ERASE THE BOUNDARIES: DESIGN IDEAS FOR GREATER PHILADELPHIA



Erase the Boundaries: Design Ideas for Greater Philadelphia is a product of the 2009 Philadelphia Regional Infrastructure Charrette, held from July 27 through July 29, 2009, at the School of Design of the University of Pennsylvania. The workshop was convened by PennDesign, orchestrated by PennPraxis and supported by the newly-formed Planning Collective. The Penn Institute for Urban Research hosted the public event organized in conjunction with the charrette on the evening of July 29, which brought together charrette team leaders and top city officials to discuss new visions for urban infrastructure. The workshop was funded by a grant from the William Penn Foundation and with the support of the Office of the Provost of the University of Pennsylvania. The Philadelphia City Planning Commission served as the executive client.

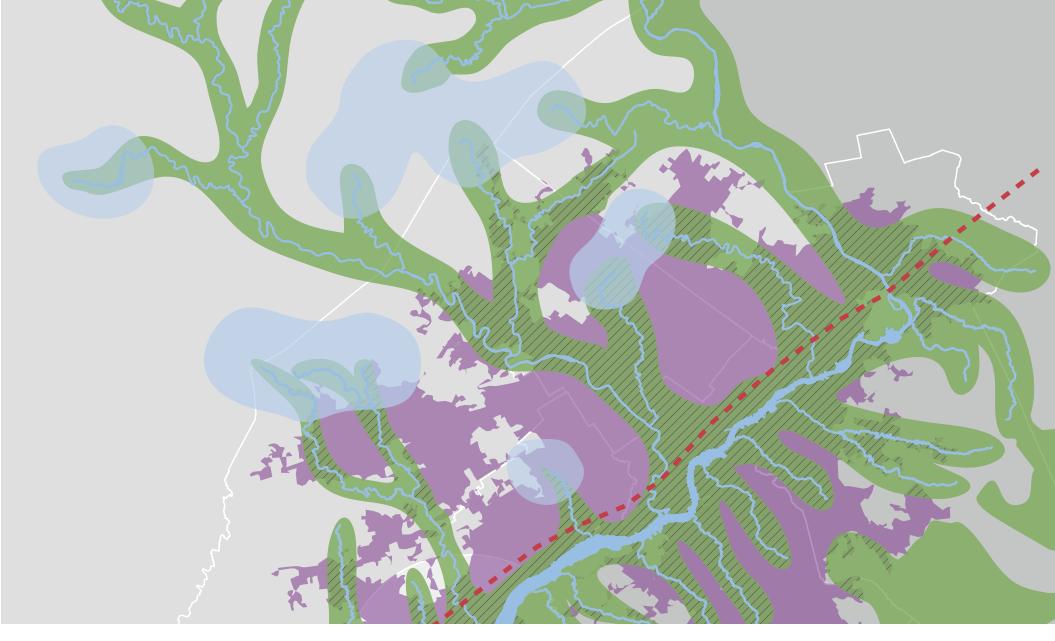
We would like to acknowledge the primary organizing group who made the event possible:

- Laurie Actman, Mayor's Office of Sustainability/ Metropolitan Caucus
- Eugenie Birch, Penn Institute for Urban Research
- Andrew Goodman, PennPraxis
- Alan Greenberger, Acting Deputy Mayor for Planning and Economic Development
- Shawn McCaney, William Penn Foundation
- Amy Montgomery, Penn Institute for Urban Research
- Harris Steinberg, PennPraxis
- Marilyn Jordan Taylor, PennDesign
- Susan Wachter, Penn Institute for Urban Research

For the online version, see www.planphilly.com/ erasetheboundaries.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	5
SETTING THE STAGE	19
Economics of the Region	
Overview of the Region	
CHARRETTE DISCOVERIES	37
Overview	
Day 1: Investigating Regional Infrastructure	
Investments	
- Regional Transportation	
- Regional Natural Systems	
- Philadelphia International Airport	
Day 2: Testing Regional Systems in Philadelphia	
 Citywide Systems: Transportation and Natural Systems 	
- Philadelphia International Airport	
- Central Schuylkill Urban Design	
APPENDIX	95
Credits	
Organizing Principles	
Charrette Schedule	
Charrette Team Members	
Plan Links	
Presentations — July 28	



