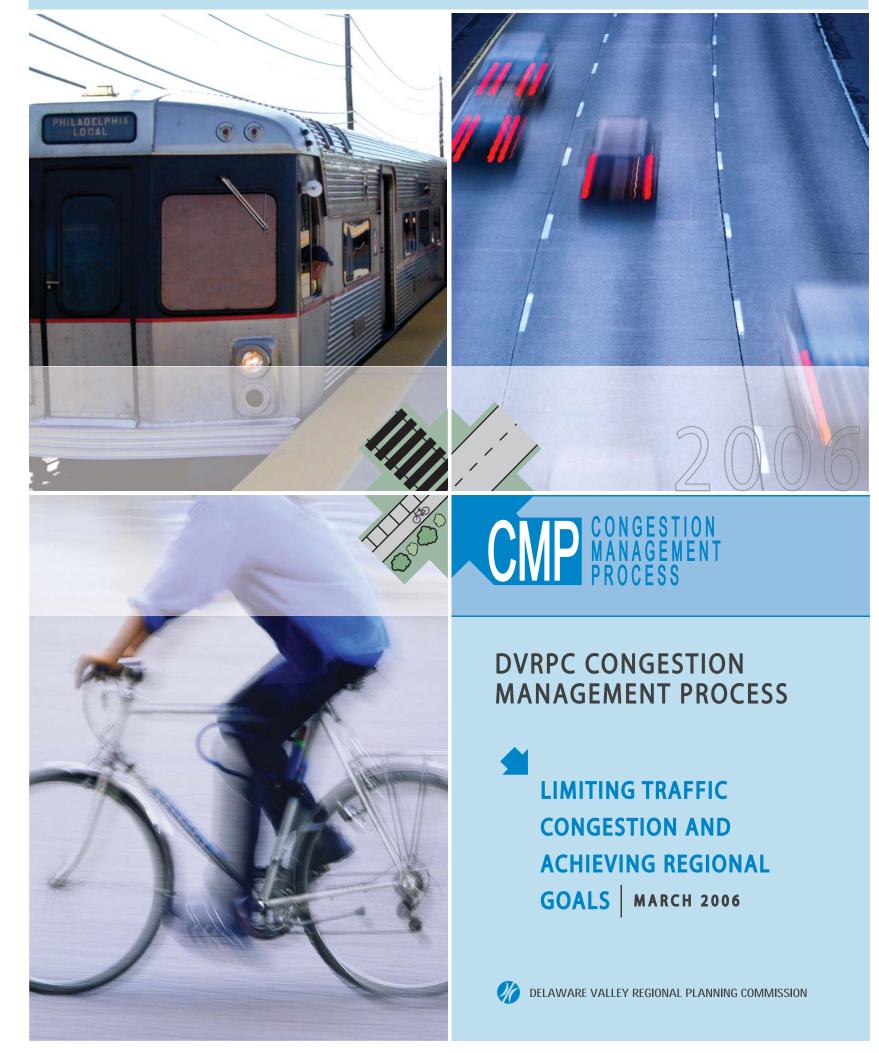
DVRPC CONGESTION MANAGEMENT PROCESS (CMP)





Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty and intercity agency that provides continuing, comprehensive and coordinated planning to shape a vision for the future growth of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties, as well as the City of

Philadelphia, in Pennsylvania; and Burlington, Camden, Gloucester and Mercer counties in New Jersey. DVRPC provides technical assistance and services; conducts high priority studies that respond to the requests and demands of member state and local governments; fosters cooperation among various constituents to forge a consensus on diverse regional issues; determines and meets the needs of the private sector; and practices public outreach efforts to promote two-way communication and public awareness of regional issues and the Commission.

Our logo is adapted from the official DVRPC seal, and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole, while the diagonal bar signifies the Delaware River. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey.

DVRPC is funded by a variety of funding sources including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), the Pennsylvania and New Jersey departments of transportation, as well as by DVRPC's state and local member governments. The authors, however, are solely responsible for its findings and conclusions, which may not represent the official views or policies of the funding agencies.

# DVRPC 2006 CONGESTION MANAGEMENT PROCESS: LIMITING TRAFFIC CONGESTION AND ACHIEVING REGIONAL GOALS

# **TABLE OF CONTENTS**

1.	INTRODUCTION	1
	DVRPC's Perspective on Transportation Planning	2
	DVRPC's Perspective on Transportation Planning: Congestion Management Process	3
	Applicable Regulations	4
2.	COOPERATION AND COORDINATION	7
	The CMP Advisory Committee	7
	Coordination within DVRPC	7
	Public Participation	8
	Environmental Justice	8
3.	EVALUATION OF TRANSPORTATION SYSTEM	15
	CMP Analysis Criteria	17
	Summary of Methodology for Developing Corridors	19
	Full Range of CMP Strategies	23
	CMP Subcorridor Types	37
	CONGESTED CORRIDORS AND STRATEGIES	
	DVRPC Congested Corridors	48
	Overview Map of New Jersey Corridors	49
	Overview Map of Pennsylvania Corridors	50
	CMP Corridor Maps and Strategies	51
5.	NEXT STEPS	53
	DVRPC CMP Tasks	54
	CMP Responsibilities of Agencies/Governmental Bodies	55
	Potential Funding Sources	56
	Conclusions and Potential Future Refinements	59





# 1. INTRODUCTION

Welcome to the process of minimizing congestion and moving forward on regional goals in the Delaware Valley. The Congestion Management Process (CMP) is a multifaceted approach that facilitates the movement of people and goods through analysis, stakeholder participation, and enhanced coordination. These efforts were referred to as a Congestion Management System (CMS) under former federal transportation bills, but the current bill emphasizes their ongoing character with a new name: Congestion Management Process (CMP).

A CMP does the following things with guidance from federal transportation regulations:

- → It is a systematic process for managing congestion and making efficient and effective use of existing and future transportation facilities.
- → It connects the Long Range Plan (Plan) for the region and short-range efforts such as the Transportation Improvement Program (TIP) and corridor studies.
- → It enhances coordination of transportation and regional planning, including land use, environmental, and economic development efforts.
- → It identifies congested corridors and strategies to minimize congestion, enhance the mobility of people and goods, and advance regional goals.

Some of the first steps in this cycle of work were organizing the CMP Advisory Committee and working with the members to prepare statements of our shared perspective on transportation and CMP. These statements are on the pages that follow and guided the CMP. Highlights of the process to date include:

- Regional congested corridors were identified based on analysis of criteria and work with the committee. The eight criteria account for highway congestion, intermodal facilities, delay due to recurring safety problems, and existing land uses.
- > Congested subcorridors with appropriate multimodal strategies were defined.
- → Where projects that increase Single Occupancy Vehicle (SOV) capacity are appropriate, supplemental strategies to reduce travel demand and get the most long-term value possible from the investment were identified.
- → Steps for evaluating projects outside of corridors, which have a higher burden of proof than those in congested areas, were developed along with other guidance.
- → Ways of encouraging a wide range of stakeholders to participate were incorporated, including offers of data, guidance on helping projects conform to the CMP, priority for conforming projects in the TIP and Plan update processes, and opportunities for stakeholders' studies to be more widely used.
- → A program was set up for regular monitoring and evaluation of system performance.

In keeping with an ongoing process, this report is designed with brief introductions followed by the latest items developed. Feel free to pull items out for use or download them from the DVRPC Web site. Expect updates and please communicate ideas that would help your governmental body or organization minimize regional congestion. Addressing congestion and meeting regional goals need everyone's participation.

## **DVRPC'S PERSPECTIVE ON TRANSPORTATION PLANNING**

#### **PHILOSOPHY**

DVRPC plans for the orderly growth and development of the bi-state region. Transportation planning supports the region's land use, environmental, and economic development policies. In this context, DVRPC is committed to the region-wide promotion and implementation of a safe, convenient, and seamless passenger and freight multimodal transportation system. A transportation system includes road, rail, bus, bicyclist, and pedestrian networks of mobility. This is accomplished in a collaborative manner with a wide range of stakeholders and based upon strong technical analysis.

#### **PRINCIPLES**

- 1. Transportation investments will support the land use goals and policies of the DVRPC Long Range Plan.
- 2. The priorities for transportation projects and programs are as follow:
- Maintain, optimize, and modernize the existing transportation system and rights-of-way. This
  includes optimizing the services delivered by the system, such as options for and
  convenience of transfers among modes.
- b. Manage demand for transportation by fostering land use patterns and other strategies that reduce the need for and length of trips.
- c. Increase capacity of the existing multimodal transportation system, limiting the addition of through-travel lanes.
- d. Add new capacity where necessary, limiting the addition of new roads.
- 3. The transportation planning process will be comprehensive, cooperative, continuing, compatible, and coordinated ("3C+2" for short). The first three are the basis of the federally required "3C" process. This process will be:
- a. **Comprehensive** All modes and their implications will be considered and evaluated. All transportation solutions will consider more than one mode.
- b. **Cooperative** We will work together productively, seeking consensus and enhancing participation across the whole population.
- c. **Continuing** New endeavors need to incorporate maintenance, consider prior efforts, and fit with adopted ongoing system planning efforts.
- d. **Coordinated** This complex region requires a focus on fitting pieces and projects together across agencies, organizations, and boundaries.
- e. **Compatible** We try to make land uses and infrastructure (transportation, water/sewer, and technologies) work efficiently together.
- 4. Investment benefits and costs will be strategically distributed across the region, with careful consideration of environmental and social impacts. Investments will be affordable and consider appropriate economic development.
- 5. The region will be innovative at incorporating policy approaches, ITS applications, and emerging technologies. DVRPC will be bold in doing projects that continue to transform the region into a better place to live, visit, and work.

Note: These approaches are in keeping with relevant regulations and memoranda of understanding between DVRPC and the following agencies: NJ Transit, PennDOT, NJDOT, SEPTA and PATCO currently and as they are developed.

# DVRPC'S PERSPECTIVE ON TRANSPORTATION PLANNING: CONGESTION MANAGEMENT PROCESS

#### **PHILOSOPHY**

The CMP advances the goals of the DVRPC Long Range Plan and strengthens the connection between the Plan and the TIP. It identifies congested corridors and strategies to mitigate the congestion. Where additions to capacity are appropriate, the CMP includes supplemental strategies to reduce travel demand and improve operations.

## **PRINCIPLES**

- 1. The CMP is region-wide. It uses the following approach:
- a. Identify congested corridors and segment them into subcorridors within which similar transportation strategies seem to be appropriate. This effort uses analysis of transportation and land-use data, and stakeholder reviews.
- b. Identify corridors of regional significance that are not currently congested, but seem likely to become so in the future.
- c. Define procedures for federally funded capacity-adding road projects not in corridors. Such projects may be appropriate but start with a higher burden of proof than those in congested corridors, given the limits on funding.
- 2. The CMP will provide information on transportation system performance and identify strategies to minimize congestion and enhance the mobility of people and goods. The strategies will include (but not be limited to) improvements to transit, pedestrian and bicyclist facilities, transportation demand management (including growth management), transportation system management/operations, and addition of road capacity. Specific strategies will be listed as appropriate for each subcorridor based on analysis and stakeholder review.
- 3. Building new road capacity may be appropriate when other strategies do not reasonably reduce congestion. These projects must include beneficial supplemental strategies to protect the investment. These strategies start with the CMP and are refined through meetings with stakeholders and in Preliminary Engineering. They must be funded at the same time as the main project. Their implementation will be monitored.
- 4. Regulations require that projects that add Single Occupancy Vehicle (SOV) capacity conform to the CMP to be eligible for federal funding. Otherwise, further analysis is required and the results will be the basis of DVPRC Board discussion to either amend the CMP or find other funding for the project.
- a. If adding SOV capacity is not listed as a strategy for that subcorridor, the proposed project must undergo quantitative analysis including the listed strategies and comparison of the results for the region as well as for the project area.
- Projects outside of corridors must demonstrate consistency with the Plan, follow CMP Procedures, and compare well with projects located in corridors.
- 5. The CMP will be updated on a regular basis.

#### **APPLICABLE REGULATIONS**

Following is a summary of the policy guide applicable during the preparation of the CMS/CMP. An update is expected in 2006. Bolding is for DVRPC use.

Source: www.fhwa.dot.gov/legsregs/directives/fapg/cfr050a.htm, as of 2/25/04

FEDERAL-AID POLICY GUIDE April 8, 1999, Transmittal 25 23 CFR 500A

OPI: HEP

## SUBCHAPTER F - TRANSPORTATION INFRASTRUCTURE MANAGEMENT

#### PART 500 - MANAGEMENT AND MONITORING SYSTEMS

## **Subpart A - Management Systems**

Sec. 500.109 CMP.

- (a) For purposes of this regulation, congestion means the level at which transportation system performance is no longer acceptable due to traffic interference. The level of system performance deemed acceptable by State and local officials may vary by type of transportation facility, geographic location (metropolitan area or subarea, rural area), and/or time of day. An effective CMP is a systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet State and local needs. The CMP results in serious consideration of implementation of strategies that provide the most efficient and effective use of existing and future transportation facilities. In both metropolitan and non-metropolitan areas, consideration needs to be given to strategies that reduce SOV travel and improve existing transportation system efficiency. Where the addition of general purpose lanes is determined to be an appropriate strategy, explicit consideration is to be given to the incorporation of appropriate features into the SOV project to facilitate future demand management and operational improvement strategies that will maintain the functional integrity of those lanes.
- (b) In addition to the criteria in paragraph (a) of this section, in all TMAs, the CMP shall be developed, established and implemented as part of the metropolitan planning process in accordance with 23 CFR 450.320(c) and shall include:
  - (1) **Methods to monitor and evaluate the performance of the multimodal transportation system**, identify the causes of congestion, identify and evaluate alternative actions, provide information supporting the implementation of actions, and evaluate the efficiency and effectiveness of implemented actions;
  - (2) Definition of **parameters for measuring** the extent of congestion and for supporting the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies for the movement of people and goods. Since levels of acceptable system performance may vary among local communities, performance measures and service thresholds should be tailored to the specific needs of the area and established cooperatively by the State, affected MPO(s), and local officials in consultation with the operators of major modes of transportation in the coverage area;

- (3) Establishment of a **program for data collection and system performance monitoring** to define the extent and duration of congestion, to help determine the causes of congestion, and **to evaluate the efficiency and effectiveness of implemented actions.** To the extent possible, existing data sources should be used, as well as appropriate application of the real-time system performance monitoring capabilities available through Intelligent Transportation Systems (ITS) technologies;
- (4) Identification and evaluation of the anticipated performance and expected benefits of appropriate traditional and nontraditional congestion management strategies that will contribute to the more efficient use of existing and future transportation systems based on the established performance measures. The following categories of strategies, or combinations of strategies, should be appropriately considered for each area:
- → Transportation Demand Management measures, including growth management and congestion pricing
- → Traffic operational improvements
- Public transportation improvements
- ITS technologies
- → Where necessary, additional system capacity.
- (5) Identification of an **implementation schedule**, **implementation responsibilities**, and **possible funding sources** for each strategy (or combination of strategies) proposed for implementation; and
- (6) Implementation of a **process for periodic assessment** of the efficiency and effectiveness of implemented strategies, in terms of the area's established performance measures. The results of this evaluation **shall be provided to decision makers** to provide guidance on selection of effective strategies for future implementation.
- (c) In a **TMA designated as nonattainment** for carbon monoxide and/or ozone, the CMP shall provide an appropriate analysis of all 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 capacity for SOVs (adding general purpose lanes to an existing highway or constructing a new highway) is proposed. If the analysis demonstrates 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 shall identify all reasonable strategies to manage the SOV facility effectively (or to facilitate its management in the future). 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. 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.





# 2. COOPERATION AND COORDINATION

## THE CMP ADVISORY COMMITTEE

The update of the CMP was vastly enriched by the ongoing participation of members of the CMP Advisory Committee. The committee started to form at the end of 2003 and met approximately six times to reach consensus on the 2005 update. It will continue meeting approximately twice a year to address ongoing matters, and more frequently during focused update periods. The participating agencies and organizations are listed below.

## CMP ADVISORY COMMITTEE MEMBERS

- Counties: Bucks (Pennsylvania), Burlington (New Jersey), Camden (New Jersey),
   Chester (Pennsylvania), Delaware (Pennsylvania), Gloucester (New Jersey), Mercer (New Jersey), Montgomery (Pennsylvania), Philadelphia (Pennsylvania)
- DOTs: PennDOT and NJDOT
- Transit authorities: SEPTA, NJ Transit, and others
- > Federal partners: FHWA New Jersey and Pennsylvania regions, and FTA
- Transportation Management Associations (TMAs): Greater Mercer TMA, Cross County Connection TMA, Greater Valley Forge TMA, and others
- Other Committees: Regional Citizens Committee, Freight Task Force
- Other MPOs: WILMAPCO, NJTPA, and other Pennsylvania MPOs
- Other participants as invited or who asked to join, including New Jersey Office of Smart Growth, cities, Delaware Regional Port Authority, and Traffic.com

## **COORDINATION WITHIN DVRPC**

The update of the CMP was enhanced by the experience and the interdisciplinary input of an internal DVRPC work group. This group included staff from the Transportation and the Regional Planning divisions. On the transportation side, this included Intermodal Planning, Long Range Planning, Capital Programming, and Corridor Studies. On the Regional Planning side, this included Smart Growth Studies, and Environmental Planning. A related effort was ongoing participation in Planning on the Edge, a project through the Regional Planning Division to encourage coordination among MPOs.

These meetings and the CMP process have resulted in greater coordination within DVRPC that is expected to increase effectiveness. These commitments include:

- → TIP The process by which projects are considered for addition to the TIP has been revised. It will more closely incorporate the CMP and Plan in selecting and prioritizing projects for funding. More details are provided in Technical Memorandum #3: CMP Procedures and Coordination with TIP, included in the Appendices.
- → TIP/CMP/participating agencies Tracking of funded capacity-adding projects and their supplemental projects will start with providing updates annually and will be used to prevent supplemental projects from falling far behind their "parent" project.

- → Long Range Plan The Plan guided the CMP and it adopted the resulting CMP corridors. In the future, a CMP update will be done approximately a year before each update of the Plan to provide technical analysis and recommendations.
- → Corridor Studies/Planning Work Program Tasks In a large, complex region like the Delaware Valley, the CMP tends to guide corridor studies and other follow-up tasks that result in projects. In a smaller region, the CMP can more readily jump to specific projects. DVRPC will fund a corridor study resulting from the CMP in each state each year and then pursue getting the resulting projects funded and completed. In addition, the CMP provides information for various other planning efforts, and those results feed back into the CMP.
- → Communication within DVRPC and with other agencies Staff working with the CMP participate in the DVRPC Safety Committee and liaison with related internal and external efforts such as the PennDOT Congestion Measures Study.

#### PUBLIC PARTICIPATION

The CMP was updated in an open and participatory process. At the beginning of the current work, a clear description and contact information for the CMP update were posted on the DVRPC Web site. A public outreach piece was prepared approximately halfway through the current effort. It was posted on the Web page and discussed at three public participation sessions held primarily for the Plan and TIP in three parts of the DVRPC region. Part of developing the Advisory Committee included asking the Regional Citizens Committee for a representative and an alternate, as well as making presentations there. Ongoing outreach will continue to refine the strategies and help implement them.

## **ENVIRONMENTAL JUSTICE**

It is important that the CMP and its related projects not result in direct or disparate negative impacts on any racial, ethnic or socioeconomic group, and this is also a requirement as the task is funded with federal dollars. A methodology was established in a 2001 report, "...and Justice for All": DVRPC's Strategy for Fair Treatment and Meaningful Involvement of All People, to help ensure that disadvantaged groups in the Delaware Valley region are being addressed in the projects approved and studies conducted by the Commission. Subsequent annual reports have provided updates and refinements to the original methodology.

The foundation of the DVRPC methodology rests on identification of the selected demographic groups that have a history and/or likelihood to be adversely affected in transportation services, programs and policies. These groups consist of the aforementioned groups cited by the federal government, as well as other pertinent populations that need to be taken into account. These demographic groups are:

- 1. Non-Hispanic minority people
- 2. Hispanic people
- 3. People in poverty
- 4. Elderly people
- 5. Households without a vehicle
- 6. People with disabilities
- 7. People with limited English proficiency
- 8. Households headed by a female with one or more children

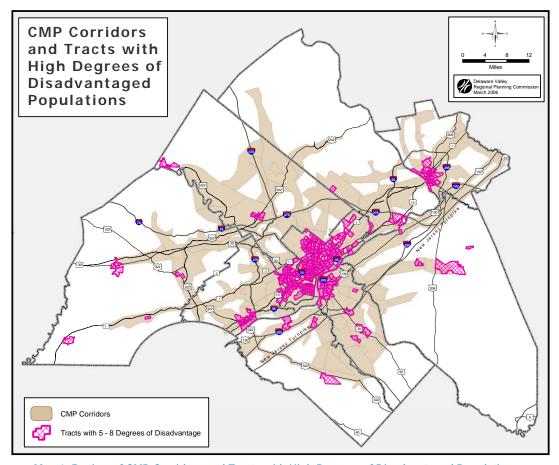
These "degrees of disadvantage" (DOD) are mapped by census tract based on whether they meet or exceed the regional average (the national guidelines from the Department of Health and Human Services are used for those in poverty). The majority of the maps created, thus far, for the analyses are based on the number of DODs each tract has (i.e., a census tract that meets or exceeds the regional average for Hispanics and car-less households is considered to have two DODs). Tracts with five or

more DODs were considered to have significance for the CMP. Approximately 27 percent of the DVRPC population lives in tracts where five or more DODs are an issue.

The methodology also includes a set of "quality-of-life" factors. These mapped factors demonstrate the existence of various assets across the region and their proximity to census tracts with degrees of disadvantage. The quality-of-life factors consist of:

- 1. Transit routes with quarter-mile buffers
- 2. Major arterial highways
- 3. Job access reverse commute routes
- 4. Employment centers
- 5. Hospitals
- 6. Day care centers
- 7. Within a 60-minute transit travel time commute to Philadelphia

In assessing the distribution of the CMP corridors as they relate to the identified disadvantaged groups in the region, DVRPC overlaid the combined disadvantaged groups with the CMP corridors. A summary of this work is shown on the next page. The information on DODs was part of the consideration of the Advisory Committee and is shown on the detailed maps to be distributed as a CMP Atlas for future consideration. Further evaluations are needed when individual corridor studies are conducted in order to understand the impact of existing conditions on the disadvantaged populations and to provide appropriate recommendations to address any inequities.



Map 1: Review of CMP Corridors and Tracts with High Degrees of Disadvantaged Populations. The vast majority of these tracts are included in corridors, encouraging investment of federal transportation dollars in strategies appropriate to the locations.

To assist in incorporating Environmental Justice within the CMP report, some strategies follow that may be considered for individual corridors or subcorridors. The disadvantaged groups that may benefit are listed under each of these strategies. The strategies are meant to be a starting point, and they are in no particular order. Due to the various combinations of DODs that may be present in a corridor, it is expected that each corridor study or project will detail recommendations that are pertinent to its own unique combination of disadvantaged groups. These strategies are also part of the "Full Range of CMP Strategies."

Outreach at Appropriate Locations and Times – Conduct outreach in locations and at times that would allow the greatest opportunities to reach groups that have been marginalized in the past, but whose inclusion is critical in order to ensure a sound and effective study of a congestion issue or project. Some traditionally marginalized groups may have different work schedules and limited nonwork hours than what is considered the norm. This will require outreach being conducted at unconventional hours of the day or at locations that may be gathering places or resources (i.e., social services) for these specific groups. If possible, it may be worthwhile to conduct outreach at their places of employment.

## Potential disadvantaged groups that this may apply to:

Non-Hispanic Minority; Hispanic; Poverty; Limited English Proficiency; Female Head of Household with Child

Multilingual Communication – Provide information in the different languages spoken by the various demographics in a community, particularly those that are affected by a proposed study, issue, or project. Approximately 2 percent of all people who live in the DVRPC region do not speak English or have limited proficiency with it, and that percent is many times higher in some communities. Information may include basic materials related to transit, driving, and bicycle transportation or it may be study/project-related material such as meeting announcements, documents, brochures and Web site content. Verbal outreach may include providing translators at meetings and ensuring any door-to-door contact will be made by those who speak the language(s) of the community. A hotline or convenient in-person contact may also be part of the multilingual outreach.

<u>Potential disadvantaged groups that this may apply to:</u> Non-Hispanic Minority; Hispanic; Limited English Proficiency

**Expansion of Transit Network** – Expand the regular, fixed-route bus and rail services, as well as some of the other types of transit mentioned in this section, and create a greater number of intermodal connections. The more extensive and, thus, convenient transit is for people, the more it will be used, especially by those whose access to private vehicles is limited or whose driving ability may be limited due to disability or age. Special consideration should be given to making connections between existing transit service and shortening transfer time between services, as this greatly increases the effectiveness of the transit system. This benefits not only the EJ disadvantaged groups, but the public in general.

Potential disadvantaged groups that this may apply to:

Car-less; Elderly; Disabled; Poverty

**Expansion of Transit Service Hours** – Expand the hours and frequency of operation for regular, fixed-route bus and rail services, as well as other types of transit. Extended service hours and frequency for nights and weekends benefit workers in service sector or nontraditional hour employment and those with limited driving ability due to disability or age. This benefits not only the EJ disadvantaged groups, but the public in general.

Potential disadvantaged groups that this may apply to:

Car-less; Elderly; Disabled; Poverty

Bicycle Transportation Improvements – Expand and improve bicycle facilities through routine accommodation and special projects. This includes creation of bicycle lanes during road resurfacing, bicycle routes on shared roadways, striped shoulders where bicycle lanes cannot be accommodated, off-road bicycle facilities, and accommodation on transit vehicles. People unable to obtain a driver's license because of immigration status or English language skill levels may favor bicycling. Elderly people who ride bicycles or parents with young children often feel safer on off-road bicycle facilities than on shared traffic facilities. Improving the ease and safety of using bicycles for transportation is a low cost transportation alternative to driving and transit for EJ disadvantaged groups and for the public in general.

<u>Potential disadvantaged groups that this may apply to:</u> Car-less; Poverty; Limited English Proficiency; Elderly

Bicycle Destination Improvements – Expand and improve bicycle facilities at frequently used destinations for bicyclists through zoning requirement guidance, routine accommodation, and special projects. This includes bicycle parking facilities, shower and changing facilities, and employer and school policies related to bicycle transportation. These endpoint improvements take away some of the difficulties associated with bicycling and encourage it as a low cost transportation alternative to driving and transit for EJ disadvantaged groups and the public in general.

<u>Potential disadvantaged groups that this may apply to:</u> Car-less; Poverty; Limited English Proficiency; Elderly

Reduced Commute Costs – Promote and implement solutions to congestion that are affordable or provide a lower-cost alternative to populations that may have limited income. Some of these solutions will relate to transit, such as TransitChek, or other kinds of commuter voucher or subsidy programs, and provide single-payment reduced fares for bi-state commutes; other solutions may deal with ride-matching and ridesharing initiatives. These measures encourage efficient use of the transportation network by everyone at affordable costs to the public.

<u>Potential disadvantaged groups that this may apply to:</u>
Poverty; Car-less; Elderly; Female Head of Household with Child

**Nontraditional Transit** – Address the forms of transportation that may be relied upon by certain demographic groups. These types of transit may or may not be formalized and/or regulated, but it would be useful to do research on how to better incorporate their role in transportation studies. This would establish a more holistic finding of existing conditions and provide more reality-based recommendations and implementation strategies to alleviate congestion, while not terminating or penalizing needed transit services.

<u>Potential disadvantaged groups that this may apply to:</u>
Non-Hispanic Minority; Hispanic; Limited English Proficiency; Poverty

Communicate Eligibility – Market who can use special transit services that may mistakenly be considered to serve a smaller segment of the population than is really eligible. This promotes a wider range of transit options, especially for those who prefer non-fixed route service, and may help to reduce vehicular use if the other choices attract people who may otherwise drive alone in their individual cars. This results in a benefit for both disadvantaged and non-disadvantaged groups. In addition, by creating a larger base of ridership, services that may have been in jeopardy of termination may be allowed to continue and generate greater revenue.

Potential disadvantaged groups that this may apply to:

Disabled; Elderly; Female Head of Household with Child; Non-Hispanic Minority; Hispanic; Limited English Proficiency

**Expand Service Area** – Provide service to communities that do not have the density to support regular transit service, but where private vehicle use creates congestion for the area. This may be done through small buses or other methods. This will allow connections to employment, shopping and personal services that may otherwise be unattainable or difficult to reach for those without, or with limited, car access.

<u>Potential disadvantaged groups that this may apply to:</u>
Car-less; Poverty; Elderly; Disabled; Female Head of Household with Child

Job Access and Reverse Commute Route (JARC) Program – Promote and continue financial support for JARC initiatives. The program strives to eliminate transportation barriers that make it difficult for welfare recipients and other transit-dependent individuals to enter the workforce. This includes individuals who live in the inner city but need to commute to outlying suburbs for employment. The JARC program has led to a major expansion of public transit and paratransit services. As congestion is also a problem for reverse commutes, this helps to reduce individual automobiles on the road in both city-to-suburb and suburb-to-city traffic directions.

<u>Potential disadvantaged groups that this may apply to:</u>
Poverty; Car-less; Female Head of Household with Child

Safety and Security – As the promotion of increased transit usage usually plays an integral part in reducing automobile congestion, it is important that those who use public transit are provided with a safe and secure experience. Women and the elderly are particularly subject to safety concerns when traveling late at night or alone. Better-lighted stops, security cameras and emergency phones are a few examples of extra safety measures that may be taken. Providing accurate, real-time information on the arrival of buses will also be helpful so that riders will be able to time their walks to the bus stops to minimize the time they will need to wait for the bus.

<u>Potential disadvantaged groups that this may apply to:</u> Female Head of Household with Child; Elderly; Car-less

**Delivery Service for Goods** – Encourage businesses to provide free shipping or delivery of goods from stores especially within a local range to encourage transit and nonmotorized access for shopping trips. This benefits not only the EJ disadvantaged groups, but the public in general.

<u>Potential disadvantaged groups that this may apply to:</u>
Car-less; Elderly; Disabled; Poverty; Female Head of Household with Child





# 3. EVALUATION OF TRANSPORTATION SYSTEM

Perhaps the most challenging part of evaluating the performance of the transportation system in the Delaware Valley was agreeing on CMP criteria. Moving toward agreement on criteria involves consideration of what conceptually is most helpful to measure. An inherent related consideration is what reliable data are available on a regular basis. Extensive policy discussion, sharing of experience, and tests of viability went into the development of eight criteria used for CMP analysis. These efforts are presented in the pages that follow as the CMP Analysis Criteria and then their use is covered in a brief summary document, Development of the CMP Corridors. Underlining here indicates that the item is attached.

Doing the analysis provided exciting opportunities to use the capabilities of Geographic Information System (GIS) software and draw upon resources such as the regional traffic simulation model. Use of these technologies allowed analysis that would not have been possible in the past. In addition, they allow for relatively easy and efficient updates.

The evaluation and analysis was completed with the understanding that it, itself, is not a complete answer; it encourages and assists in better-informed decisions. The detailed methodology and technical results are included in the CMP appendices and are available through DVRPC. The analysis was shaped by and extensively discussed by the various involved committees. It underlies the conclusions that are the focus of this report.

The methodology adopted at the start of the project outlined a way to develop draft strategies by subcorridor. The original approach proved too technical and was revised under guidance of the Advisory Committee. A secondary goal of this work was to provide toolbox and educational items for use outside this report. With both of these goals in mind, what follows is an overview of how strategies were developed for each subcorridor.

The <u>Full Range of Strategies</u> describes more than 90 transportation and transportation-related approaches in the categories outlined in the policy pieces. It develops a shared vocabulary and is an educational resource.

Strategies used in CMP projects (the SOV project and related supplemental strategies) were reviewed as tracked through the DVRPC TIP for five years. Also, an exercise was done with Advisory Committee members regarding current most-practical strategies for the Delaware Valley. These two tasks informed development of the CMP Subcorridor Types document.

In <u>CMP Subcorridor Types</u>, ten common types of subcorridors were defined for the Delaware Valley region with descriptions, examples, and sets of Very Appropriate and Secondary Appropriate strategies. While there was concern to not overly constrain strategy options, there was also need to keep the lists focused. For the lists to provide meaningful guidance to planners and engineers, they could not be very long; also the federal CMP regulations call for specificity.

Working with the Advisory Committee and internal working group, subcorridors were reviewed, revised, and each assigned a main type. This allowed an initial assignment of strategies in an efficient and rational process. A refinement step was adding information about environmental, community, and economic development characteristics of the subcorridors. Participants provided comments on the draft strategies and reference to major adopted corridor plans that had already resulted in recommendations for subcorridors. These have been, and will continue to be, tracked in a Corridor Information & Subcorridor Strategies spreadsheet with the current version included in the Appendices.

An effort that started with this update and remains underway is better understanding the effectiveness of strategies. The spreadsheet, General Effectiveness of CMP Strategies (see Appendices), is the start of a task that will be used by various parts of DVPRC and other

stakeholders as well as for CMP analysis. It is a framework for comparing strategies across modes to provide a more "apples to apples" approach as to the approximate results of strategies. This is to help with understanding potential effects, developing packages of strategies, and evaluating completed projects. It started with a national literature search and will be revised over time with more regional results.

## **CMP ANALYSIS CRITERIA**

Last Revised: May 9, 2005

#### **CRITERIA**

# 1. Current daily congestion:

- → Roads with V/C>=.85 (based on review of LOS E for various functional classes)
- Intermodal passenger centers where insufficient parking limits use (rail, bus, park & ride)
- > [Capacity constraints for the freight rail network from MAROPS when available]

## 2. Current peak hour congestion:

→ V/C>=.85 based on HPMS Volume/Service Flow Ratio

## 3. Heavily used roads and intermodal facilities:

Roads with very high AADT and major intermodal centers provide key service even if not congested

- → Top 5 percent of non-NHS system roads sorted by descending AADT prepared for the Pennsylvania and New Jersey portions of DVRPC
- Major intermodal passenger and NHS freight transfer sites

## 4. Future daily congestion:

2025 simulated V/C>=.85

# 5. Future peak-hour congestion:

2025 simulated peak hour V/C>=.85

## 6. Frequent crash-related congestion:

Recurring nonrecurrent congestion

→ This is by mile of road that had at least double the rate for that functional class of road within the DVRPC portion of that state.

## 7. Intermodal importance (current or potential):

- → NHS supplemented with results of "National Highway System Connectors to Freight Facilities in the Delaware Valley Region (DVRPC, 2001; publication 01017) gets 1 point
- → Being within ½ mile of a rail line (passenger or freight) gets 1 point
- → Being within ¼ mile of a bus route with 3 or more runs per an hour gets ½ point
- → The top two (of five) categories of the draft 2005 DVRPC Transit Index gets ½ point
- Maximum possible value is 1

#### 8. Land use:

The CMP helps implement the goals of the Plan.

It uses the 2025 Centers and the draft 2030 regional planning areas by municipality:

- → Within 1 mile of 2025 centers gets .5 of a point
- Anywhere in Growing Suburbs gets .25 (with the result that centers there get .75)
- → Urban Core and Developed Communities get 1 point
- Maximum possible value is 1

The draft results are reviewed based on origin-destination maps for the county planning areas from the DVRPC traffic model. This addresses where people are trying to go.

# **USE OF POINTS**

- → Most strongly indicated for consideration as part of CMP corridors: more than 5 points
- → Indicated for consideration: 4 to 5 points
- → Potential emerging CMP corridors/corridors of regional significance are based on reviewing areas with more than 3 points and remaining NHS roads and railroads.

## SUMMARY OF METHODOLOGY FOR DEVELOPING CORRIDORS

The CMP was designed to be thorough but manageable, to fully meet applicable regulations, to be relatively easy to update, and to be useful. While there is always more that can be done (and already a list of refinements for next time), this CMP is an exciting advance in its field. Following is an overview of the process.

#### **CRITERIA USED FOR CMP ANALYSIS**

The transportation system of the DVRPC region was evaluated using the CMP criteria, developed through extensive discussion by the Advisory Committee, and analysis with Geographic Information System (GIS) software. Each item listed below could result in a maximum of one point if it applied to the location. While the evaluation is multimodal, a representation of the road network was used to hold the points for corridor development.

#### **CMP CRITERIA**

- Current daily congestion of roads and intermodal centers
- Current peak-hour congestion of roads
- Heavily used roads and intermodal facilities: Roads with very high traffic counts and major intermodal centers provide key service even if not congested.
- Future daily congestion from the 2025 traffic model simulation
- → Future peak-hour congestion from the 2025 traffic model simulation
- → Frequent crash-related congestion: Unexpected congestion, such as that resulting from crashes, is reported to be even more frustrating to people than regular peak-hour traffic. This criterion focuses on sections of roads that had double the rate for that functional class of road in the DVRPC area by state.
- → Intermodal importance: This criterion highlights roads important to trucks (the National Highway System), corridors with rail facilities (passenger or freight) or major bus routes (three or more buses in a peak hour) or that have potential for transit based on the draft DVRPC Transit Index.
- → Land use: The CMP helps implement the goals of the Plan by supporting investment into core cities and then, in reducing priority, to 2025 centers, developed communities, and growing suburbs.

