two relate to poverty. Staff prepared this report in response to a request from the Transportation Subcommittee of the City of Richmond Mayor's Anti-Poverty Commission, and went over the initial results of this analysis at the February 28, 2012 Transportation and Regionalism Committee meeting of the Mayor's Anti-Poverty Commission. Staff is planning to review this information with Henrico and Chesterfield counties' officials in March and April 2012. The results of this analysis will be available to the MPO (for its review and consideration in developing future LRTP updates and proposed projects for consideration in upcoming SYIPs/TIPs). Note that RRPDC staff work in support of this access to jobs analysis report has not included MPO allocated funds (i.e., FHWA/PL or FTA Section 5303).

As part of the 2008/2009 National Household Travel Survey (NHTS), an enhanced survey sample was conducted in Virginia with 14,584 survey samples (note that 2,225 samples were conducted for the enhanced survey effort in the Richmond/Tri-Cities Region). In addition, VDOT has conducted a supplemental university survey (conducted at four large state universities, one of which is Virginia Commonwealth University) in order to obtain better travel data for university student populations. The household travel survey results are being utilized to develop the new Richmond/Tri-Cities regional travel demand model, and should also be available for analyses of travel characteristics in the Richmond Region. NHTS will provide detailed data for the following:

- Households – Includes number of persons, drivers, workers, vehicles, income, Hispanic status of reference person, tract and block group characteristics.
- Persons – Age, sex, driver status, travel disability, annual miles driven, use of public transit, walk and bike trips.
- Workers – Full or part-time, more than one job, occupation (four categories), workplace location, mode of travel to work, drive alone or carpool, work from home, commercial driver status.
- Each Vehicle – Make, model, age (year), how long owned.
- Daily Travel Data – Origin and destination, time of trip (start/end), distance, means of transportation (including use of transit), number of other trips.
- Longer Distance Travel – Number, dates, recurring or not, purpose, destination, means of transportation.

**B. End Products**

1. 2008/2035 Socioeconomic Data and Forecasts Report – Respond to information requests for TAZ level data and forecasts and update data and forecasts as needed.
2. 2010 Census TAZ Delineation Analysis – Revised TAZ boundaries based on 2010 census blocks; new TAZs to be utilized for the 2040 LRTP Update and for reporting 2010 census data (CTPP data expected to be available in CY 2013).
3. Title VI/Environmental Justice – Complete work on demographic profiles of Richmond Region to identify areas of significant minority, low income, and limited English proficiency population groups and update profiles as 2010 census and/or ACE data becomes available.
4. Use of the 2010 Census and ACS data in support of various plans, studies, and reports (2010 CTPP data scheduled to be available in CY 2013).
5. Staff involvement in review activities for the year 2010 census.
6. Updated Base Year Data and Forecasts – Initiate work to develop new base year data (using 2010 census and ACS data) and forecasts (for the 2040 LRTP Update).
7. RTDM Demographic Factors – Initial staff work to identify demographic factors to be used as input for the new RTDM.

8. Census Transportation Planning Package (CTPP) – Review CTPP data when it becomes available (expected in calendar year 2013).

**C. Work Elements**

1. Updated Data and Forecasts – Staff plans to initiate a review of the MPO’s adopted 2008 base year data and 2035 forecasts using available 2010 census data (plus ongoing American Community Survey or ACS estimates) to determine the need and extent for revising MPO base year data and forecasts. Staff will prepare a brief scope of work and estimated staff time for conducting this effort and will modify the FY 13 UWP, or include this effort for consideration in the FY 14 UWP.
2. RTDM Demographic Factors – Work with VDOT and VDOT’s consultants to identify demographic factors to be used as input to the trip generation model of the new RTDM (e.g., demographic factors needed to conduct transit systems analysis as possible alternatives to employment data, etc.).
3. Respond to information requests and provide technical assistance as appropriate, which requires use of the MPO’s 2008 base year data and 2035 forecasts.
4. 2010 Census – Review and analyze available census data for use and applications in various MPO planning activities. Also develop and maintain census data repository.
5. American Community Survey (ACS) Census Data – Monitor, review and analyze ACS available data for use and applications in various MPO planning activities and for use in census data repository.
6. Title VI/Environmental Justice – Complete work on demographic profiles of the Richmond Region to identify areas of significant minority, low-income, and limited English proficiency population groups. Staff may also develop demographic profiles for areas of significant elderly and disabled population groups (staff time, budget and data resources permitting). Note this work activity is in response to the MPO certification review corrective action and in response to Senior Connections new Regional Mobility Management Program staff.
7. Census Transportation Planning Package (CTPP) – Staff submitted CTPP delineated TAZs and TADs in June 2011. Sometime in calendar year 2013, the Census is scheduled to begin providing ACS five-year data by CTPP delineated TAZs to MPOs. Staff will review and analyze this data when it becomes available, and provide reports as appropriate.

VDOT and other local government work elements are as follows:

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1. Participation by appropriate local staff on the Socioeconomic Data work group [local government work element].
2. Compile data for use in various special studies (e.g., Environmental Impact Statements and Assessments, etc.) [VDOT work element].

**D. Agency Participation**

RRPDC, VDOT, DRPT, Local Governments, Crater PDC.

**E. Budget, Staff and Funding**

			FY 12 CO	
	<u>PL</u>	<u>5303</u>	<u>5303</u>	<u>TOTAL</u>
RRPDC	30,000	5,000	-	\$35,000

**F. Schedule**

1. Title VI/Environmental Justice Demographic Profiles – FY 2012 to mid-FY 2013 (depending on available census data).
  2. RTDM Demographic Factors – Conduct initial review starting late FY 2013 and continuing into FY 2014 (depending upon recommended RTDM uses and applications).
1. Ongoing – Other work activities.



**2.2 Long-Range Transportation Plan (LRTP) Update**

**A. Background**

The LRTP serves as the blueprint for developing the region’s network of transportation facilities and services. The LRTP features a multimodal approach (i.e. automobiles, buses, car and vanpools, passenger rail, bicycles, and freight by water, truck and rail) to address the region’s long term (20 year) travel needs. The LRTP considers the relationship between the transportation infrastructure and its impacts on the natural and human environment. Projects included in the LRTP are constrained by the projected levels of available financial resources and must also meet federal air quality, environmental justice, and planning requirements. Highway and public transportation projects and programs must be consistent with the MPO’s adopted LRTP to be eligible for federal-aid funds.

The current Richmond Area Long-Range Transportation Plan was adopted by the MPO early in FY 09 (i.e., August 2008). This LRTP has a horizon year of 2031, and was developed in accord with the 2005 federal transportation act entitled the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The 2031 LRTP includes both long-range and short-range strategies/actions that support the development of an integrated multimodal transportation system, designed to facilitate the safe and efficient movement of people and goods in the Richmond area. The 2031 LRTP is based on the (then) latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity.

MPO planning regulations specify minimum requirements for LRTP content which are summarized as follows (see section 450.322 (f) and (h) of the MPO planning regulations):

- a. Projected transportation demand of persons and goods.
- b. Existing and proposed transportation facilities that should function as an integrated metropolitan transportation system.
- c. Inclusion of locally preferred alternatives selected from an Alternatives Analysis under the FTA Capital Investment Grant program (note this includes consideration of financial capacity, air quality conformity, and environmental justice requirements).
- d. Operational and management strategies.
- e. Consideration of the results of the congestion management process.
- f. Assessment of capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure and provision for multimodal capacity increases based on regional priorities and needs.

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- g. Design concept and design scope descriptions of all existing and proposed transportation facilities in sufficient detail, regardless of funding source.
- h. Discussion of types of potential environmental mitigation activities and potential areas to carry out these activities (discussion developed in consultation with federal and state land management, wildlife and regulatory agencies).
- i. Pedestrian walkway and bicycle transportation facilities (in accordance with 23 U.S.C. 217 (g)).
- j. Transportation and transit enhancement activities.
- k. A financial plan that demonstrates how the adopted transportation plan can be implemented.
- l. Both a safety and a security element that summarize the priorities, goals, or projects for the MPO study area contained in: 1) the State's Strategic Highway Safety Plan, and 2) emergency relief and disaster preparedness plans, strategies, and policies that support homeland security and safeguard the personal security of all motorized and non-motorized users.

MPO planning regulations specify certain requirements for the LRTP development process, including the following (see Section 450.322 (g), (i), (j), and (l)):

- a. The MPO shall consult with state and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation.
- b. The MPO shall provide citizens and other interested parties with reasonable opportunity to comment on the LRTP (see MPO Public Participation Plan).
- c. FHWA and FTA must make an air quality conformity determination on the LRTP.

In addition, MPOs must assess the impact of proposed projects on the region's low-income, minority and limited English proficiency communities. Such an environmental justice assessment is conducted as part of the LRTP development process with the analysis and results included in the LRTP.

The development of a long-term multimodal transportation vision plan for the region was proposed by VDOT in FY 2008. Such a plan would assess scenarios for future growth and development and look at various solutions for meeting future mobility and accessibility needs. The MPO has allocated \$300,000 in FY 09 RSTP funds to begin this effort, but to move this plan forward, it is necessary to first develop the resources and expertise required to model future alternatives and analyze their impacts on the area's transportation system. Significant future allocations of RSTP funds or funds from other sources will be required to develop such a regional vision plan. The first step in the process (conducted in FY 10) was the development of a

report on in-house transportation demand modeling and forecasting capabilities to support not only the vision plan for the region, but also to support development of future LRTPs and other planning applications. This report was presented to the MPO's Technical Advisory Committee (TAC) at the November 19, 2009 meeting. In October 2010, the RRPDC staff was able to fill the new position for lead staff in charge of the regional travel demand model. For FY 2013, staff is proposing to upgrade a current part-time position to full-time status with primary responsibilities in RTDM network and system development and support (note other staff responsibilities for this position include website development and maintenance, RTDM/GIS computer programs integration, INRX travel time data development/reports, VDOT accident data development, and 2010 Census/ACS data repository development and maintenance). With this additional staff time and expertise, staff should have sufficient resources to use and apply the new RTDM for more than just minimally required MPO planning requirements (i.e., VMT input for air quality conformity analysis requirements). Further information on work related to the model is provided under UWP task 2.3, Regional Travel Demand Model.

In FY 10, staff initiated the review process for establishing the MPO study area boundary. New Kent County's TAC member requested MPO consideration for expanding the boundary in New Kent County. Staff initiated a policy review of New Kent's request and a proposal by staff to expand the study area boundary to cover the entire Richmond Region (i.e., Planning District 15, except for the portion of Chesterfield County covered by the Tri-Cities Area MPO). The proposed expansion to cover all of PD-15 was not recommended by the RRPDC's Large and Small Jurisdictions Committee. In reviewing New Kent's proposed expansion to include all of the Providence Forge and New Kent Courthouse Village areas, it was determined that the proposed expansion area for Providence Forge met federal criteria for the required level of population density. However, for the New Kent Courthouse Village area, additional information on Census Bureau criteria and procedures for connecting densely populated areas outside the urbanized area boundary line to the urbanized area was needed before a determination could be made for this area. Due to the need to proceed with work on the 2035 LRTP Update and the lack of information on Census Bureau criteria and procedures needed for a determination on this expansion request, it was decided to defer further consideration of this request to the 2040 LRTP Update.

Staff initiated work on developing the 2035 LRTP Update in early FY 2012. At the July 14 MPO meeting, the LRTP and CMP scope of work and schedule was presented with the MPO taking action to establish the LRTP Advisory Committee (AC) as a special purpose committee (composed of representation from TAC, CTAC and EDAC) and also took action to approve the work scope and schedule as guidance to staff and the LRTP AC. Staff received initial input for the LRTP by presenting the MPO's list of regional priority projects to all nine local governments' governing boards (i.e., Board of Supervisors, City Council and Town Council) and also requested input on these jurisdictions' list of proposed projects for the LRTP. The LRTP AC held its first meeting on September 19 and has generally met once or twice a month through the fall and winter with the focus of their work on the LRTP project review, selection and ranking process; review of proposed projects; conducting the

financial capacity analysis to develop a financially constrained list of proposed projects, and providing a recommended list of projects for MPO review and authorization to proceed with public review, air quality conformity analysis, and environmental justice analysis. The MPO took action at its March 8, 2012 meeting to provide this authorization. Staff expects to have a draft 2035 LRTP and CMP Update completed and submitted to the LRTP AC in mid-April and to start public review in early May. Note that the MPO is scheduled to take final action on the 2035 LRTP and CMP Update at its July 12, 2012 meeting.

For FY 2013, staff work will focus on completion of the 2035 LRTP and CMP Update, making final edits and posting the final document on the RRPDC website, developing an executive summary LRTP/CMP document (for distribution at various meetings and events, serving as a public information document, etc.) and conducting initial staff work activities for the upcoming 2040 LRTP/CMP Update. Staff is proposing that a major effort be made at the beginning of the 2040 LRTP/CMP Update to develop a 2040 Metropolitan Transportation Vision Plan for the Richmond Region.

Staff work will also continue in reporting on the MPO's Regional Transportation and Land-Use Performance Measures (reports are due/posted on the RPDC website by October 31 of each year). The Commonwealth Transportation Board (CTB) took action at its June 15, 2011 meeting to approve the MPO's performance measures (along with performance measures from other TMA designated MPOs) and the CTB took further action to add a new requirement for MPOs to develop "targets" for each of their performance measures and to submit their proposed target measures to the CTB by May 31, 2012.

### **Richmond Region Electric Vehicle Infrastructure Strategic Plan**

The MPO's recently adopted 2035 LRTP/CMP Update provides a chapter which reviews legislation, issues and activities in the Richmond Region to address the development of a sustainable transportation system (i.e., Chapter 13 – Sustainable Transportation). A critical element for a sustainable transportation system is the development of infrastructure needed to allow electric vehicles, which are now being marketed and sold in the Richmond Region, to become integrated into the Region's transportation system in an effective and efficient way.

In 2011, the RRPDC received a grant from the U.S. Department of Energy (DOE) to develop a strategic plan to prepare the Region's infrastructure for the anticipated increase of electric vehicles. Interest in this effort evolved from the efforts of the Sustainable Transportation Initiative of Richmond (STIR). Through the work of STIR ([www.projectstir.com](http://www.projectstir.com)), the Richmond Region was named one of 19 pilot communities in the country where Ford Motor Company will release its all-electric Ford Focus. In addition, several other car manufacturers are planning to release electric vehicles in the next few years, creating a high likelihood that the Region will see growth in electric vehicles over the next 5 – 10 years.

## FY 13 UWP Task 2.2

To prepare the Electric Vehicle Infrastructure Strategic Plan, the RRPDC entered into a contract agreement with a Senior Planner to advance this work effort. This position was added to RRPDC in December 2011 as a contract position, and the Senior Planner has been working since that time with the Region's jurisdictions and community stakeholders such as Dominion Power, Virginia Clean Cities, J. Sargeant Reynolds Community College and others to develop this Strategic Plan.

During this time frame, the following work has been completed:

- Identification and mapping of existing electric vehicle charging stations within the Richmond Region.
- Analysis of key indicator data to determine future growth areas in the Richmond Region for electric vehicles. This indicator data included income, existing hybrid vehicle registrations, existing and future employment and residential centers, community facilities, park and ride locations, transit system bus stops and travel pattern data.
- Using the data identified above, RRPDC has identified key electric vehicle growth areas that need enhanced electric vehicle infrastructure.
- RRPDC staff has developed model guidelines to address issues such as:
  - Codes and permitting for at-home electric vehicle charging
  - Design guidelines for electric vehicle charging facilities within land developments
  - Parking guidelines for electric vehicles
  - Signage guidelines

To date, six of the Richmond Region's nine locality planning departments have prepared letters of support for the design guidelines summarized above.

On September 15, 2012 the electric vehicle planning grant from the U.S. Department of Energy will conclude. However, there remains additional work to be accomplished to continue to advance the electric infrastructure strategic plan in the community. At the request of staff, the MPO took action at its September 13, 2012 meeting to amend task 2.2 of the FY 2013 UWP to provide for the addition of staff work activities and end products funded by FHWA/PL and/or FTA Section 5303 funds to complete the Electric Vehicle Infrastructure Strategic Plan. This amendment authorizes \$12,600 in MPO allocated funds to provide for a six-week extension of the Senior Planner contract position (i.e., from September 16, 2012 to October 31, 2012). Note that with the completion of the RRPDC's FY 2012 audit (scheduled to be presented and approved at the October 11, 2012 RRPDC Board meeting) the RRPDC auditors have informed staff that the fringe benefits rate for RRPDC staff is significantly lower than the budgeted level for FY 2013 (resulting from the new five percent employee contribution requirements that went into effect on July 1, 2012). As a result, there are additional FHWA/PL and FTA Section 5303 funds available based on the current level of staff time assigned for support of the MPO. Staff requested action at the September 13, 2012 MPO meeting to allow for the use of

these additional funds for completion of the Electric Vehicle Infrastructure Strategic Plan, and the MPO took action to amend the UWP task 2.2 to provide for these additional activities and for completion of the Electric Vehicle Infrastructure Strategic Plan.

Note that continued staff support for implementation of the Richmond Region Electric Vehicle Infrastructure Strategic Plan is provided through RRPDC staff support and participation on the Sustainable Transportation Initiative of Richmond (i.e., “STIR”; see UWP task 1.1, MPO Maintenance/Special Studies).

