

# 6 TRANSPORTATION PLAN

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The Lebanon County 2017-2040 Long Range Transportation Plan (LRTP) identifies many of the county's long-term transportation needs and strategies for improving the transportation network relative to the challenges of providing sustainable community development and redevelopment while at the same time preserving and enhancing our environment. In doing so, the Plan fulfills the federal transportation planning requirements for the Lebanon County Metropolitan Planning Organization (LEBCO MPO), thus ensuring the county's continued eligibility for Federal transportation funds.



The plan includes short-term (1-4 years), medium-term (5-12 years) and long-term (13-24 years) projects and strategies to advance steady progress toward short, medium and long range system goals. The plan will be updated every four years to adapt to changing conditions and new county, regional, state and federal priorities. With the federal passage of Fixing America's Surface Transportation (FAST) Act of 2015, the LEBCO MPO will await new guidance from the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA) and the Pennsylvania Department of Transportation (PennDOT) on new transportation planning and programming requirements. The LEBCO MPO over the next four years will work to incorporate new and/or revised activities into its plan.

## *Introduction*

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### **What is a Metropolitan Planning Organization?**

A metropolitan planning organization (MPO) is a policy-making body made up of representatives from local, state and federal government and transportation authorities. The Federal Aid Highway Act of 1962 requires the formation of an MPO for any urbanized area with a population greater than 50,000 individuals. Each urbanized area listed by the US Census Bureau must be represented by an MPO in order to carry out the metropolitan transportation planning process specified in Federal transportation regulations (23 USC 134 and 49 USC 5303).

According to the Federal Highway Administration (FHWA), the six core functions of an MPO are:

- **Establish a setting:** Establish and manage a fair and impartial setting for effective regional decision-making in the metropolitan area; understand the trends and conditions that affect transportation.
- **Evaluate alternatives:** Evaluate transportation alternatives, scaled to the size and complexity of the region, to the nature of its transportation issues, and to the realistically available options.
- **Maintain a Long Range Transportation Plan (LRTP):** Develop and update a long range transportation plan for the metropolitan area covering a planning horizon of 20 or more years that fosters (1) mobility and access for people and goods, (2) safe and efficient system performance and preservation, and (3) quality of life.
- **Develop a Transportation Improvement Program (TIP):** Develop a program based on the long range transportation plan and designed to serve the area's goals, using spending, regulating, operating, management, and financial tools.
- **Involve the public:** Involve the general public and all the significantly affected sub-groups in the four essential functions listed above.
- **Develop a Unified Planning Work Program (UPWP):** Receive federal and state funds through the UPWP to carry out the above tasks and other transportation planning and programming (funding) functions.

FHWA and FTA require metropolitan planning organizations in each urbanized area to maintain a continuing, cooperative and comprehensive transportation planning process that considers all modes through three mandated products:

- A Long Range Transportation Plan (LRTP)
- A Transportation Improvement Program (TIP)
- A Unified Planning Work Program (UPWP)

## **What is the Lebanon County MPO?**

In May 2002, based on the 2000 US Census, Lebanon County was designated by the US Census Bureau as an “urbanized area,” defined as a “densely settled territory containing 50,000 or more people,” thus requiring the formation of the Lebanon County MPO.<sup>1</sup>

The Lebanon County Metropolitan Planning Organization (LEBCO MPO) is the local agency responsible for transportation planning and programming. It includes representatives from county and local government (elected officials, planning department, emergency management), local transit, aviation, and trail/bike/pedestrian organizations, business and industry (including agriculture and tourism), as well as state

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<sup>1</sup> US Census, Federal Register, 67 FR 21962 (May 1, 2002)

and federal transportation agencies. LEBCO MPO provides the county with a collaborative planning forum to address transportation-related issues from a countywide and regional perspective and to plan for and make decisions on the use of federal and state transportation funds.

