

ISSUES & IMPLICATIONS

In February of 2015, the SEDA-COG MPO completed a Strategic Plan for the region. The process used in developing the plan afforded MPO members the opportunity to assess the current planning program's direction as well as identify specific issues demanding MPO attention. The plan included issues of concern and strategies for addressing each of six specific program areas that the MPO members prioritized as the most important to address:

1. Central Susquehanna Valley Thruway (CSVT)
2. Economic Development
3. Transportation Funding and Policy
4. Bridges
5. Corridor Modernization
6. Freight Movement

The plan included one "Other" category that captured issues outside of the identified program areas. Development of the Strategic Plan included a survey of MPO membership and a four-hour retreat with membership to discuss the issues and priorities. The following sections summarize the results of the Strategic Plan and incorporate additional information, where appropriate and available, that was collected following development of the Strategic Plan.

A. Central Susquehanna Valley Transportation (CSVT) Project

The CSVT Project (**Figure 48**) is one of the largest on the current State Transportation Improvement Program. As a major capacity-adding project, the project addresses a major freight and passenger bottleneck. The CSVT was identified as the highest priority project for the region in the 2011 LRTP and the top priority program area in the 2015 Strategic Plan.

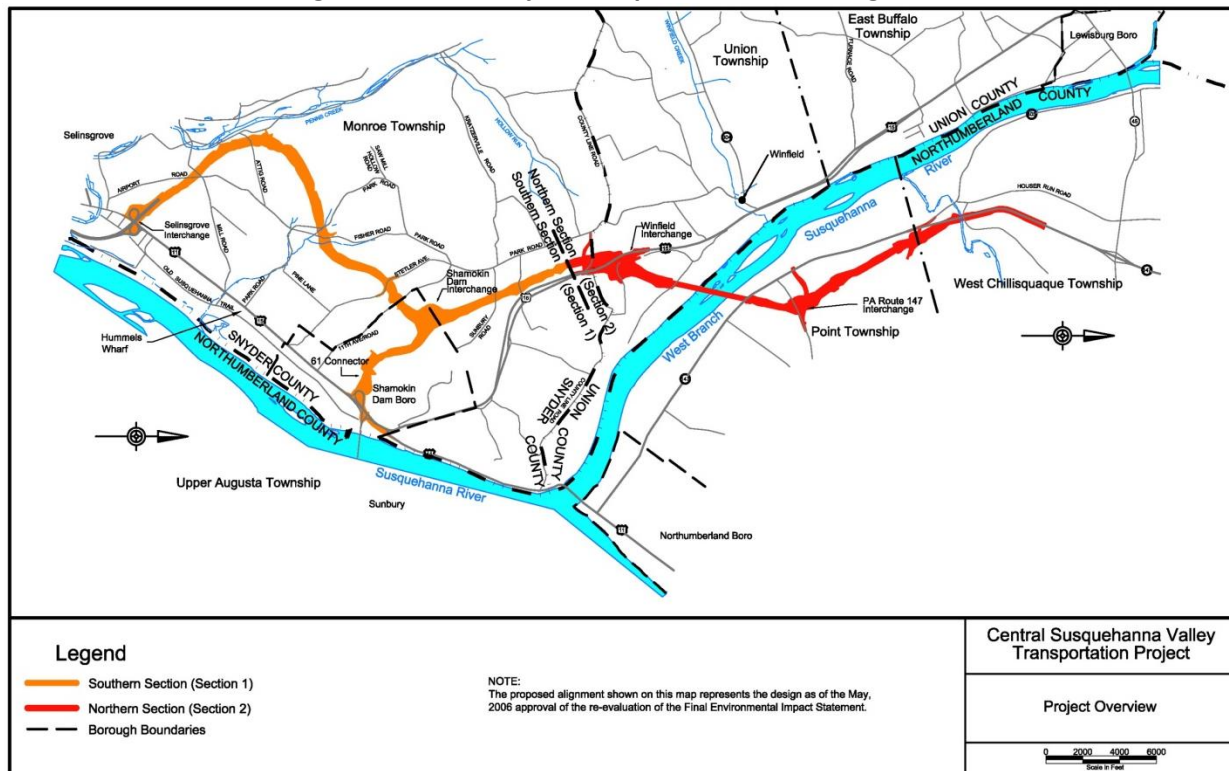
Transition

*From pre-CSVT conditions
to post-CSVT conditions*

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The CSVT project is being designed in two sections, as shown in **Figure 48**. The Northern Section starts at County Line Road near the Winfield Interchange and extends to Montandon in the north. The Southern Section starts at the Selinsgrove interchange with US 11 and extends to County Line Road. A Route 61 Connector to Shamokin Dam Borough is included with the Southern Section. The Route 61 Connector is a vital element of the CSVT that is needed to remove traffic from US 11 and 15. The overall improvement is approximately 13 miles of new four-lane highway in Snyder, Union and Northumberland counties. The improvement is expected to improve safety, reduce congestion, and accommodate growth primarily by separating freight traffic (trucks) and through traffic from local traffic. As a project with a cost in excess of \$670 million, the MPO recognizes that ongoing project communication between the MPO and its member counties and municipalities will be important as the project moves from preliminary engineering to final engineering, construction and operation. Final design of both the Northern Section and Southern Section is occurring presently, with construction of the Northern Section commencing for the bridge over the West Branch Susquehanna River in 2016. Construction of the Northern Section is anticipated to be completed by 2021 and the Southern Section by 2024.

Figure 48. CSVT Project Footprint -- Selected Alignment



Source: Central Susquehanna Valley Transportation Project, 2006 re-evaluation of the *Final Environmental Impact Statement* and Section 404 Permit Evaluation, 2003.

Implications of the CSVT include:

1. A need for land use planning and traffic operations support for directly affected and surrounding municipalities, including consideration for pursuit of PennDOT special study funding to address secondary impacts around interchanges providing local access.

- Selinsgrove (US 522-US 11/15) Interchange

This partial interchange exists today and will be completed as part of the CSVT project. It is a major gateway to the community of Selinsgrove and the extensive commercial development along the US 11 & 15 corridor through Hummel's Wharf and Shamokin Dam. New demand for highway-oriented, easy-access development may place development pressure on parcels near the interchange.

- Shamokin Dam (PA 61-US 11/15) Interchange

A new connection between the CSVT mainline and this existing grade-separated interchange will be created in CSVT's Southern Section. The interchange will become a confluence point for local access to Shamokin Dam and Hummel's Wharf as well as traffic seeking a bypass route around these areas for access to CSVT (north and south), US 11 (to/from the east), and PA 61 (to/from Sunbury and points further to the southeast). Each of these connections make the area around the interchange more

accessible and may intensify the interest in river frontage near the US 11 and US 15 intersection and the prospective redevelopment of the former PPL coal power plant property. The interchange sits in the middle of a growth area designated by Snyder County.

- Winfield (US 15) Interchange

This new local access interchange is situated near a high-point along the existing US 15 highway. The area is largely forested with residential uses dominating the nearby area. The proposed interchange includes realignments of existing two-lane roads and a proposed park and ride lot. Topography of the area and zoning may limit the feasibility and desirability for larger-scale commercial development. However, considering the current residential subdivision patterns in the area, continuation of this development trend is likely, as the area becomes more accessible for persons employed in the larger activity centers and seeking a rural residential option. Potential also exists for highway commercial development along US 15, particularly to the north where Union County has designated a growth area.

- Ridge Road (SR 1024) Interchange

This new local access interchange has drawn considerable local concern among residents of Point Township in Northumberland County. The Township has a zoning ordinance in place, but may require support to adopt overlays, access management or other ordinances to manage development pressures in the corridor. The interchange includes a proposed park and ride lot.

- Existing PA 147 Interchanges – Montandon-Lewisburg (PA 45) Interchange, Industrial Park Road Interchange, Milton-Mahoning Street (PA 642) Interchange, and Milton-Broadway Street (PA 254) Interchange

These existing diamond interchanges were completed along with the limited access section of PA 147, which bypasses Milton and Montandon. To date, minimal commercial development has occurred around the interchanges. However, pressure for highway-oriented services may increase as north-south through traffic is consolidated on the CSVT roadway.

Development pressure for truck-related services may be seen at the two Milton interchanges closest to Interstate 80—depending on parcel availability and zoning. Turbot and West Chillisquaque Townships may require support to adopt overlays, access management or other ordinances to manage development pressures. At each interchange, driveways are located relatively close to the interchange ramp intersections, complicating traffic access and future traffic operations.

The patterns of traffic access at the Montandon-Lewisburg interchange should also receive some attention in the years following completion of CSVT. For example, the redistribution of traffic that will result from the opening of the CSVT roadway could alter the existing main street environment along PA 45 through Lewisburg Borough.

2. A need for recalibration of the impacted travel corridors in terms of functional classification, network classification (BPN, Corridor Modernization), operations and future maintenance needs. The impacted corridors include the new access locations described above, as well as the following existing corridors:

- US 11 & 15 through Hummel's Wharf and Shamokin Dam
With trucks and considerable through volume removed from this corridor, the roadway is less of a community barrier and new opportunities emerge for development patterns, use of roadway space, and creation of cross-connections. Redevelopment of the nearby former Sunbury coal-fired power plant site adds to the potential for significant transformation of the community.
- PA 147 (Duke Street) through Northumberland Borough
Over the years, substantial changes in the roadways, intersections, signs and signals in Northumberland Borough have been made out of necessity to accommodate the heavy trucks traversing the fine-grained grid network of Northumberland Borough. With the CSVT roadway carrying many of these trucks, there may be improved opportunities, depending on how much traffic is removed from PA 147, to convert and reallocate the roadway's space for community use—e.g., improved pedestrian crossings, expanded sidewalk space, bike lanes, more on-street parking, etc.
- US 15 through East Buffalo Township, Lewisburg Borough, and Kelly Township
The US 15 Smart Transportation Corridor Study, completed in 2010, evaluated a 2.5 mile section of US 15 near Lewisburg, and created an urban corridor plan that incorporates sidewalks, median treatment, access management and new community roadway and trail connections. The plan also addressed ordinance changes and other regulatory changes needed to resolve existing conflicts and limitations. With completion of CSVT, most elements of the plan—including completion of the Buffalo Valley Rail-Trail connection across US 15—become even more viable as traffic is reduced and US 15 becomes less of a barrier to the community.

The themes and evaluations completed in the US 15 Study may provide a template for other post-CSVT studies in Northumberland and Hummel's Wharf/Shamokin Dam.