CMP Analysis
Points

Less than 3

4 to 5

Greater than 5

NJ 33

Map 2: Analysis for

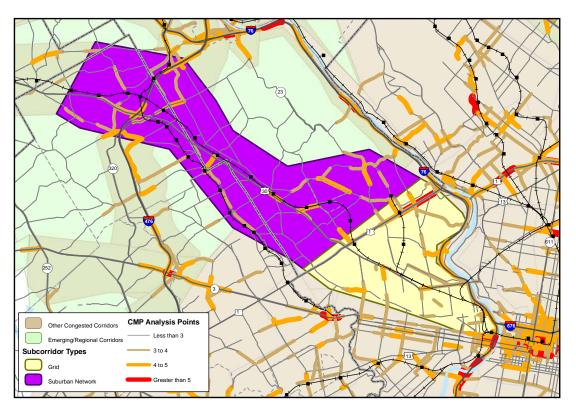
NJ CMP Corridor 9:

## **ESTABLISHMENT OF CORRIDORS**

Draft corridors were developed and then revised to a point of consensus. The intent was to keep the number of corridors manageable for regional analysis while covering key movements. Three starting points were:

- 1. CMP analysis points: The points resulting from CMP analysis represent corridors of interrelated roadways, rail lines, and land uses. Draft corridors were digitized, focusing around links with greater than 4 points (more than four criteria applied).
- Other references: This included review of highway interchanges, rail stations, and adopted TIP and Plan projects that add capacity

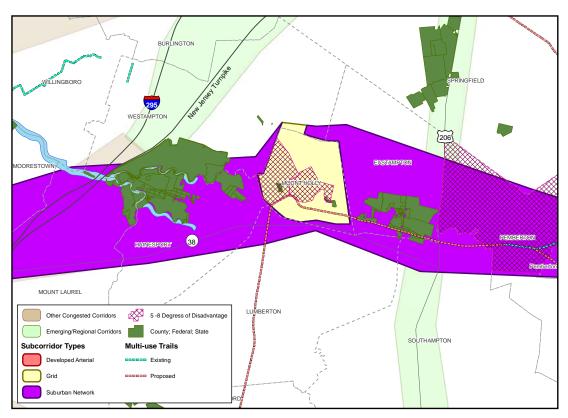
3. **Major flows of people from traffic model:** The major regional flows of origins and destinations from the 2005 model for all trips were reviewed for information on where people are trying to go in addition to just the congestion on existing routes.



Map 1: Development of PA CMP Corridor 7: US 30 to Philadelphia

## **REFINEMENT OF CORRIDORS**

As part of assigning CMP strategies to subcorridors, additional environmental, community, and economic development factors were added to the maps. This step will be further expanded in future updates, but currently involves showing dark-green areas of permanently protected county, state and federal lands (environmental); dashed lines illustrating existing and proposed multiuse trails (community); and purple hatching for census tracts with high degrees of disadvantage based on the DVRPC Environmental Justice analysis (economic development). A sample from one of these more detailed maps is shown on the next page and it is planned that they will be distributed as a CMP Atlas as a next step.



Map 2: Refinement Layers with Detail of NJ CMP Corridor 10: NJ 38

## **FULL RANGE OF CMP STRATEGIES**

Last Revised: August 29, 2006

There are many strategies that can assist in addressing traffic congestion in the Delaware Valley region. These strategies can be used to help manage and/or reduce congestion.

A wide range of techniques has been identified in this document as potential congestion management strategies. This range of CMP strategies serves two purposes. It is an educational resource for planners, engineers, and others thinking about ways to address congestion problems fully, for as long a term as possible, and within tight budgets. It was developed as a step in the CMP update. Refining the appropriate strategies for each subcorridor may include referring back to this full list.

The range of strategies is summarized into the nine categories listed below.

- Operational Improvements, Transportation System Management (TSM), and Intelligent Transportation Systems (ITS) – Maintain, optimize, and modernize the existing transportation system (roads, transit, other), including options for and convenience of transfers among modes
- → Transportation Demand Management (TDM) Programs and projects that encourage the use of alternative modes of transportation other than driving alone and that otherwise focus on the demand side of trip-making
- → Policy Approaches Foster land-use patterns and other changes that reduce the need for and length of trips through appropriate policy changes, new policies, regulations, and followthrough on existing agreements
- → Nonmotorized Transportation This primarily addresses walking and bicycling as modes of transportation
- → Public Transit Improvements Increase the capacity of <u>existing</u> services and facilities, such as by adding more service on existing routes
- → Road Improvements Increase the capacity of existing roads, such as by adding lanes
- → New Public Transit Add new capacity, such as new bus or rail lines
- → Goods Movement Maintain and optimize the safe movement of freight
- New Roads Add major new capacity, such as entirely new roads

# Operational Improvements, Transportation System Management (TSM), and Intelligent Transportation Systems (ITS)

Strategies in this category address traffic congestion problems through the improved management of existing roads and transportation facilities. Operational improvements may address things like better coordinating traffic lights or more safely managing combinations of through and local vehicles, primarily through engineering-based approaches. TSM is an even broader range of ways to maximize the use of the entire transportation system while minimizing the expense and impacts of building major new capacity. While ITS addresses many of the same goals, it focuses on integrating new technologies and better coordination of data for these purposes.

1. **Intersection Improvements** – Minor widenings and lane restriping to increase intersection capacity and safety. This may include auxiliary turn lanes (right or left) and widened

- shoulders (see Source 3 at end of this section, p. 19). Intersection design should be context sensitive. Truck routes may need special geometries.
- 2. Channelization Strategy used in optimizing the flow of traffic for making left or right turns usually using concrete islands.
- 3. Center Turn Lanes This strategy is used in conditions where there are many vehicles turning left to reduce the amount that through-traffic is slowed.
- 4. **Jug Handles** These are at-grade ramps provided at or between intersections to permit motorists to make indirect left turns and/or U-turns. (7, p. 232)
- 5. Roundabouts These are circular intersections with specific design and traffic control features. Key features include yield control of entering traffic, channelized approaches, and appropriate geometric curvature to slow speeds. Roundabouts provide substantially better operational and safety characteristics than older traffic circles and rotaries. (8, pp. 2, 5).
- 6. Ramp Metering Time differentiated metering that acts as a traffic signal for vehicles entering freeways in order to control incoming traffic and assist in maintaining vehicle flow on the highways (3, p. 18).
- 7. Bottleneck Removal for Cars and Trucks Removal or correction of temporary lane reductions, substandard design elements, and other physical limitations that form a capacity constraint (3, p. 19). Also see Bottleneck Removals for Passenger Rail and for Freight Rail, Intermodal Enhancements for Passengers and for Freight, and Bicyclist and Pedestrian Improvements.
- Basic Upgrading of Traffic Signals Adjustments to signal timing and phasing, and the
  installation and maintenance of activated system components to improve flow and reduce
  congestion. Includes equipment update, traffic signal removal, pre-timed signal plans and
  interconnected signals. Applicable to arterials with antiquated signal equipment and/or high
  signal densities (3, p. 19).
- Computerized Traffic Signals A higher level of traffic signal coordination that is more
  responsive to traffic conditions. Using detectors, a centralized computer will periodically
  sample traffic flow and determine the most appropriate timing plan and signal phasing.
  Computerized traffic signals are also employed to coordinate grid signal systems (3, p. 19).
- 10. Intelligent Transportation Systems (ITS)/Integrated Corridor Management for Freeways
   This involves the monitoring of traffic flows and a computerized central coordinating
  function for signal control. It is primarily applied to freeway systems and includes such things
  as: network surveillance, regional traffic control, traffic management centers, means of
  diverting traffic to alternate routes including variable message board systems.
- 11. Vehicle Use Limitations and Restrictions The outright or time-of-day restrictions of vehicles, usually limited to trucks, to increase roadway capacity. Also includes turn restrictions during peak hours to eliminate conflicting movements. (3, p. 18). Scheduling truck deliveries can result in more efficient use of loading facilities (6, p. 22) and can be used to reduce impacts on congestion where trucks park on-street.
- 12. Traffic Calming Specific actions intended to slow traffic to improve safety or meet other community goals. For example, speed tables are sometimes used to reduce the speed and amount of through-traffic cutting across residential local streets. This can be paired with improvements on larger roads to better manage the flow of traffic. Also see strategies listed in Policy Approaches, such as Community Oriented Policies.

- 13. Access Management Projects This refers to the more engineering side of controlling access and egress to and from mainly arterial roadways. Access is controlled through the number and design of driveways, medians, and median lanes. (3, p. 17) Also see Access Management Policies in the Policy Approaches section.
- 14. County and Local Road Connectivity This is a range of ways to encourage local traffic to use the more local road network in order to maximize use of highways for through-traffic. It can be encouraged through enhanced signage, additional connections within the local road network, and state policies such as those being used by NJDOT. This may be used with the Road Improvement strategy, Short Connections.
- 15. Street Circulation Patterns Changing and/or restricting the direction of travel or separating two-way traffic on roadways. This can involve changing the designation of roadways from two-way travel to one-way, or vice-verse. (2).
- 16. Automated Toll Collection Improvements This includes various existing and developing strategies that reduce congestion and delays at tollbooths, such as by collecting the toll via communication with a transponder in vehicles. (3, p. 21)
- 17. Signal Prioritization for Emergency Vehicles Use of technology on board vehicles to override the green time at signals for ambulances, and other high-priority vehicles through the existing road system.
- 18. Signal Prioritization for Transit Vehicles Use of technology on board vehicles to temporarily extend green time or otherwise expedite buses through the existing road system.
- 19. Safety Improvements and Programs A significant component of frustration with congestion is from unexpected delays, such as those caused by crashes. This item's strategies cover the range of generally low-cost improvements to improve safety in areas with high rates of crashes by evaluating deficiencies and meeting them through use of improved guard rails, reflecting lane dividers, signage, line-of-sight clearances, lighting if necessary, minor engineering projects, enhanced enforcement of speed limits, and educational programs.
- 20. **Incident Management** These are programs to reduce incident duration by reducing the time for incident detection/verification, response and clearance (3, p. 20). They usually include improved institutional coordination.
- 21. Transportation Security/Terrorism Prevention Improvements and programs specifically designed to reduce the potential of terrorist attacks on any mode of the transportation system, which would inherently cause massive congestion.
- 22. Traveler Information Services Provision of pre-trip and en route information to travelers on current traffic and other conditions and real-time guidance on route information. Includes advisory services to warn of traffic or transit delays. It is especially relevant to special event generators and roadways with significant concentrations of travelers unfamiliar with the transportation system. (3, pp. 21-22)
- 23. Intermodal Enhancements (Passenger) Focused improvement to make it more possible and convenient to fully use all available modes of transportation for their best purposes. Examples might include minor changes in schedules to better mesh bus and train schedules, or improved information and amenities at intermodal centers. These improvements may also be between two providers of one mode, such as convenient walking connections between

- different train lines or coordination of schedules. New intermodal centers are in the new transit facility category.
- 24. Intermodal Enhancements (Freight) Improvement to make it more possible and convenient to fully use all available modes of transportation for their best purposes. Examples might include minor improvements to roads needed for truck access to rail sidings or improved communications/ITS approaches. New intermodal centers are in the new transit facility category.
- 25. Commercial Vehicle Operations (CVO) Utilization of ITS technologies to improve efficiency and effectiveness of commercial vehicles. Includes weigh station preclearance, automated safety inspections and onboard safety monitoring (3, p. 22).
- 26. **Signage** Improvements to clearly communicate location and direction information, including adding or removing signs (to reduce clutter), redesigned signs, "trailblazing" to key locations, maintenance of signs and line of sight to them, pavement markers to provide information.
- 27. Maintenance Management Employment of strategies to minimize the congestion caused by maintenance and construction activities. Often this is already part of the project or program planning done by the implementing agency.
- 28. Parking Operations Changes to parking intended to improve the operation of roadways, such as elimination of parking spaces nearest dangerous intersections if line of sight is a contributing factor, incentives to keep short-term parking used as such, and time of day limitations on parking.

## Transportation Demand Management

Actions to reduce peak-hour use of single occupant automobiles by providing alternatives and/or shifting commuter travel to off-peak hours. These are techniques and actions intended to decrease congestion through alterations in the demand for various transportation facilities (3, p. 16).

- 29. Carpool/Vanpool Programs Carpooling is sharing a ride with one or more other people for at least most of a trip on a regular basis. Vanpooling is sharing a ride with a larger group of riders usually going to the same destination. These alternative forms of transportation save time, money, and are beneficial for the environment.
- 30. Car Sharing This is an organized program that facilitates sharing automobiles among multiple users without each incurring the fixed cost of owning a car. A charge is associated with each trip. An example is the Philly Car Share program.
- 31. One-Less-Car Program This type of program seeks the involvement of citizens to become a part of the solution for relieving congestion on area roadways. For example, a program in Seattle involved 80 families with two or more vehicles making a commitment to drive one vehicle for a certain time frame and making a diary of trips, in hopes of changing the behavior of car usage.
- 32. Park-and-Ride Lots These are facilities that serve as a transfer terminal for single occupant vehicles and bikes. They may be served by public transportation or can be used for transferring to carpools and vanpools (3, p. 14). This strategy may cover agreements for use of existing spaces, adding additional spaces to existing facilities, or building new lots that do not primarily serve transit (also see Expanded Parking/Improved access to Stations in the Transit Improvements section).

- 33. Congestion Pricing (Tolls) This is a method of reducing congestion by charging for roadway use based on time and/or location of travel to encourage travelers to shift to alternative times, routes or modes during peak-traffic periods. Higher fees apply during the periods of greatest demand. (3, p. 14). This also covers changes to the toll structure for different types of trucks and how this compares to tolls for cars. Also see Congestion Pricing Policies in the Policy Approaches section.
- 34. Parking Supply and Demand Management These are actions taken to alter the supply and/or demand of a parking system to further the attainment of transportation objectives. (3, p. 15). They can include parking cash-out/transportation allowances, preferred parking areas for car pools or for people who only drive a few times a week, or changes in pricing.
- 35. **Telecommute** This involves the elimination of a commute, either partially or completely, to a conventional office through the use of computers and telecommunication technologies (phone, personal computer, modem, fax machine, e-mail, etc.). It can involve either working at home or at a satellite work center that is closer to an employee's home than the conventional office. (3, p. 17)
- 36. Alternative Work Hours These are strategies that reduce vehicle trip demand on highway facilities by shifting it to less congested time periods. This may include work schedules that spread the hours in which trips to and from the workplace occur and the complete elimination of trips to the workplace on some days, such as through compressed work weeks. (3, p. 20)
- 37. **Guaranteed Ride Home** Serves as a safety net for employees who car/vanpool or use transit service by providing a reliable backup ride to get them to their destination if they have to work unusual hours or if an emergency arises. (3, p. 13)
- 38. Marketing/Outreach for Transit and TDM Services This covers outreach, education, planning, and other ways of encouraging use of transit services and TDM programs. Applicable to employers, public entities, and the general public. Includes Carpool, Vanpool, Ridesharing Programs, Alternate Work Hours, Guaranteed Ride Home, TransitCheck, and other TDM strategies.
- 39. Focused Environmental Justice Outreach for Decision-Making While general outreach includes the range of groups that have a history and/or likelihood of being adversely affected or not adequately involved in decisions about transportation services, it has tended not to be effective. Focused outreach may include meetings in different locations, times, or formats than are often used in the process of preparing recommendations or making decisions, and offering translated materials or translators as needed for people to participate.
- 40. Multilingual and Non-Traditional Communication Provide basic information in the languages used in communities with significant populations that speak English as a second language and otherwise communicate transportation options in locally appropriate ways. This includes bus schedules and road project information. In addition to providing access, this increases use of services, and reduces the number of confused travelers.
- 41. Promotion of TransitChek This is a benefit that employers purchase in the form of vouchers and distribute to their employees. Employees submit the voucher to a transit provider for the voucher's face value worth of transit service. Appropriate to areas with high transit accessibility and service levels. (3, p. 14)
- 42. Ride-matching Any of a range of ways to help match people willing to coordinate their trip-making. This is most often done with regard to work commutes. There are both public services available and services provided by specific employers. DVRPC has a program called **Share-A-Ride.** It is a free service that matches commuters with transit services,

- carpools, vanpools, and walking/bicycling opportunities in the five-county southeastern Pennsylvania region. The Share-A-Ride program also partners with local employers to provide these services for employees. Transportation Management Agencies (TMA) also provide related programs. (4).
- 43. Local Delivery Service Encouraging businesses to deliver locally can reduce single occupancy vehicle trips by making it more feasible to take transit, walk, or bicycle to a store. It also makes it more feasible for households to manage with one less or no vehicles at all.

# **Policy Approaches**

These are a wide range of policy and planning strategies that serve to get people and goods to their desired locations while minimizing congestion. Many of these strategies also advance other quality-of-life and related goals, including those of the DVRPC Plan, and state policies. Education and outreach are usually a necessary aspect of implementing these approaches effectively.

- 44. Growth Management & Smart Growth These are ways to encourage the use of land in a manner that reduces overall congestion and transportation costs. These approaches recognize that transportation and land use decisions form a cycle with many implications for communities. Managed and balanced development can reduce trip length by creating greater job/housing balance and by making it more feasible to get to places by means other than driving alone. This range of ideas includes locating neighborhood schools where students can walk to them and regional schools on transit lines to reduce duplicative need for buses and congestion from drivers turning into the driveway.
- 45. Trip Reduction Ordinances (TRO) These are ordinances that use a municipality's regulatory authority to limit trip generation from development sites. They usually cover an entire local political subdivision rather than just an individual project; they spread the burden more equitably between existing and future development; and they may be less vulnerable to legal challenges than conditions imposed on development approvals. (1, p. 247). Also known as Employee Trip Reduction (ETR), such approaches may be voluntary or mandatory.
- 46. Congestion Pricing Policies Various policies that use pricing to shape transportation patterns. These may include gas taxes, insurance structures and other approaches. These approaches may be used to raise funds or may be fiscally balanced with dedicated use of the resulting funds. Also see the specific application as Toll Congestion Pricing in the TDM Section.
- 47. Transit First Policy & Transit Oriented Design (TOD) Development, implementation and enforcement of policies that give preferential treatment to transit, thereby making it more attractive than single occupant vehicle travel. (3, p. 14) This also includes TOD, pedestrian friendly, mixed-use forms of development focused around transit stations. This pedestrian-oriented design encourages residents and workers to rely on transit rather than the automobile.
- 48. Access Management Policies Where necessary, adoption of the right to share access, provide cross-access, regulate driveways, or other regulatory authority. This can also include the development of model ordinances and adoption of an access code by itself or as part of other regulations. Access management codes may cover corner lot requirements, continuity of sidewalk/bike networks and pedestrian/transit rider access, and land use (trip making) intensity controls in specific areas. Also refer to the engineering aspects of access management in the Operational Improvements section.
- 49. Railroad Right-of-Way Preservation Preservation of abandoned railroad rights-of-way for potential future rail service before other development occurs.

- 50. Review of Existing Land Use/Transportation Regulations Revise and better coordinate existing regulations, such as zoning, to reducing future traffic congestion. This can be done through build-out analysis or can include use of Geographic Information System or traffic simulation modeling. It is desirable that zoning ordinances, subdivision regulations, and other rules reflect master plans and other community goals such as maintaining reasonable accessibility and mobility. They can also incorporate access management to aid in the safe, efficient movement of people and goods (see Access Management Projects and Policies).
- 51. Accessibility and Environmental Justice These are policies and reviews of existing approaches that focus on the ability of all segments of the population to get where they need to go and ensuring that transportation investments (and impacts) are spread in a fair manner throughout the region. This addresses congestion in the sense of potential over-demand for some transportation services. Specific examples include policy-level support for Job Access Reverse Commute (JARC) programs and getting transportation information out in relevant formats, such as providing translations in areas where many people are learning English as a second language.
- 52. Economic Development Oriented Transportation Policies These are transportation strategies that serve the goals of revitalization, renewal, and recentralization of the region in keeping with adopted plans and programs. Such approaches are generally more efficient ways for a region to manage congestion while retaining or increasing employment than developing new rural areas. Examples may include specifically recognizing major brownfields and actively redeveloping Superfund sites in the CMP as appropriate for investment of federal transportation funds.
- 53. Environmentally Friendly Transportation Policies These are transportation strategies that seek to minimize the impacts of transportation on the natural environment in keeping with adopted plans and programs. These include approaches to conserve fuel, improve air quality, and preserve farmland, natural features, and open spaces. Generally, they shorten trip lengths and support other TDM strategies, helping to manage congestion.
- 54. Community-Oriented Transportation Policies and Context Sensitive Design These are transportation strategies that seek to enhance community and regional character, identity, and desired growth in keeping with adopted plans and programs. They include, though are not limited to, traffic-calming (see Operational Improvements) and context-sensitive design. By improving the quality of life and sustainability of communities, they make it possible for more people to have a range of non-auto transportation options; and by reducing the length and number of car trips they reduce congestion.
- 55. Interregional Transportation Coordination While part of many other strategies, this is explicit recognition that people and goods travel across regional boundaries and congestion management is made more effective by addressing the need to coordinate and communicate beyond strict geographic lines. This includes coordination of MPOs, transit authorities, and departments of transportation, as well as outreach to key stakeholders such as the freight community. The strategies include continued strengthening of the transportation planning process.

# Nonmotorized Strategies

Walking, bicycling, and other related modes are significant ways to make at least some short trips for at least part of the year. In the United States, 61.5 percent of all trips were five miles or shorter in 2001, according to the National Household Travel Survey. The percentage for one mile or shorter was not provided, but especially in the more developed parts of the DVRPC region, it stands to reason that this is a substantial percentage. Improvements for people using wheelchairs, motorized or not, are included in this

category. These improvements may also improve recreational opportunities, safety, and address quality-of-life goals.

- 56. Improvements for Pedestrians Generally, capital improvements that make pedestrian travel safer and easier. Examples include sidewalk improvements, signals, and markings giving pedestrians the right-of-way. This can include pedestrian countdown type signals. Suitable for business districts, older communities, and newer retail/business centers. (3, p. 14)
- 57. Improvements for Bicyclists Provision of bike lanes, bike paths, and bicycle storage facilities to promote bicycles as an alternative to automobiles. (3, p. 14)
- 58. Safety Education and Enforcement (non-auto) Safety is an important consideration in fully utilizing these non-auto modes of transportation. It can be addressed through support for existing programs and, if necessary, new approaches.
- 59. Planning and Design (non-auto) This covers the general work to make an area more conducive overall for consideration of any mode other than driving alone. This includes landscaping, streetscaping, and development of regional bicycling and walking plans and maps.

# Transit Improvements

This group of strategies is about ways to make existing transit services more convenient. This may include transportation by bus, rail, or other conveyance — either publicly or privately owned — providing to the public general or special service (but not including school buses or charter or sightseeing services) on a regular and continuing basis. See www.apta.com/research/stats/overview/gendef.cfm for more background on transit. Also, see some of the more intermodal strategies in the Operational Improvements, Transportation System Management (TSM), and Intelligent Transportation Systems (ITS) category.

- 60. Electronic Fare Payment Improvements This involves automatic trip payment through the use of noncash media, such as magnetically encoded fare cards. (1, p. 286). This method may be coordinated with other systems so that one media works across various transit systems, or even for both transit and toll roads.
- 61. Intelligent Transit Stops Information systems that provide schedule updates, transfer information, the time at which the next bus is expected at the stop, and information on any unexpected delays (3, p. 21). Also see Enhanced Transit Amenities and Safety, and Advanced Transit System Management.
- 62. Advanced Transit System Management Use of Automatic Vehicle Locator (AVL) systems on buses coordinated through transit centers able to make real-time adjustments to schedules, additional use of Intelligent Transportation Systems (ITS) technologies for bus, train, and coordinated transit management, including train signals and power grids. Also see Intelligent Transit Stops and Traffic Signal Prioritization for Transit.
- 63. Express Transit Routes This involves having some or all service on a route stop only at major stops in order to transport people more rapidly. It can be done by dropping less heavily used stops from peak-hour scheduled runs or by adding additional express service.
- 64. Extensions or Changes in Bus Routes This includes review of where bus service is provided, seeking ways to provide better or more efficient service using existing resources. For bus or other services, it may include minor extensions in existing routes to provide service to a broader area.

- 65. More Frequent Transit or More Hours of Service This involves providing additional service on an existing transit route. It can be done for increased peak service, daily service, or to provide earlier or later service.
- 66. Flexible Routing/Route Deviation Service This is an approach that increases passenger convenience for fixed-route bus riders by building in ability for buses to deviate within a defined distance, such as a quarter-mile from a fixed route. This may require advance arrangement and is generally more used in rural areas
- 67. Enhanced Transit Amenities and Safety This is the broad range of ways to make it more comfortable, safe, and convenient to use transit. It includes, but is not limited to, onboard features and improvements at transit stops. Also see Intelligent Transit Stops, Advanced Transit System Management, and Intermodal Enhancements.
- 68. Expanded Parking/Improved Access to Stations (all modes) Access to stations can be a limiting factor for use of the services that stop at them. There are a range of ways access can be improved, some of which are already addressed, such as Transit Oriented Design and shuttles to transit stations. Other strategies include improvements for walking and bicycling to transit access points and increasing parking capacity. Within the category of adding to existing facilities, this may be done through added surface lot capacity, or agreements with nearby sources of parking.
- 69. At-Grade Rail Crossing Safety Improvements Improvements to the rail system and/or the crossing road or trail system to increase safety and acceptable speeds, while reducing delays and other impacts. This may include improved coordination and warning systems. A related strategy is to equip a priority set of vehicles (such as school buses, hazardous material haulers, and emergency vehicles) with in-vehicle warning devices of approaching trains, potentially with real-time information on train position. (1, pp. 289-290)

# Road Improvements

These strategies address the area between minor operational improvements and building major new road facilities on new alignments.

- 70. HOV Treatments Improvements that reduce congestion by increasing the person throughput capacity of critically congested corridors. Also includes supporting policies and constructing facilities to encourage the use of high occupancy vehicles. (3, p. 15)
- 71. General Purpose Lanes The addition of one or more through lanes to an existing road
- 72. Short Connection Roads These are sections of road that, while new, primarily serve to make the existing road network function more efficiently and would generally be under a mile in length. They might connect two lower functional class roads, such as county roads, in a manner that reduces very short trips weaving out onto highways. Also see County and Local Road Connectivity in the Operational strategies section.
- 73. Frontage or Service Roads Road strategies that maintain access to local land uses while generally increasing the throughput of regional roads. This relates to, and would be done with, other access management strategies included in this document.
- 74. Major Reconstruction with Minor Capacity Major reconstruction focuses on the basic use of a roadway, but may increase capacity, safety, and access for other modes. For example, reconstructing a facility so that it meets current design standards may include wider lanes and shoulders that result in higher actual safe operating speeds. Major new bridge or bridge replacement projects may fit into this category.

## New Passenger Transit

This group of strategies involves providing <u>new</u>, primarily public transit services. Some examples are new bus routes or new rail lines to areas currently without similar services, or different ways of helping people get where they are going on a regular and continuing basis.

- 75. Bus Route (New) New regular bus service in an area not served by existing routes
- 76. **Demand Response Transit Services** Transit set up by appointment available to the general public using smaller vehicles (i.e. vans, 30-foot buses, or sometimes taxis). This may be most applicable in areas where transit demand is low or very dispersed.
- 77. Shuttle Service to Stations Services may be added to make existing services more accessible or to efficiently expand their reach in less dense areas. Smaller vehicles can provide loops or demand-responsive services to train stations, bus stops, or other multimodal transportation transfer centers. This is sometimes referred to as shuttle bus to line-haul transit (5, p. 14)
- 78. Transportation Services for Special Events Shuttle services and other approaches can be provided to get people to and from sporting events, or concerts, or other major gatherings. This can be an efficient way to reduce what is generally referred to as non-recurring congestion as well as reducing need for expensive investments in infrastructure. These services usually serve outlying parking lots and/or transit stops.
- 79. Transportation Services for Specific Populations This is the provision of services that address specific needs or specific populations. This includes employer-supported shuttles for their employees. It also includes services oriented toward senior citizens, handicapped people, and Job Access and Reverse Commute (JARC) target populations.
- 80. Bus Rapid Transit (BRT) or Exclusive Right-of-Way Bus Lanes At the heart of such strategies is making bus service more competitive with private automobiles. Both of these approaches allow buses to bypass road congestion so they can reach destinations faster. BRT systems may also include enhanced use of ITS and traveler communication services, high-end vehicles, and distinctive marketing. Exclusive bus lanes may be part of existing roads or on new rights-of-way.
- 81. Regional or Intercity Rail Service This is longer-distance new rail service on new track or track previously not used for this specific service. Such service may be fueled and operated in a variety of ways, including electric or diesel power. This may focus on improvements in existing services.
- 82. Local Fixed Rail Service (New, Extensions, or Added Stations) This is generally oriented to movement within one city, often with linkages to regional transportation. It can be provided in many different ways, including trolley, subway, elevated rail, or other approaches. This may mean enhancements of existing services or new services.
- 83. Bottleneck Removal for Passenger Rail Investing in new bridges, tunnels, switch or other communication systems significantly increases the capacity of the rail system with limited need for right-of-way. Also related to Bottleneck Removal for Freight Rail and Intermodal Enhancements (Passenger).
- 84. Passenger Intermodal Center or Garage for Transit Riders This can range from extensive new facilities such as a landmark building with a range of services and structured parking, to parking decks for transit stations, to major new surface lots. For a smaller scale,

- see Park and Ride Lots, Expanded Parking/Improved Access to Transit Stations/Stops, and Intermodal Enhancements (Passenger).
- 85. Ferry Services Passenger or passenger/vehicle services conveying people across major water bodies. Water taxis are closely related.

# **Goods Movement**

Managing congestion on roads generally helps trucks move freight. Beyond that, there are additional strategies that can increase the efficient and safe movement of goods by various modes (and the points of intermodal transfers). Also see strategies in the Operational Improvements, TSM, and ITS category.

- 86. Bottleneck Removal for Freight Rail Investing in new bridges, tunnels, switch or other communication systems significantly increases the capacity of the rail system with limited need for new right-of-way. Also see Bottleneck Removal for Passenger Rail and Intermodal Enhancements (Freight).
- 87. Freight Rail (New or expanded) New rail lines or extensions of existing facilities built to meet the needs of moving freight, including in terms of weight, clearance, and access.
- 88. Freight Intermodal Center/Yard This can range from major reinvestment making an existing intermodal center more functional to new facilities. It can focus on transfer between modes, such as rail to truck, or transfer within a mode such as from truckload to less-than-truckload/local delivery vehicles.

# New Roads

This group of strategies adds new miles of road on new alignments, generally not replacing existing roads.

- 89. Interchange with Related Road Segments These are projects at a scale that are expected to change regional transportation patterns. They increase the capacity of the existing road network by increasing interconnection opportunities, capacity, and safety. Large intersection projects with related roads that will add major capacity would be included in this strategy.
- 90. Arterial or Collector Road New road or substantial extension of an existing road (usually over a mile), generally built with many access points and designed to fit with local conditions.
- 91. Bypass A bypass of a downtown or city adds new capacity on a new alignment. Such roads may tend to be short to medium in length and addresses a variety of transportation and other issues.
- 92. Limited Access Highway The addition of a new facility or extension of existing facilities with accompanying ramps, tollbooths if included, signage, and other related improvements.

# Index to Full Range of CMP Strategies

Access Management Policies, 28
Access Management Projects, 25
Accessibility and Environmental Justice, 29
Advanced Transit System Management, 30
Alternative Work Hours, 27
Arterial or Collector Road, 33
At-Grade Rail Crossing Safety Improvements, 31
Automated Toll Collection Improvements, 25

Basic Upgrading of Traffic Signals, 24
Bottleneck Removal for Cars and Trucks, 24
Bottleneck Removal for Freight Rail, 33
Bottleneck Removal for Passenger Rail, 32
Bus Rapid Transit (BRT) or Exclusive Right of Way Bus Lanes, 32
Bus Route (New), 32
Bypass, 33

Car Sharing, 26
Carpool/Vanpool Programs, 26
Center Turn Lanes, 24
Channelization, 24
Commercial Vehicle Operations, 26
Community-Oriented Transportation Policies and Context Sensitive Design, 29
Computerized Traffic Signals, 24
Congestion Pricing (Tolls), 27
Congestion Pricing Policies, 28
County and Local Road Connectivity, 25

# Demand Response Transit Services, 32

Economic Development Oriented Transportation Policies, 29
Electronic Fare Payment Improvements, 30
Enhanced Transit Amenities and Safety, 31
Environmentally Friendly Transportation Policies, 29
Expanded Parking/Improved Access to Stations, 31
Express Transit Routes, 30
Extensions or Changes in Bus Routes, 30

Ferry Services, 33
Flexible Routing/Route Deviation Service, 31
Focused Environmental Justice for Decision Making, 27
Freight Intermodal Center/Yard, 33
Freight Rail (New or expanded, 33
Frontage or Service Roads, 31

General Purpose Lanes, 31 Growth Management & Smart Growth, 28 Guaranteed Ride Home, 27

HOV Treatments, 31

Improvements for Bicyclists, 30 Improvements for Pedestrians, 30 Incident Management, 25 Intelligent Transit Stops, 30

Intelligent Transportation Systems (ITS) /Integrated Corridor Management for Freeways, 24

Interchange with Related Road Segments, 33

Intermodal Enhancements (Freight), 26

Intermodal Enhancements (Passenger), 25

Interregional Transportation Coordination, 29

Intersection Improvements, 23

Jug Handles, 24

Limited Access Highway, 33

Local Delivery Service, 28

Local Fixed Rail Service (New, Extensions, or Added Stations), 32

Maintenance Management, 26

Major Reconstruction with Minor Capacity, 31

Marketing/Outreach for Transit and TDM services, 27

More Frequent Transit or More Hours of Service, 31

Multilingual and Non-Traditional Communication, 27

One-Less-Car Program, 26

Park and Ride Lots, 26

Parking Management, 27

Parking Operations, 26

Passenger Intermodal Center or Garage for Transit Riders, 35

Planning and Design (Non-auto), 30

Promotion of TransitChek, 27

Railroad Right-of-Way Preservation, 28

Ramp Metering, 24

Regional or Inter-city Rail Service, 32

Review of Existing Land Use/Transportation Regulations, 29

Ride-matching, 27

Roundabouts, 24

Safety Education and Enforcement (non-auto), 30

Safety Improvements and Programs, 25

Short Connection Roads, 31

Shuttle Service to Stations, 32

Signage, 26

Signal Prioritization for Emergency Vehicles, 25

Signal Prioritization for Transit Vehicles, 25

Street Circulation Patterns, 25

Telecommute, 27

Traffic Calming, 24

Transit First Policy & Transit Oriented Design, 28

Transportation Security/Terrorism Prevention, 25

Transportation Services for Special Events, 32

Transportation Services for Specific Populations, 32

Traveler Information Services, 25

Trip Reduction Ordinances, 28

Vehicle Use Limitations and Restrictions, 24

#### References

- 1. A Toolbox for Alleviating Traffic Congestion and Enhancing Mobility. Institute of Transportation Engineers. Washington, DC. 1997.
- 2. *Introduction to Transportation Access Approaches.* (n.d.) Retrieved April 8, 2005, from the Berkshire Regional Planning Commission Web site: <a href="http://berkshireplanning.org/3/4">http://berkshireplanning.org/3/4</a>
- 3. *Pennsylvania Congestion Management System: Phase 2 Report.* Delaware Valley Regional Planning Commission, Philadelphia, PA. 1997.
- 4. *Share-a-Ride*. 2004. Retrieved April 11, 2005, from the Delaware Valley Regional Planning Commission Web site: <a href="http://www.dvrpc.org/transportation/commuter/map/sar.htm">http://www.dvrpc.org/transportation/commuter/map/sar.htm</a>
- 5. The 2020 Transit Score Report, Possibilities for the Future. New Jersey Transit, Newark, NJ. 2000.
- 6. Integrating Freight Facilities and Operations with Community Goals (National Cooperative Highway Research Program Syntheses 320). Transportation Research Board. Washington, DC. 2003.
- 7. Signalized Intersections: Informational Guide (Publication No. FHWA-HRT-04-091) Federal Highway Administration. Washington, DC. 2004.
- 8. Roundabouts: An Informational Guide: (Publication No. FHWA-RD-00-067) Federal Highway Administration. Washington, DC. 2000.

# **CMP SUBCORRIDOR TYPES**

Last Revised: October 16, 2005

#### WHAT ARE SUBCORRIDOR TYPES?

Subcorridor types help with selecting strategies to reduce or manage congestion in congested corridors. Congested corridors are being divided into subcorridors where similar strategies may be applicable, for example breaking where areas of dense grid shift to more of a corridor focused around a single main arterial. Each subcorridor will be assigned one primary type, with notes providing more detail about its other characteristics. The types focus on the major facility of the corridor, but also address the related transportation facilities serving that general movement. A small number of types of subcorridors common in the DVRPC region are covered in the pages that follow. For each type, a set of Very Appropriate strategies has been developed, as well as Secondary Appropriate strategies. This assigns an initial set of strategies for each subcorridor. This initial set will be revised with specific environmental, community, and economic development data. The results will then be reviewed for reasonableness. The intent of this approach is to be efficient, have a rational basis, and make good use of reviews by knowledgeable participants. The resulting strategies will be the basis for more detailed corridor studies and development of projects.

This document draws upon several sources. It builds upon the Full Range of CMP Strategies; see that section for definitions of strategies. It was shaped by an exercise done with CMP Advisory Committee members regarding strategies most commonly seen as applicable in the DVRPC region (marked with a "c"), and the supplemental strategies frequently committed to in CMP studies in the DVRPC region (marked with an "s"). The Advisory Committee has reviewed drafts, and comments and research results will continue to be incorporated. The order of strategies reflects the DVRPC Perspective on Transportation Planning developed by staff and the Advisory Committee.

The following strategies are appropriate for all subcorridor types:

- Safety Improvements and Programs
- > Pedestrian and Bicyclist Improvements
- Signage
- → Basic Upgrades of Signals (c)
- → Intersection Improvements of a limited scale (c, s)
- → Bottleneck Improvements (vehicle or rail)
- Access Management, both engineering and policy strategies (c)
- → Marketing (including outreach, education, and planning) of TDM and Transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where applicable (c, s)
- → Review of Existing Land Use/Transportation Regulations (c, s)
- Growth Management and Smart Growth (c)

#### SUBCORRIDOR TYPES

1. Limited Access Freeway – Limited access highway corridor, ramps, related roads, and railroads tracks where they exist. These stretches of highway carry a high percent of throughtraffic and form key links within the region. An issue in such areas is how to move large numbers of people efficiently.