EXECUTIVE SUMMARY

5

The 2009 Philadelphia Regional Infrastructure Charrette brought together experts and thought-leaders in the fields of economics, transportation, urban design, natural systems, planning and public policy, including public officials from across the region, to develop ideas for a regional infrastructure investment framework that can advance Philadelphia as the center of a prosperous 21st-century metropolitan region. Working in coordination with the Philadelphia City Planning Commission, the charrette tested the implications of a regional transportation and natural systems framework on key sites in and around Philadelphia while exploring the relationship between evolving federal policy and regional economic geography. While Greater Philadelphia has significant assets, its transportation infrastructure and natural systems frameworks struggle to keep pace with the diffuse development patterns that characterize the region.

The charrette was held from July 27 through July 29 at the School of Design of the University of Pennsylvania. The workshop was convened by PennDesign, orchestrated by PennPraxis and supported by the newly-formed Planning Collective. The Penn Institute for Urban Research hosted the public event organized in conjunction with the charrette on the evening of July 29, which brought together charrette team leaders and top city officials to discuss new visions for urban infrastructure. The workshop was funded by a grant from the William Penn Foundation and with the support of the Office of the Provost of the University of Pennsylvania. The Philadelphia City Planning Commission served as the executive client.

The charrette proceedings offer a response to the American Recovery and Reinvestment Act of 2009 and the Obama administration's policy objectives designed to stimulate collaborative metropolitan regional investment strategies, exemplified by the Interagency Partnership for Sustainable Communities adopted by the U.S. Department of Housing and Urban Development, the U.S. Department of Transportation and the Environmental Protection Agency. With federal agencies working on integrated urban policy and Congress poised to draft legislation that will affect infrastructure funding in the coming months, the Greater Philadelphia region has an important opportunity to articulate a vision that can position the region for economic growth, while serving as a model for other regions across the country. Over the last 30 years, Greater Philadelphia has successfully reinvented itself, but it struggles to keep up with other comparable metropolitan areas in terms of population and employment growth. In order to seize this opportunity, the region must respond to changing patterns in the ways we work and live, how we move goods and people throughout the region, and where economic development occurs. It means thinking more clearly about the profound connections between infrastructure investment and land use policy.

Targeted federal funding affords us the impetus to advance ideas for a dynamic, progressive and collaborative regional conversation—one based on mutual interests that could enable Greater Philadelphia to define an agenda leveraging our regional competitive economic advantages. Several organizations have been engaged in such conversations throughout the region, including the Delaware Valley Regional Planning Commission's long-range plan for

2035, and the newly formed Metropolitan Caucus (a coalition of Philadelphia-area elected leaders), the Greater Philadelphia Chamber of Commerce and the Economy League of Greater Philadelphia. New ideas can inform these conversations and energize regional coalitions to work together toward a common purpose, as well as make specific contributions to the Philadelphia City Planning Commission as it begins its first comprehensive planning process in more than four decades.

This is an opportunity to begin to frame a regional discussion around long-term goals and strategies for infrastructure investments connected to integrated and mutually supportive land use, resource management and transportation policies. The legacies of Philadelphia—its railroads, natural systems, and culture—must advance to meet 21st century challenges if the region is to find and build upon its competitive advantage in the global economy.