There is broad consensus that the land use and economic effects of CSVT deserve additional study, beyond what is provided in the CSVT Environmental Impact Statement (EIS). However, the method and driver of the study has not yet been established. The MPO's goal to "foster compatibility between land use and transportation facilities to yield orderly growth and development" puts it in the discussion, if not leading it. Casting this as a regional issue, as opposed to a local issue at the new interchanges, is important for setting up the evaluation framework that captures the foreseeable short-term impacts and more complex long-term effects related to traffic flow, asset management, and land development. The implementation step that follows the study will be equally important, to ensure that localities are not overwhelmed by the tasks needed. The MPO may supply knowledge about technical (LTAP, GIS) and financial resources (grant-writing assistance, funding streams) that will be needed to complete ordinance changes, support the evolving land use and infrastructure operation.

B. Economic Development

Per the MPO's Strategic Plan, transportation infrastructure and services should improve the vitality of the region's downtowns and urban cores, connect workers to available jobs, and lower shipping costs for freight haulers. The MPO's Strategic Plan specifically calls for consideration as to overlapping priorities (i.e., Appalachian Regional Commission or ARC) that could assist project funding. The Strategic Plan also identifies advocating and planning for improvements on strategic highway corridors (including those on the Multi-Modal Economic Competitiveness Network and the National Freight Network) in order to improve economic opportunities in the region.

In June of 2015, SEDA-COG updated its five-year Comprehensive Economic Development Strategy (CEDS). This CEDS was completed for the entire 11 county SEDA-COG Economic Development Center (EDC) region, which includes Centre, Lycoming and Perry counties, not just the eight county MPO region. This plan was approved by both the SEDA-COG CEDS committee and the SEDA-COG Board of Directors. The CEDS Committee represents the main economic interests of the region and includes private sector representatives as a majority of its membership. The 22-member SEDA-COG Board is comprised of one county commissioner and one private sector representative from each of the 11-counties in the overall SEDA-COG region.

Within the SEDA-COG region, two Economic Development Centers (EDC's) have been designated by SEDA-COG--the Bellefonte-State College EDC (Centre County) and the Central Susquehanna EDC, including portions of Columbia, Lycoming, Montour, Northumberland, Snyder, and Union counties. The Bellefonte-State College EDC is outside of the MPO region. However, the Central Susquehanna EDC includes the MPO region (with the exception of Lycoming County). Historically, the unemployment rate for the Central Susquehanna EDC counties has been generally higher than the overall SEDA-COG region and the national averages. Of the six Central Susquehanna EDC counties, only Montour and Columbia are below the regional, state, and national unemployment rates. Montour County is the smallest of the six counties and its economy is bolstered by the presence of the Geisinger Medical Center. An analysis of these Economic Development Centers shows that the region continues to be more reliant on manufacturing than the state and the nation.

Transition

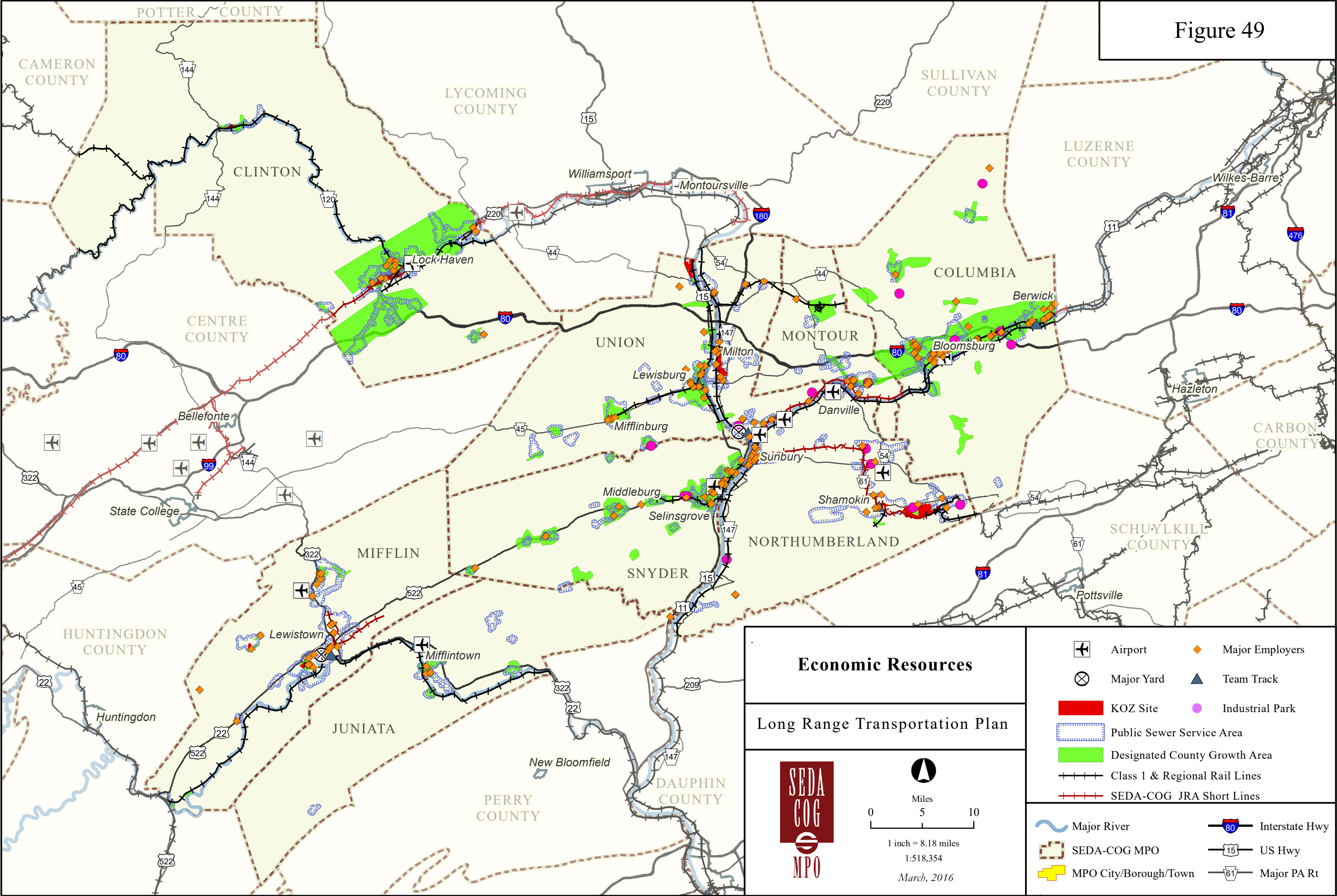
From traditional, large-scale manufacturing industries to smaller, technology driven manufacturing and service industries

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In the Central Susquehanna EDC, where the manufacture of durable goods is the primary source of employment, the development strategy must emphasize the diversification of manufacturing activity and the growth of advanced technology activity. Efforts are also proceeding to enhance the growth of the service and retail sectors. It will be necessary to promote continued improvement of public services and infrastructure.

With the new FAST Act, emphasis has been placed on the freight networks and supporting freight corridors across the country. There is also developing data and analysis tools that can be leveraged in a more dynamic way moving forward. Combining the Transsearch data, the analysis from the Comprehensive Economic Development Strategy (CEDs) updated in June 2015 and the new CIMS tool available from PennDOT should be investigated moving forward. There are certain limitations at this

Figure 49



time in doing a direct comparison of these data sets but a valuable synergy of these data can be created to highlight freight patterns through the region as well as support funding packages focused on freight and regional needs.

Portions of the Central Susquehanna EDC have been identified as both potential growth centers and major areas in need of an economic catalyst. Further analysis of these EDCs is expected to show that they will continue to serve as centers of employment and growth for the Economic Development District (EDD), and that they will increasingly support a more diversified mix of manufacturing, service and retail activity. Efforts must be made to maintain the menu of enterprise development technical assistance services and to increase entrepreneurship opportunities and assistance.

A major driver economic development in recent years has been the development of Unconventional Oil and Gas in the region. This development has slowed significantly in recent years with the drop in demand and increase in production. However, the industry will likely be back with the further development of national pipeline systems and midstream and downstream improvements to infrastructure. One example is the new facilities to export the natural gas in the region to other parts of the world. This infrastructure as well as future investment will make the development of wells and drilling more profitable in the future. Future drilling activities should also have less impact on the roadway infrastructure as PennDOT as well as other agencies have a better handle on the condition and impacts that this drilling causes.

Like many areas of Pennsylvania, the basic infrastructure of the region needs to be upgraded and/or expanded. Water and sewer service facilities are in urgent need of rehabilitation throughout much of the region. In addition, non-traditional forms of infrastructure, such as telecommunications need to be made available in the region. Natural gas infrastructure in the region also needs to be improved and expanded. Without reliable needed infrastructure, not only is it inherently impossible to recruit new business and industry to the region, but existing industry is inhibited from expansion.

While the region has a favorable geographic location and good inter-regional (rail, air, and surface) transportation system, the low population density in the EDD has inhibited the maintenance and extension of infrastructure needed for development including local roads, highways and bridges.

The region is located within a 360-mile radius of all major population centers in the Northeastern United States, a radius that encompasses about 50% of the nation's population. Much of this consumer market is within four to eight hours driving distance from the heart of the region. A number of important regional transportation projects are included on the Region's Project Priority List, including the Central Susquehanna Valley Transportation Project that is designed to improve safety, reduce the amount of congestion and provide for future growth on US 11 & 15.

Figure 49 shows the locations of the MPO region's numerous industrial parks, designated growth areas, and Keystone Opportunity Zones (KOZs). The figure also shows the region's airports and rail lines. As stated, the SEDA-COG region is served by fifteen general and commercial aviation airports. In addition, the SEDA-COG Joint Rail Authority (JRA) owns five short line railroads comprising nearly 200 miles in the SEDA-COG region. Freight service to the JRA's 80 customers is provided under a contract with a private sector operator.

A number of important regional transportation projects are included on the region's Project Priority List, including the Central Susquehanna Valley Transportation Project that is designed to improve safety,

reduce the amount of congestion and provide for future growth on Routes 11 & 15. Another important regional project is the Interstate 80/Interstate 99 Interchange project in Centre County, which is estimated at \$162 million and proposes to construct two interchanges to improve safety and traffic flow. Completion of the Interstate 99 Regional Transportation project is also listed as a prioritized project in the SEDA-COG region.

Airports are an important part of the region's transportation infrastructure. Continued maintenance and expansion of the airports are important to the region.

The SEDA-COG Joint Rail Authority (JRA) owns five short line railroads comprising nearly 200 miles in the SEDA-COG region. Freight service to the JRA's 80 customers is provided under a contract by an operator in the private sector. The JRA serves the counties of Centre, Clinton, Columbia, Lycoming, Mifflin, Montour, Northumberland and Union, and Blair County in the Southern Alleghenies Region.