- → NJ examples: NJ 42 (freeway section) between I-295 and AC Expressway, much of I-295
- → PA examples: I-95 in Bucks County, US 202 sections 300 and 400 area (eastern Chester County), Pennsylvania Turnpike

# Very Appropriate Strategies

- Integrated Corridor Management for Freeways/Intelligent Transportation Systems (ITS)
- Incident Management (c)
- → Park-and-Ride Lots (c, s)
- → General Purpose Lanes
- Major Reconstruction with Minor Capacity Changes

# Secondary Appropriate Strategies

- → Automated Toll Collection Improvements (c)
- → Traveler Information System
- → Maintenance Management (s)
- → Transportation Security/Terrorism Prevention
- Computerized Traffic Signals (on parallel roads, provides infrastructure especially in case they need to be used as detours)
- → Commercial Vehicle Operations (CVO)
- County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- → Interregional Transportation Coordination
- → Congestion Pricing (Tolls)
- → Express Transit Services
- HOV Treatments
- → Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes (c)
- → Regional or Intercity Rail
- → Freight Rail
- → Interchange with Related Road Segments (c)
- See front page for strategies appropriate for all subcorridor types
- 2. **Junction of Limited Access Freeways** Subcorridors where limited access freeways come together or there are other unusual circumstances involving extensive weaving of vehicles and the related transportation facilities around them. A common issue is dealing with crashes and other events that can delay thousands of people.
- → NJ examples: I-295/I-76/NJ 42 area (south Camden County/north Gloucester County), NJ Turnpike/I-295/I-276 Extension area (north Burlington County)
- → PA examples: I-76/I-476 area, I-76/I-676 east of City Line Avenue, I-95 from I-676 to vicinity of Bensalem

## Very Appropriate Strategies

- Incident Management (c)
- Traveler Information Services
- Integrated Corridor Management for Freeways/Intelligent Transportation Systems (ITS)
- → Major Reconstruction with Minor Capacity Changes
- General Purpose Lanes

# Secondary Appropriate Strategies

- → Automated Toll Collection Improvements (c)
- → Commercial Vehicle Operations
- Integrated Corridor Management for Freeways/Intelligent Transportation Systems (ITS)
- Maintenance Management (s)
- Transportation Security/Terrorism Prevention
- Computerized Traffic Signals
   (parallel roads, provides infrastructure especially in case they need to be used as detours)
- County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- → Freight Rail Bottlenecks
- → Interregional Transportation Coordination
- → Congestion Pricing Tolls
- → HOV Treatments
- → Express Transit Services
- → Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes (c)
- Regional or Intercity Rail
- → Freight Rail
- → Interchange with Related Road Segments (c)
- See front page for strategies appropriate for all subcorridor types
- 3. **Dense Grid** Very densely developed area (more than just a through corridor) with varied purposes of roads in addition to a main street, usually with many pedestrians and bicyclists. This would mostly be found in cities and larger boroughs, especially where much of the development occurred before WW II. Generally the scale of streets is smaller and there is often mixing of uses. Safety and convenience of multiple modes are usually important in these areas.
- > NJ examples: Cities of Trenton, Camden, Burlington, Woodbury; Princeton Borough
- → PA examples: Philadelphia urban communities (Center City, North, South, and West Philadelphia), Chester, Media

## Very Appropriate Strategies

- → Computerized Traffic Signals (c, s)
- → Intermodal Enhancements Passenger
- Parking Operations
- → Community Friendly Transportation Policies
- → More Frequent or More Hours of Service for Transit (c, s)

- → Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- → Signal Priority for Transit
- Planning and Design (Nonmotorized)
- → Street Circulation Patterns
- Traveler Information
- Vehicle Use Limitations and Restrictions
- Maintenance Management (s)
- → Transit Rail Bottlenecks
- → Center Turn Lanes
- Accessibility and Environmental Justice

- → "Transit First" Policy & Transit Oriented Design (TOD)
- → Economic Development Oriented Transportation Policies
- Shuttle Services to Stations
- → Local Fixed Rail Service
- Intercity Rail
- See front page for strategies appropriate for all subcorridor types
- 4. **Dense Suburban Network** Highly developed suburban centers where much of the movement is internal these are areas where people live, shop, and work. They share some qualities with dense urban grid, but are generally more auto-oriented. While there is significant through-traffic, local trips going in all directions are a large component of the mix. In some cases there is opportunity to enhance a sense of community character.
- > NJ examples: Cherry Hill, Hamilton, Deptford
- → PA examples: PA 611 area between PA 73 and the Turnpike, US 202 section 200 area (vicinity of PA 3), US 30 area between I-76 and I-476

# **Very Appropriate Strategies**

- → Computerized Traffic Signals (c, s)
- → County and Local Road Connectivity; Short Connections
- → Park-and-Ride Lots (c, s)
- → Expanding Parking/Better Access at Stations (c, s)
- → Community Friendly Transportation Policies

# Secondary Appropriate Strategies

- → Signal Priority for Transit
- → Channelization
- → Expanded Parking/Improved Access to Transit Stations (c, s)
- → More Frequent Transit or More Hours of Service (c, s)
- → Flexible Routing/Route Deviation Transit Service
- → Services for Specific Populations
- → Demand Response Transit Service
- → Frontage/Service Roads
- → Arterial and Collector Road
- → See front page for strategies appropriate for all subcorridor types
- 5. Main Street as Through Route The main street of a community is also a highway serving a major role in carrying regional traffic. This main street, with a few parallel related transportation facilities, is a more common type of subcorridor for communities in the DVRPC region than dense grid. In some cases, the area around the original stand-alone community is developing, resulting in growing traffic. A common transportation issue is maintaining a meaningful multimodal system and retaining community character.
- → NJ examples: NJ 31 in Pennington area, US 322 in Mullica Hill and Glassboro, NJ 551 through Swedesboro
- → PA examples: PA 3 in Haverford area, PA 63 through Lansdale, US 202 section 500 Norristown, Downingtown, Exton area

## **Very Appropriate Strategies**

- Parking Operations
- → Computerized Traffic Signals (c, s)

- → "Transit First" Policies and Transit Oriented Design
- Transit Services for Specific Populations
- County and Local Road Connectivity; Short Connections

# Secondary Appropriate Strategies

- Street Circulation Patterns
- → Enhanced Transit Amenities and Safety
- Planning and Design (nonmotorized)
- → Maintenance Management (s)
- Signal Prioritization for Transit Vehicles
- → Signal Prioritization for Emergency Vehicles
- Community Friendly Transportation Policies
- → Park-and-Ride Lots (c, s)
- → More Frequent or More Hours of Service for Transit (c, s)
- → Flexible Routing/Route Deviation Services
- → Bus Route
- Major Reconstruction with Minor Capacity
- → Bypass
- See front page for strategies appropriate for all subcorridor types
- 6. **Developed Arterial** Generally long-standing travel routes with development along them (mostly from before the 1970s) sometimes passing through community centers. It is fairly usual for them to have transit service. In some cases, maintenance or reinvestment is an issue. These major through-routes may vary between having long stretches of residential and commercial development, to wider cross-sections built out with office buildings, industrial uses, and usually older shopping plazas.
- → NJ examples: Much of US 130 between Burlington and Westville, NJ 70 between I-295 and CR 541 (Medford-Mount Holly Road)
- → PA examples: US 1 in lower Bucks County (vicinity of Oxford Valley), US 13 between Chester and Philadelphia, US 422 broad vicinity of Phoenixville to Norristown

# Very Appropriate Strategies

- Computerized Traffic Signals (c, s)
- Enhanced Transit Amenities and Safety
- → Expanded Parking/Improved Access to Transit Stations (c, s)
- → Center Turn Lanes
- → More Frequent or More Hours of Transit Service (c, s)

- Transit Signal Prioritization
- → Signal Prioritization for Emergency Vehicles
- County and Local Road Connectivity; Short Connections
- → "Transit First"/Transit Oriented Design policies
- → Economic Development Oriented Transportation Policies
- Transit Services for Specific Populations
- → Extensions or Changes in Transit Routes (c, s)
- → Express Transit Services
- Frontage or Service Roads
- → Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes (c)

- → Local Fixed-Rail Services
- → Regional Rail
- See front page for strategies appropriate for all subcorridor types
- 7. **Developing Arterial** Roads designed originally for through-traffic that have had extensive commercial development. The main characteristic is that these are corridors oriented for driving to and among the stores. Often these corridors have developed with big box retail in the last few decades (with accompanying subdivisions and other uses). In some cases, older auto-oriented corridors that may have been built up in the 1950s or 1960s with businesses that have become obsolete are redeveloping with similar characteristics. They generally have high rates of turning vehicles interacting with through-traffic. There is often need for alternatives to driving, though transit can be difficult to provide that compares reasonably with driving.
- → NJ examples: US 130 between I-95 and Bordentown, east side of NJ 42 corridor in the vicinity of Winslow and Gloucester
- → PA examples: US 202 sections 600 and 700 (north of Norristown), US 1 in the area of the junction with US 202 and US 322, PA 309 between Ambler/Fort Washington and Quakertown, US 422 between Oaks and Pottstown

# Very Appropriate Strategies

- → Computerized Traffic Signals (c, s)
- → Center Turn Lanes
- → Extensions or Changes in Transit Routes (c, s)
- Accessibility and Environmental Justice Policies
- → Frontage or Service Roads

- Channelization
- → Bottleneck Improvements (c)
- → Signal Priority for Transit
- Expanding Parking/Better Access at Stations (c, s)
- County and Local Road Connectivity; Short Connections
- → Trip Reduction Ordinances
- Environmentally Friendly Transportation Policies
- → Park-and-Ride Lots (c, s)
- → Flexible Routing/Route Deviation Transit Service
- → Major Reconstruction with Minor Capacity Changes
- → General Purpose Lanes
- → Exclusive Rights-of-way for Buses
- → New Bus Routes
- New Regional or Local Rail Services
- Interchanges with Related Road Segments (includes major intersection capacity adding projects that change regional transportation patterns)
- See front page for strategies appropriate for all subcorridor types
- 8. Suburban Secondary Arterial Corridors connecting suburban development with major employment areas such as office parks and/or light industrial sites. They are not limited to minor arterials but often include them. These areas tend to be auto-dependent and of medium or low densities. Peak-hour commuter demand is a significant issue.

- → NJ examples: CR 571, Cross Keys area (includes NJ 47)
- → PA examples: Area of PA 132 (Street Road)/PA 63 (Welch Road), PA 322 and Newtown

# Very Appropriate Strategies

- Computerized Traffic Signals (c, s)
- Expanded Parking/Improved Access to Stations (c, s)
- → Park-and-Ride Lots (c, s)
- Shuttle Service to Station
- → County and Local Road Connectivity; Short Connections

# Secondary Appropriate Strategies

- Signal Prioritization for Emergency Vehicles
- → Signal Priority for Transit
- → Transit Amenities & Safety
- → Channelization
- → Center Turn Lane
- Community-Friendly Transportation Planning (for example to minimize cut-through traffic in residential areas)
- Parking Management (such as transportation allowances)
- → Trip Reduction Ordinances
- → Extensions or Changes in Transit Routes
- → More Frequent Transit Service
- → Shuttle Services to Stations
- Services for Specific Populations
- Demand Responsive Transit
- Arterial or Collector Road
- → See front page for strategies appropriate for all subcorridor types
- 9. **Lightly Developed Arterial** Through-routes that form the more open, rural or semi-suburban stretches between centers. In some cases they are congested at major intersections but also they connect congested subcorridors. Municipalities may wish to carefully think about whether they want these corridors managed to reduce sprawl or developed thoughtfully as remaining growth areas.
- → NJ examples: US 322 between the Commodore Barry Bridge and NJ 45
- → PA examples: US 1 west of US 202 to vicinity of Kennett Square, PA 112 and PA 309 connection corridor

# Very Appropriate Strategies

- Channelization
- → Park-and-Ride Lots (c, s)
- → Environmentally Friendly Transportation Policies
- → Transit Services for Specific Populations
- → Demand Response Services

- → Planning & Design (non-auto)
- County and Local Road Connectivity; Short Connections

- → Economic Development Oriented Transportation Policies
- → Flexible Routing/Route Deviation Service
- See front page for strategies appropriate for all subcorridor types

10. Major Freight/Industrial Subcorridor – Very high percentages of trucks and complex types of heavy equipment routinely use these routes. While other subcorridors may also be involved with transport of goods, these are corridors that focus on that role. Maintenance of infrastructure and clear signage for out-of-state drivers are key issues, and this may be complicated by need for 24-hour movement.

# NJ examples:

US 130 in Pennsauken, US 130 in the industrial area between Camden and Gloucester

→ PA examples:

I-95 Packer Avenue/Airport area, PA 291 area of southwestern Philadelphia

# **Very Appropriate Strategies**

- → Commercial Vehicle Operations
- Incident Management (c)
- → Interregional Transportation Coordination for Freeways
- Major Reconstruction with Minor Capacity Changes
- → Intermodal Enhancements Freight

- → Traveler Information Services
- → Maintenance Management
- County and Local Road Connectivity; Short Connections
- General Purpose Lanes
- → Frontage or Service Roads
- → Freight Intermodal Center/Yard
- New Freight Rail
- Interchange with Related Road Segments
- → Limited Access Highways
- → See front page for strategies appropriate for all subcorridor types

#### REFINEMENT OF APPLICATION OF TYPES

The use of types of subcorridors will be refined as described below, reflecting the Plan. This is in addition to reviews of known plans and programs. Naturally, these screenings can only result in a well-reasoned draft. This draft is revised based on input by the CMP Advisory Committee (which includes each DVRPC county and various agencies), DVRPC committees, and public comment. Draft strategies for each subcorridor are modified with respect the following characteristics:

## **ENVIRONMENTAL**

- Large areas of environmentally sensitive or permanently protected open space
- > Rural land uses along congested corridors

#### **COMMUNITY**

- Preferences at the county level from the Plan survey
- Potential for Transit Oriented Development and review of Transit Score strategies
- Statewide or other adopted multiuse trails, adopted zones such as for schools

#### **ECONOMIC DEVELOPMENT:**

- → Environmental Justice areas of high degree of disadvantage
- Areas with high rates of growth based on census data

For the current cycle of the CMP, one type of data from each of the above categories is being used. These are large areas of permanently protected open space (federal, state, and county lands), multiuse trails (existing and proposed), and Environmental Justice areas with a high degree of disadvantage (five or more of the eight criteria). This will be expanded in the future.

# **EMERGING AND REGIONALLY SIGNIFICANT CORRIDORS**

The CMP identifies corridors that seem likely to become congested or are otherwise important for proactive planning. These are based on travel corridors where three or more of the CMP criteria are in effect and also the remaining NHS road and rail facilities that are not currently congested, such as some of the corridors connecting to outside of the region. These corridors are shown in light, transparent green on a variety of CMP maps. They are not as precisely defined as the congested corridors. At a regional planning level, the strategies appropriate in all subcorridor types are a starting point to further study in these corridors.





# 4. CONGESTED CORRIDORS AND STRATEGIES

The extensive analysis and evaluation described in the previous section brought the process to a point of agreement on defined congested corridors and emerging/regionally significant ones. The next step was to develop and agree on how to manage that congestion or its likelihood in the future. Continued concerns about keeping the project feasible helped keep the number of congested corridors just below 30 for the region. Breaking those corridors into sections where, at a regional planning level, generally similar strategies seemed applicable yielded just under 100 subcorridors for which to agree on strategies.

As described in the previous section, a rational method was used to do a preliminary assignment of appropriate strategies by subcorridor and then to refine them according to additional characteristics of each subcorridor. These results were further revised based upon knowledge of members of the CMS (CMP) Advisory Committee, DVRPC staff, and review of major adopted plans. It represents a genuine quantitative and qualitative effort, however one that inherently remains imperfect in the scale of area covered in the resource framework of a project. The DVRPC Board indicated its agreement that the CMP is a high-quality process and that it also adopts this report with its unanimous vote on October 27, 2005.

Even presented in a very summary form, the 29 corridors, which follow by state and then number, form a significant part of the rest of this report. This next part starts with a list of all the corridors, <a href="DVRPC Congested Corridors">DVRPC Congested Corridors</a>. The next items are summary maps, <a href="New Jersey Congested Corridors">New Jersey Congested Corridors</a>, <a href="New Jersey Congested Corridors">New Jersey Congested Corridors</a>, and <a href="Pennsylvania Congested Corridors">Pennsylvania Congested Corridors</a>. The lengthy section, <a href="DVRPC CMP Strategies">DVRPC CMP Strategies</a> <a href="DVRPC CMP Strategies">by Subcorridor</a>, follows with a map for each congested corridor with its subcorridors, followed by specific sets of strategies for each subcorridor. Some strategies were deemed appropriate almost anywhere in the DVRPC region and these are listed at the end of each corridor; this allows a person considering the function of one specific corridor to take out or copy just those pages.

In addition to the congested corridors, the maps show emerging/regionally significant corridors. These are corridors where proactive strategies (such as those listed as applicable to all subcorridors) are an especially good investment in the future of the region.

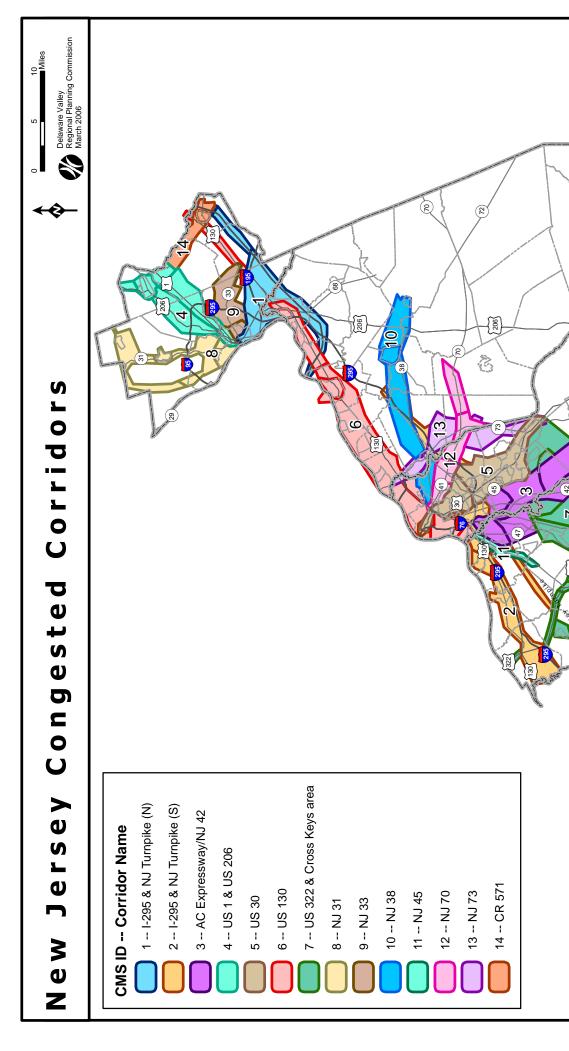
More guidance about how to use the information that follows is provided in Technical Memorandum #3: CMP Procedures and Coordination with TIP, which is available in the Appendices or through DVRPC. The report and key appendices, such as this memorandum, are also available on the DVRPC Web site, specifically at

<u>www.dvrpc.org/transportation/longrange/cmp.htm</u>. A related resource being developed is a detailed Atlas of Congested Corridors. DVRPC staff will be doing outreach and training sessions and is available to assist in using these CMP materials.

# **DVRPC CONGESTED CORRIDORS**

# By State and ID Number

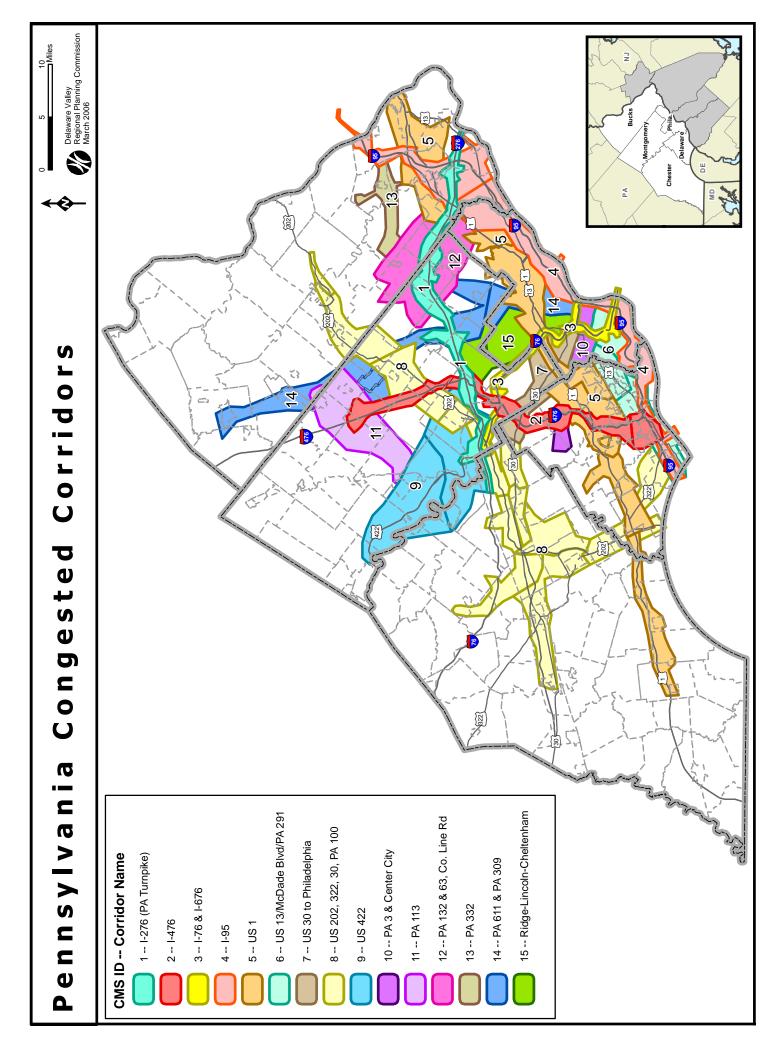
State	Corridor II	O Corridor Name
NJ	1	I-295 & NJ Turnpike (N)
NJ	2	I-295 & NJ Turnpike (S)
NJ	3	AC Expressway/NJ 42
NJ	4	US 1 & US 206
NJ	5	US 30
NJ	6	US 130
NJ	7	US 322 & Cross Keys Area
NJ	8	NJ 31
NJ	9	NJ 33
NJ	10	NJ 38
NJ	11	NJ 45
NJ	12	NJ 70
NJ	13	NJ 73
NJ	14	CR 571
PA	1	I-276 (PA Turnpike)
PA	2	I-476
PA	3	I-76 & I-676
PA	4	I-95
PA	5	US 1
PA	6	US 13/McDade Blvd/PA 291
PA	7	US 30 to Philadelphia
PA	8	US 202, 322, 30, PA 100
PA	9	US 422
PA	10	PA 3 & Center City
PA	11	PA 113
PA	12	PA 132 & 63, County Line Rd
PA	13	PA 332
PA	14	PA 611 & PA 309
PA	15	Ridge-Lincoln-Cheltenham





322

(25)



# **DVRPC CMP Strategies by Subcorridor**

See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
1	I-295 & NJ Turnpike (N)	New Jersey Turnpike from I-
		276 (Pennsylvania
		Turnpike) to Middlesex
		County; also includes I-195
		and I-295

**Subcorridors with Their Strategies** 

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
A	I-195; I-295; Turnpike	Mainly interstate and related	2. Freeway
		land uses	Junction

#### Very Appropriate Strategies

- o Incident Management
- o Traveler Information Services
- o Major Reconstruction with Minor Capacity Changes
- o Interchange with Related Road Segments
- o General Purpose Lanes

#### Secondary Appropriate Strategies

- o Automated Toll Collection Improvements
- o Commercial Vehicle Operations
- o Integrated Corridor Management-Freeways
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals
  - (provide infrastructure on parallel roads especially in case of use as detours)
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Freight Rail Bottlenecks
- o Interregional Transportation Coordination
- o Congestion Pricing-Tolls
- o HOV Treatments
- o Express Transit Services
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Freight Rail
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 01306: I-295/Rising Sun Interchange

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	NJ Turnpike	Narrow, straight Turnpike	1. Freeway
		corridor	

#### Very Appropriate Strategies

- o Integrated Corridor Management for Freeways
- o Incident Management
- o Park and Ride Lots
- o General Purpose Lanes
- o Major Reconstruction with Minor Capacity Changes

# Secondary Appropriate Strategies

- o Automated Toll Collection Improvements
- o Traveler Information System
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals

(provide infrastructure on parallel roads especially in case of use as detours)

#### **NJ CMP Corridor 1**

- o Commercial Vehicle Operations
- County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Interregional Transportation Coordination
- o Congestion Pricing (Tolls)
- o Express Transit Services
- o HOV Treatments
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Freight Rail
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
С	Exit 8 and North	Major truck activity area	2. Freeway
			Junction

#### Very Appropriate Strategies

- Incident Management
- o Traveler Information Services
- o Commercial Vehicle Operations
- o Major Reconstruction with Minor Capacity Changes
- General Purpose Lanes

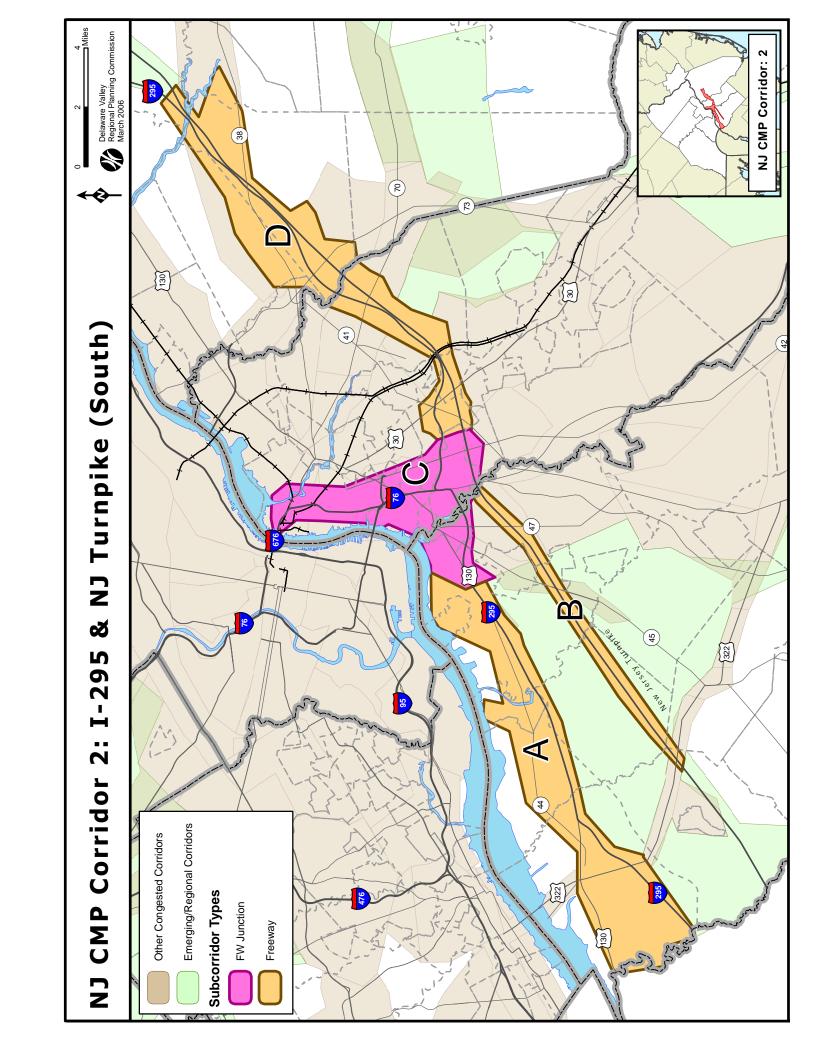
## Secondary Appropriate Strategies

- o Automated Toll Collection Improvements
- o Integrated Corridor Management-Freeways
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals
  - (provide infrastructure on parallel roads especially in case of use as detours)
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Interregional Transportation Coordination
- o Congestion Pricing-Tolls
- o HOV Treatments
- o Express Transit Services
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Freight Rail
- o Interchange with Related Road Segments
- Also see strategies appropriate for all subcorridor types

# Area-wide Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth

Note that the CMP respects permanently protected open space and other policy commitments of the Long Range Plan and in no way replaces the EIS or other planning processes. Due to the size of subcorridors, capacity additions may be appropriate for a subcorridor but not appropriate everywhere in them. Widenings are assumed to be considered on the most major facility first.



# **DVRPC CMS Strategies by Subcorridor**

See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
2	I-295 & NJ Turnpike (S)	NJ Turnpike & I-295 from
		Salem County to Northern
		Camden County; I-76/676;
		Extended to reflect CPA
		major trip flows

# **Subcorridors with Their Strategies**

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
A	I-295 in Gloucester County	High growth area	1. Freeway

#### Very Appropriate Strategies

- Integrated Corridor Management for Freeways
- Incident Management O
- Park and Ride Lots 0
- Intermodal Enhancements (Freight) 0
- General Purpose Lanes 0
- Major Reconstruction with Minor Capacity Changes

#### Secondary Appropriate Strategies

- Automated Toll Collection Improvements
- Traveler Information System 0
- Maintenance Management
- Transportation Security/Terrorism Prevention 0
- Computerized Traffic Signals (provide infrastructure on parallel roads especially in case of use as detours)
- 0 Commercial Vehicle Operations
- County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- Interregional Transportation Coordination 0
- Congestion Pricing (Tolls)
- **Express Transit Services** 0
- **HOV Treatments** 0
- Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes 0
- Regional or Inter-city Rail O
- 0 Freight Rail
- Interchange with Related Road Segments 0
- Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM 04321: Paulsboro Brownfield Access

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	NJ Turnpike in Gloucester County	Few exits	1. Freeway

### Very Appropriate Strategies

- Integrated Corridor Management for Freeways
- Incident Management 0
- Park and Ride Lots O
- General Purpose Lanes 0
- Major Reconstruction with Minor Capacity Changes

- **Automated Toll Collection Improvements**
- Traveler Information System 0
- Maintenance Management 0
- Transportation Security/Terrorism Prevention
- Computerized Traffic Signals
  - (provide infrastructure on parallel roads especially in case of use as detours)
- Commercial Vehicle Operations

#### **NJ CMP Corridor 2**

- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- Interregional Transportation Coordination
- o Congestion Pricing (Tolls)
- o Express Transit Services
- o HOV Treatments
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Freight Rail
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
С	I-295, NJ Turnpike, I-76/676	North Burlington County	2. Freeway
			Junction

# Very Appropriate Strategies

- o Incident Management
- o Traveler Information Services
- o Integrated Congestion Management for Freeways
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes
- o Interchange with Related Road Segments

#### Secondary Appropriate Strategies

- o Automated Toll Collection Improvements
- o Commercial Vehicle Operations
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals
  - (provide infrastructure on parallel roads especially in case of use as detours)
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Interregional Transportation Coordination
- o Congestion Pricing-Tolls
- o HOV Treatments
- o Express Transit Services
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Freight Rail
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 355: I-295/NJ 42/I-76 Connection. 355A: I-295/NJ 42 Missing Moves,

Bellmawr; 9108: I-676, MLK Blvd Operational Improvements

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
D	NJ Turnpike in Camden & Burlington counties		1. Freeway

# Very Appropriate Strategies

- o Integrated Corridor Management for Freeways
- o Incident Management
- o Park and Ride Lots
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes
- o Interchange with Related Road Segments

# Secondary Appropriate Strategies

- o Automated Toll Collection Improvements
- o Traveler Information System
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals

(provide infrastructure on parallel roads especially in case of use as detours)

#### **NJ CMP Corridor 2**

- o Commercial Vehicle Operations
- County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Interregional Transportation Coordination
- o Congestion Pricing (Tolls)
- o Express Transit Services
- o HOV Treatments
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Freight Rail
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

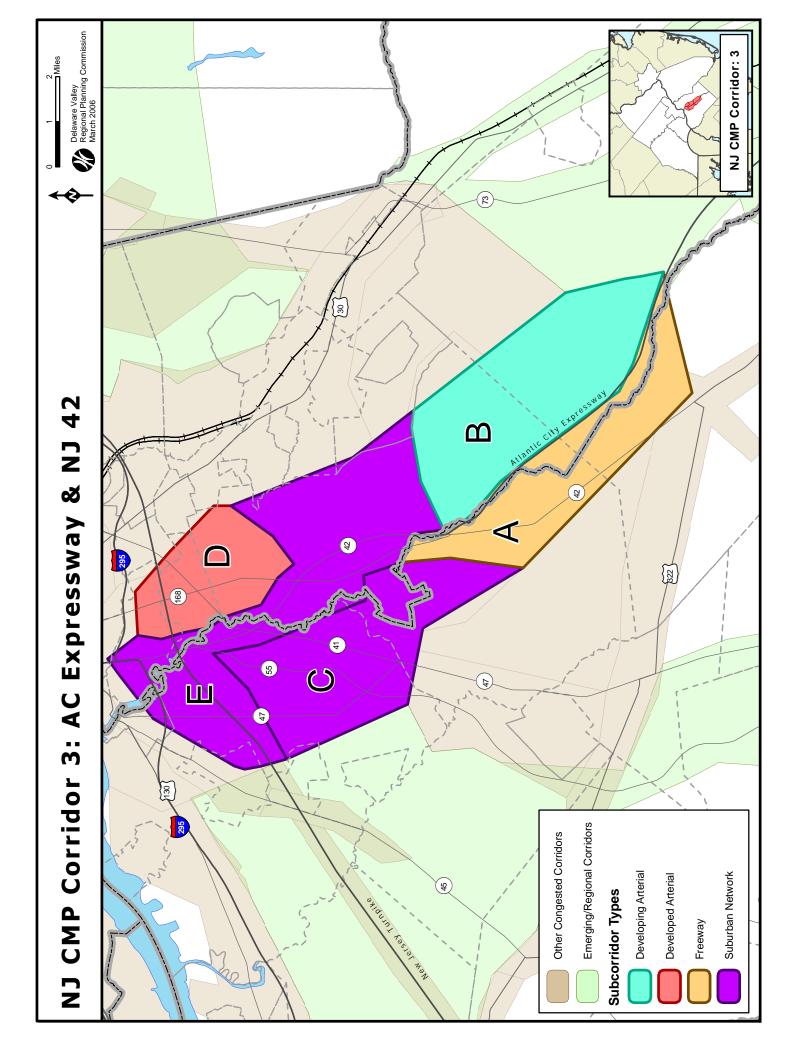
See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM 191A: I-295/NJ 38 Missing Moves

# Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth

Note that the CMP respects permanently protected open space and other policy commitments of the Long Range Plan and in no way replaces the EIS or other planning processes. Due to the size of subcorridors, capacity additions may be appropriate for a subcorridor but not appropriate everywhere in them. Widenings are assumed to be considered on the most major facility first.