The LEBCO MPO is comprised of an MPO Policy Board and an MPO Technical Planning Committee which meet bimonthly at advertised meetings.

- The MPO Policy Board includes voting representatives from Lebanon County government, the City of Lebanon, Lebanon Transit (formerly County of Lebanon Transit), PennDOT's Central Office and District 8-0 office, Lebanon Valley Chamber of Commerce, and two representatives from the County's townships or boroughs. Non-voting, advisory members include representatives from the Federal Highway Administration, the Federal Transit Administration and the Environmental Protection Agency. The role of the Policy Board is to approve all actions of the MPO.
- The MPO Technical Planning Committee includes voting representatives from Lebanon County government, Lebanon County Planning Department, the City of Lebanon, Lebanon Transit, Lebanon Valley Economic Development Corporation, PennDOT's Central Office and District 8-0 office, one representative from the county's townships and one from the county's boroughs, and one representative from the aviation community. Non-voting, advisory members include representatives from the Federal Highway Administration, the Federal Transit Administration and the Environmental Protection Agency, Lebanon County/City Geographic Information Systems office, the agricultural community, Lebanon Valley Tourist Promotion Agency, Community of Lebanon Association, Lebanon Valley Rails to Trails (LVRT), Inc., Lebanon County Emergency Management Agency, the Lebanon County Human Services Community Action Partnership, the Lebanon Valley Bicycle Coalition (also called Bike Lebanon) and the City of Lebanon Authority. The role of the Technical Planning Committee is to provide procedural and technical guidance on the products and processes of the MPO.

Lebanon County Planning Department provides staff support to both the Policy Board and the Technical Planning Committee.

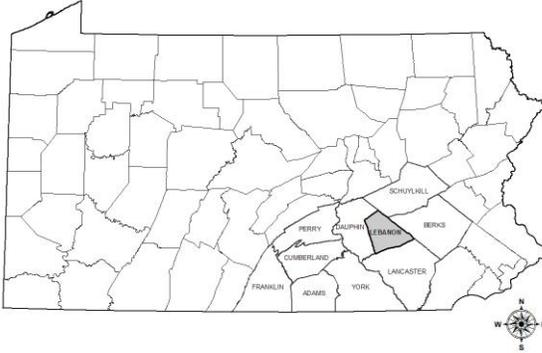
## **Lebanon County MPO's Region**

Lebanon County is a 5<sup>th</sup> class county in south central Pennsylvania. The county encompasses 362.9 square miles or 232,256 acres. Its population in 2000 was 120,327 persons. It grew by 11% over the next ten years, with the total county population increasing to 133,568 in 2010 which ranks 27<sup>th</sup> among the state's 67 counties in population and 60<sup>th</sup> in land area.

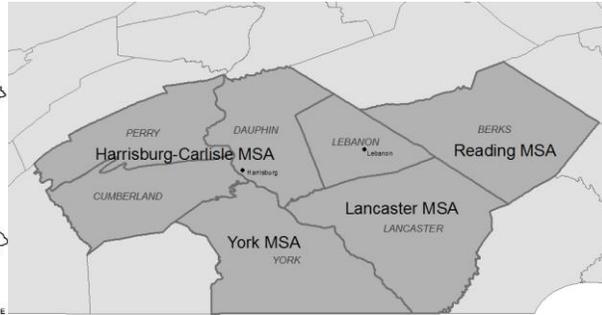
The county is comprised of 26 municipalities: sixteen townships of the second class, two townships of the first class, seven boroughs, and one third class city (the City of Lebanon). The City of Lebanon is the county seat and has traditionally been the center of major business and banking activity. The boroughs developed as community centers along major trade and transportation routes, connecting farmers and tradesmen with regional markets.



Lebanon County is bordered by Dauphin County to the north and west, by Berks and Schuylkill Counties to the east, and by Lancaster County to the south. Neighboring metropolitan centers include Harrisburg, Lancaster, Reading, and Pottsville.