**B. End Products**

1. Adopted 2035 LRTP and CMP Update
2. Maintenance of a conforming and financially constrained 2035 LRTP.
3. Amendments and Administrative Modifications to the 2035 LRTP as necessary.
4. Annual report on MPO Regional Transportation and Land-Use Performance Measures and Targets (posted on RRPDC website by October 31, 2012).
5. 2035 LRTP/CMP Update Executive/Citizens Summary Report.
6. Completion of the Richmond Region Electric Vehicle Infrastructure Strategic Plan (action on plan by the RRPDC and MPO boards).

**C. Work Elements**

Work activities include the following:

1. 2035 LRTP Update – Complete public review activities for the final draft 2035 LRTP and CMP Updates and submit for MPO review and adoption. Print/produce (hard copies and CDs) and distribute the final adopted 2035 LRTP and CMP Update.
2. 2035 LRTP/CMP Update Executive/Citizens Summary Report – Prepare and distribute summary LRTP/CMP document (for public information purposes). Note that this will be a significant direct cost (printing hard copies and CDs).
3. 2040 LRTP Scope of Work – Prepare staff initial recommended work scope and distribute for CTAC, EDAC and TAC review comment and recommendation, and for MPO review and action (starting mid- to late FY 2013/early FY 2014).
4. LRTP Regional Transportation and Land Use Performance Measures and Targets – Annual report (due in October) on MPO approved regional transportation and land-use performance measures and targets. Note that the CTB took action in May 2011 to add targets for each performance measure.

Staff will submit proposed targets for TAC review and recommendation and for action at the May 10, 2012 MPO meeting.

5. MPO Defined Urbanized Area and Study Area Functional Classification Review – To be conducted after release of census defined urbanized area boundary with MPO defined urbanized area boundary established, then review of roads in the MPO study area to update functional classification.
6. LRTP Amendments/Administrative Modifications – Conducted as needed; amendments requiring air quality conformity analysis require significant staff time and resources and should be limited to no more than one time per year and conducted in conjunction with any necessary TIP amendments.

**Richmond Region Electric Vehicle Infrastructure Strategic Plan Work Elements**

7. Continued coordination with jurisdiction planning departments to garner regional support for the Electric Vehicle Strategic plan. Support has been received from 6 of 9 planning departments - specific focus will be placed on gaining support letters from the three remaining planning departments.
8. Coordinate the Region's electric vehicle strategic planning efforts with the Sustainable Transportation Initiative of Richmond (STIR) and other key stakeholders including Virginia Clean Cities, Dominion Power and J. Sargeant Reynolds Community College (work element also covered by UWP task 1.1, MPO Maintenance/Special Studies).
9. Coordinate efforts with the VDOT and local jurisdictions to develop consistent signage for identifying electric vehicle charging stations and parking spaces.
10. Finalize the text and graphic layout of the Richmond Region Electric Vehicle Infrastructure Strategic Plan in a manner that serves to educate the community about this topic (work element also covered by UWP task 1.1).
11. Participate in public education and outreach efforts in cooperation with STIR and other electric vehicle stakeholders (work element also covered by UWP task 1.1).

**Other LRTP Work Elements:**

12. Functional Classification – Review requests for function classification and reclassification and submit for MPO review and action.
13. Review highway construction plans for conformance with the adopted Transportation Plan [VDOT and RRPDC].
14. Maintain/update computer software, staff training, and direct costs [VDOT].

**D. Agency Participation**

RRPDC, VDOT, DRPT, VDEQ, local governments, CRAC, GRTC, RMA, VPA, FHWA, FTA, and RideFinders.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	FY 12 CO	<u>TOTAL</u> <sup>①</sup>
RRPDC	130,000	30,000	–	\$160,000

<sup>①</sup> 9/13/12 – MPO action to amend the FY 13 UWP to authorize use of FHWA/PL and FTA Section 5303 funds currently available under UWP task 2.2 for the completion of the RRPDC’s Richmond Region Electric Vehicle Infrastructure Strategic Plan (additional staff time to be funded by the MPO estimated to cost approximately \$12,600 and within current PL and 5303 funds budgeted for UWP task 2.2).

**F. Schedule**

1. LRTP/CMP Update – Submitted for review and action at the July 12 or August 9 MPO meeting.
2. 2035 LRTP/CMP Executive/Citizens Summary Report – Draft document completed by November 2012, submitted for CTAC, EDAC and TAC review, and revised/final document submitted for MPO review and action in February or March 2013.
3. MPO Regional Transportation and Land-Use Performance Measures and Targets – Posted on RRPDC website by October 31, 2012.
4. LRTP Amendments/Administrative Modifications – Conducted as needed (staff anticipates that no more than one major amendment process involving air quality conformity analysis, financial capacity analysis, and public review can be conducted in a fiscal year). LRTP administrative modifications conducted as needed (all amendments and modifications to be documented as part of the 2035 LRTP and CMP Update document posted on the RRPDC website).
5. MPO Defined Urbanized Area and Study Area Functional Classification Review – To be scheduled (dependent upon Census Bureau action to release the 2010 census defined urbanized area).
6. Richmond Region Electric Vehicle Infrastructure Strategic Plan – Final draft plan to be completed by October 31, 2012 and submitted for RRPDC and MPO review and action in November 2012 (reviewed and approved by RRPDC board; submitted for MPO board consent approval action).
7. Other work activities – Ongoing.



## 2.3 Regional Travel Demand Model (RTDM)

### A. Background

On April 8, 2009, VDOT announced a new policy that starting in FY 2010 (July 1, 2009) VDOT would no longer support MPO model application/usage for MPO short- and long-range plans (including the constrained long-range plan and the TIP), providing outputs required for the air quality conformity analysis (including project listing/implementations, and VMT for the region) and other MPO studies (such as alternatives analysis for corridor studies and scenario planning). VDOT's announcement also stated that MPO staffs would now be responsible for conducting these activities. VDOT's responsibilities for support of the MPO's RTDM were announced as follows:

- Support model development and enhancement (includes data collection through travel surveys and traffic counts, model calibration/validation, and supporting documentation).
- Provide Citilabs software (i.e., Cube Base, Voyager and Analyst) and training to MPO staff.
- Perform state model applications for state studies and plans, and for public/private partnership solicitations to the state.
- Support for the Virginia Transportation Modeling (VTM) Users Group.

VDOT also announced (on April 8, 2009) that VDOT would continue to support the following:

- Statewide coordination and training (includes provision of RTDM software through statewide license for VDOT and all MPO staffs; covers Citilabs CUBE Base, Voyager and Analyst and may also include CUBE Cluster).
- Conduct/lead the Virginia Transportation Model User's Groups.
- Model development and enhancement (e.g., HOV/HOT, tolling, transit, heavy trucks), data collection (i.e., travel surveys, traffic counts and other activities required for model calibration) model calibration/validation, and model documentation.
- Model application and usage (limited to state studies and plans, and PPTA process applications/requests).

The RRPDC, as staff for the MPO, is now responsible for conducting travel demand modeling to meet federal MPO planning requirements, including the regional travel demand model portion of the air quality conformity analysis, and development of model networks (both highway and transit) for the analysis of LRTP alternatives and air quality conformity analysis. In addition, the RRPDC is responsible for model applications that may be used for alternatives and scenarios analysis, corridor studies, and other MPO plans and studies that involve model applications.

## FY 13 UWP Task 2.3

VDOT has been working to develop a new RTDM for the Richmond/Tri-Cities MPOs since April 2010 (when it initiated the VDOT Models Major Updates Work Plan) and has had consultants (AECOM is the prime consultant) under contract for this work since February 8, 2010. Completion and delivery of the new Richmond/Tri-Cities MPO's RTDM had been scheduled for December 2011; however, work is continuing with completion and submission of the new completed RTDM package (including highway and transit networks, socioeconomic data input files, model script files, etc.) to RRPDC and Crater PDC staffs expected by early April 2012. Note that the new RTDM covers all of the Richmond and Tri-Cities MPOs study areas, plus the rural portions (i.e., outside of the MPO study area) of Charles City and New Kent counties. Note that it does not cover those areas outside of the MPO study area for Powhatan and Goochland counties. Following submission of the new RTDM to RRPDC and Crater PDC staffs, VDOT will provide training to RRPDC and Crater PDC staffs in model use and applications.

The RTDM used for the MPO's 2031 LRTP Update was sufficient for conducting regional level air quality conformity analysis, but was not sufficiently accurate for conducting corridor level or transit service analysis. Extensive work conducted by VDOT since January 2010 has enhanced the RTDM's capabilities as follows:

- New/expanded transportation networks (GIS based network)
- Time of day modeling (accurate for planning level analysis)
- Congestion feedback
- Transit model
- New toll modeling procedures
- Enhanced truck modeling procedures (based on data from Hampton Roads)
- Full use of "Cube Voyager" scripts

In addition, RRPDC staff's development of autos by TAZ based on geocoded address data (auto data used in the 2031 LRTP Update was based on assumed rates applied to demographic data), plus other model enhancements conducted by VDOT, should provide for a more effective model. The new RTDM also incorporates results from the enhanced National Household Travel Survey (NHTS) that was conducted in 2008 and 2009 and the supplemental large universities (including VCU) survey (conducted in 2009). The new Richmond/Tri-Cities RTDM will support VDOT and MPO planning needs as follows:

- Air quality conformity analysis
- Comprehensive HOV and toll enhancement
- Mode choice and transit inputs
- Congestion assessment
- Subarea analysis (note that additional data, network and other modifications required depending on the scale of the subarea)
- Truck movements

The new RTDM features will include the following:

- Detail coded highway networks
- Updated transit network, with delay-based bus times/speeds (not multiplicative factors)
- Updated trip rates with consistent methodology
- Time of day modeling (peak/off peak distribution through mode choice, four periods for final highway assignment)
- Mode choice using structure/parameters FTA expects in New Starts (i.e., FTA light rail/BRT funding program) forecasts
- AM peak, PM peak, mid-day, and night highway assignments (which sum to 24 hour traffic volumes)
- Full feedback loops (peak and off peak) from highway assignment through distribution

**B. End Products**

1. Development and maintenance of the Richmond Regional Travel Demand Model (RTDM).
2. Coordinate RTDM work activities with VDOT and Crater PDC

**C. Work Elements**

1. RRPDC staff support for RTDM system development in coordination with VDOT and Tri-Cities MPO staffs.
2. Conduct RTDM runs and evaluation for transportation alternatives, scenarios, projects and policy analysis, and in support of LRTP and CMP work activities and special studies.
3. Participate in Virginia Transportation Modeling (VTM) Users Group meetings and web conferences.
4. Conduct RTDM runs to generate VMT input when required for air quality conformity analysis (i.e., for LRTP and/or TIP amendments).
5. Review and analysis of National Household Travel Surveys (NHTS) data and related surveys (e.g., VDOT university travel surveys).

**D. Agency Participation**

RRPDC, VDOT, DRPT, GRTC, FHWA, FTA, local governments.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>FY 12 CO</u> <u>5303</u>	<u>TOTAL</u>
RRPDC	85,000	10,000	10,000	\$105,000

**F. Schedule**

1. Ongoing work activity in support of the LRTP and CMP work activities.
2. Conduct RTDM runs to provide VMT input for air quality conformity analysis when needed.

## 2.5 Transportation Data Base Development/GIS

### A. Background

Conducting the MPO's regional transportation planning and programming process involves extensive work efforts to develop data and information on the region's transportation network. While some of this information is developed by RRPDC staff, a great deal is developed by VDOT, DRPT, consultants, area local governments, and others. Much of this information is of interest to area local governments, transportation agencies, business and marketing firms, educational institutions, citizens groups, and others. Responding to information requests involving certain data items often results in staff work to develop the appropriate information, refer the requesting organization/individual to another agency, or advising them that the information is not available. This UWP task provides for work by RRPDC staff to develop data bases and informational reports on the region's transportation system, and to develop and distribute reports, maps, and other information.

This UWP task also provides for staff development and maintenance of Geographic Information System (GIS) staff services. The use of GIS has become an integral part of the transportation planning process, providing an ability to work with map information and to graphically display various features, data, and other characteristics in various formats. The GIS system also provides staff the ability to link map and data information to conduct transportation systems analysis.

For FY 12, work will focus on completion of the 2035 LRTP/CMP Update, support for the 2035 LRTP/CMP Update Executive Summary, and other MPO plans, studies and reports. Staff will also work with 2010 census and American Community Survey (ACS) data as it becomes available (for use in conducting/updating Title VI, Environmental Justice and limited English proficiency demographic profiles and other planning activities).

### B. End Products

1. Informational reports, maps, inventories, and other documents, reporting on transportation activities and development.
2. GIS support for MPO plans, programs, studies, and other work activities.

### C. Work Elements

1. GIS File Structure – Continuing staff support to be provided for GIS file system maintenance and development (oversight by staff GIS File Structure Committee).

**FY 13 UWP Task 2.5**

2. Information/Data Reports – Develop and print and/or post (on web site) reports on transportation plans, programs, data, and/or activities.
3. MPO Plans/Programs/Reports – GIS mapping for MPO plans, programs, studies and reports.
4. Street Name Clearinghouse – Continuing support for the RRPDC street name clearinghouse program.

**D. Agency Participation**

RRPDC, VDOT, DRPT, FHWA, FTA, local governments, GRTC, CRAC, RMA, RideFinders.

**E. Budget, Staff and Funding**

	<u>PL</u>
RRPDC	\$60,000

**F. Schedule**

Ongoing

## 2.8 Route 5 Urban/Suburban Multimodal Corridor Study

### A. Background

Conduct study of the Route 5 corridor between downtown Richmond and Route 895 to determine various corridor transportation needs and improvements. The study has been conducted by a consultant using VDOT/SPR funds with completion of the study (i.e., consensus recommendation of the preferred concept alternative) being facilitated by RRPDC staff. The RRPDC staff has administered the study with technical review by a study work group (composed of RRPDC, VDOT, DRPT, Henrico, Richmond and GRTC staffs).

Work on the study was initiated in May 2010, with the consultant team led by Kimley-Horn and Associates, Inc., selected for providing consultant services. A study work group was established which consisted of comprehensive and transportation planning staffs from Henrico County and the City of Richmond; staffs from the RRPDC, VDOT, DRPT and GRTC; and citizen representatives from the MPO's Citizens Transportation Advisory Committee and the Elderly and Disabled Advisory Committee. The work group held seven meetings in FYs 2011 and 2012 with the consultant team to assist and guide the consultants, and to provide comments and feed-back for the various work tasks. The consultants and work group came up with two concept alternatives with the consultant acknowledging that both alternatives were very close in terms of costs and feasibility and expressed a slight preference for one of the alternatives. The two alternatives recommend major roadway improvements and widening along Route 5 (from its intersection with New Osborne Turnpike and south/east along Route 5 to Route 895) and also recommend improvements and widening of either Route 5 (on its current alignment into downtown Richmond) or improvements and widening along New Osborne Turnpike (from its intersection with Route 5), Newton Road, and Hatcher Street in Henrico and Richmond, and improvements for Route 5/Main Street in the City of Richmond into downtown. Note that both alternatives include detailed transit service recommendations as well as the Virginia Capital Trail as an off-road multi-purpose trail facility (this project is in the planning phase in Henrico County). Also, the portion proposed of the Broad Street/Main Street bus rapid transit (BRT) project in this part of the Route 5 study corridor is proposed to run along Main Street from 14th Street to Rocketts Landing.

The study consultant provided a presentation of the Route 5 study and the two concept alternatives at the November 10, 2011 MPO meeting. The study work group requested additional time to come up with a consensus alternative, and the MPO took action to request that the study work group continue its work to come up with a consensus recommendation by March 2012 to the MPO, and that the guiding principles for the selected alternative consider the needs of individuals with disabilities (i.e., for proposed pedestrian improvements/facilities). Public feedback received between November 2011 and March 2012, encouraged City and County

local elected officials to continue citizen outreach efforts. Therefore, the City Council representatives to the MPO requested and received approval at the March 2012 MPO meeting to conduct additional citizen meetings and workshops during the remainder of FY 2012 to develop a consensus on one of the two concept alternatives. Note that the consultant services agreement ended in December 2011 with all budgeted funds for consultant services expended and no further funds available from VDOT for additional consultant work. For the rest of FY 2012, staff will work with Henrico and Richmond staffs and local elected officials to develop a consensus recommendation for the MPO’s review and consideration. Staff will also assist Henrico and Richmond officials in meeting with area groups and organizations to address questions and to also be available to City and county staffs and officials to address questions related to the study and the proposed improvements. It is anticipated that a consensus recommendation can be reached and presented to the MPO in the fall of FY 2013.

**B. End Products**

The end product shall be a study that provides a consensus recommendation on a preferred concept for improvements in the study area corridor with the guiding principles for the selected alternative giving consideration for the needs of individuals with disabilities.

**C. Work Elements**

1. RRPDC staff support and assistance for work conducted by City of Richmond and Henrico County staffs and officials in meeting with corridor study area groups and organizations to address questions and concerns related to the study and to also be available to city and county staffs and officials to address questions related to the study and proposed improvements.
2. RRPDC staff support and assistance for the Route 5 Corridor Study work group in reviewing and recommending to the MPO a consensus alternative.
3. Presenting the consensus alternative for MPO review and action.

**D. Agency Participation**

RRPDC, VDOT, DRPT, City of Richmond, Henrico County, GRTC, FHWA, FTA.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	FY 12 CO <u>5303</u>	<u>TOTAL</u>
RRPDC	20,000	5,000	5,000	\$30,000



**F. Schedule**

Consensus alternative presented for MPO review and action in FY 2013 late fall/early winter.