DEFINING THE REGION

For the purpose of this charrette, "Greater Philadelphia" was defined as the following 10 counties in three adjoining states:

- Pennsylvania: Bucks, Chester, Delaware, Montgomery, Philadelphia
- New Jersey: Burlington, Camden, Gloucester, Mercer
- Delaware: New Castle

This is a "no boundaries" definition of the region, drawn to extend from Wilmington, Del., to Trenton, N.J., and encompass all of the economic centers in between. The region was defined to show the full extent of population and employment centers that are interconnected (with Philadelphia at the core) by

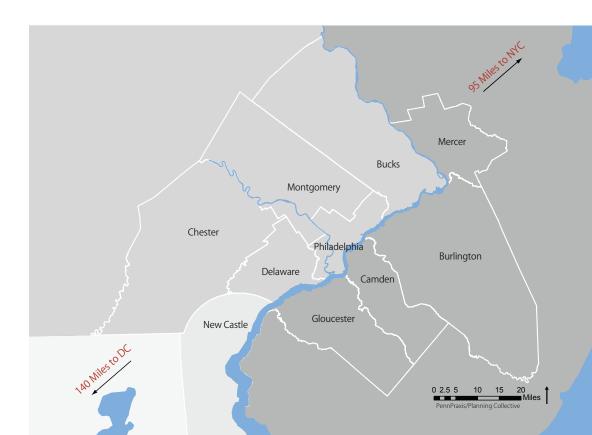
existing transit and open space systems.

ORGANIZING PRINCIPLES

At the federal level, the Office of Housing and Urban Development (HUD), the Department of Transportation (DOT) and the Environmental Protection Agency (EPA) have established principles that are intended to guide federal investment choices in enhancing sustainable communities. The principles challenge local governments and civic leaders to develop ideas for regionally-connected transportation, energy, housing and environmental projects that transcend political boundaries. These principles which provided a foundation for the work of the charrette are:

Provide more transportation choices — Develop safe, reliable and economical transportation choices to

BELOW: A map of the 10-county Greater Philadelphia region, running from Mercer County, N.J., in the northeast to New Castle County, Del., in the southwest.



BELOW: A "dot density" map of the region shows relative concentration of employment (purple) and population (green) throughout Greater Philadelphia. A larger version of this map can

be found on page 28.

decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions and promote public health.

Promote equitable, affordable housing — Expand location- and energy-efficient housing choices for people of all ages, incomes, races and ethnicities to increase mobility and lower the combined cost of housing and transportation.

Enhance economic competitiveness — Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers, as well as expanded business access to markets.

Support existing communities — Target federal

funding toward existing communities—through such strategies as transit-oriented, mixed-use development and land recycling—to increase community revitalization, improve the efficiency of public works investments and safeguard rural landscapes.

Coordinate policies and leverage investment — Align federal policies and funding to remove barriers to collaboration, leverage funding and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as investing in locally generated renewable energy.

Value communities and neighborhoods — Enhance the unique characteristics of all communities by investing in healthy, safe and walkable neighborhoods—rural, urban or suburban.

PROCESS OVERVIEW

The charrette was held from July 27 through July 29, 2009, and involved more 90 participants from city, regional and state government; local design professionals; national experts in economics, transportation and urban design; and other stakeholders.

July 27: Economic Geography of Greater Philadelphia

• Ryan Sweet, senior economist from Moody's Economy.com, presented an economic overview of Greater Philadelphia. This was followed by a respondent panel featuring Barry Seymour, executive director of the Delaware Valley Regional Planning Commission; Steve Wray, executive director of the Economy League of Greater Philadelphia; and Tom Morr, president and CEO of Select Greater

Philadelphia. A summary of the presentation and discussion can be found on page 21 of the report.

July 28: Investigating Regional Infrastructure Investments

Three teams explored transportation systems and natural systems on a regional scale in order to develop ideas for an infrastructure investment framework for the 10-county region that can advance Philadelphia as the center of a prosperous 21st-century region. Philadelphia International Airport was also looked at in its role as an international gateway to Philadelphia and the potential for increased transportation connections that would boost economic development as well as the general image of the region.

- Transportation: Rachel Weinberger, PennDesign, team leader
- Natural Systems: Alex Krieger, Harvard
 University Graduate School of Design, team leader
- Philadelphia International Airport: Marilyn Jordan Taylor, PennDesign, and Derek Moore, Skidmore Owings & Merrill LLP, team leaders

July 29: Testing Regional Systems in Philadelphia
Three teams explored the relationship between the regional systems thinking from the day before and their implications on city planning and urban design in Philadelphia. Working with the Philadelphia City
Planning Commission as the executive client, the charrette tested the implications of a regional transportation and natural systems framework on key sites in Philadelphia while exploring the relationship between federal policy, regional economic geography and sustainability.

