

DESTINATION 2030

FUTURE LAND USE AND TRANSPORTATION FACILITIES





Delaware Valley Regional Planning Commission .

DESTINATION 2030

Future Land Use and Transportation Facilities

Delaware Valley Regional Planning Commission 190 North Independence Mall West 8th Floor Philadelphia, PA 19106-1520

www.dvrpc.org

June 2005

Created in 1965, the Delaware Valley Regional Planning Commission [DVRPC] is an interstate, intercounty, and intermunicipal 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.



The DVRPC logo is adapted from the official seal of the Commission, 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 author(s), however, are solely responsible for its findings and conclusions, which may not represent the official views or policies of the funding agencies.

TABLE OF CONTENTS

Ι.	INTRODUCTION	-	-	-	-	-	-	-	-	-	1
	A. Overview	-	-		-	-	-	-		-	3
	B. Regional T	rend	s and	Chan	iges	-	-	-	-	-	9
	C. Population	and	Emple	oyme	nt Fo	reca	sts	-	-	-	13
	D. Destination	1 203	80: A \	Vision	n for t	he F	uture	-	-	-	19
11.	LAND USE -	-	-	-	-	-	-	-	-	-	35
	A. Overview	-	-	-	-	-	-	-	-	-	37
	B. Maps -		-	-	-	-	-	-	-	-	49
	i. Year 2	2030	Planr	ning A	reas	-	-	-	-	-	51
	ii. Year 2	2030	Land	Use		25	-	-	-	-	52
	iii. 2030 (Cons	ervat	ion Fo	ocus	Area	s -	-	-	-	53
	iv 2030 (Gree	nenac	o No	twork	_	_				55
	147 2000		napac	ie ne		-	-		-		00
Ш	TRANSPORTAT	ION			-	-	-	-	-	-	57
	A. Overview	-	-	-	-	-	-	2	2	-	59
	B. Financial	Plan	-	-	-	-	-	-	-	-	71
	C. Major Reg	jiona	l Proj	ects	-	-	-	-	-	-	81
	D. Destinatio	on 20	30 As	spirat	ions		-	-	-	-	91
	E. Transport	atio	n Mod	ules	-	-	-	-	-	=	97
	i. Aviati	on	-		-	-		-	-	-	99
	ii. Freigh	It	-	-	-		-		-	- 1	105
	iii. Bicyc	le an	d Ped	lestria	an	-	-	-	-	- 1	115
	iv. Intelli	gent	Trans	sporta	ation	Syst	ems		-	- 1	123
	F. Air Qualit	y Co	nform	ity	-		-	-	-	. *	129

List of Figures

Figure 1. Land Use in the Delaware Valley, 1990 vs. 2000	11
Figure 2. Selected Results of the Future Scenarios	24
Figure 3. Regionwide Allocation by Sub-Region	76
Figure 4. Sub-Regional Allocation by Mode – Pennsylvania	76
Figure 5. Sub-Regional Allocation by Mode – New Jersey	76

List of Tables

Table 1. Population Change and Forecasts by County for DVRPC Region	16
Table 2. Employment Change and Forecasts by County for DVRPC Region	17
Table 3. DVRPC Year 2030 Land Use Centers	43
Table 4. Year 2004 Delaware Valley Protected Open Space by Ownership	45
Table 5. Financial Principles and Assumptions - Federal and State Sources	74
Table 6. Estimated Financial Resources by Mode, Funding Source, and Sub-Region	75
Table 7. Estimated Financial Resources by Mode and Time Frame	77
Table 8. Estimated Financial Resources by Funding Category	80
Table 9. Fiscally-Constrained Major Regional Projects with Evaluation Criteria	87
Table 10. Major Regional Transportation Project List	90
Table 11. Major Regional Transportation Aspirations	95
Table 12. Identified Port and Rail Freight Projects	109
Table 13. Estimated VOCs Emissions (Tons/July Day)	136
Table 14. Estimated NOx Emissions (Tons/July Day)	136
Table 15. Estimated CO Emissions (Tons/January Day)	137
Table 16. Transportation Conformity Air Quality Codes for Major Regional Transportation Projects	139

List of Maps

Map 1. 2030 Municipal Population Forecast Absolute Change	16
Map 2. 2030 Municipal Employment Forecast Absolute Change	17
Map 3. Year 2030 Planning Areas	51
Map 4. Year 2030 Land Use Plan	52
Map 5. 2030 Conservation Focus Areas - Southeastern Pennsylvania	53
Map 6. 2030 Conservation Focus Areas - Southern New Jersey	54
Map 7. 2030 Greenspace Network - Southeastern Pennsylvania	55
Map 8. 2030 Greenspace Network - Southern New Jersey	56
Map 9. 2030 Long Range Plan/Congestion Management System Corridors - Pennsylvania	67
Map 10. 2030 Long Range Plan/Congestion Management System Corridors - New Jersey	68
Map 11. Major Regional Transportation Projects	89
Map 12. 2030 Delaware Valley Regional Airport System	103
Map 13. Freight Facilities: 2030 Major Port, Air and Rail Freight Capacity Improvements	113
Map 14. 2030 Regional Trails Network - Southeastern Pennsylvania	121
Map 15. 2030 Regional Trails Network - Southern New Jersey	122
Map 16. 2030 Transportation Plan ITS Infrastructure	127









INTRODUCTION

OVERVIEW





OVERVIEW

What is the Delaware Valley Regional Planning Commission (DVRPC) and How Does It Help You?

DVRPC, created in 1965 through an interstate compact between Pennsylvania and New Jersey, is a bi-state agency federally designated and certified as the Metropolitan Planning Organization (MPO) for the nine-county, Philadelphia-Camden-Trenton region. DVRPC is responsible for land use and transportation planning in accordance with US Department of Transportation guidance. DVRPC is governed by an 18-member Board composed of state, county and city representatives from its member governments, as well as various participating, non-voting members and federal agency observers.

- DVRPC's long-range planning is a collaborative process that involves close working relationships with the two State Departments of Transportation, the region's three public transit agencies and representatives from the eight suburban counties and four cities that are members of the DVRPC Board.
- DVRPC's land use and transportation plans and policies affect every citizen, business and institution in the Delaware Valley (and beyond), with recommendations for all modes of travel (pedestrian, bicycle, automobiles, public transit, shipping and air), regional goods movement, air quality, infrastructure investment (roads, bridges, sewer and water facilities) and the location of future land development and protected green space.

What is the DVRPC Long-Range Land Use and Transportation Plan?

Destination 2030 is intended to help DVRPC carry out its defined mission "to plan for the orderly growth and development of the region." It is also a requirement of the US Department of Transportation, which is charged with certifying MPO plans and programs. MPOs are key actors, in regions across the country, helping to implement the federal Surface Transportation Act (most recently, TEA-21, the Transportation Equity Act for the 21st Century).

DVRPC's Long-Range Plan serves as the basis for the Transportation Improvement Program (TIP), a capital program of highway, bridge and public transit projects, as well as separate plans for regional airports, goods movement and bicycle/pedestrian activities. Proposed projects must be included on the TIP if they are to receive federal funding. The Plan is also used to evaluate the consistency of sewer and water projects in the New Jersey and Pennsylvania portions of the region, as well as relating regional plans to the on-going, concurrent planning at the county and State levels. Finally, DVRPC's Long-Range Plan serves as an educational guide and informational resource for the citizens, businesses and institutions in the Delaware Valley. The document includes the following primary elements:

Regional Population and Employment Forecasts

A key component of the long-range planning process is the preparation and adoption of revised population and employment forecasts for the nine counties and the 352 municipalities that make up the region. DVRPC staff prepared Year 2030 regional and county forecasts and coordinated with each county on the final municipal forecasts. The forecasts have been adopted by the DVRPC Board.

Destination 2030 – A Vision for The Future – Is a separate document that contains the policies and the goals of the Long-Range Plan. This report lays the framework for the Long-Range Plan and explores eight critical issue areas, including: Urban Revitalization, Growth Management, Economic Development, the Environment, Equity and Opportunity, Transportation Facilities, Transportation Operations, and Transportation Finance.

The Land Use Component

The Land Use component summarizes and integrates the Plan's vision, goals and policies related to land use, and serves as the basis for the transportation plan's facilities and service recommendations.

The Planning Areas

The Planning Areas represent DVRPC's effort to categorize and simplify the region's 353 townships, boroughs and cities and the corresponding long-range planning policies appropriate for each community type.

The Land Use Map

The Year 2030 Land Use Map shows the generalized extent of existing developed areas, the region's proposed growth areas, and rural lands. The region's various Centers are also mapped, reflecting their significance in terms of scale and stage of development.

2030 Greenspace Network

The core areas included in the network encompass large contiguous natural resource features and existing regional parks.

2030 Conservation Focus Areas

The 2030 Conservation Focus Areas depict largely unfragmented areas of agricultural and natural lands that possess a combination of unique geographic, physiographic, and land use characteristics.

Transportation Component

The Transportation component provides the vision and foundation for the region's transportation system. The transportation goals are 1) Improving Safety, 2) Reducing Congestion, 3) Increasing Mobility, 4) Rebuilding the Infrastructure, 5) Enhancing the Environment, and 6) Linking Transportation Investments to Land Use and Economic Development Goals.

Financial Plan – The Long Range Plan is required to be fiscally-constrained. Fiscal-constraint limits the number of projects that can be included in the Plan to what we can reasonably assume to afford over the life of the Plan. The Financial Plan documents total funds anticipated to be available by state and by mode (i.e., highway or transit). The 2030 Plan also allocates money to various funding categories (i.e., reconstruction, new capacity, operational improvements) based on historic trends and anticipated needs. The number of projects included in each funding category is capped by the amount of money available within that category.

Evaluation Criteria for Selecting Projects – Over 250 candidate transportation projects were evaluated for inclusion in the fiscally-constrained Long Range Plan. In order to help guide the selection process, projects were evaluated by 14 criteria to determine how well they met the transportation goals of the Plan.

Major Regional Transportation Projects – the fiscally-constrained Long Range Plan includes over 100 major regional projects that were selected from a pool of over 250 candidate projects. Major regional projects are those projects that have a significant impact on travel patterns and the movement of people and goods in the Delaware Valley. Smaller scale, non-regionally significant projects, such as a bridge rehabilitations or intersection improvements, are considered consistent with the Plan's goals and policies, even though they are not specifically listed in the Plan.

Transportation Modules – The Transportation component contains four modules which present a more detailed vision, goals, policies and projects for four transportation sub-modes: Aviation, Freight, Bicycle/Pedestrian, and Intelligent Transportation Systems.



INTRODUCTION

REGIONAL TRENDS AND CHANGES



.



REGIONAL TRENDS AND CHANGES

What are the Region's Land Use, Development and Travel Trends, and How Do These Changes Affect You?

Current trends have serious consequences for the social, physical, economic and environmental character and quality of life in the nine-county region. One of the major issues facing the Delaware Valley is the redistribution of population and jobs from core cities and developed suburban communities into new suburban areas. Growth in population and employment is a positive indicator of a region's appeal to retain and attract new businesses and residents. However, when regional growth is coupled with decline in existing developed areas and communities, the outcome is continued sprawl with the resulting loss of open space and farmland, deteriorating urban areas, increased traffic congestion, and duplicative and excessive infrastructure costs.

Figure 1: Land Use in the Delaware Valley, 1990 vs. 2000 1990 Land Use 2000 Land Use



Since 1970, the population of the region has grown by over 265,000 people, but we have developed an additional 280,000 acres of land. These trends are not sustainable, and the need for implementing a consistent and coordinated growth management approach across the Delaware Valley region is urgent. Continuation of these development patterns will result in:

- Further outward expansion into rural areas and across the boundaries of adjacent regions; blurring the unique character and identity of each.
- Loss of farmland and natural features. Since 1970, almost a quarter of a million acres of farmland have been converted to other uses, representing a decline of nearly one-third of the region's agricultural lands.
- Over-reliance on the single occupant automobile for most trips, at the expense of public transit, bicycling and walking, resulting in over-consumption of gasoline, increased traffic congestion and negative impacts to community health. As of 2000, over 70% of the region's workforce drives alone to work each day, while only 10% use transit.
- Continuation of the region's designation as Ozone and Fine Particulate Matter Non-Attainment Areas by the US Environmental Protection Agency, given the heavy contribution of mobile source pollution from the region's dramatic increases in vehicles, trips and vehicle miles traveled.



INTRODUCTION

POPULATION AND EMPLOYMENT FORECASTS





POPULATION AND EMPLOYMENT FORECASTS

Forecasting Regional Population and Employment

In order to plan for the future, it is essential to understand development trends in the region. From 1990 to 2000, regional population grew by 4%, with Chester, Gloucester, and Montgomery Counties seeing the largest gains. By 2030, the population of the nine-county region is forecasted to grow by nearly 13%, with no net population growth in Philadelphia, Delaware or Camden counties and increases exceeding 25% in Bucks, Burlington, Chester and Gloucester counties. By 2030, the employment of the nine-county region is forecasted to grow by 18%, with the greatest increases in Bucks, Chester and Gloucester counties.

If current land use development trends continue, this future growth would consume an additional 250,000 acres of land, now in agricultural use or forested, for new development. However, by directing a small amount of new growth as infill to existing communities and modestly increasing the net density of new development, all of the forecasted growth could be accommodated in just 110,000 acres, saving over 140,000 acres – an area the size of Camden County.

The DVRPC Board has also adopted municipal-level population and employment forecasts. The complete municipal-level forecasts are included in DVRPC Data Bulletin Revised Number 73.

Table 1: Population Change and Forecasts by County for DVRPC Region

			% Change 1990 to		% Change 2000 to
County	1990	2000	2000	2030 Forecast	2030
Bucks	541,174	597,635	10%	762,455	27.6%
Chester	376,396	433,501	15%	571,800	31.9%
Delaware	547,651	550,864	1%	547,890	-0.7%
Montgomery	678,193	750,097	11%	878,440	17.1%
Philadelphia	1,585,577	1,517,550	-4%	1,505,000	-0.8%
5 PA Counties	3,728,991	3,849,647	3%	4,265,585	10.8%
Burlington	395,066	423,394	7%	532,850	25.9%
Camden	502,824	508,932	1%	515,425	1.3%
Gloucester	230,082	254,673	11%	337,090	32.4%
Mercer	325,824	350,761	8%	415,650	18.5%
4 NJ Counties	1,453,796	1,537,760	6%	1,801,015	17.1%
9 Counties	5,182,787	5,387,407	4%	6,066,600	12.6%

Source: DVRPC/US Census Bureau, 2005.

Map 1: 2030 Municipal Population Forecast Absolute Change



Table 2: Employmen	t Change and F	orecasts by	County for	DVRPC Region
--------------------	----------------	-------------	-------------------	---------------------

County	1990	2000	% Change 1990 to 2000	2030 Forecast	% Change 2000 to 2030
Bucks	245,360	267,124	8.9%	352,772	32.1%
Chester	197,752	238,641	20.6%	345,062	44.6%
Delaware	230,459	238,164	3.3%	273,411	14.8%
Montgomery	457,501	492,677	7.7%	597,300	21.2%
Philadelphia	836,874	741,397	-11.6%	763,176	2.9%
5 PA Counties	1,967,946	1,978,003	0.5%	2,331,721	17.9%
Burlington	191,345	202,535	5.8%	249,653	23.2%
Camden	227,933	216,931	-4.8%	235,453	8.5%
Gloucester	86,079	99,467	15.6%	135,627	36.4%
Mercer	220,592	220,915	0.1%	257,162	16.4%
4 NJ Counties	725,949	739,848	1.9%	877,895	18.7%
9 Counties	2,693,895	2,717,851	0.9%	3,209,616	18.1%

Source: DVRPC/US Census Bureau, 2005.

Map 2: 2030 Municipal Employment Forecast Absolute Change





INTRODUCTION

DESTINATION 2030: A VISION FOR THE FUTURE





DESTINATION 2030: A VISION FOR THE FUTURE

OVERVIEW

One of the first steps in developing a new Long Range Plan is to look at what challenges the region faces both now and in the future. Addressing these issues helps in articulating a bold vision for the region's future. Goals, in turn, are developed to attain the future vision and the Plan sets forth the means to achieve the goals. The *Destination 2030 Vision Report* outlines a vision for the year 2030 in eight key policy areas: Growth Management, Urban Revitalization, the Environment, Economic Development, Transportation Facilities, Transportation Operations, Transportation Finance, and Equity and Opportunity. Each of the eight issue areas is addressed within a separate section of this report. Each section contains a vision for the year 2030 and provides an overview of pertinent background information, such as current policy perspective and key actors. Each section also addresses the challenges and opportunities that each issue presents. The full *Destination 2030: A Vision for the Future* report is summarized in this section. Refer to the full report for a more detailed discussion of policies and issues.

FUTURE SCENARIOS

As part of the preliminary work for the development of the 2030 Plan, staff assessed potential regional, national, and global issues and trends that should be considered in the development of the 2030 Plan. A scenario planning technique was employed to dynamically assess future alternatives. A scenariobased planning method is particularly useful when an uncertain future demands a logical process about changing situations with defensible results. From these assessments, a range of possible scenarios were crafted and analyzed. Initially, a set of twelve future scenarios was selected for qualitative evaluation of their implications. Then, a subset of five was chosen for in-depth quantitative analyses. The five final scenarios are briefly described below.

- 2025 Plan is a center-based and planned infill scenario in which all assumptions in the current *Horizons 2025 Long Range Plan* bear out. Plan policies are observed in subsequent county and municipal plans and planned infrastructure is built on schedule.
- Recentralization is an urban-core revitalization scenario, in which people return to the urbanized areas of the region to both live and work. The total net population remains stable at the *Horizons 2025* level, but due to its concentrated spatial patterns, travel behaviors are greatly affected. Uses of public transit, bicycle, and otherwise environmentally friendly modes of transportation increase. A high concentration of activities allows necessary infrastructure and supportive systems to be well utilized.
- Sprawl is an accelerated dispersion scenario. The total net population changes little from the *Horizons 2025* level, but it spreads out farther to consume more land area, more energy, and more natural resources. Low-density development scattered over a massive land area poses a daunting challenge in transit provision, and the regional transportation network becomes increasingly car-oriented. The first generation suburbs suffer while the older urban centers begin to disintegrate at a rapid rate. The need for physical and institutional infrastructure maintenance increases.
- Regional Growth assumes that the region's many regional assets, appealing amenities, rich socio-cultural resources, and abundant employment opportunities attract additional people to the region. This in-migration scenario assumes an additional 500,000 people (above existing forecasts) enter the region by 2025. However, the housing options these new residents may consider are likely to be either rental units or relatively new housing stock. The first-generation suburbs generally offer very few of either. Consequently, some old neighborhoods may continue to decline despite the growth. Bicycling, walking and other leisure activities using non-motorized
 - 22

modes may increase but transit for commuting purpose suffers as sprawl endures.

 Regional Decline is an out-migration scenario, in which the region fails to remain attractive and experiences a severe population drain. By 2025, the region loses 500,000 people from the forecasted *Horizons 2025* population and those who cannot afford to leave remain and age. Urban cores are largely abandoned and activity clusters within the region are increasingly becoming rare, sparse and far in-between. The region's physical, economic, institutional, human, and other social assets slowly deteriorate.

Each scenario brings a varying range of different impacts to the region. *Recentralization* is the most environmentally friendly, but before the region can enjoy its full benefits, adequate transportation infrastructure and relevant policies must be in place to alleviate concentrated traffic at the core. *Sprawl* disperses activity locations and imposes high social costs upon the region. *Regional Growth* results imply that the region can handle an influx of additional residents but that it may also require some infrastructure improvements and committed economic development/transportation/land use policies. *Regional Decline* empties out the regional core, and weakens the region's overall sustainability. *2025 Plan* features many realistic and practical characteristics of both *Recentralization* and *Sprawl*. Selected results of the five scenarios are summarized in Figure 2.

Figure 2: Selected Results of the Future Scenarios

	2025 Plan	Recentralization	Sprawl	Regional Growth	Regional Decline	
Population	6.0 million	6.0 million	6.0 million	6.5 million		
Transportation Choices				Reak	Q	
How Far We Drive (Daily Hwy VMT)	138,963,900	137,492,300	141.895,900	142,088,700	137,448,200	
Transit Usage (Daily Transit Boardings)	1.382.506	^{1,520,681}	^{981,967}	1.393.934 ጀ አአአአ	1,145,365 京次次次	
Walkable Communities	ጵጵጵ	ጵጵጵ	Ŕ	ጵጵ	Ŕ	
Peak-Hour Highway Speed	22.6 mph	26.2 mph	25.3 mph	22.0 mph	27.1 mph	
Stuck in Traffic (Daily Congestion, Total Hours Lost)	804,107 hrs	726,519 hrs	815,273 ltrs	831,030 hrs	723,456 hrs	
Infrastructure Costs (In 2000 Dollars)	568.7B	S55.0B	596.3B	\$77.8B	565.9B	
Avg. HH Energy Consumptions (per year)	100.6M BTU	81.3M BTU	149.11M/BTU	106.2M BTU	139.6M-BTU	
Average # Of Dwelling Units (Units per acre)		6.1		5.6	4.7 1	
Urban Area	84,205 acres	105,882 acres	57,232 acres	114,447 acres	84,265 acres	
Agricultural Land Lost to Dvlpm't (1997-2025)	120,351 acres lost	(4,165 acres gained)	264.964 acres lost	180,374 acres lost	18,901 acres lost	
Regional Air Quality	68.0 tons	67.5 tons	69.4 tons	69.6 tons	67.3 tons	
Per July day)	URBAN SUBURB RURAL	URBAN SUBURB RURAL	URBAN SUBURB RURAL	URBAN SUBURB RURAL	URBAN SUBURB RURAL	

Source: DVRPC

Future scenarios provide a planning resource to understand the choices and consequences the region must consider in developing the 2030 Plan. Recognizing the long-term impacts of different trends can help define issues and opportunities for the public, as well as help decision-makers make informed decisions about the future. The scenario analysis helps lay the foundation for the 2030 Plan by describing the range of possible future conditions. Only by understanding the impacts of these alternative futures can we define our own vision for the year 2030.