# **DVRPC CMS Strategies by Subcorridor**

See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
3	AC Expressway/NJ 42	

# **Subcorridors with Their Strategies**

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
Α	Atlantic City (AC) Expressway	AC Expressway and west	1. Freeway

#### Very Appropriate Strategies

- o Integrated Corridor Management for Freeways
- o Incident Management
- o Park and Ride Lots
- o General Purpose Lanes
- o Major Reconstruction with Minor Capacity Changes

#### Secondary Appropriate Strategies

- o Automated Toll Collection Improvements
- o Traveler Information System
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals
  - (provide infrastructure on parallel roads especially in case of use as detours)
- o Commercial Vehicle Operations
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Interregional Transportation Coordination
- o Congestion Pricing (Tolls)
- o Express Transit Services
- o HOV Treatments
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Freight Rail
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	East of AC Expressway	Development pretty much	7. Developing
		up to AC Expressway	Arterial

# Very Appropriate Strategies

- o Computerized Traffic Signals
- Center Turn Lanes
- o Extensions or Changes in Transit Routes
- o Accessibility and Environmental Justice Policies
- o Frontage or Service Roads

- Channelization
- o Signal Priority for Transit
- o Expanding Parking/Better Access at Stations
- o County and Local Road Connectivity; Short Connections
- o Trip Reduction Ordinances
- o Environmentally Friendly Transportation Policies
- Park and Ride Lots
- o Flexible Routing/Route Deviation Transit Service
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes
- o Exclusive Rights-of-way for Buses
- o New Bus Routes
- o New Regional or Local Rail Services
- o Interchanges with Related Road Segments
- Also see strategies appropriate for all subcorridor types

# **NJ CMP Corridor 3**

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
С	NJ 55/NJ 41	Deptford area	4. Dense
			Suburban
			Network

## Very Appropriate Strategies

- Computerized Traffic Signals
- County and Local Road Connectivity; Short Connections 0
- Extensions or Changes in Transit Routes
- Transit Services for Specific Populations 0
- Community Friendly Transportation Policies

# Secondary Appropriate Strategies o Signal Priority for Transit

- Channelization 0
- **Commercial Vehicle Operations** 0
- **Traveler Information**
- Park and Ride Lots O
- More Frequent Transit or More Hours of Service 0
- Flexible Routing/Route Deviation Transit Service 0
- Major Reconstruction with Minor Capacity
- Demand Response Transit Service O
- Frontage/Service Roads 0
- Arterial and Collector Road 0
- Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
D	NJ 41/Black Horse Pike	Developed area	<ol><li>Developed</li></ol>
			Arterial

# Very Appropriate Strategies

- Computerized Traffic Signals
- **Enhanced Transit Amenities and Safety** 0
- Expanded Parking/Improved Access to Transit Stations 0
- 0 Center Turn Lanes
- More Frequent or More Hours of Transit Service 0
- General Purpose Lanes 0

#### Secondary Appropriate Strategies

- Transit Signal Prioritization
- Signal Prioritization for Emergency Vehicles 0
- County and Local Road Connectivity; Short Connections 0
- "Transit First"/Transit Oriented Design policies 0
- Economic Development Oriented Transportation Policies 0
- Extensions or Changes in Transit Routes 0
- **Express Transit Services** 0
- 0 Frontage or Service Roads
- Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes 0
- Local Fixed Rail Services 0
- Regional Rail 0
- Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 201: NJ 41/42 Freeway Singley Ave-Cooper St Widening

#### Adopted Corridor Studies Include (also see Bibliography):

NJ 168 Corridor Study (DVRPC Publication 04042, 2004)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
E	Northern developed part of corridor	Includes access to I-295	4. Dense
			Suburban
			Network

#### Very Appropriate Strategies

- o Computerized Traffic Signals
- o Expanding Parking/Better Access at Stations
- o General Reconstruction with Minor Capacity
- o Interchange with Related Road Segments
- o General Purpose Lanes

#### Secondary Appropriate Strategies

- o Signal Priority for Transit
- o Channelization
- o Expanded Parking/Improved Access to Transit Stations
- o Park and Ride Lots
- o Center Turn Lanes
- o Community Friendly Transportation Policies
- o More Frequent Transit or More Hours of Service
- o Flexible Routing/Route Deviation Transit Service
- o Services for Specific Populations
- o Demand Response Transit Service
- o County and Local Road Connectivity; Short Connections
- Frontage/Service Roads
- o Arterial and Collector Road
- Also see strategies appropriate for all subcorridor types

#### Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 355: I-295/NJ 42/I-76, 355a: I-295/NJ 42 Missing Moves, Bellmawr, 201:

NJ 41/NJ 42 Freeway, Singley Ave-Cooper St Widening; 349: NJ 42/CR 673

College Road CD/CMS study of a new interchange

# Area-wide Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- Growth Management and Smart Growth

See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
4	US 1 & US 206	Includes Princeton area

**Subcorridors with Their Strategies** 

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
Α	Trenton area	Matches Urban Core	3. Dense Grid
		Community outline from	
		Long Range Plan	

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o Intermodal Enhancements Passenger
- o Express Bus Services
- o Shuttle Services to Stations
- o More Frequent or More Hours of Service for Transit
- o Major Reconstruction with Minor Capacity

#### Secondary Appropriate Strategies

- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit
- o Planning and Design (Non-motorized)
- o Parking Operations
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- Economic Development Oriented Transportation Policies
- o Community Friendly Transportation Policies
- o Bus Rapid Transit/Exclusive Bus Lanes
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 05358: Trenton Magic Marker Site

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	US 1 area	Between Trenton &	4. Dense
		Princeton	Suburban
			Network

# Very Appropriate Strategies

- o County and Local Road Connectivity; Short Connections
- o Expanding Parking/Better Access at Stations
- o Express Bus Services
- o More Hours or More Frequent Transit Service
- o Bus Rapid Transit/Exclusive Bus Lanes

- o Signal Priority for Transit
- o Computerized Traffic Signals
- o Channelization
- o Community Friendly Transportation Policies
- o Expanded Parking/Improved Access to Transit Stations
- o Park and Ride Lots
- o Flexible Routing/Route Deviation Transit Service
- o Services for Specific Populations

- o Demand Response Transit Service
- o Frontage/Service Roads
- o Arterial and Collector Road
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
С	US 1/Penns Neck Area	Alexander Rd to County	4. Dense
		Line, Princeton Junction	Suburban
		Train Station	Network

#### Very Appropriate Strategies

- o County and Local Road Connectivity; Short Connections
- o Expanding Parking/Better Access at Stations
- o Center Turn Lane
- o Major Reconstruction with Minor Capacity
- o Bus Rapid Transit/Exclusive Bus Lanes

#### Secondary Appropriate Strategies

- o Signal Priority for Transit
- o Computerized Traffic Signals
- o Channelization
- o Community Friendly Transportation Policies
- o Enhanced Transit Amenities and Safety
- o Planning and Design (Non-auto)
- o Trip Reduction Ordinances
- o Shuttle to Station
- o Park and Ride Lots
- o Flexible Routing/Route Deviation Transit Service
- o Services for Specific Populations
- o Demand Response Transit Service
- o Frontage/Service Roads
- o General Purpose Lanes
- o Interchange with Related Road Segments
- o Arterial and Collector Road
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM 031: Route 1 / CR 571, Penns Neck Area EIS (a.k.a. Millstone Bypass)

# Adopted Corridor Studies Include (also see Bibliography):

Penn's Neck FEIS (NJDOT, 2004), Route 1 BRT Study (NJ Transit, 2006),

West Windsor Princeton Junction Redevelopment Study (West Windsor Township, 2005)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
D	US 206 area	US 206 between Trenton &	8. Suburban
		Princeton	Secondary

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o Enhanced Transit Amenities and Safety
- o Park and Ride Lots
- o Shuttle Service to Station
- o Community Friendly Transportation Planning

- o Signal Prioritization for Emergency Vehicles
- o Signal Priority for Transit
- o Channelization
- o County and Local Road Connectivity; Short Connections
- o Center Turn Lane
- o Environmentally Friendly Transportation Planning
- o Parking Management (such as transportation allowances)

- o Trip Reduction Ordinances
- o Extend/Change Routes
- o More Frequent or More Hours of Transit Service
- o Flexible Routing/Route Deviation Service
- o Services for Specific Populations
- o Demand Responsive Transit
- o Major Reconstruction with Minor Capacity
- o Also see strategies appropriate for all subcorridor types

# Adopted Corridor Studies Include (also see Bibliography):

US 206 Corridor Study underway by DVRPC as of 2006

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
E	Princeton area	Borough plus related part of	3. Dense Grid
		Township; Princeton Train	
		Station (DINKY)	

#### Very Appropriate Strategies

- o Intermodal Enhancements Passenger
- o Parking Operations
- o More Frequent or More Hours of Service for Transit
- o Express Bus Services
- o Community Friendly Transportation Policies
- o Bus Rapid Transit/Exclusive Bus Lanes

# Secondary Appropriate Strategies

- o Computerized Traffic Signals
- o Signal Priority for Transit
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Enhanced Transit Amenities and Safety
- o Intelligent Transit Stops
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Flexible Routeing/Route Deviation Services
- o Demand Response Services
- o Shuttle Services to Stations
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
F	US 206 to Mercer/Somerset County Line	Princeton - Somerset	8. Suburban
		County Line	Secondary

# Very Appropriate Strategies

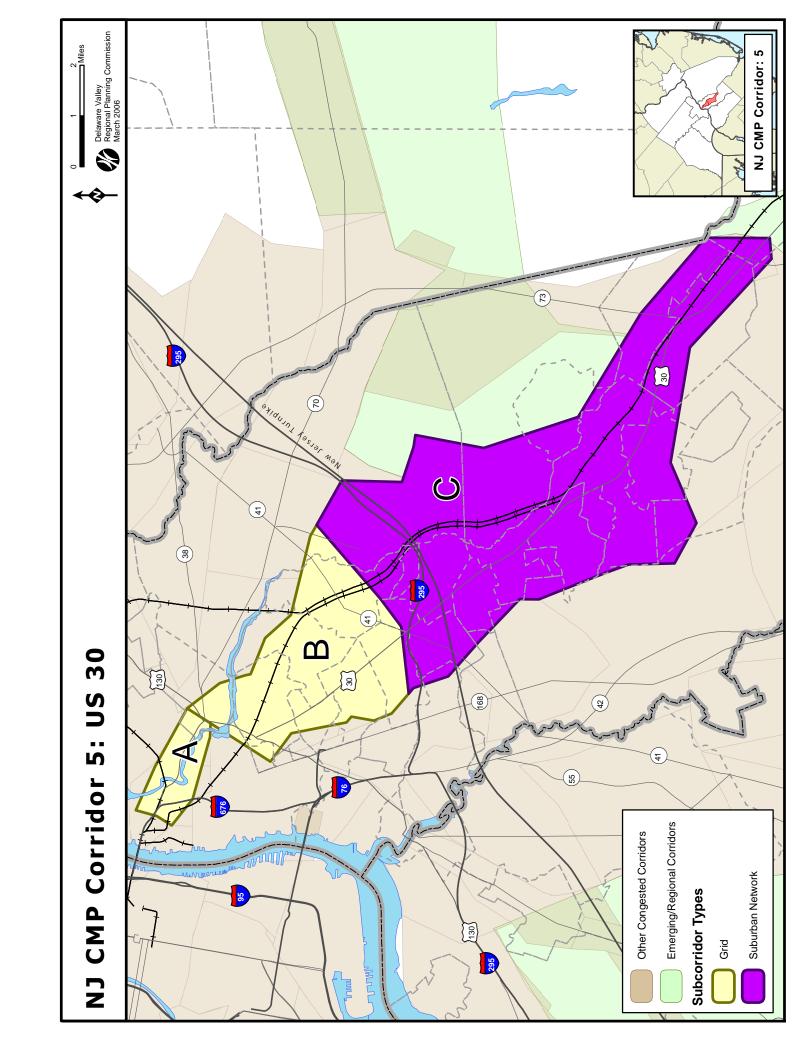
- o Computerized Traffic Signals
- o Park and Ride Lots
- o Shuttle Service to Station
- o Flexible Routing/Route Deviation Services
- o Community-Friendly Transportation Planning

- o Signal Prioritization for Emergency Vehicles
- o Signal Priority for Transit
- o Enhanced Transit Amenities and Safety
- o Channelization
- o County and Local Road Connectivity; Short Connections
- o Center Turn Lane
- o Community-Friendly Transportation Planning

- o Parking Management (such as transportation allowances)
- o Trip Reduction Ordinances
- o Extensions or Changes in Routes
- o More Frequent or More Hours of Transit Service
- o Community-Friendly Transportation Planning
- o Demand Responsive Transit
- o Major Reconstruction with Minor Capacity
- o Also see strategies appropriate for all subcorridor types

# Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
5	US 30	Haddon Ave, Lindenwold,
		Berlin - PATCO Corridor

# **Subcorridors with Their Strategies**

oubooniuo.o.	Cabournation than their characterist			
Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor	
			Type	
A	US 30 in Camden	Admiral Wilson Blvd (US	3. Dense Grid	
		30) is an expressway		

#### Very Appropriate Strategies

- o Computerized Traffic Signals
- o Major Reconstruction with Minor Capacity
- o Interchange with Related Road Segments
- o Short Connections
- o More Frequent or More Hours of Service for Transit
- o Local Fixed Rail Service (for example, added stations)

#### Secondary Appropriate Strategies

- Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Parking Operations
- o Intermodal Enhancements Passenger
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Economic Development Oriented Transportation Policies
- o Community Friendly Transportation Policies
- o Shuttle Services to Stations
- o Services for Specific Populations
- o Demand Responsive Transit services
- o Bus Route
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 9108: I-676, MLK Blvd Operational Improvements

# Adopted Corridor Studies Include (also see Bibliography):

Inter-Municipal Cooperation: White Horse Pike Study (DVRPC et al, 2003)

Camden Hub Study (underway), Cramer Hill Redevelopment Project materials

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	Camden - I-295	Collingswood & Haddonfield	3. Dense Grid
		area	

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o Intermodal Enhancements Passenger
- o Parking Operations
- o Major Reconstruction with Minor Capacity
- o More Frequent or More Hours of Service for Transit

# Secondary Appropriate Strategies

o Enhanced Transit Amenities and Safety; Intelligent Transit Stops

- o Signal Priority for Transit
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Expanded Parking/Improved Access to Stations
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Economic Development Oriented Transportation Policies
- o Community Friendly Transportation Policies
- o Shuttle Services to Stations
- o Local Fixed Rail Service
- o Bus Route
- o Also see strategies appropriate for all subcorridor types

#### Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 155B: US 30/130 Collingswood Circle Elimination (A), Comly Ave to

PATCO Bridge; 155C: US 30/US 130 Cooper River to PATCO Bridge (B)

# Adopted Corridor Studies Include (also see Bibliography):

Inter-Municipal Cooperation: White Horse Pike Study (DVRPC et al, 2003)

Camden Hub Study (underway)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
С	I-295 to Berlin	Inner ring suburban	4. Dense
		communities	Suburban
			Network

#### Very Appropriate Strategies

- o Computerized Traffic Signals
- o Economic Development Oriented Transportation Policies
- o Parking Management
- o Park and Ride Lots
- o Major Reconstruction with Minor Capacity

# Secondary Appropriate Strategies

- o Signal Priority for Transit
- o Channelization
- o Community Friendly Transportation Policies
- o Expanded Parking/Improved Access to Transit Stations
- o Transit First Policies and Transit Oriented Design (TOD)
- o Expanding Parking/Better Access at Stations
- o More Frequent Transit or More Hours of Service
- o Flexible Routing/Route Deviation Transit Service
- o Services for Specific Populations
- o Demand Response Transit Service
- o County and Local Road Connectivity; Short Connections
- o Frontage/Service Roads
- o Arterial and Collector Road
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 93109: US 30/NJ 73 Berlin Circle Improvements

# Adopted Corridor Studies Include (also see Bibliography):

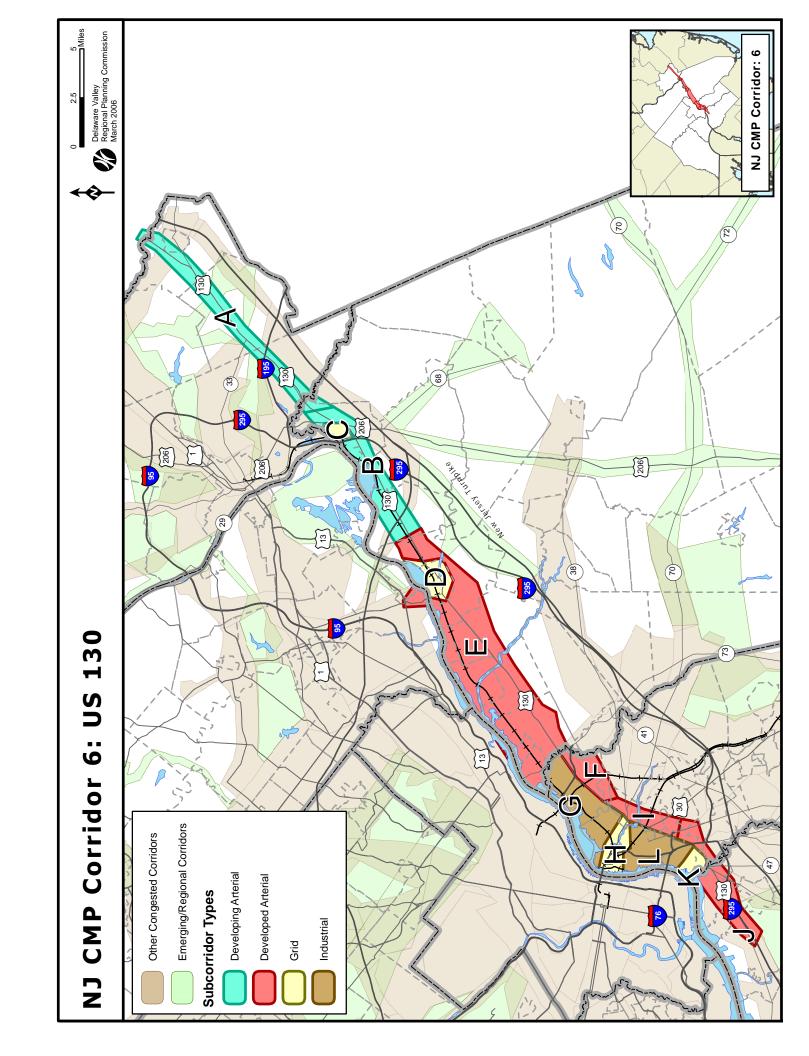
Inter-Municipal Cooperation: White Horse Pike Study (DVRPC et al, 2003)

Camden Hub Study (underway)

Congestion and Accident Mitigation (CAMP) Program Report (DVRPC, 2006)

# Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
6	US 130	

**Subcorridors with Their Strategies** 

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
A	Washington Township - Hightstown Borough	Lightly developed but	7. Developing
		developing fast; no rail	Arterial

# Very Appropriate Strategies

- o Center Turn Lanes
- o Jughandles
- o Extensions or Changes in Transit Routes
- o Interchange with Related Road Segments
- o Community Friendly Transportation Policies

# Secondary Appropriate Strategies

- o Channelization
- o Computerized Traffic Signals
- o Signal Priority for Transit
- o County and Local Road Connectivity; Short Connections
- o Trip Reduction Ordinances
- o Environmentally Friendly Transportation Policies
- o Park and Ride Lots
- o Service for Specific Populations
- o Flexible Routing/Route Deviation Transit Service
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes
- o Exclusive Rights-of-way for Buses
- o New Bus Routes
- o New Regional or Local Rail Services
- o Frontage or Service Roads
- o Interchanges with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

#### Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 9101: Rt 33 Conrail Bridge and Intersection work, 99368A: Rt 33 Bypass

# Adopted Corridor Studies Include (also see Bibliography):

Washington Township Town Center plans

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	North of City of Burlington	North of I-95 - Bordentown	7. Developing
		City (but not including it)	Arterial

#### Very Appropriate Strategies

- o Computerized Traffic Signals
- o Center Turn Lanes
- o Extensions or Changes in Transit Routes
- o County and Local Road Connectivity/Short Connections
- o Economic Development Oriented Transportation Policies
- Environmentally Friendly Transportation Policies

- o Channelization
- o Signal Priority for Transit
- o Expanding Parking/Better Access at Stations
- o More Frequent or More Hours of Service
- o Trip Reduction Ordinances

- o Accessibility and Environmental Justice Policies
- o Park and Ride Lots
- o Frontage or Service Roads
- o Flexible Routing/Route Deviation Transit Service
- o Major Reconstruction with Minor Capacity Changes
- o Exclusive Rights-of-way for Buses
- o New Bus Routes
- o New Regional or Local Rail Services
- o Interchanges with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

# Adopted Corridor Studies Include (also see Bibliography):

Context Sensitive Vision Plan for Rt 130 (2003)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
С	Bordentown City		3. Dense Grid

#### Very Appropriate Strategies

- o Computerized Traffic Signals
- o Parking Operations
- o County and Local Road Connectiity/Short Connections
- o More Frequent or More Hours of Service for Transit
- o Economic Development Oriented Transportation Policies
- Environmentally Friendly Transportation Policies

# Secondary Appropriate Strategies

- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Intermodal Enhancements Passenger
- o Signal Priority for Transit
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Flexible Routing/Route Deviation Transit Service
- o Major Reconstruction with Minor Capacity Changes
- o Shuttle Services to Stations
- o Local Fixed Rail Service
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

# Adopted Corridor Studies Include (also see Bibliography):

Context Sensitive Vision Plan for Rt 130 (2003)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
D	City of Burlington	City; Riverline	3. Dense Grid

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o County and Local Road Connectivity/Short Connections
- o Economic Development Oriented Transportation Policies
- o Major Reconstructionwith Minor Capacity
- o More Frequent or More Hours of Service for Transit

- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information

- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Parking Operations
- o Expanded Parking/Improved Access to Stations
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Intermodal Enhancements Passenger
- o Community Friendly Transportation Policies
- o Shuttle Services to Stations
- o Transit Services for Specific Populations
- o Local Fixed Rail Service Enhancements
- Also see strategies appropriate for all subcorridor types

#### Adopted Corridor Studies Include (also see Bibliography):

Congestion and Accident Mitigation (CAMP) Program Report (DVRPC, 2006)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
E	Pennsauken-Burlington	Riverline; goes around City	<ol><li>Developed</li></ol>
		of Burlington	Arterial

#### Very Appropriate Strategies

- "Transit First"/Transit Oriented Design policies
- o Community Friendly Transportation Policies
- o Economic Development Oriented Transportation Policies
- o Major Reconstruction with Minor Capacity
- o More Frequent or More Hours of Transit Service

#### Secondary Appropriate Strategies

- o Computerized Traffic Signals
- o Transit Signal Prioritization
- o Signal Prioritization for Emergency Vehicles
- o County and Local Road Connectivity; Short Connections
- o Enhanced Transit Amenities and Safety
- o Expanded Parking/Improved Access to Transit Stations
- o Economic Development Oriented Transportation Policies
- o Center Turn Lanes
- o Extensions or Changes in Transit Routes
- o Express Transit Services
- o Frontage or Service Roads
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Local Fixed Rail Services
- o Regional Rail
- o Also see strategies appropriate for all subcorridor types

#### Adopted Corridor Studies Include (also see Bibliography):

Context Sensitive Vision Plan for Rt 130 (2003) - Nodes 1-3

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
F	Pennsauken/Merchantville	US 130 northeast of main	6. Developed
		Camden grid area	Arterial

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o Enhanced Transit Amenities and Safety
- o Center Turn Lanes
- o More Frequent or More Hours of Transit Service
- o Major Reconstruction with Minor Capacity

- o Transit Signal Prioritization
- o Signal Prioritization for Emergency Vehicles
- o County and Local Road Connectivity; Short Connections

- o "Transit First"/Transit Oriented Design policies
- Economic Development Oriented Transportation Policies
- o Expanded Parking/Improved Access to Transit Stations
- o Extensions or Changes in Transit Routes
- o Services for Specific Populations
- o Express Transit Services
- o Frontage or Service Roads
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Local Fixed Rail Services
- o Park and Ride Lots
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
G	North Camden and Pennsauken Area	North of City to NJ 73;	10. Industrial
		Riverline, Cramer Hill	
		Redevelopment Proposal	

#### Very Appropriate Strategies

- o Commercial Vehicle Operations
- o Incident Management
- o Economic Development Oriented Transportation Policies
- o Major Reconstruction with Minor Capacity Changes
- o Accessibility and Environmental Justice

#### Secondary Appropriate Strategies

- o Interregional Transportation Coordination for Freeways
- o Maintenance Management
- o Street Circulation Patterns
- o Vehicle Use Limitations and Restrictions
- o Community Friendly Transportation Policies
- o Interregional Transportation Coordination for Freeways
- o Expanded Parking/Improved Access to Stations
- o Passenger Intermodal Center or Garage for Transit
- o Interregional Transportation Coordination for Freeways
- o County and Local Road Connectivity; Short Connections
- o General Purpose Lanes
- o Frontage or Service Roads
- o Freight Intermodal Center/Yard
- o New Freight Rail
- o Local Fixed Rail Service (for example, new stations)
- o Interchange with Related Road Segments
- o Arterial or Collector Road
- o Limited Access Highways
- o Also see strategies appropriate for all subcorridor types

#### Adopted Corridor Studies Include (also see Bibliography):

Studies underway include Cramer Hill Redevelopment Plans and Camden Truck Route Optimization Project

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
Н	City of Camden grid-type dense development		3. Dense Grid

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o Economic Development Oriented Transportation Policies
- o Accessibility and Environmental Justice
- o Parking Operations
- o Street Circulation Patterns
- o More Frequent or More Hours of Service for Transit

- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit

- o Planning and Design (Non-motorized)
- Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Intermodal Enhancements (Passenger)
- o Intermodal Enhancements (Freight)
- o Center Turn Lanes
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Community Friendly Transportation Policies
- o Shuttle Services to Stations
- o Services for Specific Populations
- o Major Reconstruction with Minor Capacity
- o Local Fixed Rail Service (additions)
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

#### Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 155B: US 30/US 130 Collingswood Circle Elimination (A), Comly Ave to

PATCO Bridge; 155C: US 30/US 130 Cooper River to PATCO Bridge (B); 9108: I-

676, MLK Blvd Operational Improvements

#### Adopted Corridor Studies Include (also see Bibliography):

Studies underway include Camden Truck Route Optimization Project

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
	East of US 130 toward the south side of Camden - Pennsauken, Collingswood	Southern Camden County	6. Developed
	Borough, Oaklyn Borough		Arterial

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o Enhanced Transit Amenities and Safety
- o Expanded Parking/Improved Access to Transit Stations
- o Center Turn Lanes
- o More Frequent or More Hours of Transit Service

# Secondary Appropriate Strategies

- o Transit Signal Prioritization
- o Signal Prioritization for Emergency Vehicles
- o County and Local Road Connectivity; Short Connections
- o "Transit First"/Transit Oriented Design policies
- o Economic Development Oriented Transportation Policies
- o Services for Specific Populations
- o Extensions or Changes in Transit Routes
- o Express Transit Services
- o Frontage or Service Roads
- o Flexible Routeing/Route Deviation Services
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Local Fixed Rail Services
- o Regional Rail
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 155B: US 30/US 130 Collingswood Circle Elimination (A), Comly Ave to

PATCO Bridge; 155C: US 30/US 130 Cooper River to PATCO Bridge (B)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
J	US 130 in Gloucester County	North Gloucester County to	6. Developed
		Camden County	Arterial

#### Very Appropriate Strategies

- o Computerized Traffic Signals
- o More Frequent or More Hours of Transit Service
- o Bus Routes
- o Center Turn Lanes
- o Park and Ride Lots

#### Secondary Appropriate Strategies

- o Transit Signal Prioritization
- o Signal Prioritization for Emergency Vehicles
- o County and Local Road Connectivity; Short Connections
- o "Transit First"/Transit Oriented Design policies
- o Economic Development Oriented Transportation Policies
- o Enhanced Transit Amenities and Safety
- o Extensions or Changes in Transit Routes
- o Express Transit Services
- o Expanded Parking/Improved Access to Transit Stations
- o Frontage or Service Roads
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Local Fixed Rail Services
- o Regional Rail
- o Major Reconstruction with Minor Capacity
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
K	West of Jersey Ave	Southport & Gloucester Pt	3. Dense Grid
		redevelopment area	

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o Economic Development Oriented Transportation Policies
- o County and Local Road Connectivity; Short Connections
- o Planning and Design (non-auto)
- o Environmentally Friendly Transportation Policies

# Secondary Appropriate Strategies

- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit
- o Commercial Vehicle Operations
- o Street Circulation Patterns
- o Traveler Information
- o Parking Operations
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Intermodal Enhancements Passenger
- o Expanded Parking/Improved Access to Stations
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o Community Friendly Transportation Policies
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o More Frequent or More Hours of Service for Transit
- o Shuttle Services to Stations
- o Local Fixed Rail Service
- Also see strategies appropriate for all subcorridor types

# Adopted Corridor Studies Include (also see Bibliography):

Studies underway include SouthPort Connector and Redevelopment

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
L	Camden-Gloucester Industrial Area	Industrial area between	10. Industrial
		Camden & Gloucester	

#### Very Appropriate Strategies

- o Street Circulation Patterns
- o Vehicle Use Limitations and Restrictions
- o Accessibility and Environmental Justice
- o Major Reconstruction with Minor Capacity Changes
- Intermodal Enhancements Freight

#### Secondary Appropriate Strategies

- o Traveler Information Services
- o Maintenance Management
- o Incident Management
- o Commercial Vehicle Operations
- o Economic Development Oriented Transportation Policies
- o Community Friendly Transportation Policies
- o Interregional Transportation Coordination for Freeways
- o County and Local Road Connectivity; Short Connections
- o Intermodal Enhancements (Freight)
- o General Purpose Lanes
- o Frontage or Service Roads
- o Freight Intermodal Center/Yard
- o New Freight Rail
- o Arterial or Collector Road
- o Interchange with Related Road Segments
- o Limited Access Highways
- o Also see strategies appropriate for all subcorridor types

#### Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 155B: US 30/US 130 Collingswood Circle Elimination (A), Comly Ave to

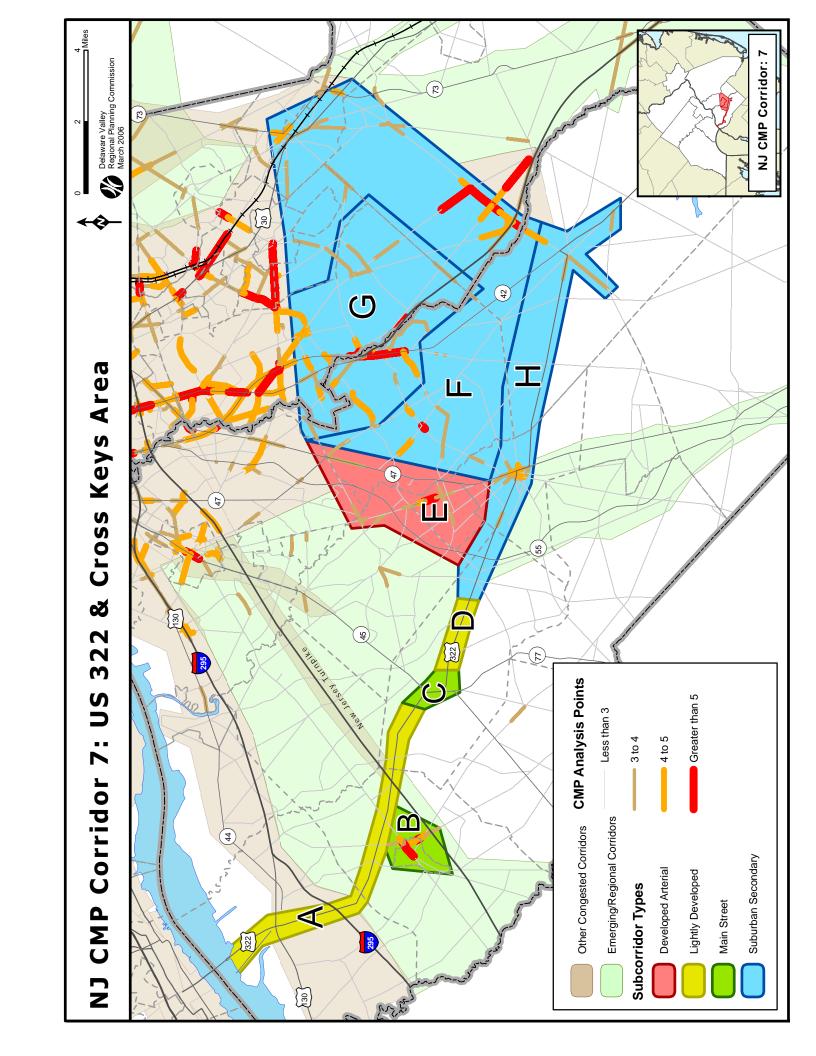
PATCO Bridge; 155C: US 30/US 130 Cooper River to PATCO Bridge (B)

# Adopted Corridor Studies Include (also see Bibliography):

Studies underway include SouthPort Connector and Redevelopment

# Area-wide Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes	
7	US 322 & Cross Keys Area	Includes Cross Keys and	
		Glassboro areas, CR 651,	
		NJ 47, CR 634, CR 689	

#### **Subcorridors with Their Strategies**

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
A	Commodore Barry Bridge-Mullica Hill	Growth area	9. Lightly
			Developed

#### Very Appropriate Strategies

- o Access Management (while approved for all areas, it is especially highlighted here)
- o Environmentally Friendly Transportation Policies
- o Park and Ride Lots
- o Interregional Transportation Coordination
- o Transit Services for Specific Populations

#### Secondary Appropriate Strategies

- o Planning & Design (non-auto)
- o County and Local Road Connectivity; Short Connections
- o Economic Development Oriented Transportation Policies
- o Demand Response Services
- o Flexible Routing/Route Deviation Service
- o Bus Route
- Also see strategies appropriate for all subcorridor types

#### Adopted Corridor Studies Include (also see Bibliography):

Studies underway include US 322 Smart Growth Study

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	Swedesboro		5. Main Street

# Very Appropriate Strategies

- o Parking Operations
- o Computerized Traffic Signals
- o "Transit First" Policies and Transit Oriented Design
- o Transit Services for Specific Populations
- o County and Local Road Connectivity; Short Connections

- o Street Circulation Patterns
- o Enhanced Transit Amenities
- o Planning and Design (non-motorized)
- o Maintenance Management
- o Signal Prioritization for Transit Vehicles
- o Traveler Information Services
- o County and Local Road Connectivity; Short Connections
- Community Friendly Transportation Policies
- o Park and Ride Lots
- o More Frequent or More Hours of Service for Transit
- o Flexible Routing/Route Deviation Services
- o Major Reconstruction with Minor Capacity
- o Bus Route
- o Bypass
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
С	Mullica Hill	Trucks are reported to be a	<ol><li>Main Street</li></ol>
		problem	

#### Very Appropriate Strategies

- o Parking Operations
- o Computerized Traffic Signals
- o "Transit First" Policies and Transit Oriented Design
- o Traveler Information Services
- o County and Local Road Connectivity; Short Connections

# Secondary Appropriate Strategies

- o Street Circulation Patterns
- o Enhanced Transit Amenities
- o Planning and Design (non-motorized)
- o Maintenance Management
- o Signal Prioritization for Transit Vehicles
- County and Local Road Connectivity; Short Connections
- o Community Friendly Transportation Policies
- o Park and Ride Lots
- o More Frequent or More Hours of Service for Transit
- o Flexible Routing/Route Deviation Services
- o Transit Services for Specific Populations
- Bus Route
- o Bypass
- o Also see strategies appropriate for all subcorridor types

### Adopted Corridor Studies Include (also see Bibliography):

Studies underway include local study of Main Street operations

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
D	Glassboro-Richwood	Between two settled areas	9. Lightly
			Developed

#### Very Appropriate Strategies

- o Access Management (while approved for all areas, it is especially highlighted here)
- o Traveler Information Services
- o Park and Ride Lots
- o Environmentally Friendly Transportation Policies
- o Transit Services for Specific Populations

# Secondary Appropriate Strategies

- o Planning & Design (non-auto)
- o County and Local Road Connectivity; Short Connections
- o Economic Development Oriented Transportation Policies
- o Flexible Routing/Route Deviation Service
- o Demand Response Services
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
E	NJ 55	Pittman & Glassboro	6. Developed
			Arterial

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o Enhanced Transit Amenities and Safety
- o Transit Services for Specific Populations
- o Center Turn Lanes
- o More Frequent or More Hours of Transit Service

#### Secondary Appropriate Strategies

- o Transit Signal Prioritization
- o Signal Prioritization for Emergency Vehicles
- o County and Local Road Connectivity; Short Connections
- o "Transit First"/Transit Oriented Design policies
- o Economic Development Oriented Transportation Policies
- o Extensions or Changes in Transit Routes
- o Express Transit Services
- o Expanded Parking/Improved Access to Transit Stations
- o Frontage or Service Roads
- o Bus Route
- o Major Reconstruction with Minor Capacity
- o Local Fixed Rail Services
- Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
F	Berlin, suburbs	Berlin, suburban area	8. Suburban
		around Gloucester	Secondary
		Township	

#### Very Appropriate Strategies

- o Computerized Traffic Signals
- o Community-Friendly Transportation Planning
- o Park and Ride Lots
- o Shuttle Service to Station
- o Transit Services for Specific Populations

# Secondary Appropriate Strategies

- o Signal Prioritization for Emergency Vehicles
- o Signal Priority for Transit
- o Transit Amenities & Safety
- o Channelization
- o County and Local Road Connectivity; Short Connections
- o Center Turn Lane
- o Jughandles
- o Community-Friendly Transportation Planning
- o Parking Management (such as transportation allowances)
- o Trip Reduction Ordinances
- o Extend/Change Routes
- o More Frequent Transit Service
- o Demand Responsive Transit
- o Expanded Parking/Improved Access to Stations
- o Arterial or Collector Road
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 93109: US 30/NJ 73 Berlin Circle Improvements

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
G	Gloucester Township	Developed Community	8. Suburban
			Secondary

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o Community-Friendly Transportation Planning
- o Park and Ride Lots
- o Shuttle Service to Station
- o Transit Services for Specific Populations

#### Secondary Appropriate Strategies

- o Signal Prioritization for Emergency Vehicles
- o Signal Priority for Transit
- o Transit Amenities & Safety
- o Channelization
- o County and Local Road Connectivity; Short Connections
- o Center Turn Lane
- o Jughandles
- o Community-Friendly Transportation Planning
- o Parking Management (such as transportation allowances)
- o Trip Reduction Ordinances
- o Street Circulation Patterns
- o Extend/Change Routes
- o More Frequent Transit Service
- o Bus Route
- o Expanded Parking/Improved Access to Stations
- o Demand Responsive Transit
- o Major Reconstruction with Minor Capacity
- o Arterial or Collector Road
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 349: NJ 42/CR 673 College Road CD/CMS study of a new interchange

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
Н	US 322 east of NJ 55	Highway with regional	8. Suburban
		centers	Secondary

#### Very Appropriate Strategies

- o Computerized Traffic Signals
- o Community-Friendly Transportation Planning
- o Park and Ride Lots
- o Transit Services for Specific Populations
- o More Frequent Transit Service

# Secondary Appropriate Strategies

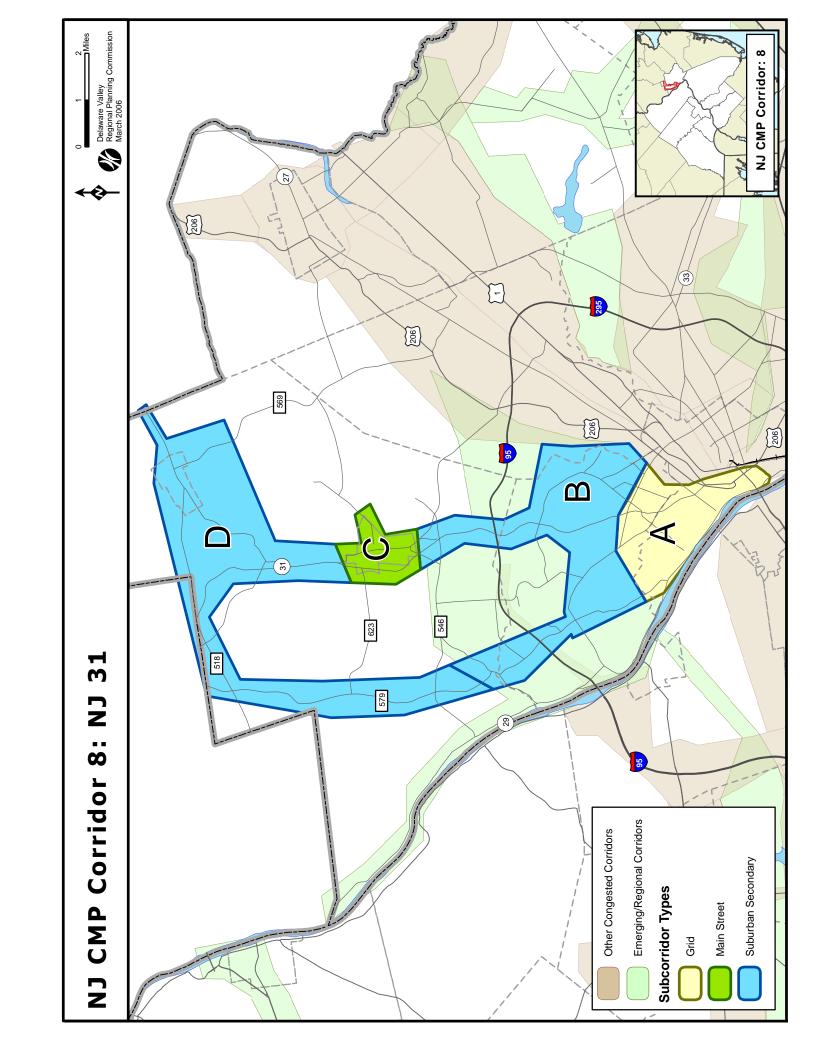
- o Signal Prioritization for Emergency Vehicles
- o Signal Priority for Transit
- o Transit Amenities & Safety
- o Channelization
- o County and Local Road Connectivity; Short Connections
- o Center Turn Lane
- o Environmentally Friendly Transportation Planning
- o Parking Management (such as transportation allowances)
- o Trip Reduction Ordinances
- o Expanded Parking/Improved Access to Stations
- o Extend/Change Routes
- o Shuttle Services to Stations
- o Demand Responsive Transit
- o Major Reconstruction with Minor Capacity
- o Arterial or Collector Road
- o Also see strategies appropriate for all subcorridor types

#### Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 97112D: US 322, Richwood Area Intersection Improvements

# Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
8	NJ 31	North-south movement to
		Trenton. County routes 518
		& 579 added in emerging
		corridor review.