• Citywide Systems: Alex Krieger, Harvard

University Graduate School of Design, and Trent Lethco, Arup Inc., team leaders

- Philadelphia International Airport: Derek Moore, Skidmore Owings & Merrill LLP, team leader
- Central Schuylkill Urban Design: Marilyn Jordan Taylor, PennDesign, and Cindy Sanders, Olin Partnership, team leaders

EMERGING CONCEPTS

The charrette produced many exciting ideas, both original and synthesized from work done over the last year, last decade, or even the last century. Some of the ideas are big-picture concepts that will take many years to study and achieve, while others seem achievable in the near term. Most will require a change in how we view our regional assets and



RIGHT: Members of the Citywide Systems group discuss priority transportation and open space systems projects within Philadelphia that would have immediate regional impact.

liabilities and the way we make choices about limited infrastructure investment dollars. All will take regional cooperation to begin to move forward in a meaningful way.

Perhaps the most important overarching concept to emerge from the charrette is that we must not only plan for growth, but we must do so using a methodology and framework for strategic investments that build on existing assets and economic centers. Only with a cohesive strategy will we be equipped to make the necessary choices to turn those plans into reality. Metropolitan regions that plan cooperatively are best positioned to compete for new federal transportation funding programs and sustainable community initiatives. As the charrette participants discussed, Greater Philadelphia must act now to seize

this metropolitan moment to plan and build the infrastructure that will enhance its economic competitiveness over the coming decades.

The HUD-DOT-EPA principles rely on coordination between land use, infrastructure investment, conservation and economic goals. To reach the outcomes suggested by the principles, we must, at the municipal and regional levels, systematize a process for choice-making related to achieving the systemic efficiencies the principles support. This will likely require new methods of study to determine possible coordination of energy generation and distribution, water use and protection, land development and preservation, and strategic investment in infrastructure of all types. This will also require openness to planning for infrastructure obsolescence, right-sizing and



RIGHT: Team leader Alex Krieger of the Harvard Graduate School of Design (left) discusses regional transportation projects with representatives from 10,000 Friends of Pennsylvania, DVRPC, PennDOT and the Wilmington Area Planning Council.

removal, planning across political boundaries, and long-term stewardship strategies for contaminated land and water resources. This means creating new methods for evaluating the "bottom line" of projects, which should include sustainability goals for ecology, economy and equity.

The collaboration among city and regional officials at the charrette indicates an interest in regional problem-solving and demonstrates the type of cooperation that could make Greater Philadelphia a more competitive and better integrated metropolitan region. Collaboration and cross-county dialogue will allow us to explore innovative regional strategies that could help us create, as team leader Alex Krieger said after the charrette, "the first fully networked metropolis of this century."

The following overarching concepts emerged from the design workshop:

ENHANCE ACCESS TO THE AIRPORT (THROUGH HIGH-SPEED RAIL OR OTHER MODES)

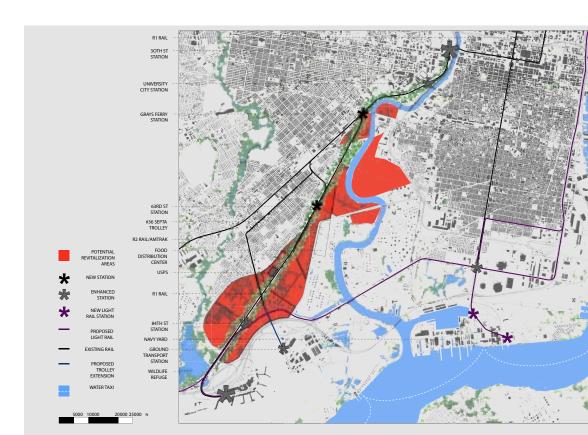
The study suggests that, more than in most cities, the proximity of Center City Philadelphia, the industrial lands of the Central and Lower Schuylkill, and the Philadelphia Navy Yard to Philadelphia International Airport would allow for the city itself to develop as an "aerotropolis." Existing airport plans begin to unlock the design constraints created by its relatively small existing site to allow for future efficient configuration of its terminals and back-of-house operations, providing opportunities to improve existing connections and create new ones. Many choices for connections were explored during the charrette; in fact, the thinking at the charrette around high-speed rail and creating a new Amtrak alignment through