## 2.9 City of Richmond Strategic Multimodal Transportation Plan

### A. Background

In 1997, the City of Richmond contracted with Michael Baker Jr. Inc. for the development of the City of Richmond Transportation Plan. The document analyzed the existing conditions of the various modes of travel within the City, developed multimodal goals/objectives/policies and developed recommendations for implementation. This document was incorporated into the City's Master Plan document in 2001.

The goals of the City of Richmond Transportation Plan were:

- To promote a multimodal transportation system which is designed to support the efficient movement of people and goods while respecting the quality of life in neighborhoods and the environmental, cultural, and historic resources of the City.
- To promote alternative modes of transportation to more efficiently address demand on the transportation network.

The transportation vision created in the report promoted the urban qualities of the City providing a transportation system that is seamless, functional and inviting. The goals and vision of the 1997 Plan provide a basis from which to expand upon. Given the high level of growth and development in the City in recent years, particularly in the downtown, a new multimodal transportation plan is needed.

In addition, since the 1997 plan was adopted the transportation planning field has broadened to include essential connections between transportation and land use, a stronger focus on the street network and linkages of multimodal transportation choices, management of urban mobility, best transportation planning practices, transit oriented development, complete streets and other related focus areas while maintaining the core components of a safe and efficient system.

### B. End Products

A consultant conducted study that will provide a balanced Richmond Strategic Multimodal Transportation Plan (RSMTP) which encompasses specified work elements to best address the City's current and future transportation needs and enhance the safety, mobility and quality of life of the City and the region. The plan will provide a dynamic transportation vision and set the foundation to comprehensively identify the transportation/land use strategies, resources and priorities which will shape the transportation framework of the City.

1. Update the 1997 City of Richmond Transportation Plan.

## **FY 13 UWP Task 2.9**

2. Coordinate with other transportation studies, programs or projects. The consultants should focus on existing data where practical and maximize use of their transportation planning expertise. It is recognized that there are many current and valid plans for different transportation modes; however, the roadway system assessment will need to be fully updated including future travel demand projections, corridor capacities, level of service assessments and improvements sufficient to provide future safe and efficient travel for all modes of transportation.
3. Identify current multi-modal strengths and deficiencies in the existing transportation/land use system and project anticipated future deficiencies and challenges.
4. Analyze site or topic specific transportation/land use emphasis areas.
5. Coordinate public information/input process.
6. Develop short-term (0-6-year), mid-term (6-15 year) and long-term (15-20 year) multimodal transportation/land use recommendations.
7. Identify Costs/Funding/Priorities.
8. Identify/recommend needed plans, ordinances and policies for implementation.

### **C. Work Elements**

1. Data Collection and Review:
  - Collect and review past and current studies of all modes
  - Coordinate with other programs/projects
  - Confirm traffic volumes, accident/safety data, roadway inventory/physical features, travel demand management programs, land use patterns and projections, socioeconomic demographics, and levels of pedestrian/bicycle activity to the extent practical.
  - Review and understand the philosophies of the 2008 Downtown Plan, 2000-2020 City Master Plan and 1997 City of Richmond Transportation Plan and identify transportation/land use network recommendations

#### Deliverables:

- Summary of past and current studies and other programs as they relate to the RSMTTP
- Summary of traffic volumes, accident/safety data, roadway inventory/physical features, travel demand management programs, land use patterns

and projections, socioeconomic demographics, and levels of pedestrian/bicycle activity to the extent practical.

- Summary of transportation/land use network recommendations of the 2008 Downtown Plan, 2000-2020 City Master Plan and 1997 City of Richmond Transportation Plan as they relate to the RMSTP
- Summary of other pertinent information needed for RMSTP

2. Mapping and Future Growth Model Analysis:

- Update base mapping in ArcGIS if necessary (City provides base)
- Database approach combining data in map/database platform
- Analyze intersection density (# of intersections per sq. mile) for defined districts within the City as a means to evaluate connectivity within the street network
- Identify opportunities for greater transportation mode share
- Characterize development patterns
- The VDOT supplied Richmond and Tri-Cities Regional Travel Demand Model may be used as the basis of area wide traffic projections. An important part of the travel demand effort will be ascertaining those corridors and key intersections/gateways that will and will not function safely and efficiently in the future and to develop specific multimodal operational approaches to these deficiencies

Deliverables:

- Updated base mapping
- Mapping of databases and pertinent information
- Mapping and analysis of intersection density (# of intersections per sq. mile) for defined districts to evaluate connectivity within the street network, identify opportunities for greater transportation mode share and characterize development patterns
- Area wide traffic projections using VDOT supplied Richmond and Tri-Cities Regional Travel Demand Model
- Identification of corridors and key intersections/gateways that will and will not function safely and efficiently in the future and develop specific multimodal operational approaches to these deficiencies

3. Public Outreach and Stakeholder Involvement:

- Meet with RSMTP Advisory Committee and stakeholders as determined
- Develop a public involvement plan which includes hand-on workshops/charettes with presentations to set the stage for the discussion, educates the participants and provides an opportunity for meaningful

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public input that creates the vision and guides the work of the consultant team

- Sharing information – interim and final deliverables posted on City website/newsletter
- Conduct scheduled meetings to present deficiencies and initial thoughts on recommendations to key staff and the Advisory Committee

Deliverables:

- Briefings to RSMTA Advisory Committee, key staff and other interested parties
- Public involvement plan and its implementation
- Deliverables posted on City website/newsletters

#### 4. Existing Conditions Analysis for All Modes:

- Document known multi-modal/land use strengths, deficiencies, constraints and operational issues
- Perform capacity analysis on selected systems/corridors and intersections using available studies to the extent possible

Deliverables:

- Existing Conditions Analysis document containing all modes/land use
- Capacity analysis on selected systems/corridors and intersections

#### 5. Analyze Various Site and Area Wide Issues:

- Analyze potential conversion of limited number of one-way streets to two-way streets in downtown area (using existing Synchro network) – impact on adjacent land use, accidents for vehicles, pedestrians, and bicyclists, level of service, costs, vehicle conflict points, operational evaluation, public education, staged implementation, modeling and mapping
- Evaluate Downtown Plan proposals for street cross sections.
- Provide multimodal recommendations to accommodate infill development proposed in Downtown Plan
- Develop typical concept cross sections for corridors and other defined districts based upon the relationship between land use and the transportation network (e.g. “walkable districts” for Downtown, traditional neighborhood areas and current City Right of Way Design Manual)
- Review concepts of transit oriented development, complete streets recommendations/guidelines, traditional walkable city recommendations,

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best transportation planning practices, transportation harmonization and other transportation and land use strategies as they apply to the City of Richmond and its current standards.

- Analyze the impact of interstate and freeway corridors on the City
- Review City functional classification system and assess VDOT funding allocations to ensure the City is capturing available funding.
- Review the impact of current and proposed passenger and freight rail corridors within the City (including transport of hazardous materials and grade crossings).
- Analyze at a functional schematic level key intersection operations for pedestrian, bicyclists, and vehicles at Broad and Belvidere Streets; Downtown Expressway ramp intersections at 7th, 10th, and 12th Streets; Byrd and 9th Streets; Broad and 14th Streets, Maury and 4th Streets and others.
- Analyze scenic, historic and critical corridors (Riverside Drive, Monument Avenue, Cary Street/ Three Chopt Road, “Boulevard of Museums”, Belt Boulevard and others) from the point of view of protecting and enhancing their unique character while maintaining their safe and efficient travel function
- Analyze Citywide bridges
- Analyze Citywide Intelligent Transportation Systems (ITS)
- Analyze Citywide signal system
- Analyze Citywide truck routes
- Analyze Citywide bike routes
- Analyze Citywide walking routes and pedestrian guidelines
- Analyze ADA accessibility and policies
- Analyze pedestrian/vehicle issues in university areas
- Analyze parking resources: on and off street parking, permit parking
- Analyze transportation needs of tourists/visitors
- Analyze major events circulation
- Analyze Emergency, Police, Fire, transportation concerns
- Analyze City of Richmond Emergency Evacuation Plan – ESF1
- Analyze downtown transit circulation and GRTC transfer center/s
- Coordinate with DRPT on GRTC’s Bus Rapid Transit and associated land use proposals

### Deliverable:

- Depending upon the scope and findings of each Task item – a technical memorandum will be provided with appropriate text, tabulation and mapping outlining results and providing recommendations

6. Develop Strategic Multimodal Transportation Vision Statement for the City of Richmond:

- Develop core values that support the Vision Statement
- Develop goals and objectives that support the Vision Statement

Deliverables:

- Multimodal Transportation Vision Statement for the City of Richmond
- Core Values that support the Vision Statement
- Goals and objectives that support the Vision Statement

7. Development of Short-Term, Mid-Term and Long-Term Recommendations:

- Develop specific short-term, mid-term and long-term multimodal/land-use recommendations
- Identify/recommend needed plans, ordinances, strategies and policies for implementation

Deliverables:

- Detailed short-term, mid-term and long-term multimodal/land use recommendations
- Identification of recommend plans, ordinances, strategies and policies needed for implementation

8. Implementation Plan and Funding:

- Prioritize multimodal projects/recommendations and identify implementation years
- Project funding and costs

Deliverables:

- Prioritization of multimodal projects and identification of implementation years
- Detailed project funding and costs

9. Presentation of Documents, Draft and Final Plan:

- Prepare draft and final documents including Executive Summary and Citizen Guide in hard copy, CD, and PowerPoint Presentation
- Prepare appropriate maps and public information documents
- Assist with Planning Commission & City Council adoption

Deliverables:

- Maps of concepts and deliverables
- Public information documents of deliverables
- Draft RSMTP including an Executive Summary and Citizen Guide
- Final RSMTP including an Executive Summary and Citizen Guide in hard copy, CD and PowerPoint Presentation
- Scheduled meetings to present draft and final Richmond Strategic Multimodal Transportation Plan to RSMTP Advisory Committee, key staff and interested parties.
- Presentations to the City Planning Commission and City Council

**D. Agency Participation**

City of Richmond, “Richmond Connects” RSMTP Advisory Committee, stakeholders (including RRPDC)

**E. Budget, Staff and Funding**

RSTP

City of Richmond      \$448,000<sup>①</sup>

<sup>①</sup> Total of \$500,000 in RSTP funds allocated by the MPO for this study. As of March 19, 2012, authorized amount identified in VDOT’s Project Cost Estimating System (PCES) is \$448,000. Project programmed in FY 12 – FY 15 TIP with \$100,000 in federal and state funds shown as previously obligated; no actual or planned obligations shown (VDOT UPC project number 64222) for FYs 12 to 15.

**F. Schedule**

Schedule information to be provided by the City of Richmond.



**3.0 MANAGEMENT SYSTEMS/SHORT RANGE PLANNING**

**3.1 Congestion Management Process (CMP) Update**

**A. Background**

The Congestion Management Process (CMP) serves as a systematic process for addressing congestion by providing information on transportation system performance and proposing use of alternative strategies and programs to help alleviate congestion. Update work on the CMP is conducted as an element of the LRTP update. In addition, MPO planning regulations require the MPO to address congestion management through a process that provides for safe and effective integrated management and operation of the multimodal transportation system, based on a cooperatively developed and implemented metropolitan-wide strategy of new existing transportation facilities eligible for funding under title 23 U.S.C. and title 49 U.S.C. Chapter 53, through the use of travel demand reduction and operational management strategies (see Section 450.320 (a) of the MPO planning regulations). MPO planning requirements for development of a CMP is summarized as follows (see Section 450.320 (b) for a complete description of these requirements):

1. Development of a CMP should result in multimodal system performance measures and strategies that can be reflected in the LRTP and the TIP.
2. The level of system performance deemed acceptable by state and local transportation officials may vary by facility type, location, and/or time of day.
3. Consideration should be given to strategies that manage demand, reduce single occupant vehicle (SOV) travel, and improve transportation system management and operations.
4. Where the addition of general purpose lanes is determined to be an appropriate congestion management strategy, explicit consideration is to be given to the incorporation of appropriate features with the SOV project to facilitate future demand management strategies and operational improvements that will maintain the functional integrity and safety of those lanes.

Note that Section 450.320 (c) provides that the CMP shall be developed, established, and implemented as part of the MPO planning process including coordination with transportation system management and operations activities. In addition, the CMP shall include the following (see Section 450.320 (c) for a complete description of these requirements):

1. Methods to monitor and evaluate the performance of the multimodal transportation system, identify the causes of recurring and non-recurring congestion, identify and evaluate alternative strategies, provide information

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supporting the implementation of actions, and evaluate the effectiveness of implemented actions.

2. Definition of congestion management objectives and appropriate performance measures to assess the extent of congestion and support the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies. Such measures shall be developed in consultation with operators of major modes of transportation.
3. Establishment of a coordinated program for data collection and system performance monitoring. To the extent possible, this data collection program should be coordinated with existing data sources (including archived operational/ITS data) and coordinated with area operations managers.
4. Identification and evaluation of the anticipated performance and expected benefits of appropriate congestion management strategies, which may include the following:
  - Demand management measures including growth management and congestion pricing;
  - Traffic operational improvements;
  - Public transportation improvements;
  - ITS technologies as related to the regional ITS architecture; and
  - Where necessary, additional system capacity.
5. Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy/combination of strategies proposed for implementation.
6. Implementation of a process for periodic assessment of the effectiveness of implemented strategies.

Work in conducting the CMP corridor reviews was placed on hold with the Richmond nonattainment area (which includes most of the MPO study area) being reclassified to maintenance status. Such a reclassification means that such corridor reviews are not necessary. While a revised (lowered) 8-hour ozone air quality standard of the current 0.075 parts per million (ppm) (previous standard set at 0.084 ppm) standard was proposed, the EPA took action in December 2011 to withdraw the proposed 0.075 ppm standard, and to give reconsideration to a possible new ozone air quality standard starting in 2014. As a result of this new federal policy and based on the most recent air quality data for the past three years, the Richmond Nonattainment/Maintenance Area may be redesignated to “unclassifiable/attainment” status. EPA is expected to publish final designations in the spring or summer of 2012. Note that ozone air quality readings for at least one of the past three years have

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been very close to the current 0.075 ppm standard, and should the Richmond Area experience bad air quality readings during the upcoming summer ozone season, the Richmond Area would be redesignated from its current maintenance status back to nonattainment.

In the event that the Richmond Area is redesignated back to nonattainment status, the MPO planning regulations would require the following (see Section 450.320(d) for a complete description):

1. The CMP shall provide an appropriate analysis of reasonable (including multimodal) travel demand reduction and operational management strategies for the corridor in which a project that will result in a significant increase in single occupant vehicle (SOV) capacity is proposed to be advance with federal funds.
2. If the analysis of such strategies for such a corridor demonstrate that travel demand reduction and operational management strategies cannot fully satisfy the need for additional capacity in the corridor, and additional SOV capacity is warranted, then the CMP process shall identify all reasonable strategies to manage the SOV facility safely and effectively, or to facilitate its future management.
3. Other travel demand reduction and operational management strategies appropriate for the corridor, but not appropriate for incorporation into the SOV facility itself, shall also be identified through the CMP.
4. All identified reasonable travel demand reduction and operational management strategies shall be incorporated into the SOV project or committed to by the State and MPO for implementation.

Section 450.320 (f) of the MPO planning regulations states that state laws, rules, or regulations pertaining to congestion management systems may constitute the CMP if the FHWA and FTA find that the state law, rules, or regulations are consistent with and fulfill the intent of the MPO planning requirements. Staff is not aware of this being the case; however, staff will work with VDOT to incorporate VDOT CMP planning, operational, and management activities into the MPO's process should such plans be available from VDOT.

In May and June 2009, staff received from VDOT central office year 2009 accident data for all roads (both VDOT system and non-VDOT system) in the Richmond Region. This data includes accident by vehicle type, type of crash (i.e., non-injury, injury or fatality), if the accident was pedestrian related, alcohol-related, roadway conditions (i.e., weather and light conditions), and various other factors. Note some of this information was not complete due to incomplete police accident reports. All of the data is also geo-based (i.e., location given for all accident reports), which

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allows the MPO to conduct a high level of analysis of accidents on the region's major roadways (analysis is based on the CMP roadway network). As part of the MPO's 2040 LRTP and CMP update, staff will request that VDOT provide similar data for 2010 and 2011.

Another significant feature utilized in the 2035 LRTP and CMP update is the use of INRIX travel time data (proprietary data available from VDOT, which contracts with INRIX, Inc., and provides archived monthly and annual average travel time data for all roads on the CMP network) to identify segments of the CMP network that have experienced impaired or congested traffic conditions. Staff expects to continue use of INRIX archived travel time data for the 2040 LRTP and CMP update and staff will request that VDOT provide 2011 data. Note that a significant direct cost may be required to update the Traffic Message Channel (TMC) shape file, which is used to geo-code travel time data to the region's roadway network (staff expects this direct cost to be between \$2,000 and \$4,000; current TMC shape file cost approximately \$3,500).

### **B. End Products**

Ongoing monitoring and reporting of accident data, travel times, and congestion based on the most recent and available VDOT accident data, travel time data, and Texas Transportation Institute Congestion Reports.

### **C. Work Elements**

1. Traffic Congestion Data – VDOT has entered into an agreement with INRIX, Inc. which provides proprietary comprehensive travel time data for the state. VDOT has received authorization from INRIX to share their travel time data (i.e., archived data) with RRPDC staff. The VDOT and RRPDC INRIX Travel Time Use Agreement (allowing VDOT to share archived data with the RRPDC) was executed on August 23, 2011. In FY 2012, the RRPDC purchased the INRIX configured shape file that can locate travel time data onto the Richmond Region's major roads. Future changes to the network may require further purchases of updated network shape files. Note that travel time data presented in the CMP will need to acknowledge and cite INRIX and VDOT as the data source. Also note that GPS travel time runs or other data sources may be needed depending on the scope of INRIX coverage of the Richmond Region's major roads.
2. Accident Data – VDOT provided 2009 accident data for all roads in the Richmond Region to RRPDC staff (including non-VDOT administered roads). Staff expects to receive 2010 or 2011 data from VDOT (schedule to be determined). Staff will review, analyze and apply this data for use in the CMP (e.g., identify non-recurring traffic impaired and congestion areas).