**Subcorridors with Their Strategies** 

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
A	NJ 31, NJ 29 in Trenton		3. Dense Grid

#### Very Appropriate Strategies

- o Intermodal Enhancements Passenger
- o Computerized Traffic Signals
- o Economic Development Oriented Transportation Policies
- o More Frequent or More Hours of Service for Transit
- Major Reconstruction with Minor Capacity

#### Secondary Appropriate Strategies

- Parking Operations
- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit
- o Signal Priority for Emergency Vehicles
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- "Transit First" Policy & Transit Oriented Design (TOD)
- o Accessibility and Environmental Justice
- o Community Friendly Transportation Policies
- o Shuttle Services to Stations
- o Transit Services for Specific Populations
- Local Fixed Rail Service
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 05358: Trenton Magic Marker Site

### Adopted Corridor Studies Include (also see Bibliography):

Rt 31 Study underway (NJDOT)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
В	NJ 31 to south of Pennington, CR 579	Developed area; heavy cut-	8. Suburban
		through & truck traffic,	Secondary
		crashes	

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o Park and Ride Lots
- o Shuttle Service to Station
- o Extend/Change Transit Routes
- vehicle Use Limitations and Restrictions

- o Signal Prioritization for Emergency Vehicles
- Signal Priority for Transit

- o Transit Amenities & Safety
- o Channelization
- o County and Local Road Connectivity; Short Connections
- o Center Turn Lane
- o Community-Friendly Transportation Planning
- o Parking Management (such as transportation allowances)
- o Trip Reduction Ordinances
- o Expanded Parking/Improved Access to Stations
- o More Frequent Transit Service
- o Shuttle Services to Stations
- o Services for Specific Populations
- o Demand Responsive Transit
- o Bus Route
- o General Purpose Lanes
- o Arterial or Collector Road
- o Also see strategies appropriate for all subcorridor types

### Adopted Corridor Studies Include (also see Bibliography):

Rt 31 Study underway (NJDOT)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
С	Pennington Borough		5. Main Street

# Very Appropriate Strategies

- Parking Operations
- o Computerized Traffic Signals
- o "Transit First" Policies and Transit Oriented Design
- o Community Friendly Transportation Policies
- o County and Local Road Connectivity; Short Connections

# Secondary Appropriate Strategies

- o Street Circulation Patterns
- o Enhanced Transit Amenities
- o Planning and Design (non-motorized)
- o Maintenance Management
- o Trip Reduction Ordinances
- o Center Turn Lanes
- vehicle Use Limitations and Restrictions
- o Park and Ride Lots
- o More Frequent or More Hours of Service for Transit
- o Flexible Routing/Route Deviation Services
- o Transit Services for Specific Populations
- o Bus Route
- o General Purpose Lanes
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
D	CR 579, used as alternate north-south route	Heavily used for through	8. Suburban
		travel as alternate to NJ 31;	Secondary
		rural	

# Very Appropriate Strategies

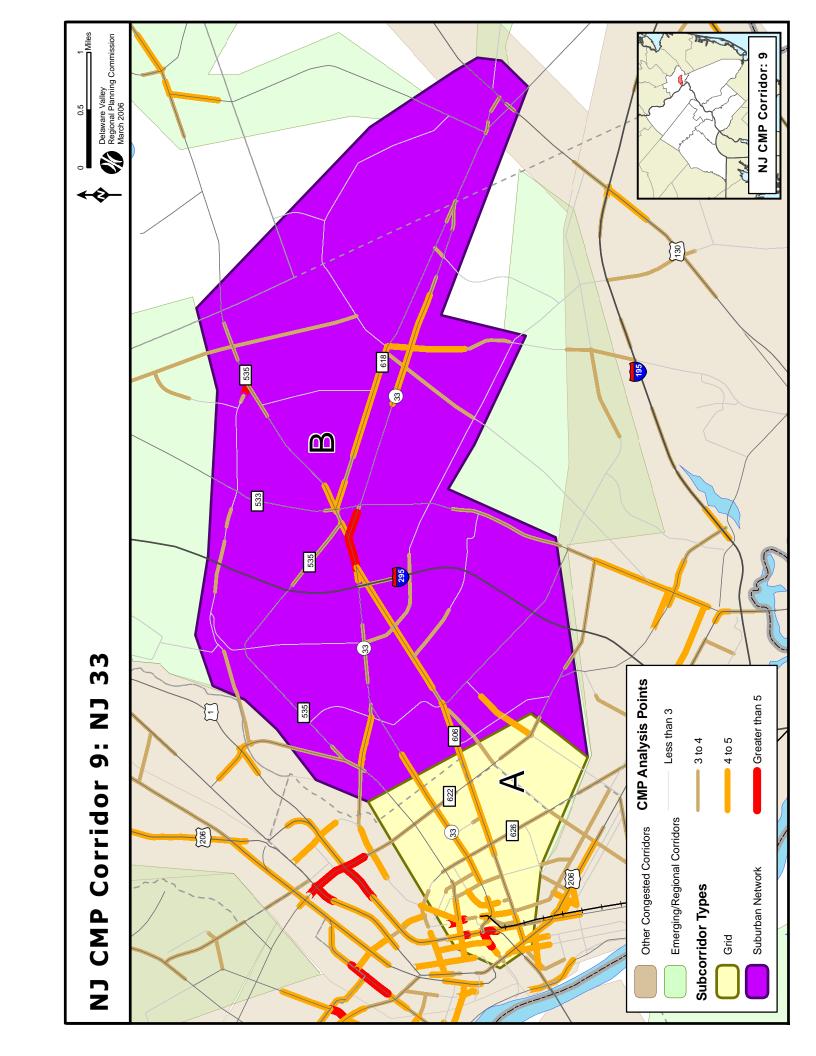
- o Park and Ride Lots
- o Environmentally Friendly Transportation Planning
- o Transit Services for Specific Populations
- o County and Local Road Connectivity

- o Computerized Traffic Signals
- o Signal Prioritization for Emergency Vehicles
- o Signal Priority for Transit
- o Transit Amenities & Safety
- o Channelization
- o County and Local Road Connectivity; Short Connections

- o Center Turn Lane
- o Expanded Parking/Improved Access to Stations
- o Community Friendly Transportation Planning
- o Parking Management (such as transportation allowances)
- o Trip Reduction Ordinances
- o Shuttle Service to Station
- o Extend/Change Routes
- o More Frequent Transit Service
- o Shuttle Services to Stations
- o Transit Services for Specific Populations
- o Demand Responsive Transit
- o Major Reconstruction with Minor Capacity
- Also see strategies appropriate for all subcorridor types

# Area-wide Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
9	NJ 33	General NJ 33 east-west
		corridor

# **Subcorridors with Their Strategies**

	<u> </u>		
Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
A	NJ 31-Trenton area	Urban	3. Dense Grid

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o Intermodal Enhancements Passenger
- o Signal Priority for Transit
- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Major Reconstruction with Minor Capacity

# Secondary Appropriate Strategies

- o Parking Operations
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- Expanded Parking/Improved Access to Stations
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Economic Development Oriented Transportation Policies
- o Community Friendly Transportation Policies
- o More Frequent or More Hours of Service for Transit
- o Shuttle Services to Stations
- o Short Connections
- o Passenger Intermodal Center or Garage for Transit
- o Local Fixed Rail Service
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	NJ 31 to East	Mostly single family home	4. Dense
		development; Washington	Suburban
		Township Center proposal	Network

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o County and Local Road Connectivity; Short Connections
- o Community Friendly Transportation Policies
- o Environmentally Friendly Transportation Policies
- o Major Reconstruction with Minor Capacity

- o Signal Priority for Transit
- o Channelization
- o Planning and design (non-auto)
- o Park and Ride Lots
- o More Frequent Transit or More Hours of Service
- o Flexible Routing/Route Deviation Transit Service
- o Services for Specific Populations
- o Demand Response Transit Service
- o Bus Route
- o Frontage/Service Roads
- o Arterial and Collector Road

- o Bypass
- o Also see strategies appropriate for all subcorridor types

Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

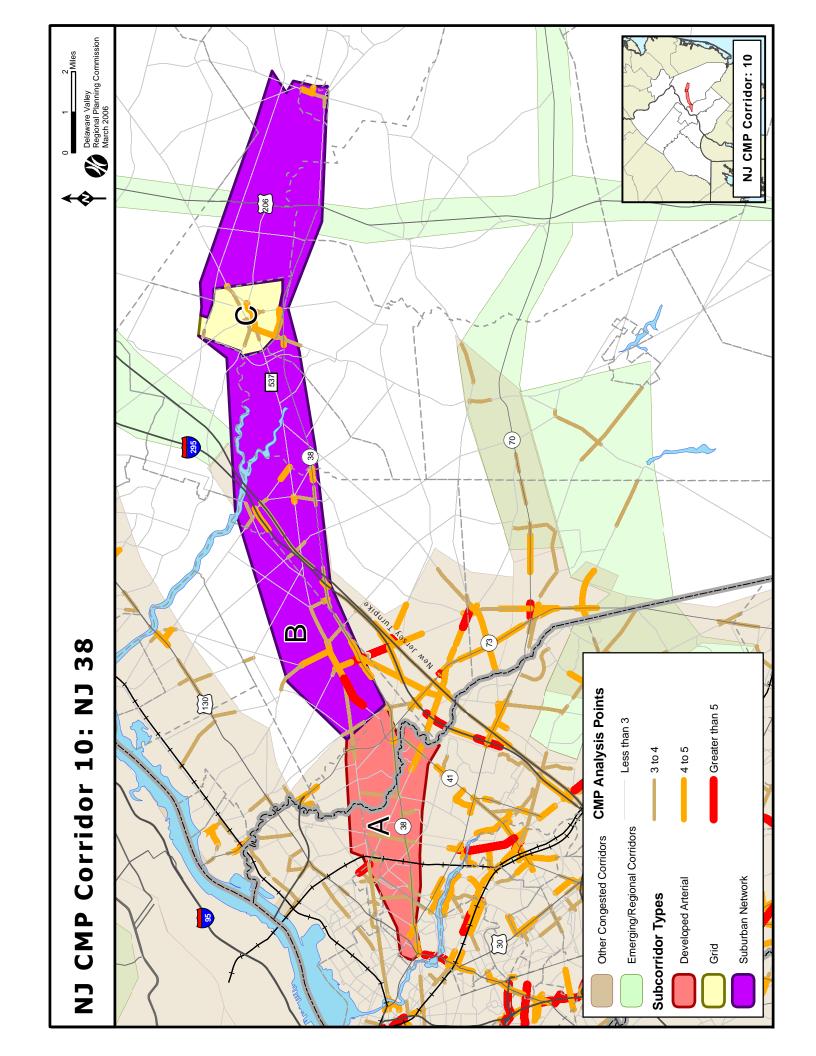
See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 99368A, Washington Township Bypass

Adopted Corridor Studies Include (also see Bibliography): Washington Township Center Plan (Washington Township)

# Area-wide Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
10	NJ 38	

### Subcorridors with Their Strategies

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
Α	From Camden, developed		<ol><li>Developed</li></ol>
	·		Arterial

# Very Appropriate Strategies

- Computerized Traffic Signals
- Community Friendly Transportation Policies
- More Frequent or More Hours of Transit Service
- Extensions or Changes in Transit Routes
- Center Turn Lanes

#### Secondary Appropriate Strategies

- Transit Signal Prioritization
- Signal Prioritization for Emergency Vehicles 0
- County and Local Road Connectivity; Short Connections O
- "Transit First"/Transit Oriented Design policies
- Accessibility and Environmental Justice 0
- Economic Development Oriented Transportation Policies O
- Traveler Information
- Commercial Vehicle Operations
- Expanded Parking/Improved Access to Transit Stations 0
- Enhanced Transit Amenities and Safety
- Transit Services for Specific Populations
- Demand Response Transit Service
- **Express Transit Services**
- Frontage or Service Roads
- Major Reconstruction with Minor Capacity
- Regional Rail
- Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 155C: US 30/NJ 130 Cooper River to PATCO Bridge (B)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
В	Maple Shade to East	Includes Moorestown;	4. Dense
		almost Grid-type	Suburban
		development pattern	Network

#### Very Appropriate Strategies

- Computerized Traffic Signals
- County and Local Road Connectivity; Short Connections
- Extensions or Changes in Transit Routes
- Community Friendly Transportation Policies
- Park and Ride Lots

### Secondary Appropriate Strategies

- Signal Priority for Transit
- Channelization
- Expanded Parking/Improved Access to Transit Stations
- Jughandles
- More Frequent Transit or More Hours of Service
- Flexible Routing/Route Deviation Transit Service
- Services for Specific Populations
- Demand Response Transit Service
- Expanding Parking/Better Access at Stations Major Reconstruction with Minor Capacity
- Frontage/Service Roads O
- General Purpose Lanes
- Interchange with Related Road Segments
- Arterial and Collector Road
- Also see strategies appropriate for all subcorridor types

### Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 191A: I-295/NJ 38 Missing Moves, Mount Laurel

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
С	Mount Holly		<ol><li>Dense Grid</li></ol>

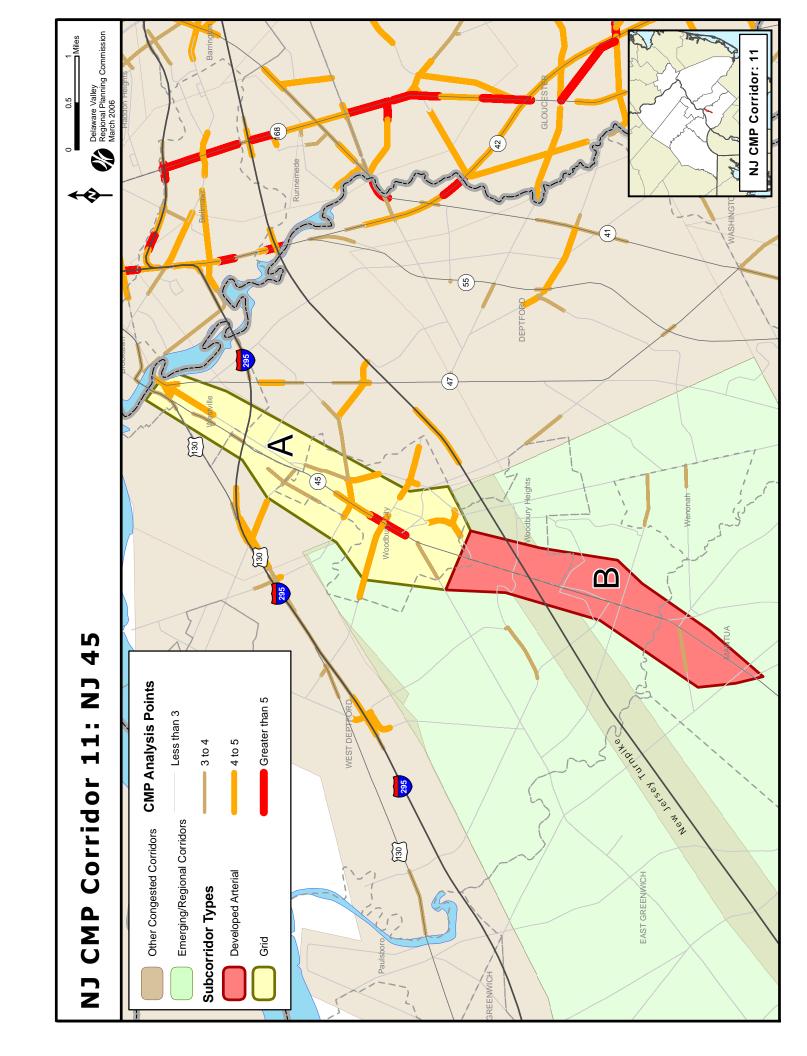
- <u>Very Appropriate Strategies</u>
  o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- More Frequent or More Hours of Service for Transit O
- Parking Operations 0
- Community Friendly Transportation Policies 0
- Transit for Specific Populations

# Secondary Appropriate Strategies

- Computerized Traffic Signals
- Signal Priority for Transit
- Planning and Design (Non-motorized)
- Street Circulation Patterns
- Vehicle Use Limitations and Restrictions
- **Economic Development Oriented Transportation Policies**
- Accessibility and Environmental Justice
- Maintenance Management
- Intermodal Enhancements Passenger
- Center Turn Lanes
- Park and Ride Lots
- "Transit First" Policy & Transit Oriented Design (TOD)
- Extensions or Changes in Transit Routes
- More Frequent or More Hours of Service
- Shuttle Services to Stations
- Local Fixed Rail Service
- Major Reconstruction with Minor Capacity
- Also see strategies appropriate for all subcorridor types

### Area-wide Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- Pedestrian and Bicyclist Improvements
- Signage
- Basic Upgrades of Signals
- Intersection Improvements (of a limited scale)
- Bottleneck Improvements (vehicle or rail)
- Access Management, both engineering and policy strategies
  Marketing (including outreach, education, and planning) of TDM
  and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- Review of Existing Land Use / Transportation Regulations
- Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
11	NJ 45	Connects Mullica Hill,
		Woodbury; developing,
		especially with housing;
		serves as a link to I-295

### **Subcorridors with Their Strategies**

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
Α	City of Woodbury and Borough of Westville		3. Dense Grid

#### Very Appropriate Strategies

- o Computerized Traffic Signals
- o Intermodal Enhancements Passenger
- o Parking Operations
- o Extensions or Changes in Transit Routes
- o More Frequent or More Hours of Service for Transit

#### Secondary Appropriate Strategies

- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Jughandles
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- Economic Development Oriented Transportation Policies
- o Community Friendly Transportation Policies
- o Shuttle Services to Stations
- o Major Reconstruction with Minor Capacity
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
В	Mantua-Woodbury	S part Developing; N older	Type 6. Developed
			Arterial

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o Planning and Design (non-auto)
- o Demand Response Transit Service
- o Center Turn Lanes
- o Transit Service for Specific Populations

- o Transit Signal Prioritization
- o Signal Prioritization for Emergency Vehicles
- County and Local Road Connectivity; Short Connections
- o "Transit First"/Transit Oriented Design policies
- o Economic Development Oriented Transportation Policies
- o Enhanced Transit Amenities and Safety
- o Extensions or Changes in Transit Routes
- o Expanded Parking/Improved Access to Transit Stations
- o More Frequent or More Hours of Transit Service
- o Express Transit Services
- o Frontage or Service Roads
- o Major Reconstruction with Minor Capacity

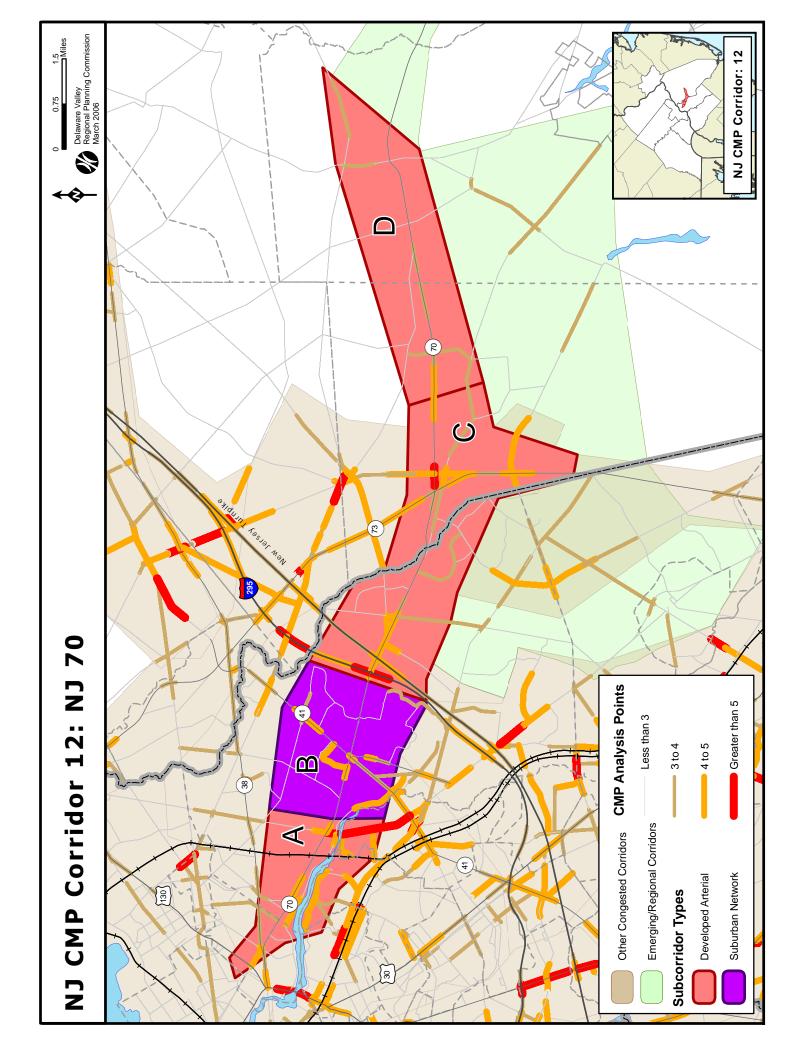
- o Local Fixed Rail Services
- o Regional Rail
- o Also see strategies appropriate for all subcorridor types

Adopted Corridor Studies Include (also see Bibliography):

Route 45 Corridor Study (DVRPC, 2005)

## Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
12	NJ 70	Extended eastward to reflect
		traffic model major flow

**Subcorridors with Their Strategies** 

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
A	NJ 70 between Airport Circle to Curtis Ave/Erlton	6 Lane cross section changing to 4 east of Haddonfield Rd; predominantly auto-oriented commercial with pockets of neighborhoods. Important issues include high crash rates, access problems and lack of pedestrian amenities. (NJ 70 Study)	6. Developed Arterial

## Very Appropriate Strategies

- Computerized Traffic Signals\*
- o County and Local Road Connectivity; Short Connections\*
- o Integrated Corridor Management/ITS\*
- o Frontage or Service Roads\*

## Secondary Appropriate Strategies

- o Economic Development Oriented Transportation Policies\*
- o "Transit First"/Transit Oriented Design policies\*
- Express Transit Services\*
- o Bus Rapid Transit (BRT) or Exclusive Right-of-Way Bus Lanes\*
- o Transit Signal Prioritization
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o Enhanced Transit Amenities and Safety
- o Expanded Parking/Improved Access to Transit Stations
- o Flexible Routing/Route Deviation Service
- o Extensions or Changes in Transit Routes
- o More Frequent or More Hours of Transit Service
- o Transit Service for Specific Populations
- o Demand Response Transit Service
- o Major Reconstruction with Minor Capacity
- o General Purpose Lanes
- o Also see strategies appropriate for all subcorridor types

## Adopted Corridor Studies Include (also see Bibliography):

NJ 70 Corridor Study (DVRPC Publication 06003, 2005)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor Type
В	NJ 70 between Curtis Ave./Erlton to I-295	Mostly a 4 lane cross section, predominantly with retail/offices along NJ 70 and neighborhoods further back. The primary need is to address mobility and safety issues while retaining quality of life for residents, including improvements for bicyclists and pedestrians (NJ 70 Study)	4. Dense Suburban Network

<sup>\*</sup>from NJ 70 Corridor Study

## Very Appropriate Strategies

- Computerized Traffic Signals\*
- o County and Local Road Connectivity; Short Connections\*
- o Integrated Corridor Management/ITS\*
- o Frontage/Service Roads\*

## Secondary Appropriate Strategies

- o Accessibility and Environmental Justice\*
- o Community Friendly Transportation Policies\*
- o Arterial or Collector Road\*
- o Flexible Routing/Route Deviation Transit Service
- o Demand Response Transit Service
- o Signal Priority for Transit
- o Channelization
- o Expanded Parking/Improved Access to Transit Stations
- o Park and Ride Lots
- o More Frequent Transit or More Hours of Service
- o Enhanced Transit Amenities
- o Services for Specific Populations
- o Demand Response Transit Service
- o Major Reconstruction with Minor Capacity
- o General Purpose Lanes
- o Also see strategies appropriate for all subcorridor types

### Adopted Corridor Studies Include (also see Bibliography):

NJ 70 Corridor Study (DVRPC Publication 06003, 2005)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
С	NJ 70 between I-295 to East of Radnor Blvd	The number of lanes in this section changes from 6 to 8 to 4 from west to east. It includes intersections with I-295 and NJ 73. Land uses vary from homes to industrial uses, including a mall and big box retail toward the eastern end. Important issues include crash rates, access, pedestrian amenities and Smart Growth/Growth Management. (NJ 70 Study)	6. Developed Arterial

## Very Appropriate Strategies

- o Computerized Traffic Signals\*
- o County and Local Road Connectivity; Short Connections\*
- o Integrated Corridor Management/ITS\*
- o Frontage or Service Roads\*

- o Ramp Metering\*
- o Economic Development Oriented Transportation Policies\*
- o "Transit First"/Transit Oriented Design policies\*
- o Express Transit Services\*
- Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes\*
- o Transit Signal Prioritization
- o Enhanced Transit Amenities and Safety
- o Signal Prioritization for Emergency Vehicles
- o Center Turn Lanes
- o Jug Handles
- o More Frequent or More Hours of Transit Service
- o Extensions or Changes in Transit Routes
- o Traveler Information
- o Major Reconstruction with Minor Capacity
- o General Purpose Lanes
- Also see strategies appropriate for all subcorridor types

<sup>\*</sup>from NJ 70 Corridor Study

<sup>\*</sup>from NJ 70 Corridor Study

Major Single Occupancy Vehicles Capacity-adding TIP Projects in the vicinity as of December, 2005. See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 567: NJ 70/NJ 73 Marlton Circle

Adopted Corridor Studies Include (also see Bibliography):

Studies close to completion or done of NJ 70 corridor by DVRPC and NJDOT (2005)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
D	Between west of North Elmwood Rd to east end of congested corridor	2 lane cross-section; eastern	<ol><li>Developed</li></ol>
		Evesham Township through	Arterial
		much of Medford Township	

### Very Appropriate Strategies

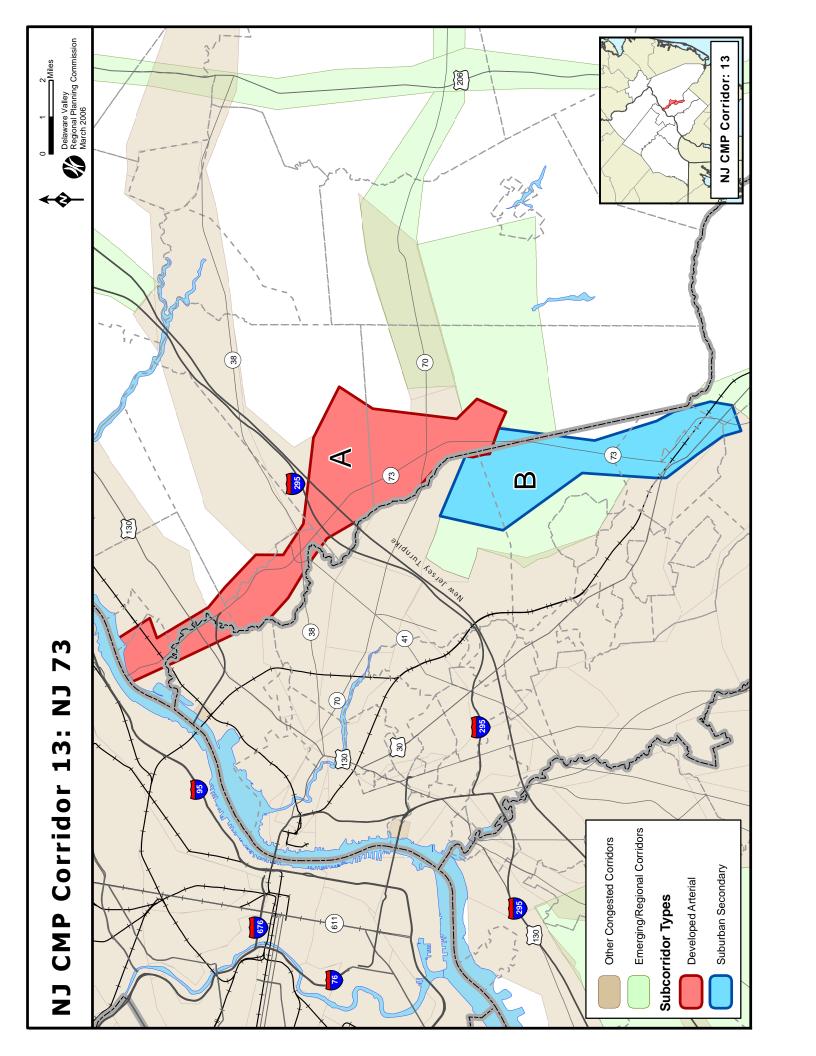
- o Computerized Traffic Signals
- o Enhanced Transit Amenities and Safety
- o Park and Ride Lots
- o Center Turn Lanes
- o Extensions or Changes in Transit Routes

### Secondary Appropriate Strategies

- o Transit Signal Prioritization
- o Signal Prioritization for Emergency Vehicles
- o County and Local Road Connectivity; Short Connections
- o "Transit First"/Transit Oriented Design policies
- o Economic Development Oriented Transportation Policies
- o Trip Reduction Ordinances
- o Planning and Design (non-auto)
- o Jughandles
- o Transit Services for Specific Populations
- o Express Transit Services
- o Frontage or Service Roads
- o Bus Route
- o More Frequent or More Hours of Transit Service
- o Major Reconstruction with Minor Capacity
- o Also see strategies appropriate for all subcorridor types

## Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
13	NJ 73	

**Subcorridors with Their Strategies** 

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
A		More urban, more intersections than Subcorridor 13B; intersects I-295, NJ 70, NJ 38	6. Developed Arterial

### Very Appropriate Strategies

- o Computerized Traffic Signals
- o Enhanced Transit Amenities and Safety
- o More Frequent or More Hours of Transit Service
- o Major Reconstruction with Minor Capacity
- General Purpose Lanes

## Secondary Appropriate Strategies

- o Transit Signal Prioritization
- o Signal Prioritization for Emergency Vehicles
- o Automated Toll Collection Improvements
- o County and Local Road Connectivity; Short Connections
- o "Transit First"/Transit Oriented Design policies
- o Economic Development Oriented Transportation Policies
- o Community Friendly Transportation Policies
- o Commercial Vehicle Operations
- o Expanded Parking/Improved Access to Transit Stations/Stops
- o Extensions or Changes in Transit Routes
- o Express Transit Services
- o Center Turn Lanes
- o Frontage or Service Roads
- o Park and Ride Lots
- o Demand Response Transit
- o Bus Route
- o Arterial or Collector Road
- o Interchange with Related Road Segments
- o Freight Intermodal Center/Yard
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 567: NJ 70/NJ 73 Marlton Circle; 9208: US 206 Connector with Rising

Sun Rd; 94068: Adding Lanes on NJ 73

## Adopted Corridor Studies Include (also see Bibliography):

NJ 73 Corridor Study (DVRPC Publication 00023, 2000)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	South of CR 544 to US 30	Less developed than	8. Suburban
		Subcorridor 13A, includes	Secondary
		Atco station	

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Planning and Design (non-auto)
- o Park and Ride Lots
- o Extend/Change Routes
- o Major Reconstruction with Minor Capacity

### Secondary Appropriate Strategies

- o Community-Friendly Transportation Planning
- o Parking Management (such as transportation allowances)
- o Transit Amenities & Safety
- o Channelization
- o Jughandles
- o Center Turn Lane
- o County and Local Road Connectivity; Short Connections
- o "Transit First" and Transit Oriented Design (TOD)
- o Trip Reduction Ordinances
- o Shuttle Service to Station
- o Expanded Parking/Improved Access to Stations
- o Intermodal Enhancements Passengers
- o More Frequent Transit Service
- o Shuttle Services to Stations
- o Services for Specific Populations
- o Demand Responsive Transit
- o Frontage or Service Roads
- o Arterial or Collector Road
- o Also see strategies appropriate for all subcorridor types

Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

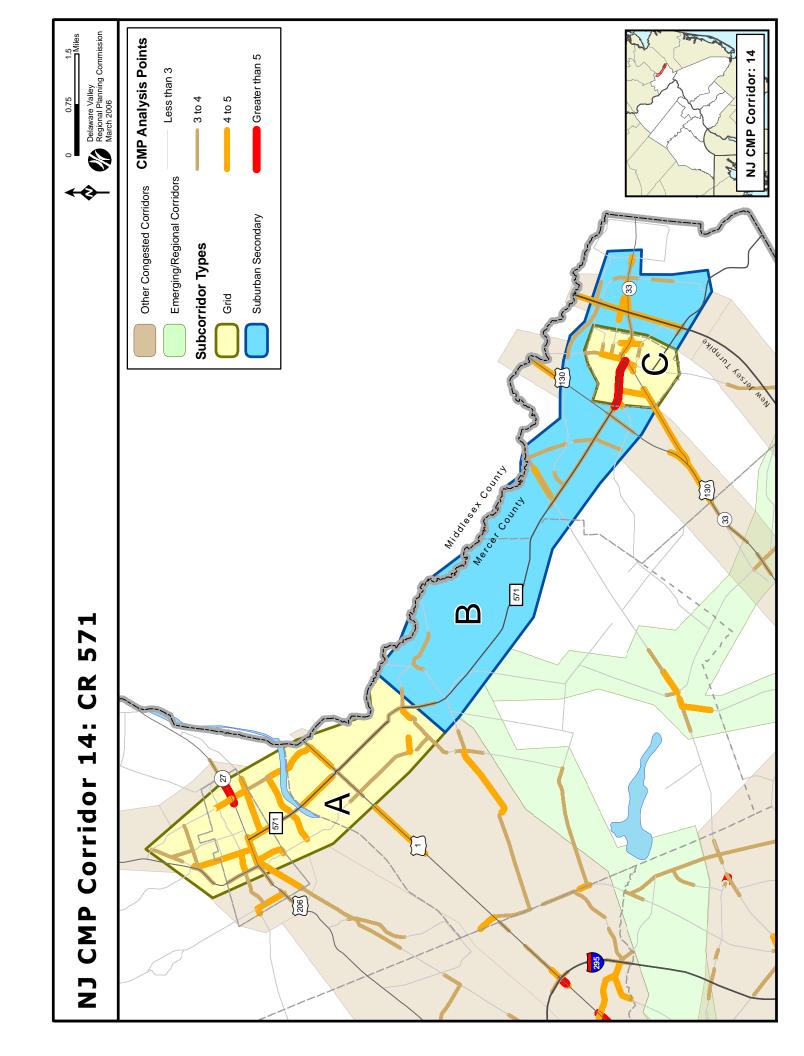
DBNUM: 93109: US 30/NJ 73 Berlin Circle Improvements

Adopted Corridor Studies Include (also see Bibliography):

NJ 73 Corridor Study (DVRPC Publication 00023, 2000)

# Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
14	CR 571	Princeton - Hightstown area,
		to US 130 and NJ Turnpike

**Subcorridors with Their Strategies** 

	- marting of the control of the cont				
Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor		
			Туре		
Α	Princeton area of CR 571 and part of West Windsor	Princeton Borough-	3. Dense Grid		
		Princeton Junction Rail			
		Station			

### Very Appropriate Strategies

- o Computerized Traffic Signals
- o Intermodal Enhancements Passenger
- o Parking Operations
- o Improvements for Pedestrians and Bicyclists
- o More Frequent or More Hours of Service for Transit

## Secondary Appropriate Strategies

- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- Economic Development Oriented Transportation Policies
- o Community Friendly Transportation Policies
- o Shuttle Services to Stations
- o Local Fixed Rail Service
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 031: Route 1 / CR 571, Penns Neck Area EIS (a.k.a. Millstone Bypass)

### Adopted Corridor Studies Include (also see Bibliography):

Penns Neck Area FEIS (NJDOT, 2004),

Route 1 BRT Study (NJ Transit, expected 2006),

West Windsor Princeton Junction Redevelopment Study and CR 571 project

(West Windsor Township, 2005)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
В	· · · · · · · · · · · · · · · · · · ·	CR 571 varies considerably in character in this section	

## Very Appropriate Strategies

- o Community-Friendly Transportation Planning
- o Planning and Design (non-auto)
- o Shuttle Service to Station
- Major Reconstruction with Minor Capacity
- o Park and Ride Lots

## Secondary Appropriate Strategies

- Computerized Traffic Signals
- Signal Prioritization for Emergency Vehicles 0
- Signal Priority for Transit 0
- Transit Amenities & Safety 0
- Expanded Parking/Improved Access to Stations 0
- Traveler Information 0
- Channelization O
- 0 County and Local Road Connectivity; Short Connections
- Center Turn Lane 0
- Parking Management (such as transportation allowances) 0
- Trip Reduction Ordinances
- Planning and Design (non-auto) O
- Extend/Change Routes 0
- More Frequent Transit Service 0
- Shuttle Services to Stations 0
- Services for Specific Populations 0
- **Demand Responsive Transit** 0
- **Bus Route**
- Also see strategies appropriate for all subcorridor types

# Adopted Corridor Studies Include (also see Bibliography):

West Windsor Princeton Junction Redevelopment Study and CR 571 project (West Windsor Township, 2005)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
С	Hightstown Borough	Densely developed,	3. Dense Grid
		Turnpike Exit 8	