**Figure 6-1**



**Figure 6-2**

The MPO territory includes all of Lebanon County, since the boundary was expanded in April of 2009 to include Palmyra Borough and portions of North Londonderry Township and South Londonderry Township, which were previously under the Harrisburg MPO.

Further description of Lebanon County’s location within the surrounding region can be found in *Chapter 2 – Regional Setting of the Comprehensive Plan*.

*Chapter 2* focuses on historic population statistics and population projections. Lebanon County has shown consistent growth over the past four decades, from 90,853 residents in 1960 to 133,568 residents in 2010. Other portions of the comprehensive plan note that approximately 75% of the population lives within three miles of US Route 422. For future planning, population projections were based upon the linear projection method. The county is expected to continue to grow through 2020, and in terms of growth rates, the county’s foreseeable growth rate is expected to be similar to that of the 1980-1990 decade.

The median age in Lebanon County is also projected to remain above that of the state resulting from the aging Baby Boomers and the growing number of senior citizen housing complexes. The MPO will continue to monitor and become more involved in initiatives like Grace@HOME, Lebanon County Age-Wave Initiative and iTNAmerica to determine how best to partner with the private sector to address the growing transportation needs of the elderly, which includes all modes ... continuing to drive, using door-to-door private/public services, riding Lebanon Transit, bicycling or walking short distances, etc. Aging in-place is the goal of these initiatives.

While all minority ethnic groups grew in Lebanon County between 2000 and 2010, the most significant growth occurred among the Hispanic population.

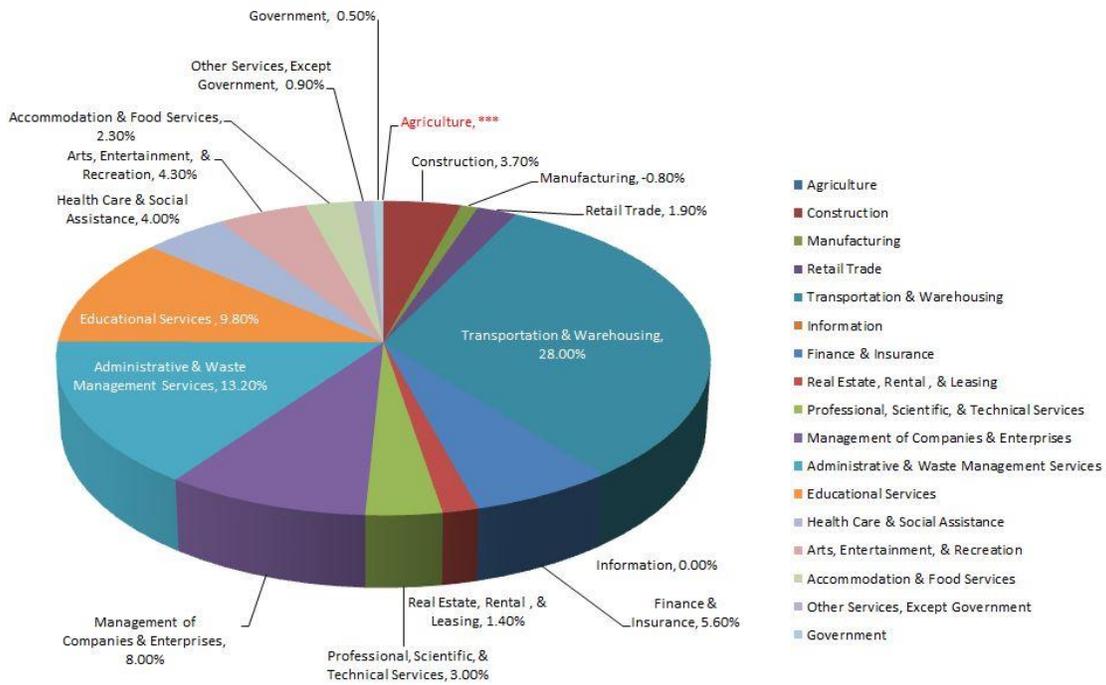
Between 2000 and 2010, almost 6,272 new dwelling units were constructed in Lebanon County. Housing growth in Lebanon County during that period was 12.7%; outpacing statewide growth of 6%. Housing growth took place in all but 5 of Lebanon County’s municipalities. The average household size in Lebanon County is 2.49 persons. In the last 20 years, 95% of the new residential units were single family