C. Transportation Investment and Funding

Per the SEDA-COG MPO Strategic Plan, "The infusion of federal "spike" dollars (ARRA in 2009) coupled with the passage of recent state transportation funding acts, including Act 13 of 2012 and Act 89 of 2013 have improved the region's fortunes concerning available funding for transportation infrastructure. However, there remains a limited amount of funding for a multitude of transportation demands."

1. Investment Trends

During the last decade, system maintenance and asset management have become the dominant focus for transportation planning and investment in Pennsylvania. This emphasis is illustrated by the decline in spending on capacity-adding projects since 2001. From 2001-2004, the statewide four year Transportation Improvement Program (TIP) spent 25% of the available funding on capacity adding projects such as new roadways or additional through lanes. The 2005-2008 TIP saw a decline of capacity adding projects to 20%. More recently, in the 2009-2012 and 2013-2016 TIP's, this percentage declined significantly to the 5 to 6% range (**Figure 50**). Several factors are influencing this trend:

- Increased awareness of infrastructure condition
- Rising costs of construction without a commensurate escalation of transportation revenue
- Less need for large-scale capacity-adding projects, resulting from minimal growth in travel/traffic volume
- Sense that the major parts of the transportation system are largely "complete"

Transitions

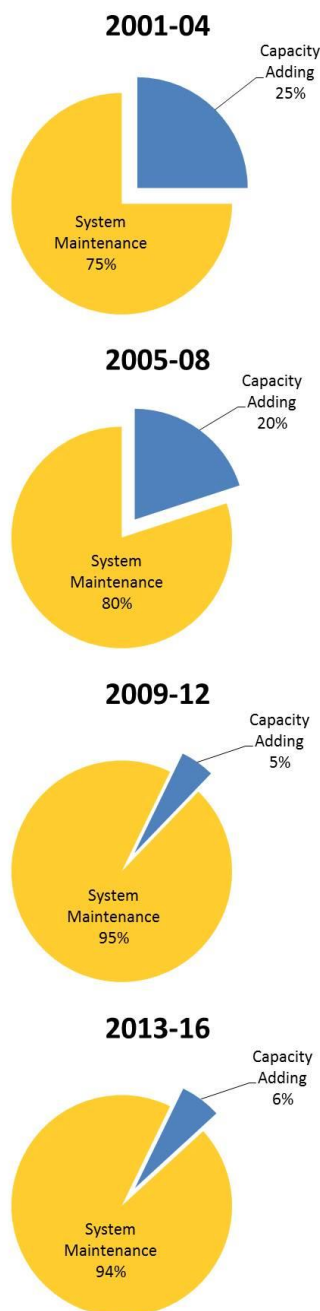
From capacity-adding and network expansion projects to asset management projects

From allocated, formula funding to competitive funding processes

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Recent PennDOT financial guidance recommends that, as a rule of thumb, 90% of the TIP be allocated to maintenance. This level of spending may need to be even higher. An evaluation of asset management costs included in the 2011 LRTP found that the steady state maintenance need for the region was \$194.6 million per year (2011 dollars). Based on the TIP allocations and liquid fuels funding totaling \$74.5

Figure 50. Statewide Spending Trends



million, a shortfall of about \$120 million per year was estimated. Inflating the steady state maintenance cost to 2016 dollars²⁹, this maintenance need increases to \$225.6 million. With the TIP allocation still near the 2011 levels, the shortfall has not been reduced and asset management will remain the paramount priority in planning and programming for the foreseeable future.

Spending trends in Pennsylvania and the SEDA-COG MPO region are expected to change in the short term, mostly as a result of \$2.5 billion in new funding to be generated through Pennsylvania Act 89 of 2013. However, funding has been largely directed to a priority program of projects—the “Decade of Investment” (DOI)—which includes multimodal, maintenance, and capacity-adding projects. Many of the larger DOI projects, including the Central Susquehanna Valley Transportation Project (CSVTV) are funded via “spike” funds made available as one-time infusions for large capital projects.

Consistent with the guidance coming in the Scorecard of Influence and other financial guidance, it is clear that the trend in spending is toward asset management activities. As a capacity-adding/network completion project, the CSVTV project is more of an outlier than a trend; the dollars provided for such a project will not be sustained in the MPO’s regular allocation going forward. In fact, PennDOT is taking a highly cautious approach in longer term financial guidance, indicating that funding levels look set to decrease. For instance, liabilities associated with the State Police Pension Program (among other state-level expenses) may quickly erode the value of the Act 89 revenue.

2. New Policies for Transportation Funding

The recent federal reauthorizations (SAFETEA-LU, MAP-21, FAST Act) and Pennsylvania transportation funding acts (Acts 13, 44, 89) sustained and increased funding for transportation, but in many ways, they changed the policies that guide how funding is allocated and made accessible. Two fundamental changes are noted. First, funding allocations are made more and more on a performance basis, depending on actual conditions of bridges or pavements, for instance. Second, more and more transportation funding is available through competitive grant programs, rather than through the traditional “block” allocations.

The combined impact of these two policy changes in the mechanisms for transportation funding is evidenced in the 2015 SEDA-COG Strategic Planning effort. The issues demanding attention encompassed the following (quoted from the 2015 Strategic Plan):

²⁹ Inflation assumed to be 3% per year (compounded), according to PennDOT Financial Guidance.

- *The Transportation Alternatives Program (TAP) process needs to be modified to ensure project continuity throughout the region.*
- *More education is needed on the state's new Multimodal Transportation Fund to ensure that the region is proposing the best candidate projects that can successfully compete for these funds.*
- *Innovative funding solutions may be necessary to ensure projects are able to be completed. Partnerships for infrastructure investment are becoming increasingly necessary as public solutions become more constrained.*
- *Project funding priorities can sometimes be challenging for municipal officials in rural areas.*
- *Emerging State priorities may reduce the amount of funding available for transportation such as Act 13 funds - which could be redirected by the new administration.*

It is revealing to note that all of these issues reference the process of accessing new or existing competitive grant programs (TAP, Multimodal), new funding strategies and partnerships (Public-Private Partnerships - P3), discerning when and how to apply for what programs, and managing funds directed to the counties (Act 13). The implications for the SEDA-COG MPO and its constituencies include the following:

1. Increased need for education about the funding programs available and their eligibility – As a first step, education and awareness of the array of funding programs is needed. Programs tend to be scattered among federal and state webpages, without a central resource that supplies help in discovering “what’s out there.” During the LRTP process, many on the Steering Committee expressed interest in learning more about the transportation funding landscape. The MPO, while not handling all educational activities directly, may continue to infuse its planning processes with educational pieces and facilitate additional investment in knowledge development.
2. Increased importance of winning in competitive programs – With more and more transportation dollars available only through competitive programs, it is necessary to increase/establish the capability of agencies, municipalities, counties and the MPO in writing effective applications. This capability is not well-developed in many of the SEDA-COG MPO constituencies, partly because of the small staff sizes and frequent turnover. For this reason, the MPO area may not see its fair share of these funding programs, since the larger agencies and municipalities in other parts of the state have more experience and can devote more resources to it.
3. Increased need for support in assembling functional partnerships and leveraging P3 – The creation of effective transportation partnerships typically emerges among a group of agencies, municipalities, etc., who have a more advanced understanding of the funding landscape and the rules governing how they can leverage various funding streams. It also involves freeing staff to invest time in “research and development” types of activities. For many constituencies in the SEDA-COG MPO, maintaining their day to day operations can be enough of a challenge.
4. Assisting local governments in understanding the Local Use Fund provision of Act 89 – The political environment of many SEDA-COG MPO counties and municipalities tends to be

conservative, making increases in fees and taxes a politically unpopular course of action. Still, with so many local transportation needs—local bridges being only one of them—the concept of tapping local revenue for local needs may still have some appeal. In addition, should implementation of the Local Use Fund become more common, lessons learned elsewhere and success stories in applying the revenue generated may be shared through the SEDA-COG MPO.

3. State and Federal Revenue

a. FAST Act

The new Fixing America's Surface Transportation (FAST) Act (P.L. 114-94) was signed into law on December 4, 2015. The FAST Act provides five-years of certain funding for infrastructure investment and planning. The Act authorizes \$305 billion across all modes over fiscal years 2016-2020 and includes \$70 billion in transfers to keep the Highway Trust Fund solvent. The FAST Act builds on the program structure and reforms of the prior funding bill (MAP-21) and includes a continued focus on accelerating project delivery. Two new programs (discussed in the Freight Movement and Priorities section below) have been added for freight funding. Specifically, the FAST Act provides the funding shown in **Table 28**.

Table 28. FAST Act Funding

Program	Average Annual Funding (Millions)	Increase from FY 2015
National Highway Performance Program	\$23,280	6.3%
Surface Transportation Block Grant Program	\$11,654	15.6%
Transportation Alternatives (set-aside)	\$760	3.3%
Recreational Trails Program (set-aside)	\$84	0.0%
Surface Transportation Block Grant Program (net of TA & Rec Trails)	\$10,809	7.3%
Congestion Mitigation & Air Quality Improvement	\$2,405	6.1%
Highway Safety Improvement Program	\$2,317	5.7%
Railway-Highway Crossings Program	\$235	6.8%
Metropolitan Planning	\$343	9.5%
National Highway Freight Program (NEW)	\$1,249	100.0%

Source: USDOT, FHWA, P.L. 114-94, *Fixing America's Surface Transportation (FAST) Act, Key Highway Provisions*, <http://www.fhwa.dot.gov/fastact/presentations.cfm>.

b. Act 89

Act 89 replaces the funding formerly provided to distressed counties allocated under Act 26. It amounts to one percent of the Oil Company Franchise Tax for Highway Maintenance and Construction. All counties in the Commonwealth of Pennsylvania who own public bridges are eligible to receive the funding. The Commonwealth allocates available funds to counties based on the ratio of the square footage of deck area of a county's county-owned bridges to the total square footage of county-owned bridges throughout the Commonwealth. The amount of square footage used shall be that reported as part of the National Bridge Inspections Standards Program.

Act 89, which became law on November 25, 2013, established a special fund within the state treasury called "Local Use Fund." Beginning January 1, 2015, a county may pass an ordinance to implement a fee

PennDOT at the time a vehicle is registered or renewed. These funds will be used by the county for transportation purposes or be allocated by the county in accordance with Section 9010 (c) of the Pennsylvania Vehicle Code. The \$5 county fee is in addition to the registration fee.