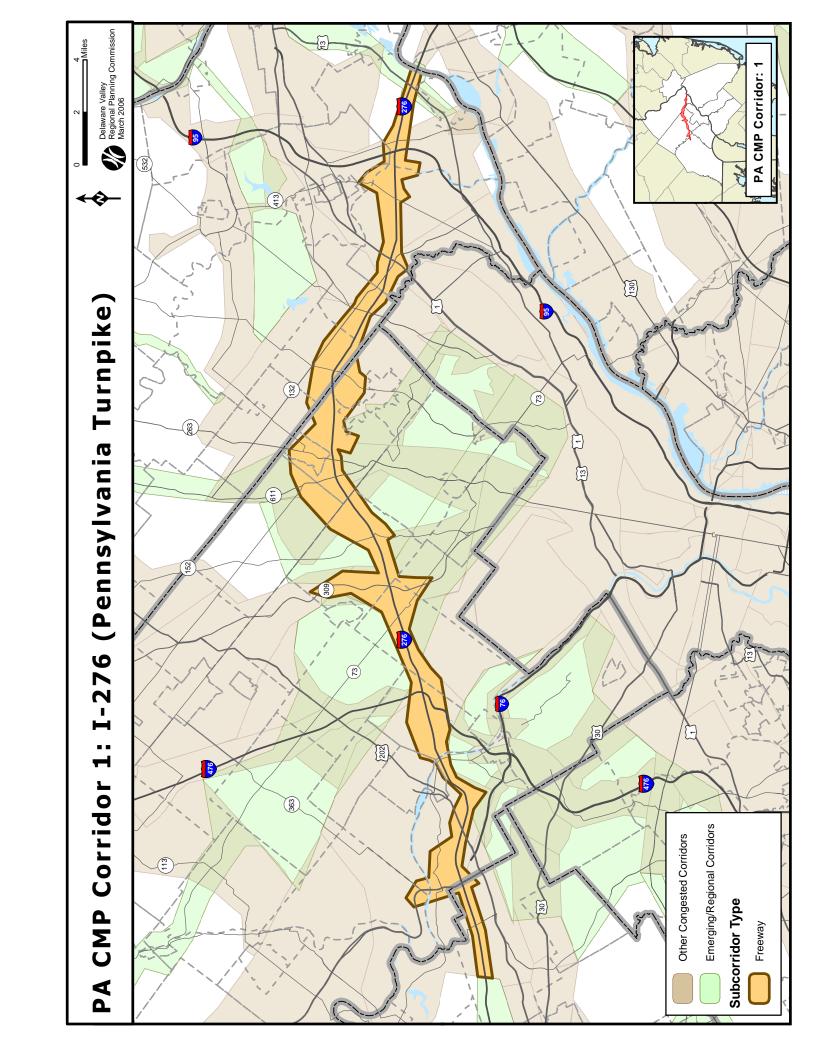
### Very Appropriate Strategies

- Community Friendly Transportation Strategies
- Enhanced Transit Amenities and Safety; Intelligent Transit Stops 0
- **Parking Operations** 0
- Transit Services for Specific Populations 0
- Traveler Information

- Computerized Traffic Signals
- Signal Priority for Transit 0
- Signal Priority for Emergency Vehicles 0
- Planning and Design (Non-motorized) 0 Street Circulation Patterns
- 0 Vehicle Use Limitations and Restrictions
- Maintenance Management 0
- Intermodal Enhancements Passenger 0
- 0 Center Turn Lanes
- Accessibility and Environmental Justice O
- "Transit First" Policy & Transit Oriented Design (TOD)
- Economic Development Oriented Transportation Policies O
- 0 Community Friendly Transportation Policies
- More Frequent or More Hours of Service for Transit 0
- Shuttle Services to Stations 0
- **Bus Route**
- Major Reconstruction with Minor Capacity 0
- Interchange with Related Road Segments 0
- Also see strategies appropriate for all subcorridor types

# Area-wide Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
1	I-276 (PA Turnpike)	

### **Subcorridors with Their Strategies**

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
	Whole Turnpike Corridor in Pennsylvania part of DVRPC	Narrowly drawn	1. Freeway

# Very Appropriate Strategies

- o Integrated Corridor Management for Freeways (ITS)
- o Incident Management
- o Park and Ride Lots
- o General Purpose Lanes
- Major Reconstruction with Minor Capacity Changes

### Secondary Appropriate Strategies

- Automated Toll Collection Improvements
- o Traveler Information System
- o Maintenance Management
- o Transportation Security / Terrorism Prevention
- o Computerized Traffic Signals
  - (provide infrastructure on parallel roads especially in case of use as detours)
- o Commercial Vehicle Operations
- County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Intermodal Enhancements (Freight)
- o Interregional Transportation Coordination
- o Congestion Pricing (Tolls)
- o Ramp Metering
- o Express Transit Services
- o Freight Rail
- o Interchange with Related Road Segments
- o Arterial or Collector Road
- Limited Access Highway
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 13347: PA Turnpike / I-95 Interchange; 16114: Blair Mill Rd; 16299:

Dresher Rd Widening; 16446: PA 463, Horsham Rd Widening; 57870: PA 611,

Easton Rd Widening; 64275: PA 309, Commerce Rd to Pennsylvania Ave

Reconstruction (Ft Washington Interchange); 57859: US 422, Pottstown

Expressway Widening and interchange Improvements Study; 64027: US 202

Bypass, Rt 309 to Horsham Rd; 13347: I-95 / PA Turnpike Interchange; 57858:

Lafayette St Extension; 48172: PA 23 Relocation; 48187: I-76 Interchange &

Henderson Rd Widening; 64052: US 202 Bypass; 64796: US 422/ PA 363

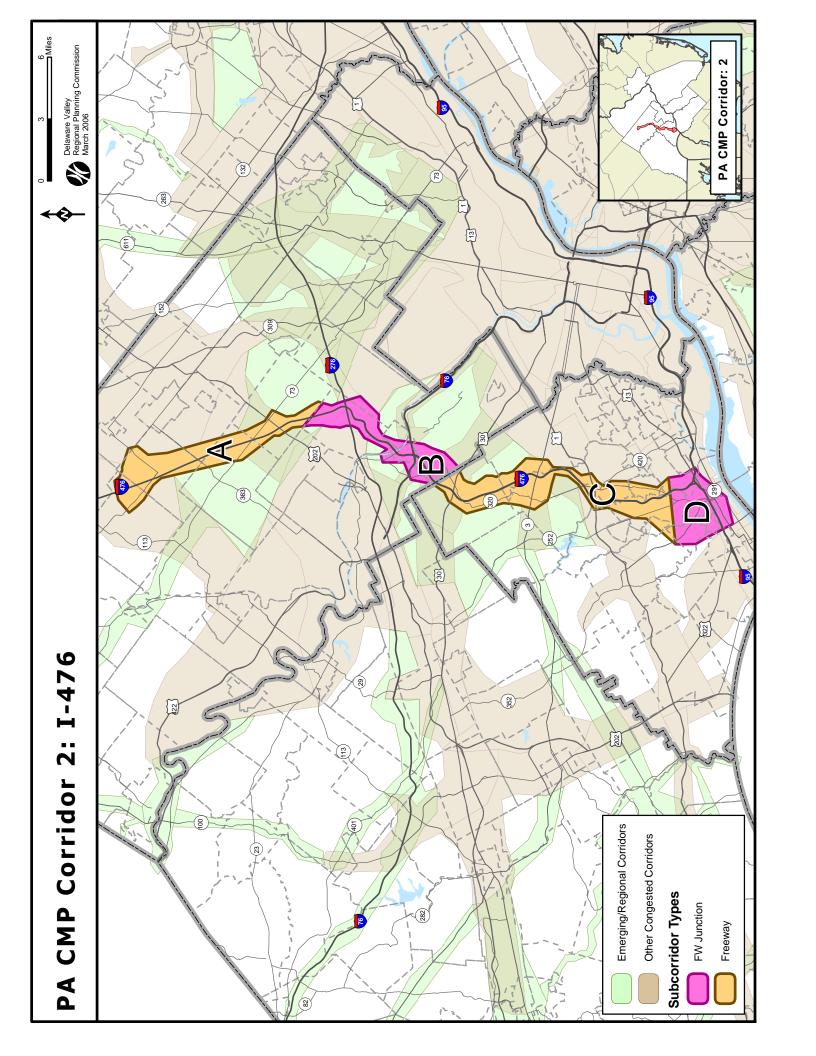
Interchange; 66952: PA 23/US 422 Interchange & N Gulph Rd Improvements;

16476: PA 309 Reconstruction - Haws Rd to Highland Ave; 70197: US 422

Betzwood Bridge Reconstruction

# Area-wide Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- Pedestrian and Bicyclist Improvements
- Signage
- Basic Upgrades of Signals
- Intersection Improvements (of a limited scale)
- Bottleneck Improvements (vehicle or rail)
- 0 0 0 0 0 Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- Review of Existing Land Use / Transportation Regulations
- Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
2	I-476	

## **Subcorridors with Their Strategies**

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
A	US 476 N of Plymouth Meeting		1. Freeway

### Very Appropriate Strategies

- o Integrated Corridor Management for Freeways (ITS)
- o Incident Management
- o Park and Ride Lots
- o General Purpose Lanes
- o Major Reconstruction with Minor Capacity Changes

### Secondary Appropriate Strategies

- o Automated Toll Collection Improvements
- o Traveler Information System
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals (provide infrastructure on parallel roads in case of use as detours)
- o Commercial Vehicle Operations
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Interregional Transportation Coordination
- o Congestion Pricing (Tolls)
- o Express Transit Services
- o Freight Rail
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 16742: PA 63, Forty Foot Rd Widening, Intersection Improvement;

16438: PA 309 Connector Project; 63490: US 202, Twp Line Rd to Morris Rd;

50364: US 202, Dekalb Pk Widening; 57869: PA Turnpike NE Extension

Ramp Modification

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	I-476 from I-76 to I-276	Includes Conshohocken;	2. Freeway
		complex weaves	Junction

### Very Appropriate Strategies

- o Incident Management
- o Traveler Information Services
- o Integrated Corridor Management-Freeways
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes

- o Automated Toll Collection Improvements
- o Commercial Vehicle Operations
- o Intermodal Enhancements (Freight)
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals (provide infrastructure on parallel roads, especially in case of use as detours)
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Interregional Transportation Coordination
- o Transit Services for Specific Populations
- o Express Transit Services
- Demand Response Service

- o Bus Route
- o Freight Rail
- o Interchange with Related Road Segments
- Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
С	I-476, Mid-North Delaware Co	N of Chester FW Junction	1. Freeway
		area to County line	

### Very Appropriate Strategies

- o Integrated Corridor Management for Freeways (ITS)
- o Incident Management
- o Park and Ride Lots
- o General Purpose Lanes
- o Major Reconstruction with Minor Capacity Changes

### Secondary Appropriate Strategies

- o Automated Toll Collection Improvements
- o Traveler Information System
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals (provide infrastructure on parallel roads, especially in case of use as detours)
- o Commercial Vehicle Operations
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Interregional Transportation Coordination
- o Congestion Pricing (Tolls)
- o Express Transit Services
- o HOV Treatments
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Transit Services for Specific Populations
- o Demand Response Service
- o Bus Route
- o Freight Rail
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
D	Chester & I-95 area		2. Freeway
			Junction

## Very Appropriate Strategies

- o Incident Management
- o Computerized Traffic Signals (provide infrastructure on parallel roads, especially in case of use as detours)
- o Park and Ride Lots
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes

- o Channelization
- o Commercial Vehicle Operations
- o Integrated Corridor Management-Freeways
- o Maintenance Management
- o Enhanced Transit Amenities and Safety
- o Transportation Security/Terrorism Prevention
- o Intermodal Enhancements (Freight)
- o Intermodal Enhancements (Passenger)
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Traveler Information Services
- o Shuttle to Station
- o Transit Services for Specific Populations
- o Demand Response Service

- o Bus Route
- o Interregional Transportation Coordination
- o Ramp Metering
- o HOV Treatments
- o Express Transit Services
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Freight Rail
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

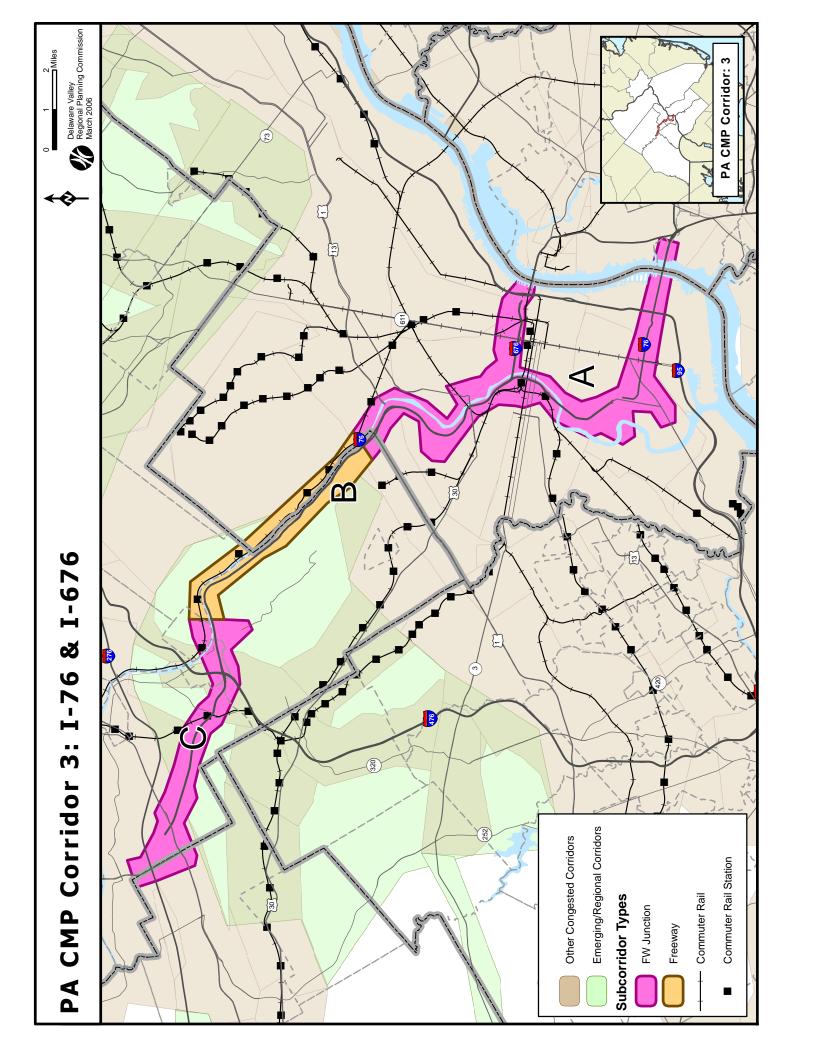
Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

14865: I-95 Ramp from PA 352 to SB I-95

# Area-wide Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
3	I-76 & I-676	

## **Subcorridors with Their Strategies**

	c		
Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
A	I-676/76 to City Ave		2. Freeway
			Junction

### Very Appropriate Strategies

- o Incident Management
- o Traveler Information Services
- o Integrated Corridor Management-Freeways
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes

### Secondary Appropriate Strategies

- Computerized Traffic Signals
  - (provide infrastructure on parallel roads especially in case of use as detours)
- o Commercial Vehicle Operations
- o Enhanced Transit Amenities and Safety (area surrounding interstates)
- o Park and Ride Lots
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Signal Prioritization for Emergency Vehicles
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Interregional Transportation Coordination
- o Congestion Pricing-Tolls
- o HOV Treatments
- o Express Transit Services
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail (additions)
- o Freight Rail (additions)
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM:17724: South Street Bridges and I-76 off ramp work; 17462: South

St Bridge over SEPTA; 17603: South St Bridge over I-76 EB; 17649: PA 611,

S Broad St Interchange Realignment

### Adopted Corridor Studies Include (also see Bibliography):

Congestion and Accident Mitigation (CAMP) Program Report (DVRPC, 2006) - 34th St and Grays Ferry Rd Regional detour routes project (DVRPC, underway)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	I-76 to I-476	Cut just before PA 23	1. Freeway

## Very Appropriate Strategies

- o Integrated Corridor Management for Freeways (ITS)
- o Incident Management
- o Park and Ride Lots
- o General Purpose Lanes
- o Major Reconstruction with Minor Capacity Changes

- o Traveler Information System
- o Maintenance Management

- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals (provide infrastructure on parallel roads in case of use as detours)
- o Commercial Vehicle Operations
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Ramp Metering
- o Express Transit Services
- o Bus Route
- o Regional Rail (additions)
- o Freight Intermodal Center/Yard
- o Freight Rail (additions)
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM 64795: Rock Hill Rd/Belmont Ave Corridor Improvements

### Adopted Corridor Studies Include (also see Bibliography):

Regional detour routes project (DVRPC, underway)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
С	I-76 from I-476 to Turnpike		2. Freeway
			Junction

### Very Appropriate Strategies

- o Incident Management
- o Traveler Information Services
- o Integrated Corridor Management-Freeways
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes

## Secondary Appropriate Strategies

- o Commercial Vehicle Operations
- o Park and Ride Lots
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals (provide infrastructure on parallel roads in case of use as detours)
- o More Frequent or More Hours of Transit Services
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Ramp Metering
- o Interregional Transportation Coordination
- o Express Transit Services
- o Transit Services for Specific Populations
- o Bus Route
- o Demand Response Transit Services
- o Regional or Inter-city Rail
- o Freight Rail
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

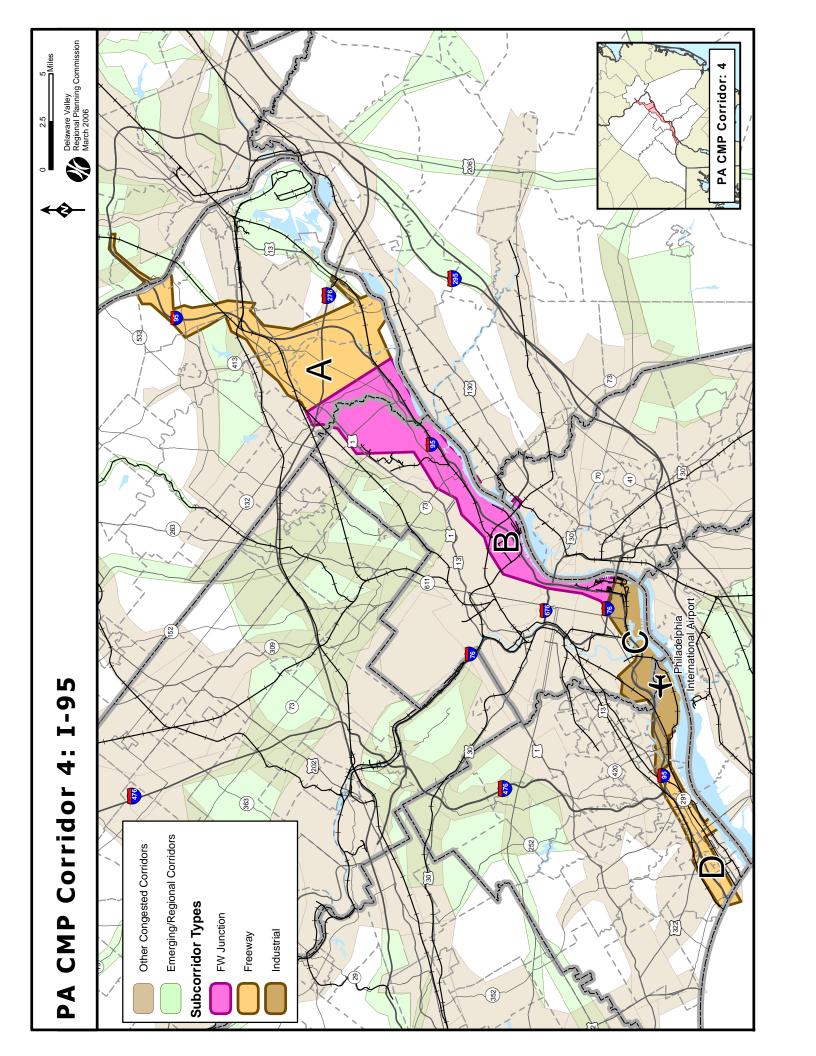
DBNUM: 57859: US 422: Pottstown Expressway Widening & Interchange Improvement Study; 64027: US 202 Bypass; 16210: US 202 Section 400 Widening and Access Improvements; 16487: US 202/422 Ramp to I-76; 16732: US 202 Sec. 305 Widening and Access Improvements; 16733: US 202/US 422 Interchange; 16211: I-76, Schuylkill Interchange Improvement This includes projects primarily in other overlapping corridors

# Adopted Corridor Studies Include (also see Bibliography):

Regional detour routes project (DVRPC, underway)

# Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
4	I-95	Pennsylvania portion

**Subcorridors with Their Strategies** 

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
A	I-95 Corridor N of Street Rd	Less developed; extended for I-276/US13 movement; includes PA 413 and Burlington-Bristol Bridge approach	1. Freeway

### Very Appropriate Strategies

- o Integrated Corridor Management for Freeways (ITS)
- o Incident Management
- o Park and Ride Lots
- o General Purpose Lanes
- o Maior Reconstruction with Minor Capacity Changes
- o Interregional Transportation Coordination

### Secondary Appropriate Strategies

- o Channelization (adjoining/parallel roads)
- o Traveler Information System
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- Computerized Traffic Signals (provide infrastructure on parallel roads especially in case of use as detours)
- o Commercial Vehicle Operations
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Extensions or Changes in Routes
- o More Frequent or More Hours of Service
- o Shuttle to Stations
- o Congestion Pricing (Tolls)
- o Express Transit Services
- o HOV Treatments
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Freight Intermodal Center/Yard
- o Freight Rail
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

# $\underline{\text{Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005}$

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 13347: I-95/PA Turnpike Widening & Interchange; 12871: PA 413, New

Rodgers Road Widening; 13518: I-95 Interchange at PA 332

## Adopted Corridor Studies Include (also see Bibliography):

PA CMS PA 413 Corridor - Top 10 Worst Performing Arterial Sections #4 (DVRPC, 2003)

Coordination with I-95 Coalition

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
В	I-95 Corridor-Philadelphia	Urban area	2. Freeway
			Junction

### Very Appropriate Strategies

- o Incident Management
- o Traveler Information Services
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes
- o Interchange with Related Road Segments

### o Integrated Corridor Management-Freeways

### Secondary Appropriate Strategies

- Channelization (adjoining/parallel roads)
- o Commercial Vehicle Operations
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals
  - (provide infrastructure on parallel roads especially in case of use as detours)
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Interregional Transportation Coordination
- o Park and Ride Lots
- o Shuttle to Stations
- o Express Transit Services
- o Extensions or Changes in Routes
- o More Frequent or More Hours of Service
- o Transit Services for Specific Populations
- o HOV Treatments
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Freight Rail
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

### Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 17113: Aramingo Ave Connector, I-95; 17782: I-95 & Aramingo Ave,

Adams Ave Connector; 17821: I-95 Shackamaxon St to Ann St Widening; 46956:

N Delaware Ave New Roadway Phase 1; 47394: I-95 Levick St - Bleigh Ave

Bridge and Roadway Reconstruction; 70231: Swanson St Reconstruction; 46948: I-95 at Street Rd Interchange Study; 17794: Torresdale Ave Signal Improvements

(related to I-95 rehab); 17795: Holme Ave Signal Improvements (related to I-95

rehab); 17825: Tioga Marine Terminal Transportation Improvements; 17798:

Knights Rd Arterial Improvements (related to I-95 rehab)

## Adopted Corridor Studies Include (also see Bibliography):

Coordination with I-95 Coalition

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
С	I-95 Corridor by Airport	Packer Ave, Airport, Boeing	10. Industrial
		in Delaware Co	

## Very Appropriate Strategies

- o Commercial Vehicle Operations
- o Incident Management
- o Interregional Transportation Coordination for Freeways
- o Major Reconstruction with Minor Capacity Changes
- o Intermodal Enhancements Freight
- General Purpose Lanes

- o Traveler Information Services
- o Maintenance Management
- o Channelization
- o Jug Handles
- o County and Local Road Connectivity; Short Connections
- o Extensions or Changes in Routes
- o More Frequent or More Hours of Service
- o Transit Services for Specific Populations
- o Shuttle Service to Stations
- o Economic Development Oriented Transportation Strategies
- o Frontage or Service Roads
- Freight Intermodal Center/Yard
- o Freight Rail (additions)

- o Interchange with Related Road Segments
- Arterial or Collector Road
- o Limited Access Highways
- o Also see strategies appropriate for all subcorridor types

Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 46958: Philadelphia Naval Shipyard Access; 17828: I-95/International

Airport Ramp Revision

### Adopted Corridor Studies Include (also see Bibliography):

Coordination with I-95 Coalition

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
D	I-95 from I-476 interchange area to State of Delaware	Includes Commodore Barry	1. Freeway
		Bridge	

### Very Appropriate Strategies

- o Integrated Corridor Management for Freeways (ITS)
- o Incident Management
- o Interregional Transportation Coordination
- o General Purpose Lanes
- o Major Reconstruction with Minor Capacity Changes
- o Interchange with Related Road Segments

## Secondary Appropriate Strategies

- o Park and Ride Lots
- o Traveler Information System
- o Maintenance Management
- o Channelization
- o Computerized Traffic Signals

(provide infrastructure on parallel roads especially in case of use as detours)

- o Commercial Vehicle Operations
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Economic Development Oriented Transportation Strategies
- o Congestion Pricing (Tolls)
- o HOV Treatments
- o Transit Services for Specific Populations
- o Shuttle Service to Stations
- o Express Transit Services
- o Extensions or Changes in Routes
- o Demand Response Service
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Freight Rail
- o Freight Intermodal Center/Yard
- o Also see strategies appropriate for all subcorridor types

### Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

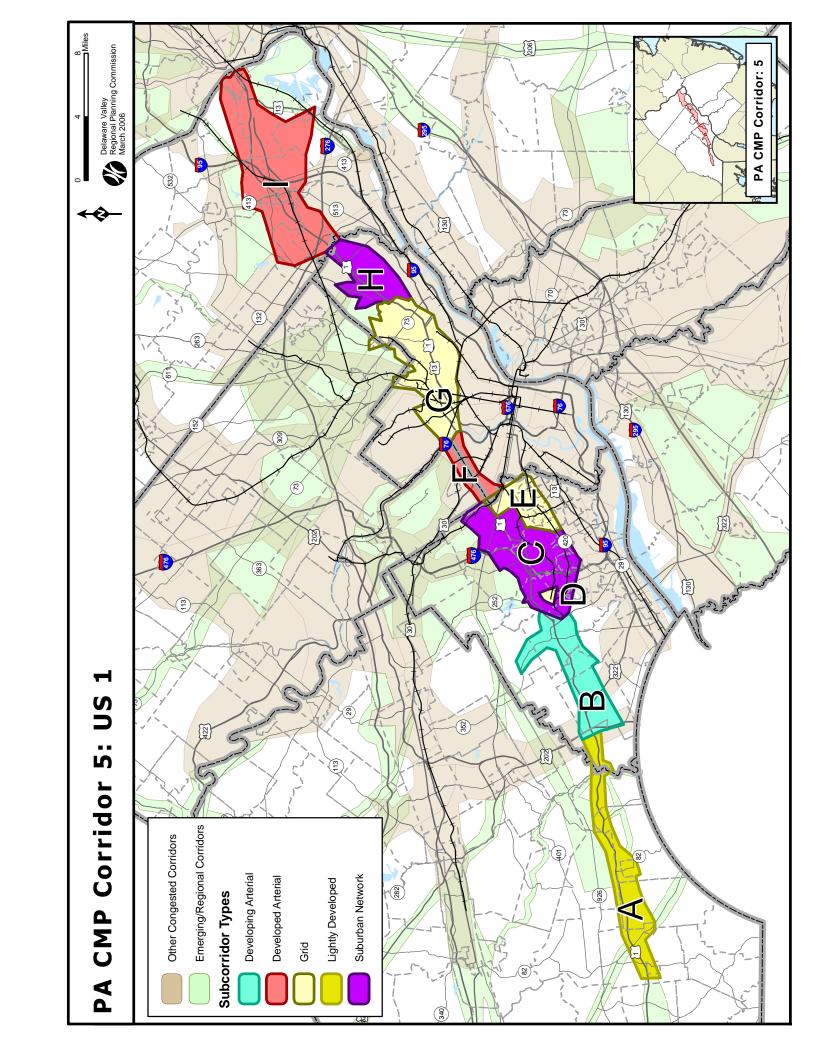
See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 57780: US 322/Comm Barry Bridge/I-95/2nd St Interchange; 15477: I-95/Conchester Hwy Interchange/Area Improvements; 14865: I-95 Ramp from PA 352 to SB I-95

# Adopted Corridor Studies Include (also see Bibliography):

Coordination with I-95 Coalition

# Area-wide Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Co	rridor ID	Corridor Name	Corridor Notes	
5		US 1	Broadly defined with	
			surrounding development	

### **Subcorridors with Their Strategies**

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
A	US 1 West of US 202	Less developed	<ol><li>Lightly</li></ol>
			Developed

## Very Appropriate Strategies

- o Park and Ride Lots
- o Environmentally Friendly Transportation Policies
- o Transit Services for Specific Populations
- o Demand Response Services

## Secondary Appropriate Strategies

- o Planning & Design (non-auto)
- o County and Local Road Connectivity; Short Connections
- o Community Friendly Transportation Policies
- o Economic Development Oriented Transportation Policies
- o Flexible Routing/Route Deviation Service
- o Bus Route
- o Major Reconstruction with Minor Capacity
- o Center Turn Lanes
- o General Purpose Lanes
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 14541: US 1, Baltimore Pike Phase 2 of Partnership

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	US 1 West of PA 252	Media Bypass area and	7. Developing
		west, not Media	Arterial

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Center Turn Lanes
- o Extensions or Changes in Transit Routes
- o Frontage or Service Roads
- o New Regional or Local Rail Services

## Secondary Appropriate Strategies

- o Channelization
- o Jug Handles
- o County and Local Road Connectivity; Short Connections
- o Trip Reduction Ordinances
- o Accessibility and Environmental Justice Policies
- o Environmentally Friendly Transportation Policies
- o Park and Ride Lots
- o Extensions or Changes in Transit Routes
- o Flexible Routing/Route Deviation Transit Service
- o Major Reconstruction with Minor Capacity Changes
- General Purpose Lanes
- o Exclusive Rights-of-way for Buses
- o New Bus Routes
- o Major Reconstruction with Minor Capacity Changes
- o Interchanges with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 14747: US 322 Final Design for Preconstruction; 15251: US 1, Baltimore Pk Interchange Improvement Study

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
С	US 1 69th St - Media	Developed Communities W	4. Dense
		of 69th St, Baltimore Pike	Suburban
			Network

### Very Appropriate Strategies

- o Computerized Traffic Signals
- o County and Local Road Connectivity; Short Connections
- o Expanding Parking/Better Access at Stations
- o Community Friendly Transportation Policies

### Secondary Appropriate Strategies

- o Signal Priority for Transit
- Channelization
- o Expanded Parking/Improved Access to Transit Stations
- o Park and Ride Lots
- o More Frequent Transit or More Hours of Service
- o Flexible Routing/Route Deviation Transit Service
- o Services for Specific Populations
- o Demand Response Transit Service
- o Frontage/Service Roads
- o General Purpose Lanes
- o Arterial and Collector Road
- o Also see strategies appropriate for all subcorridor types

Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 15345: PA 252, Providence Rd Widening

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
D	Media Borough		3. Dense Grid

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Intermodal Enhancements Passenger
- o Parking Operations
- o Community Friendly Transportation Policies
- o More Frequent or More Hours of Service for Transit

- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Economic Development Oriented Transportation Policies
- o Shuttle Services to Stations
- o Local Fixed Rail Service
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
E	Lansdowne and Adjacent Boroughs	Lansdowne, Clifton Heights,	<ol><li>Dense Grid</li></ol>
		Yeadon, E Upper Darby	
		Township	

### Very Appropriate Strategies

- o Computerized Traffic Signals
- o Intermodal Enhancements Passenger
- o Economic Development Oriented Transportation Policies
- o Community Friendly Transportation Policies
- o More Frequent or More Hours of Service for Transit

### Secondary Appropriate Strategies

- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit
- o Planning and Design (Non-motorized)
- o Parking Operations
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Shuttle Services to Stations
- o Local Fixed Rail Service
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

## Adopted Corridor Studies Include (also see Bibliography):

Delaware County Renaissance Program plans

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
F	City Ave	Office parks, nursing	6. Developed
		homes, shopping	Arterial

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Enhanced Transit Amenities and Safety
- o Expanded Parking/Improved Access to Transit Stations
- o Economic Development Oriented Transportation Policies
- o More Frequent or More Hours of Transit Service

## Secondary Appropriate Strategies

- o Transit Signal Prioritization
- o Signal Prioritization for Emergency Vehicles
- o County and Local Road Connectivity; Short Connections
- o "Transit First"/Transit Oriented Design policies
- o Center Turn Lanes
- o Extensions or Changes in Transit Routes
- o Express Transit Services
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
G	Dense area around US 1/I-76	Urban area N of Center	3. Dense Grid
		City; US 1 is expressway	

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Intermodal Enhancements Passenger
- o Parking Operations
- o Major Reconstruction with Minor Capacity
- o More Frequent or More Hours of Service for Transit

### Secondary Appropriate Strategies

- Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Economic Development Oriented Transportation Policies o Community Friendly Transportation Policies
- c Community Friendly Transportd Shuttle Services to Stations
- o Local Fixed Rail Service
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

### Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 13451: Broad St Interchange Improvement; 17796: PA 611, Broad St at

I-95 Signals (related to I-95 rehab)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
Н	US 1 Far NE Philadelphia	N of Pennypack Creek	4. Dense
			Suburban
			Network

## Very Appropriate Strategies

- Computerized Traffic Signals
- o County and Local Road Connectivity; Short Connections
- o Expanding Parking/Better Access at Stations
- o Enhanced Transit Amenities and Safety
- o Community Friendly Transportation Policies

## Secondary Appropriate Strategies

- o Signal Priority for Transit
- o Channelization
- o Expanded Parking/Improved Access to Transit Stations
- o Park and Ride Lots
- o More Frequent Transit or More Hours of Service
- o Flexible Routing/Route Deviation Transit Service
- o Services for Specific Populations
- o Demand Response Transit Service
- o Frontage/Service Roads
- Arterial and Collector Road
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 16948: Vine St Expressway Reconstruction

Ì	Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
				Type
I		US 1 to New Jersey	Includes Oxford Valley area	6. Developed
				Arterial

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Enhanced Transit Amenities and Safety
- o Expanded Parking/Improved Access to Transit Stations
- o Vehicles Use Limitations and Restrictions
- More Frequent or More Hours of Transit Service

## Secondary Appropriate Strategies

o Traffic Calming

- o Transit Signal Prioritization
- o Signal Prioritization for Emergency Vehicles
- o County and Local Road Connectivity; Short Connections
- o Center Turn Lanes
- o "Transit First"/Transit Oriented Design Policies
- o Economic Development Oriented Transportation Policies
- o Major Reconstruction with Minor Capacity
- o General Purpose Lanes
- o Extensions or Changes in Transit Routes
- o Express Transit Services
- o Frontage or Service Roads
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Local Fixed Rail Services
- o Regional Rail
- o Also see strategies appropriate for all subcorridor types

### Adopted Corridor Studies Include (also see Bibliography):

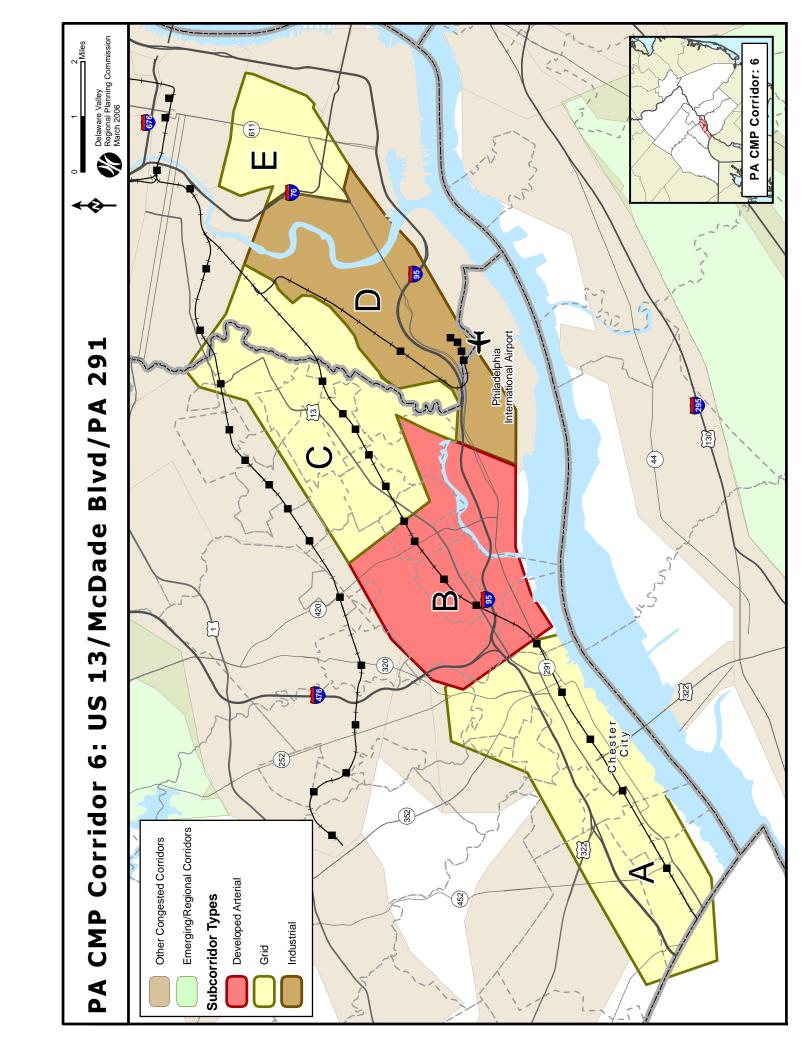
Pennsylvania CMS PA 413 Report (DVRPC, 2003) - Most of its worst performing arterial sections are in this subcorridor

Assessment of Land Use and Transportation for PA 413/513 Corridor (DVRPC, 2004) -

Recommendation areas 1 & 2

## Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
6	US 13/McDade Blvd/PA 291	US 13/Southern Delaware
		County riverfront
		communities, also R2
		SEPTA

### **Subcorridors with Their Strategies**

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
Α	City of Chester and related area		3. Dense Grid

### Very Appropriate Strategies

- o Intermodal Enhancements Passenger
- o More Frequent or More Hours of Service for Transit
- o Economic Development Oriented Transportation Policies
- o Major Reconstruction with Minor Capacity
- o General Purpose Lanes