DEVELOPMENT OF THE 2030 VISION STATEMENTS

In fall 2003, vision statements, describing regional conditions in 2030 if each vision were attained, were prepared for eight topics: Growth Management, Urban Revitalization, the Environment, Economic Development, Transportation Facilities, Transportation Operations, Transportation Finance and Equity and Opportunity. The vision statements were accompanied by a summary of background information and planning/policy issues related to each topic. The two-page Vision Statements were reviewed and discussed by DVRPC Board members and other regional leaders at the December 2003, DVRPC Board Retreat in Trenton. The emphasis of the Vision Statements review was on what steps the region would need to take to attain the vision. DVRPC revised and expanded the initial Vision Statements to include more background information, DVRPC's current issues, trends and policy perspectives, Year 2030 goals and preliminary implementation actions. The Destination 2030: A Vision for the Future report is intended to help define issues and opportunities for the public, as well as regional interests and decision-makers. The vision and goals for each of the eight issues are excerpted below.

Growth Management

2030 Vision

Regional sprawl is minimized, as a significant share of new growth and development locates within and around defined centers and along major transportation corridors. High quality site and building design is the norm, with higher density, mixed-use and transit-oriented development in existing and emerging communities with a strong identity and character.

2030 Goals

Revitalization

To attain renewed population and job growth in the region's Core Cities, First Generation Suburbs and Older Centers, reversing past declines and enhancing a more stable climate as a foundation to attract new real estate and infrastructure investment.

Curtailing Sprawl

To curb sprawl, particularly along the region's exurban, rural edge, through a combination of planned infrastructure investments, land use controls, land preservation and reinvestment in the region's existing developed areas as a means to focus continuing suburban growth.

Quality Design

To enhance the design quality of new development and redevelopment that is more sensitive to its surroundings, community character and thematic landscapes through additional application of municipal Smart Growth tools.

Infrastructure Investment

To use existing and planned expansions of sewer and water systems and transportation facilities and services as key growth management strategies to curtail sprawl and yield more efficient and sustainable regional development patterns.

Open Space/Farmland/Natural Features Preservation

To maximize preservation of prime farmland areas, natural, scenic, historic and cultural resources that can protect water quality and the environment, buffer and shape new development, strengthen the region's economic competitiveness, provide recreational and tourism opportunities and enhance the overall quality of life for all.

Municipal Implementation Tools

To provide technical assistance and guidance to local governments on the adoption and implementation of regional plan policies and recommendations, including such tools as development controls (e.g., zoning, subdivision and land development, official map), innovative growth management techniques (e.g., transferable development rights, traditional neighborhood development and transit-oriented development) and financing approaches (e.g., business improvement districts, tax increment financing, impact fees).

Urban Revitalization

2030 Vision

Urban centers, boroughs, and older suburbs thrive, as a combination of public and private actions strengthen local schools; improve the quality of local services; rejuvenate our cities and older boroughs with art and culture; reduce crime; clean up brownfields sites; reinvigorate greyfields and abandoned shopping areas; build relationships with the business community to foster local entrepreneurship and business investment and create new jobs; capture and enhance existing amenities; preserve existing historical elements of significance; strive for a mix of younger and older persons; and restore distressed neighborhoods.

2030 Goals

 Strengthen the urban centers and older centers of the region to maintain and enhance the quality of life and increase their appeal as a place to live, work, and visit.

• Preserve, revitalize, and renew the region's older centers to restore their economic well-being and attractiveness for immigrant populations.

 Manage future development through focused infrastructure investments to contain sprawl by limiting development to the core cities, older suburbs, and future growth areas.

• Rebuild abandoned brownfield and greyfield sites into thriving mixed-use areas to improve the quality of life for older areas of the region

 Restore and maintain existing infrastructure systems, services, and capacity to support existing development as well as attract new population and employment growth.

• Work with municipal and private stakeholders to create strong leadership that will promote smart growth techniques in the region's core cities and first generation suburbs.

• Market the amenities of the core cities and older suburbs – transit and pedestrian friendliness, housing options, and established neighborhoods – to younger persons as well as immigrant populations.

The Environment

2030 Vision

A clean and sustainable environment for existing and future residents of and visitors to the region, where key natural resource areas and scenic landscapes are protected; recreation and open space facilities are provided in an integrated regional network; environmental protection objectives are incorporated into planning activities and growth strategies at all government levels; and investment and redevelopment of urban areas results in reduced development of rural and agricultural lands.

2030 Goals

• Land Preservation for Natural Resource Protection, Agricultural Preservation and Recreation:

• Preserve critical natural resources, agricultural lands and key recreational landscapes in the region, which shape development, give identity to the region, provide for recreation, attract residents, businesses and tourists, and contribute to the region's overall quality of life.

 Promote well-planned and environmentally responsible development and redevelopment of neighborhoods and communities.

Improving Water Quality

 Improve the surface water quality of all watersheds through the achievement of target water quality goals Maintain the safety and abundance of drinking water derived from groundwater sources

Increase public awareness and involvement in water-related issues

Meeting Air Quality Standards

• Educate the public about air quality issues and promote ways to reduce emissions that cause air pollution

• Promote good air quality through sound planning and land use development policies that reduce travel by single-occupant vehicles.

Increasing Tree Coverage

 Educate decision makers about the environmental and economic benefits of trees, encourage communities to set tree canopy goals, and promote specific management strategies to achieve those goals

 Promote the planting and stewardship of shade trees in suburban and urban areas to enhance property values, provide energy savings, store and sequester air pollution, and absorb stormwater

 Protect existing riparian buffers and reforest barren areas to improve water quality, lower stormwater costs and improve air quality

Economic Development

2030 Vision

A diversified and growing regional economy, attractive for new entrepreneurial and established business investment where the combination of an educated labor force, favorable business climate, and high quality of life create a competitive regional advantage with new economic opportunities created in proximity to the needed labor force.

<u>2030 Goals</u>

- Targeting Business Investment to the Region's Best Opportunities
- Supporting an Appropriate Competitive Advantage Strategy for the Region
- Improving the quality of the labor force through education and training
- Upgrading the region's public strategic investment structures for the global competition of the 21st century.

Transportation Facilities

<u>2030 Vision</u>

A safe, convenient and seamless multi-modal passenger and freight system that is sufficient in its capacity, attractive and affordable to its users, accessible and equitable for all citizens and visitors to locations throughout the region and incorporating sound growth management, urban revitalization, environmental and economic development planning principles.

<u>2030 Goals</u>

• Improve safety by reducing travel hazards through the application of technological improvements and by bringing our transportation system up to modern standards.

• Reduce congestion by making the transportation infrastructure more efficient, instituting transportation demand management strategies and providing alternatives to the single-occupant vehicle.

• Rebuild the transportation infrastructure with a focus on maintaining our current system before expanding capacity to new areas.
• Enhance the environment by ensuring transportation investments improve or preserve our natural environment.

• Increase mobility by providing additional choices for travel and guaranteeing the transportation system accommodates everyone.

• Link transportation improvements to land use and economic development policies outlined in the Long Range Plan in order to create a holistic built environment.

Transportation Operations

<u>2030 Vision</u>

A well-planned, reliable and safe multi-modal, regional transportation system that promotes interconnectivity among systems, keeps operators and users informed about travel conditions, responds rapidly to incident related congestion and assures efficient delivery of goods and passengers utilizing available and new technologies.

2030 Goals

- Implement one regional incident management program to coordinate with individual-incident management corridor programs.
- Study airport growth with respect to demand, and expand capacity where necessary.

• Institute a central data clearinghouse for all regional transportation operations, whether virtual via the Internet or at a physical location, where travel information is shared freely among agencies.

• Utilize ITS technology to provide information about travel conditions to travelers and operators.

31

• Dedicate funding for operation centers into the region's transportation improvement programs.

• Implement an integrated fare collection mechanism for transit throughout the region.

Transportation Finance

2030 Vision

Each mode of transportation has adequate funding to maintain, modernize and operate its infrastructure. Money is available to provide needed expansions within corridors designated for growth and reinvestment in existing centers. Funding can be used to facilitate the movement of people, vehicles and goods and to enhance important inter-modal connections. A combination of user fees, tolls, regional and state taxes, and other creative financing mechanisms, including public-private partnerships, are in place.

2030 Goals

• Establish a funding mechanism for financing projects of regional significance, including enactment of state enabling legislation to permit dedicated regional revenue generation.

• Maximize the amount of state and federal transportation resources that flow to this region, consistent with statewide mobility needs and cognizant of the added costs associated with construction in dense, older urban areas.

• Select projects for capital programming in the TIP based on sound long range strategic planning considerations, life-cycle investment analyses, and system performance and condition data (actual and projected).

Equity and Opportunity

2030 Vision

Barriers to opportunity for all residents of the region are removed through increased distribution of affordable housing throughout the region, enhanced resources and equalized quality of education in all school districts. Transportation choices and reverse commute opportunities are provided to regional employment centers for all workers.

2030 Goals

- To provide transit lines and commute patterns that provide easy access for all residents to jobs in various suburban areas as well as in Center City, thus meeting the goals of reverse commuting and welfare-to-work programs.
- To urge communities throughout the region to adopt affordable housing programs that offer a number of alternatives for residents at all income levels.
- To propose federal and state incentives that subsidize municipalities for choosing to minimize sprawl and recentralize or redevelop within certain boundaries.
- To provide quality education for more students through additional funding that is provided both by the states and the federal government.
- To promote better development with less disparate effects on citizens throughout the region.
- To encourage racial and ethnic diversity in our schools and communities by stressing our common goals, individual skills, and shared future.
- To recognize and support the leaders that rise to the occasion to make such goals possible in the region.









LAND USE

OVERVIEW





LAND USE OVERVIEW

Planning Areas

Analyzing the Region's Geography: A Community Typology and Planning Policies for the 21st Century

The Delaware Valley region is a mosaic of 353 townships, boroughs and cities. The communities are quite diverse and complex, and the present level of land use and planning can only be described as fragmented. In an effort to categorize and simplify the types of communities and corresponding long-range planning policies, DVRPC organized the region into four community types, each with different overall planning and development policies. (See Planning Areas map)

• Core Cities

The region's four Core Cities are Philadelphia, Trenton, Camden and Chester. Each has success stories and key assets: Philadelphia's Central Business District is thriving, Trenton's downtown is supported by the offices of New Jersey State government and Chester and Camden have seen revitalized waterfront development. However, each has also experienced population and job losses related to the national and local shift from a manufacturing to a service-based economy, and each has experienced declining housing stock and infrastructure systems, including the quality of education to support the human capital for the knowledge-based economy of the 21st Century.

Key policies that should guide the future growth and development of Core Cities are **Redevelopment and Renewal.** Such actions as targeted infrastructure investments, asset maintenance and rehabilitation, comprehensive renewal of local neighborhoods and concerted efforts to reinforce a network of educational and social programs can help to rebuild and restore currently declining portions of these cities. The goal of the Year 2030 Plan is to maximize the assets of these communities, while stressing community renewal, neighborhood preservation and economic development strategies that encourage population and job growth rather than further decline.

• Developed Communities

These communities represent the region's older suburbs, including: inner ring communities adjacent to the Core Cities; railroad boroughs and trolley car communities whether close-in or in outlying locations around the region; and developed townships that experienced the first wave of post-war suburban boom in the 1950s. Many of these suburban communities are stable and thriving, with

housing opportunities for young families, a walking and bicycling environment, easy access to transit and strong community identity. However, many are also experiencing loss of population and jobs, deteriorating infrastructure, a declining tax base, an aging population that requires more services and a property tax base that cannot keep pace with existing realities and new demands. The key policy approach for these communities is **Stabilization and Revitalization**. Preventive maintenance, economic development activities (like Main Street programs) and aesthetic projects, like streetscape and signage programs, can help to reinforce their locational and physical advantages, while stemming further or initial decline. Similar to the Core Cities, these communities offer the potential for increased population growth, particularly if current, aging residents are supplanted by young families in the future.

• Growing Suburbs

These communities are experiencing or are forecast to experience significant additional growth, including employment and retail centers. However, unlike the stereotypical "bedroom" communities of the 1950s and 1960s, they also provide a location for jobs and shopping and are evolving into self-contained communities. With rapid growth in population, jobs and land consumption, these communities face problems of traffic congestion, low density, leap-frogging sprawl, increased infrastructure construction demands, dwindling open space resources and a lack of community identity.

Key policies for these communities are **Growth Management and Community Design** reflecting the need to improve the form of development, reduce congestion and mitigate the negative impacts of rapid growth. A "reimaging" of the growing suburbs would establish a more concentrated development pattern, with higher densities (including clustering, mixed-use and transit-oriented development) to provide the critical mass that can support new transit services and other mobility alternatives to the single-occupant automobile. A key approach is to focus on the quality of design and architectural character, in terms of the location and arrangement of buildings and parking areas, landscaping, signage and other design features. Preservation and creation of a coordinated system of open space and recreational areas is also a priority goal and strategy for these communities.

• Rural Areas

Farmland in the Delaware Valley is some of the most productive agricultural land in the nation, but it is also land most easily converted to other developed uses. From 1990 to 2000 the region lost almost 10,000 acres of farmland a year. The strong agricultural heritage of the region needs to be retained because farming and its support industries are an important economic sector for the region. Active farming can also preserve the pastoral landscapes that contribute to the region's attractiveness for residents, visitors and businesses. The key policy approach for these communities is **Preservation and Limited Development**, including limited expansion of infrastructure systems, preservation of a rural lifestyle and village character, support for continued farming and enhancing further natural resource protection. The additional benefit that this policy approach can accomplish is to inhibit exurban sprawl that threatens to meld the Delaware Valley region with adjacent regions in southeastern and central Pennsylvania and southern and Central New Jersey.

Core Planning Principles Regional Core Planning Principles

The Land Use component of the *DESTINATION 2030* Plan is based on five core principles, which are summarized here and illustrated on the Year 2030 Land Use Plan map:

1. Linking Land Use and Transportation

At the root of planning for transportation facility and service improvements is the notion of travel demand. Travel demand is derived from population and employment growth and land use changes. Thus, more people (whether workers or residents) desiring to access different land uses (for example, shopping, employment or housing) generally results in greater demand for travel in an area or along a transportation facility. The spatial arrangement of land uses is also important, since that will determine whether alternatives to the automobile (public transit, bicycling and walking) can succeed.

Likewise, transportation facilities and services result in impacts (both positive and negative) on the landscape, the environment and the demand for different land uses. Planning for such facilities without considering the consequences for land use change would be as short sighted as planning for land uses without considering the resulting demand for transportation. A more coordinated approach to land use and transportation convenes municipal, county, regional and state land use and transportation planners with local elected officials and the public to craft an integrated solution for an area that meets multiple community goals for transportation mobility, community character, economic development, and environmental protection.

2. Creating and Maintaining Centers

A key principle to guide the *DESTINATION 2030* Plan is the concept of *Centers*. Centers provide a focal point in the regional landscape that can serve to reinforce or establish a sense of community for local residents, while recognizing their regional and local significance from a governmental, service, economic or mixed-use perspective. The Year 2030 Plan includes a hierarchy of Center-types, based on their current or prospective role and activities within the region:

• Metro Center

The three square miles of Center City Philadelphia, bounded by the Delaware and Schuylkill rivers from Spring Garden to South streets, is the region's *Metro Center*. This dense, compact, mixed-use area includes the City's central business district and office core with more than 265,000 jobs and about 50,000 residents, as well as major tourism and entertainment destinations. Future growth to 2030 may well expand the definition of the Metro Center north and south, as well as west across the Schuylkill River into University City.

• Metro Sub-Centers

Six *Metro Sub-Centers* reflect their region-wide significance and stages of development. Two *Mature Urban Centers*, the cities of Trenton and Camden, reflect existing job concentrations and regional importance as Core Cities. Four *Suburban Growth Centers* - King of Prussia/Valley Forge, International Airport/I-95, Cherry Hill/Mt. Laurel/Marlton and the Route 1/Princeton Corridor - reflect the dramatic job growth concentrations that have emerged as employment centers.

Regional Centers

Three types of Regional Centers have been identified on the plan, reflecting their different stages of development and the need for different planning policy approaches in the future. *County Centers* are existing centers of importance on a countywide or sub-county scale, and provide a stable concentration of housing, jobs and services. *Revitalizing Centers* are compactly developed, mixed-use communities that have served as focal points for employment, services or cultural activities, but now require concerted action to renew and stabilize neighborhoods and reverse the trend of declining population and/or jobs. *Growth Centers* are either existing or emerging centers forecasted to have increasing concentrations of people, jobs and services. They have land available for new development, existing or planned sewage capacity and are supported by current county and municipal planning policies favoring continued growth and expansion.

3. Promoting Growth Areas

A third principle of the plan is to identify areas appropriate for new growth. This growth management strategy is developed in cooperation with city and county member governments. The strategy is derived from a framework of sewer, water and transportation facility plans that define proposed "growth areas", where infrastructure would be provided or encouraged to support new growth within the time frame of the plan. Growth areas are located contiguous to existing developed areas and provide appropriate and sufficient land (in combination with the defined Centers) to accommodate the region's forecasted increases in population and jobs. DVRPC will direct its infrastructure investments in accordance with this approach, and it is recommended that local municipalities use this approach to manage their growth based on infrastructure availability and planned expansions of these systems.

	Metro Sub-	Regional Centers						
County	Center	County	Growth	Revitalizing				
Bucks		Doylestown, Newtown, Oxford Valley, Quakertown,	Warrington	Bensalem, Bristol/Route 413/13 Corridor, Penndel/Langhorne, Falls, Tullytown, Warminster				
Chester	King of Prussia/Valley Forge	Downingtown, Kennett Square, Oxford, Paoli, West Chester	Exton, Lionville, Great Valley	Coatesville, Phoenixville				
Delaware	International Airport/I-95	Ardmore, Media, Radnor, 69 th Street	Middletown, Routes 1/202/& 322 Corridor	Darby, Routes 291/13 Waterfront Corridor				
Montgomery	King of Prussia/Valley Forge	Ardmore, Cheltenham Avenue, City Avenue, Jenkintown, Ft. Washington/ Ambler	Conshohocken, Kulpsville, Montgomeryville, Plymouth Meeting, Route 422, Willow Grove/Horsham	Lansdale, Norristown, Pottstown				
Philadelphia	International Airport/I-95	Boulevard/Grant, Broad and Olney, Cheltenham Avenue, Chestnut Hill, City Avenue, Cottman/Bustleton, Lawncrest/Fox Chase, Mayfair/Holmesburg, Roxborough/Manayunk, 69 th St	Boulevard/Wood-haven, Navy Yard/Sports Complex, University City	Broad and Cecil B. Moore, Broad and Erie, Broad and Passyunk, Central Germantown, Frankford, Kensington/Richmond, 52 nd and Market				
Burlington	Cherry Hill/ Mt. Laurel/ Marlton	Bordentown, Browns Mills, Medford, Moorestown, Mt. Holly, Wrightstown	Mt. Laurel	Burlington City, Roebling, Rt. 130 Corridor, Willingboro Town Center				
Camden	Camden, Cherry Hill/ Mt. Laurel/ Marlton	Haddon Avenue Corridor, Lindenwold Station, Cherry Hill Mall/Racetrack	Berlin, Cross Keys Corridor, Sicklerville, Cedarbrook	Gloucester City, Echelon, Rt. 30 Corridor, Rt. 168 Corridor				
Gloucester		Clayton, Glassboro/Pitman, Swedesboro, Williamstown, Woodbury	Deptford, Logan/Woolwich, Washington	National Park, Paulsboro, Westville				
Mercer	Route 1/ Princeton Corridor, Trenton	Hopewell, Hightstown, Pennington, Princeton	Washington Town Center					

4. Implementing Smart Growth and Smart Transportation Approaches to Achieve Change

The policies and implementation approaches for the land use and transportation plan are linked through five components of Smart Growth and Smart Transportation:

- **Regional Policy Framework** links the transportation plan's six different levels of investment and modal types to the four different community types and areas defined on the land use plan.
- **Corridor Planning** provides a comprehensive approach that links land use, transportation, the environment and the economy, working collaboratively with county and municipal representatives.
- **Multi-Modal / Intermodal Approaches** integrate different transportation modes to serve community and area needs, while facilitating accessibility and transfers between modes.
- **Context Sensitive Planning and Design** crafts transportation solutions through collaboration with local stakeholders, in context with the setting and character of the local community, and sensitive to community concerns about potential negative impacts.
- **Community Development Approaches** use transportation investments as a foundation and catalyst to effect positive community changes. Transitoriented development (as recommended in studies funded through DVRPC's TCDI program) is an example of this approach. Such development can help to generate new real estate development, revitalize older communities and support increased public transit ridership.
- 5. Maintaining and Preserving Sensitive Environmental Areas and Creating a Greenspace Network

Areas located adjacent to or beyond already developed areas and the newly defined growth areas include protected lands (parks, preserved farms or land trust lands), proposed greenspace network lands (proposed for protection for ecological and recreational purposes), and undeveloped rural and agricultural lands that are designated to remain rural or agricultural in character.