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3. Texas Transportation Institute (TTI) Congestion Reports – Continue to receive, review, and analyze TTI congestion data for the Richmond Urbanized Area.
4. Consideration for Change in Area’s Air Quality Status – Richmond Area MPO jurisdictions covered by EPA’s nonattainment area designation for ozone air quality standards include the counties of Charles City, Chesterfield, Hanover (including Ashland), Henrico and the City of Richmond. This area extends into and includes several jurisdictions in the Tri-Cities Area MPO. In February 2012, DEQ staff reported that the Richmond nonattainment/maintenance area is in compliance with the current ozone air quality standards, and DEQ submitted a request in November 2011 for redesignation of the Richmond area to attainment status. EPA Region III officials responded on December 9, 2011 that it intends to designate the Richmond area to “unclassifiable/attainment” status, and EPA is expected to publish final designations by the summer of 2012. Note that recent monitored data for the Richmond area is just under current ozone air quality standards and a bad summer (with four or more exceedances of the ozone standard) could put most of the Richmond Region back into nonattainment status. If this happens, a number of additional CMP requirements will apply to the Richmond Area MPO (see MPO planning regulations, Section 450.320(d) and (e)).
5. Access Management – Activities previously conducted under FY 2011 UWP task 3.2, Access Management Studies, are now included under this work task. For FY 2013, staff does not anticipate conducting a significant level of work in this area.

**D. Agency Participation**

RRPDC, VDOT, Local Governments, GRTC, RideFinders, CRAC, RMA, FHWA, FTA, DRPT.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>FY 12 CO</u> <u>5303</u>	<u>TOTAL</u>
RRPDC	90,000	10,000	–	\$100,000

**F. Schedule**

1. Ongoing work activities (to be scheduled based on data becoming available from VDOT).
2. Texas Transportation Institute (TTI) Congestion Reports – Ongoing.

### 3.3 Intelligent Transportation Systems (ITS) Update

#### A. Background

Intelligent Transportation System (ITS) is defined by USDOT federal regulations as “...electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system” (see 23CFR Part 940 – ITS Architecture and Standards). The basic goal of ITS programs is to use modern computer and communications technologies to provide for more efficient and effective management of existing transportation systems. When integrated into the transportation system infrastructure, and in vehicles themselves, these technologies help monitor and manage traffic flow, reduce congestion, provide alternate routes to travelers, enhance productivity, and save lives, time and money. Examples of ITS include the following:

- Advanced traveler information systems – Provides information on traffic conditions, accidents and other incidents, weather information, etc. directly to travelers, enabling them to make more informed decisions on routes.
- Advanced traffic management systems – Employs a variety of detectors, cameras, and other systems to monitor traffic, optimize traffic signal timings on major arterials, and other means to control traffic flow.
- Incident Management Systems – Provides traffic operators with tools to allow quick and efficient response to accidents, hazardous spills, and other emergencies.
- Emergency Vehicle Pre-Emption Devices – Carried on ambulances, fire trucks and other emergency vehicles, it enables such vehicles to remotely change traffic signals for safe and speedy passage through intersections (usually by advancing or extending “green” time so traffic can move through ahead of emergency vehicle).
- Automatic Vehicle Location – GPS-based vehicle tracking system, used on buses, paratransit vehicles, long-haul freight trucks to monitor vehicle location and provide location information to dispatchers and bus users.

The underlying principle for ITS deployment is adherence to established standards and an overall framework that can allow all elements of the transportation network to function and interact as one system. This is achieved through the “National ITS Architecture,” which provides a common framework for planning, defining, and integrating ITS; and through “Regional ITS Architecture,” which is the regional framework for ensuring institutional agreement and technical integration for implementation of ITS projects. Federal policy provides that regional ITS architecture should be consistent with the transportation planning process for Statewide and Metropolitan Transportation Planning (i.e., the MPO planning and programming process).

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The Commonwealth of Virginia is divided into five regions for ITS planning and project development. The Richmond Area MPO along with Tri-Cities Area MPO, portions of the Fredericksburg Area MPO, and rural area jurisdictions are covered by VDOT's Central Region. ITS program development and project deployment for jurisdictions in the Central Region is provided through VDOT's "Virginia Central Region ITS Architecture Implementation Plan" and "Virginia Central Region ITS Architecture Maintenance Plan." The Implementation Plan covers the process for ITS deployment, project sequencing, developing various levels of agency/jurisdiction cooperative agreements, and establishing standards for exchange of information among ITS systems. The Maintenance Plan establishes the agency responsible for ITS architecture maintenance (i.e., VDOT Richmond District office is the VDOT Central Region "ITS Architecture Maintainer"), defines the ITS Architecture maintenance process, the architecture update process, and defines the ITS Architecture Maintenance Committee (participants include ITS Stakeholders and the ITS "Architecture Maintainer").

The MPO took action at its June 9, 2011 meeting to establish the Richmond Region ITS Work Group under the MPO's Technical Advisory Committee (TAC) to provide planning and programming support and assistance for TAC on ITS related matters, with work group members appointed by TAC members (for their respective jurisdictions/agencies) and with representatives from the Crater Planning district Commission and the FHWA Virginia Division office, and with the direction that the work group's duties and responsibilities are subject to TAC review, consideration and action. The primary responsibilities for the ITS/TAC work group are as follows:

1. Provide a regional forum for discussion of ITS related issues, projects, plans and programs.
2. Facilitate and promote use and maintenance of the VDOT Central Region ITS Architecture.
3. Promote and assist in integrating the ITS architecture into the regional planning process.
4. Provide recommendations to TAC on ITS projects, programs and services for development and/or funding consideration.

In FY 2012, the ITS/TAC work group held two meetings (on October 20, 2011 and February 16, 2012) with a third meeting planned for June 7, 2012. Significant items addressed at the October 20 and February 17 meetings included the following:

- Review and comment on staff's draft ITS section for the 2035 LRTP and CMP updates.
- Review of the initial draft regional inventory of ITS facilities along the region's major highways.

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- Initial discussion of a proposed Richmond Region ITS Strategic Plan.
- Status of VDOT's development of a real time information program for traffic and travel conditions (requirements established by FHWA on December 23, 2010, which includes the establishment of state-designated metropolitan area routes of significance, which must be completed by November 8, 2016).
- Identified future meeting topics for identification of proposed ITS projects for consideration in the FY 14 – FY 19 Six-Year Improvement Plan (SYIP) and presentations by Iteris or VDOT on the status of the Central Region ITS Architecture update process and work for the new 511 program (e.g. website edits, a mobile smartphone app, updated video feed on corridors, etc.)

#### **B. End Product**

Ongoing and active ITS/TAC work group with the following primary functions:

- Provide a regional forum for discussion of ITS related issues, projects, plans and programs
- Facilitate and promote use and maintenance of the VDOT Central Region ITS Architecture
- Promote and assist in integrating the ITS architecture into the regional planning process
- Provide recommendations to TAC on ITS projects, programs and services for development and/or funding considerations.

#### **C. Work Elements**

1. Richmond Region ITS Work Group – Administrative and technical support by RRPDC staff for the TAC ITS Work Group which includes reporting work group recommendations to TAC, and coordinating activities with VDOT, local governments, GRTC, RMA and others. Work group established by the MPO on June 15, 2011 as the Richmond Region ITS Work Group to provide planning and programming assistance for TAC and to advise TAC on ITS related matters.
2. ITS Related Advisory Groups and Training – Staff participation on ITS related advisory groups (VDOT's Central Region ITS Work Group) and organizations (Intelligent Transportation Society of Virginia, ITSVA) and ITS related meetings, conferences, webinars, etc.
3. ITS Reports and Recommendations – Provide reports and recommendations on projects, programs, and services based on the VDOT Central Region ITS Architecture and based on findings and recommendations from the Richmond Region ITS Work Group (RRPDC staff reports prepared and provided to TAC).



**D. Agency Participation**

RRPDC, VDOT, DRPT, local governments, GRTC, RMA, CRAC, FHWA, FTA, Crater PDC.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	<u>FY 12 CO</u> <u>5303</u>	<u>TOTAL</u>
RRPDC	34,000	5,000	–	\$39,000

**F. Schedule**

Ongoing process.

**4.0 TRANSPORTATION PROJECT PROGRAMMING**

**4.1 Transportation Improvement Program (TIP)**

**A. Background**

As federally funded highway and transit projects and programs move from the planning to the implementation phase, such projects and programs must be reviewed and approved by the MPO. The MPO’s approval allows the project or program to be included in the TIP. Once in the TIP (i.e., when funds are obligated), it shows that sufficient funds are available, or are reasonably expected to become available in the near future (i.e., one to four years) for a project, project phase, or program to move forward for implementation. It allows the implementing agency (i.e., state, local government or regional agency) to have access to the designated federal fund source and request reimbursement for project expenses.

The RRPDC serves as lead staff for developing and maintaining the TIP. However, all federal-aid highway funds and most federal-aid transit funds are managed and administered by VDOT and DRPT. As a result, projects and programs that are ready to move forward for implementation must first be reviewed with their proposed funding request authorized and submitted by VDOT or DRPT with these agencies requesting that the funds be shown as obligated in the TIP.

In addition to state and federally funded highway and transit projects and programs, locally and privately funded highway projects that are considered “regionally significant” must be included in the TIP (and the LRTP) for public review and air quality conformity analysis purposes.

Under SAFETEA-LU, there are a number of federal-aid highway programs (i.e., administered by FHWA) which, in order to be eligible for use by the implementing agency, must be programmed in the TIP. This includes the following:

1. Equity Bonus
2. Interstate Maintenance (IM)
3. National Highway System (NHS)
4. Bridge
5. Surface Transportation Program (STP)
6. Regional Surface Transportation Program (STP subprogram for urbanized areas with greater than 200,000 population)
7. Highway Safety Improvement Program (HSIP)
8. Congestion Mitigation and Air Quality Improvement (CMAQ)
9. Recreational Trails
10. Safe Routes to Schools
11. Rail-Highway Grade Crossing
12. Highway Priority Projects (Congressional Earmarks)

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13. Transportation Enhancements
14. Transportation, Community, and System Presentation Program (TCSP)
15. Scenic Byways
16. Federal Lands Highway Program (FLHP)

SAFETEA-LU also has funds available under federal-aid transit programs (i.e., administered by FTA) which, in order to be eligible for use by the implementing agency, must be programmed in the TIP. This includes the following:

1. Sections 5307 and 5340 – Urbanized Areas
2. Section 5308 – Clean Fuels Grant Program
3. Section 5309 – Capital Investment Grants “New Starts”
4. Section 5309 and 5318 – Bus and Bus Facility Grants
5. Section 5310 – Elderly and Persons with Disabilities
6. Section 5316 – Job Access and Reverse Commute (JARC)
7. Section 5317 – New Freedom Program
8. Section 5320 – Transit in the Parks

Projects included in the TIP include information on the implementing agency, location/service area, cost estimates, funding sources, amount of funds actually or scheduled for allocation, type of improvement, and other appropriate information. The TIP also includes a financial plan summary, GRTC’s Financial Capacity documentation and certification, project implementation status, public participation and the MPO/State Statement of Certification.

Note that SAFETEA-LU provides several significant changes to the TIP development process and document content which includes the following:

- The TIP must be updated at least every four years and contain at least four years of projects and strategies. Staff recommends that the TIP be updated annually based on state’s current process to annually adopt the SYIP.
- The TIP must be developed through the MPO’s adopted *Public Participation Plan* (adopted by MPO on April 12, 2007 and SAFETEA-LU compliant).
- Visualization techniques shall be employed to describe the TIP.
- The TIP shall be made available in electronically accessible formats (such as the RRPDC web site).
- SAFETEA-LU specifies that the development of the annual listing of obligated projects “shall be a cooperative effort of the state, transit operator, and MPO” and also shall include two new project types: “investments in pedestrian

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walkways and bicycle transportation facilities” for which federal funds have been obligated in the preceding year.

- The TIP will contain: priority list of projects and strategies for four years; financial plan; and description of work (type of work, termini, length, etc.) of each project in the TIP.

It should be noted that SAFETEA-LU expired in September 2009 with several extensions already approved by Congress. Staff will monitor the reauthorization and integrate any new/revised metropolitan planning requirements as they come into effect.

The MPO has lead authority for the allocation of Regional Surface Transportation Program (RSTP) and Congestion Mitigation Air Quality (CMAQ) program funds. RSTP funds are allocated under federal formula to the Richmond Urbanized Area while CMAQ funds are allocated by federal formula to the state and these funds are sub-allocated by state formula to EPA designated non-attainment and maintenance areas in the state. The Commonwealth Transportation Board (CTB) established a new policy on February 16, 2011, which directs the district CTB member to work with the appropriate MPO and with VDOT and DRPT staff to recommend to the Board a list of CMAQ projects for inclusion in the SYIP with all six years of CMAQ funds anticipated to be available to the MPO to be programmed; that CMAQ projects will be programmed to facilitate maximization of the use of federal funds including fully funding project phases according to current schedules and cost estimates; and that CMAQ allocations be programmed centrally by VDOT and DRPT staff based on the recommended CMAQ projects according to CTB priorities and federal eligibility requirements.

The MPO established its current RSTP and CMAQ funds project review, selection and funds allocation process on December 9, 2004. This process emphasizes allocating funds to projects by phase as each project moves forward in both the SYIP and TIP. After all current projects have been reviewed and allocations have been made to allow these projects to move forward, consideration to allocation of remaining funds is given to new candidate projects. Applications submitted by area local government and regional agency TAC members are reviewed and scored based on established criteria for project applications. These applications are reviewed and ranked by RRPDC and VDOT staffs. These findings are presented to TAC, which provides its recommendation to select projects and allocate funds by year. The TAC recommendation for CMAQ funds is then reviewed by the CTB member, and the TAC and staff recommendation is presented for MPO review and action.

Essential elements of the TIP are as follows:

1. Approval and Updates – The TIP must be approved by the MPO and the Governor, and must be updated at least every four years. The Richmond Area

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MPO's TIP is currently updated on an ongoing basis based on VDOT's annual preparation of the state's Six-Year Improvement Program. Note that a new TIP update is due by June 2015.

2. **Scope of TIP** – The TIP must include all projects within the MPO's Study Area (including pedestrian walkways and bicycle transportation facilities) to be funded under Title 23 and the FTA.
3. **Financial Plan** – The TIP must include a financial plan component or element. The financial plan must demonstrate how the TIP can be implemented, and indicate resources from public and private sources that are reasonably expected to be made available to carry out the plan.
4. **Project Priorities** – The TIP must include a priority list of projects to be carried out over a four-year period, and a financial plan that demonstrates how it can be implemented. Projects within a funding category for a particular year can serve as an indicator of priority, such that first year projects are the highest priority, second year projects are the next highest priority, etc. Procedures or agreements that distribute sub-allocated STP or funds under 49 U.S.C. 5307 to individual jurisdictions or modes within the metropolitan planning area by predetermined percentages or formulas are inconsistent with legislative provisions that require the MPO, in cooperation with the state and public transportation operator, to develop a prioritized and financially constrained TIP, and shall not be used unless they can be clearly shown to be based on considerations required to be addressed as part of the MPO's planning process.
5. **Included Projects** – The TIP shall include capital and non-capital surface transportation projects (or phases of projects) within the boundaries of the metropolitan planning area proposed for funding under 23 U.S.C. and 49 U.S.C. Chapter 53 (including transportation enhancements, Federal Lands Highway program projects, safety projects included in the state's Strategic Highway Safety Plan, trails projects, pedestrian walkways, and bicycle facilities), except the following do not necessarily have to be included:
  - a. Safety projects funded under 23 U.S.C. 402 and 49 U.S.C. 31102;
  - b. Metropolitan planning projects funded under 23 U.S.C. 104 (f), 49 U.S.C. 5305 (d), and 49 U.S.C. 5339;
  - c. State planning and research projects funded under 23 U.S.C. 505 and 49 U.S.C. 5305 (e);
  - d. At the discretion of the state and MPO, state planning and research projects funded with National Highway System, STP, and/or Equity Bonus funds;

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- e. Emergency relief projects (except those involving substantial functional, locational, or capacity changes);
  - f. National planning and research projects funded under 49 U.S.C. 5314; and
  - g. Project management oversight projects funded under 49 U.S.C. 5327.
6. Project Selection – All federally funded projects, except NHS, Bridge, Interstate Maintenance and Federal Lands Highway Program projects are to be selected by the MPO in consultation with the state and public transportation operator (GRTC) from the approved TIP and in accordance with the TIP priorities. Projects that are on the NHS and projects funded under the Bridge and Interstate Maintenance programs are to be selected by the state in cooperation with the MPO from the approved TIP. Federal Lands Highway program projects shall be selected in accordance with procedures developed pursuant to 23 U.S.C. 204. The TIP serves as the project selection document.
7. Transportation Plan Consistency – All federally funded TIP projects must be consistent with the MPO's adopted Metropolitan Transportation Plan (i.e., LRTP). As a management tool for monitoring progress in implementing the transportation plan, the TIP should:
- a. Identify criteria and process for prioritizing implementation of transportation plan elements (including multimodal trade-offs) for inclusion in the TIP and any changes in priorities from the previous TIP; and
  - b. List major projects from the previous TIP that were implemented and identify any significant delays in the planned implementation of major projects.
8. Air Quality Conformity – The MPO, along with FHWA and FTA, must make a conformity determination for projects listed in the proposed TIP, or for amendments that add or delete regionally significant projects. Conformity is generally defined in the CAAA as conforming to the adopted State Implementation Plan's purpose for eliminating and reducing the severity and number of NAAQS violations and achieving attainment status. In other words, the implementation of TIP projects must be shown to serve as part of the region's effort to improve air quality.
9. Agencies/Public Review and Comment – The public, affected agencies, representatives of transportation agency employees, other affected employee representatives, private providers of transportation, and other interested parties must receive a reasonable opportunity to comment on the proposed program.