### Secondary Appropriate Strategies

- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Computerized Traffic Signals
- o Signal Priority for Transit
- o Parking Operations
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- "Transit First" Policy & Transit Oriented Design (TOD)
- o Community Friendly Transportation Policies
- o Shuttle Services to Stations
- o Local Fixed Rail Service
- o Interchange with Related Road Segments
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 57780: US 322/Comm Barry Bridge/I-95/2nd St Interchange; 15477: I-

95/Conchester Hwy Interchange/Area Improvements; 14822: PA 291, Industrial

Highway Widening; 69818: US 322, Cherry Tree Rd to I-95 Widening; 14865: I-95

Ramp from PA 352 to SB I-95

# Adopted Corridor Studies Include (also see Bibliography):

PA 291 Industrial Heritage Corridor Parkway Plan (Delaware County Planning Department)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
В	US 13 between Chester & Philadelphia		Type 6. Developed Arterial

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Enhanced Transit Amenities and Safety
- o Expanded Parking/Improved Access to Transit Stations
- o Center Turn Lanes
- Economic Development Oriented Transportation Policies

# Secondary Appropriate Strategies

o Transit Signal Prioritization

- o Signal Prioritization for Emergency Vehicles
- o County and Local Road Connectivity; Short Connections
- o "Transit First"/Transit Oriented Design policies
- o More Frequent or More Hours of Transit Service
- o Extensions or Changes in Transit Routes
- o Major Reconstruction with Minor Capacity
- o Express Transit Services
- o Frontage or Service Roads
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Local Fixed Rail Services
- o Regional Rail
- o Also see strategies appropriate for all subcorridor types

## Adopted Corridor Studies Include (also see Bibliography):

PA 291 Industrial Heritage Corridor Parkway Plan (Delaware County Planning Department)

Congestion and Accident Mitigation (CAMP) Program Report (DVRPC, 2006) -

PA 420 at McDade Blvd and at 4th Ave/Academy Ave

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
С	US 13 - Cobbs Creek	Southwest Philadelphia-	3. Dense Grid
		Colwyn, Elmwood	
		communities	

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Intermodal Enhancements Passenger
- o Parking Operations
- o Economic Development Oriented Transportation Policies
- o More Frequent or More Hours of Service for Transit

## Secondary Appropriate Strategies

- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Community Friendly Transportation Policies
- o Shuttle Services to Stations
- o Local Fixed Rail Service
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

## Adopted Corridor Studies Include (also see Bibliography):

PA 291 Industrial Heritage Corridor Parkway Plan (Delaware County Planning Department)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
D	PA 291/Airport Area	Airport industrial area and	10. Industrial
		developed mixed use area	
		around it	

## Very Appropriate Strategies

- o Commercial Vehicle Operations
- o Expanded Parking/Improved Access to Stations
- o Accessibility & Environmental Justice
- o Major Reconstruction with Minor Capacity Changes
- o Economic Development Oriented Transportation Policies

- o Traveler Information Services
- o Maintenance Management
- o Incident Management
- o Intermodal Enhancements Freight
- o Interregional Transportation Coordination for Freeways
- o County and Local Road Connectivity; Short Connections
- o General Purpose Lanes
- o Frontage or Service Roads
- o Freight Intermodal Center/Yard
- o New Freight Rail
- o Interchange with Related Road Segments
- o Limited Access Highways
- Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 17828: I-95/International Airport Ramp Revision

## Adopted Corridor Studies Include (also see Bibliography):

PA 291 Industrial Heritage Corridor Parkway Plan (Delaware County Planning Department)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
E	Penrose Ave - Broad St	South Philadelphia	3. Dense Grid
		residential area with some	
		commercial/industrial	

## Very Appropriate Strategies

- o Expanded Parking/Improved Access to Stations
- o Intermodal Enhancements Passenger
- o Parking Operations
- o Economic Development Oriented Transportation Policies
- o More Frequent or More Hours of Service for Transit

# Secondary Appropriate Strategies

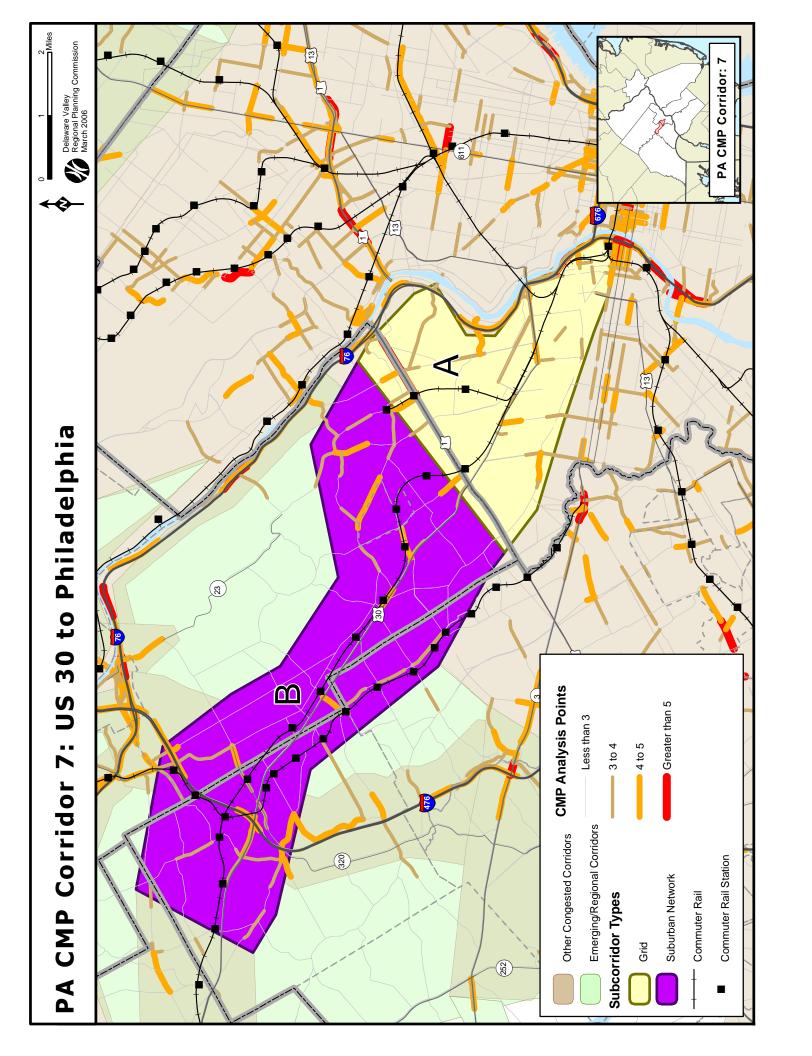
- o Computerized Traffic Signals
- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Community Friendly Transportation Policies
- o Shuttle Services to Stations
- o Local Fixed Rail Service Improvements
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 17649: PA 611, S Broad St Interchange Realignment

# Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
7	US 30 to Philadelphia	Eastern part of US 30;
		western part with Corridor 8

**Subcorridors with Their Strategies** 

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
A	US 30 E of US 1	To 30th St Station/Schuylkill	3. Dense Grid
		Exp	

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Intermodal Enhancements Passenger
- o Parking Operations
- o Signal Priority for Transit
- o Expanded Parking/Improved Access to Stations

### Secondary Appropriate Strategies

- c Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o More Frequent or More Hours of Service for Transit
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- "Transit First" Policy & Transit Oriented Design (TOD)
- o Economic Development Oriented Transportation Policies
- c Community Friendly Transportation Policies
- o Shuttle Services to Stations
- o Local Fixed Rail Service Improvements
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
В	US 30 Main Line	Ardmore, Radnor; W of US	4. Dense
		1	Suburban
			Network

# Very Appropriate Strategies

- o Computerized Traffic Signals
- o County and Local Road Connectivity; Short Connections
- o Expanding Parking/Better Access at Stations
- o Services for Specific Populations
- o Community Friendly Transportation Policies

## Secondary Appropriate Strategies

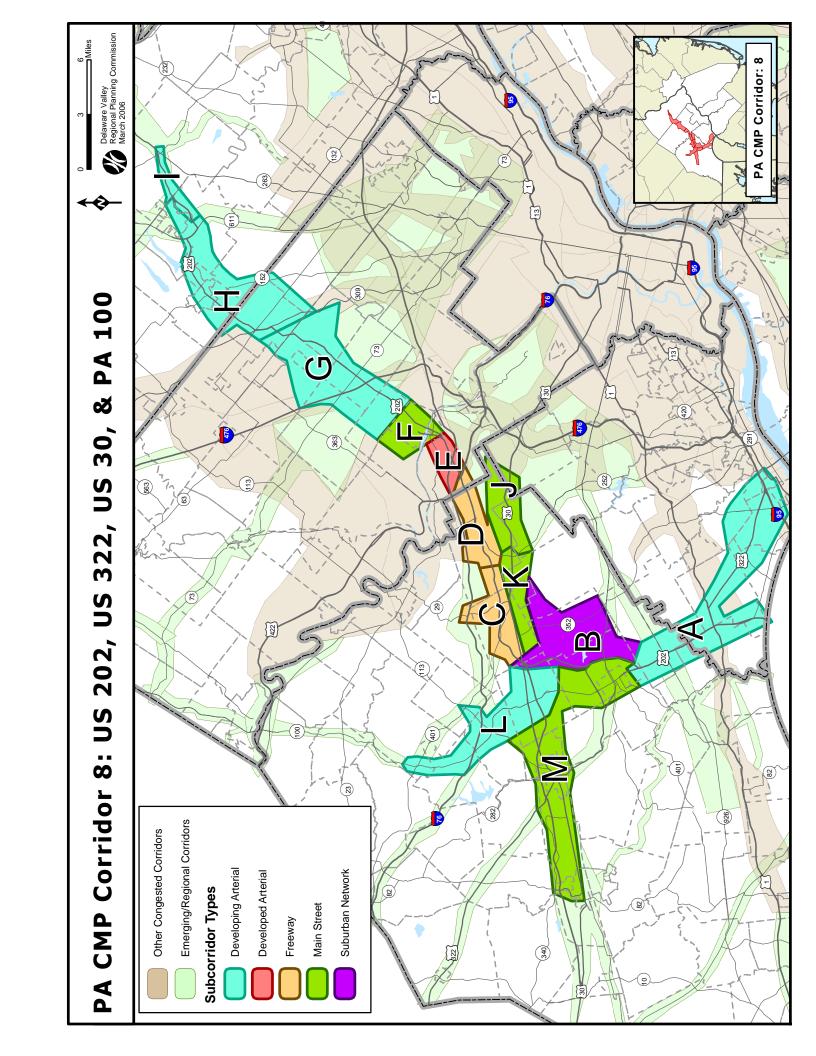
- o Signal Priority for Transit
- o Signal Priority for Emergency Vehicles
- o Channelization
- o Traveler Information Services
- o Vehicle Use Limitations and Restrictions
- o More Frequent Transit or More Hours of Service
- o Flexible Routing/Route Deviation Transit Service
- o Demand Response Transit Service
- o Arterial and Collector Road
- o Also see strategies appropriate for all subcorridor types

Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 64795: Rock Hill Rd/Belmont Ave Corridor Improvements

# Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
8	US 202, 322, 30, PA 100	Western part of US 30,
		parts of PA 100 from
		DVRPC corridor study
		98002/Chester Co growth
		areas, 202 sec 700 modified
		w TIP project

## **Subcorridors with Their Strategies**

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
A	US 202 Section 100/US 322	4 Lane signalized,	7. Developing
		uncontrolled access	Arterial
		(us202.com)	

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Park and Ride Lots
- o Extensions or Changes in Transit Routes
- o Enhanced Transit Amenities and Safety
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Interregional Transportation Coordination

## Secondary Appropriate Strategies

- Channelization
- o Center Turn Lanes
- o Signal Priority for Transit
- o Expanding Parking/Better Access at Stations
- o County and Local Road Connectivity; Short Connections
- o Trip Reduction Ordinances
- o Community Friendly Transportation Policies
- o Environmentally Friendly Transportation Policies
- o Frontage or Service Roads
- o Accessibility and Environmental Justice Policies
- o Flexible Routing/Route Deviation Transit Service
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes
- o New Bus Routes
- o New Regional or Local Rail Services
- o Interchanges with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 15477: I-95 Conchester HWY Interchange/Area Improvements; 69818: US 322, Cherry Tree Rd to I-95; 15385: US 202 (Sec 100) Design; 69816: US 322, US 1 to Featherbed Lane Widening; 69817: US 322, Featherbed Lane to Cherry Tree Rd; 57780: Rt 322/Comm Barry Bridge/I-95 2nd St Interchange

## Adopted Corridor Studies Include (also see Bibliography):

Route 322 Land Use Strategies Study (DVRPC Report 02022, 2002),

Route 202 Section 100 Land Use Strategies Study (DVRPC Report 01024, 2001)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	US 202 Section 200 area	US30-Matlack; close	4. Dense
		Interchanges (us202.com);	Suburban
		includes Paoli Pike, PA 352	Network

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o County and Local Road Connectivity; Short Connections
- o More Frequent Transit or More Hours of Service
- o Park and Ride Lots
- o Community Friendly Transportation Policies

## Secondary Appropriate Strategies

- o Signal Priority for Transit
- o Channelization
- o Expanded Parking/Improved Access to Transit Stations
- o Extensions or Changes in Transit Routes
- o Flexible Routing/Route Deviation Transit Service
- o Services for Specific Populations
- o Demand Response Transit Service
- o General Purpose Lanes
- o Frontage/Service Roads
- o Arterial and Collector Road
- Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 47978: PA 100, Ludwigs Corner Realignment; 13945: US 202, TR 252 to US 30 (Sec 300) Design

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
С	US 202 Section 300	4 lanes limited access	1. Freeway
		expressway (us202.com)	

### Very Appropriate Strategies

- o Integrated Corridor Management for Freeways/ITS
- o More Frequent or More Hours of Service
- o Demand Responsive Transit Services
- o Bus Route
- o General Purpose Lanes
- o Major Reconstruction with Minor Capacity Changes

- o Automated Toll Collection Improvements
- o Traveler Information System
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals
  - (provide infrastructure on parallel roads especially in case of use as detours)
- o Incident Management
- o Park and Ride Lots
- o Commercial Vehicle Operations
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Interregional Transportation Coordination
- o Congestion Pricing (Tolls)
- o Express Transit Services
- o HOV Treatments
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Freight Rail
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 50364: US 202, Dekalb Pike Preconstruction Widening; 13945: US 202,

TR 252 to US 30 (Sec 300) Design

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
D	US 202 Section 400 (not Paoli) mostly in Tredyffrin Township, Chester County	4 lane expressway (us202.com)	Type 1. Freeway

## Very Appropriate Strategies

- o Integrated Corridor Management for Freeways
- o Incident Management
- o Park and Ride Lots
- o General Purpose Lanes
- o Major Reconstruction with Minor Capacity Changes

## Secondary Appropriate Strategies

- o Automated Toll Collection Improvements
- o Traveler Information System
- o Maintenance Management
- o Transportation Security/Terrorism Prevention
- o Computerized Traffic Signals

(provide infrastructure on parallel roads especially in case of use as detours)

- o Commercial Vehicle Operations
- o County and Local Road Connectivity; Short Connections (to keep local traffic off expressways)
- o Interregional Transportation Coordination
- o Congestion Pricing (Tolls)
- o Express Transit Services
- o HOV Treatments
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Regional or Inter-city Rail
- o Freight Rail
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 57868: Lafayette St Extension; 13945: US 202, TR 252 to US 30 (Sec

300) Design; 14546: US 202, Swedesford Rd to Old Eagle Rd (Sec 402)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
E	US 202 Section 500-arterial, King of Prussia area in Upper Merion Township,	Johnson HW - Gulph Rd: 4	6. Developed
	Montgomery County	lane arterial (us202.com)	Arterial

### Very Appropriate Strategies

- o Computerized Traffic Signals
- o Enhanced Transit Amenities and Safety
- o Expanded Parking/Improved Access to Transit Stations
- o Center Turn Lanes
- o More Frequent or More Hours of Transit Service

- o Transit Signal Prioritization
- o Signal Prioritization for Emergency Vehicles
- o County and Local Road Connectivity; Short Connections
- o "Transit First"/Transit Oriented Design policies
- o Extensions or Changes in Transit Routes
- o Shuttle Service to Stations
- o Transit Services for Specific Populations
- o Express Transit Services
- o General Purpose Lanes

- o Arterial or Collector Road
- o Bypass
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Local Fixed Rail Services
- o Regional Rail
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 64027: US 202 Bypass, Rt 309 to Horsham Rd; 57868: Lafayette St Extension; 16210: US 202 Section 400 Widening and Access Improvements

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
F	US 202 Section 500-Norristown Borough area	Johnson HW - Gulph Rd:	<ol><li>Main Street</li></ol>
		local network	

### Very Appropriate Strategies

- o Parking Operations
- o Computerized Traffic Signals
- o "Transit First" Policies and Transit Oriented Design
- o Shuttle Service to Stations
- o County and Local Road Connectivity; Short Connections

### Secondary Appropriate Strategies

- o Street Circulation Patterns
- o Enhanced Transit Amenities
- o Planning and Design (non-motorized)
- o Maintenance Management
- o Signal Prioritization for Transit Vehicles
- o County and Local Road Connectivity; Short Connections
- o Community Friendly Transportation Policies
- o Park and Ride Lots
- o More Frequent or More Hours of Service for Transit
- o Flexible Routing/Route Deviation Services
- o Transit Services for Specific Populations
- o Major Reconstruction with Minor Capacity
- o General Purpose Lanes
- o Bus Route
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 57859: US 422 Pottstown Expwy Widening, Interchange Improvements Study; 16210: US 202 Section 400 Widening and Access Improvements; 16487: US 202 (Sec 403) & US 422 Ramp to I-76; 16732: us 202 (Sec 405) Widening and Access Improvements, 16733: US 202 (Sec 404)/US 422 Interchange

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
G	US 202 Section 600, includes much of Lower Gwynedd Twp and North Wales	PA 309 - Johnson HW: 2	7. Developing
	Borough	lanes medium-high level of	Arterial
		commercial development	
		(us202.com)	

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Center Turn Lanes
- o Extensions or Changes in Transit Routes
- o Shuttle Services to Stations
- o Accessibility and Environmental Justice Policies

## Secondary Appropriate Strategies

- o Channelization
- o Signal Priority for Transit
- o Expanding Parking/Better Access at Stations
- o County and Local Road Connectivity; Short Connections
- o Community Friendly Transportation Policies
- o Environmentally Friendly Transportation Policies
- o Park and Ride Lots
- o Flexible Routing/Route Deviation Transit Service
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes
- o Exclusive Rights-of-way for Buses
- o New Bus Routes
- o New Regional or Local Rail Services
- o Arterial or Collector Road
- o Interchanges with Related Road Segments
- o Bypass
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 63490: US 202, Twp Line Rd to Morris Rd Widening; 63491: US 202, Morris Rd to PA 63 Reconstruction and Widening (Sec 65S); 63492: US 202, PA 63 to PA 309 (Sec 65N); 63486: US 202, Johnson Hwy to Twp Line Rd (Sec 61S); 47396: US 202 Bypass, PA 463 to Pickertown Rd (Sec 711); 16731: US 202 Bypass, PA 63 to 309/463 (Sec 701); 64026: US 202 Bypass, Hancock Rd to 309 (Sec 70A); 16477: PA 309, Welsh Rd to Highland Ave Reconstruction (Sec 101)

## Adopted Corridor Studies Include (also see Bibliography):

US 202 Section 600 Congestion Management System Program (DVRPC, 1995)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
	US 202 Section 700, crossing from Montgomery into Bucks County including the area of Chalfont and New Britain boroughs	PA 611 - PA 309: 2 Lanes, medium density level of development (us202.com)	<b>Type</b> 7. Developing Arterial

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Center Turn Lanes
- o Extensions or Changes in Transit Routes
- o Accessibility and Environmental Justice Policies
- County and Local Road Connectivity; Short Connections

## Secondary Appropriate Strategies

- o Channelization
- o Signal Priority for Transit
- o Expanding Parking/Better Access at Stations
- o Community Friendly Transportation Policies
- o Environmentally Friendly Transportation Policies
- o Park and Ride Lots
- o Shuttle Service to Stations
- o Flexible Routing/Route Deviation Transit Service
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes
- o Exclusive Rights-of-way for Buses
- o New Bus Routes
- o New Regional or Local Rail Services
- o Arterial and Collector Road
- o Interchanges with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 47395: US 202 Bypass, Pickertown Rd to PA 611 (Sec 721); 64053: US 202 Bypass, County Line to Pickertown (Sec 71C); 64055: US 202 Bypass, Pickertown Rd to Almshouse (Sec 72A); 64811: PA 463 Horsham Rd Widening; 47396: US 202 Bypass, PA 463 to Pickertown Rd (Sec 711); 16731: US 202 Bypass, PA 63 to 309/463 (Sec 701); 64026: US 202 Bypass, Hancock Rd to 309 (Sec 70A); 64056: US 202 Bypass, Almshouse Rd to PA 611 (Sec 72B); 16477: PA 309, Welsh Rd to Highland Ave Reconstruction (Sec 101); 12923: Bristol Rd Extension; 64779: County Line Rd Widening; 63493: US 202, 5 Points Intersection (Sec 71A); 16755: US 202, Morris Rd to PA 309 Reconstruction and Widening (Sec 650)

## Adopted Corridor Studies Include (also see Bibliography):

US 202 Section 700 Community Task Force Report (September, 2005), US 202 Section 700 Congestion Management System Program (DVRPC, 1995)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
I	US 202 N of Section 700, including the intersection of PA 413 and PA 263	NE of PA 611	7. Developing
			Arterial

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Center Turn Lanes
- o Extensions or Changes in Transit Routes
- o Accessibility and Environmental Justice Policies
- Frontage or Service Roads

## Secondary Appropriate Strategies

- o Channelization
- o Signal Priority for Transit
- o Expanding Parking/Better Access at Stations
- o County and Local Road Connectivity; Short Connections
- o Trip Reduction Ordinances
- o Environmentally Friendly Transportation Policies
- o Park and Ride Lots
- o Flexible Routing/Route Deviation Transit Service
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes
- o Exclusive Rights-of-way for Buses
- o New Bus Routes
- o New Regional or Local Rail Services
- o Arterial or Collector Road
- o Interchanges with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 64056: US 202 Bypass, Almshouse Rd to PA 611 (Sec 72B)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
J	Berwyn, small centers on US 30	Centers around US 30 W of	5. Main Street
		Radnor, F of Malvern	

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o "Transit First" Policies and Transit Oriented Design
- o Shuttle Service to Stations
- o Community Friendly Transportation Policies
- County and Local Road Connectivity; Short Connections

- o Parking Operations
- o Street Circulation Patterns
- o Enhanced Transit Amenities and Safety

- o Planning and Design (non-motorized)
- o Signal Prioritization for Transit Vehicles
- o Park and Ride Lots
- o More Frequent or More Hours of Service for Transit
- o Flexible Routing/Route Deviation Services
- o Transit Services for Specific Populations
- o Bus Route
- o Major Reconstruction with Minor Capacity
- o General Use Lanes
- o Bypass
- Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 15477: I-95/Conchester Hwy Interchange/Area Improvements; 14747:

US 322 Final Design for Preconstruction; 69818: US 322, Cherry Tree Rd to I-95

Widening; 15385: US 202 Section 100 Traffic Flow Improvements; 69816: US

322, US 1 - Featherbed Ln Widening; 69817: US 322, Featherbed Ln - Cherry

Tree Rd Widening

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
K	Borough of Malvern, US 30	Centers along US 30	<ol><li>Main Street</li></ol>

## Very Appropriate Strategies

- o Parking Operations
- o Computerized Traffic Signals
- o "Transit First" Policies and Transit Oriented Design
- o Transit Services for Specific Populations
- o County and Local Road Connectivity; Short Connections

## Secondary Appropriate Strategies

- o Street Circulation Patterns
- o Enhanced Transit Amenities
- o Planning and Design (non-motorized)
- o Maintenance Management
- o Signal Prioritization for Transit Vehicles
- o Community Friendly Transportation Policies
- o Park and Ride Lots
- o More Frequent or More Hours of Service for Transit
- o Flexible Routing/Route Deviation Services
- o Shuttle Service to Station
- o Bus Route
- o Major Reconstruction with Minor Capacity
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
L	PA 100 north of US 30	Exton Bypass to just North	7. Developing
		of PA 401	Arterial

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Center Turn Lanes
- o Extensions or Changes in Transit Routes
- o Accessibility and Environmental Justice Policies
- o Frontage or Service Roads

- o Channelization
- o Jug Handles
- o Signal Priority for Transit
- o Expanding Parking/Better Access at Stations
- o County and Local Road Connectivity; Short Connections
- o Trip Reduction Ordinances

- o Planning and Design (Non-auto)
- Environmentally Friendly Transportation Policies
- o Park and Ride Lots
- o Shuttle Service to Stations
- o Flexible Routing/Route Deviation Transit Service
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes
- o Exclusive Rights-of-way for Buses
- o New Bus Routes
- o New Regional or Local Rail Services
- o Major Reconstruction with Minor Capacity Changes
- o Interchanges with Related Road Segments
- Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 14629: PA 100 Eagle Loop Rd - S Link Relocation; 14515: PA 100 Widening and CMS Improvements; 14500: PA 113 Roadway Improvements

vicinity of PA Turnpike; 70240: US 30B Widening vicinity of West Whiteland

### Adopted Corridor Studies Include (also see Bibliography):

Pennsylvania Congestion Management System: PA 100 Corridor Study (DVRPC Publication 02009, 2002), PA 100 Corridor Study (DVRPC Publication 98002, 1998)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
М	US 202 Communities W of PA 100, including Downingtown Borough and City of	Downingtown, Exton, W	<ol><li>Main Street</li></ol>
	Coatesville	Chester; 322, 30, 100; to 82-	
		growth	

## Very Appropriate Strategies

- o Parking Operations
- o Computerized Traffic Signals
- o "Transit First" Policies and Transit Oriented Design
- o Transit Services for Specific Populations
- o County and Local Road Connectivity; Short Connections

## Secondary Appropriate Strategies

- o Street Circulation Patterns
- o Enhanced Transit Amenities and Safety
- o Planning and Design (non-motorized)
- o Signal Prioritization for Transit Vehicles
- o Center Turn Lanes
- o Environmentally Friendly Transportation Policies
- o Community Friendly Transportation Policies
- o Park and Ride Lots
- o More Frequent or More Hours of Service for Transit
- o Flexible Routing/Route Deviation Services
- o Shuttle Service to Stations
- o Bus Route
- o Frontage or Service Roads
- o Major Reconstruction with Minor Capacity
- o Bypass
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

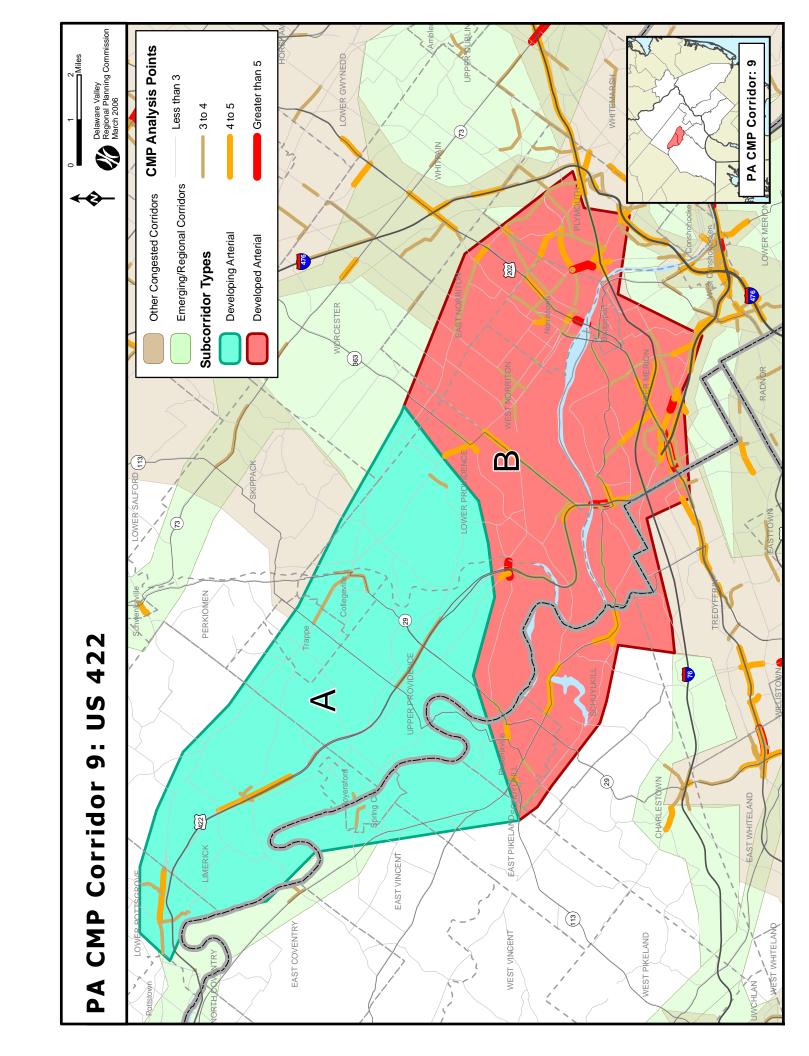
See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 14532: US 30 Coatesville Downingtown Bypass Reconstruction

## Adopted Corridor Studies Include (also see Bibliography):

Pennsylvania Congestion Management System: PA 100 Corridor Study (DVRPC Publication 02009, 2002)

## Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
9	US 422	North-South broader
		corridor to King of Prussia
		and Turnpike

**Subcorridors with Their Strategies** 

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
A	Oaks - Pottstown	Egypt Rd area N to	7. Developing
		Pottstown; 422 is freeway	Arterial

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Center Turn Lanes
- o Extensions or Changes in Transit Routes
- o Accessibility and Environmental Justice Policies
- o Frontage or Service Roads

### Secondary Appropriate Strategies

- o Channelization
- o Enhanced Transit Amenities and Safety
- o County and Local Road Connectivity; Short Connections
- o Environmentally Friendly Transportation Policies
- o Park and Ride Lots
- o More Frequent or More Hours of Transit Service
- o Flexible Routing/Route Deviation Transit Service
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes
- o Exclusive Rights-of-way for Buses
- o Transit Services for Specific Populations
- o New Bus Routes
- o New Regional or Local Rail Services
- o Arterial or Collector Road
- o Interchanges with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 71174: Rt 29/Rt 113, Black Rd to Hopwood Rd Signalization and Improvements

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	US 202 - Oaks	US 202 N to Egypt Rd/Oaks	6. Developed
			Arterial

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Enhanced Transit Amenities and Safety
- o Expanded Parking/Improved Access to Transit Stations
- o Center Turn Lanes
- o More Frequent or More Hours of Transit Service

- o Transit Signal Prioritization
- o Signal Prioritization for Emergency Vehicles
- o Incident Management
- o Traveler Information
- o Commercial Vehicle Operations
- o County and Local Road Connectivity; Short Connections
- o "Transit First"/Transit Oriented Design policies
- o Economic Development Oriented Transportation Policies

- Enhanced Transit Amenities and Safety
- Extensions or Changes in Transit Routes
- o Express Transit Services
- o Transit Services for Specific Populations
- o Frontage or Service Roads
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Local Fixed Rail Service Enhancements
- o Regional Rail
- o Major Reconstruction with Minor Capacity
- o General Purpose Lanes
- o Interchanges with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

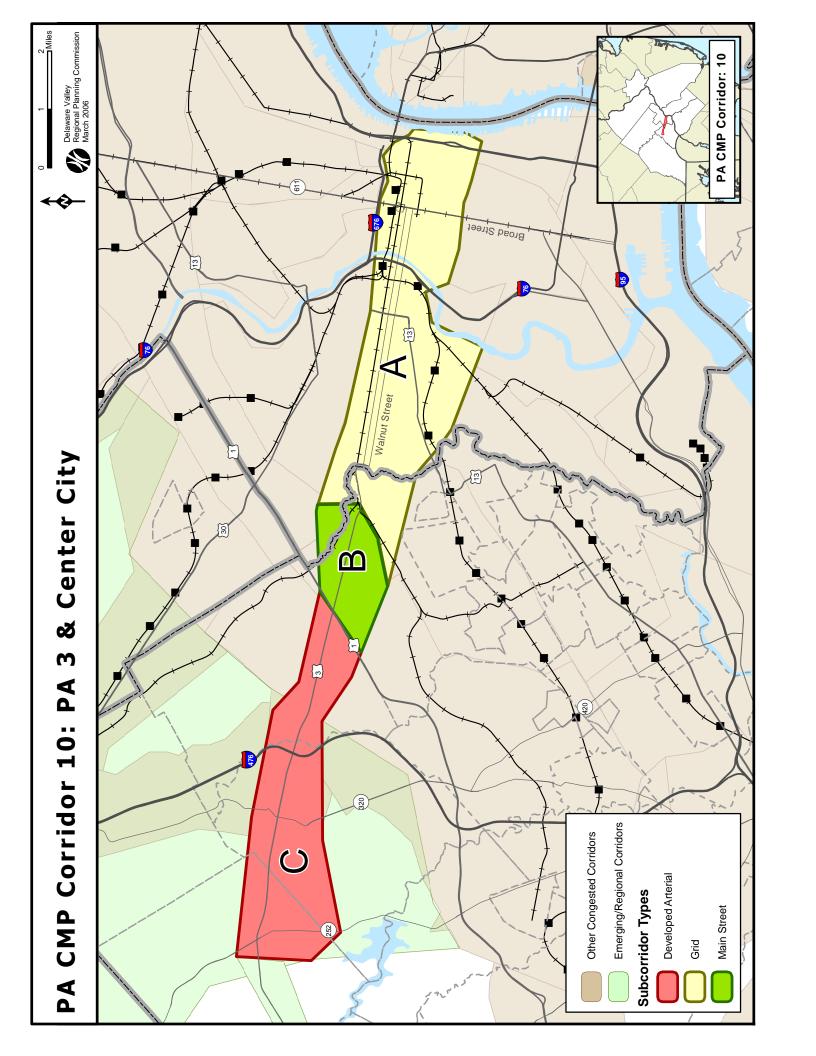
See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 57859: US 422: Pottstown Expressway Widening & Interchange Improvement Study; 64027: US 202 Bypass; 57858: Lafayette St Extension; 48172: PA 23 Relocation; 48187: I-76 Interchange & Henderson Rd Widening; 64052: US 202 Bypass; 64796: US 422/ PA 363 Interchange; 66952: PA 23/US 422 Interchange & N Gulph Rd Improvements; 50364: US 202, Dekalb Pk Widening; 16487: US 202/422 Ramp to I-76; 16732: US 202 Sec. 305 Widening and Access Improvements; 16733: US 202/US 422 Interchange; 16211: I-76, Schuylkill Interchange Improvement; 63486: US 202, Johnson Hwy - Twp Line Rd Widening; 57659: French Creek Parkway New Collector Rd; 46954: US 422 River Crossing Complex Environmental Study; 70197: US 422 Betzwood Bridge Reconstruction

Adopted Corridor Studies Include (also see Bibliography):

Interim Improvements to Help Relieve US 422 Westbound Evening Traffic Problems (2005), Montgomery County Transportation Plan (2005)

# Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
10	PA 3 & Center City	

## **Subcorridors with Their Strategies**

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
A	Center City, University City	To Cobbs Creek Exp; to S	3. Dense Grid
		from edits for US 1 CMS	

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Intermodal Enhancements Passenger
- o Parking Operations
- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit

## Secondary Appropriate Strategies

- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Economic Development Oriented Transportation Policies
- o Community Friendly Transportation Policies
- o More Frequent or More Hours of Service for Transit
- o Major Reconstruction with Minor Capacity
- o Local Fixed Rail Service
- o Intercity Rail
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 17462: South St Bridge over SEPTA; 17603: South St Bridge over I-76

EB; 17724: South St Bridge Replacement

## Adopted Corridor Studies Include (also see Bibliography):

Congestion and Accident Mitigation (CAMP) Program Report (DVRPC, 2006) -

Focus area at 34th Street and Grays Ferry Road

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	PA 3 from Cobbs Creek to US 1	Mostly Delaware County	5. Main Street

## Very Appropriate Strategies

- o Parking Operations
- o Computerized Traffic Signals
- o "Transit First" Policies and Transit Oriented Design
- o Enhanced Transit Amenities and Safety
- o County and Local Road Connectivity; Short Connections

- o Street Circulation Patterns
- o Enhanced Transit Amenities
- o Planning and Design (non-motorized)
- o Maintenance Management
- o Signal Prioritization for Transit Vehicles
- o County and Local Road Connectivity; Short Connections
- o Community Friendly Transportation Policies
- o Park and Ride Lots

- o More Frequent or More Hours of Service for Transit
- o Flexible Routing/Route Deviation Services
- o Transit Services for Specific Populations
- o Bus Route
- o Major Reconstruction with Minor Capacity
- o Bypass
- o Also see strategies appropriate for all subcorridor types

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
С	PA 3 West of US 1	From just W of PA 252	Type 6. Developed Arterial