dwellings or mobile homes and less than 5% were multifamily dwellings. The most recent national recession has hurt the housing market in Lebanon County, with new housing starts being dramatically reduced in 2008 through 2010; however, that trend is now reversing itself. These and other housing facts, figures and programs are outlined in *Chapter 12 – Housing Plan from the County Comprehensive*.

A very detailed assessment of Lebanon County’s economic structure, performance, and labor force are documented in *Chapter 8 – Economic Development Plan*. The county’s economy has evolved from one based primarily on agricultural pursuits to a diverse mixture of agricultural, industrial, manufacturing and service enterprises. The diversity of the modern-day Lebanon County economy is shown in Figure 6.3 below. Please note that agriculture and agriculture-related earnings are listed in separate tables and charts in the *Economic Profile*.

**Figure 6-3 Earnings as a Percent of Total Earnings**

**2013-2014 – GDP for the Lebanon MSA-Earnings as a Percent of Total Earnings**



\*\*\*Agriculture % not shown in order to avoid disclosure of confidential information

Source: Most recent information available from the US Bureau of Economic Analysis

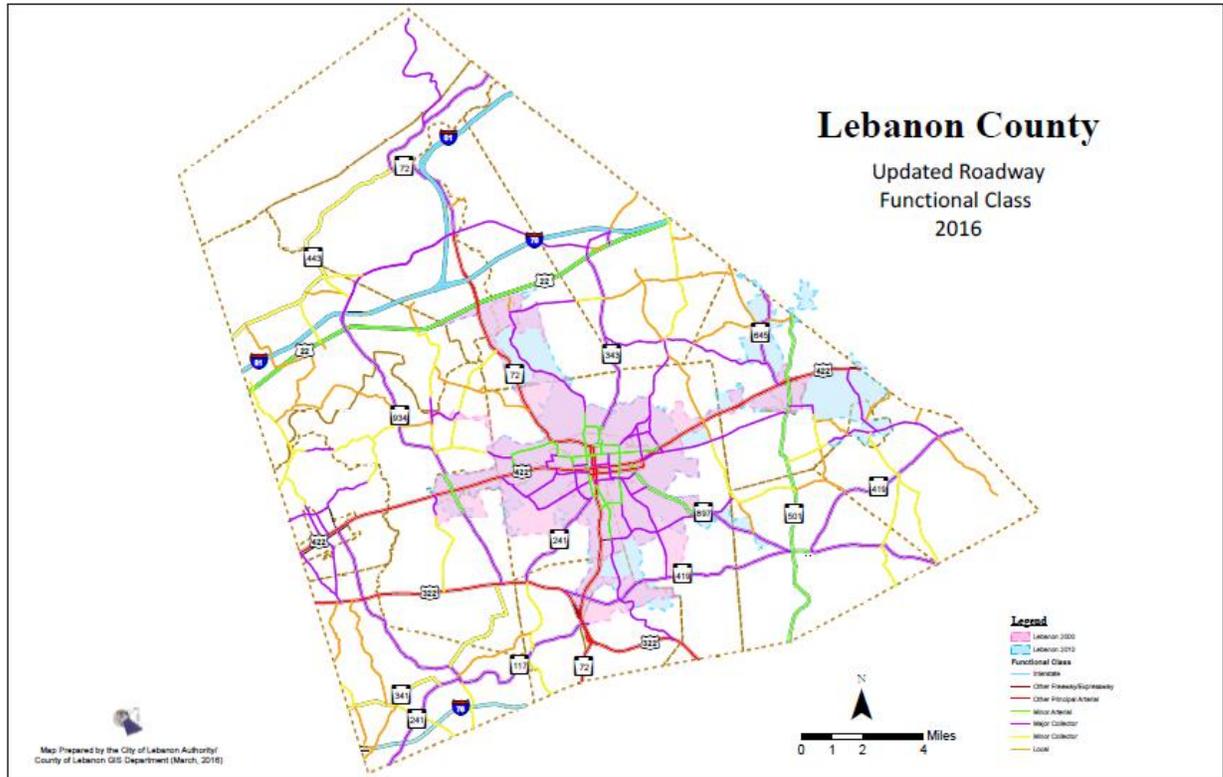
Lebanon County had one of the fastest growing economies over the last several years according to the US Department of Commerce. With a rate of 6.27%, Lebanon County ranked 30<sup>th</sup> nationwide among 382 metropolitan areas. The US average growth rate for metropolitan areas was 2.50%. Lebanon's gross domestic product has risen steadily from \$3.392 billion in 2007 to \$3.772 billion in 2010 to \$4.001 billion in 2013. The county's jobless rate dropped to 4.7% in April of 2014, which was the third lowest in the state and lower than statewide (5.7%) and national (6.7%) averages.