The following provide overview summaries of the Act 89 legislation:

- “Act 89 of 2013”, prepared by PennDOT, January 2014
<https://www.dot.state.pa.us/public/Bureaus/PublicTransportation/GeneralInformation/Act%2089%20of%202013.pdf>
- “Pennsylvania’s New Transportation Funding Law: Detailed Summary of Act 89 of 2013”, prepared by Associated Pennsylvania Contractors (APC) and the Pennsylvania Highway Information Association (PHIA)
<http://pahighwayinfo.org/wp-content/uploads/2013/11/Detailed-Summary-of-Act-89-of-2013.pdf>

c. Act 13

Act 13 of 2012 establishes a Marcellus Legacy Fund that allocates a portion of the Marcellus Shale Impact Fee to the Highway Bridge Improvement Restricted Account in the Motor License Fund. These funds are distributed to counties (proportionately based on population) and are to be used to fund the replacement or repair of locally owned (county; municipal), at-risk, deteriorated bridges. The Act 13 Highway Bridge Improvement payments are made to counties on August 15 of each year. A clearinghouse of information regarding Act 13—including timelines, annual reports, and links to summaries prepared by other agencies—has been set up by the Pennsylvania Public Utility Commission at http://www.puc.state.pa.us/filing_resources/issues_laws_regulations/act_13_impact_fee.aspx.

d. Act 44 County Maintenance

Act 44 provides for an annual allocation to all counties that own public bridges. These allocations are made on December 1 of each year as provided in 75 Pa. C.S. § 8915.6(b)(2). The Commonwealth allocates the funds available through Act 44 to counties based on the ratio of the square footage of deck area of a county’s county-owned bridges to the total square footage of deck area of county-owned bridges throughout the Commonwealth. The amount of square footage used shall be that reported as part of the National Bridge Inspection Standards Program.

4. Project Funding Sources

a. Multimodal Fund

Act 89 established a dedicated Multimodal Transportation Fund that stabilizes funding for ports and rail freight, increases aviation investments, establishes dedicated funding for bicycle and pedestrian improvements and allows targeted funding for priority investments in any mode. The program is intended to provide financial assistance to municipalities, councils of governments, businesses, economic development organizations, public transportation agencies, rail/freight and ports in order to improve transportation assets in order to enhance communities, pedestrian safety and transit revitalization. The required local match is no less than 30% of the amount awarded.

b. Green Light Go

Pennsylvania's Municipal Signal Partnership Program, also known as the "Green Light-Go Program," provides state funds for the operation and maintenance of traffic signals along critical and designated corridors on state highways.

- *Designated Corridors* are State Highways with traffic volumes less than 10,000 vehicles per day.
- *Critical Corridors* are State Highways with traffic volumes greater than 10,000 vehicles per day and/or locations where traffic signals exist at the end of limited-access highway ramps.

PennDOT has developed an interactive webmap for identifying traffic signals on Designated and Critical Corridors.³⁰

Act 89 of 2013 created Title 75, Section 9511(e.1) [Allocation to Municipalities for Traffic Signals] which is a new funding program for Designated corridors. PennDOT developed a similar traffic signal modernization and improvement program for critical corridors designed to improve safety and mobility by reducing congestion and improving efficiency on key state highways. Municipal applications for the Green Light-Go Program require a 50% match using municipal or private cash. Announcements are communicated through municipal organizations and PennDOT Municipal Services representatives.

c. ARLE

The Automated Red-Light Enforcement (ARLE) Grant Program is administered by PennDOT's Bureau of Maintenance and Operations. Currently the Philadelphia Parking Authority, the City of Philadelphia's system administrator, provides PennDOT with quarterly deposits of revenue generated by automated red light enforcement (ARLE) violations into a restricted Motor License Fund account. The Philadelphia Parking Authority deducts all operation and maintenance costs prior to depositing the remaining revenues into a restricted Motor License Fund account. The balance of revenues generated in the restricted Motor License Fund account is eligible for use as part of the ARLE Funding Program.

PennDOT will post yearly revenues available for the ARLE Funding Program into the Pennsylvania Bulletin each spring prior to the submission of applications. No matching funds are required for eligibility in the ARLE Grant Program but cost sharing is encouraged. The intent of this program is to fund worthwhile, relatively low-cost projects that improve the safety and mobility of the traveling public. The kinds of eligible projects vary widely from improvements to traffic signals, to roadway improvements at signalized intersections, to school zones, guiderail and roadside safety. Improvements recommended by LTAP programs such as the Local Safe Roads Communities and Walkable Communities are also eligible.

d. TIGER

The Consolidated and Further Continuing Appropriations Act, 2015 appropriated \$500 million, available through September 30, 2017, for National Infrastructure Investments otherwise known as TIGER grants. As with previous rounds of TIGER, funds for the FY 2015 TIGER program are to be awarded on a competitive basis for projects that will have a significant impact on the Nation, a metropolitan area, or a region. There is no match requirement for rural areas.

³⁰ <http://pennshare.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=a31ed30f42f849d591631140df98c2bb>.

TIGER Discretionary Grants have supported innovative projects, including multimodal and multijurisdictional projects that are difficult to fund through traditional federal programs. Successful TIGER projects leverage resources, encourage partnership, catalyze investment and growth, fill a critical void in the transportation system or provide a substantial benefit to the nation, region or metropolitan area in which the project is located. The TIGER grant program is expected to continue to make transformative surface transportation investments that dramatically improve the status quo by providing significant and measurable improvements over existing conditions.

e. ARC

Appalachian Regional Commission (ARC)³¹ funds may be used for the construction, reconstruction or improvement of highways on the designated 3,090 mile Appalachian Development Highway System (ADHS). MAP-21 Section 1108 amended 23 U.S.C. 133 and made STP funds eligible for the “construction, reconstruction, rehabilitation, resurfacing, restoration, preservation, or operational improvements for highways, including construction of designated routes” of the ADHS and local access roads under title 40, section 14501.

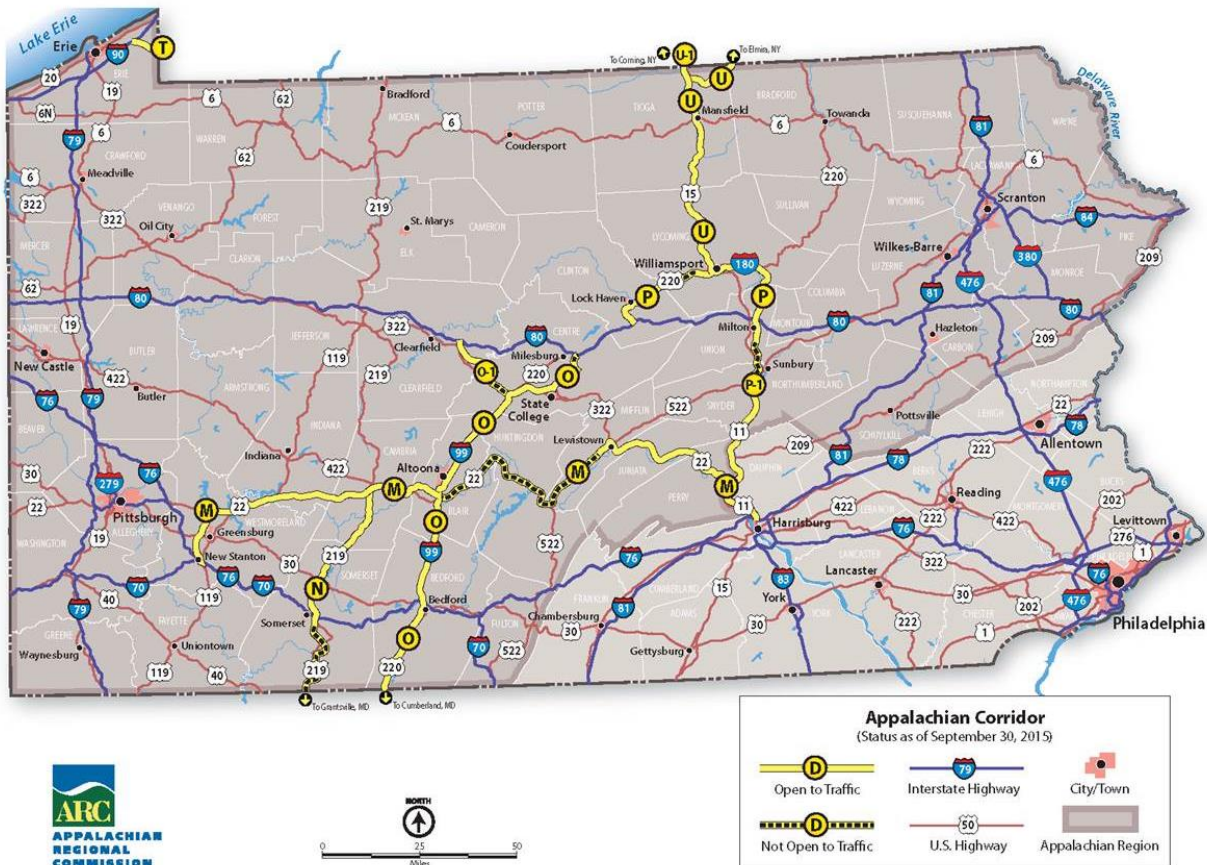
The ADHS was created by the Appalachian Regional Development Act of 1965. Its purpose was to provide a system of development highways and access roads that would contribute to economic development in the Appalachian regions of 13 States -- Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia and West Virginia. ADHS funds carry no year-of-obligation limitation, making the funds available until used.

Figure 51 illustrates the ADHS context of the region and within Pennsylvania. Recent changes in the designated miles has allowed corridor P and P-1 to become more developed and continue the movement and completion of the system of roadways under the ARC funding umbrella. Funding for future development of Corridor M is currently tied to US 22/522 through Mifflin, Huntingdon, and Blair Counties. In the past, efforts were made to remove this portion of US 22/522 from the ADHS, thereby impacting future funding. Mifflin County has expressed interest in completing a master plan for the entire corridor through Blair, Huntingdon, and Mifflin Counties. Such a study was completed by PennDOT District 9 for the Blair/Huntingdon section.

For the last 30 years, the SEDA-COG MPO has experienced success advancing one or two projects per year through the ARC Local Access Road (LAR) program. **Table 29** describes the currently open infrastructure projects receiving ARC funding. The MPO’s experience in identifying needs and writing project justifications as part of the grant program could form foundational material for educating other agencies and municipalities on the grant writing process.