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10. Environmental Justice – Assessment and documentation of the distributional effects of the metropolitan transportation investments are provided through the MPO’s LRTP and VDOT’s use of the NEPA process. The NEPA process that is completed by VDOT (or project administrator) address project specific Environmental Justice (EJ) analysis and documentation. With a regional level assessment of EJ covered by the LRTP and with project level EJ analysis covered by the NEPA process, an EJ component is not required at the TIP level.
11. MPO Certification – In TMA's, the USDOT Secretary shall certify the planning process at least once every four years. Note that the most recent federal certification review was conducted on March 25-26, 2009. A draft certification review report was issued by FHWA on June 18, 2010 and staff received the final signed certification letter and report on February 13, 2012.
12. The state, public transportation operator and MPO shall, on an annual basis and within 90 days following the end of a program year, cooperatively develop a listing of projects (including investments in pedestrian walkways and bicycle transportation facilities) for which funds under 23 U.S.C. or 49 U.S.C. Chapter 53 were obligated in the preceding program year. This listing shall be prepared in accordance with Section 450.314 (a) of the MPO planning regulations and shall include all federally funded projects authorized or revised to increase obligations in the preceding program year, and shall at a minimum include the TIP information under Section 450.324 (e) (1) and (4) and identify for each project the amount of federal funds requested in the TIP, the federal funding that was obligated during the preceding year, and the federal funding remaining and available for subsequent years. This listing shall be made available for public review in accordance with the MPO’s public participation criteria for the TIP.

Note that the “Memorandum of Understanding on Metropolitan Transportation Planning Responsibilities for the Richmond Area” (MOU signed by the Richmond Area MPO, the Commonwealth of Virginia Secretary of Transportation, GRTC Transit System, and the RRPDC) states under the Annual Obligation Report section the following:

Within 60 days after the close of the federal fiscal year the Virginia Department of Transportation and the Virginia Department of Rail and Public Transportation shall provide the MPO with Annual Obligation Report information. To the extent possible, this report(s) will contain the projects (including investments in pedestrian walkways and bicycle transportation facilities) for which federal highway or transit funds were obligated in the preceding program year. It shall include all federally funded projects authorized including those revised to increase obligations in the preceding program year, at a minimum include TIP project description and implementing agency information and identify, for each

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project, the amount of federal funds requested in the TIP, the federal funding that was obligated during the preceding year, and the federal funding remaining and available for subsequent years. The MPO shall publish the Annual Obligation Report on the web and in accordance with any procedures outlined in the Public Participation Plan to ensure adequate access by the public and other interested stakeholders.

13. Freight shippers, providers of freight transportation services, and representatives of users of public transit are added to the list of parties that must be given the opportunity for review and comment on plans and TIP's.

Note that the TIP is posted on the RRPDC's web site and updates are made when the TIP is amended or adjusted (i.e., changes which the RRPDC staff is authorized to make to the TIP).

In addition to developing and maintaining the TIP, RRPDC staff identifies regional priority projects and advocates for the allocation of funds to these projects, and it has lead authority in allocating federal funds under the Regional Surface Transportation Program (RSTP) and Congestion Mitigation Air Quality (CMAQ) program

### **B. End Products**

1. Annual listing of obligated projects from preceding program year (i.e., federal fiscal year). Projects to be submitted by VDOT and DRPT to RRPDC by December 1, 2012 and posted on RRPDC web site by December 30, 2012.
2. Maintenance activities in support of the current TIP including processing of TIP amendment and adjustment requests; and maintenance of records tracking the programming of RSTP and CMAQ funds.
3. Development and submission of the MPO's list of regional transportation priority projects.
4. Conduct annual RSTP and CMAQ projects review, selection, and funds allocation, and submit MPO approved list of projects and allocations for CTB review and programming in the upcoming Six-Year Improvement Program (SYIP).

### **C. Work Elements**

Work activities include the following:

1. TIP Amendments/Adjustments – Based on requests from VDOT, local governments, GRTC, and other transportation agencies, RRPDC staff prepares



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and submits proposed amendments for TAC review and recommendation and for MPO action. Based on action taken at the July 14, 2005 MPO meeting, RRPDC staff is authorized to make certain changes to the TIP in consultation with and with written agreement from local government/agency TAC members and VDOT. VDOT staff has also developed a monitoring and reporting system for “grouped projects” with reports provided monthly by VDOT Richmond District staff to RRPDC staff, which reviews these reports and forwards them on to TAC members. These monthly reports cover projects where there has been recent activity (covers changes to schedule, cost estimates, project scope and/or obligations). VDOT Richmond District has full-time staff to monitor and report on various project programming activities, and works with VDOT Richmond District project managers, VDOT Central Office Programming and Scheduling staff, and MPO and local government staffs to monitor, report and facilitate updates to project costs, allocations and obligations. Note that VDOT is responsible for advising the MPO as to the availability and amount of federal transportation funds to be obligated and this information is needed before proposed amendments/adjustments can be submitted for appropriate review and action.

2. Regional Surface Transportation Program (RSTP)/Congestion Mitigation/Air Quality (CMAQ) Tracking and Financial Closeout – Staff support to track RSTP and CMAQ allocations made to individual projects. Note that VDOT has established and staffed (at the Richmond District office) an ongoing process for financial close-out of all state and federal (including RSTP and CMAQ) projects. This will allow for the MPO to reallocate remaining RSTP and CMAQ funds as such projects are closed to further charges. Also note that work to close out RSTP and CMAQ funded projects has been underway since before the MPO took action on April 12, 2007 to direct that VDOT submit its report on 29 RSTP and CMAQ funded projects which staff identified as a surplus of approximately \$7 million.
3. RSTP/CMAQ Project Review and Selection – Conduct the annual project review, selection and funds allocation process for RSTP and CMAQ funds allocated to the Richmond Area MPO. Note that the MPO’s FY 2013 allocation of RSTP and CMAQ funds is approximately \$26.6 million (\$17.0 million for RSTP and \$9.6 million for CMAQ). In addition, proposed changes to the MPO’s RSTP and CMAQ Project Review, Selection and Funds Allocation Guidelines policies/document on returning FY 2007 and prior years surplus allocations for reallocation at the regional level (rather than staying with jurisdictions and regional agencies to which they were first allocated) and the proposed change to the annual 11.4 percent off-the-top CMAQ funds allocation for RideFinders policy should be reviewed by TAC with staff’s and TAC’s recommendation for proposed changes to the MPO’s allocation process and guidelines presented to the MPO.

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4. TIP Participation Plan – Conduct participation plan that specifies procedures and process for providing reasonable opportunity for comment on the content of the TIP. This includes consultation with interested parties and consultation with federal, state, and local agencies when developing the draft TIP document.
5. Annual Listing of Obligated Projects – Annual submission by VDOT and DRPT of projects that had funds obligated during the preceding federal fiscal year (due to RRPDC staff by December 1, 2012). RRPDC staff supplements this report by including projects with planned obligations, but the funds were not actually obligated. Staff also plans to review the last several years of annual obligation reports and provide a summary report to TAC and the MPO on the obligation of federal and state funds. Staff will also give consideration to recommending a new performance measure and target for the MPO's Regional Transportation and Land-Use Performance Measures which monitors and reports the region's progress in having planned obligations actually obligated and showing an upward trend over a several year time period in the total and per capita amount of actual obligations.
6. Public Review – Conduct public review process for final draft TIP document and air quality conformity analysis findings (conduct when appropriate; development of the next TIP is not yet scheduled). Adopted TIP document, RSTP and CMAQ allocations, and regional priority projects are posted on the RRPDC web site.
7. Visualization Techniques – Staff will work on developing visualization techniques that can be employed to help identify and describe projects shown in the TIP.
8. Conformity Analysis – Utilizing the regional travel demand model, RRPDC staff will model projects when developing a draft TIP or when amending the TIP for regionally significant projects to determine vehicle miles of travel (VMT), which is used as input to the MOBILE 6.2 model (i.e., used to determine the amount of nitrogen oxides and volatile organic compounds emissions that are attributable to the region's highway and transit networks). Starting on March 2, 2013, use of the new Motor Vehicle Emission Simulator (MOVES2010) model for SIP development and regional conformity applications will take effect. VDOT staff is charged with running the MOBILE 6.2/MOVES2010 models for analyzing projects included in the draft TIP and for regionally significant TIP amendments, and prepares and submits the air quality conformity analysis report for RRPDC staff review, and for TAC review and recommendation. The RRPDC staff conducts the public review process for the draft air quality conformity analysis report, which is submitted for TAC review and recommendation and for MPO action. The RRPDC staff conducts the public review process for the draft air quality conformity analysis

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report. The RRPDC staff also runs the regional travel demand model (RTDM) which provides VMT input for the MOBILE or MOVES model.

9. Regionally Significant Projects – Under VDOT guidance, coordinate identification of regionally significant public and private transportation projects and submit to VDOT for air quality analysis purposes.
10. Federal Transit Administration (FTA) Section 5310 Projects – Advise area local governments, human service agencies and organizations, TAC, EDAC and private transportation operators of upcoming review and application activities for FTA Section 5310 program funds. Note that interested private transportation operators are included in the information and notices provided to EDAC, TAC, and local governments and human service agencies and organizations in order to encourage the use of private transportation services. Following CTB action to approve the SYIP, staff takes action to amend the current TIP to include those Section 5310 projects included in the SYIP (MPO action to authorize amending the TIP is given as part of the MPO’s action to endorse application for Section 5310 funds subject to their being selected and programmed in the SYIP).
11. Transportation Enhancement Projects – Action taken by the MPO to endorse requests for transportation enhancement program funds. Projects are selected by the CTB and programmed in VDOT’s Six-Year Improvement Program. Selected projects are then programmed in the TIP given sufficient funds for obligation purposes.
12. MPO Regional Transportation Priority Projects – Annual activity to identify the region’s list of priority projects. These projects are described in a report document (i.e., Regional Transportation Priority Projects Report), submitted to the Commonwealth Transportation Board (CTB) for its review and consideration in allocating state and federal funds in the Six-Year Improvement Program (SYIP), and can be submitted by MPO member local governments and agencies in seeking federal, state and other potential sources of funds. With the completion of the 2035 LRTP Update scheduled for early FY 2013, staff plans to review the projects identified in the 2035 LRTP with the MPO and propose a process to review, rank and move these projects into the MPO’s list of priority projects. Note that the timing of 2035 LRTP completion and VDOT’s initiation of the upcoming (FY 14 – FY 19) SYIP process may result in this input not being ready for MPO review and action until January or February 2013. Staff’s review will also take into consideration work by local government to establish their jurisdiction’s list of priority projects, and identifying projects that are ready to move forward for funding consideration.
13. VDOT Richmond District Funds Allocation – Prepare annual report which shows the actual allocation of federal and state transportation funds (by total

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funds and per capita) by VDOT district. Staff plans to make this an annual report so that the Richmond Region can track how well it is doing in securing federal and state transportation funds.

14. SYIP and STIP – Monitor and report as appropriate federal and state activities to merge/coordinate the State SYIP with the federally required State TIP.
15. Coordinate listing and description of progress in the implementation of TCM’s (if appropriate).
16. TIP Availability in Electronically Accessible Format – Post MPO adopted TIP and other appropriate documents on the RRPDC web site.

**D. Agency Participation**

RRPDC, VDOT, VDEQ, DRPT, Local Governments, GRTC, FHWA, EPA, FTA, RideFinders, CRAC, paratransit and other transportation operators, freight shippers, providers of freight transportation services, and representatives of users of public transit.

**E. Budget, Staff and Funding**

	<u>PL</u>	<u>5303</u>	FY 12 CO <u>5303</u>	<u>TOTAL</u>
RRPDC	180,000	20,000	10,000	\$210,000

**F. Schedule**

1. TIP Amendments/Adjustments – Ongoing activity
2. Regional Transportation Priority Projects – September 2012 to February 2013.
3. FY 14 to FY 19 RSTP/CMAQ Project Review and Selection – October 2012 to March 2013.
4. Annual Listing of Obligated Projects Report – VDOT and DRPT to provide annual listing of actual project obligations during the preceding program year (i.e., federal fiscal year) to RRPDC by December 1, 2012 and final list to be posted on RRPDC web site by December 31, 2012.
5. VDOT Richmond District Funds Allocation Report – July 2012 to September 2012.

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6. RSTP/CMAQ Project Review and Selection Policy Guidelines (proposed changes eliminating policy of 11.4 percent off-the-top CMAQ funds allocation to RideFinders and eliminating policy of FY 2007 and prior allocated CMAQ and RSTP funds staying with jurisdictions and agencies to which they were first allocated) – FY 2012 to September 2012.

**5.0 TRANSIT PLANNING**

**5.2 Elderly and Disabled Transportation Needs and Services**

**A. Background**

The Elderly and Disabled Advisory Committee (EDAC) is composed of individuals and organizations representing the region's elderly, disabled, and low income groups and advises the MPO on plans, studies, issues, and other matters related to the planning of public transportation services. It also assists GRTC by advising them of public transportation needs and issues of concern to the elderly and disabled community. EDAC members also serve with other human service agency/organization staffs as a part of the stakeholders work group for work on UWP task 5.6, Coordinated Human Services Mobility Plan (see UWP task 5.6).

This task provides RRPDC staff support to ensure an active and involved EDAC and to assist the committee in developing up-to-date information on transportation needs of elderly and disabled individuals in the Richmond area, their transportation needs, and available transportation services and resources. This task also provides for staff participation in various study activities addressing the region's specialized transportation services and serving on advisory committees involved with specialized transportation needs and services.

Staff prepares and submits EDAC meeting agendas and agenda attachments to several EDAC members by e-mail in an accessible format that allows visually impaired committee members to receive and read these materials. Information posted on the RRPDC/MPO web site is also accessible to these members.

One major work task for FY 2013 will be to complete work started in FY 2011 on the Transportation Operators Inventory report. This report will provide an inventory of both public and private transportation service providers in the Richmond Region (including human service agencies and organizations, and public transportation operators). For each operator (except for private contract operators under the Department of Medical Assistance Services program) included in the report, information should be provided on number and types of vehicles, services offered, area covered, contact information, and certain other service related information.

**B. End Products**

1. A functional and viable process that advises the MPO and GRTC on the special transportation needs of elderly and disabled individuals, and provides reports on transportation needs and services.
2. Updated Transportation Operators Inventory report.

**C. Work Elements**

1. MPO Elderly and Disabled Advisory Committee (EDAC) – Provide administrative and technical support for EDAC (anticipate four to five meetings in FY 13).
2. Coordinated Human Services Mobility Plan (CHSMP) Update – Provide for EDAC review and participation in updating the CHSMP (see UWP task 5.6).
3. Transportation Operators Inventory Report – In FY 2011, staff completed a preliminary list of area human resource agencies and organizations and public and private public transportation service operators involved in providing specialized transportation services and showed a potential need for transportation assistance. Work to develop an inventory of specialized transportation service operators/providers was not completed due to extensive duplications in the list of organizations and providers/operators. Work on the inventory was set aside in FY 2012 due to other work priorities. In FY 2013, staff will work with the new Senior Connections Regional Mobility Management Program staff to develop an inventory of area human service agencies and organizations, and area public and private specialized transportation operators in support of the Regional Mobility Management program.
4. Advisory Groups/Organizations Participation – Participation by staff on various advisory committee/work groups related to the transportation needs of elderly, disabled and low income persons.
5. GRTC CARE Services, Report and Policies – Coordinate submission of CARE service reports, proposed CARE services policies and programs, and other items of interest for EDAC review and input that can assist GRTC in addressing ADA related matters, and also to assist GRTC in providing more effective, efficient and consumer friendly public transportation services for use by qualified elderly and disabled individuals.

**D. Agency Participation**

RRPDC, GRTC, DRPT, local governments, FTA, EDAC appointing organizations, private and human service agency transportation operators.

**E. Budget, Staff and Funding**

	<u>5303</u>	FY 12 CO <u>5303</u>	<u>TOTAL</u>
RRPDC	50,000	10,000	\$60,000

**F. Schedule**

1. Transportation Operators Inventory – To be scheduled following consultation with Senior Connections Regional Mobility Manager.
2. Other activities are ongoing.



## 5.5 Regional Public Transportation Services

### A. **Background**

The MPO *Regional Mass Transit Study* was completed and approved by the MPO in May 2008. The results from this study were incorporated into the MPO's adopted 2031 Long-Range Transportation Plan (LRTP) update. In addition, the MPO took action at its November 13, 2008 meeting to establish its list of regional priority projects, which included two new transit projects; Broad Street Bus Rapid Transit (from Willow Lawn to Rockett's Landing) and GRTC Downtown Transfer Center.