As of 2004, 18% of the region (almost 427,000 acres) was permanently protected as parks, preserved farms or land trust lands. *Destination 2030* proposes linking and expanding this existing open space into a green space *network*, where parks, forests, meadows, protected farms and stream corridors are joined together in an inter-connected system. The 2030 Greenspace Network is based on the twin principles of protecting core natural resource areas and linking them with greenways. The core areas included in the network encompass large contiguous natural resource features and existing regional

parks. The 2030 Greenspace Network portrays a seamless vision of connected natural open space that enhances ecological and recreational capacity, protects critical natural resources, ameliorates the impacts of sprawl, and improves the quality of life in the region's communities.

	Publicly Owned Lands (acres)						Privately Owned Lands (acres)				
County	Federal	State	County	Municipal	Total Protected Public Open Space	Protected Public Open Space as Percent of Total Area	Public Protected Acreage per 1000 population	Preserved Farmland	Land Trust or Privately Protected	Total Protected Private Open Space	Protected Private Open Space as Percent of Total Area
Bucks	0	12,880	8,322	10,363	31,565	8.12%	52.8	8,014	7,617	15,631	4.02%
Chester	1,290	7,105	5,792	7,714	21,901	4.53%	50.5	20,688	30,660	51,348	10.61%
Delaware	726	2,683	844	5,197	9,450	8.02%	17.2	208	2,289	2,497	2.12%
Montgomery	1,964	4,475	5,770	11,031	23,240	7.52%	31.0	6,183	3,606	9,789	3.17%
Philadelphia	365	282	8,126	1,360	10,133	11.72%	6.7	0	531	531	0.61%
PA TOTAL	4,345	27,425	28,854	35,665	96,289	6.95%	25.0	35,093	44,703	79,796	5.76%
Burlington	4,001	140,036	2,658	9,512	156,207	30.34%	368.9	18,321	2,841	21,162	4.11%
Camden	0	18,845	2,640	4,050	25,535	17.95%	50.2	118	9	127	0.09%
Gloucester	0	5,400	1,706	4,058	11,164	5.37%	43.8	8,865	423	9,288	4.46%
Mercer	0	4,283	8,311	8,040	20,634	14.28%	58.8	4,676	2,079	6,755	4.67%
NJ TOTAL	4,001	168,564	15,315	25,660	213,540	21.15%	138.9	31,980	5,352	37,332	3.70%
REGION TOTAL	8,346	195,989	44,169	61,325	309,829	12.93%	57.5	67,073	50,055	117,128	4.89%

Table 4: Year 2004 Delaware Valley Protected Open Space by Ownership

The 2030 Conservation Focus Areas Map depicts agricultural and natural lands that possess a combination of unique physiographic, vegetative and land use characteristics. These characteristics make each focus area unique and worthy of heightened preservation efforts by government organizations and nonprofit land trusts. The focus areas contain villages and scattered suburban development, but they remain comparatively unfragmented and their integrity can be maintained through strategic acquisitions and easements, land management, and appropriate forms of growth. The focus areas are not "no-growth zones", but instead are areas whose natural, agricultural and recreational values should be protected, while allowing for limited growth that is in character with each region. The 2030 Conservation Focus Areas are overlain on the Year 2000 Rural Lands layer in order to show where conservation efforts should be targeted relative to current land use.

Open space is also very important in urban/suburban lands for water supply and flood control, wildlife habitat, recreation, scenic landscapes, and a sense of living in an appealing, clean and green metropolitan area. However, due to the degree of development found in urban/suburban lands, proposed open spaces in such areas are mostly shown on the 2030 Greenspace Network Map, which depicts interconnected linear corridors, rather than on the Conservation Focus Areas Map, which shows large conservation landscapes. Several exceptions are the Delaware and Schuylkill River Corridors, and the Pennypack and Wissahickon Preserves.

Both the 2030 Greenspace Network and the 2030 Conservation Focus Areas are designed to brand individual greenspace and focus areas. By creating a shared regional geography and "name recognition" with regard to these areas, their status and prominence can be elevated, thereby enhancing preservation efforts.

Implementation Plan How Can the Plan be Achieved?

Planning is a process that involves communicating information, ideas and goals to the public, including specific local interests. Through a constructive dialogue, planners and the public can share their opinions and mutually shape a vision for a neighborhood, community, county or region. Key stakeholders in the planning and implementation process include: (1) elected or appointed officials; (2) the development community; (3) local interests, such as the chamber of commerce or other business groups, civic and neighborhood associations, community development corporations and environmental and historic preservation and affordable housing advocacy organizations; and (4) the general public.

Public agencies and organizations involved in the planning and implementation process include local, county and regional planning commissions and agencies, the State Departments of Environmental Protection, the State Departments of Transportation, the Office of Smart Growth and the Department of Community Affairs (in New Jersey) and the Departments of Community and Economic Development, the Office of Housing and Community Revitalization and the Department of Conservation and Natural Resources (in Pennsylvania), SEPTA, PATCO and NJ Transit, sewer and water authorities (or companies), local Zoning Hearing Boards, Redevelopment Authorities (for urban renewal projects), school districts and other special purpose boards and commissions.

DVRPC will continue to work with all of these partners and the public to make the vision of the plan a reality. By "thinking regionally but acting locally", DVRPC is able to achieve coordinated and cooperative action across municipal, county and state lines;

across local, county, state and federal agencies; and across the public and private sectors.

Specific planning and implementation programs at DVRPC related to the three action areas included in this paper (Centers, Growth Areas and Farmland/Open Space Preservation) include DVRPC's Transportation and Community Development Initiative (TCDI), which provides grants to local governments for revitalization planning; local area and corridor planning studies that develop integrated solutions for the transportation and land use needs of an area; municipal open space and natural resource plans that form the building blocks for the regional open space network; and extensive outreach and education efforts that facilitate better communication and information sharing across the region.



LAND USE

MAPS



Suppose and the second s





2030 Conservation Focus Areas

Southeastern Pennsylvania



Sources: DVRPC, Natural Lands Trust, Brandywine Conservancy, Heritage Conservancy, Greenspace Alliance Bucks County Planning Commission, Chester County Planning Commission, Delaware County Planning Department, Montgomery County Planning Commission, Philadelphia City Planning Commission, PADCNR

2030 Conservation Focus Areas

Southern New Jersey

Legend









Delaware Valley Regional Planning Commission June 2005

Sources: DVRPC, NJDEP, New Jersey Conservation Foundation, Mercer County Planning Division, Burlington County Departmen of Resource Conservation, Camden County Division of Open Space and Farmland Preservation

2030 Greenspace Network

29. Skippack Creek-Evansburg

30. Towamencin Creek

33. Plymouth Creek

36. Pennypack Creek

37. Poquessing Creek

38. Neshaminy Creek

41. Mill Creek

39. Mill-Queen Anne Creek

40. Little Neshaminy Creek

43. W. Branch Neshaminy Ck.

44. Paunnacussing-Pine Run

47. North Woods (Highlands)

48. Quakertown-Cooks Creek

45. Peace Valley-Deep Run

46. Tohickon Creek

49. Delaware River

50. Serpentine Barrens

42. New Hope-Ivyland

34. Cross County Corridor 35. Tacony-Cresheim Creek

31. Stony Creek 32. Wissahickon Creek

Southeastern Pennsylvania

Legend

- 1. Octoraro Creek 2. Big Elk Creek 3. White Clay-Ways Run 4. White Clay-Doe Run 5. Buck Run 6. West Branch Brandywine Ck. 7. Delaware Arc 8. Brandywine Creek 9. Great Valley Ridgelines 10. Big Woods Corridor 11. Warwick-Elverson Corridor 12. Marsh Creek-Beaver Run 13. French Creek 14. Pickering Creek 15. Valley Creek-Pigeon Run 16. Naamans Creek-Harvey Run 17. West Branch Chester Creek 18. Chester Creek 19. Ridley Creek 20. Crum Creek 21. Darby Creek 22. Cobbs-Mill Creek
- 23. Schuylkill River 24. Manatawny Creek
- 25. Middle Creek
- 26. Swamp-Deep Creek
- 27. East Brach Perkiomen Creek
- 28. Perkiomen Creek

Minor Connecting Greenways

Note: Greenway colors are only meant to show where idividual greenways start and stop



Delaware Valley Regional Planning Commission June 2005

Sources: DVRPC, Natural Lands Trust, Brandywine Conservancy, Heritage Conservancy, Greenspace Alliance, Bucks County Planning Commission, Chester County Planning Commission, Delaware County Planning Department Montgomery County Planning Commission, Philadelphia City Planning Commission, PADCNR



2030 Greenspace Network

21. Rancocas Creek

23. Bisphams Mill Creek

25. Batsto-Friendship

27. Haynes-Alquatka

30. River-to-Bay

31. Newton Creek

32. Cooper River

34. Woodbury Creek

35. Mantua Creek

36. Repaupo Creek

38. Chestnut Branch

37. Pargey Creek

39. Edwards Run

40. Raccoon Creek

33. Big Timer

28. Pennsauken-Mason

29. South Pennsauken Creek

24. Pinelands Conservation Areas

26. Southwest Branch Rancocas Ck.

22. Mount Misery

Southern New Jersey

Legend

- 1. North Mercer
- 2. Jacobs Creek
- 3. Washington Crossing
- 4. Stony Brook
- 5. Shabakunk-Ewing
- 6. Assunpink Creek
- 7. Big Bear Brook
- 8. Millstone River
- 9. Miry Run
- 10. Pond Run-Back Creek
- 11. Delaware and Raritan Canal
- 12. Delaware River
- 13. Doctors Creek
- 14. Crosswicks Creek
- 15. Bacons Run
- 16. Blacks Creek
- 17. Crafts Creek
- 18. Assiscunk Creek
- 19. Pemberton-North Run
- 20. Mill Creek



Minor Connecting Greenways

Note: Greenway colors are only meant to show where individual greenways start and stop.





Delaware Valley Regional Planning Commission June 2005

- 41. Oldmans-Reed
- 42. Still Run (Maurice River)
- 43. Glassboro Wildlife Management Area
- 44. Little Ease Run
- 45. Scotland Run
- 46. Hospitality Branch
- 47. Great Egg Harbor River
- 48. Pump Branch
- 49. Sleeper Branch





TRANSPORTATION





TRANSPORTATION

OVERVIEW





TRANSPORTATION OVERVIEW

The DVRPC region has a mature highway network. This has two important implications. First, a large percentage of our transportation funds must be spent on rebuilding and maintaining our present infrastructure at the expense of improved or new facilities or services. Second, since there are few new facilities planned, most increase in capacity will have to come from making our current system more efficient and reducing the demand for travel.

Our road system is not as congested compared to many other major metropolitan areas across the country, even though the number of miles traveled is growing disproportionate to the region's growth in population, as we continue to experience sprawling development patterns. The growth in traffic particularly exacerbates congestion on the region's arterial street network. Many of the region's arterials suffer from poor access management, numerous driveways, older signal systems, and little or no linkage between highway and land use planning. In addition, they are required to carry high volumes of traffic due to the limited coverage of the freeway system.

As development continues to push into rural areas at the periphery of the region, new transportation investments are sought by people who want to live there. However, investments serving low-density development are inefficient and divert funds that are needed to expand and rebuild our existing system in established communities.

The region's transit system is also mature. Most of the rail system was built in the early part of the 20th century. Not only does the infrastructure need to be rebuilt, but the system is radial and does not readily serve the growing intra-suburban circumferential travel patterns that have emerged over the past several decades. Additionally, travel time for the suburban to Philadelphia CBD transit commute has increased as residential and employment locations have spread into the outward suburbs. Operating the existing system, let alone expanding it, is difficult given the unreliable funding streams currently allocated to transit. Transit ridership has declined across the region over the past forty years. However, the rate of decline has slowed over the past decade. The value of the transit system remains in removing vehicle trips from the highway network and providing mobility options.

Consistent with the passage of ISTEA and the subsequent TEA-21 legislation, DVRPC realizes the importance of a multi-modal transportation network and stress the integration and role of all travel modes. The vision for our future transportation system needs to address the needs of bicycle, pedestrian, aviation and freight movement along with the highway and transit modes. Philadelphia International Airport suffers from one of the highest rates of delay in the nation. Increasing capacity at Philadelphia International Airport is a priority for the region for both transportation and economic reasons. Equally important is maintaining the feeder and relief system at smaller airports in face of increasing development pressures on suburban land. Bicycle and pedestrian modes are important to foster because they provide an alternative to driving for short trips, help support sound land use development, and encourage a healthy life-style. The Federal Highway Administration estimates that freight will double by 2020. Currently, over 70% of all freight is shipped by truck. As freight service continues to increase we must plan to better accommodate both passenger and freight movements on the highway network. Sharing track rights between freight and passenger service while still providing "just in time" delivery of goods is another significant freight movement issue.

At present, each mode of transportation is faced with a staggering backlog of unmet needs. Much of the region's infrastructure is more than half a century old and in need of complete reconstruction. Expansion of the labor force in recent decades and higher standards of living have placed tremendous demands on the system, often more than the facilities were ever designed to handle. Though the population of the region has not grown significantly, it has spread out across the landscape. In particular, the leapfrogging of businesses into once rural areas has doubly impacted the system: by generating traffic in areas without sufficient infrastructure; and, by replacing once efficient radial travel patterns with scattershot chaos. And while highways are in better surface condition in most parts of the region than in years past, a significant number of bridges are below federal standards. Also, while a number of our transit lines have undergone major reconstruction, the commuter rail system is still one of the slowest in the nation and does not serve many of the major population and employment centers in the region.

Financial resources to address these needs have not been able to keep up, despite increases of state and federal gas taxes and expanded federal and state appropriations. Gas tax receipts at the national and state level plateaued in the late 1990's and have actually declined, after accounting for inflation.

VISIONS, GOALS, AND POLICIES

The *Destination 2030* Long Range Plan focuses on three primary components of the transportation system: Facilities, Operations and Finance. Transportation Facilities incorporates the physical infrastructure of roads, transit lines, trails, and other transport facilities. Operations addresses the performance of the transportation system. This sector is receiving increased attention as we try to make our existing facilities more efficient. Finance, is becoming increasingly important as we look for innovative ways to fund our ever-increasing transportation and other societal needs. Visions of what the future holds for each of the three focus areas were developed at the beginning of the development process for the Destination 2030 Plan and are summarized below.

The Vision for Transportation Facilities

A safe, convenient and seamless multi-modal passenger and freight system that is sufficient in its capacity, attractive and affordable to its users, accessible and equitable for all citizens and visitors to locations throughout the region and incorporating sound growth management, urban revitalization, environmental and economic development planning principles.

The Vision for Transportation Operations

A well-planned, reliable and safe multi-modal, regional transportation system that promotes interconnectivity among systems, keeps operators and users informed about travel conditions, responds rapidly to incident related congestion and assures efficient delivery of goods and passengers utilizing technologies.

The Vision for Transportation Finance

Each mode of transportation has adequate funding to maintain, modernize and operate its infrastructure. Money is available to provide important expansions within corridors designated for growth and reinvestment in existing centers. Funding can be used to facilitate the movement of people, vehicles and goods and to enhance important inter-modal connections. A combination of user fees, tolls, regional and state taxes, and other creative financing mechanisms, including public-private partnerships, are in place.

Policies

The following transportation policies are organized around the transportation goals of the Plan and seek to implement the Facilities, Operations and Finance visions.

Improving Safety

- Ensure the safety and security of all users of all modes.
 - Reduce the number of accidents and fatalities across all modes
 - Address safety needs as they relate to specific population segments such as the elderly and handicapped
- Address the importance of safety issues when considering regional transportation plans
- Collect, analyze and share regional crash data to serve as a basis for safety planning
- Promote programs that address behavioral and marketing aspects of safety
- Facilitate quick emergency response through incident management planning
- Increase public awareness of transportation security program

Reducing Congestion

- Optimize the efficiency of the existing transportation system
 - Reduce traffic congestion along travel corridors and at critical intersections through incident management, access control, signal system improvements and needed highway improvements
- Utilize transportation demand management (TDM) techniques
 - o Establish programs to reduce the number of vehicle trips
 - Encourage practices which spread travel throughout the day, and throughout the week, making the transportation system more efficient
- Provide more options for commuters
 - o Improve area coverage and operation of transit service
 - Increase the number of multi-modal transportation centers and park and ride facilities
 - o Improve bicycle and pedestrian facilities
- Focus construction of new capacity on providing missing links

Improving Mobility

- Promote coordination and integration of all transportation systems
 - o Establish opportunities for connections among transportation modes
 - o Improve scheduling and operations to accommodate intermodal movements
- Provide system accessibility for all segments of the population And increase affordable transportation alternatives
- Comply with regulations and guidance for the Americans with Disabilities Act and Environmental Justice (Title VI)

Enhancing the Environment

- Encourage the reduction in use of travel modes that contribute significantly to air pollution
 - Promote the use of public transit, bicycle and pedestrian facilities, telecommuting and ridesharing
 - Forecast poor air quality days and request temporary, voluntary changes in behavior to reduce pollutants
- Encourage the use of transportation control measures
 - Expand the use of employer-based ride-sharing programs and shuttles
 - Promote the use of low-emission vehicles, low-polluting fuels, and cleaner fleets

- Protect the environmental assets of the region
 - Seek alternatives to transportation projects that negatively impact wetlands, riparian corridors and unique habitats
 - Include best management practices for the treatment of stormwater runoff from transportation facilities to improve water quality and groundwater recharge
 - Build and retrofit noise reduction barriers where necessary to enhance he livability of existing residential areas

Rebuilding the Infrastructure

- Devote sufficient resources to address reconstruction and maintenance needs
- Develop and employ assess management systems to determine capital plans to increase the long-term cost effectiveness of system improvements
- Identify innovative financing mechanisms and advocate for a greater share of federal and state funds
 - Support a dedicated funding stream for transit
 - o Identify and pursue opportunities for public/private partnerships
- Preserve existing rail and road right-of-way for future transportation uses

Linking Transportation Investments to Land Use and Economic Development Goals

- Promote transit-oriented development and mixed use development
- Encourage investment in older, developed areas and brownfields
- Increase the level of investment in transportation facilities that promote freight movement and economic development
- Limit new capacity to appropriate areas as identified in the Congestion Management System
- Consider the land use impacts of transportation investments in the development of plans and programs
- Apply context-sensitive design standards to transportation facilities

Associated Programs

The Long Range Plan has a symbiotic relationship with a number of other transportation planning programs, most importantly the Transportation Improvement Program (TIP) and the Congestion Management System (CMS). The TIP is the

regionally agreed upon list of priority projects to be advanced during a short (3-4 year) timeframe. As required by federal law (ISTEA and TEA-21), the TIP document must list all projects that intend to use federal funds, along with non-federally funded projects that are regionally significant. The TIP also includes all other State funded capital projects. The projects are multi-modal; that is, they include bicycle, pedestrian, freight-related projects, and innovative air quality projects, as well as the more traditional highway and public transit projects.

Regionally significant projects must be drawn from the region's long range plan and all projects in the TIP must help implement the goals of the plan. The Long Range Plan, required by federal law, is the document which helps direct transportation and land use decisions over a minimum 20 year horizon. The TIP represents the implementation of recommendations from DVRPC's Long-Range Plan into a short-term program of improvements.

The CMS advances the goals of the 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 CMS includes supplemental strategies to reduce travel demand and improve operations. The CMS is a management system that is designed to aid decision-makers in gauging system performance, assessing needs, and in selecting cost-efficient strategies and actions to improve and protect investment in the region's infrastructure. The CMS is used in prioritizing and selecting projects for the Transportation Improvement Program, guiding the planning activities of the long-range plan and serving as input for alternative analysis studies.

A major role of the CMS is to identify all capacity-adding single-occupant vehicle (SOV) projects. Any project that receives federal funds and results in adding generalpurpose lanes to an existing highway or in constructing a new highway must be included in the region's Congestion Management System. An analysis may be necessary to determine if the additional capacity needs can be first met through other means. The CMS corridors have been developed in conjunction with the Long Range Plan and are also designated as *Destination 2030* Long Range Plan corridors.

Congested corridors were determined by a number of criteria including: current and future daily and peak hour congestion, frequent crash-related congestion, average annual daily traffic (AADT), intermodal importance and land use. Congested locations were then compiled into corridors. Corridors were reviewed to ensure inclusion of major flows of trips based on the regional travel demand simulation model, rail lines, approved TIP and Long Range Plan projects, major Brownfields and Superfund sites, and other studies and plans. In addition to currently congested corridors, there are corridors that are becoming congested and may be added to future updates. A set of emerging/regionally significant corridors was developed to represent them and also National Highway System (NHS) routes that are not congested but that form key links within the region.