³¹ <http://www.arc.gov/about/index.asp>

Figure 51. The Appalachian Development Highway System in Pennsylvania



Source: Appalachian Regional Commission, *Status of the Appalachian Development Highway System, 9/30/2015*, <http://www.arc.gov/images/programs/transp/ADHSFY2015StatusReport.pdf>, p. 44.

f. DCNR

DCNR's Bureau of Recreation and Conservation helps communities build connections between citizens and the outdoors by providing technical and financial assistance for community recreation and conservation projects and community revitalization efforts. A complete list of DCNR funding resources can be found in their Funding Guide for Recreation and Conservation Projects (March 2014), which can be found on their website (<http://www.dcnr.state.pa.us/brc/elibrary/resourcesta/funding/index.htm>).

Table 29. Open ARC Local Access Road Projects, 2Q 2015

Project Name	ARC Amount	Grantee	Approval Date	Start Date	Completion Date	Project Status
Penn House Commons Access Road Project	\$590,000	East Buffalo Township, Union County	5/12/2009	9/25/2014	7/31/2015	Project let on 9/25/14 with the PA 45 and 15th Street Intersection and Road Improvements project below. Construction completed.
Rt. 45 and 15th Street Intersection and Road Improvements	\$580,000	East Buffalo Township, Union County	4/5/2010	9/25/2014	7/31/2015	This project was combined and jointly let with the Penn House Commons Access Road project. See above for project status.
SEEDCO Access Road Project	\$230,000	Mount Carmel Township, Northumberland County	3/3/2011			SEDA-COG JRA, SEDA-COG, and SEEDCO have reached an agreement on the alignment of the new access roadway. The scoping field view was held on 5/7/14, and the reimbursement agreement between PennDOT District 3 and Mount Carmel Township for the local match portion of the funding was being finalized. Project schedule submitted on 10/20/14. Funding for the engineering costs (\$120K) is being explored, including the PennDOT Multimodal Fund. No change as of 10/16/15 as far as District 3-0 is aware.
Bloomsburg Light Street Road and Swisher Circle Intersection Upgrade	\$350,000	Town of Bloomsburg, Columbia County	9/11/2013			Safety review has been approved. Environmental Clearance was issued 5/13/15. Final ROW Plan submitted. Designer working on finalizing Line, Grade and Typical Section and utility coordination. Project estimated for an October 2016 let.
Progress Road Reconstruction Project	\$427,430	Rapho Township, Northumberland County	9/21/2015	9/11/2015	11/17/2015	Environmental Clearance issued 7/15/15. Project was let on 9/11/15. Construction completed.
Expansion Drive Reconstruction Project	\$250,000	Granville Township, Mifflin County	7/30/2012	2/2/2015	6/9/2015	The Expansion Road project has been completed with a Physical Work Acceptance Date of 6/13/15.
Roundhouse Road Project	\$410,000	Granville Township, Mifflin County	6/30/2014	3/24/2016 (let date)		Conducted scoping field view on 9/25/14. The survey is complete. The Design Criteria Report was approved. Working on the Typical Section Approval.

Source: SEDA-COG, 2016.

5. Project Funding Strategies

a. Public-Private Partnerships (P3)

Act 88 of 2012 authorizes public private partnerships (P3)³² in Pennsylvania. This allows PennDOT and other transportation authorities and commissions to enter into agreements with the private sector to participate in the delivery, maintenance, and financing of transportation-related projects. P3's are a contractual agreement between a public entity and private entity. The agreement transfers responsibility of engineering, construction, operation, and/or maintenance to the private sector for a defined period of time; or allows the private sector to perform by contract a service previously provided by the public sector. The private firm receives payments either from existing revenue sources or through the collection of new tolls or user fees. There are two basic P3 project types:

1. Building New Facilities – Adding capacity to the system by building something new.
2. Modifying Existing Facilities – Improving capacity or performance of the current system.

b. Multi-Agency Cooperation – Coordinating Funding Streams

During the August 2015 LRTP Steering Committee Meeting, a discussion ensued on how to maximize funding by planning for projects to be done in cycles and tapping into other pots of money for funding. This would require looking at different programs with different agencies to see where there may be additional funding outside of PennDOT that can be leveraged. A suggestion was made that coordination with other state agencies should be added to the Strategic Issues list.

The discussion included some insight as to what institutional barriers exist regarding matching up pots of public money that may be under PennDOT, DCNR, Department of Community and Economic Development (DCED), and Community Development Block Grant (CDBG) jurisdiction, to put into a project. It was noted that it depends on the type of project, but that federal or state regulations would need to be followed. It was suggested that the potential funding sources be identified as part of the LRTP process, but that this money not be included in any anticipated allocations or revenue sources. While federal and state highway monies have financial guidance available, the same is not available for agencies such as DCNR, and commitment to a funding program would need to be established.

³² <http://www.penndot.gov/ProjectAndPrograms/p3forpa/Pages/default.aspx#.VwbnRL7D-Uk>.

D. Bridges/Asset Management

PennDOT measures bridge condition by whether it is structurally deficient, which is an indication of a bridge's overall status in terms of structural soundness and ability to service the traveling public. "SD" indicates that the bridge has deterioration to one or more of its primary structural components. PennDOT quantifies structurally deficient bridges in two ways: first by the number of bridges rated by SD, and second, by the total square feet of deck area within bridges that are rated SD.

Per SEDA-COG MPO's *Long Range Transportation Plan, Regional Performance Measures Report, April 2015*, from 2012 to 2013, SD rates in the MPO region fell to below 10% SD (based on square feet of deck area) for all categories, except local bridges greater than 20 feet in length. For these local bridges, almost 30% are SD. Overall, this indicates that SEDA-COG MPO's state bridges are in fairly good shape; however, there is still much to do with local bridges. The local bridge issue though is a non-uniform issue across the MPO; some counties like Juniata County have no local county-owned bridges, while others like Columbia County have many county-owned bridges. Counties themselves receive very small local bridge allocations each year and so cannot address the problem on their own.

Transitions

*From bridge replacement
only to maximum benefit
strategy*

*From local only strategies
to regionalized strategies
and decision-making
processes*

...

The SEDA-COG MPO is also home to many covered and historic bridges (some state and some local) that receive special protection from demolition or significant changes. PennDOT currently has a planned program of preservation activities for their state bridges aimed at extending service life. Currently, local bridges have no such program for preservation, so the local jurisdictions often request higher-cost, wholesale bridge replacements.

As outlined previously, various funding sources are available for bridge improvements, preservation projects, etc., including Act 13 funding, which is specific to counties and municipalities. However, there are still substantial challenges to meeting all of the needs, especially on the local level.

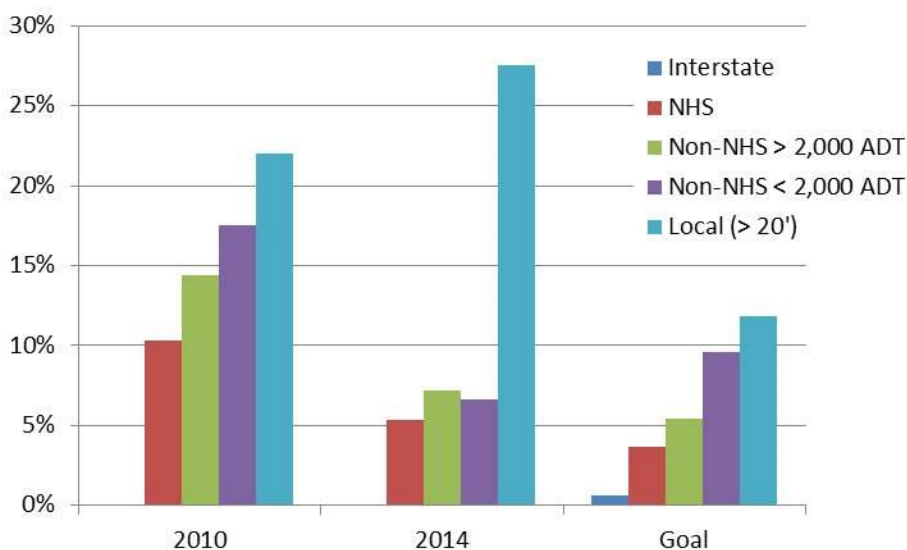
The 2015 SEDA-COG MPO Strategic Plan stated that the region's LRTP should seek to quantify the asset management demands of the system as part of a process to balance the economic development and adequate maintenance for the system. Specific strategies included the following:

- Collaboration with PennDOT to identify possible bridge bundling projects;
- Further exploration of how PennDOT's P3 Rapid Bridge Replacement Program (see following paragraphs) has affected the region and remaining needs;
- Use of the 8' to 20' local bridge inventory for municipal outreach in developing capital improvement programs for SD local bridges that includes a training/assistance program; and
- Investigation/identification of potential funding streams for local bridges.

1. Local bridges

The SEDA-COG MPO is home to over 2,731 total known bridges (state and local bridges over 8 feet in length) and 838 of those bridges are considered “local bridges,” owned by municipalities or counties; the remaining 1,893 are state bridges. During the past several updates to the Transportation Improvement Program (TIP), the members of the MPO have noted difficulty in programming local bridge projects on the TIP. They have also noted that several of the projects programmed have encountered a range of difficulties in moving to construction. As a result, trends in local bridge conditions show an increase in structurally deficient bridges and deck area (**Figure 52**), which is in stark contrast to the trends on the state system. It has been noted that, while significant resources are devoted to local bridge work, this work frequently involves bridge replacement, rather than less expensive preservation or rehabilitation.

Figure 52. Change in Structurally Deficient (SD) Bridge Deck Area, 2010-2014



Source: PennDOT Performance Measures Annual Report, Bridges, 2010 and 2014.

With the consensus of the MPO Committee, a Local Bridge Subcommittee was convened in 2015 to investigate the broad range of challenges and issues presented by local bridge projects. Over a series of five meetings, the committee first identified the issues and causes, and developed several potential solutions to be applied in the 2017-2020 and succeeding TIP updates. The committee prioritized the following activities for staff to provide more information to local owners of bridges:³³

- Continue to schedule LTAP sessions on classes related to local bridges on a regular basis.
- Schedule technical assistance sessions as requested, and work to make sure that local officials are aware of the option to schedule a technical assistance session on issues related to local bridges, the installation of GRS construction materials, and related topics.
- Develop a resource guide for local officials identifying funding programs that can be used in local bridge work. Post the guide on the SEDA-COG website, and publicize it at county conventions and other venues.

³³ SEDA-COG MPO, *Outcomes and Recommendations from the SEDA-COG MPO Metropolitan Planning Organization Local Bridge Subcommittee*, DRAFT dated January 26, 2016.