Philadelphia to the airport is an example of the type of priority-driven, coordinated regional infrastructure investments that the region needs in order to remain competitive going forward. In the end, the work of the Airport group focused on defining an enhanced transit connection with reliable, dedicated service between 30th Street Station (as an intermodal hub) and a new and inviting, world-class, multimodal Ground Transportation Center at the airport.

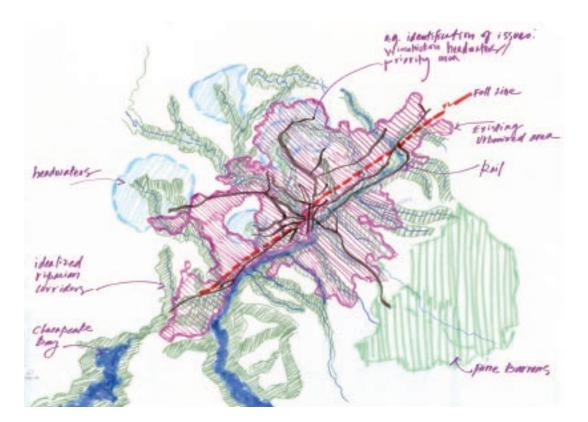
Opportunities for further study:

As national high-speed rail is routed through the Philadelphia region, there will be an opportunity to configure the alignment to maximize connections to leverage the region's economic potential. The work in the Airport and Central Schuylkill groups demonstrated that there are many options for possible connections,

BELOW: A map digitized after the charrette that shows the Airport group's vision for numerous new public transportation connections to the airport, including a "green" SEPTA Regional Rail corridor. A larger version of this map can be found on page 61.



BELOW: A sketch drawn by charrette participants Mami Hara of WRT and David Schaaf of the Philadelphia City Planning Commission outlining the region's riparian corridors and headwaters. and the relative proximity of Philadelphia's regional work centers to the airport is a unique competitive advantage to be exploited. Greater Philadelphia should collaborate around planning Amtrak high-speed rail connections and alignments through the region, even if actual stops in the region are limited. As airport planning proceeds, the process should coordinate with regional goals for economic growth, maximize reliable connections, create opportunities for efficiencies in freight and people movement, and respect Greater Philadelphia's character. A key choice in this process will be to determine which connections (Center City, the Navy Yard, Central/Lower Schuylkill, others?) will return the most benefit in terms of realizing the efficiencies suggested in the HUD-DOT-EPA principles.



NATURAL SYSTEMS INTEGRATION

Well-planned and successful natural systems can enhance economic prosperity, promote public health and strengthen existing communities. There are vast opportunities in the Philadelphia region, from capitalizing on vacant land to creating a regional agenda across natural systems. The concepts that emerged were:

- Regional thinking is paramount: Because almost all of our watersheds are shared across county and state boundaries, we must share responsibility for regional water management, particularly for headwater protection, to ensure that water quality issues are stopped at the source.
- As the regional economy has changed, land use strategy is as important for open space as it is for developed space, particularly because many of our "open spaces" have been affected by man-made intervention and require management.

Opportunities for further study:

- A process by which open space resources and opportunities are surveyed and identified on a regional scale would be helpful in creating an agenda for natural systems protection, watershed and stormwater management, and interim land management strategies. This process would identify connections between resources and opportunities for cooperation between governments, and assert best practices for stewardship and economic development, in areas such as urban agriculture, landscape detoxification and sustainable stormwater management.
- From this process, a recognizable agenda should be established for underutilized or naturalized land. This may mean organizing the land assets into

individual systems within the larger whole. These systems could be aligned with watersheds, rights-of-way or other common patterns that will enable a comprehensive rehabilitation and stewardship to be realized. Making the connections among these lands explicit will enable further connections to be made to transportation infrastructure of all modes, land use patterns and energy use.