Some of the larger employers in Lebanon County include

<b>NAME</b>	<b>FULL &amp; PART-TIME EMPLOYEES</b>
Department of Military and Veteran Affairs at Fort Indiantown Gap	16,500
VA Medical Center	1,800
Good Samaritan Hospital	1,100
Lebanon County	900
Philhaven Hospital	900
Cornwall Lebanon School District	650
Tyco Electronics	650
MSC Industrial Supply Company	550
Weaber, Inc.	500

The largest full time employer in Lebanon County is the VA Medical Center. And just to the west in Hershey, PA, well over 44,500 people are employed at various locations, with many living in Lebanon County.

The following map identifies the functionally classified highways in Lebanon County. This map was just approved by the MPO in late February of 2016. These classifications are very important to determine which federal and state funds can be used on what roads and bridges in Lebanon County.



## **The Long Range Transportation Plan**

As an MPO, Lebanon County is required by federal regulations to develop a Long Range Transportation Plan (LRTP) and update that plan every four years. The horizon year of this plan is 2040. The Lebanon County Comprehensive Plan was finalized in late 2007 and as implementation began in calendar year 2008, the transportation plan (which as a part of the comprehensive plan) was also amended at that time. This is the next update of the plan, not including the transportation system profile which is updated on a sporadic or incremental basis as funding and staffing permits. The plan and TIP were last updated and adopted on June 19, 2014. The June 2016 update will be a minor update. The next major plan update will be completed in June of 2018.

Based upon state and federal requirements, the LEBCO MPO LRTP must:

- Have a minimum 20-year planning horizon
- Be updated at least once every four years
- Be based on the latest available estimates and assumptions on population, land use, travel, employment, congestion and economic activity
- Identify an integrated, multimodal transportation system, giving emphasis to facilities that serve important national and regional functions
- Contain operational and management strategies to improve the performance of existing infrastructure to maximize safety and mobility of people and goods
- Conform to state and federal air quality standards
- Provide for multimodal capacity increases if needed based upon regional needs and priorities
- Be fiscally constrained by identifying sources of funds “reasonably expected to be available” to implement the plan
- Discuss potential environmental mitigation activities
- Include transportation and transit enhancements, as well as address pedestrian and bicycle facility improvements
- Provide for public participation, including publications with electronically accessible formats.

Key elements of the Comprehensive Plan that will influence the transportation plan in the near future are the Community Facilities Plan, the Housing Plan, the Natural Resources/Open Space/Recreation Plan, the Cultural and Historic Resources Plan, the Land Use Plan and the Energy Conservation Plan.