	CMS_ID Name	Notes
	1 I-295 & NJ Turnpike (N)	I-95 from Scudders Falls Bridge - Middlesex Co; I-195; I-295 cutting across
	2 I-295 & NJ Turnpike (S)	Extended to reflect CPA major trip flows
	3 AC Expressway/NJ 42	
	4 US 1 & US 206	Also Princeton area
	5 US 30	
	6 US 130	
	7 US 322 & Cross Keys area	Includes Cross Keys and Glassboro areas, CO 651, NJ 47, CO 634, CO 689
	8 NJ 31	North-south movement to Trenton. County routes 518 & 579 added in emerging corridor review.
	9 NJ 33	General NJ 33 east-west corridor
0 2.5 5	10 NJ 38	
Miles	11 NJ 70	Extended eastward to reflect traffic model major flow
Delaware Valley	12 NJ 73	
Regional Planning Commission June 2005 (06/16/05)	13 CR 571	Princeton - Hightstown area, to US 130 and NJ Turnpike

Financial Plan

The *Destination 2030* Financial Plan and the Major Regional Projects that follow seek to implement the Plan goals and policies. The Long Range Plan must be fiscally-constrained to the amount of funds that are expected to be available over the life of the Plan. The *Destination 2030* Plan anticipates over \$57 Billion being available for transportation projects over the 25-year time span of the Plan.

Due to the extensive and expensive needs of rebuilding our current system, *Destination 2030* has adopted a "fix-it first" policy. Both Pennsylvania and New Jersey Departments of Transportation have also adopted maintenance-first policies. This means that the majority of funds available over the life of the Plan will be reserved for reconstructing and maintaining our existing infrastructure.

Destination 2030 differs from previous long-range plans, by allocating funding to the various funding categories, such as new capacity, operational improvements and reconstruction, before selecting projects. Therefore, the number of projects able to be selected in each funding category is limited by how much money is available in each category. More details on funding is included under the *Financial Plan* section of this document

Transportation Modules

Destination 2030 has devoted extra consideration to the Aviation, Freight, Bicycle and Pedestrian, and Intelligent Transportation Systems (ITS) components of the transportation system. Specific visions, goals, and policies have been developed for each of these important areas. Additionally, projects have been developed for the Aviation and Freight modules. However, these projects are not part of the fiscallyconstrained Plan but are included as part of an Aspirations plan that highlights the total transportation needs of the region, irrespective of anticipated revenue. Funding for aviation, rail freight and port-related projects typically come from sources other than the federal and state revenue sources that fund the region's highway and transit projects. Major regional projects that have been identified for the ITS and Bicycle and Pedestrian modules, as well as highway-related goods movement projects are funded as part of the fiscally-constrained Plan.

Implementing the Plan

A Plan is not worth much unless people take ownership of it. DVRPC has worked with our regional planning partners to develop the transportation elements of the Destination 2030 Plan and the projects identified therein. DVRPC will continue to foster a close working relationships with our federal, state and regional planning partners as we implement the Long Range Plan. We will work with our partners to:

- Improve the transportation planning process
- Find innovative solutions to transportation problems through technical studies.

- Build coalitions to plan for major new projects
- Protect the region's air quality
- Find new funding opportunities
- Meet the goals of the Plan and attain the vision for the future
- Continue to expand opportunities for public involvement in the planning process



TRANSPORTATION

FINANCIAL PLAN





FINANCIAL PLAN

Overview

Federal regulations require that a regional long-range transportation plan be fiscally constrained. The total transportation expenditure level identified in a long-range plan must not exceed the total revenue level expected to be available for the region over the life of the long-range plan. This requirement is intended to ensure that the longrange plan is a financially responsible one.

Adhering to these requirements, DVRPC has identified both federal and state revenue resources that the region can reasonably expect to receive in the next 25 years. All revenue estimates are developed in consultation with DVRPC's federal, state and transit partners including Federal Highway Administration (FHWA), Federal Transit Administration (FTA), state departments of transportation (state DOTs; or PennDOT and NJ DOT, individually), Southeastern Pennsylvania Transportation Authority (SEPTA), New Jersey Transit (NJ Transit), Port Authority Transit Company (PATCO) of the Delaware River Port Authority (DRPA), and Pottstown Urban Transit (PUT).

Preparation of this financial plan included a review of historical data, recent trends and other relevant materials including the statewide FY 2005 financial guidance documents and information from previous statewide transportation improvement programs (STIPs). Previous STIPs and federal authorization levels also serve as a baseline for the future. General assumptions regarding the future of the federal and state funds that are expected to be available to the region are collectively developed among DVRPC and its federal, state and transit partners. These general assumptions include the expected levels of all future federal reauthorization acts, each state's share of the total authorized amount, and the DVRPC's share of the states' shares by sub-region under the current highway distribution formulae. State funds are assumed to maintain the respective FY 05 STIP levels and extended to the future tracking the respective state's federal trends.

All pertinent planning principles and assumptions in identifying financial resources have been collectively developed and reviewed by DVRPC and its federal, state and transit partners. Various funding levels for each DVRPC sub-region by mode follow the overall federal authorization levels and other governing assumptions consistent with the recent trends and projected growths in the use of transportation facilities. These pertinent planning principles and financial assumptions are detailed in Table 5. No new funding sources are recognized for the fiscally constrained plan.

This financial plan for *DESTINATION 2030* also assumes a change in federal funding related to the minimum guarantee provision, as proposed in the Senate version

of the reauthorization bill (TEA-3). If passed, the Senate provision would increase the minimum guarantee from the current 90.5% to 95% return on a state's federal motor fuel tax contribution by 2010. Currently, Pennsylvania's rate of return is at about 120%, while New Jersey's rate of return is about 91%. This assumption is a departure from other assumptions in the financial plan which assume the status quo in federal funding programs or that carry forward clear trends. At this time, this assumption seems reasonable, though conservative. Finally, all amounts are stated in constant dollars.

	Financial Plan Parameter	Planning Principle and Justification	Assumptions (2006-2010) [‡]	Assumptions (2011-2030) [§]
	Totals ^a	Transportation Authorization Act	Roughly \$ 255B ^a	12% increases every 6 years
Federal Funds	Hwy/Transit Splits	Proportionate to Titles I & III in S.1072	80/20 after take-downs (3%) [«]	80/20 after take-downs (3%) "
	State Shares "	State Shares "% by mode after the take-downs;PA - 4.7% (hwy); 3.8% (trnst) NJ - 2.9% (hwy); 5.5% (trnst)		PA – 4.6% (hwy); 3.7% (trnst) NJ – 3.3% (hwy); 6.2% (trnst)
	DVRPC Shares	% by mode of the respective state's shares	PA – 26% (hwy); 65% (trnst) NJ – 18% (hwy); 12% (trnst)	PA – 26% (hwy); 66% (trnst) NJ – 20% (hwy); 12% (trnst)
	Totals	Proportionate to FY 2005 STIP levels	PA – \$1.8B (hwy); \$1.9B (trnst) NJ – \$3.4B (hwy); \$2.6B (trnst)	Tracks the respective state's federal share trends ¹
State Funds	Hwy/Transit Splits	Proportionate to FY 2005 STIP levels	PA – roughly 48 / 52 NJ – roughly 56 / 44	Preserve the split ratios
	DVRPC Shares	% by mode of the respective state fund totals	PA – 26% (hwy); 63% (trnst) NJ – 10% (hwy); 25% (trnst)	PA – 26% (hwy); 66% (trnst) NJ – 12% (hwy); 25% (trnst)

TABLE 5: FINANCIAL PRINCIPLES & ASSUMPTIONS – FEDERAL & STATE SOURCES[†]

NOTE:

+ Local funds do exist in the region, but are deemed marginal. Other financial resources including the Turnpike and toll revenues are identified by respective authorities and agencies, and as such, are not considered in the DVRPC's LRP.

^a Based on the TEA-3 estimate of \$300 B beginning in FFY 2004 and a 12% increase in the subsequent TEA. Assumes a sixyear cycle for all present and future federal reauthorization bills.

§ Long-term assumptions reflect the DVRPC's LRP vision and policies for the future where appropriate.

The take-downs, typically 2% - 3% of the authorized total, include provisions for research, safety, and other miscellaneous items.

» Includes Earmark and Demo funds at the same proportion as in ISTEA and TEA-21. 95% donor/donee equity adjustments are proportionate to the yearly apportionment changes in S.1072, which achieves the 95% equity by 2010.

State funds are independent of the federal 95% equity changes.

Revenues

In all, DVRPC anticipates that over \$57.3 billion will be available from traditional financial sources for the region for transportation improvements over the life of *DESTINATION 2030*. This amount assumes as a starting point the passage of TEA-3 federal reauthorization bill at a level of \$300 billion over six years (FY2004-FY2009). Table 6 details the estimated *DESTINATION 2030* resource amounts by mode, funding source and sub-region.

Mode	Funding Source	PA Sub-region	NJ Sub-region	DVRPC Total
	Federal	\$ 14.5 B	\$ 6.1 B	\$ 20.6 B
Hwy	State	\$ 4.6 B	\$ 4.1 B	\$ 8.7 B
	Subtotal	\$ 19.1 B	\$ 10.1 B	\$ 29.3 B
	Federal	\$ 7.1 B	\$ 2.4 B	\$ 9.5 B
Transfer	Federal (New Start) [‡]	\$ 0.6 B	\$ 0.6 B	\$ 1.2 B
Transit	State	\$ 11.5 B	\$ 5.9 B	\$ 17.4 B
	Subtotal	\$ 19.2 B	\$ 8.9 B	\$ 28.1 B
	Grand Total	\$ 38.3 B	\$ 19.0 B	\$ 57.3 B

TABLE 6: ESTIMATED FINANCIAL RESOURCES BY MODE, FUNDING SOURCE & SUB-REGION[†]

NOTE:

+ All amounts are DVRPC estimates over the life of the LRP, and are based on the \$300 B estimate for TEA-3. All figures are in 2005 dollars, and are rounded off to the nearest tenth of a billion.

Represents the discretionary federal matching amount for transit new start projects in respective sub-region. Currently, FTA meets roughly 4%-5% of all New Starts demands nationally with Full Funding Grant Agreements. Upon consultation with FTA, DVRPC assumes that the region receives two New Start matches over the life of the LRP, which are evenly divided between the two sub-regions. It is extremely rare that any new transit project would receive more than \$0.6 B in New Starts funds.

Figure 3 shows how the \$57.3 billion region total is allocated by mode and by sub-region. The assumptions translate into roughly \$38.3 billion for the Pennsylvania sub-region and \$19.0 billion for the New Jersey sub-region over the life of the long-range plan. As structured, the Pennsylvania sub-region receives 2/3 of the total funds identified for the region and the New Jersey sub-region 1/3. Of the assumed total, roughly 54% is from federal sources; the rest is from the respective state funds. Figures 4 and 5 detail the fund composition by mode in the sub-regions.

FIGURE 3: REGIONWIDE (\$57.3 B) ALLOCATION BY SUB-REGION



Note: From the assumed total of \$57.3 billion. Federal Transit New Start funds (PA-2; NJ-2) are pulled out slightly to indicate their discretionary nature. Percentages correspond to the expected amounts, which are not guaranteed.

FIGURE 4: SUB-REGIONAL (\$38.3 B) ALLOCATION BY MODE - PENNSYLVANIA



Note: From the assumed sub-regional total of \$38.3 billion. Federal Transit New Start fund (T-2) is pulled out slightly to indicate its discretionary nature. Percentage corresponds to the expected amounts, which is not guaranteed.

FIGURE 5: SUB-REGIONAL (\$19.0 B) ALLOCATION BY MODE - NEW JERSEY



Note: From the assumed sub-regional total of \$19.0 billion. Federal Transit New Start fund (T-2) is pulled out slightly to indicate its discretionary nature. Percentage corresponds to the expected amounts, which is not guaranteed.

This financial plan also provides a fiscal framework for capital project planning. *DESTINATION 2030* defines three time periods in the Plan, and each plan project (see Major Regional Projects section) has a corresponding estimated completion year within one of these periods. Identified financial resources are distributed over the life of the Plan to ensure fiscal responsibility, and subtotals – by sub-region, by mode, and by time frame – function as control totals for the fiscally constrained project set. Table 7 shows this fiscal framework.

	Mode	2006-2010	2011-2020	2021-2030	Plan Total
	Hwy	\$ 3.3 B	\$ 7.3 B	\$ 8.5 B	\$ 19.1 B
5.0	Transit	\$ 2.4 B	\$ 7.7 B	\$ 8.4 B	\$ 18.6 B
PA	Transit (New Start) [‡]		-		\$ 0.6 B
	Sub-region Total §	\$ 5.8 B	\$ 15.0 B	\$ 16.9 B	\$ 38.3 B
	Hwy	\$ 1.7 B	\$ 3.9 B	\$ 4.6 B	\$ 10.1 B
	Transit	\$ 1.1 B	\$ 3.4 B	\$ 3.8 B	\$ 8.3 B
БМ	Transit (New Start) [‡]	-	-	-	\$ 0.6 B
	Sub-region Total §	\$ 2.8 B	\$ 7.3 B	\$ 8.3 B	\$ 19.0 B
	Regionwide Total §	\$ 8.6 B	\$ 22.3 B	\$ 25.2 B	\$ 57.3 B

TABLE 7: ESTIMATED FINANCIAL RESOURCES BY MODE AND TIME FRAME[†]

NOTE:

† All amounts are DVRPC estimates over the life of the LRP, and are based on the \$300 B estimate for TEA-3. All figures are in 2005 dollars, and are rounded off to the nearest tenth of a billion.

‡ Represents the discretionary federal matching amount for transit new start projects in respective sub-region. Currently, FTA meets roughly 4%-5% of all New Starts demands nationally with Full Funding Grant Agreements. Upon consultation with FTA, DVRPC assumes that the region receives two New Start matches over the life of the LRP, which are evenly divided between the two sub-regions. It is extremely rare that any new transit project would receive more than \$0.6B in New Starts funds.

§ Due to the New Start provision, individual time frame totals may not add up to their respective plan totals.

GARVEE Bonds in New Jersey

Beginning in FY 2006, NJDOT will begin using a federal innovative financing program (Grant Anticipation Revenue Vehicles, or "GARVEEs") to finance certain highcost projects. GARVEE bonds allow FHWA to authorize a project agreement that reimburses the state for the total project cost plus debt service over a longer period of time, typically 12 years, than would be otherwise allowed (no longer than the period of construction). Future federal appropriations are pledged to pay down the GARVEE bonds. While GARVEE funding adds debt service costs to the project costs, these are expected to be offset by avoidance of recurring expenditures for maintenance and the increase in construction costs that would occur if the project were delayed.

Expenditures

The financial plan also describes anticipated usage of the identified resources over the life of Plan. Identified highway and transit funds are allocated to various plan funding categories and the percentage proportions reflect the DVRPC's long-term transportation vision for the future.

There are five categories in both highway and transit. They are:

<u>Highway</u>

- n ROADWAY RECONSTRUCTION/REHABILITATION/RESURFACE/RESTORATION
- n BRIDGE REPLACEMENT/RESTORATION
- n SAFETY & OPERATIONAL IMPROVEMENTS
- n NEW CAPACITY
- ⁿ OTHER (including ITS and bike/ped trail projects)

<u>Transit</u>

- n TRACK & SYSTEM REHABILITATION/RESTORATION
- n VEHICLE REHABILITATION/RESTORATION/REPLACEMENT
- n System & Operational Improvements
- n NEW CAPACITY
- n OTHER (including park & ride and ITS projects)

The ROADWAY RECONSTRUCTION-REHABILITATION-RESURFACE-RESTORATION and BRIDGE REPLACEMENT-RESTORATION categories are two highway capital maintenance categories. Long-term needs in these two categories are not individually listed in the Plan, but funds are set aside to address all appropriate projects arising from the regional transportation system needs. Those projects will be able to draw from the allocated amount as they advance into the TIP process throughout the life of the Plan, so long as the allocated category funds are not depleted. Likewise, on the transit side, the TRACK & SYSTEM REHABILITATION-RESTORATION and VEHICLE REHABILITATION-RESTORATION-REPLACEMENT categories are the capital maintenance categories for the long-term needs. These funds will be shared between SEPTA and Pottstown Urban Transit (PUT) in the Pennsylvania sub-region and between NJ TRANSIT and PATCO in the New Jersey sub-region. Individual transit projects in these capital maintenance categories are not listed on the Major Regional Project list, either.

The highway *NEW CAPACITY* category is for projects that construct new roads and interchanges or that provide additional capacity (e.g. by adding through lanes) on existing facilities. An extensive list of candidate projects was identified in this category, and an evaluation exercise was performed to prioritize projects for inclusion in the Major Regional Project list. The 10% allocation of funds in this category reflects the region's "fix-it-first" approach. In the Pennsylvania sub-region, one tenth of the New Capacity

allocation will be held in reserve for smaller emerging new capacity projects that may be identified in the future.

On the transit side, the *NEW CAPACITY* category funds projects that are new transit facilities. In identifying available financial resources in this category, the federal discretionary funds (New Starts funds) are treated separately from other traditional sources. Currently, the FTA meets only 4%-5% of all demands nationally for Full Funding Grant Agreements under the New Starts funding program. FTA advised DVRPC that the region should anticipate no more than two New Start grants over the life of the LRP, each worth the national average of \$0.6 billion, which must be matched at least dollar for dollar by state and local funds. Therefore, DVRPC has assumed that the region will secure \$1.2 billion of the federal New Start funding over the life of the plan divided equally between PA and NJ, and that each sub-region will commit at least the same amount as match. In Table 4, the Transit New Capacity is shown as two parts. The first line, "As-Identified", refers to the allocation of funds for New Capacity from the region's identified financial resources. The second line, "New Start", is based on the above assumption concerning federal discretionary funding.

The long-range plan also allocates highway funds to the *SAFETY & OPERATIONAL IMPROVEMENTS* and *OTHER* categories. Transit funds are likewise allocated to the *SYSTEM & OPERATIONAL IMPROVEMENTS* and *OTHER* categories. However, projects in these categories are typically not identified until the needs arise or are often of an ongoing nature. Therefore, individual projects in these categories are not noted on the Major Regional Project list in the long-range plan.

The resulting funding scheme shown in Table 8, which is based on recent trends, known constraints and anticipated future needs, is the collective recommendation of DVRPC staff and our federal, state, and local highway and transit partners.

			PA Sub	-region	NJ Sub	region	DVBPC
Mode	Fund	ding Category	Allocation %	25-Year Estimate	Allocation %	25-Year Estimate	Total
	Rdwy Rci	ns/Rhb/Rsf/Rstrtn	45.0 %	\$ 8.6 B	35.0 %	\$ 3.5 B	\$ 12.2 B
	Bridge Rp	olcmt/Rstrtn	25.0 %	\$ 4.8 B	20.0 %	\$ 2.0 B	\$6.8 B
Hour	Safety &	Op Imp	15.0 %	\$ 2.9 B	25.0 %	\$ 2.5 B	\$ 5.4 B
пwy	New Cap	acity	10.0 %	\$ 1.9 B	10.0 %	\$ 1.0 B	\$ 2.9 B
	Other (IT	S, bike/ped, etc.)	5.0 %	\$ 1.0 B	10.0 %	\$ 1.0 B	\$ 2.0 B
		Subtotal	100.0 %	\$ 19.1 B	100 %	\$ 10.1 B	\$ 29.3 B
	Trk & Sys	s Rhb/Rstrtn	37.5 %	\$ 7.0 B	35.0 %	\$ 2.9 B	\$ 9.9 B
	Vhcl Rhb	/Rstrtn/Rplcmt	37.0 %	\$ 6.9 B	30.0 %	\$ 2.5 B	\$ 9.4 B
	Sys & Op	Imp	15.0 %	\$ 2.8 B	15.0 %	\$ 1.2 B	\$ 4.0 B
Transit ¹	New	As Identified §	5.5 %	\$ 1.0 B	15.0 %	\$ 1.2 B	\$ 2.3 B
	Capacity	New Start "		\$ 0.6 B		\$ 0.6 B	\$ 1.2 B
	Other (P&	&R, security, etc.)	5.0 %	\$ 0.9 B	5.0 %	\$ 0.4 B	\$ 1.3 B
	Ş	Subtotal		\$ 19.2 B		\$ 8.9 B	\$ 28.1 B
	Grand	Total		\$ 38.3 B		\$ 19.0 B	\$ 57.3 B

Table 8. Estimated Financial Resources by Funding Category[†]

NOTE:
† All figures are in 2005 dollars, and are rounded off to the nearest tenth of a billion.
§ Represents non-federal only, and does not include discretionary federal grants for transit new start projects.
« Represents the discretionary federal grant amount for transit new start projects in respective sub-region.



TRANSPORTATION

MAJOR REGIONAL PROJECTS





MAJOR REGIONAL TRANSPORTATION PROJECTS

The Destination 2030 Plan offers a framework for future transportation investments and puts forth a set transportation projects. The projects help to carry out the Plan's vision and goals. The projects listed in the Plan are major, regional projects that have significant impact on regional travel. All major regional projects included in the Long Range Plan were evaluated to determine how well they meet the goals of the Plan. The evaluation was based on 14 criteria that measure attainment of the transportation goals of the Plan. More details on the evaluation process is contained in the *Evaluation Criteria for Selecting Projects* section of this document

The project selection process was rooted in consensus-building, technical rigor, and flexibility. As previously noted, the vast majority of funds anticipated over the life of the Plan will be allocated for rebuilding and maintaining our existing roads, bridges and transit facilities. These projects are generally, not considered major, regionally-significant projects. Therefore, they are not specifically listed in the Long Range Plan. However, there must be funding available for these projects and *Destination 2030* has consulted with each state department of transportation and the various operating agencies to set aside sufficient funds to meet anticipated needs for such projects. The Financial Plan contains more details on the allocation of anticipated funds over the life of the Plan.

The Long Range Plan contains over 100 major regional projects. They are grouped by funding category to more readily show the financial constraint of the Plan. The projects are listed and mapped in the *Major Regional Transportation Projects* section of this document.