In October and November 2011, GRTC and its consultants completed work on the GRTC Transit Development Plan (TDP), which was approved at the October 18, 2011 GRTC board meeting and accepted as work received at the November 10, 2011 MPO board meeting. The TDP is designed to help transit operators improve their efficiency and effectiveness by identifying the need and required resources for modifying and enhancing services provided to the general public. TDPs also provide a solid foundation for funding requests and feed directly into the programming process (i.e., budgeting, funding and implementation of a transit operators capital needs program and transportation services). To capture the benefit of this planning tool, DRPT requires that any public transit (bus, rail, ferry) operator receiving state funding prepare, adopt, and submit a TDP. DRPT requires that a TDP be completed every six years. DRPT also requires the annual submission of a letter by the transit operator describing progress made towards implementing the TDP and any significant changes. The planning horizon for the TDP is a minimum of six years (a longer planning horizon may be required to reflect significant capital replacement/rehabilitation needs, or the capital and operating budget implications of significant service expansion). Items identified by DRPT as the purpose of the TDP are as follows:

- To improve the efficiency and effectiveness of public transportation services in the Commonwealth of Virginia.
- To serve as a management and policy document for the transit operators.
- To maximize the investment of public funds and achieve the greatest possible public benefit.
- To provide the basis for inclusion of an operator's capital and operating programs in planning and programming documents such as: the Six Year Improvement Program (SYIP), Statewide Transportation Improvement Program (STIP), Transportation Improvement Program (TIP) and Constrained Long-Range Plan (CLRP).

The MPO is involved with various agencies, jurisdictions, and organizations providing technical assistance and participation in various public transportation services studies, advisory groups and committees, and other activities supporting the development of public transportation services in the region. This work task provides for RRPDC staff participation in such activities. Work activities anticipated for RRPDC staff in FY 2013 include the following:

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- Review and recommendation on the GRTC Bus Rapid Transit (BRT) Alternatives Analysis for the Broad Street corridor locally preferred alternative, and submit for MPO review and action.
- Provide for MPO review/participation in various rail studies and projects (e.g., Richmond/Hampton Roads Passenger Rail Project Tier I Final EIS, Main Street Station, Southeast High Speed Rail Corridor studies and projects, both north and south of the Richmond Region).
- Staff work to identify potential rail and transit improvement projects in the Richmond MPO study area eligible for RSTP and/or CMAQ funds, and conduct needed reviews and reports to move these potential projects forward for funding.
- Review of various local and regional proposals for expanded public transportation services.
- Attend/participate on various advisory committees and work groups. Includes staff participation as a member of the RideFinders Advisory Board, the DRPT Multimodal and Public Space Design Guidelines Steering Committee, and staff attendance at GRTC Board meetings and other meetings, conferences, webinars, and events.
- Staff review, comments and recommendations (if appropriate) to TAC and the MPO on the GRTC Annual TDP Update letter (required annual submission by GRTC to DRPT). At a minimum, staff plans to submit the Annual TDP Update letter to the MPO for its review and consideration. Note that the MPO has provided significant funding to GRTC through the MPO allocation of RSTP and CMAQ funds for various projects. The MPO's list of regional priority projects also includes several GRTC projects.

### **B. End Products**

Ongoing RRPDC staff review and participation in local and regional public transportation service proposals and studies and state passenger rail studies.

### **C. Work Elements**

1. Advisory Committees/Work Groups/Meetings – RRPDC staff participation on the GRTC/DRPT Broad Street Rapid Transit Study Alternatives Analysis project/study, GRTC Transfer Center Steering Committee, RideFinders Advisory Board, DRPT Multimodal and Public Space Design Guidelines Steering Committee, DRPT SJR 297 Statewide Transit Funding Issues Advisory Committee, and other public transportation related groups and organizations. Attendance at public transportation workshops, conferences, webinars and meetings.

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2. Plans, EIS and Studies – Monitor, review, comment, and provide reports to the MPO and MPO committees on plans, studies, and Environmental Impact Statement (EIS) projects (includes EIS work currently underway for the Washington, D.C. to Richmond, Richmond to Raleigh/Charlotte, and Richmond to Hampton Roads High Speed rail corridors; and studies for Richmond area rail improvement projects). Also monitor, review, comment and report on GRTC, RideFinders, DRPT and local government public transportation plans, programs, projects and studies.
3. Other Studies and Projects – Monitor, review and comment, and advise the MPO as appropriate on public transportation and passenger rail projects and studies (includes Main Street Station, GRTC Transfer Center, GRTC Broad Street Rapid Transit Alternatives Analysis project/study and high speed rail studies and projects).
4. GRTC TDP – Work on the GRTC Transit Development Plan (TDP) was completed and accepted as work completed by the MPO on November 10, 2011 (TDP was approved by the GRTC Board on October 18, 2011). Updates to the TDP will be reviewed by staff with reports provided to MPO committees (CTAC, EDAC and/or TAC) and the MPO as appropriate. Note that DRPT requires all public transit operators (e.g., GRTC) to develop and maintain TDPs on an ongoing basis in order to be eligible for various state grant programs. **DRPT also requires an Annual TDP update letter be submitted to DRPT. The MPO requests that a copy of this letter be submitted and reported to the MPO.** The TDP is being used in developing the MPO’s Long-Range Transportation Plan (LRTP) Update and is also considered in developing the Transportation Improvement Program (TIP). It can also be used to identify projects and programs for consideration in the MPO’s list of regional priority projects.
5. Richmond Area Rail and Transit Improvement Projects – Staff work to identify potential rail and transit projects in the Richmond MPO study area eligible for RSTP and/or CMAQ funds, and conduct needed reviews and reports to move these potential projects forward for allocation of funds (including RSTP, CMAQ and other potential funding sources). Staff will also give consideration to other federal and/or state funding sources when appropriate.

**D. Agency Participation**

RRPDC, GRTC, RideFinders, local governments, DRPT, FTA.

**E. Budget, Staff, and Funding**

	<u>5303</u>	<u>FY 12 CO</u> <u>5303</u>	<u>TOTAL</u>
RRPDC	50,000	10,000	\$60,000

**F. Schedule**

Ongoing

**5.6 Coordinated Human Services Mobility Plan (CHSMP)**

**A. Background**

SAFETEA-LU requires that as a condition of federal assistance covering FTA Section 5310 (Elderly Individuals and Individuals with Disabilities Program) Section 5316 (Job Access and Reverse Commute Program) and Section 5317 (New Freedom Program, funding new ADA type paratransit services), that the region prepare a coordinated public transit human services transportation plan for the coordination of transportation resources provided through multiple federal programs. This plan should enhance transportation access for elderly, disabled, and low-income individuals, minimize duplication of services, and encourage the most cost-effective transportation program possible. Note that SAFETEA-LU requires this coordination plan to be developed by a process that includes representatives of public, private, and nonprofit transportation and human service providers and participation by the public. In the Richmond area, the MPO working in coordination with GRTC, the Tri-Cities Area MPO, DRPT and its study consultant, came up with a plan of action covering both MPOs (plan approved at the October 9, 2008 MPO meeting). Such coordination is required due to FTA Section 5316 and Section 5317 funds being allocated on a formula basis, which is based on the census designated Richmond Urbanized Area (which covers most of both MPOs' study areas). GRTC is the urbanized area designated recipient for administering these funds.

The Coordinated Human Services Mobility Plan (CHSMP) establishes the construct for a unified comprehensive strategy for transportation service delivery in both the Richmond Area and Tri-Cities Area MPOs and in the Richmond Region (i.e., rural areas of Planning District 15). It is focused on unmet transportation needs of seniors, disabled, and low-income individuals. The CHSMP includes the following federally required elements:

1. Assessment of available services identifying current providers (public and private).
2. Assessment of transportation needs of elderly, disabled and low-income individuals.
3. Strategies, activities, and/or projects to address the identified gaps between current services and needs, as well as opportunities to improve efficiencies in service delivery.
4. Priorities for implementation based on resources, time, and feasibility for implementing specific strategies and/or activities.

The CHSMP serves as a comprehensive, unified plan that promotes community mobility for residents who are elderly, disabled or low-income; establishes priorities to incrementally improve mobility for these groups; and provides an ongoing process to identify partners interested, willing and able to promote community mobility for

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these groups. One remaining effort for the CHSMP planning process is the development of an ongoing structure and process for future coordinated transportation planning efforts. Note that the MPO took action at its October 9, 2008 meeting to approve the CHSMP and to endorse the establishment of and authorize the participation of those designated by GRTC on a project review and selection committee for the purpose of reviewing and scoring applications for FTA Section 5316 and 5317 funds as administered by GRTC (the MPO also specified the member organizations for this project review and selection committee).

In FY 2012, three meetings of the Richmond Region, Richmond Area MPO and Tri-Cities Area MPO CHSMP stakeholders work group are scheduled (meetings held on September 13, 2011, January 12, 2012, and one scheduled for June 2012) to review the Richmond Region's and Richmond Area MPO/Tri-Cities Area MPO CHSMP strategies, CHSMP update, and applications for FTA Sections 5310 (Elderly Individuals and Individuals with Disabilities), 5316 (Job Access Reverse Commute) and 5317 (New Freedom) grant programs. In addition, two meetings of the CHSMP stakeholders work group are scheduled for March 26, 2012 (at the RRPDC offices) and on April 4, 2012 (at the Crater District Area Agency on Aging offices). These two meetings are being held to review and discuss the availability of GRTC administered FTA Section 5316 and 5317 funds (for use in the Richmond Urbanized Area). Note that the MPO took action on December 7, 2011 to amend the GRTC Project Management Plan (PMP) and application document (which covers requests for FTA Sections 5316 and 5317 funds apportioned by FTA to the Richmond Urbanized Area and administered by GRTC) to allow private for-profit transportation operators to directly apply for grant funds under these two programs. The GRTC board has also taken action to approve this amendment. Also, DRPT will use KFH Consulting to develop a scope of work for the CHSMP Update that is scheduled to be reviewed and discussed at the June 2012 CHSMP Stakeholders work group meeting.

Work on Senior Connections Regional Mobility Management Program was re-initiated in January 2012 (the previous program manager had retired in September 2011). Mr. Ken Lantz was hired by Senior Connections in January 2012, and a presentation on this new program was provided to EDAC on January 25, 2012. The program will provide services to assist individuals in finding transportation to accommodate a wide variety of needs and eligibility. This program will function as a call center for individuals seeking transportation assistance. Referrals will be made to transportation service providers which could include taxicabs, fixed route buses, paratransit, and others, and also provide assistance in sorting out eligibility questions for the different types of services offered. The Regional Mobility Management Program is currently scheduled to begin service sometime in late FY 2012 or early FY 2013. Since the Regional Mobility Management Program is being funded with GRTC administered FTA Section 5317 New Freedom funds, the service area will be the Richmond Urbanized Area (use of these funds is primarily for the Richmond Urbanized Area). Note that Senior Connections submitted its application for FTA Section 5317 funds on June 24, 2009, and it submitted a revised application in April/May 2010 (revised application was reviewed, scored and approved by the

Application Project Review and Selection Committee between May and September 2010).

DRPT also maintains and conducts a mobility management training program and has encouraged area human service agencies and organizations to participate in these training programs and work with other human service agencies and organizations to share and coordinate their limited transportation resources to have more effective and efficient services. DRPT is also encouraging human service agencies and organizations to utilize private transportation operators. Note that Chesterfield County contracts with the private company Van Go, Inc., which operates the Access Chesterfield program for qualified elderly, disabled and low-income Chesterfield County residents.

It should also be noted that Hanover County has been working with Quin Rivers (Community Action Agency for Charles City and New Kent counties) and Bay Area Transit (which provides public transportation and human service agencies bus and van services to Charles City and New Kent counties, and to other jurisdictions in the Northern Neck and Middle Peninsula regions) to develop a plan for certain types of public transportation. Further information on these efforts, activities and funding should be addressed as work on the Senior Connections Regional Mobility Management Program gets underway (program manager was hired in January 2012).

**B. End Product**

1. Update of the Coordinated Human Services Mobility (CHSMP) including the definition of the ongoing structure and process for future coordinated transportation planning efforts.
2. Ongoing participation in the GRTC administered FTA Sections 5316 and 5317 application review and scoring process.

**C. Work Elements**

Work activities include the following:

1. Work with GRTC, DRPT, DRPT's consultant (KFH Consultants), RRPDC, Crater PDC, and Senior Connections Regional Mobility Manager staffs, and the Richmond Region (i.e., PD 15) and Richmond Area and Tri-Cities Area MPOs CHSMP stakeholder work group to update the CHSMP including provision for an ongoing structure and process for future coordinated public transportation and human service agencies/organizations paratransit services planning efforts. Development of the ongoing structure and process for future coordinated human service agencies and organizations public transportation services should be determined through input from a diverse group of stakeholders that represent transportation, aging, disability, social service and other appropriate organizations in the Richmond and Tri-Cities regions. A proposed starting point for this effort will include participants from previous CHSMP

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development workshops and EDAC members, alternates and interested parties. While formal responsibilities and organization roles will be determined locally, it is anticipated this structure will:

- Lead updates of the Richmond Region and MPO and Tri-Cities MPO *Coordinated Human Service Mobility Plan* based on local needs (at the minimum FTA required cycle or earlier).
- Provide input and assist public transit and human service transportation providers in establishing priorities with regard to community transportation services.
- Review and discuss coordination strategies and provide recommendations for possible improvements to help expand mobility options.
- Provide input on applications for funding through the Section 5310, JARC, and New Freedom competitive selection process.

[Note work activities and responsibilities for this work element will need to be reviewed and assigned to appropriate staff agencies, i.e., GRTC, RRPDC, and/or Crater PDC, and/or to the DRPT consultant for the CHSMP Update.]

2. Ongoing RRPDC staff participation on the GRTC administered Project Review and Selection Committee for FTA Sections 5316 and 5317 funds applications.
3. Provide technical and administrative assistance to DRPT in conducting reviews of requests for FTA Section 5310 funds (including reviews of application procedures and addressing applicants' transportation needs including coordination with other area transportation providers and human service agencies and organizations).
4. Monitor and report to the MPO, EDAC and TAC on various public transportation services and programs for the elderly, disabled, and low-income persons in the Richmond Region.
5. Assist in notification and coordination of DRPT's regional CHSMP stakeholders/team meetings and provide limited technical assistance to interested applicants with grant applications.

### **D. Agency Participation**

RRPDC, DRPT, DRPT Consultant, VDOT, GRTC, Senior Connections, local governments, human service agencies/ organizations, public and private non-profit and private for-profit paratransit service operators, FTA.



**E. Budget, Staff and Funding**

	<u>5303</u>	FY 12 CO <u>5303</u>	<u>TOTAL</u>
RRPDC	15,000	5,000	\$20,000

**F. Schedule**

1. GRTC Administered FTA Sections 5316 and 5317 funds project review and application process – Initiated in March 2012 and completed by late FY 2012/early FY 2013.
2. Updated Richmond Region/Richmond Area and Tri-Cities Area MPOs' CHSMP – Initiated in late FY 2012/early FY 2013, and completed in FY 2013 (schedule to be submitted by DRPT).
3. Other CHSMP maintenance/review/support activities – Ongoing.

## 5.7 Broad Street Bus Rapid Transit (BRT) Study Alternatives Analysis

### A. **Project Description**

The Broad Street Bus Rapid Transit (BRT) Study Alternatives Analysis (AA) and Environmental Assessment will develop a detailed problem statement representing the purpose and need of the project from which project goals and objectives will be derived. The Alternatives Analysis will be conducted in accordance with the Environmental Assessment (EA) guidelines, as required by the National Environmental Protection Act (NEPA) of 1969.

A definition of alternatives will be developed to: 1) meet the study's problem statement goals and objectives for the improvements, 2) isolate the differences between potential solutions to an identified transportation problem, and 3) highlight the tradeoffs inherent in the selection of a locally-preferred alternative (LPA). The "build" and Transportation System Management (TSM) alternatives will be included in the definition of alternatives report and will be directly related to and address the "purpose and need" of the project. An "Evaluation of Alternatives" report will be developed in a manner that will provide the information necessary for local officials and the general public to understand the relative costs and benefits among the alternatives and to ultimately select the LPA. The evaluation framework will focus on the transportation problems identified in the project's purpose and need and will reflect the corresponding project goals and objectives that will fundamentally drive the alternatives analysis. A detailed station area analysis will be conducted to identify appropriate station locations and assess the adjacent land-use compatibility. Ridership forecasts will be developed to contribute to the evaluation of the alternatives. Detailed capital and operating costs will be developed to reflect each alternative, along with a preliminary financial plan. The financial plan will reflect the recent financial history of GRTC, document projected costs and revenues into the future, and demonstrate the reasonableness of key assumptions underlying these projections. The financial plan will aid decision makers in understanding the costs associated with constructing, operating and maintaining each of the alternatives on an annual basis.

The BRT alternatives analysis study area is along the Broad Street Corridor starting at Willow Lawn (in Henrico County) extending east on Broad Street in the City of Richmond to downtown, then proceeding along the Route 5 corridor to the Rocketts Landing development in the City of Richmond and Henrico County.

The Project Team collaborated with a Policy Advisory Committee (PAC) and a Technical Advisory Committee (TAC) that is comprised of representatives from the City of Richmond and Henrico County, as well as representatives from the Virginia Commonwealth University (VCU), the Convention Center, the MPO, in developing the BRT study alternatives analysis. In addition, public outreach and communications to the public have helped to facilitate DRPT's and GRTC's ability to gain public involvement and input throughout the AA and EA planning and project development process.