• Explore a new regional institution charged with supporting the regional network of open spaces, and provide a funding mechanism that may provide a dedicated funding stream for open-space-related projects in those municipalities that choose to participate.

CREATE INTEGRATED AND INTERDEPENDENT INFRASTRUCTURE

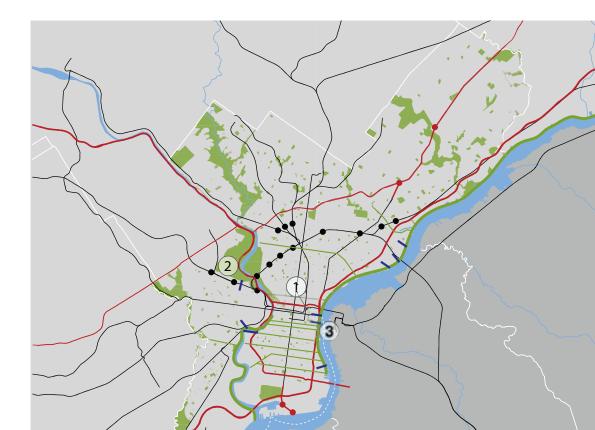
Perhaps the most valuable part of any collaborative exercise is the nontraditional exploration of ideas, which is at the heart of innovation. The integrative approach brought to the charrette by its team leaders and participants meant that infrastructure would be approached as multifaceted: an asset that could have broad impacts across sectors if leveraged successfully. This means expanding past highway projects, rail lines, storm sewers, green and natural infrastructure to plan around "infrastructure sheds" and "energy sheds," where energy production and consumption is planned for and made more efficient in correlation with other systems. Embedded in this concept is the exploration of infrastructure "strange bedfellows" in which transportation, open space, energy and other large-scale investments are integrated and aligned across regional boundaries. One needs only look to the traditional American parkway system for the

multipurpose potential of integrated infrastructure. Efficiencies can be created by the seemingly competing goals of people and goods movement systems, parks and transportation, and development all sharing dedicated infrastructure while creating a whole greater than the sum of its parts. Charrette participants recognized that the region's systems physically transcend political boundaries, and should be planned and funded in a similar cross-boundary fashion. This requires each project to be evaluated in its own context, but is a crucial part of planning in a meaningful and integrated way; as was discussed in one charrette group, don't "fill gaps like potholes."

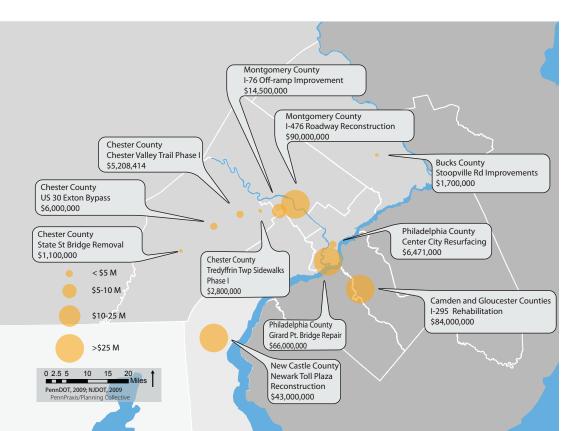
Opportunities for further study:
As the HUD-DOT-EPA principles suggest,

coordination between housing and transportation

BELOW: A digitized map showing the beginning of a "gap analysis" done by the Citywide Systems group that begins to look at transportation and open space investments as connected.



investments means a commitment to making new development more sustainable. As corridors like Amtrak's Northeast Corridor, many SEPTA rights of way, I-95 and I-76 are rebuilt in the coming decades, an opportunity exists for the region to see return from well-planned, integrated investments. In planning for these investments, the region should seek to maximize connections between housing, transportation, energy, water and waste system infrastructure to begin to create corridors of infrastructure that realize efficiency in economy, energy and environmental benefit. This would position Philadelphia and the region for lower-cost growth as the infrastructure yields private investment in coming years.