Evaluation Criteria for Linking Transportation Investments to the Goals of the Long Range Plan

The *Destination 2030* Long Range Plan includes a set of transportation projects to be carried out over the life of the Plan. The transportation projects serve as a tangible implementation of the Plan's goals and policies. The projects included in the plan are major regionally significant projects that will have an impact on regional travel. Smaller scale projects, such as individual intersection improvements and bridge replacements, are not specifically listed in the plan, but are considered consistent with the plan.

Destination 2030 seeks to create improved linkages between the transportation projects identified in the Plan and the goals and policies of the Plan. In order to help in the selection of projects, evaluation criteria were established for each of the six primary transportation goals and are shown below. The evaluation criteria cover an array of project types. Some criteria are suitable for all project types while others may only pertain to highway or transit projects. Projects are grouped together by funding category (i.e., reconstruction, new capacity, etc.) to facilitate easier comparisons. A positive response to a given criteria generally indicates a desirable attribute. Consequently, the more criteria that are checked, the more a project may be considered to be meeting the goals of the plan. The matrix that follows this section shows the results of the evaluation of major regional projects.

<u>Goal:</u>

Improve safety by reducing travel hazards through the application of technological improvements and by bringing our transportation system up to modern standards.

Evaluation Criteria:

- Is project located in a high accident location with more than twice the statewide average number of accidents for similar type facilities?
- Does the project improve safety by reducing the number or severity of accidents which occur on highways or transit systems by reconstructing a facility to modern standards or improving the geometry or alignment of a facility?

<u>Goal:</u>

Reduce congestion by making the transportation infrastructure more efficient, instituting transportation demand management strategies and providing alternatives to the single-occupant vehicle.

Evaluation Criteria:

- Is the project located in a congested corridor as identified in the regional Congestion Management System?
- Is the project a transportation demand management strategy or does it provide an alternative to or improve the area coverage and/or operation of an alternative to the single-occupant vehicle?

<u>Goal:</u>

Rebuild the transportation infrastructure with a focus on maintaining our current system before expanding capacity to new areas.

Evaluation Criteria:

- Does the project maintain or improve an existing facility?
- Does this project serve or support an existing Plan Center as identified in the Land Use Plan Map?

<u>Goal:</u>

Enhance the environment by ensuring transportation investments improve or preserve our natural environment

Evaluation Criteria:

- Is the project located beyond an area targeted for preservation in the Greenspace Network or Conservation Focus Areas?
- Will the project contribute to a reduction in vehicle miles traveled by reducing singleoccupant vehicle trips or promoting the use of public transit and ridesharing and/or improving or expanding bicycle and pedestrian facilities?

<u>Goal:</u>

Increase mobility by providing additional choices for travel and guaranteeing the transportation system accommodates everyone.

Evaluation Criteria:

• Does the project serve an area with a large proportion of households without access to an automobile?

AND

Will the project provide more non-auto options for commuters by:

- o Improving the operation of transit service and/or increasing the coverage area.
- Increasing the number of multi-modal transportation centers and park and ride facilities, or
- Encouraging pedestrian and/or bicycle use or supporting transit-oriented land use and mixed-use development?

• Will the project establish opportunities for linkages between transportation modes or otherwise improve the intermodal connectivity of the transportation system?

<u>Goal:</u>

Link transportation improvements to land use and economic development policies outlined in the Long Range Plan in order to create a holistic built environment.

Evaluation Criteria:

- Is the project located in a developed or future growth area as shown on the Land Use Map?
- Is the project located in a Core City or Developed Communities as shown on the Planning Areas Map?
- Will the project improve access to major rail freight or port facilities?
- Will the project improve access to areas of major employment concentration based on the map of Major Employment Centers?

Destination 2030 Long Range Plan Fiscally-Constrained Major Regional Projects

Destination 2030 Major Regional Transportation Projects		Imp Sat	Improve Safety		prove Reduce Safety Congestion		Rebui Infrast	ld the ructure	Enhan Enviro	nce the	Increase Mobility		Link Tr a	ansporta nd Econo	tion to La mic Goal	nd Use Is	
ID	Facility	Limits	Brief Description	Located in High Accident Location	Reduce Accident Number or Severity	Located in Congested Corridor	TDM or Provide Alternative to SOV	Improve Existing Facility	Support Existing Centers	Not Located in Preservation Area	Reduce VMT or Promote Transit and/or Bike/Ped	Large Proportion of Car Less HH & Provide More Non-auto Options	Provide Intermodal Linkages	Located in Developed or Future Growth Area	Located in Core City or 1st Generation Suburbs	Improve Access to Freight Facilities	Improve Access to Employment Centers
HRR	HIGHWAY RECONSTRUCTION/REHABIL	ITATION/RESURFACING/RESTORATION	December		- 10 - 4 - 1			100						1.4			
2	US 422	Berks County line to Sanatoga	Reconstruction	•	1	•			•					•			
3	US 1 US 30 Downingtown-Coatesville Bypass	Baltimore Pike to Maryland state line PA 10 to Exton Bypass	Reconstruction Reconstruction	•	1	•								0	•		
5	US 1 - Media Bypass I-476	I-476 to Baltimore Pike PA Turnpike to Delaware County line	Reconstruction Reconstruction	•		•		1	•					•	•		
7	PA 309 I-95	Greenwood Ave to Welsh Rd within Philadelphia	Reconstruction Reconstruction (see also 60)	•		•			•					•	•		
9 10	I-295 NJ 42 Freeway	US 1 to I-195 and CR 561 to CR 607	Reconstruction	•		•			•	•				0	•		•
HSO	HIGHWAY SAFETY/OPERATIONAL IMPR	OVEMENTS		1999				1 SIRE				25	Tata)				
11 12	PA 113 Heritage Corridor PA 413	Schuylkill River to PA 611 PA 611 to Delaware River	Intersection and Corridor Improvements Access Management Improvements	•		•					1			0	0		•
13 14	US 13 Street Rd.	Levittown Parkway to Philadelphia line at I-95 interchange	Access Management & Corridor Improvements Interchange Reconstruction	•		•			•	•	/			•	•		•
15 16	Bristol Rd. PA 52	Old Lincoln Highway to Hulmeville Rd. PA 926 to US 1	Add Center Turn Lane Realignment/Safety Improvements/New Bridge	•		•		,		•	_			•	•		•
17 18	US 30, PA 82, Station I-95	Coatesville Redevelopment Area at US 322	New Bridge and Access Improvements Interchange Reconstruction & Bridgewater Rd. Extension			•		1	•	•		•	1	•	•	•	•
19 20	I-95 Ridge Pike	at I-476 and Chestnut Street On-Ramp Butler Pike to Norristown	Interchange Reconstruction Intersection Improvements/ Widening to 5 lanes	•		•		1		•				•	•		•
21 22	US 202 (Sec. 500) Markley Street Ben Franklin Bridge	Main St. to Johnson Hwy. West Side Connector - Ben Franklin Bridge to Vine St.	Signal Improvements, Center Turn Lane, Widening Bridge Egress Improvements	•		•			•	•				•	•		•
23	National Highway System Connectors	to Intermodal Freight Facilities	Pavement, Geometry, Operations and Signing Improvements Grade-Separated Interchance	•	/	•		1	•	-			1	•	•	1	•
25	CR 530 (South Pemberton Rd.)	US 206 to Magnolia Rd. (CR 644)	Add Center Turn Lane on CR 530		,	0				-					•		-
27	US 130 and US 30	at Collingswood Circle	Eliminate Circle	•	/	•		,	-	•	4			•	•		•
29	US 130 and CR 551	at Brooklawn Circle	Redesign Intersection			•		1	•	•				•	•		•
HNC	HIGHWAY NEW CAPACITY	Instruct									and the					151	
31 32	I-476 (PA Tumpike Northeast Ext.) US 202 (Sec. 700)	Lansdale to Allentown Montgomeryville to Doylestown	Widen to 6 Lanes New 2 Lane Parkway and Intersection Improvements	•		•	-	1	•	0				0			•
33 34	County Line Road I-95	PA 309 to PA 611 at I-276 (PA Turnpike)	Widening/Reconstruction New Interchange; Delaware R. Bridge and Widening	•		•		1		0				•	•		•
35 36	I-95 US 1	Scudders Falls Bridge to PA 332 I-276 (PA Turnpike) to NJ state line	Widening Reconstruction, Widening & Interchange Improvements	•	,	•			•	•				•	•	•	•
37 38	US 202 (Sec. 100) I-76 (PA Tumpike)	West Chester to DE state line Downingtown to Valley Forge	Widening and Supportive Land Use Plans Widening			0		,	•	•	,			•			•
39 40	French Creek Parkway PA 100	PA 23 to PA 29 Shoen Rd to Fellowship Rd	Construct New Road Widening	•		•		,	•	•				•	•		•
41 42	US 202 (Sec. 300) US 1	PA 252 to US 30 within East Marlborough Township	Widening/Reconstruction Widen to 6 Lanes	•		•		,	•	•				•			•
43 44	PA 41 US 30	Delaware state line to PA 926 Exton Mall to US 202	Reconstruction / Widening Widen to 5 Lanes	•		0		1.	•	•				•	•		•
45 46	I-76 (PA Tumpike) US 30 Bypass	at PA 29 Interchange at Airport Road	Electronic Interchange Interchange Improvements			•		1		•				0	•		•
47	US 322 US 1 / US 322	US 1 to I-95 US 202 (Sec 100) to US 322 in Concord	Widening/Reconstruction Widening	•		0		1	•	•				•		•	•
49	US 322 / Commodore Barry Bridge	to PA 291/2nd St. Mid-County to Lansdale	Construct Ramps to Bridge Widen to 6 Lanes	•		•		,	•	•				•	•		•
51 52	PA 23 I-76 / Henderson Rd.	US 202 to US 422 Henderson Rd. (South Gulph Rd. to US 202)	New 2 Lane Highway Construct Ramps to 1-76 / Widening/Reconstruction			0			•	0				•			•
53 54	Lafayette St. US 202 (Sec. 600)	to Conshohocken Rd.; New PA Turnpike Interchange	Roadway Ext./ Intersection & Bridge Improvements			•			٠	•				•	•		•
55	PA 309 Connector Road Matsonford Bridge / Road	PA 309 to Sumneytown Pike	New Road and Upgrades/Reconstruction			•			•	•				•	•		•
57	Ridge Pike	Butler Pike to Philadelphia	Intersection Improvements/ Widen to 4 Lanes/Recon.	•		•		,		•				•	•		•
59 60	River Crossing Complex	US 202 to PA 363 over Perkiomen Creek	Widening/Interchange Imprvmnts. at PA 23 & PA 363			•			•	•				•	-		•
61 62	I-95 North Delaware Ave	Cottman, Girard, Allegheny, Bridge, & Betsy Ross Bridge	Interchange Improvements (see also 8) Arterial Extension			•				•				•	•	•	•
63 64	Delaware Ave & Penrose Ave/26th St Adams Ave. Connector	to Navy Yard Business Center	New Access Roadways from the East and West Extend Roadway to New Ramos			•			•	•				•	•	•	•
65 66	PA 63 (Woodhaven Road) New Jersey Tumpike	US 1 to Philmont Ave. Exit 4 to Delaware Memorial Bridge	Traffic Flow Improvements			•			•	•				•	•	-	•
67 68	New Jersey Tumpike US 206 (Old York Road)	Exit 6 to Exit 8A at Rising Sun Road	Widening New Connector Road	•		•		1		•					•		•
69 70	I-295	at NJ 38	Add Missing Movements at Interchange			•		-		•				•			•
71	NJ 70 NJ 73 NJ 90 & US 130	Mariton to Medford	Widening Access Improvements	. • .		•			•	•				•		0	•
73	I-295 NJ 42 Freeway	at NJ 42 / I-76 at College Drive	Add Missing Movements at Interchange	•		•				•				•	•	-	•
75	I-295 NJ 55	at NJ 42 / I-76 at Deotford Center Rd	Direct Connection of I-295 Through Interchange	•		•				•				•	•	•	•
77	US 322 Paulsboro Bridge	US 130 to NJ Tumpike I-295 to Paulsboro BP site	Widening New Bridge and Roadway Improvements	•		•		.1		0				0			
79 80	CR 571 NJ 33 Bypass	Wallace-Cranbury to Clarksville Rds. Washington Blvd. to US 130	Widening, Reconstruction, Signals Realignment / Extend Kuser Rd. to Robbinsville Rd.	•	,	•			•	•			-	•			•
81 82	West Trenton (Ewing) Transit Village US 1 - Penns Neck Area	West Trenton Bypass in vicinity of Penns Neck	New Connector Roads New Connector Road, Interchanges and Widening	•		•		,	•	•				•	•		•
83 HO	NJ 29 HIGHWAY OTHER	US 1 to Sullivan Way	Convert NJ 29 to an Urban Boulevard	•	1	•			•	•	-	-	The second	•	•	25-51220	•
84	RIMIS - Regional ITS	Traffic Operations Center	Regional ITS Coordination		1			1		State Ba							
86	ITS Maintenance	Regionwide in PA	Maintain Equipment and the Traffic Operations Centers														
88	ITS Traffic & Incident Management	Regionwide in NJ Regionwide in NJ	Smart Moves Program, IMRT & Emergency Service Patrol						-	-				-	-	-	-
90	ITS Deployment DRPA Traffic Operations Center	Regionwide in NJ DRPA Facilities	CCTV, VMS, Detectors, and Fiber Optic					,									
TTR	TRANSIT TRACK AND SYSTEM REHABIL	ITATION/RECONSTRUCTION/REPLACEMENT									PIG		No Trige				
92 TOI	Market-Frankford Line TRANSIT SYSTEM/OPERATIONAL IMPRO	46th St. to 69th St.	Reconstruction		/	•	/	1	•	•	,	•		•	•	BURNIN	•
93	SEPTA Fare Payment Modernization	Systemwide Systemwide	Updated Fare Collection			an Grego	1	1			1						
95 06	Keystone Corridor (Passenger)	Philadelphia to Harrisburg at Paoli Train Station	Operation Standard Upgrade / Rehabilitation			•	,		•	0		•		•	•		•
97 08	West Chester Pike Busway Route 23 / Route 56	North Lawrence Rd. to 69th St. Terminal	Reserved Bus Lane			•	1		•	•		•		•	•		•
99	Regional Rail R1 / Route 36	Eastwick Operational Improvements	New R1 Station and Route 36 Extension			•			•	•		•	1	•	•		•
101	PATCO Transfer Station	at Lindenwold	Operations Building for River Line and Atlantic City Pail Line			•			-		· ·	•		•	•	-	•
102	Woodbury Transportation Center	Woodbury	to Serve Bus Routes	Contraction of the	A-L WALL	•			•	•		•		•	•		•
TNC 104	Delaware River Tram	Philadelphia to Camden	New Aerial Tram		1000	•	/		•	•		•	,	•	•		•
105 106	Quakertown Line Regional Rail (R6) / Schuylkill Valley Metro	Lansdale to Hellertown Norristown to Wyomissing	New Passenger Rail Line Rail Line Extension			0	1		•	•	,	•	,	•	0		•
107 108	Regional Rail (R3) Route 100 Spur	Elwyn to Wawa Hughes Park to King of Prussia	Rail Line Extension Rail Line Extension			•	1	,	•	•	1			•			•
109 110	Broad Street Subway NJ Transit US 1 BRT	Pattison Ave. to Navy Yard Central NJ / US 1 BRT	Rail Line Extension New Bus Rapid Transit Service			•	,	,	•	•	,	•		•			•
111 112	Rail line to Gloucester County River Line LRT	Camden / Gloucester Counties Trenton Station to State Capitol	Construct New Rail Line Extend LRT Line			•	,		•	•		•	1	•	•		•