## Very Appropriate Strategies

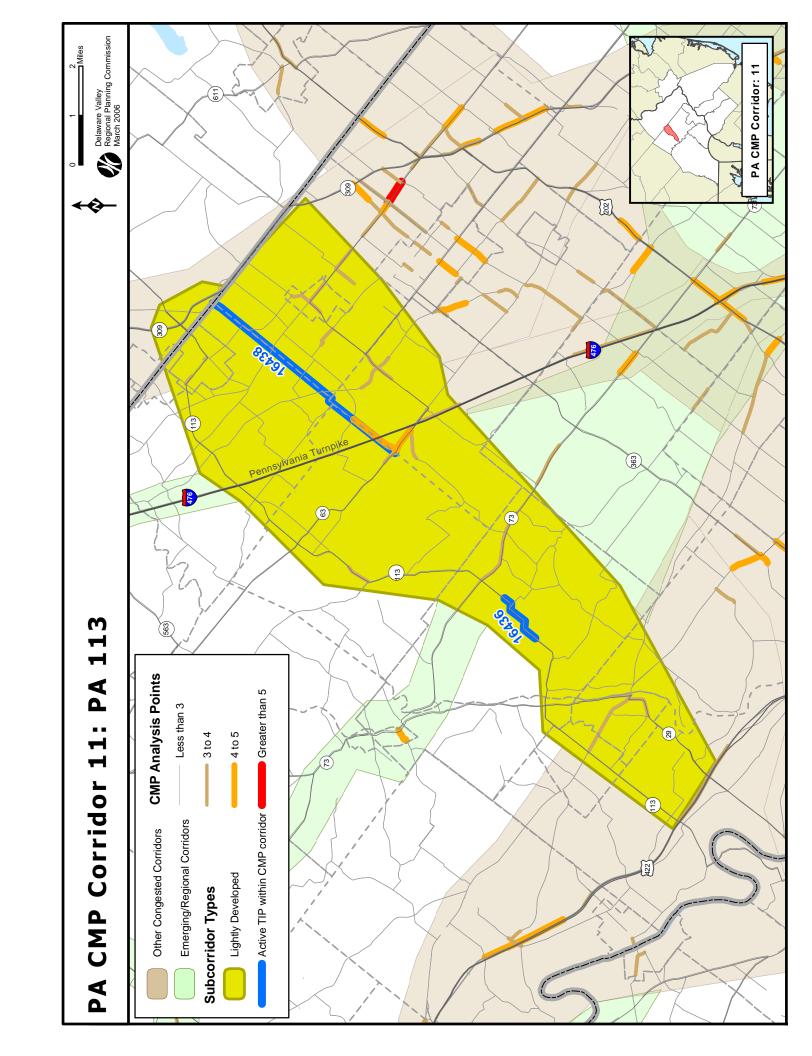
- o Computerized Traffic Signals
- Enhanced Transit Amenities and Safety
- o Expanded Parking/Improved Access to Transit Stations
- o Center Turn Lanes
- More Frequent or More Hours of Transit Service

## Secondary Appropriate Strategies

- o Transit Signal Prioritization
- o Signal Prioritization for Emergency Vehicles
- o County and Local Road Connectivity; Short Connections
- o "Transit First"/Transit Oriented Design policies
- o Economic Development Oriented Transportation Policies
- o Extensions or Changes in Transit Routes
- o Express Transit Services
- o Frontage or Service Roads
- o Bus Rapid Transit (BRT) and Exclusive Right-of-Way Bus Lanes
- o Local Fixed Rail Services
- o Regional Rail
- o Also see strategies appropriate for all subcorridor types

# Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
11	PA 113	This corridor was developed
		based mainly on TIP
		projects and secondarily on
		analysis indicating east-
		west congestion

**Subcorridors with Their Strategies** 

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
	PA 113 (Souderton-Harleysville Pike) Area, from US 422 across I-476 to	Focus seems to be	9. Lightly
	Montgomery/Bucks County Line	commuters in this	Developed
		developing area. Includes	
		boroughs of Trappe,	
		Collegeville, and Hatfield	

## Very Appropriate Strategies

- o Planning & Design (non-auto)
- o Park and Ride Lots
- o Environmentally Friendly Transportation Policies
- o Transit Services for Specific Populations
- o Demand Response Services

## Secondary Appropriate Strategies

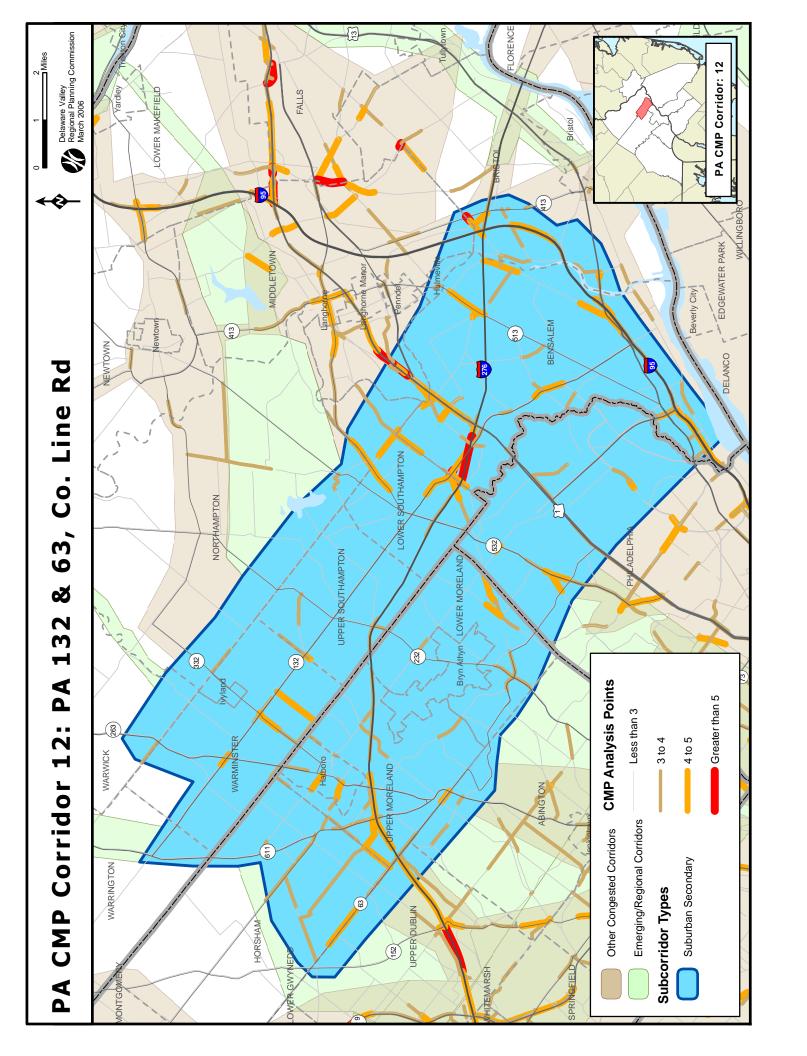
- o Computerized Traffic Signals
- o County and Local Road Connectivity; Short Connections
- o Channelizaton
- o Jug Handles
- o Parking Operations
- o Economic Development Oriented Transportation Policies
- o Community Friendly Transportation Policies
- o Extensions or Changes in Route
- o More Frequent or More Hours of Transit Service
- o Bus Route
- o Flexible Routing/Route Deviation Service
- o Demand Response Services
- o Major Reconstruction with Minor Capacity
- o General Purpose Lanes
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

# $\underline{\text{Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005}$

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 16742: PA 63, Forty Foot Rd Widening, Intersection Improvement; 16438: PA 309 Connector Project; 57869: PA Turnpike NE Extension Ramp Modification; 71174: Rt 29 and Rt 113, Black Rock to Hopwood Rd Signalization and Improvements

# Area-wide Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
12	PA 132 & 63, County Line Rd Area	This is more of an area,
		including the parallel roads
		N of the Turnpike, following
		Street Rd (132) and
		Woodhaven (63) to I-95

## **Subcorridors with Their Strategies**

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
		Major office parks, air base, bedroom communities	8. Suburban Secondary

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Expanded Parking/Improved Access to Stations
- o Park and Ride Lots
- o Shuttle Service to Station
- Transit Amenities and Safety

## Secondary Appropriate Strategies

- o Signal Priority for Transit
- o Traffic Calming
- o Channelization
- o County and Local Road Connectivity; Short Connections
- o Center Turn Lane
- o Community Friendly Transportation Planning
- o Economic Development Oriented Transportation Planning
- Parking Management (such as transportation allowances, parking lot design)
- o Extensions or Changes in Transit Routes
- o More Frequent Transit Service
- o Services for Specific Populations
- o General Purpose Lanes
- o Demand Responsive Transit
- o Arterial or Collector Road
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

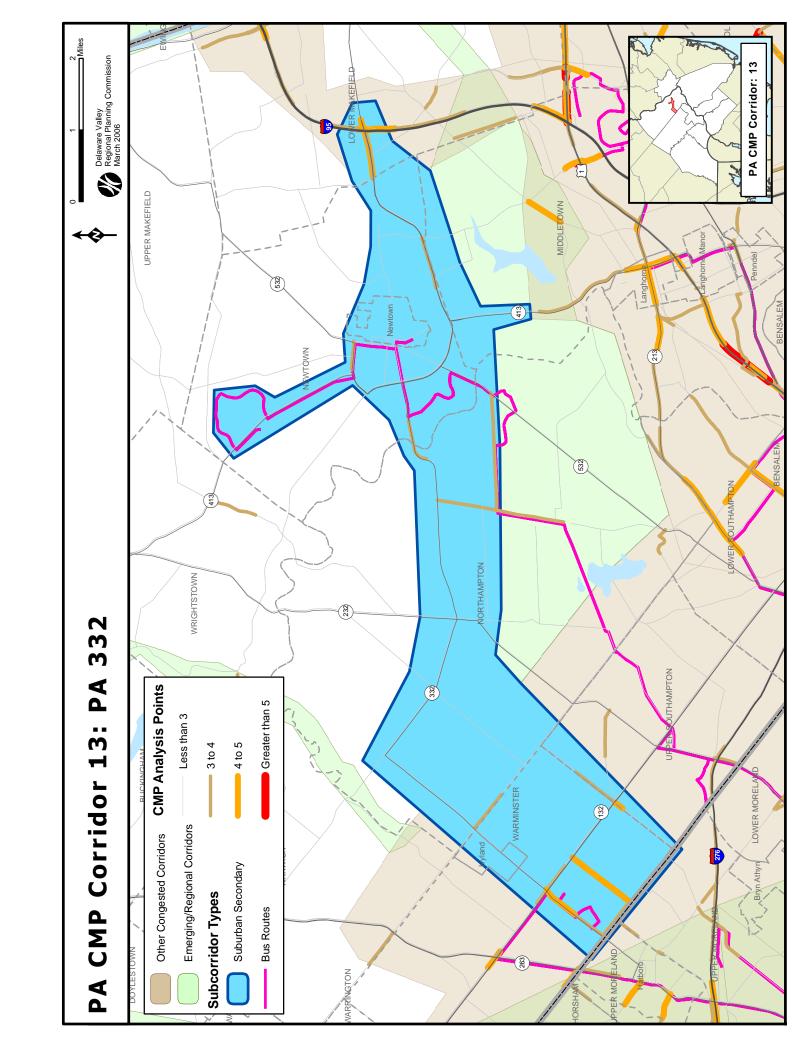
DBNUM: 57617: Galloway Road Extension; 57629: County Line Road Extension; 16114: Blair Mill Rd Intersection and Corridor Improvements; 16299: Dresher Rd Widening; 16446: PA 463, Horsham Rd Widening; 57870: PA 611, Easton Rd Widening; 13347: I-95/PA Turnpike Widening & Interchange; 57643: Bristol Rd & Jacksonville Rd Corridor Improvements; 46948: I-95 at Street Rd Interchange Study; 17798: Knights Rd Arterial Improvements (relating to I-95 rehab); 16948: Vine St Expressway Reconstruction

## Adopted Corridor Studies Include (also see Bibliography):

Assessment of Land Use and Transportation Solutions for the Route 413/513 Corridor (DVRPC Publication 04014, 2004)

# Area-wide Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
13	PA 332 (Newtown Bypass	Movement to and from I-95;
		May be less important when
		I-276 & I-95 interchange
		opens; Corridor modified to
		include bus routes and to
		Co line

**Subcorridors with Their Strategies** 

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Туре
	PA 332 area between Bucks/Montgomery line and I-95. Names include	This corridor was modified	8. Suburban
	Jacksonville Rd, Almshouse Rd, Richboro Rd, Newtown Bypass	reflecting bus routes to	Secondary
		densely developed area up	
		PA 413 in northern part of	
		Newtown Twp. Area	
		includes office and industria	I
		parks	

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Expanded Parking/Improved Access to Stations
- o Park and Ride Lots
- o Shuttle Service to Station
- o Transit Services for Specific Populations (such as employers)

## Secondary Appropriate Strategies

- o Signal Prioritization for Emergency Vehicles
- o Channelization
- o Jug Handles
- o County and Local Road Connectivity; Short Connections
- o Center Turn Lane
- o Community-Friendly Transportation Planning
- o Parking Management (such as transportation allowances)
- o Trip Reduction Ordinances
- o Commercial Vehicle Operations
- o Extensions or Changes in Transit Routes
- o More Frequent Transit Service
- o Major Reconstruction with Minor Capacity
- o General Purpose Lanes
- o Demand Responsive Transit
- o Arterial or Collector Road
- o Also see strategies appropriate for all subcorridor types

# Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 57643: Bristol Rd & Jacksonville Rd Corridor Improvements; 13518: I-95 Interchange at PA 332

## Adopted Corridor Studies Include (also see Bibliography):

Assessment of Land Use and Transportation Solutions for the Route 413/513 Corridor (DVRPC Publication 04014, 2004)

## Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth

See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
14	PA 611 & PA 309	Broad Street in Center City

## **Subcorridors with Their Strategies**

Oubstillasis i	Cabberration with their Chategree					
Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor			
			Type			
A	PA 611/309 from Center City to vicinity of the Philadelphia County Line	Cheltenham Ave -	3. Dense Grid			
		Washington Ave				

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Intermodal Enhancements Passenger
- o Parking Operations
- o More Frequent or More Hours of Service for Transit
- o Major Reconstruction with Minor Capacity

### Secondary Appropriate Strategies

- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Signal Priority for Transit
- o Signal Priority for Emergency Vehicles
- o Planning and Design (Non-motorized)
- o Street Circulation Patterns
- o Traveler Information
- o Maintenance Management
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Economic Development Oriented Transportation Policies
- o Community Friendly Transportation Policies
- o Shuttle Services to Stations
- o Local Fixed Rail Service Improvements
- Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm DBNUM: 13451: Broad St Interchange Improvement; 17796: PA 611, Broad St at I-95 Signals (related to I-95 rehab)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
В	Montgomery County to vicinity of Pennsylvania Turnpike		4. Dense Suburban Network

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o County and Local Road Connectivity; Short Connections
- o Expanding Parking/Better Access at Stations
- o Park and Ride Lots
- o Community Friendly Transportation Policies

- o Signal Priority for Transit
- o Channelization
- o Intermodal Enhancements (Passenger)
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Economic Development Oriented Transportation Policies
- o More Frequent Transit or More Hours of Service
- o Flexible Routing/Route Deviation Transit Service
- o Services for Specific Populations

- o Demand Response Transit Service
- o Major Reconstruction with Minor Capacity
- o Frontage/Service Roads
- o Arterial and Collector Road
- o Interchange with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 64275: PA 309, Commerce to Pennsylvania Ave Reconstruction; 16476:

PA 309 Reconstruction - Haws Rd to Highland Ave; 16477: PA 309, Welsh Rd to

Highland Ave Reconstruction

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
С	PA 309 northern suburbs, vicinity of Butler Pike and Lower Gwynedd Township	This subcorridor does not	7. Developing
	(Montgomery) north to vicinity of PA 313 and Quakertown Borough (Bucks)	include Lansdale Borough	Arterial
		(See 14D)	

## Very Appropriate Strategies

- o Computerized Traffic Signals
- o Center Turn Lanes
- o Extensions or Changes in Transit Routes
- o Accessibility and Environmental Justice Policies
- Park and Ride Lots

## Secondary Appropriate Strategies

- o Channelization
- o Signal Priority for Transit
- o Expanding Parking/Better Access at Stations
- o County and Local Road Connectivity; Short Connections
- o Environmentally Friendly Transportation Policies
- Planning and Design (non-auto)
- o Shuttle Service to Transit Stations
- o Transit Services for Specific Populations
- Flexible Routing/Route Deviation Transit Service
- o Major Reconstruction with Minor Capacity Changes
- o General Purpose Lanes
- o Exclusive Rights-of-way for Buses
- o New Bus Routes
- o Local Rail Services
- o Arterial or Collector
- o Interchanges with Related Road Segments
- o Also see strategies appropriate for all subcorridor types

## Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 16731: US 202 Bypass (part of Section 700); 49315: Portzer Rd

Connector; 16438: PA 309 Connector Project; 64811: PA 463 Horsham Rd

Widening; 16731: US 202 Bypass, PA 63 to 309/463; 64026: US 202 Bypass,

Hancock Rd - PA 309; 63491: US 202 Morris Rd - PA 63; 63492: US 202, PA 63 to PA 309 Reconstruction & Widening; 16755: US 202 Morris Rd - PA 309; 16477:

PA 309, Welsh Rd to Highland Ave Reconstruction; 63493: US 202, 5-Points

Intersection Widening

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
D	Lansdale Borough		<ol><li>Main Street</li></ol>

### Very Appropriate Strategies

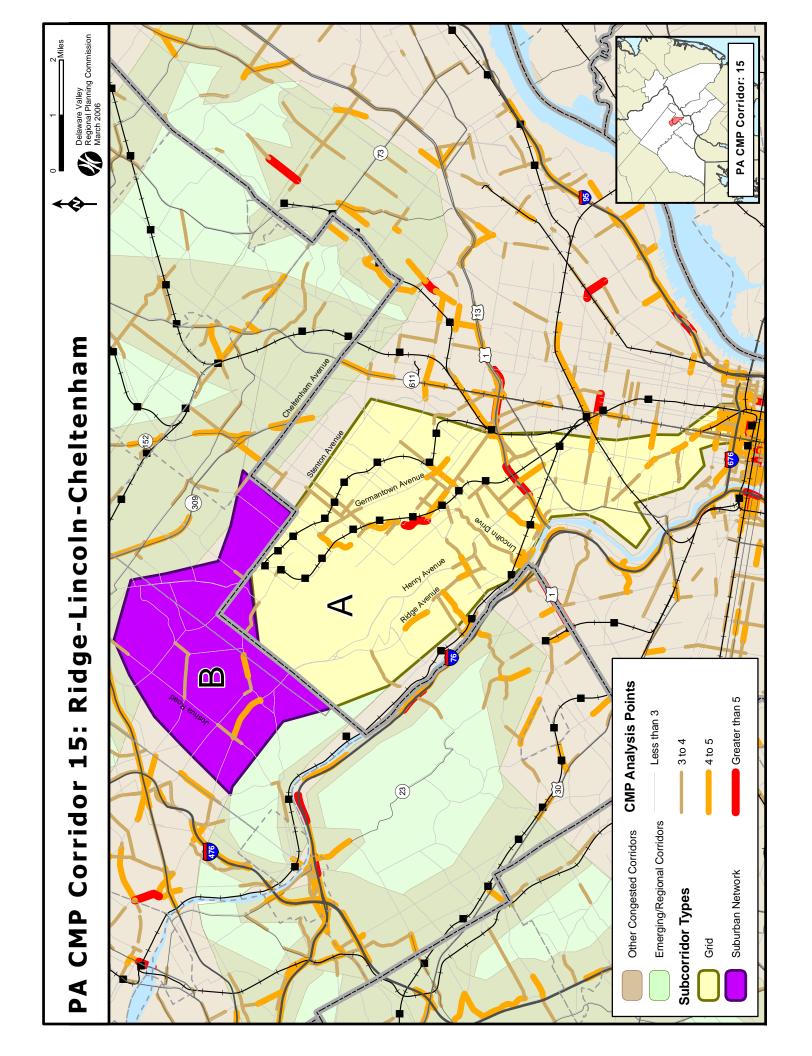
- o Parking Operations
- o Computerized Traffic Signals
- o "Transit First" Policies and Transit Oriented Design
- o More Frequent or More Hours of Service for Transit
- County and Local Road Connectivity; Short Connections

## Secondary Appropriate Strategies

- Street Circulation Patterns
- o Enhanced Transit Amenities and Safety
- o Planning and Design (non-motorized)
- o Maintenance Management
- o Signal Prioritization for Transit Vehicles
- o Intermodal Enhancement (Passenger)
- o Expanded Parking/Improved Access to Stations
- o Community Friendly Transportation Policies
- o Park and Ride Lots
- o Flexible Routing/Route Deviation Services
- o Transit Services for Specific Populations
- o Major Reconstruction with Minor Capacity
- o Bus Route
- o Local Fixed Rail Service Enhancements
- Also see strategies appropriate for all subcorridor types

# Area-wide Strategies Appropriate for All Subcorridors

- Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- o Signage
- Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth



# **DVRPC CMP Strategies by Subcorridor**

See map for each corridor and its subcorridors

Corridor ID	Corridor Name	Corridor Notes
15	Ridge-Lincoln-Cheltenham	Pie-shaped area of
		generally similar land use
		from Ridge Ave, across
		Lincoln Dr, Cheltenham
		Ave, up toward I-276

# **Subcorridors with Their Strategies**

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
A	Ridge Rd, Lincoln Dr, Cheltenham Ave; dense Philadelphia residential	Mt. Airy, Chestnut Hill, older	3. Dense Grid
	communities	communities	

#### Very Appropriate Strategies

- o Intermodal Enhancements Passenger
- o Signal Priority for Transit
- o Enhanced Transit Amenities and Safety; Intelligent Transit Stops
- o Planning and Design (Non-motorized)
- Shuttle Services to Stations

#### Secondary Appropriate Strategies

- o Parking Operations
- o Computerized Traffic Signals
- o Street Circulation Patterns
- o Traveler Information
- o Vehicle Use Limitations and Restrictions
- o Maintenance Management
- o More Frequent or More Hours of Service for Transit
- o Center Turn Lanes
- o Accessibility and Environmental Justice
- o "Transit First" Policy & Transit Oriented Design (TOD)
- o Economic Development Oriented Transportation Policies
- o Community Friendly Transportation Policies
- o One-Less-Car Program
- o Local Fixed Rail Service Enhancements
- o Major Reconstruction with Minor Capacity
- o Also see strategies appropriate for all subcorridor types

### Major Single Occupancy Vehicles Capacity-adding TIP Projects as of December, 2005

See the TIP for more current and complete information at www.dvrpc.org/transportation/capital/tip.htm

DBNUM: 13451: Broad St Interchange Improvement; 17796: PA 611, Broad St at

I-95 Signals (related to I-95 rehab)

Subcorridor ID	Subcorridor Name	Subcorridor Notes	Subcorridor
			Type
	, , , , , , , , , , , , , , , , , , , ,	Less dense but developing; through traffic	4. Dense Suburban
		J	Network

#### Very Appropriate Strategies

- o Computerized Traffic Signals
- o County and Local Road Connectivity; Short Connections
- o Extensions or Changes in Routes
- o Flexible Routing/Route Deviation Transit Service
- o Planning and Design (non-auto)

### Secondary Appropriate Strategies

- o Channelization
- o Center Turn Lanes
- o Community Friendly Transportation Policies
- o Park and Ride Lots
- o More Frequent Transit or More Hours of Service

#### **PA CMP Corridor 15**

- o Traveler Information
- o Services for Specific Populations
- o Demand Response Transit Service
- o Major Reconstruction with Minor Capacity
- Arterial and Collector Road
- Also see strategies appropriate for all subcorridor types

### Area-wide Strategies Appropriate for All Subcorridors

- o Safety Improvements and Programs
- o Pedestrian and Bicyclist Improvements
- Signage
- o Basic Upgrades of Signals
- o Intersection Improvements (of a limited scale)
- o Bottleneck Improvements (vehicle or rail)
- o Access Management, both engineering and policy strategies
- Marketing (including outreach, education, and planning) of TDM and transit, including carpool, vanpool, and ridesharing programs, alternate work hours, guaranteed ride home, and TransitCheck where these strategies are applicable
- o Review of Existing Land Use / Transportation Regulations
- o Growth Management and Smart Growth

Note that the CMP respects permanently protected open space and other policy commitments of the Long Range Plan and in no way replaces the EIS or other planning processes. Due to the size of subcorridors, capacity additions may be appropriate for a subcorridor but not appropriate everywhere in them. Widenings are assumed to be considered on the most major facility first.

# 5. NEXT STEPS

There are several aspects to what happens next with the CMP. These include how the CMP is used to minimize congestion, how it is maintained for ongoing use by the transportation community, and how it is periodically updated based upon experience and feedback. The tasks and materials prepared to date include:

- → Work is underway to complete the tables of Most Congested Travel Subcorridors and Congested Travel Subcorridors for each state. The emerging/regional corridors will form a third table. These subcorridors are to be addressed in the context of their corridors and other interacting corridors. The resulting table of Most Congested Travel Subcorridors will help focus implementation on a manageable set of important subcorridors. Results of this effort will be incorporated in technical memoranda and the first update to this report.
- How DVRPC continues to incorporate the CMP internally and in its work with others is outlined in DVRPC CMP Tasks
- → What other agencies/governmental bodies are asked and/or required to do to implement the CMP is included as a brief table of CMP Responsibilities of Agencies/Governmental Bodies
- → An overview of <u>Potential Funding Sources</u> is attached. It is intended as a starting point when thinking about implementing strategies and to provide a sense of the wide range of ways to go about funding projects. It includes agencies to contact for further information and online resources.
- → An essential part of any cyclical process is reflecting on how the previous go-around worked and making notes of ideas for the next time. This is summarized in a section on <u>Conclusions</u> and Potential Future Refinements.

# **DVRPC CMP TASKS**

Task	Lead Section of
lask	
Maintain CMD fields in TID database as projects are undated as	DVRPC
Maintain CMP fields in TIP database as projects are updated or	Congestion Management
added	Conital Programming
Integrate CMP and Plan into updated TIP project evaluation process	Capital Programming
and prioritize funding of projects that advance regional goals  Use the table of Most Congested Travel Subcorridors along with	Congestion Management,
other management systems and work with the CMP Advisory	Advisory Committee, TIP
Committee and other committees to develop a set of priority	Development Committee,
additions to the TIP and other funding sources each year. These will	RTC, Board
draw upon analysis, adopted major studies and other sources.	Trio, Board
Provide data to corridor and other studies, plans, and projects	Congestion Management
Participate/coordinate with current and future regional efforts. This	Congestion Management
includes ones led by DVRPC, such as the regional transit score,	with others
regional performance measures, and project to procure adequate	
funding for transportation. It also includes ones run by other	
agencies such as the PennDOT 12-year planning process,	
PennDOT Congestion Measures Study, NJDOT CMS update,	
NJDOT statewide plan update, and TIP processes	
Monitor changes to federal CMP regulations. Provide input to	Congestion Management
rulemaking as useful. Modify CMP to reflect any new requirements.	
Coordinate with schedule of DVRPC Plan so that the CMP is	Congestion Management
updated in time to be useful	& Plan
Continue incorporating major adopted corridor studies and plans in	Congestion Management
the CMP documentation for reference, strategy refinement, to	
encourage coordinated efforts, and for implementation; incorporate other information as useful	
Maintain documentation and update CMP data as needed, work with	Congestion Management
project sponsors, prepare amendments if necessary	Congestion Management
Enhance quantification of strategies so the potential effectiveness of	Congestion Management
CMP recommendations can be better evaluated for corridors and	Congestion Management
modeled at a regional level	
Prepare a study of at least one congested corridor each for New	Corridor Studies
Jersey and Pennsylvania that starts with the CMP strategies and	
results in a specific prioritized list of actions with implementation	
steps that will minimize congestion and advance regional goals	
Do outreach and education efforts including:	Congestion Management
→ Web site postings of CMP and toolbox materials	
→ Prepare appropriate printed materials on a regular basis	
→ Include specific outreach to DOT project managers, possibly	
through meetings at DOTs. Other on-site meetings will be held	
as requested.	
→ Work from the bottom up as well as the top down, including	
through a fact sheet series/newsletter focusing on one priority subcorridor at a time oriented to and distributed to community	
groups and local officials in that area. This effort will be	
coordinated with the Regional Citizens Committee.	
Track supplemental projects, working with relevant agencies	Congestion Management
resulting in annual report coordinated with TIP update	& Capital Programming

# CMP RESPONSIBILITIES OF AGENCIES/GOVERNMENTAL BODIES

Task	Leadership
Members of DVRPC and any other entity proposing TIP projects or	RTC members, TIP
other projects that add major capacity will provide a CMP contact	committees, Capital
person at their agency and keep that information current. Large	Programming and CMP
agencies should provide a main contact and a list of other people for mailings.	staff
Project managers should contact DVRPC early in the process—at a	Project managers, such as
point when the project is still flexible—for CMP consultation.	at DOTs
Waiting until late in the process may lead to requirement for	
extensive additional analysis before a project can be funded in the	
TIP. DVRPC will work with managers of studies and projects that	
may add SOV capacity on considering appropriate supplemental	
strategies, or providing guidance for the added analysis required before a CMP amendment can be considered.	
NJDOT has requested prioritized results with as much specificity as	NJDOT Systems Planning
possible and is to respond in writing to such submittals	and Research and NJDOT
possible and is to respond in writing to such submittals	Project Planning and
	Development
Agencies and governmental bodies will participate in CMP updates	Members of DVRPC and
and corridor studies	others as appropriate

# POTENTIAL FUNDING SOURCES

This evolving table is a starting point for researching funding sources

Funding Programs	llana.	Contacts for
with Citations	Uses	Information
Region-wide		
National Highway System (NHS) 23 USC Section 1408	Acceptable uses include construction of carpool, related transit, bicycle and pedestrian walkways, ridesharing, and other demand management strategies in NHS corridors	DVRPC, PennDOT, NJ DOT, FHWA
Metropolitan Planning (often abbreviated as Planning or PL) 23 USC Section 1107, 49 USC Section 5303	Planning studies in the DVRPC Work Program	DVRPC, PennDOT, NJ DOT, FHWA
Surface Transportation Program (STP) 23 USC Section 1108	STP funds are among the most flexible. They may be used for capital or planning projects, including roads, transit projects, construction of bicyclist/pedestrian facilities, or nonconstruction projects such as maps.	DVRPC, PennDOT, NJ DOT, FHWA
Transportation Enhancement (TE) Program 23 USC Section 1202, Paragraph 35	These funds are used for enhancements to the transportation system including bicyclist and pedestrian facilities, preservation of rail corridors, and mitigation of transportation impacts on communities and the environment.	DVRPC, PennDOT, NJ DOT, FHWA
Congestion Mitigation and Air Quality Improvement Program (CMAQ) 23 USC Section 149	These funds may be used on a variety of projects that reduce emissions from highway sources, including bicyclist/pedestrian facilities, traffic flow improvements, and demand management programs.	DVRPC, PennDOT, NJ DOT, FHWA
Federal Bridge Program	These funds are for highway bridges on or off of the federal network. Work may include bicyclist/pedestrian treatments for the bridge	DVRPC, PennDOT, NJ DOT, FHWA
Transportation, Community, and System Preservation (TCSP) Program 23 USC Section 1117	Transit and highway projects that enhance transit-oriented development are eligible, along with other projects that improve the efficiency of the transportation system and reduce its impacts on the environment.	DVRPC, PennDOT, NJDOT, FTA, FHWA
Job Access and Reverse Commute Grants (JARC) 49 USC Section 5316	These funds can be used for a range of services, usually transit related, to help people overcome barriers to holding jobs	DVRPC, NJ Transit, SEPTA, FTA
Transit Urbanized Area Formula Grants 49 USC Section 5307	These funds can be used for improving bicyclist/pedestrian access to transit, and capital expenses of providing transit service	DVRPC, NJ Transit, SEPTA, FTA
Transit Capital Assistance Program 49 USC Section 5309	This includes the New Starts program, funding for alternatives analysis, and earmarks	DVRPC, NJ Transit, SEPTA, FTA
Elderly Individuals and Individuals with Disabilities Program 49 USC Section 5310 & New Freedom Program 49 USC Section 5317	Funds are used to provide transportation services to meet the special needs of elderly individuals and individuals with disabilities.  The New Freedom Program provides funds for programs that go beyond Americans with Disabilities Act requirements	DVRPC, NJ Transit, SEPTA, FTA
State and Community	Pedestrian and bicyclist safety improvements	DVRPC,

Highway Safety Grants	are eligible	PennDOT, NJ
23 USC Section 1402	are eligible	DOT, FHWA
Transportation and	This program funds planning activities to	DVRPC
Community Development	enhance redevelopment and improve the	
Initiative (TCDI)	efficiency of the regional transportation	
O	system in older developed communities	LILID DVDDO
Community Development Block Grant (CDBG)	Grants and technical assistance for designated municipalities for many types of	HUD, DVRPC, County Planning
Program, 42 USC Sections	community development	Divisions
5301-5320	Community development	2111010110
Enterprise Zone Program	Grants to financially disadvantaged	HUD, DVRPC,
42 USC Section 11501	communities for preparing and implementing	County Planning
Dide charing and other	business development strategies within zones	Divisions
Ride-sharing and other transportation management	Transportation Management Associations (TMAs) coordinate an array of programs. Part	TMAs, USDOT
activities	of the funding is from 49 USC Section 3049	
Pennsylvania		
Pennsylvania Infrastructure	Provides low-interest loans to leverage state	PennDOT
Bank (PIB)	and federal funds, accelerate priority	
	transportation projects, spur economic	
	development, and assist local governments	
Transit Research &	with their transportation needs.  Provides financial assistance for innovative	PennDOT Bureau
Demonstration Program	projects that enhance the attractiveness of	of Public
Joinen audien Frogram	public transportation	Transportation
Transportation	Competitive funding program for studies that	PennDOT Center
Projects/Land Use Initiative	coordinate transportation and land use	for Program
		Development and
Home Town Streets	Projects may include sidewalk improvements,	Management DVRPC,
Tiome rown directs	street lighting, pedestrian crossings, transit	PennDOT
	bus shelters, traffic calming, bicycle	
	amenities, kiosks, signage and other elements	
Safe Routes to School	This program works with school districts and	DVRPC,
	pedestrian/bicyclist safety advocates to make physical improvements that promote safe	PennDOT, FHWA
	walking and biking passages to schools. This	
	program has a longer history in Pennsylvania	
	than in New Jersey.	
New Jersey		
Local Aid for Municipalities	Funding from the Transportation Trust Fund	NJDOT
and Counties	for local governments to do road, bridge, and	
	other transportation projects such as Transit Oriented Design/Transit Village projects	
Smart Moves for Business	Awards grants to NJ employers to develop	NJ Department of
Challenge Grant Program	innovative commuter assistance services	Community Affairs
Smart Growth Grants	Grants for Design Guidelines for Creating	NJ Department of
	Places, Transfer of Development Rights	Community Affairs
	(TDR), Greyfield Redevelopment, and other	
Safe Routes to School	programs This program works with school districts and	DVRPC, NJDOT,
Sale Noules to School	pedestrian/bicyclist safety advocates to make	FHWA
	physical improvements that promote safe	
	walking and biking passages to schools	

# SOURCES OF INFORMATION ON FUNDING TRANSPORTATION PROJECTS

- → DVRPC TIPs and Planning Work Program: <a href="www.dvrpc.org/transportation/capital/tip.htm">www.dvrpc.org/about/workprogram.htm</a> and <a href="www.dvrpc.org/about/workprogram.htm">www.dvrpc.org/about/workprogram.htm</a>
- → NJ Department of Community Affairs: <a href="https://www.nj.gov/dca/grantoverview.shtml">www.nj.gov/dca/grantoverview.shtml</a>
- → NJ Office of Local Aid and Economic Development: www.nj.gov/transportation/business/localaid/funding.shtm
- > PennDOT (see Bureau of Planning and Research): www.dot.state.pa.us
- Pennsylvania Infrastructure Bank:
  - www.dot.state.pa.us/penndot/bureaus/PIB.nsf/HomePagePIB
- → Federal Transit Authority: www.fta.dot.gov
- → Federal Highway Administration: <a href="https://www.fhwa.dot.gov/discretionary">www.fhwa.dot.gov/safetealu/factsheets.htm</a>
- → US Housing and Urban Development: www.hud.gov/offices/cpd/communitydevelopment/programs

Note: DVRPC anticipates releasing an extensive guide to funding sources in 2007. While tentatively titled "The Older Suburbs Resource Guide," it will be widely applicable.

# **CONCLUSIONS AND POTENTIAL FUTURE REFINEMENTS**

This update of the CMP was a major step forward and DVRPC is committed to using and staying with this process. In addition, a number of areas for future exploration were identified. A brief summary of such areas is listed below to provide research and project ideas for continued CMP effort:

- → More quantification and analysis of strategies and how they interact in meeting the needs of specific subcorridors. This includes use of travel model features such as select link analysis of a section of a complex subcorridor in each county and meaning of this data with regard to effective strategies. There will also be investigation of using UPlan, a land use planning model, to better understand interaction of transportation strategies and Plan goals.
- More work with the strategy refinement layers.
- Recognizing major brownfields and Superfund sites in remediation, because large projects to bring these areas back into use often have a transportation component. Reuse of these areas serves multiple regional goals including efficient transportation.
- → Economic analysis of the transportation value of the congested corridors.
- → More development of the prioritization process of subcorridors.
- > Work with users to refine and add to toolbox items.
- → More outreach to and participation by municipalities, community groups, organizations, and under-represented groups.

Overall, two general conclusions emerge from conducting the process of this CMP update. Attention to these matters will guide future updates of the CMP and other projects. They are:

- Data Large databases are a foundation of most transportation (and other) planning and are growing in importance, size, and number. Compatibility, maintenance, and coordination are key areas for investment.
- → Involvement The value of an educated, positive CMP Advisory Committee can not be underestimated. It should include the counties and other involved parties, and specifically the people who make decisions on the relevant subjects. Regional agencies play a needed role in coordinating congestion management processes, but rely upon appropriate smaller levels of government and other organizations for input and reviews.

Title of Report DVRPC Congestion Management Process:

Limiting Traffic Congestion and Achieving Regional Goals

Publication No.: 06008

Date Published: March, 2006

Geographic Area: Nine-county, bi-state DVRPC region

Key Words: Congestion Management Process (CMP), Congestion Management

System (CMS), regional transportation planning, evaluation, coordination

**Abstract:** The Congestion Management Process (CMP) is a multifaceted,

ongoing approach that facilitates the movement of people and goods through analysis, participation, and enhanced coordination. It connects

the Long Range Plan with shorter-range efforts such as the

Transportation Improvement Program and helps make all these efforts more effective in achieving regional goals. It includes appropriate multimodal strategies for congested subcorridors throughout the DVRPC region and guidance for areas beyond them. This approach replaces the

previous Congestion Management System (CMS).

Delaware Valley Regional Planning Commission 190 N. Independence Mall West 8<sup>th</sup> Floor

Philadelphia, PA 19106-1520

Phone: 215-592-1800
Fax: 215-592-9125
Internet: <u>www.dvrpc.org</u>

Staff contact: Zoe Neaderland, AICP, Senior Transportation Planner

Direct phone: 215-238-2839

E-mail: <u>ZNeaderland@dvrpc.org</u>

CMP Page: <a href="https://www.dvrpc.org/transportation/longrange/cmp.htm">www.dvrpc.org/transportation/longrange/cmp.htm</a>