ERASE THE BOUNDARIES THAT DIVIDE US POLITICALLY

On the first night of the workshop, Barry Seymour, the executive director of the Delaware Valley Regional Planning Commission, urged participants to erase the region's political boundaries in organizing their thinking and work product during the charrette. An examination of regional growth and development maps without the county lines reveals how infrastructure, when broadly defined, has shaped our region more than jurisdictional boundaries, yet none have effectively restrained the potential to sprawl. The participants of the charrette, representing state, county, city and stakeholder interests, used this directive as a way to explore possibilities unconstrained by funding disparities, decision-making divisions and political interests. The frank conversation that resulted yielded exciting ideas to explore, and initiated relationships between planning and governmental staff, which may be helpful in future collaborations. Recognizing Greater Philadelphia's smart future will mean acknowledging the tensions and tradeoffs that come with regional change. The city's population loss is the suburbs' sprawl. Moving forward will require both common ground and a shared purpose to achieve something meaningful.

Opportunities for further action:

• Explore a framework for choice-making (differentiated from decision-making by the constraints that finite resources impose) that allows for objective cost and benefits to be established in an open and transparent process that invites accountability for leaders and rewards principle-based arbitration.

Principles could be based on national guidelines as well as local sustainability goals and other regional

benchmarks. This process would emphasize systemic thinking, would avoid focusing on one-off individual projects, and would be as thorough in its analysis as it is explicit in its outcomes. Achieving this goal will be difficult but presents a healthy alternative, giving regional leaders an opportunity to learn more about their partners in this effort. This could ultimately lead to reopening discussions such as regionalizing the port authority or initiating new discussions like regionalizing the airport authority and open space governance.

- Plan for the long term, and act in the short term. Plans can be fulfilled over decades, but inevitably they begin with small steps that compound into big moves. As the region moves toward identifying opportunities for investment and making plans for achieving them, early actions, especially those that are low-cost, should be expedited to help projects gain momentum. Philadelphia's bike plan initiative on Spruce and Pine streets is an example of a project that is forward-thinking and experimental, and requires very little upfront investment to produce real change.
- Provide the newly formed Metropolitan Caucus with useful data and best-practice information to positively affect projects where regional partners share common interests.

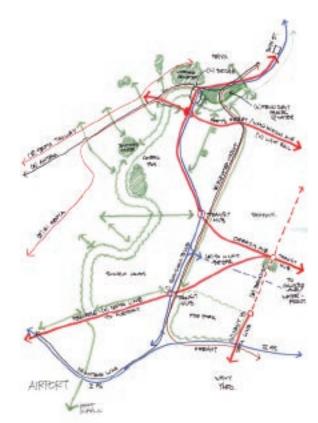
RETHINK THE CURRENT MPO STRUCTURE TO MEET THE NEEDS OF A "METRO NATION."

Numerous charrette groups questioned if the current national model of allocating federal transportation funding and decision-making to regional metropolitan planning organizations is the appropriate model going forward. Many noted that strategic growth of our transportation network cannot occur when decisions

about improvements are made by confederations of competing local governments or according to trendbased computer models.

As suggested in DVRPC's Connections 2035 recentralization growth scenario, the region must prioritize existing areas of economic strength, not just by identifying them but by coordinating public and private investment around them. This means blurring county and municipal boundaries in order to make the best decision for the region as a whole. There must be a new system of prioritizing criteria with benchmarks and standards so that planning organizations may be held accountable.

Nationally, this raises the question of the effectiveness of the Metropolitan Planning Organization model in today's shifting landscape.



LEFT: A sketch drawn by Michael Larice of PennDesign and Nando Micale of WRT showing proposed transportation improvements across the Central and Lower Schuylkill site to improve regional connectivity and transit access for underserved neighborhoods.

16

Transit investment decisions linked to goals that support the future growth of the region have the greatest chance of success, and if those goals include reinforcing the notion of supporting existing economic centers, then this could prove problematic for current MPO governing boards. Metropolitan Planning Organizations are well equipped for study and analysis, but less so for the agenda-setting and leadership required to guide visionary projects on the regional scale.