DESTINATION 2030 FISCALLY-CONSTRAINED MAJOR REGIONAL PROJECTS

		DESTINATION 2030 FISCALLY-CONSTRAINED MAJOR REGIONAL PROJECTS			lementa	tion	1			1	ocation					Cost
ID	FACILITY	LIMITS	BRIEF DESCRIPTION	2005 - 2010	2011 - 2020	2021 - 2030	Bucks	Chester	Delaware	Montgomery	Philadelphia	Burlington	Camden	Gloucester	Mercer	(in millions)
1	-95	in Bucks County	Reconstruction		×		x						-			\$545.0
2	US 1	Berks County line to Sanatoga Baltimore Pike to Maryland state line	Reconstruction Reconstruction		x			x		X						\$210.0 \$200.0
4	US 30 Downingtown-Coatesville Bypass US 1 - Media Bypass	PA 10 to Exton Bypass I-476 to Baltimore Pike	Reconstruction Reconstruction			x		X	x							\$187.5 \$20.0
6 7	PA 309	PA Turnpike to Delaware County line Greenwood Ave to Welsh Rd	Reconstruction Reconstruction	x						×						\$70.0 \$280.0
9	I-95	Within Philadelphia US 1 to I-195 and CR 561 to CR 607	Reconstruction (see also 60) Reconstruction	X	x						X	x		×	x	\$500.0
HIGHW	NJ 42 Freeway AY SAFETY/OPERATIONAL IMPROVEMENTS	I-7671-295 to A.C. Expressway	Reconstruction	1	×	1.41			6.5		Ser. A		×	×	192	\$15.0
11 12	PA 113 Heritage Corridor PA 413	Schuylkill River to PA 611 PA 611 to Delaware River	Intersection and Corridor Improvements Access Management Improvements			× ×	x x			X						\$25.0 \$25.0
13 14	US 13 Street Rd.	Levittown Parkway to Philadelphia line at I-95 interchange	Access Management & Corridor Improvements Interchange Reconstruction			× ×	××									\$25.0 \$30.0
15 16	Bristol Rd	Old Lincoln Highway to Hulmeville Rd. PA 926 to US 1	Add Center Turn Lane Realignment/Safety Improvements/New Bridge	× X			×	x								\$5.3 \$8.0
17 18	US 30, PA 82, and Station I-95	Coatesville Redevelopment Area at US 322	New Bridge and Access Improvements Interchange Reconstruction & Bridgewater Rd. Extension	x	×			X	x							\$10.0 \$40.0
19 20	I-95 Ridge Pike	at I-476 and Chestnut Street On-Ramp Butler Pike to Norristown	Interchange Reconstruction Intersection Improvements/ Widening to 5 lanes		×				X	x						\$15.0 \$25.0
21 22	US 202 (Sec. 500) Markley Street Ben Franklin Bridge	Main St. to Johnson Hwy. West Side Connector - Ben Franklin Bridge to Vine St.	Signal Improvements, Center Turn Lane, Widening Bridge Egress Improvements	X	x					X	x					\$22.8 \$35.0
23 24	National Highway System Connectors NJ 73 and NJ 70	to Intermodal Freight Facilities at Marlton Circle	Pavement, Geometry, Operations and Signing Improvements Grade-Separated Interchange	×	×	×	X		X		×	×	×	X		\$25.0 \$36.0
25 26	CR 530 (South Pemberton Rd.) NJ 73	US 206 to Magnolia Rd. (CR 644) Marlton Circle to I-295	Add Center Turn Lane on CR 530 Intersection Improvements	X	x							x				\$15.0 \$10.0
27 28	US 130 and US 30 NJ 73 and US 30	at Collingswood Circle at Berlin Circle	Eliminate Circle Eliminate Circle and Operational Improvements	x	X								x			\$20.0 \$47.0
29 30	US 130 and CR 551	at Brooklawn Circle at CR 620	Redesign Intersection Interchange Reconstruction		×								x	x		\$14.0 \$3.0
HIGHW 31	AY NEW CAPACITY I-476 (PA Turnpike Northeast Ext.)	Lansdale to Allentown	Widen to 6 Lanes *, ***			X	x			×			5.58%	144 A.M.		\$0.0
32 33	US 202 (Sec. 700) County Line Road	Montgomeryville to Doylestown PA 309 to PA 611	New 2 Lane Parkway and Intersection Improvements Widening/Reconstruction **		X	x	× ×			X X						\$200.0 \$30.0
34 35	I-95 I-95 at Scudders Falls Bridge	at I-276 (PA Turnpike) PA 332 to CR 579	New Interchange; Delaware R. Bridge and Widening *, ** Widening *		X X		X X					X			X	\$145.6 \$0.0
36 37	US 1 US 202 (Sec. 100)	I-276 (PA Turnpike) to NJ state line West Chester to DE state line	Reconstruction, Widening & Interchange Improvements ** Widening and Supportive Land Use Plans		X X		x	x	x			_				\$22.5 \$100.0
38 39	I-76 (PA Turnpike) French Creek Parkway	Downingtown to Valley Forge PA 23 to PA 29	Widening * Construct New Road	x	X			X X	-	X						\$0.0 \$20.0
40 41	PA 100 US 202 (Sec. 300)	Shoen Rd to Fellowship Rd PA 252 to US 30	Widening Widening/Reconstruction **	×	x			X X								\$40.0 \$50.0
42 43	US 1 PA 41	within East Marlborough Township Delaware state line to PA 926	Widen to 6 Lanes Reconstruction / Widening **	x	_	x		x x								\$5.0 \$22.5
44 45	US 30 I-76 (PA Tumpike)	Exton Mall to US 202 at PA 29 Interchange	Widen to 5 Lanes Electronic Interchange *	x	X			X X								\$15.0 \$0.0
46 47	US 30 Bypass US 322	at Airport Road US 1 to I-95	Interchange Improvements		x	x		X	x							\$62.5 \$40.0
48 49	US 1 / US 322 US 322 / Commodore Barry Bridge	US 202 (Sec 100) to US 322 in Concord to PA 291/2nd St.	Widening Construct Ramps to Bridge	x		x			× ×		-					\$15.0 \$27.0
50 51	I-476 (PA Turnpike Northeast Ext.) PA 23	Mid-County to Lansdale US 202 to US 422	Widen to 6 Lanes * New 2 Lane Highway		X	x				X X						\$0.0 \$60.0
52 53	I-76 / Henderson Rd. Lafayette St.	Henderson Rd. (South Gulph Rd. to US 202) to Conshohocken Rd.; New PA Turnpike Interchange	Construct Ramps to I-76 / Widening/Reconstruction ** Roadway Extension/ Intersection & Bridge Improvements		x	X				x x						\$18.0 \$75.0
54 55	US 202 (Sec. 600) PA 309 Connector Road	Johnson Hwy. to PA 309 PA 309 to Sumneytown Piko	Widening/Reconstruction ** Now: Road and Upgrades/Reconstruction **	X	x		×			X X						\$70.0 \$40.0
56 57	Matsonford Bridge / Road Ridge Pike	I-476 interchange to Elm St. Butler Pike to Philadelphia	Widening /Improvements/Reconstruction ** Intersection Improvements/Widen to 4 Lanes/Reconstruction **		x	X				x						\$20.0 \$5.0
58 59	I-276 (PA Turnpike) River Crossing Complex	Norristown to Valley Forge US 202 to PA 363	Widening* Widening/Interchange Improvements at PA 23 & PA 363	×		x				X						\$0.0 \$136.0
60 61	Ridge Pike Bridge I-95	over Perkiomen Creek Cottman, Girard, Allegheny, Bridge, & Betsy Ross Bridge	New Bridge and Roadway Realignment Interchange Improvements (see also 8)	X		x				X	x					\$20.0
62 63	North Delaware Ave. Delaware Ave & Penrose Ave/26th St	Lewis to Bridge to Navy Yard Business Center	New Access Roadways from the East and West	×	~	-					x					\$10.0
64 65	Adams Ave. Connector PA 63 (Woodhaven Road) New Jacobi Tumpilo	US 1 to Philmont Ave.	Traffic Flow Improvements		^	x				x	×	×	~	×		\$25.0
67	New Jersey Turnpike	Exit 4 to Delaware memorial bridge Exit 6 to Exit 8A	Widening , Widening *, ***	v	x	^						×	^	^	x	\$0.0
69 70	US 206 (Uld York Road) I-295	at NJ 38	New Connector rotado Add Missing Movements at Interchange Midania / Interchange	×								×				\$103.8
70	NJ 73 NJ 70 NJ 73 NJ 90 & US 130	Mariton to Medford	Widening / Intersection Improvements Widening Access Improvements		x							×				\$70.0 \$30.0
72	I-295	at NJ 42 / I-76	Add Missing Movements at Interchange	x	×								×	x		\$81.2 \$17.0
75	I-295	at NJ 42 / 1-76	Direct Connection of I-295 Through Interchange		x								×	×		\$300.0
77	US 322 Paulsboro Bridge	US 130 to NJ Turnpike	Widening New Bridge and Roadway Improvements		x	x								x		\$74.0 \$16.0
79 80	CR 571 NJ 33 Bypass	Wallace-Cranbury to Clarksville Rds. Washington Blvd. to US 130	Widening, Reconstruction, Signals Realignment / Extend Kuser Rd. to Robbinsville Rd.		X	X					1				X X	\$8.0 \$16.3
81 82	West Trenton (Ewing) Transit Village	West Trenton Bypass in vicinity of Penns Neck	New Connector Roads New Connector Road, Interchanges and Widening			X X		-				_			X X	\$8.0 \$90.0
83 HICLINE	NJ 29	US 1 to Sullivan Way	Convert NJ 29 to an Urban Boulevard	1996	X	1.5	17105	STRANS.	-			1200	allen.	1. 2007-2	X	\$175.0
84	RIMIS - Regional ITS	Traffic Operations Center	Regional ITS Coordination	X	X	X	X	X	X	X	X	x	x	x	x	\$25.0
85	ITS Maintenance	Regionwide in PA	Initiation Cut v, vmo, Lettectors and Fiber Optic Maintain Equipment and the Traffic Operations Centers Transportation Control Control Control	X	x	x	X	X	x	x	X					\$8.2
87	ITS Traffic & Incident Management	Regionwide in NJ	Smart Moves Program, IMRT & Emergency Service Patrol	X	x	x					*	X	X	X	X	\$52.4
90	ITS Trattic Operations Center ITS Deployment DPDA Traffic Operations Center	Regionwide in NJ Regionwide in NJ DDDA Excilition	CCTV, VMS, Detectors, and Fiber Optic	X	x	X	v		v		v	X	X	X	x	\$135.0
TRANS	DRPA Traffic Operations Center		Trainc Operations Center	*	10550											\$0.0
A	Market-Frankford Line	46th St. to 69th St.	Reconstruction	X			19	Her.St.	X		X					\$219.0
BC	Fare Payment Modernization Smart Stations	Systemwide Systemwide	Updated Fare Collection Improved Station Safety, Security and Communications	x	x		X X	X X	X X	X X	X X					\$49.0 \$75.9
DE	Keystone Corridor (Passenger) Regional Rail (R5)	Philadelphia to Harrisburg at Paoli Train Station	Operation Standard Upgrade / Rehabilitation *** Multimodal Center and Access Improvements	X	x			× ×	X	x	x					\$180.0 \$50.0
F	West Chester Pike Busway Route 23 / Route 56	North Lawrence Rd. to 69th St. Terminal Entire Routes	Reserved Bus Lane		X	X			X		x	1				\$10.0 \$319.0
H	Regional Rail R1 / Route 36 River Line LRT	Eastwick Operational Improvements	New R1 Station and Route 36 Extension Extend Sidings and Other Rail Improvements		X X						X	x	x			\$10.8 \$20.0
J	PATCO Transfer Station	at Lindenwold at Delair	Operations Building * for River Line and Atlantic City Rail Line	X	x	-							X X			\$0.0 \$11.8
L	Woodbury Transportation Center	Woodbury	to Serve Bus Routes	X	- No				1.8	1000				X	14. S. 16	\$6.0
M	Delaware River Tram	Philadelphia to Camden	New Aerial Tram *		×						x		X			\$0.0
N O	Quakertown Line Regional Rail (R6) / Schuylkill Valley Metro	Lansdale to Hellerlown Norristown to Wyomissing	New Passenger Hall Line *** Rail Line Extension *** Duble Content for the former forme		x	X	X	x	-	X	x					\$200.0
Q	Regional Rail (R3) Route 100 Spur	Ewyn to Wawa Hughes Park to King of Prussia	reau Line Extension Rail Line Extension Dell Line Extension	X	x				*		v					\$150.0 \$200.0
R S	NJ Transit US 1 BRT	Central NJ / US 1 BRT	New Bus Rapid Transit Service *** Construct New Bail Line			X					~		v	v	x	\$250.0
U	rvan line to Gloucester County River Line LRT	Trenton Station to State Capitol	Extend LRT Line		X								^	~	x	\$100.0



TRANSPORTATION

ASPIRATIONS





Destination 2030 ASPIRATIONS

There are many more identified regional transportation needs than there is funding available for over the life of the Plan. In order to highlight the discrepancy between needed and available funding, as well as provide a list of regional priorities, a list of future aspirations is included as part of the *Destination 2030* Long Range Plan. Major regional needs that have been identified as part of the development of the long range plan but are currently unable to be funded due to fiscal constraint are included in this list. This is not an all-inclusive list. These are only the major regional projects that were identified during the development of the fiscally-constrained Plan. Projects may be periodically added to the Aspirations list without amending the Plan. However, any changes to the fiscally-constrained project set will require an amendment. In the event that additional funds are identified or as individual project priorities change, the Long Range Plan may be amended to include additional projects.

DVRPC will undertake a project in FY 2006 to compile a detailed and accurate picture of the current transportation related funding resources in the Commonwealth of Pennsylvania, and in particular those available to the five county Pennsylvania portion of the DVRPC region. The project will assess the transportation funding needs of the region, assess the shortfall in existing revenue sources; and investigate and evaluate potential new sources of funding for the region with the intent to incorporate findings from this project the Long Range Plan.

	Table 11: M	ajor Regional Tra	nsportation Aspir	ati	on	S						
		Project			P	ennsylvar	nia			New J	lersey	
ID	Facility	Limits	Brief Description	Bucks	Chester	Delaware	Montgomery	Philadelphia	Burlington	Camden	Gloucester	Mercer
	HIGHWAY											
A1	County Line Road	Buck Road to New Road	Widening	x			x					
A2	Inter-County Relief Route	PA 113 to PA 29	New Connector Road	Personal and	x		x					
A3	US 202 (Sec. 200)	Matlack Street to US 30	Widening		x							
A4	PA 3	US 202 to PA 352	Widen to Six Lanes		x							
A5	US 202 (Sec. 200)	at US 322 Bypass	Interchange Construction		x							
A6	PA 113	US 30 Bypass to Peck Road	Widen to Four Lanes		x							
A7	I-95 / PA 291	Trainer Borough	New Connector Road			x						
A8	US 1 / PA 452	Interchange at US 1 / PA 452	Grade-Separated Interchange			x						
A9	R3 Regional Rail Line	Morton, Secane and Primos Stations	Remove At-Grade Crossings			x						
A10	Germantown Pike	PA 363 to North Wales Road	Widening				x					
A11	US 422	Pawlings Road to Limerick	Widening and New Interchange				x					
A12	Sumneytown Pike	PA 63 to Troxel	Widen to Four Lanes				x					
A13	PA 29	Mennonite Road to Collegeville	Widen Four Lanes				x					
A14	PA 113	Creamery Village	Relocate PA 113 near Creamery Village				x					
A15	US 202 (Sec. 500)	Henderson Road to Allendale Road	Widen to Six Lanes / Reconstruction				х					
A16	Royersford / Spring City Bridge	Over Schuylkill River	Grade Separation from Norfolk Southern Tracks				X					
A17	Crossroads Bridge	Over Schuylkill River	New Bridge				X					
A18	1-76	I-476 to US 202	Widening / Reconstruction				X					
A19	Township Line Road	US 422 to Schwenksville	Widen to 3 to 5 Lanes				X					
A20	PA 63	PA 113 to Wambold Road	Widening				x					
A21	PA 309	PA 63 to North Wales Road	Widen to Six Lanes, Grade Separation of PA 63				x					
A22	1-76	at Hollow Road (Gladwyne Interchange)	Construct Full Interchange				X					
A23	I-276 (PA Turnpike)	at PA 63	New Electronic Interchange				X					
A24	Delaware Avenue	Allegheny Avenue to Cumberland Street	Construct New Rroad					X		×		
A25	Cramer Hill Bridge	Harrison Street to US 30 and I-676	New Bridge and Ramps							×		
A26	CR 536 Spur	NJ 42 to CR 706								×	x	
A27	CR 534	NJ 42 to CR 686 at CR 703	Widening							Ŷ		
A28	CR 705		Widening							×		
A29	Mercer Crossing	Evtend Calbour Street to Spruce Street	Widening Widening Signals Bynass							1		x
AJU						10.00					Salaria.	
			Ducklateral	~			×			all and a		U.S.
A31	Regional Rail (R2)	Roslyn to Warminster		*	Y		*					
A32	Regional Rail (R5)		New Transportation Center & Access Improvements		*	v						
A33		1-4/6 to woodland Avenue				~						
A34	P2 Wilmington / P1 Aimort	Infound R2 Service	Improved Connection between P2 and Airport			×						
000		Control-Point Philadalphia						×				
A30	Regional Rail (R8)	Fox Chase to Newtown	Extension	×			×	×				
A38	Cross County Métro Phase 2	King of Prussia to Trenton	New Rail Line	x			x	Contraction of the				x
A39	Morrisville Station	NJ Transit Line to Morrisville	New Rail Station and Parking	x								x
A40	Regional Rail (R2)	Warminster to Wycombe	Extension	x								
A41	Cross County Metro Phase 1	Thorndale to King of Prussia	New Rail Line		x		x					
A42	Regional Rail (R3)	Wawa to West Chester	Extension	-	x	x			*)			
A43	Regional Rail (R5)	Thorndale to Atglen	Extension		x							
A44	Regional Rail	Wawa to Painter's Crossroads	New Rail Line			x						
A45	Rte. 100 High-Speed Line	King of Prussia to Valley Forge	Extension				x					
A46	New Ferry Service	Navy Yard to South Jersey	New Service					x			x	
A47	New Transit Line	Sports Complex / Navy Yard to Gloucester County	New Transit Line					x			x	
A48	City Branch Line & Historic Trolley	Penn's Landing to 52nd Street	New Transit Service					x				
A49	North Delaware Riverfront Transit	North Delaware Riverfront	North Delaware Avenue Transit Initiative					x				
A50	PATCO - Philadelphia Extension	Center City and/or Columbus Boulevard	Transit Line Extension					x				
A51	Northeast Rapid Transit Line	Broad Street to Southampton Road	Transit Line Extension					x				
A52	Cape May Seashore Line	Lindenwold to Cape May	New Rail Line							x		
A53	I-295 / US 130 Corridor	Woodbury to Corporate Campuses / Industrial Parks	Shuttle and Internal Circulator Services								x	
A54	Regional Rail (R3)	West Trenton to Newark	New Rail Line									x



TRANSPORTATION

TRANSPORTATION MODULES





TRANSPORTATION

TRANSPORTATION MODULES

I. AVIATION





AVIATION

To maintain an efficient, safe and competitive regional airports system, certain facility goals need to be achieved through specific improvements. Those improvements are at not only the commercial airports in our region, but also the General Aviation and Business Aviation facilities. DVRPC has developed, with the Regional Aviation Committee, policy goals and a list of projects that are most important to maintain competitiveness and achieve the regional objectives set forth in this and previous vision plans for the next 25 years.

Policy Goals:

The DVRPC Office of Aviation Staff works to integrate and improve Aviation policies at all governmental levels. In view of a looming federal and state funding crisis in the aviation trust fund, which provides the main funding source to non-commercial business and GA airports for safety/security, and capacity projects, DVRPC recommends study of an increase in the jet fuel tax, federal trust fund formulas, state and other revenue sources to remedy revenue losses due to airline service cutbacks.

Current federal policy prevents the sale of obligated airports even to parties willing to continue to utilize the land for aviation purposes. DVRPC will work with the states and the FAA to resolve the interpretation of issues restricting such transactions. In addition, more federal and state funds should be used for the purchase of land and easements to improve safety and satisfy GPS minimums. DVRPC continues to integrate regional airport capital needs with state and federal funding Programs (ACIP) to insure adequate regional aviation infrastructure investment.

Regional GA and commercial airports are experiencing continued land use pressure, which in turn hinders necessary airport development from being implemented. The need to introduce legislation to force airport municipal zoning and coordination of compatible land-use around airports on every planning level is a priority. Airport sponsors must also develop business plans for their facilities to satisfy airport and municipal needs. DVRPC will work to find alternative funding sources for our airports to ensure a safe, profitable regional aviation system.

Specific Facility Goals and Recommendations:

CAPACITY INCREASE

- Increase Philadelphia International Airport capacity by 30% including air traffic control, runway/taxiway and passenger terminal improvements.
- Design capacity increases and service improvements at existing smaller regional commercial airports, including TTN, ABE, ACY, NCC.
- Consider need for a new commercial airport location in central New Jersey.
- Willow Grove NAS conversion to corporate jet port.
- Penn's Landing Heliport, conduct FAA-AIP funding feasibility study, and extend pier to increase operating and storage capacity.
- Trenton Mercer, construct 2 new gates and increase parking lot capacity.
- System wide, construct hangars to house 500 additional aircraft at regional General Aviation (GA) and Reliever (business) airports and heliports.

RUNWAY/TAXIWAY EXTENSIONS

- Chester County, relocate and extend runway 700 feet to 6,100 feet total length.
- Pottstown Limerick, extend runway 1,201 feet to 4,570 feet total length.
- Doylestown, extend runway 800 feet to 3,800 feet total length.
- Quakertown, extend runway 600 feet to 3,800 feet total length.
- New Garden, extend taxiway 1,000 feet to 3,690 feet total length.
- South Jersey Regional, extend runway 1,600 feet to 5,500 feet total length.
- System wide, where appropriate implement safety area and approach improvements to allow small corporate jet operations.

PRESERVATION

- New Garden, public acquisition by New Garden Township.
- Pottstown Limerick, public acquisition by County (Montgomery County Airport Authority) or Municipality.
- System wide, conduct and update outdated Master Plans and Airport Layout Plans, develop airport business plans.




TRANSPORTATION

TRANSPORTATION MODULES

II. Freight





FREIGHT

The movement of freight is an important aspect of regional planning. Freight transport is integrally linked to economic growth and prosperity, the quality of life, and traffic volumes and patterns.

The Delaware Valley is a highly prominent international freight gateway with major air, rail, port, truck, and warehousing facilities. The Destination 2030 Long Range Plan seeks to maximize each of the individual modes of freight transport, and to improve intermodal connectivity. The 2030 Plan is further defined by delineating and focusing efforts on a major north-south freight corridor and a major east-west freight corridor.

In terms of projects, the 2030 Plan identifies \$2 billion in port improvements (i.e., in known costs) and \$785 million in rail freight improvements (i.e., in known costs). These improvements augment additional projects contained in the highway, transit, and aviation portions of the 2030 Plan which also facilitate the safe and efficient flow of freight. Public-private partnerships will be a key to funding and constructing these improvements.

DVRPC will continue to address freight issues and opportunities with the local freight community on a continuing, comprehensive, and cooperative basis. The DVRPC freight advisory committee, the Delaware Valley Goods Movement Task Force, spearheads DVRPC's freight planning program and was integrally involved in the formulation of the 2030 freight plan module.

Vision

ECONOMIC DEVELOPMENT WILL BE ADVANCED THROUGH FREIGHT TRANSPORTATION INFRASTRUCTURE, INVESTMENT, AND POLICIES.

The planning process will place emphasis on economic development. Transportation policies, regulations, and projects will support the needs of manufacturers, carriers, and consumers. The freight network is recognized as a cornerstone of efforts to foster a flourishing regional economy.

Policies and Strategies

IDENTIFY STRATEGIES AND IMPROVEMENTS THAT MAXIMIZE AIR, RAIL, SHIP, AND TRUCK MODAL CONTRIBUTIONS TO THE FLOW OF GOODS, INCLUDING CONNECTIONS BETWEEN THE MODES AND SUPPORT FACILITIES.

- Collect, analyze, and disseminate strategic goods movement data using information from public sources and facility owners and operators.
- Utilize and cultivate all available strategies and technologies to address capacity and bottleneck issues in corridors and for key freight generators and attractors.

- Employ the Delaware Valley Goods Movement Task Force to identify and advocate policies, regulations, and projects that promote the movement of freight.
- Promote orderly growth and development and a hierarchical transportation network that most efficiently uses primary corridors and feeder routes, and that minimizes total travel.
- Promote compatible interface and balance competing demands posed by the mixing of freight and passenger operations.

ELEVATE CONSIDERATIONS OF PROJECTS THAT PROMOTE EFFICIENT FREIGHT MOVEMENT AND ECONOMIC DEVELOPMENT.

- Maintain the freight community's close involvement in federal and state funding programs.
- Document and communicate the positive economic and quality of life effects resulting from freight improvements, as well as the alternative consequences if no improvements are made, to decision makers when funding allocation priorities are being established...
- Support partnerships between the freight community, economic development agencies, adjacent regions and states, multi-national corporations, and foreign diplomatic offices.

INTEGRATE FREIGHT FACILITIES AND OPERATIONS WITH COMMUNITY GOALS.

- Promote safety and environmental programs that minimize the negative impacts of freight operations, while supporting the positive contributions derived from freight movement.
- Prepare education materials and *big picture views* that explain freight and distribution practices, trends, implications, and benefits to the private sector, the general public, and affected public agencies.
- Inform local elected officials about zoning, planning ordinances, and site design strategies which help better manage freight activity.
- Advance the reuse of brownfields as transportation and distribution facilities.
- Support efforts to assure national security and national defense.