As of mid-FY 2012, the study/project is near the point at which there will need to be a local commitment of funds of approximately \$17 million by the City of Richmond and Henrico County in order to move this project forward (note that the project cost as shown in the TDP is \$70 million). An economic impact analysis of the proposed new BRT service is being conducted and should be completed in FY 2012. GRTC expects the information from this analysis should help GRTC in securing local financial commitments. GRTC is also waiting on FTA approval of the alternatives analysis document. After GRTC receives this FTA approval, it can be submitted to the MPO for its review and action in establishing the “Locally Preferred Alternative” (one of the requirements for submission of an application to FTA for federal New Starts/Small Starts Program funding).

**B. Project Budget**

In FY 2009, DRPT and GRTC programmed \$720,000 flexible STP (allocated by the state) and local match of \$180,000 (\$90,000 state and \$90,000 GRTC). In FY 2010 DRPT and GRTC programmed \$873,142 of Section 5304 funding (allocated by the state) and local match of \$180,000 (allocated by GRTC) to provide an additional \$1,053,142 of funding to the project. The total project budget between FY 2009 and FY 2010 is \$1,953,142. No additional funds have been programmed in FY 2011 and FY 2012.

**C. Schedule**

To be determined when FTA New Starts/Small Starts funding request is submitted.

**5.8 Richmond Area Rail Studies and Projects**

The following presents a brief informational report on statewide and Richmond Region passenger rail studies and projects.

**Virginia State Rail Plan**

The *Virginia Statewide Rail Plan* analyzes the current state of Virginia’s rail system and recommends segments for improvement. The *Virginia Statewide Rail Plan* has been developed in accordance with guidelines (49 CFR 266.15) set out by the Federal Railroad Administration (FRA) for state plans in order to ensure that Virginia’s rail plans are consistent with federal funding requirements. The *Virginia Statewide Rail Plan* has been incorporated into the Commonwealth’s long-range multi-modal transportation plan, *VTrans 2035*.

The draft Rail Plan was made available for public comment in June 2008 and public hearings were held across the state and comments were received through August 2008. The *Virginia Statewide Rail Resource Allocation Plan* was released in December 2008 to assist in programming funds. The *Virginia Statewide Rail Plan* was completed in December 2008.

**Southeast High Speed Rail – Raleigh to Richmond**

In cooperation with the North Carolina Department of Transportation (NCDOT), the Virginia Department of Rail and Public Transportation (DRPT) continues to advance high speed rail in Virginia, and the Commonwealth’s contributions toward the Southeast High Speed Rail Project will:

- Evaluate high speed passenger rail service on the designated high speed rail corridor from Raleigh, N.C. through Richmond to Washington, D.C.;
- Evaluate the high speed rail connection between Hampton Roads and Richmond’s Main Street Station;
- Provide passengers with a more cost-effective, competitive alternative to air travel; and
- Connect Virginia to the Northeast Corridor, the only active high speed rail corridor operating in North America.

The Commonwealth, Amtrak, and CSX will coordinate all project-related rail improvements and operations. The project will be managed through a public-private partnership between the Commonwealth, North Carolina, CSX, Norfolk Southern and federal partners. DRPT is coordinating with the NCDOT to complete the Tier II Environmental Impact Statement (EIS) and seek a federal Record of Decision for railway and associated highway design in the corridor from Richmond Main Street Station to Raleigh, N.C. The draft Tier II EIS has been completed and public hearings were held during the summer of 2010. The final Tier II EIS is expected to be completed in early to mid-2012. A Record of Decision from the U.S. Federal

Rail Administration (FRA) for this segment of the SEHSR corridor is expected in 2012. This action would be followed by right-of-way and permit acquisitions. Right-of-way and construction dates will depend on funding. Project sponsors are projecting high speed rail passenger service, pending sufficient funding, could potentially commence during the 2018 – 2022 time period. Note that the Petersburg to Norfolk extension of the Southeast High Speed Rail Corridor is advancing under the Hampton Roads EIS.

**Southeast High Speed Rail – Richmond to Washington, D.C.**

On May 27, 2009, DRPT announced that the high speed rail route between Main Street Station and Doswell (Hanover County) was established following the completion of an environmental study to select the most feasible route between these two points. The study looked at an eastern route, which followed the Buckingham Branch line, and a western route, which followed the CSX rail line (which currently serves Amtrak routes). FRA notified DRPT on May 13, 2009 that findings from the environmental study were confirmed and that the eastern route may be dismissed from further consideration. With this announcement, the SEHSR corridor from Main Street Station north to Washington, D.C. was now defined. On August 10, 2010, DRPT announced that it had submitted an application for funding from FRA to advance development of the portion of the Southeast High Speed Rail Corridor (SEHSRC) from the Main Street Station to Washington, D.C. The application was for \$55.385 million (\$44,308,000 in federal funding and \$11,077,000 in non-federal match) to conduct preliminary engineering and National Environmental Protection Act (NEPA) EIS activities along this corridor. DRPT also submitted an application of approximately \$1.5 million for preliminary engineering/final design of a new rail bridge across the Appomattox River in Chesterfield County and the City of Petersburg. On October 29, 2010, Virginia Senator Jim Webb announced that \$45.4 million in federal transportation grant funds to develop high speed passenger rail service between Richmond/Petersburg and Washington, D.C. were approved.

In FY 2011, DRPT provided the MPO the following timeline for developing high speed rail in the Richmond area to Washington, D.C. corridor:

- Conduct preliminary engineering and Tier II EIS (from EIS to Record of Decision) – 2012 to 2020
- Negotiate with railroad and apply for federal funds for construction – 2020 to 2021
- Receive federal funding and obligate funds – 2021 to 2022
- Construction – 2022 to 2029
- Service begins – 2034

The Arkendale to Powell’s Creek (in Northern Virginia Section of rail corridor), third main line track covering 11 miles, has been fully funded by ARRA (\$75 million). Negotiations with FRA and CSX, however, are still underway (as of mid-FY 2012).

**Richmond to Hampton Roads Passenger Rail Project**

The DRPT is pursuing improved passenger rail service in the major east-west travel corridor between Richmond and the Hampton Roads regions of Virginia, to ultimately connect to the Southeast, Northeast and Mid-Atlantic regions as an extension of the Southeast High Speed Rail Corridor. This potential project could include improvements to existing service or the development of new rail service to accommodate frequent passenger trains. New service could include a link to Hampton Roads via Route 460, rail improvements to existing lines in or around Petersburg. VDPRT completed a series of public meetings on the Tier I Draft Environmental Impact Statement document on alternatives for Richmond to Hampton Roads passenger rail service. The Richmond Area MPO took action at its February 11, 2010 meeting to endorse Alternative One of the Tier I Draft EIS and noted its further support of high speed rail, which is summarized as follows:

- Reaffirms the MPO's strong support for the extension of high speed rail in the Washington, D.C. to Richmond Region corridor followed by high speed rail from the Richmond Region east to the Hampton Roads Region and south along the Southeast High Speed Rail corridor.
- Supports high speed rail capable of more than 110 mph along the U.S. Route 460 corridor connecting Richmond to Norfolk.
- Supports enhancing passenger rail along the Peninsula I-64 corridor from Richmond to Hampton Roads.
- Urges DRPT to move forward as quickly as possible to complete all plans and programs for high speed rail in the Washington, D.C. to Richmond Region corridor.
- Pledges MPO support to assist DRPT in its efforts to secure high speed rail funding for service throughout the state.

The Commonwealth Transportation Board (CTB) took action at its February 18, 2010 meeting to select Alternative One as the preferred alternative. Following FRA review and action, DRPT plans to proceed with developing the final draft EIS based on Alternative One as the Preferred Alternative.

The CTB has also approved (as of January 2012) \$102,606,691 of state Rail Enhancement Funds for the restoration of conventional passenger rail service between Richmond/Staples Mill Road Station and Norfolk via the Ettrick Station in Chesterfield County. The corridor being developed for this service is ultimately being planned by the state for high speed passenger rail service that would connect with Southeast, Northeast and Mid-Atlantic regions as an extension of the SEHSRC. This project could include potential improvements to existing rail stations or development of new passenger rail stations to accommodate conventional passenger trains. On December 20, 2010, it was announced that the state and Norfolk Southern Corporation (NS) have signed an agreement to upgrade the company's railroad track between Petersburg and Norfolk in order to accommodate passenger trains. The track work includes improved signaling, track extensions and connections, passenger

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train turning and servicing facilities, and a track and platform near Norfolk's Harbor Park. It also includes a new connection between NS and CSX tracks near Petersburg. Construction is expected to be completed with the new service expected to start in December 2012. The trains will be part of Amtrak's Virginia regional service and will operate at up to 70 mph between Norfolk and Petersburg. Initial service is expected to have three departures.

**6.0 INTERMODAL PLANNING**

**6.1 Intermodal Planning**

**A. Background**

With the passage of SAFETEA-LU and growing concern over the movement of freight through the Richmond Region, there is a renewed interest and need to address freight transportation issues and needs. Part of this need has been addressed under work being conducted by VDOT to develop the statewide Multimodal Freight Study. This effort was initiated in October 2006 with a Phase One report being completed in early 2008. The Phase Two report was completed in April 2011 with recommendations incorporated into the VTrans 2035 Statewide Transportation Plan. The Statewide Multimodal Freight Study provides a comprehensive look at Virginia's freight issues covering all transportation modes at statewide and corridor levels, and all types of freight movement (local/regional and through).

VDOT provided the MPO with 2004 commodity flow data for the Richmond Region (provided to VDOT under contract with Global Insight, Inc.). Staff was able to use this data for an analysis of region-wide freight data (examining commodity flow data by load, tonnage and value) in the 2031 LRTP Update. Note this is proprietary data and staff reviewed proposed tables and data included in the 2031 LRTP with VDOT before its release and publication.

In May 2010, the MPO's Intermodal Strategies and Action Study was completed. Work on this study was initiated in October 2008 and was funded under a VDOT Multimodal Planning Grant (i.e., state funds). It identifies roadway designations and policy measures to improve accommodation of current and future truck traffic and presents a summary of infrastructure improvement projects. These strategies and actions will help the MPO in addressing various regional freight movement needs and has been included as part of the 2035 LRTP and CMP Update. In addition, project recommendations may also be considered for funding (following the state and the MPO's process for reviewing and selecting projects and allocating and obligating funds).

A major innovation in freight movement, initiated by the Richmond Area MPO, has been the highly successful "64 Express" James River Barge service operating between the Port of Richmond and Hampton Roads marine terminals. The service concept was proposed in November 2007 and the service was launched in December 2008 as a cooperative venture by the MPO, the Port of Richmond, the Virginia Port Authority (VPA), and Norfolk Tug. It has provided once or twice weekly service transporting about 100 to 160 truck containers. During its first year of operation (ending December 2009),



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approximately 6,000 truck containers were moved by barge on the 64 Express. It also removes oversize and overweight containers from the Region's roads and provides 30-plus gallons of diesel fuel saved per trip. The MPO initiated the 64 Express service by allocating approximately \$3.9 million in federal and state CMAQ funds for a three-year demonstration period. In FY 2011, RRPDC staff assisted VPA and the City of Richmond in discussions on VPA's proposed lease of the Port of Richmond from the City. VPA entered into a five-year lease arrangement (with options for future renewals) with the City of Richmond to manage and operate the Port of Richmond. This lease went into effect on July 1, 2011. Note that the City's Port of Richmond Commission has been disbanded. With the Port of Richmond now under VPA operation, areas adjacent to the port terminal as well as other areas in the City of Richmond plus Chesterfield and Henrico counties should become more attractive locations for warehousing and distribution centers. Note that several actions were taken during the 2011 General Assembly session for various tax credits (i.e., SB 1282, SB 1136 and HB 2531/SB1481) that provide direct and indirect economic incentives for shipping truck containers by barge on the 64 Express. Also, during the 2012 General Assembly session, legislation will likely be passed (SB 578) which provides for the creation of an economic development zone along the U.S. Route 460 corridor and extends to include a connection to the U.S. Route 1/I-95 corridor that covers Chesterfield County and South Richmond (including areas adjacent to and near the VPA Port of Richmond terminal). Staff anticipates that SB 578 will provide tax credits and other economic incentives for certain types of businesses that would use the 64 Express barge service at the VPA Port of Richmond terminal, and this should help stimulate significant economic development in this part of the Richmond Region.

In FY 2012, RRPDC staff will work with the City of Richmond, VPA, DRPT, and VDOT in addressing highway and rail access issues at the VPA Port of Richmond terminal. Staff will also coordinate the MPO's transportation planning and programming work with the Regional Comprehensive Economic Development Strategies (CEDS). Work on the Richmond Regional CEDS was initiated in early FY 2012. The RRPDC established a CEDS Strategy Committee, which held its first meeting in January 2012. The committee consists of local economic development directors, community business leaders, and representatives from work force development boards, institutions of higher education, minority and labor groups, and private sector businesses. The Richmond Region CEDS will result in an overall economic development strategy and plan of action to identify regional economic strengths, opportunities and infrastructure needed for regional economic development. Following its approval, jurisdictions are eligible to apply for EDA funding. The Richmond Regional CEDS is scheduled to be completed by July 2013. This plan will need to be updated on a regular basis (at least once every five years) in order for the Richmond Region to maintain its status as being qualified for EDA grants and applications. Note that work on the Richmond

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Regional CEDS is being conducted by RRPDC staff. The RRPDC received an EDA grant of \$75,000 (matched by at least \$75,000 in RRPDC funds) to conduct the Richmond Regional CEDS.

The RRPDC is also active on “Richmond’s Future” an independent think tank organization chaired by Dr. Eugene P. Trani, President Emeritus and University Distinguished Professor for Virginia Commonwealth University. Richmond’s Future has identified logistics related to the warehousing, processing and distribution of freight as a major economic development opportunity for the Richmond Region. With the 64 Express James River barge service, increasing traffic congestion along I-64 and Route 460 out of Hampton Roads, and the significant increase in truck container traffic through VPA’s Hampton Roads marine terminals (associated with improved economic conditions and the upcoming expansion of the Panama Canal) the Port of Richmond is expected to see significant increases in truck container traffic. The Richmond Region should plan to take advantage of these conditions, and Richmond’s Future is working with area government leaders and businesses to facilitate appropriate plans and projects.

### **B. End Products**

Ongoing technical support for regional and state multi-modal transportation planning activities, projects and programs.

### **C. Work Elements**

1. VPA Port of Richmond Terminal Strategic Economic Development – RRPDC staff to review with the City of Richmond and Virginia Port Authority staffs and officials, and with other interested parties, revisions/updates to capital facility plans and programs. Staff will also assist in strategic development activities and rail and roadway access improvements to and from the Port of Richmond terminal. Staff will also coordinate with the City of Richmond and VPA in continuing and expanding the “64 Express” James River Barge Service.
2. Intermodal Economic Development Coordination – Coordinate MPO intermodal economic development activities with work underway as part of the Richmond Regional CEDS.
3. Intermodal Strategies and Actions – Provide technical and administrative assistance in carrying out program activities identified in the *2010 Intermodal Strategies and Action Study*. Work activities will include working with Richmond’s Future and their Logistics Task Force, other freight system users, and local, regional and state government organizations to refine and prioritize projects, transportation programs and other infrastructure needs to support

growth in manufacturing, distribution, and logistics related users in the region. This work will be accomplished through small group meetings with results presented in an annual forum. The small group meetings will include freight users of various modes, shippers, and other interested parties. Consideration should be given for coordinating the annual forum as a component of the Virginia Freight Summit (inaugural Summit was held December 2011). Input and recommendations received from these meetings will be incorporated into future long-range transportation plan revisions, strategic plan development supporting the VPA Port of Richmond terminal, and in addressing road and rail access issues throughout the region.

**D. Agency Participation**

RRPDC, VDOT, DRPT, Crater PDC, CRAC, VPA, local governments, FHWA, MARAD, public and private shippers/freight operators.

**E. Budget, Staff and Funding**

	<u>PL</u>
RRPDC	\$32,000

**F. Schedule**

Ongoing

**7.0 AIR QUALITY PLANNING**

**7.1 Air Quality Plan and Program Activities**

**A. Background**

The Clean Air Act Amendments (CAAA) of 1990 present serious air quality improvement challenges to almost all of the nations mid-size to major metropolitan areas. To meet this challenge, the state has pursued a program of reduction measures, which includes various stationary source control measures, stage 2-vapor recovery, clean fuels, and other measures.

In FY 1995, the Metropolitan Richmond Air Quality Committee (MRAQC) was established as the Section 174 Lead Planning Organization (LPO) based on appointments by the Governor's office. Representation on MRAQC includes local elected officials from non-attainment area jurisdictions (i.e. Richmond, Henrico, Chesterfield, Hanover, Charles City, Colonial Heights, Hopewell and Prince George), from the Richmond and Tri-Cities Area MPOs, the Crater and Richmond regional planning district commissions and agency representatives from VDOT and VDEQ. The role of the LPO is established and defined in general terms in Section 174 of the CAAA. It is also described in the Richmond Area and Tri-Cities Area Memorandum of Understanding (MOU) for Air Quality and Transportation Planning Coordination. Section 174 of the CAAA provides that the LPO shall prepare the state implementation plan (SIP) revisions, and determine those elements of the SIP to be implemented by the state, local governments, regional agencies, and others. In FY 1997, VDEQ staff submitted a request to EPA for designating the area to attainment status. In November 1997 EPA issued notice in the Federal Register noting the Richmond Area to be in attainment status for ozone air quality standards and was designated as a Maintenance Area. However, EPA designated the Richmond area (i.e., City of Richmond, Petersburg, Colonial Heights and Hopewell, and counties of Charles City, Chesterfield, Hanover, Henrico, and Prince George) to be a marginal nonattainment area for ozone air quality standards. The Richmond area nonattainment designation went into effect on June 15, 2004 with its status being set at a marginal level shortly after that time (Richmond was a moderate nonattainment area at one time under EPA's one-hour ozone air quality standards).