- Develop a resource guide for local officials identifying funding programs that can be used in local bridge work. Post the guide on the SEDA-COG website, and publicize it at county conventions and other venues.
- Continue efforts to complete and share the inventory of local bridges between eight and twenty feet in the SEDA-COG area.
- Support county-led efforts to inspect, maintain and repair locally owned bridges between eight and twenty feet long.
- Support county-led efforts to find and apply low-cost replacement methods, including open-bottom aluminum culverts, pipe replacements and other locally developed solutions.

The subcommittee also considered a bridge prioritization methodology, developed by the MPO staff, for scoring bridges based on ten factors, including condition, context, county priority, local impact, and resiliency. The bridges considered in the evaluation are indicated in **Figure 19, Figure 20, Figure 21, Figure 22 and Figure 23**, along with other Bridges of Special Concern. The subcommittee applied the methodology and presented a suite of local bridge projects that represent the priorities of the MPO member counties heading into the 2017-2020 TIP update.

2. High Value Bridges (bridges over 1,000 feet)

As an element of the Bridges of Special Concern mapping (**Figure 19, Figure 20, Figure 21, Figure 22 and Figure 23**), bridges greater than 1,000 feet in length are identified as High Value Bridges. Within the SEDA-COG MPO, there are 22 bridges over 1,000 feet and another 20 bridges over 500 feet. PennDOT has and continues to pay attention to these bridges, doing forward looking planning and following a disciplined preservation schedule to make them last to their service life. The bridges are called out in this plan as a “long range radar” for tracking the timing of major maintenance activities and (eventually) replacement projects. The MPO recognizes that the number of High Value Bridges raises the possibility that major preservation or replacement projects could overlap and encumber large portions of the MPO’s TIP.

3. Rapid Bridge Replacement (RBR) Project

This Public-Private Partnership (P3) is designed to bolster PennDOT’s ongoing effort to address the state’s nearly 4,200 Structurally Deficient (SD) bridges. With the P3 approach, PennDOT will replace 558 SD bridges around the state more quickly; achieve significant savings for taxpayers; and minimize the impact on the traveling public. The initiative was approved by the Public-Private Transportation Partnership Board in September 2013. In October 2014, Plenary Walsh Keystone Partners was selected as PennDOT’s private partner. Construction began in the summer of 2015 and all 558 bridges must be replaced within 36 months. PennDOT will maintain ownership of the bridges throughout the contract.³⁴

In the SEDA-COG MPO, the 30 state system bridges shown in **Figure 53** are to be replaced through the RBR project. A full listing of the bridges by county, along with maps of their locations and a timeframe for completion, are provided at <http://parapidbridges.com/bridgesbycounty.html>.

³⁴ <http://parapidbridges.com/whatisthepennsylvaniarbrproject.html>.

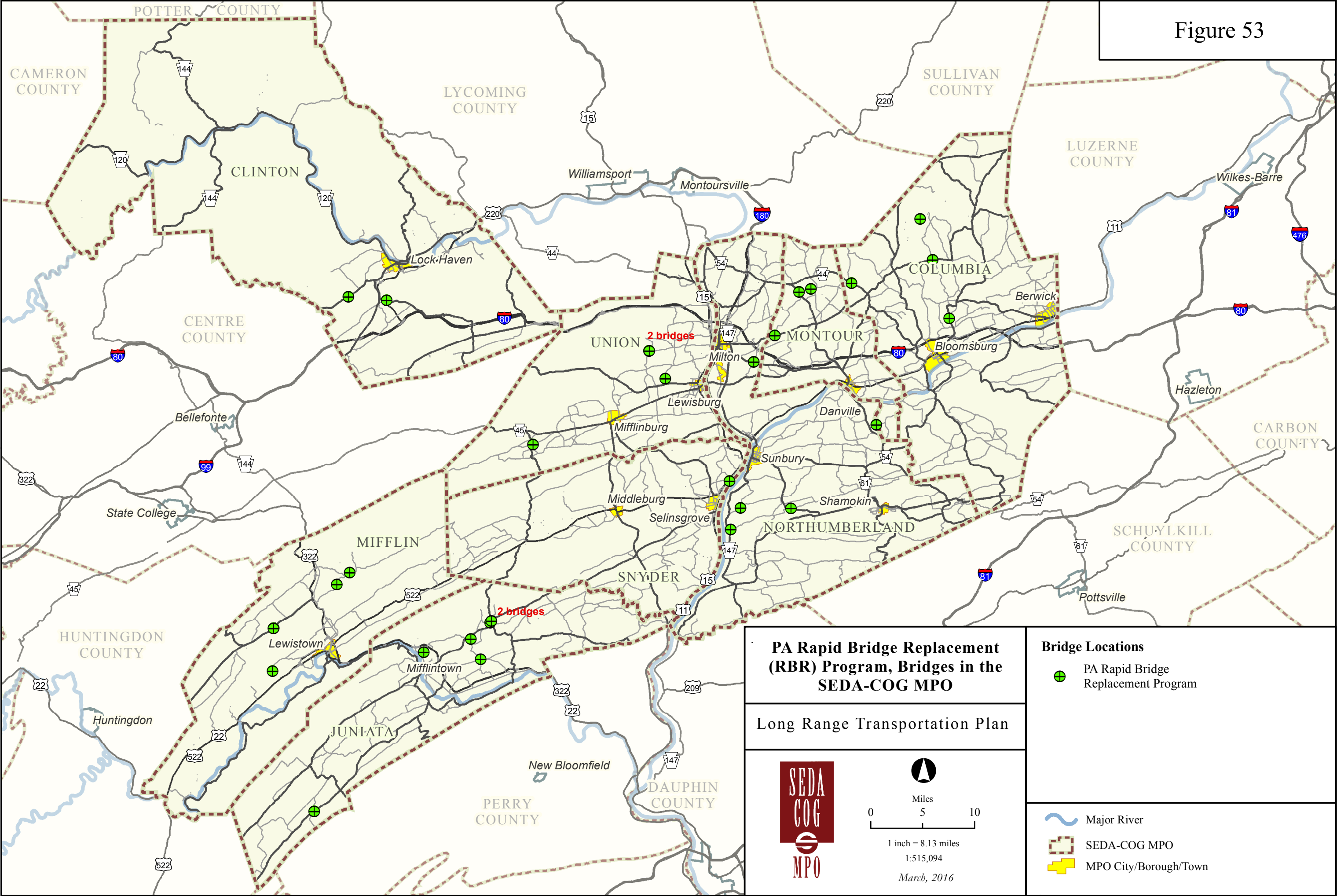


4. Bridge Removals

In May 2015, SEDA-COG MPO and North Central Rural Planning Organization identified a package of 14 locally owned bridges to be recommended for removal. Most of the structures had been closed for longer than four years, and it seemed unlikely that the bridges would ever be returned to service. In February 2016, PennDOT Central Office replied to the request, indicating that spike funds would be made available and the removals project would be placed on the Draft 2017-2020 TIP.

The bridge removals in the SEDA-COG MPO region are symbolized along with other Bridges of Special Concern on **Figure 19, Figure 20, Figure 21, Figure 22 and Figure 23.**

Figure 53



E. Corridor Modernization

The overall focus on transportation throughout the state and the SEDA-COG MPO region has been transitioning from the previous narrow focus on small local jurisdictions to a more regional focus on corridors that cross jurisdictions (including MPOs) and the implications of those corridors on much broader areas. Much of this changing focus has centered on how to "modernize" strategically important corridors to better serve communities, regions and economic development centers. The MPO's Strategic Plan states that PennDOT defines corridor modernization as "An objectives-driven, performance based program to better evaluate, prioritize, plan, deploy and measure the effectiveness of Transportation Management and Operations (M&O) strategies." For the SEDA-COG MPO, corridor modernization is primarily focused on traffic signals and Intelligent Transportation Systems (ITS) improvements. Specific strategies for the region include investigation of a TIP line item for traffic signals, funded by state and federal sources. The Strategic Plan also calls for an inventory of both traffic signal operation needs and ITS-related needs. These inventories would facilitate coordination with PennDOT to better understand statewide needs and initiatives, especially those related to ITS.

A future and potentially significant need for the SEDA-COG MPO region will be the impact of CSVt on regional corridor operations, especially related to traffic signals. The completion of CSVt is going to substantially affect traffic patterns and operations throughout the region. These changing traffic patterns will need to be addressed on affected corridors through signal operations evaluations and improvements, and possibly additional ITS needs.

PennDOT is responsible for operations planning at the statewide level. The statewide plan is spelled out in the Transportation Systems Operations Plan (TSOP), which defines PennDOT's operational directions for the next several years. There are nine operations regions across the Commonwealth. Each region developed, adopted and executed its own operations plan with support from Central Office. There is a current initiative within PennDOT Central Office to develop a more widespread operations scenario and performance based and managed ITS system. This effort is linked to the statewide Traffic Management Center as well as a new investment infrastructure around the four business plan networks. This program is also looking to advance other traveler information such as Inrix and Waze apps and other new technology to advance incident management and traveler information in the regions.

Transitions

*From segmented,
jurisdictional-based
systems to more
connected, corridor-based
systems*

*From old technology
(or no technology)
to new technology*

*From a projects-driven
program to a performance
based program*

...

F. Freight Movement & Priorities

“PA On Track” is the brand name for Pennsylvania’s most recent update of its multimodal LRTP and the Commonwealth’s first comprehensive freight movement plan. The multimodal LRTP seeks to preserve and improve accessibility and connectivity for all transportation modes. The comprehensive freight movement plan further defines how to efficiently move freight, while fostering the state’s economy and generating future growth. PennDOT led the development of PA On Track in partnership with the many entities that influence transportation planning in Pennsylvania, as well as members of the general public.

According to PA On Track, in 2011, Pennsylvania’s multimodal transportation system moved 1.2 billion tons of goods valued at over \$1.6 trillion. A number of existing and projected economic trends have the potential to impact freight movement in Pennsylvania. One example is the shift of manufacturing back to the Americas. After the 1980s, a time when manufacturing dominated the U.S. economy, manufacturing growth began to move from the U.S. to emerging developing countries such as China. Due to multiple factors, including a rise in labor costs in these developing countries, manufacturing is shifting back to the Americas. As stated previously, the economy of the SEDA-COG MPO region is very heavily dependent on manufacturing and therefore has a great need for efficient freight infrastructure.

Transition

*From freight as a
secondary issue to freight
as a primary planning
factor*

...