Table 12: DVRPC 2030 Transportation Plan Identified Port and Rail Freight Projects

No.	Facility	Limits and Location	Brief Project Description	Counties	Cost Est. (\$millions)	
Ports and Adjacent Facilities						
1.	Delaware River	Delaware River Bay to Ben Franklin Bridge	Deepen main channel to 45 feet	Delaware, Philadelphia, Gloucester, and Camden	\$300.0	
2.	Broadway Terminal	Broadway and Morgan Boulevard	Make terminal improvements, expand bulkhead, and improve highway access	Camden	\$100.0	
3.	Paulsboro Port	Former BP site near Mantua Ave.	Construct commercial port and improve rail	Gloucester	\$80.0-120.0	
4.	Crown Landing LNG Facility	Logan Township	Construct liquid natural gas facility and tanks, berthing pier, and connections to area pipeline systems	Gloucester	\$500.0	
5.	Philadelphia Freedom Energy Center	Port Richmond PGW facility	Expand liquid natural gas facility	Philadelphia	\$600.0	
6.	Pier 74 South	Columbus Blvd. and McKean St.	Construct paper products warehouse	Philadelphia	\$12.0	
7.	Food Distribution Center	South Philadelphia	Construct new produce and seafood terminals and cross- dock facility	Philadelphia	\$150.0	
8.	Northport- FastShip Terminal	Columbus Blvd. and Packer Avenue at the Publicker site	Expand Packer Avenue Marine Terminal container operations or construct high- tech terminal	Philadelphia	\$50.0-125.0	
9.	Southport	South of the Packer Avenue Marine Terminal	Construct new marine terminal on 87 acres of land	Philadelphia	\$230.0	
10.	Schuylkill River Piers 1, 2, and 3	near Girard Point Bridge (I-95)	Reconstruct piers and improve landside infrastructure	Philadelphia	NA	
11.	Penn Terminals	Saville Avenue, near PA 291	Renovate and expand warehouses	Delaware	\$6.8	

No.	Facility	Limits and Location	Brief Project Description	Counties	Cost Est. (\$millions)
Rail Freight					
12.	CSX Philadelphia Subdivision line	Delaware state line to CSX Trenton line	Construct second main track and Main Street grade crossing separation	Delaware	\$23.6
13.	CSX Philadelphia Subdivision line	Broad Street to Clifton Avenue	Undertake 11 clearance projects for high stack car equipment	Delaware, Philadelphia	\$5.0
14.	CSX Trenton Subdivision line	Philadelphia to Woodbourne	Undertake 33 clearance projects for higher doublestack container cars	Bucks, Philadelphia	\$28.4
15.	CSX Trenton Subdivision line	CP Wood to CP Nice	Add 16.5 miles of second main track	Bucks, Philadelphia	\$61.8
16.	CSX Trenton Subdivision line	Manville Yard to Wing	Add second main track and traffic control system	Mercer	\$46.0
17.	Norfolk Southern Harrisburg and Morrisville lines	Abrams to Morrisville	Restore second main track, rehabilitate bridges and culverts, and make other related improvements	Bucks, Montgomery	\$43.4
18.	Norfolk Southern Harrisburg line	CP Rock to CP Norris	Install traffic control system for rail operations	Montgomery	\$3.4
19.	Norfolk Southern Jersey Track	Zoo Interlocking	Reconstruct track connection between Amtrak Northeast Corridor and Keystone Corridor	Philadelphia	\$2.5
20.	Norfolk Southern Berry Tracks	Zoo Interlocking	Rehabilitate connections from High Line to Amtrak Northeast Corridor	Philadelphia	\$31.0
21.	High Line and Trenton Subdivision line	High Line, and CP Park to CP River	Construct additional main track, and other signal and track improvements	Philadelphia	\$121.5
22.	Amtrak Keystone Corridor	Philadelphia to Harrisburg	Implement clearance improvements and 286,000 lb. upgrades	Chester, Delaware, Montgomery, and Phila.	\$10.0
23.	Amtrak Northeast Corridor	Delaware County to Mercer County	Effect clearance and 286,000 lb. railcar weight capacity improvements	Delaware, Philadelphia, Bucks, Mercer	NA

No.	Facility	Limits and Location	Brief Project Description	Counties	Cost Est. (\$millions)
24.	Amtrak Northeast Corridor	CP Phil to CP Holly	Construct separate Norfolk Southern freight track	Delaware, Philadelphia	\$350.0
25.	SEPTA R1 and R2 lines	Phil Interlocking and Amtrak Northeast Corridor	Provide flyover for northbound SEPTA R1 trains from Philadelphia International Airport and R2 trains from Wilmington	Philadelphia	\$35.0
26.	SMS Rail Lines	Penn Warner Industrial Park, Falls Township	Construct new rail siding and upgrade existing rail	Bucks	\$0.4
27.	Octoraro Branch	Chadds Ford Junction to West Nottingham	Improve ties, rail, crossings, drainage, and bridges	Chester	\$5.0
28.	ISG Rail Yard	Coatesville	Undertake 286,000 lb. railcar capacity improvements	Chester	\$1.0-3.0
29.	Stony Creek Branch and SEPTA R5 line	Philadelphia to Lansdale	Improve rail freight route and expand Lansdale Yard	Montgomery	NA
30.	Port Richmond Branch	Richmond Street to Clairessa St.	Improve vertical clearances to port area	Philadelphia	NA
31.	Delair Branch	Philadelphia Beltline North	Construct track connection	Philadelphia	\$5.0
32.	Bustleton Branch	Willits Road overpass	Lower track profile to increase vertical clearances	Philadelphia	\$1.0
33.	Paulsboro Branch	Valero Refinery	Upgrade main line and yard tracks	Gloucester	\$1.0
34.	Bridgeport Branch	Pureland Industrial Park	Upgrade existing rail and construct new rail siding	Gloucester	\$0.9
35.	Vineland Secondary	Wenonah; over Mantua Creek	Replace timber trestle	Gloucester	\$1.5
36.	Salem Branch	Oldman's Creek	Replace wooden trestle	Gloucester, Salem	\$2.0

No.	Facility	Limits and Location	Brief Project Description	Counties	Cost Est. (\$millions)
37.	Southern Railroad of New Jersey	Winslow Junction	Construct Hazmat storage yard	Camden	\$0.8
38.	Delair Branch	Delair Bridge	Install remote control operations	Philadelphia, Camden	\$2.0
39.	Delair Branch	Delair Bridge	Replace deck spans	Philadelphia, Camden	\$10.0
40.	Robbinsville Secondary Track	Bordentown to Yardville	Rehabilitate 5.5 miles of track	Burlington, Mercer	\$2.5
41.	Pemberton Industrial Track	Hainesport Industrial Park	Construct 1300 ft. runaround	Burlington	\$0.5
42.	New Jersey north-south connection	South Jersey, Delaware Valley region	Restore and facilitate intra- state north-south rail moves	Mercer, Burlington	NA

Notes

Prepared by DVRPC and the Delaware Valley Goods Movement Task Force Planning Subcommittee. Many projects in the highway, transit, and aviation portions of the 2030 Plan also facilitate freight movement. CP=Control Point. (NA) shaded cells indicate information is not determined.





TRANSPORTATION

TRANSPORTATION MODULES

III. BICYCLE AND PEDESTRIAN





BICYCLE AND PEDESTRIAN

Vision

The Delaware Valley is a place where people of all ages choose to bicycle and walk for routine transportation, as part of an active, healthy lifestyle, and to experience the remarkable natural and cultural resources of the region. Residents and visitors alike are able to conveniently walk and bicycle with confidence and a sense of security in every community.

Goals

DVRPC embraces the twin goals of the USDOT: doubling the percentage of trips by foot and bicycle while reducing the number of injuries and fatalities suffered by bicyclists and pedestrians by 10 percent from current levels.

To accomplish this requires a program addressing the 4 E's: Engineering, Education, Enforcement and Encouragement. To this end, DVRPC:

- Works with the state DOTs, counties and municipalities to accommodate bicyclists and pedestrians in all highway projects.
- Works to accelerate the development of a regional trails network.
- Serves as a catalyst for education, encouragement and enforcement programs to increase safe bicycle and pedestrian travel.

Policies

DESIGN STREETS AND HIGHWAYS FOR ALL USERS

- Highway projects are designed to accommodate bicyclists and pedestrians in accordance with USDOT policy and guidance and each state's Bicycle and Pedestrian Master Plan.
- TIP project sponsors routinely address bicyclist and pedestrian accommodation in project scope descriptions.

- DVRPC evaluates highway construction, reconstruction and resurfacing projects and recommends the appropriate level of bicyclist and pedestrian accommodation, addressing physical and right-of-way constraints, measures of probable demand, various area and roadway designations of state and regional plans, designated hazardous school walking routes, connectivity with the regional trail network, and roadway operational characteristics.
- Highway projects meeting a critical combination of factors as listed above are designed to accommodate "Group B" basic adult bicyclists in accordance with FHWA guidance and incorporate sidewalks. All other projects are designed to accommodate "Group A" (advanced) bicyclists except where bicycles are prohibited; in this instance, accommodation elsewhere within the right of way or corridor is investigated. Funding is allocated for necessary retrofit design work otherwise not provided for in highway maintenance program budgets.
- DVRPC provides technical and administrative assistance to municipalities for the development of municipal bicycle and pedestrian plans.
- DVRPC promotes the implementation of traffic-calming techniques in a context-sensitive approach.
- Major bridge construction and reconstruction projects provide new opportunities to cross the Delaware River, the region's longest single barrier to non-motorized travel, by bicycle or on foot. DVRPC works with bridge and turnpike authorities and commissions to incorporate non-motorized access in project scopes, plans and designs, in compliance with USDOT policy; and to remove financial, legal, statutory, regulatory, and technical impediments to implementation.
- DVRPC works with its planning partners to foster the creation of safe walking and bicycling routes to primary and secondary schools.
- DVRPC and the state DOTs systematically record and measure progress toward the plan's goals and objectives. DVRPC performs a regional bicycle travel survey once every ten years, and keeps an updated inventory of regionally significant trails and trail development projects; and the DOTs record the presence of bike lanes and sidewalks in their Roadway Management System inventories.

PROMOTE DEVELOPMENT OF A REGIONAL TRAIL NETWORK

- DVRPC works with its planning partners to accelerate the movement of trail projects through the project development pipeline.
- DVRPC supports the completion of the East Coast Greenway through the region.
 - DVRPC has developed a future trails network that identifies existing and proposed trails. Funding for future trail projects is accounted for in the financial plan.

PROMOTE SAFE NON-MOTORIZED TRAVEL THROUGH EDUCATION, ENFORCEMENT AND ENCOURAGEMENT

- DVRPC promotes the inclusion of bicycle education curricula in middle schools through the dissemination of information and the benefits of such programs.
- DVRPC encourages adherence to and enforcement of vehicle laws for the safety of bicyclists and pedestrians through execution and funding of education and awareness campaigns and regional conferences.
- DVRPC works with transportation management associations to encourage more and safer bicycling and walking.

ACCOMMODATE BICYCLES ON PUBLIC TRANSPORTATION

• Transit operators strive for constant improvement in the offering and marketing of bicycle transport and parking amenities for their customers.

DVRPC works with transit operators to ensure secure bicycle parking facilities at all rail stations and transportation centers sufficient to meet current and potential demand. Operators keep an inventory of such facilities as part of an asset management system.

2030 Regional Trails Network

Southeastern Pennsylvania





Delaware Valley Regional Planning Commission June 2005

Sources: DVRPC, Natural Lands Trust, Brandywine Conservancy, Heritage Conservancy, GreenSpace Alliance, Bucks County Planning Commission, Chester County Planning Commission, Delaware County Planning Department, Montgomery County Planning Commission, Philadelphia City Planning Commission, PADCNR

1. Octoraro

- 2. Oxford-Avondale
- 3. Big Elk Creek
- 4. White Clay Creek
- 5. Delaware Arc
- 6. Red Clay Creek
- 7. Brandywine-Struble

9. Buck-Atglen 10. Chester Valley 11. Welsh Mtn.-St. Peters 12. Sow Belly-French Creek 13. Brandywine -Marsh Creek

14. Pickering Creek

8. Brandywine-West Branch

16. Horse Shoe 17. County Seat 18. Harvey Run-Naaman Creek 19. Chester Creek 20. Ridlley Creek 21. Newtown

15. Uwchlan

- 22. Darby-Cobbs 23. Schuylkill River 24. Route 291/13 25. Tinicum-Ft. Mifflin 26. Manatawny 27. West County 28. Sunrise
- 29. Perkiomen 30. Evansburg 31. Stony Creek 32. Liberty Bell 33. Power Line 34. Cross County

35. Wissahickon

- 36. Cresheim Valley
- 37. Pennypack
- 38. North Delaware Greenway
- 39. Delaware Canal Towpath
- 40. Neshaminy Creek
- 41. Core Creek
- 42. Washington Crossing

- 43. Little Neshaminy
- 44. Pennridge Area Network
- 45. Tohickon Creek
- 46. Nockamixon
- 47. Cooks Creek-Lake Towhee

2030 Regional Trails Network

Southern New Jersey





Sources: DVRPC, NJDEP, New Jersey Conservation Foundation, Mercer County Planning Division, Burlington County Departmen of Resource Conservation, Camden County Division of Open Space and Farmland Preservation

7. Pemberton
8. Rancocas Creek
9. Mt. Holly-Cherry Hill
10. River-to-Bay
11. Camden Waterfront
12. West Jersey-Seashore

13. East Atlantic
14. Gloucester-Mt. Ephraim
15. Big Timber Creek
16. Central Railroad
17. Mantua Creek
18. Raccoon Creek

19. Gloucester County
 20. Hospitality Branch
 21. Bridgeton Secondary
 22. Little Ease
 23. Lawrence Hopewell

This map depicts existing, planned and proposed trails and trail corridors. The lines on this map depict generalized trail alignments.



TRANSPORTATION

TRANSPORTATION MODULES

IV. INTELLIGENT TRANSPORTATION SYSTEMS





INTELLIGENT TRANSPORTATION SYSTEMS

Vision

According to national statistics, 55 percent of the congestion in major metropolitan areas is attributable to non-recurring congestion caused by accidents, special events, construction and maintenance activity, and other types of incidents. The goal of ITS is to implement an infrastructure to monitor traffic and transit networks, identify incidents as soon as possible, trigger an appropriate response, and notify the traveling public so they can take alternative routes or modes to avoid getting stuck in delays. Because traffic congestion does not recognize jurisdictional boundaries, a secondary goal of ITS is to establish institutional relationships that will allow different types of transportation agencies to coordinate their operations with each other, and with non-transportation organizations like police and fire departments. The Regional ITS Architecture for the Delaware Valley establishes the framework for information sharing by identifying the interagency linkages and information flows that will be built into the region's ITS network.

Strategies

IMPLEMENT HIGHWAY ITS INFRASTRUCTURE

- Deploy basic field devices including closed circuit television (CCTV) cameras, variable message signs (VMS), and traffic flow detectors.
- Implement fiber optic communications networks to link field devices to operation centers.
- Establish operation centers at all major transportation organizations, operate centers 24X7.
- Install high speed E-ZPass lanes, security cameras at bridges and other sensitive transportation structures, and equipment for commercial vehicle operations.

IMPLEMENT INCIDENT MANAGEMENT PROGRAMS

- Deploy emergency service patrol vehicles to assist motorists.
- Utilize incident management task forces to improve incident management coordination. Task forces are composed of departments of transportation, state police, 911 dispatchers, tow truck operators, and local police, fire, and EMS personnel.
- Establish incident management response teams to coordinate a department of transportation's response to incidents.

• Use integrated corridor management control to dynamically implement expressway detours. Traffic signal timings on diversion routes would automatically change to reflect the surge in traffic. Blankout signs will delineate the detour route for motorists.

IMPLEMENT TRANSIT MANAGEMENT PROGRAMS

- Deploy advance control systems for rail and buses. This encompasses automatic vehicle location (ALV) for buses, and signal and electrical systems for rail.
- Modernize transit control centers to incorporate the latest technology.
- Implement advanced traveler information systems for transit riders, including smart bus stops, and VMS signs and public address systems for rail stations.
- Implement advanced passenger security systems.

IMPLEMENT TRAVELER INFORMATION PROGRAMS

- Maintain public-private partnerships with traffic reporting services.
- Provide basic pre-trip and enroute travel information to the public.
- Deploy 511 telephone number for traveler information.

Regional Initiatives and Policies

Below are items that need to be addressed on a regional basis by the ITS Technical Task Force and/or by individual agencies:

- Implement the Regional Integrated Multi-modal Information Sharing (RIMIS) information exchange network.
- Establish policies and priorities for implementing closed loop traffic signal systems and coordinating the signal systems across neighboring jurisdictions.
- Conduct a regional Smart Card study to evaluate the need and feasibility of implementing a regional advanced Smart Card based fare collection program.
- Conduct a regional study to evaluate various probe vehicle technologies for obtaining traffic flow information, and develop a regional consensus on the best approach. Traffic flow information will generate realtime travel time information for motorists.
- Develop policies to fund ITS maintenance and operations through the TIP. These costs are associated with maintaining field devices, leasing telecommunication lines, software maintenance, and staffing operation centers and emergency service patrols.





TRANSPORTATION

AIR QUALITY CONFORMITY





Air Quality Conformity

A Demonstration of Transportation Conformity of the DVRPC Destination 2030 Long Range Plan, including the FY2005-2008 Pennsylvania Transportation Improvement Program, and the FY 2006-2008 New Jersey Transportation Improvement Program with the State Air Quality Implementation Plans of Pennsylvania and New Jersey



EXECUTIVE SUMMARY

OVERVIEW

This report documents the demonstration of transportation conformity of the DVRPC *Destination 2030 Long Range Plan*, including the *FY 2005-2008 Pennsylvania Transportation Improvement Program* [*Plan*] and the *FY 2006-2008 New Jersey Transportation Improvement Program* [*TIP*] with the respective State Implementation Plans [*SIPs*] of Pennsylvania [PA] and New Jersey [NJ] under the current federal Clean Air Act as amended [CAAA]. Three interlocking circles appearing throughout this report represent the unity of these conformity components: the *Plan*, the *TIP* and the *SIPs*.

This conformity demonstration is based on the current final conformity guidance [*Final Rule*] including 40 CFR Part 93 as revised, and adheres to all requirements in the current National Ambient Air Quality Standards [NAAQS]. Pollutants addressed include volatile organic compounds [VOCs], nitrogen oxides [NO_x] and carbon monoxide [CO]. Conformity findings must be based on established budgets (where appropriate) for VOCs, NO_x and CO for all applicable analysis years in both Pennsylvania and New Jersey. These analyses also incorporate the most recent population and employment projections approved by the DVRPC Board in February 2005 and other applicable latest planning assumptions.

Effective June 15, 2004, the United States Environmental Protection Agency [US EPA] finalized ground-level ozone designations under the new 8-hour ozone NAAQS, which replaces the 1-hour ozone NAAQS. Complying with the new regulation, DVRPC must now demonstrate transportation conformity of the *Plan* and the *TIP* under the 8-hour ozone NAAQS. The *Final Rule* dictates that conformity findings within the DVRPC

planning area, which is part of the Philadelphia-Wilmington-Atlantic City Moderate Ozone Non-attainment Area under the 8-hour ozone NAAQS, must be based on the existing 1-hour *SIP* budgets for VOCs and NO_x for all applicable analysis years in both Pennsylvania and New Jersey until new 8-hour ozone *SIPs* are implemented. Attainment of the new federal ozone standard in the area is required by the year 2010.

A portion of the region is also part of a CO moderate maintenance area. CO attainment was achieved under the existing CO NAAQS in 1996, and the current 10-year maintenance plan ends in 2007. US EPA has recently approved a revised CO Maintenance Plan for Philadelphia, to become effective June 3, 2005. As part of the SIP revision, emissions budgets have been established for CO. CO emissions in Philadelphia will now be capped for conformity purposes as follows: 331.25 tons/day in 2007, 278.23 tons/day in 2013, and 260.97 tons/day in 2017. The *NJ SIP* for CO establishes maintenance budgets for Burlington, Camden and Mercer counties for 2007. New Jersey is currently developing a second ten-year CO Maintenance Plan. CO conformity is determined against these budgets.

PROJECTS AND ANALYSIS YEARS

There are two categories of projects in the *Plan* and the *TIP* for the conformity demonstration: 1) regionally significant and non-exempt projects, and; 2) projects exempted from the conformity analysis. The *Final Rule* defines a regionally significant project as a non-exempt transportation project that is on a facility serving regional transportation needs and would normally be included in the modeling of a metropolitan area's transportation network. The emission analysis of transportation plans and programs must model all regionally significant and non-exempt projects.

DVRPC's regional emissions analysis conducted to demonstrate conformity of the *Plan* and the *TIP* includes all "regionally significant, non-exempt" projects on principal arterials and higher classifications – that is, those which can impact regional air quality. The project set includes all those in the *Plan*, those in the current *TIP* and those which have been introduced in previous *TIPs* that are not yet completed. Those projects that are not able to be analyzed within the travel demand model are categorized as "off-network," are evaluated using "off-network" emissions estimate techniques, and their results are combined with the emissions estimates from the network modeling output.

Each categorized project is classified by the first year it is included in the analysis. For this iteration of transportation conformity, there are three analysis years for ozone (2010, 2020 and 2030). Additionally, carbon monoxide emissions are estimated for 2007, 2013 (Philadelphia only), and 2017 (Philadelphia only) and compared to the established motor vehicle budgets. These years are consistent with the *Final Rule*.

The analysis years for ground-level ozone are: 2010, which is the 8-hour ozone NAAQS attainment year, by when the region must achieve the 8-hour ozone standard; Year 2020 is the interim year selected to keep all analysis years no more than ten years apart; and the year 2030 is the horizon year of the *Plan*. VOCs and NOx, which are heat-related ozone precursors, are concerns during the summer months, and are estimated for a July day.

New Jersey is currently preparing its second ten-year carbon monoxide Maintenance Plan and is only required to meet the 2007 carbon monoxide budget. Due to the revised CO maintenance plan and CO SIP for Philadelphia, Philadelphia will also estimate emissions for 2013 and 2017, in addition to 2007, for CO conformity. CO is estimated for a January day since its effects are more prevalent during the winter months. To demonstrate conformity, projected emissions must not exceed the established budgets.