In FY 05, VDEQ reconstituted the Metropolitan Richmond Air Quality Committee (MRAQC) which is the Lead Planning Organization (LPO) under Section 174 of the CAAA. Appointments of local elected officials and agency members were made in FY 05 and MRAQC held its first meeting in November 2005 (FY 06) initiating work to develop the region's State Implementation Plan (SIP). At its May 10, 2006 meeting, action was taken to approve proposed control strategies (as part of the extension of the Richmond nonattainment area into the newly added areas, which are the City of

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Petersburg, Prince George County, and the remaining area of Charles City County; previously only a small part of Charles City County was in the nonattainment/maintenance area). MRAQC also took action to approve contingency measures (required as part of the contingency plan included in VDEQ's request for redesignation of the Richmond nonattainment area to attainment/maintenance status).

In March 2008, EPA finalized and set the new 8-hour ozone standard to 0.075 parts per million (it was previously set at 0.08 ppm). As a result of this change and based on the past three years of data exceeding these new standards, the Richmond and Tri-Cities Maintenance Area jurisdictions (i.e., Richmond, Henrico, Hanover, Chesterfield, Charles City, Petersburg, Colonial Heights, Hopewell, and Prince George) were expected to be redesignated to nonattainment status. However, on September 16, 2009, EPA announced that it would reconsider the 2008 ozone standard and area designations (under the new 0.075 ppm standard) were put on hold. On June 2, 2010, EPA proposed it was proceeding to develop a new lower standard within the range of 0.060 ppm to 0.070 ppm. EPA was expected to have the final standard set and announced by July 31, 2011. However, on September 2, 2011, President Obama announced that the new proposed standards were withdrawn and EPA would now move forward with the implementation of the 2008 standard of 0.075 ppm (which had been on hold since the announcement of the standard reconsideration in 2009). In addition, the Richmond area experienced relatively good air quality readings in the previous three years (i.e., 2009 to 2011) and DEQ submitted a revised area recommendation request to EPA on November 21, 2011 asking for the Richmond area to be designated as an attainment area. EPA Region III responded on December 9, 2011 that based on preliminary 2009 – 2011 air quality data and other relevant technical information, EPA intends to designate the Richmond area as “unclassifiable/attainment.” After considering additional information it has and may receive on this matter, EPA plans to promulgate final ozone designations in the spring of 2012. It should be noted that the Richmond area status could be formally designated as in attainment at that point.

This work task also provides for RRPDC and VDOT staff work activities for conducting air quality conformity analysis in support of the TIP and LRTP. VDOT is responsible for conducting the air quality conformity analysis using the MOBILE 6.2 model (used to determine the amount of Nitrogen Oxides and Volatile Organic Compounds emissions that are attributable to the region's highway and transit networks). Note that starting in March 2013, VDOT will be required to use EPA's new emissions analysis model “MOVES 2010” (Motor Vehicle Emission Simulator, first released for use in 2010). The RRPDC staff is responsible for developing the vehicle miles of travel (VMT) input for MOBILE 6.2 and MOVES2010 (staff will be using the regional travel demand model). RRPDC staff is also responsible for conducting the public review process when an air quality conformity analysis

is conducted, and also provides staff support for TIP, LRTP, and TIP/LRTP amendments (when appropriate) review and coordination.

Staff work activities includes identification of projects, project descriptions, submission of socioeconomic data and forecasts, coordinate/conduct project reviews with local staff and other administrative and coordination activities.

**B. End Products**

Technical and administrative support for MPO activities involving development of maintenance/non-attainment area state implementation plan and air quality conformity analysis.

**C. Work Elements**

1. Monitor air quality data for the Richmond area, and review EPA and Virginia Department of Air Pollution Control reports, guidelines, regulations, etc.
2. Conduct work activities in support of MRAQC – Includes work with VDEQ and VDOT staffs to review proposed changes to the nonattainment area source emission budgets (for VOC and NO<sub>x</sub> emissions). Note that the emission budgets establish the benchmark or target which must be met in order to have a conforming LRTP and TIP. Changes to the area's emission budgets should be reviewed and recommended by TAC and it must be submitted for MRAQC review and approval (budgets established for transportation, point, area-wide, biogenic and other sources).
3. New Air Quality Conformity Analysis Model – Work with VDOT Environmental Division staff to coordinate the implementation of the new air quality conformity analysis model (i.e., “MOVES”) with the Richmond/Tri-Cities MPOs regional travel demand model, and to gain an understanding of its use and applications for air quality conformity analysis. Implementation of the new MOVES conformity analysis model is scheduled to take effect on March 2, 2013 (i.e., any LRTP, TIPs, or amendments to the LRTP or TIP involving regionally significant projects that are initiated on or after March 2, 2013 will be required to utilize the new MOVES model).
4. Computer modeling using the regional travel demand model for development of VMT data required for maintenance plan/nonattainment area plan implementation [RRPDC].
5. Conduct air quality conformity analysis activities in support of the TIP and LRTP (RRPDC and VDOT work task). Conformity analysis for LRTP and TIP amendments are conducted as needed. Note that due to

the length of time and staff effort required to conduct this analysis (e.g., modify RTDM networks, run the RTDM and provide output to VDOT for the conformity analysis model, ICG meetings, TAC meetings, public review, MPO review and action, and state and federal agencies reviews and action), staff expects to conduct a conformity analysis process (for proposed LRTP and TIP amendments to include regionally significant projects) no more than one time a year [RRPDC and VDOT; RRPDC to develop VMT input for conformity analysis and conduct review process].

**D. Agency Participation**

RRPDC, VDOT, DRPT, VDEQ, MRAQC, GRTC, RideFinders, local governments, FHWA, EPA, FTA, and Tri-Cities MPO.

**E. Budget, Staff, and Funding**

	<u>PL</u>
RRPDC	\$17,000

**F. Schedule**

Ongoing activity

**8.0 BICYCLE AND PEDESTRIAN PLANNING**

**8.1 Bicycle and Pedestrian Planning**

**A. Background**

This task provides RRPDC staff time in support of work by area groups, organizations and local governments to advance bicycle and pedestrian studies, programs and projects in the Richmond Region.

Efforts to improve bicycle and pedestrian access, whether on or off-road are in keeping with the Virginia Department of Conservation and Recreation 2007 Outdoors Plan, the 1993 Regional Greenways Plan, and various efforts already underway in the Region. The Virginia Capital Trail is nearing completion except for a portion in Henrico County (west of I-295) which is currently under review. The East Coast Greenway (ECG), a continuous path from Florida to Maine, requires a regional thoroughfare through this region and needs a local effort to support it. The James River Heritage Trail (JRHT) is shown running along the south shore of the James River in Chesterfield and Powhatan counties and the City of Richmond. Both the ECG and the JRHT are shown in the Virginia Outdoors Plan as proposed trails.

As part of the MPO's 2035 LRTP and CMP updates, staff is proposing a new approach in developing a regional network of bicycle and pedestrian routes and facilities. Note that a comprehensive evaluation of the region's roadway network was conducted as part of the Richmond Regional Bicycle and Pedestrian Plan (accepted as work received at the July 2, 2004 MPO meeting, with technical training and report follow-up activities, and with portions incorporated into the 2031 LRTP Update). The draft 2035 LRTP Update identifies current major regional/multi-state (e.g., U.S. Routes 1 and 76, East Coast Greenway and Virginia Capital Trail) facilities and designated routes to identify the region's major bicycle/pedestrian network. It also takes a "bottom-up" approach with local governments developing bicycle and pedestrian facilities, designating and signing bicycle routes and multi-use trails (not recreational trails) that can eventually be linked to establish a well-defined regional bicycle and pedestrian network. The draft 2035 LRTP also looks at regional demographic characteristic (e.g., area concentrations of households with zero or one car only) to identify areas where bicycle and pedestrian projects have a higher need. The GRTC transit service area is also identified with the intent of improving pedestrian and bicycle access to GRTC bus service. The draft 2035 LRTP Update also reviews how bicycle and pedestrian facilities are addressed in local government comprehensive plans, reviews their subdivision and zoning ordinances to identify implementation tools for bicycle and pedestrian facilities, and identifies the jurisdiction's existing and proposed bicycle and pedestrian corridors.

Staff work activities will include meeting with advocacy groups and organizations, local government staffs and officials, and others to review and



discuss proposals, studies and plans for development of a regional network of bicycle and pedestrian routes and facilities.

**B. End Products**

1. Development of jurisdiction level inventories for bicycle and pedestrian routes and facilities.
2. Participation in various groups and organizations in support of and to assist in the development of local and regional bicycle and pedestrian routes and facilities.
3. Reports for the MPO's Regional Transportation and Land-Use Performance Measures for bicycle and pedestrian related measures and targets.

**C. Work Elements**

Federal legislation requires that MPO activities provide for all means of transportation, "including accessible pedestrian walkways and bicycle transportation facilities". This task helps to satisfy federal regulations by ensuring that there are a sufficient number of projects which minimize transportation-related fuel consumption and air pollution, and which protect and enhance the environment and improve quality of life (23 CFR sec 450.300 (a) and 450.306 (a)(2), (3), (5) and (6)). Also, note that at a minimum, the MPO's metropolitan transportation plan (i.e., LRTP) shall include existing and proposed transportation facilities that include "pedestrian walkways and bicycle facilities" with these and other transportation modes functioning "...as an integrated metropolitan transportation system giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan."

Work activities include the following:

1. Initiate work on jurisdiction level inventories of existing, planned, and programmed bicycle and pedestrian facilities (staff to work first with one local government to serve as a template for other jurisdictions inventories).
2. Conduct review of census (American Community Survey) Journey to Work data to identify the number and percent of residents who walk to work (note this is one of the MPO's Regional Performance Measures which responds to the General Assembly's performance measure for Job and Housing Access to Pedestrian Facilities).
3. Participation in National Park Service, Virginia Department of Conservation and Recreation, Sports Backers and other groups and organizations meetings/work activities for regional/multi-state facilities

(e.g., East Coast Greenway, James River Heritage Trail, etc.) and other pedestrian and bicycle plans, programs and studies.

4. GRTC Transit Service Area Bicyclists and Pedestrian Access Improvements – As part of FTA grant programs that involve pedestrian and bicyclists access to transit services, FTA has issues guidelines that establish a recommended service area to plan for pedestrian and bicyclist access (i.e., one-half mile for pedestrians and three miles for bicyclists). Staff will work with GRTC and area local governments to promote these programs and planning considerations, and may also identify a limited number of areas where improved pedestrian and bicyclist access should be studied in order to identify projects that can improve safe and efficient access to GRTC transit services.

**D. Agency Participation**

RRPDC, VDOT, DRPT, GRTC, FHWA, National Park Service, local governments and interested parties (e.g., Richmond Area Bicycling Association, etc.)

**E. Budget, Staffing and Funding**

	<u>PL</u>	<u>5303</u>	FY 12 CO <u>5303</u>	<u>TOTAL</u>
RRPDC	18,000	5,000	5,000	\$28,000

**F. Schedule**

Ongoing activity.

**AGENCY BUDGET SUMMARY SHEET  
FHWA PL/SPR; FTA SEC 5303; FHWA RSTP  
FY 2013 UWP - RICHMOND AREA MPO**

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Task No/ Abbrev	RRPDC			VDOT SPR	OTHER	TOTAL					GRAND TOTAL
	PL	5303	CO 5303			PL	SPR	5303	CO 5303	OTHER	
1.1 MPO Maint	460,881	19,274	3,821	220,000	-	460,881	220,000	19,274	3,821	-	703,976
1.1 Conting.	-	-	-	-	-	-	-	-	-	-	-
1.2 Citi Partic	95,000	20,000	10,000	-	-	95,000	-	20,000	10,000	-	125,000
1.3 UWP	85,000	10,000	-	-	-	85,000	-	10,000	-	-	95,000
2.1 Data	30,000	5,000	-	-	-	30,000	-	5,000	-	-	35,000
2.2 LRTP	130,000	30,000	-	-	-	130,000	-	30,000	-	-	160,000
2.3 RTDM	85,000	10,000	10,000	-	-	85,000	-	10,000	10,000	-	105,000
2.5 TD/GIS	60,000	-	-	-	-	60,000	-	-	-	-	60,000
2.8 Rt. 5 Study	20,000	5,000	5,000	-	-	20,000	-	5,000	5,000	-	30,000
2.9 City SMTP (1)	-	-	-	-	448,000	-	-	-	-	448,000	448,000
3.1 CMP	90,000	10,000	-	-	-	90,000	-	10,000	-	-	100,000
3.3 ITS	34,000	5,000	-	-	-	34,000	-	5,000	-	-	39,000
4.1 TIP	180,000	20,000	10,000	-	-	180,000	-	20,000	10,000	-	210,000
5.2 E&D TNS	-	50,000	10,000	-	-	-	-	50,000	10,000	-	60,000
5.5 RPTS	-	50,000	10,000	-	-	-	-	50,000	10,000	-	60,000
5.6 CHSMP	-	15,000	5,000	-	-	-	-	15,000	5,000	-	20,000
5.7 RBRT (2)	-	-	-	-	-	-	-	-	-	-	-
5.8 Rail (2)	-	-	-	-	-	-	-	-	-	-	-
6.1 IM Plg.	32,000	-	-	-	-	32,000	-	-	-	-	32,000
7.1 Air Q. Plg.	17,000	-	-	-	-	17,000	-	-	-	-	17,000
8.1 Bike/Ped Plg.	18,000	5,000	5,000	-	-	18,000	-	5,000	5,000	-	28,000
<b>TOTAL (\$)</b>	<b>1,336,881</b>	<b>254,274</b>	<b>68,821</b>	<b>220,000</b>	<b>448,000</b>	<b>1,336,881</b>	<b>220,000</b>	<b>254,274</b>	<b>68,821</b>	<b>448,000</b>	<b>2,327,976</b>

NOTE: (1) Work conducted by consultants (UWP information item). City of Richmond planning study funded with MPO allocated RSTP funds.  
(2) Work conducted by consultants (UWP information item).

**FUNDING SOURCES SUMMARY SHEET  
FHWA PL/SPR; FTA SEC 5303; FHWA RSTP  
FY 2013 UWP - RICHMOND AREA MPO**

Task No./ Abbrev.	PL		SPR		5303		CO 5303		OTHER		TOTAL		GRAND TOTAL
	Federal	State/Local	Federal	State	Federal	State/Local	Federal	State/Local	Federal	State/Local	Federal	State/Local	
1.1 MPO Maint	368,705	92,176	176,000	44,000	15,419	3,855	3,057	764	-	-	563,181	140,795	703,976
1.1 Conting.	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2 Citi Partic	76,000	19,000	-	-	16,000	4,000	8,000	2,000	-	-	100,000	25,000	125,000
1.3 UWP	68,000	17,000	-	-	8,000	2,000	-	-	-	-	76,000	19,000	95,000
2.1 Data	24,000	6,000	-	-	4,000	1,000	-	-	-	-	28,000	7,000	35,000
2.2 LRTP	104,000	26,000	-	-	24,000	6,000	-	-	-	-	128,000	32,000	160,000
2.3 RTDM	68,000	17,000	-	-	8,000	2,000	8,000	2,000	-	-	84,000	21,000	105,000
2.5 TD/GIS	48,000	12,000	-	-	-	-	-	-	-	-	48,000	12,000	60,000
2.8 Rt. 5 Study	16,000	4,000	-	-	4,000	1,000	4,000	1,000	-	-	24,000	6,000	30,000
2.9 City SMTP (1)	-	-	-	-	-	-	-	-	358,400	89,600	358,400	89,600	448,000
3.1 CMP	72,000	18,000	-	-	8,000	2,000	-	-	-	-	80,000	20,000	100,000
3.3 ITS	27,200	6,800	-	-	4,000	1,000	-	-	-	-	31,200	7,800	39,000
4.1 TIP	144,000	36,000	-	-	16,000	4,000	8,000	2,000	-	-	168,000	42,000	210,000
5.2 E&D TNS	-	-	-	-	40,000	10,000	8,000	2,000	-	-	48,000	12,000	60,000
5.5 RPTS	-	-	-	-	40,000	10,000	8,000	2,000	-	-	48,000	12,000	60,000
5.6 CHSMP	-	-	-	-	12,000	3,000	4,000	1,000	-	-	16,000	4,000	20,000
5.7 RBRT (2)	-	-	-	-	-	-	-	-	-	-	-	-	-
5.8 Rail (2)	-	-	-	-	-	-	-	-	-	-	-	-	-
6.1 IM Plg.	25,600	6,400	-	-	-	-	-	-	-	-	25,600	6,400	32,000
7.1 Air Q. Plg.	13,600	3,400	-	-	-	-	-	-	-	-	13,600	3,400	17,000
8.1 Bike/Ped Plg.	14,400	3,600	-	-	4,000	1,000	4,000	1,000	-	-	22,400	5,600	28,000
<b>TOTAL (\$)</b>	<b>1,069,505</b>	<b>267,376</b>	<b>176,000</b>	<b>44,000</b>	<b>203,419</b>	<b>50,855</b>	<b>55,057</b>	<b>13,764</b>	<b>358,400</b>	<b>89,600</b>	<b>1,862,381</b>	<b>465,595</b>	<b>2,327,976</b>

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