Opportunities for further study:

Work locally and nationally to ensure that Metropolitan Planning Organizations like the Delaware Valley Regional Planning Commission are resourced properly to guide the integrative thinking and provide the leadership required to meet the goals of the HUD-DOT-EPA Sustainable Communities principles. This may require an examination both of the funding mechanisms that support the MPO network and of the enabling legislation that created it. Rethinking the current MPO structure to create a regional planning authority with strategic decision-making power may become essential if a shared vision for the Greater Philadelphia region is to be achieved.

The concepts expressed herein reflect the work and conversations of the 2009 Philadelphia Regional Infrastructure Charrette. They are not the views of PennDesign, PennPraxis, Penn Institute for Urban Research, Philadelphia City Planning Commission, William Penn Foundation or the Office of the Provost of the University of Pennsylvania, nor are they presented as recommendations. They are the products

of the two days of small-group work and are offered as a springboard for further discussion.

PennDesign is dedicated to improving the quality of life through the design and preservation of artworks, buildings, landscapes, cities, and regions. The School's distinctive contributions to this effort lie at the intersection of the integrated design arts as they are rooted in the research of technologists, historians, and social scientists. Professional master's degrees are awarded in architecture, city planning, landscape architecture fine arts, historic preservation, and urban spatial analytics. The Ph.D. is offered in architecture and city planning. The School provides certificate programs in a range of areas including real estate design and development, urban design, ecological architecture, and GIS and spatial analysis. Courses of study in fine arts, architecture, and digital media design are available to undergraduates. The University of Pennsylvania School of Design is also home to the T.C. Chan Center for Building Simulation and Energy Studies, PennPraxis, and the Penn Institute for Urban Research.

PennPraxis is the clinical consulting arm of the Penn School of Design. It was created in 2001 to further the mission of the school in its five fields: architecture, landscape architecture, city planning, historic preservation, and fine arts. Praxis creates opportunities for PennDesign faculty and students to work on practical or applied projects around the world, providing opportunities to strengthen community ties and provide service to the community. Several PennPraxis projects have focused on participatory planning processes that marry local community

expertise and professional design knowledge, including the award-winning *A Civic Vision for the Central Delaware*, Penn's Landing Design forums, and *Re-Envisioning the Kimmel Center through Civic Engagement and Design*.

Penn Institute for Urban Research is dedicated to fostering increased understanding of cities and developing new knowledge bases that will be vital in charting the course of local national and international urbanization. By providing an umbrella structure for the urban focused scholarship, research and civic engagement within Penn's twelve schools, the Penn IUR provides the synergy needed to address urban challenges in the 21st century. As a campus-wide institute, Penn IUR sponsors a number of initiatives, stimulates research, provides opportunities for collaborative instruction and engages with the world of practitioners and policymakers.

Philadelphia City Planning Commission is responsible for guiding the orderly growth and development of the City of Philadelphia. The 1951 Home Rule Charter defines the powers and duties of the Commission to include the preparation of:

- A Comprehensive Plan and its modifications;
- The Capital Program and Budget;
- Proposed zoning ordinances and amendments;
- Regulations concerning the subdivision of land.

William Penn Foundation, founded in 1945 by Otto and Phoebe Haas, is dedicated to improving the quality of life in the Greater Philadelphia region through efforts that foster rich cultural expression, strengthen children's futures, and deepen connections

to nature and community. In partnership with others, the Foundation works to advance a vital, just, and caring community.

The Provost of the University of Pennsylvania oversees all aspects of the university related to teaching, research, and scholarship. The Provost works in tandem with the President and Executive Vice-President on university oversight and planning, including budgets, capital projects, and long-range strategic planning. In recent years, the Provost, working closely with faculty and other campus leaders, has developed a wide range of initiatives focused on strengthened recruitment and retention of faculty (with particular attention to female and minority faculty), promotion of interdisciplinary scholarship and teaching (including the Penn Integrates Knowledge Program), enhanced internationalization, and increased support for undergraduate and graduate education.