The main goal of PA On Track in relation to freight is to expand and improve system mobility and integrate modal connections. A few of the plan’s objectives related to this goal include:

- Provide modal infrastructure and technology advancements to improve system efficiency and trip predictability and to eliminate bottlenecks (the proposed CSVT project will address this objective in a portion of the MPO region)
- Increase access to jobs/labor/transportation choices in urban, suburban, and rural communities
- Support local communities through appropriate and equitable transportation modal options and investments
- Improve first and last mile intermodal access and connections
- Support pedestrian and bicycle facility development
- Improve bridge under-clearances and intersection geometry

The FAST Act includes two new programs specific to freight: the National Highway Freight Program and the Nationally Significant Freight and Highway Projects Program.

The National Highway Freight Program provides \$1.2 billion per year apportioned to states by formula. The state must have a statewide freight plan to be eligible for funding. The program adds a new freight formula and expands the freight network.

The Nationally Significant Freight and Highway Projects Program includes \$900 million per year (on average) for competitive grants or loans. Eligible projects must be greater than \$100 million in size (although this requirement is reduced for states with small programs). Eligible activities include:

- Highway freight projects on National Highway Freight Network
- NHS highway/bridge projects, projects in National Scenic Areas
- Freight rail/intermodal/port projects (\leq \$500 M over 5-year period)
- Rail-highway grade crossing or grade separation projects

The MPO's Strategic Plan states that many of the needs of the general traveling public are similar to those of freight carriers and customers. For example, bottlenecks that reduce passenger vehicle travel times also affect those of motor carriers. Some needs are unique to freight only such as freight rail transload facilities or truck turning radii improvements. Specific strategies indicated for freight planning in the region include obtaining input from specific freight operators and third party logistics providers in the LRTP and use of the Statewide Freight Plan to focus in on specific freight types and needs. The Strategic Plan also states that the MPO should use the PA Transportation Advisory Committee (TAC) 2007 study on truck access and parking to identify needs and should identify the Priority Freight Network in the SEDA-COG MPO region in coordination with PennDOT and FHWA.

G. Other Strategic Regional Issues

1. Horse-Drawn Vehicle Travel & Safety

Growing concern has been expressed for the safety of Plain Sect populations—Amish and Old Order Mennonite groups—who travel by horse-and-buggy on the region's highways and streets. The Old Order Mennonite groups also make extensive use of bicycles for transportation. Growth trends for the Plain Sect populations show quick growth—with populations potentially doubling by 2040, the horizon year of this LRTP. The trends point to increasing conflicts between motorized and horse-and-buggy vehicles (as well as bicycles), which deserve some attention in the project development process—particularly where Amish are known to reside and on routes that have frequent horse-and-buggy traffic and crash history.

PennDOT's CDART crash reporting tool allows the tracking of crashes that involve a horse-and-buggy vehicle type, and reportable crashes from 2010-2014 involving a horse-and-buggy are mapped in **Figure 54** by crash type. A total of 47 crashes were identified, with "rear end" crashes being the most common type. **Table 30** identifies the roadway corridors where crash concentrations are noted. Mifflin and Clinton counties show the most intense concentrations of crashes.

This plan recommends increased attention to highway and bridge design for the safe accommodation of horse-and-buggy travel, including mitigation of existing crash issues in the corridors where crash trends are noted. Further study to identify the roadways and pathways used most by the Plain Sect, key locations of conflict (intersections, bridges), use of edgeline rumble strips and the adequacy of shoulder widths will help target and prioritize projects. To help educate those who operate horse and buggy vehicles or hire drivers of motorized vehicles, PennDOT has developed a Horse and Buggy Driver's Manual (Publication 632) in consultation with the Lancaster County Amish community.

Table 30. Corridors with Concentrations of Horse-and-Buggy Crashes

County	Municipalities	Roadway	Crash Types
Clinton	Porter Township	SR 0064	2 Rear End
Clinton	Greene Township	SR 0880	2 Angle 1 Head-On
Clinton	Bald Eagle Township	SR 0150	1 Rear End 1 Head-On
Mifflin	Menno, Union, Brown Townships	SR 0655 SR 0305	6 Rear End 1 Angle
Mifflin	Menno Township	SR 4004 (Front Mountain Road)	1 Rear End 1 Angle
Union	Limestone Township Mifflinburg Borough	SR 0045 SR 2004 (Furnace Road)	2 Angle 2 Same Direction Side
Snyder	Perry, Washington Townships	SR 0104	1 Rear End 1 Angle
Northumberland & Montour	Delaware, Lewis, Anthony Townships	SR 0054	2 Rear End 2 Angle
Northumberland	Delaware Township	SR 0405	2 Rear End

Source: PennDOT CDART, 2010-2014.

1. State Asset Vulnerability Assessment

PennDOT Central Office has initiated a study of extreme weather and the vulnerability of transportation assets. From an 11/12/2015 PennDOT Press Release:

*The first phase of the extreme weather vulnerability study, to be completed by September 2016, involves documenting historic weather impacts on the road and bridge network and identifying potential impacts in the future. The study will engage emergency management officials, PennDOT's planning partners as well as other stakeholders and lead to later phases. The goal is to develop strategies to increase the resiliency of PennDOT's assets and adopt strategies into planning, design and operations to allow PennDOT to successfully cope with severe weather events.*³⁵

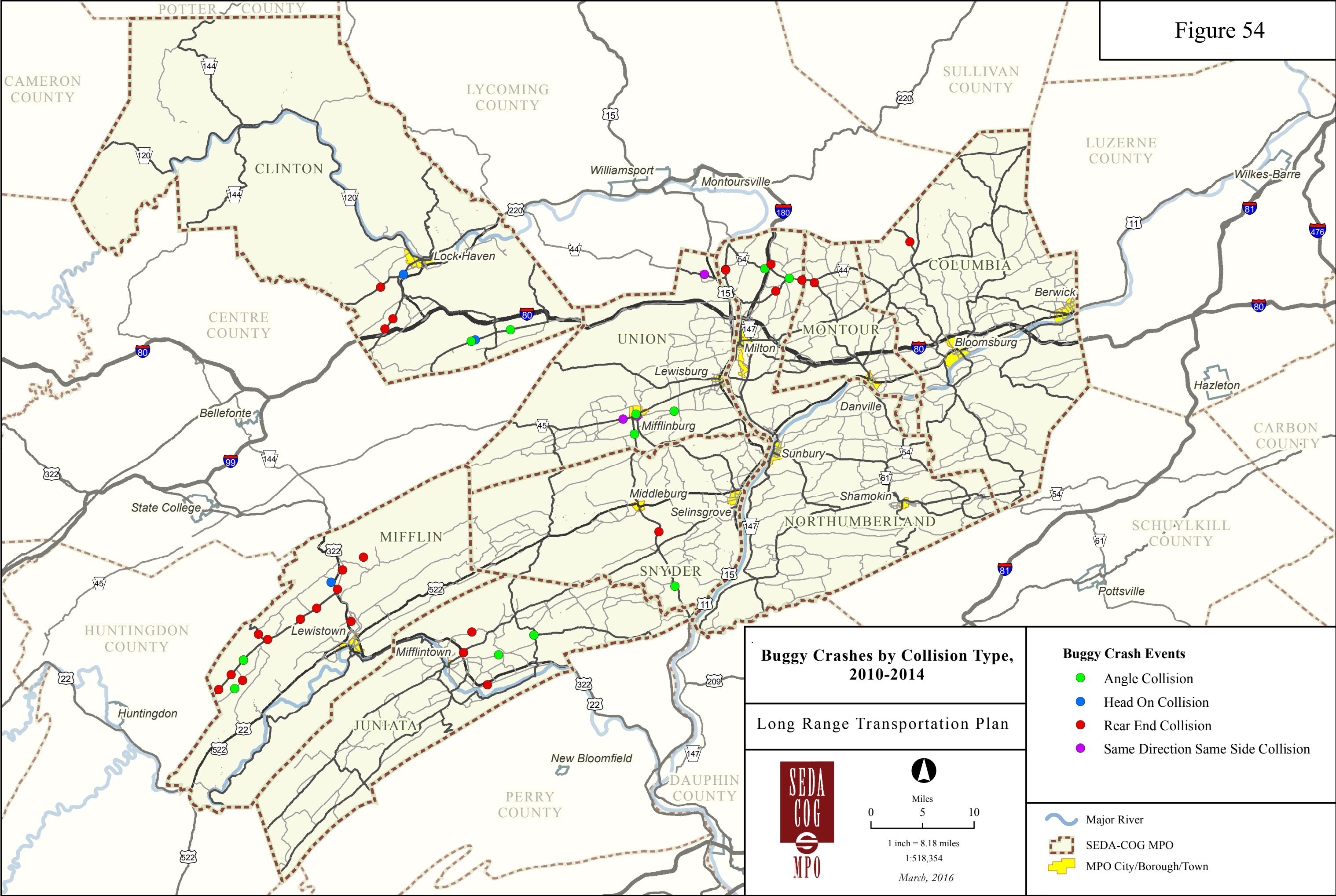
As of April 2016, PennDOT had contacted its District Maintenance Offices to set up interviews with their staff, and a web tool had been set up for collecting locations of concern.

The study is expected to follow principles outlined in FHWA's *Climate Change & Extreme Weather Vulnerability Assessment Framework*³⁶ to maintain compliance with the new FAST Act planning factor for "Resilience and Reliability."

³⁵<http://www.dot.state.pa.us/internet/pdnews.nsf/8c5bc4e349ab4db6852576c800678468/657d6fcfb386ea3785257efb0061433e?OpenDocument>.

³⁶http://www.fhwa.dot.gov/environment/climate_change/adaptation/publications/vulnerability_assessment_framework/fhwahep13005.pdf

Figure 54



H. Issues of Public Concern

Several additional regional issues and concerns, beyond those identified in the Strategic Plan, were discovered during the course of this LRTP update. The primary sources for these issues and concerns were the following:

- The Transportation Issues Forums, where participants reviewed an evaluation of public comments received by the State Transportation Commission (STC) and PennDOT, adding their own comments and ideas for resolving transportation issues. (See the Outreach & Public Involvement chapter for more information.)
- The LRTP Steering Committee, which injected salient issues that emerged during the six (6) Steering Committee Meetings conducted during the LRTP update process.

1. Walkable/Bikeable Communities

Many communities have not envisioned the desire for pedestrian and bicycle facilities and lack a long-term plan for developing such a network. As such, they have little leverage with developers and too often will waive subdivision requirements for building sidewalks and paths.

At the same time, public desire for more walkable and bikeable communities was a frequent quality of life issue reflected in more than one third of all the SEDA-COG MPO region comments received by the STC and PennDOT. With parts of US 11/15, US 15, and PA 147 becoming more community focused when CSVT reduces volumes and diverts the larger vehicles, a variety of new opportunities will be available to shape these traditionally vehicle dominated corridors into walkable and bikeable systems.