This iteration of transportation conformity includes a new long range plan and new New Jersey TIP. Additionally, the *FY 2005-2008 Pennsylvania TIP* will be included as part of the *Destination 2030 Long Range Plan* analysis to ensure consistent analysis years between the Long Range Plan and Pennsylvania TIP and to conform to the new CO Maintenance Plan. There are eight additional projects in the PA TIP since the last conformity demonstration. There is also one additional project from the previous PA TIP conformity determination that was constructed in FY 2005 and will be included as part of the base network for this iteration. All *Plan* and the *TIP* projects have been reviewed and approved by the TCICG for appropriate air quality code and analysis year.

PLANNING ASSUMPTIONS

The *Final Rule* is also clear that conformity demonstration must be based on all latest planning assumptions including the most recent estimates of population, employment, and other pertinent traffic information. A US EPA-US DOT joint guidance further specifies that these latest planning assumptions must be updated regularly and that they should be less than 5 years old.

DVRPC's long-range population and employment forecasts are revised periodically to reflect changing market trends, development patterns, local and national economic conditions, and other current and available data. DVRPC uses a multi-step, multi-source methodology to produce these estimates at the county-level. These estimates, in turn, become the control totals for municipal-level and traffic analysis zone [TAZ] level estimates.

Population forecasting at the regional level involves review and analysis of six major components: births, deaths, domestic in-migration, domestic out-migration, international immigration, and changes in group quarter populations (e.g. dormitories, military barracks, prisons, and nursing homes). DVRPC uses both the cohort survival concept to age individuals from one age group to the next, and a modified Markov transition probability model based on the US Census 2000 and the US Census' recent

Current Population Survey research to determine the flow of individuals between the region and the rest of the world. Current and future population estimates for the DVRPC planning area were adopted by the DVRPC Board in February 2005.

Employment is influenced by political and socioeconomic factors at local, national, and global levels. Using the time-series data on county sectoral employment from the Bureau of Economic Analysis [BEA] as the primary data source for employment forecasts, DVRPC utilizes the OBERS (formerly the Offices of Business Economics and of Economic Research Services) shift-share model in combination with the Woods and Poole Economics' sectoral forecasts to generate the basis for DVRPC's employment forecasts. These forecasts incorporate various supplementary data from private and public sectors including data from the US Census, BEA, Dun & Bradstreet, Bureau of Labor Statistics, Occupational Privilege Tax database, Woods & Poole Economics Complete Economic and Demographic Data Source, and other public and private sector statistics. Current and future employment estimates for the DVRPC planning area were adopted by the DVRPC Board in February 2005.

As part of the latest planning assumptions, current transit operations policies and other road toll structures are also considered. All transit fares entering the travel demand model are "blended" in a way that different existing fare types (e.g. cash, token, transfer charge, daily, weekly, and monthly passes) are aggregated into a single fare policy by transit operator based on percentage of the each fare type and use in the 1997 fare structure. Then, all future fares are held constant in current dollars. All current operating plans, ridership and service levels of transit systems are built in the transit network and are incorporated into the future year networks as well except where a future year transit network is augmented with any new services identified in the corresponding DVRPC *Plan* and *TIP*.

Other transportation related costs such as automobile operating costs, gasoline costs, parking costs, and road / bridge tolls are also based on current and available data, and are held constant in current dollars into the future analysis years. Vehicle registration data used in MOBILE6.2.03 (referred to as MOBILE6.2 hereafter) is from 2002 for both Pennsylvania and New Jersey.

Travel simulation work and other relevant quantitative analyses for this demonstration of transportation conformity began on March 28, 2005. All planning assumptions utilized in this demonstration are the latest and most current as of that date. All planning assumptions have been reviewed and approved by TCICG.

TRAVEL SIMULATIONS

Regional emissions analysis begins with travel simulations. The enhanced DVRPC travel simulation, validated in 1997, is a classic four-step transportation modeling application that operates within an iterative (Evans algorithm) structure with respect to highway travel time, and is disaggregated into separate peak, mid-day, and evening time periods. In the four-step modeling process, trip generation is based on

constant trip rates imbedded in a cross-classification structure. Trip distribution uses a doubly constrained gravity model, stratified into three person (home-based work, home-based non-work, and non-home-based) and four vehicle trip purposes. Modal split employs a binary probit-like formulation stratified by trip purpose, transit submode, and auto ownership. The highway assignment component is based on the equilibrium method using minimum travel-time path. Free flow highway speeds are entered via a look-up table stratified by functional class and density of development. Transit assignment is unrestrained, and uses minimum paths based on the modal split model definition of impedance.

While most regionally significant and non-exempt projects can be coded into the travel demand model, certain projects are not able to be analyzed within a regional network model. Such regionally significant and non-exempt projects are categorized as "off-network," and are evaluated using "off-network" impact estimate techniques. The Pennsylvania Air Quality Off-Network Estimator [PAQ-ONE] and the New Jersey Air Quality Off-Network Estimator [NJAQ-ONE] are a set of travel impact and emissions analysis methodologies developed for the Pennsylvania and New Jersey State Departments of Transportation [state DOTs]. However, due to their embedded settings, the off-network analyses are suitable only for summer conditions, and are not used in the winter CO analyses.

EMISSIONS ESTIMATES

The *Final Rule* regulates that the conformity determination must be based on the latest emission estimate model. MOBILE6.2 is the latest version of the family of MOBILE models, and reflects the cumulative technological enhancements, emissions control updates, and trend shifts introduced since 1996. These changes include expanded vehicle type categories and state inspection and maintenance [I/M] program specification options, more detailed vehicle activity information and fuel program definitions, and revised base emissions rates.

Utilizing these parameters, MOBILE6.2 settings are prepared to reflect the local condition, and the model is run to generate separate emissions factors for VOCs, and NOx appropriate for the years 2010, 2020, and 2030. CO emissions factors are also produced for 2007 (New Jersey and Philadelphia), 2013 (Philadelphia) and 2017 (Philadelphia), which are years with established budgets in the corresponding CO maintenance plans. All identified local parameters have been reviewed and approved by the TCICG.

Both PAQ-ONE and NJAQ-ONE also contain independent MOBILE6 modules to determine emissions estimates. Final off-network emissions estimate outputs show the changes in VOCs and NOx, in both kg/July-day and tons/July-day for individual projects. The off-network outputs also produce the change in CO, but as noted earlier, this analysis is not suitable for winter conditions.

FINDINGS

DVRPC has successfully demonstrated transportation conformity of the *Destination 2030 Long Range Plan*, including the *FY 2005-2008 Pennsylvania TIP*, and the *FY 2006-2008 New Jersey TIP* with the corresponding state *SIPs* and the *Final Rule* under the CAAA.

The *Plan* and the *TIP* meet all criteria for transportation conformity with the CAAA and both the Pennsylvania and New Jersey *SIPs*. The forecasted emissions of VOCs, NO_x and CO do not exceed the respective budgets established by the state DEPs in accordance with the *Final Rule* under the 8-hour ozone, and the CO NAAQS, and the transportation conformity analysis meets all applicable conformity criteria including the following:

- the *Plan* and the *TIP* are fiscally constrained [40 CFR 93.108];
- this determination is based on the latest planning assumptions [40 CFR 93.110];
- this determination is based on the latest emissions estimation model available [40 CFR 93.111];
- DVRPC has made the determination according to the applicable consultation procedures [40 CFR 93.112];
- the *Plan* and the *TIP* do not interfere with the timely implementation of TCMs [40 CFR 93.113]; and,
- the *Plan* and the *TIP* are consistent with the motor vehicle emissions budgets in the applicable implementation plans [40 CFR 93.118].

The following tables show the estimated emissions results and the demonstrated transportation conformity findings for the *Plan* and the *TIP*.

TABLE 13: ESTIMATED VOCS EMISSIONS (TONS/JULY DAY)[†]

		PA	NJ	Region
	MOBILE6 Emissions Budget	79.69	42.99	122.68
2010	Estimated Emissions Total	50.03	29.92	79.95
2020	Estimated Emissions Total	24.92	16.74	41.66
2030	Estimated Emissions Total	22.23	15.15	37.38

Note: † The 2005 1 Hour budget applies to all future analysis years. All emissions are rounded off to the nearest hundredth.

TABLE 14: ESTIMATED NO_x EMISSIONS (TONS/JULY DAY)[†]

		PA	NJ	Region
	MOBILE6 Emissions Budget	144.73	63.44	208.17
2010	Estimated Emissions Total	75.83	38.54	114.37
2020	Estimated Emissions Total	26.55	14.33	40.88
2030	Estimated Regional Emissions Total	17.24	10.25	27.49

Note: † The 2005 1-Hour budget applies to all future analysis years. All emissions are rounded off to the nearest hundredth.

TABLE 15: ESTIMATED CO EMISSIONS (TONS
--

		Burlington	Camden	Mercer	Philadelphia
2007	Emissions Budget	170.43	149.73	128.49	331.25
	Estimated Emissions Total	166.93	141.70	123.14	233.18
2010	Estimated Emissions Total	155.45	129.88	114.46	200.30
2013	Emissions Budget	N/A	N/A	N/A	278.23
	Estimated Emissions Total	N/A	N/A	N/A	176.15
2017	Emissions Budget	N/A	Ν/Λ	N/A	260.97
	Estimated Emissions Total	N/A	N/A	N/A	158.02
2020	Estimated Emissions Total	137.45	112.91	99.77	151.85
2030	Estimated Emissions Total	140.05	112.58	100.84	144.25
Mate	Notes to The 2007 had use for New Jacobia and the 2007 2012 and 2017 had use for Dependencia are based on MODIL EC				

for New Jersey and the 2007, 2013 and 2017 budgets for Pennsylvania are based on MOBILE6

Transportation conformity of the DVRPC Destination 2030 Long Range Plan, including the FY 2005-2008 Pennsylvania TIP, and the FY 2006-2008 New Jersey TIP with the corresponding state SIPs and the Final Rule under the CAAA including all current NAAQS requirements are hereby demonstrated and documented.
Transportation Conformity Air Quality Codes for Destination 2030 Major Regional Transportation Projects

	Table 16: Tra	Table 16: Transportation Conformity Air Quality Codes for Destination 2030 Major Regional Transportation Projects				1	1	Locatio	n				epo
				g	ter	are	meny	phia	gton	u -	ster	er	tillality of the second
ID	Facility	Limits	Brief Description	Buck	Chest	Delaw	ontgo	nilade	Burling	Camd	louce	Merc	Air (onfori
							¥	ā			Ľ		0
HIGHW	AY RECONSTRUCTION/REHABILITATION/RES	In Bucks County	Reconstruction	x	<u> </u>			T					S10
2	US 422	Berks County line to Sanatoga	Reconstruction	(MANAGAMAN)	X		X						S10
<u>3</u> 4	US 1 US 30 Downingtown-Coatesville Bypass	Baltimore Pike to Maryland state line PA 10 to Exton Bypass	Reconstruction		X X								S10 S10
5	US 1 - Media Bypass	I-476 to Baltimore Pike	Reconstruction			X	Y				\vdash		S10
7	PA 309	Greenwood Ave to Welsh Rd	Reconstruction				X						S10
8	I-95 I-295	within Philadelphia US 1 to I-195 and CR 561 to CR 607	Reconstruction (see also 60) Reconstruction					<u>×</u>	x	┝───┤	x	x	S10 S10
10	NJ 42 Freeway	I-76 / I-295 to A.C. Expressway	Reconstruction	000000000000000000000000000000000000000		L.	STEREMANDERS'			X	X		S10
HIGHW 11	PA 113 Heritage Corridor	Schuylkill River to PA 611	Intersection and Corridor Improvements	X	1	<u> </u>	x	<u> </u>		<u>г</u>			2030M
12	PA 413	PA 611 to Delaware River	Access Management Improvements	X				 					2030M
13 14	US 13 Street Rd.	Levittown Parkway to Philadelphia line at I-95 interchange	Interchange Reconstruction	X X									2030M R3
15	Bristol Rd.	Old Lincoln Highway to Hulmeville Rd.	Add Center Turn Lane Realinnment/Safety Improvements/New Bridge	×	¥	1							2010O
17	US 30, PA 82, and Station	Coatesville Redevelopment Area	New Bridge and Access Improvements		X								2020M
18 19	I-95 I-95	at US 322 at I-476 and Chestnut Street On-Bamp	Interchange Reconstruction & Bridgewater Rd. Extension			X X					┝──┥		2010M R3
20	Ridge Pike	Butler Pike to Norristown	Intersection Improvements/ Widening to 5 lanes				X						2020M
21	US 202 (Sec. 500) Markley Street Ben Franklin Bridge	Main St. to Johnson Hwy. West Side Connector - Ben Franklin Bridge to Vine St.	Signal Improvements, Center Turn Lane, Widening Bridge Egress Improvements				X	x					2010M 2020M
23	National Highway System Connectors	to Intermodal Freight Facilities	Pavement, Geometry, Operations and Signing Improvements	X		X		X					S19
24	CR 530 (South Pemberton Rd.)	US 206 to Magnolia Rd. (CR 644)	Add Center Turn Lane on CR 530						X				2010M
26	NJ 73	Martton Circle to I-295	Intersection Improvements						X	¥			2020M
28	NJ 73 and US 30	at Berlin Circle	Eliminate Circle and Operational Improvements			<u> </u>		<u> </u>	<u> </u>	x			2010M
29	US 130 and CR 551 I-295	at Brooklawn Circle at CR 620	Redesign Intersection					<u> </u>		X	X		S6 R3
HIGHW	AY NEW CAPACITY		·			L				1	accenter (2000)		
31	I-476 (PA Tumpike Northeast Ext.)	Lansdate to Allentown	Widen to 6 Lanes	X			X			\square	\square		2030M
33	County Line Road	PA 309 to PA 611	Widening/Reconstruction	X			X						2030M
34 35	I-95 I-95	at I-276 (PA Tumpike) Scudders Falls Bridae to PA 332	New Interchange; Delaware R. Bridge and Widening Widening	X]	<u> </u>	x			x	2020M
36	US 1	I-276 (PA Tumpike) to NJ state line	Reconstruction, Widening & Interchange Improvements	X	SSIMPLALA	Market Concernent							2020M
37 38	US 202 (Sec. 100) I-76 (PA Tumpike)	West Chester to DE state line Downingtown to Valley Forge	Widening and Supportive Land Use Plans Widening		X X	X	x	 					2020M 2020M
39	French Creek Parkway	PA 23 to PA 29	Construct New Road		X			[2010M
40	US 202 (Sec. 300)	PA 252 to US 30	Widening/Reconstruction		X X			<u> </u>					2020M 2010M
42	US 1	within East Marlborough Township	Widen to 6 Lanes		X			-					2010M
43	US 30	Exton Mali to US 202	Widen to 5 Lanes		X								2020M
45	I-76 (PA Tumpike) US 30 Bypass	at PA 29 Interchange at Airport Road	Electronic Interchange		X X			<u> </u>					2010M 2030M
47	US 322	US 1 to I-95	Widening/Reconstruction			X							2020M
48 49	US 1 / US 322 US 322 / Commodore Barry Bridge	US 202 (Sec 100) to US 322 in Concord to PA 291/2nd St.	Widening Construct Ramps to Bridge			X X		,-,		 			2030M 2010M
50	I-476 (PA Tumpike Northeast Ext.)	Mid-County to Lansdale	Widen to 6 Lanes				X						2020M
51 52	PA 23 I-76 / Henderson Rd.	US 202 to US 422 Henderson Rd. (South Gulph Rd. to US 202)	New 2 Lane Highway Construct Ramps to I-76 / Widening/Reconstruction				X X						2030M
53	Lafayette St.	to Conshohocken Rd.; New PA Turnpike Interchange	Roadway Extension/ Intersection & Bridge Improvements				X						2020M
55	PA 309 Connector Road	PA 309 to Sumneytown Pike	New Road and Upgrades/Reconstruction	X			X						2020M
56 57	Matsonford Bridge / Road Ridge Pike	I-476 interchange to Elm St. Butler Pike to Philadelphia	Widening /Improvements/Reconstruction Intersection Improvements/Widen to 4 Lanes/Reconstruction				X X						2030M 2020M
58	I-276 (PA Tumpike)	Norristown to Valley Forge	Widening				X						2010M
59 60	River Crossing Complex Ridge Pike Bridge	US 202 to PA 363 over Perkiomen Creek	Widening/Interchange Improvements at PA 23 & PA 363 New Bridge and Roadway Realignment				X X						2030M
61	I-95 North Delaware Ave	Cottman, Girard, Allegheny, Bridge, & Betsy Ross Bridge	Interchange Improvements (see also 8)					X					2010M
63	Delaware Ave & Penrose Ave/26th St	to Navy Yard Business Center	New Access Roadways from the East and West					X					2010M
64 65	Adams Ave. Connector PA 63 (Woodhaven Road)	I-95 and Aramingo Ave. US 1 to Philmont Ave.	Extend Roadway to New Ramps Traffic Flow Improvements				X	X X					2020M 2030M
66	New Jersey Turnpike	Exit 4 to Delaware Memorial Bridge	Widening						X	X	X		2030M
67 68	New Jersey Lumpike US 206 (Old York Road)	at Rising Sun Road	New Connector Road						X X			<u> </u>	2020M
69 70	I-295	at NJ 38 In visioity of Fox Meadow Rd	Add Missing Movements at Interchange						X				2010M
71	NJ 70	Mariton to Medford	Widening						X				2020M
72 73	NJ 73, NJ 90 & US 130 I-295	in Pennsauken at NJ 42 / I-76	Access Improvements Add Missing Movements at Interchange						×	x	X		2020M 2010M
74	NJ 42 Freeway	at College Drive	New Interchange							X			2020M
76	NJ 55	at Deptford Center Rd.	Interchange Improvements								X		2020M
77	US 322	US 130 to NJ Tumpike	Widening								X		2030M
79	CR 571	Wallace-Cranbury to Clarksville Rds.	Widening, Reconstruction, Signals									X	2030M
80 81	NJ 33 Bypass West Trenton (Ewing) Transit Village	Washington Blvd. to US 130 West Trenton Bypass	Realignment / Extend Kuser Rd. to Robbinsville Rd.			<u> </u>		<u> </u>	\vdash			X X	2020M 2030M
82	US 1 - Penns Neck Area	in vicinity of Penns Neck	New Connector Road, Interchanges and Widening									×	2030M
83 HIGHW	AY OTHER		Provincial Mar 24 in all Olinali DonieASIG	L		<u>ا</u> ــــــــــــــــــــــــــــــــــــ]				I	<u>.</u>	2020M
84	RIMIS - Regional ITS	Traffic Operations Center	Regional ITS Coordination	X	X	X	×	X	X	x	x	×	87
85 86	ITS Deployment	Regionwide in PA Regionwide in PA	Install CCTV, VMS, Detectors and Fiber Optic Maintain Equipment and the Traffic Operations Centers	X X	X X	X X	X X	X X					\$7 \$7
87	ITS Traffic Operations Centers	in Philadelphia	Transportation Central Control Centers					×	y	Y	¥	Y	S7
89	ITS Traffic Operations Center	Regionwide in NJ	Traffic Operations Center						X	X	X	X	57 S7
90 91	ITS Deployment DRPA Traffic Operations Center	Regionwide in NJ DRPA Facilities	CCTV, VMS, Detectors, and Fiber Optic Traffic Operations Center						X X	X X	X X	X	S7 S7
TRANS	IT TRACK AND SYSTEM REHABILITATION REG	CONSTRUCTION/REPLACEMENT											
92	Market-Frankford Line	46th St. to 69th St.	Reconstruction			X		X					M9
TRANS 93	IT SYSTEM/OPERATIONAL IMPROVEMENTS	Systemwide	Updated Fare Collection	X	X	x	X	×					M5
94	Smart Stations	Systemwide	Improved Station Safety, Security and Communications	X	x	x	x	X					M8
95 96	Keystone Corridor (Passenger) Regional Rail (R5)	Philadelphia to Harrisburg at Paoli Train Station	Operation Standard Upgrade / Rehabilitation Multimodal Center and Access Improvements		X X	X	X	×					M6 2020O
97	West Chester Pike Busway	North Lawrence Rd. to 69th St. Terminal	Reserved Bus Lane			×		v					2030M
99 99	Regional Rail R1 / Route 36	Eastwick	New R1 Station and Route 36 Extension					X	100944	Banau			2020M
100	River Line LRT	Operational Improvements at Lindenwold	Extend Sidings and Other Rail Improvements Operations Building						<u>×</u>	X			M9 M6
102	Transfer Station	at Delair	for River Line and Allantic City Rail Line							x	10000000000000000000000000000000000000		2020M
103	Woodbury Transportation Center	Woodbury	Ito Serve Bus Roules		L						<u>x</u>		R6
104	Delaware River Tram	Philadelphia to Camden	New Aerial Tram					x		x			2020M
105	Quakertown Line Regional Rail (R6) / Schuwkill Valley Matro	Lansdale to Hellertown	New Passenger Rail Líne Rail Line Extension	X	X		X X	×					2030M 2020M
107	Regional Rail (R3)	Elwyn to Wawa	Rail Line Extension			x							2010M
108 109	Route 100 Spur Broad Street Subway	Hughes Park to King of Prussia Pattison Ave. to Navy Yard	Rail Line Extension Rail Line Extension					x				-+	2020M 2030M
110	NJ Transit US 1 BRT	Central NJ / US 1 BRT	New Bus Rapid Transit Service									×	2030M
111	River Line LRT	Trenton Station to State Capitol	Extend LRT Line							-		×	2020M



Delaware Valley Regional Planning Commission

190 N. Independence Mall West Philadelphia, PA 19106-1520 Phone: 215.592.1800 Web: www.dvrpc.org



Valley Regional Planning Commission