- At the planning level, community-based plans for developing walking and biking facilities are needed to give the municipalities support when faced with pressure to waive the requirements. To this end, the Susquehanna Greenway Partnership is in the early stages of a bike/pedestrian plan for communities in the Greenway Corridor.
- At the policy level, re-establishing the emphasis on creating functional networks of sidewalks and paths is a common theme among many national advocacy and policy campaigns, including FHWA's Active Transportation Initiative and the Complete Streets concept. The creation of county or regional "model" ordinances could help where municipal ordinances do not have strong requirements.
- At the implementation level, PennDOT's Local Technical Assistance Program (LTAP) Walkable Communities Program provides assessments of pedestrian facility safety and develops potential solutions. For the SEDA-COG MPO region, LTAP walkability assessments have been completed for Bloomsburg, Lock Haven and Selinsgrove.

2. Transportation Access & Options

Comments regarding access to transportation options, including transit and commuting options, were reflected in just under 10% of the comments received by STC and PennDOT for the SEDA-COG MPO region. In many cases, a lack of transportation options was indicated.

The need for additional options has been recognized by transit agencies. Strategies, including the following, were compiled by the North Central PA Public Transportation Taskforce in their 2011 *Regional Public Transportation Needs Assessment*:

- Expansion of shared-ride services to evenings and weekends
- Improvement of service convenience and amenities
- Taxi subsidy program
- Accessible taxi vehicles
- Expansion of carpool and vanpool services
- Car sharing programs
- “Beyond the Region” (inter-city) commuter bus service
- General public rural demand responsive service

Shared-ride transit services are currently available to all residents of the SEDA-COG MPO counties at the unsubsidized rate of about \$1.50 per mile. This cost makes such service minimally competitive when compared with the \$0.58 per mile cost to own and operate a personal vehicle.³⁷

The 2011 *Needs Assessment* also gave some consideration to community fixed-route transit service. The Community Characteristics chapter identified the US 11 and US 15 corridors as having higher potential demand for transit services. However, the report acknowledges the difficulty and cost of operating fixed route bus services in this area, where each community is rather small and the distances between communities is significant. Operating cost is cited most frequently as the primary barrier to developing fixed route service or expanding subsidies. More significantly, there is not a policy consensus among the various decision-makers and transit service providers about the viability and relative benefit versus cost of providing fixed route service. For the foreseeable future, consensus for the path forward centers on service innovations, more accessible information on existing service, and evolving operational strategies based on the shared-ride model.

a. Private Services

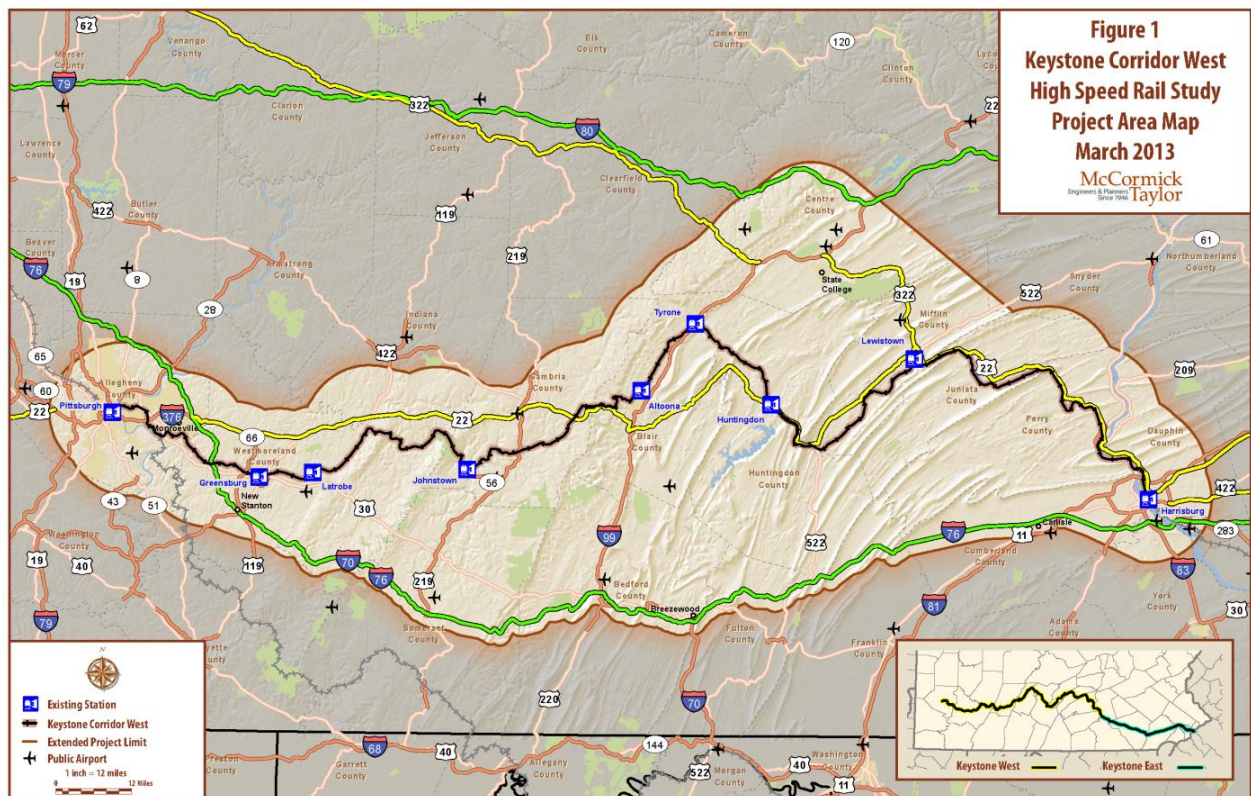
Transportation service enterprises, like Uber, Lyft, and others, offer a smartphone platform for connecting people to drivers who will provide on-demand point to point transportation. Service is based on availability of drivers, and cost is derived according to trip time or mileage, similar to a taxi fare. As of April 2016, neither Uber nor Lyft was providing service in the SEDA-COG MPO region.

b. Passenger Rail

Amtrak currently operates the Pennsylvanian Route one trip per day of passenger rail service between Harrisburg and Pittsburgh on the Keystone West Corridor (**Figure 55**). This passenger rail service runs on Norfolk Southern Main Line Freight rail lines through Juniata and Mifflin Counties, with a stop in Lewistown.

³⁷ Estimate of the per mile shared ride cost based on the Union-Snyder Transportation Alliance rates effective 3/25/2016 (<http://www.ustatrans.org/Main/Rates.asp>). Per mile cost to own and operate a car based on 2015 data from the American Automobile Association (<http://newsroom.aaa.com/2015/04/annual-cost-operate-vehicle-falls-8698-finds-aaa-archive/>).

Figure 55. Keystone Corridor West Passenger Rail



Source: Keystone West High Speed Rail Study, *Feasibility Report & Preliminary Service Development Plan*, 2014, [http://www.planthekeystone.com/PDF/Keystone West-Feasibility Report & SDP August2014.pdf](http://www.planthekeystone.com/PDF/Keystone%20West-Feasibility%20Report%20&%20SDP%20August2014.pdf).

On-time performance is generally unreliable. Further consideration by PennDOT and other partners has been given to upgrade this service, however numerous funding and technical challenges must be considered. To build this current service into a commuter option to Pittsburgh or Harrisburg, expansion to two or three trips per day would be needed. From the *PA Intercity Passenger and Freight Rail Plan*, 2010.³⁸

The Keystone Corridor West is located between Pittsburgh and Harrisburg. It provides critical mobility to the communities and natural attractions of central Pennsylvania, such as Greensburg, Altoona, and Johnstown, as well as connections to Penn State University, the state parks, and other attractions in the Allegheny Mountains.

Norfolk Southern owns the Keystone West line and uses it as a critically important freight route between the Midwest and the East Coast. Although Norfolk Southern's predecessor, Conrail, pared down portions of the line from four-track to double- and triple-track segments, the right-of-way is available to accommodate significant capacity increases and frequent passenger service.

³⁸ <http://www.dot.state.pa.us/public/bureaus/railfreight/PARailPlanAppend2/PARailPlanlowres.pdf>

The Pittsburgh to Cleveland corridor could be considered as a future extension of the Keystone Corridor West. Currently, only one Amtrak train per day operates on this segment and its on-time performance is unreliable. A number of alternative routes could accommodate service increases in this corridor.

In 2014, the Pennsylvania Department of Transportation (PennDOT), in cooperation with the Federal Railroad Administration (FRA), Amtrak, and Norfolk Southern, conducted the Keystone West High Speed Rail Study to evaluate the feasibility of options to reduce rail travel times and increase trip frequency on Amtrak's Keystone West portion (between Harrisburg and Pittsburgh)—which is part of the Pennsylvanian Line service between New York City and Pittsburgh. The study evaluated existing rail operations and infrastructure within the Keystone West corridor and identified potential improvements and conceptual alternatives to provide higher speed passenger rail service. The analysis of alternatives involved a two-tiered approach that included identification & analysis of "full alternatives" and evaluation of individual improvement components (options).

All alternatives were rooted in incrementally increasing speeds of passenger trains and providing the capacity for additional passenger train frequencies, while minimizing impacts to current NS freight operations and future opportunities. Potential improvements were developed in a manner that would allow them to be completed incrementally, based on need, expected benefits and funding availability. Incremental improvements along the corridor would offer a fiscally constrained approach to the long-term implementation of a full and complete alternative; and allow ridership to increase systematically in support of future improvements. To aid in future discussions concerning what improvements could be advanced—considering fiscal constraints, in particular—a menu of possible improvement options was developed and is contained in the Keystone West High Speed Rail Study, which can be found on the Plan the Keystone website.³⁹ The *DRAFT 2015 Pennsylvania State Rail Plan* makes mention of this corridor as a Vision Project.

The United States Department of Transportation (USDOT) FAST Act has identified a set-aside funding source specifically for developing commuter rail service. This set aside includes track improvements and sidings to improve passenger travel efficiency and up to three years of operating assistance. Prospective commuter corridors would be evaluated as new starts and would require a forecast of ridership necessary to operationally sustain the route. Challenges associated with this competitive funding source and the Keystone West Corridor include, but are not limited to:

- Ridership justifying commuter-level service, related to the degree of connection between the economies of Harrisburg/Central Pennsylvania and Pittsburgh.
- The one-way travel time of 5½ hours significantly exceeds the travel time by car, putting it at a competitive disadvantage for attracting ridership.
- Ability to improve travel time, train speed, and the number of trains, which is limited by the shared passenger-freight arrangement.

³⁹ Plan the Keystone website, <http://www.planthekeystone.com/>