Each successive update of this document will respond to the trends and projected changes in the county’s demographics, economy, and transportation needs and serve as a guide for future transportation investments. This plan will be reviewed and updated every two years (minor update) and every four years (major update) and, when appropriate, the vision and goals will be refined and adjusted.

The LEBCO MPO Long Range Transportation Planning process comprises two main elements:

- **Goals and policy statements** – a description of the transportation system that Lebanon County strives to provide and other policies addressing areas such as maintenance, preservation, safety, mobility, access and decision making.
- **A transportation plan** – a prioritized list of projects, improvements and other strategies and services to be programmed and funded through private, local, state, and/or federal sources.

(Please note that the status of the LRTP changes every two years as the LEBCO MPO adopts a new Transportation Improvement Program (TIP) but the Lebanon County Comprehensive Plan remains static.)

The MPO also developed a **Transportation System Profile** many years ago, but it only gets updated as funding and staffing permits. The profile is an inventory of transportation facilities and an assessment of its capacity to serve its users; this includes historic and forecasted user demand of the transportation facilities and a discussion of the need and opportunities for transportation planning to sustain Lebanon County’s quality of life. The profile was one of many background documents for the County Comprehensive Plan. New county-wide congestion data, information and trends were collected, summarized or analyzed in calendar years 2013 and 2014 for the congestion management processes (CMP) update called Lebanon County Moves!. During the 2015 Planning Process Review of the LEBCO MPO, PennDOT and FHWA recommended that the six corridors of concern in the CMP be periodically reviewed, possibly doing two each year so that the findings and recommendations can be used to identify future projects for the plan and TIP.

## *Vision Statement, Goals and Policy Considerations*

### **Introduction**

The Lebanon County LRTP is organized around a vision statement, six goals, and numerous policy statements that identify the basic values for the plan’s development and implementation.

The vision statement, goals and policy considerations were developed in conjunction with the MPO’s Policy Board and Technical Planning Committee and continue to be refined over time.

### **Vision Statement**

The Vision Statement conveys the preferred future direction and condition of the community concerning the countywide transportation network.

***The Lebanon County Long Range Transportation Plan (LRTP) Vision Statement***



*The transportation system of Lebanon County will safely, efficiently and effectively serve the mobility, access and travel needs of residents, businesses and visitors.*

## Goals

The Plan is organized around six goals that identify key directions or areas of priority.

### **The Lebanon County Long Range Transportation Plan's (LRTP's) Goals**

- Provide a safe and secure transportation system;
- Provide a multi-modal system that is efficient, interconnected and accessible;
- Promote a sustainable transportation system that complements the county's natural and built environment;
- Meet the challenges and opportunities of growth through collaborative planning, funding and project implementation;
- Target investments for maximum local and regional benefit and impact; and
- Utilize all available funding sources to finance investments for the transportation network.

## Policy Statements

The LEBCO MPO Long Range Transportation Plan process has identified a multi-faceted policy statement as a method of assessing candidate projects and strategies to ensure that they adhere to the vision and goals listed above as well as the eight federal planning factors.

### **Lebanon County Long Range Transportation Plan Policy Statements:**

- Establish databases and monitoring systems to ensure that funding is targeted to preserve Lebanon County's transportation infrastructure;
- Maintain and improve the existing transportation system;
- Improve the safety and security of the transportation system for motorized and non-motorized users;
- Increase the efficiency and connectivity for moving both people and goods, including the protection of future transportation corridors;
- Promote efficient system management and operation, including the application of access management provisions in local regulations;
- Focus on affordable and sensible operational improvements;
- Enhance the integration and connectivity of the transportation system for people and freight;
- Ensure that the county's bicycle and pedestrian network is fully integrated into

the county's multimodal transportation system;

- Emphasize transit's role in support of the continued economic health of Lebanon County and its integral relationship to mobility, land use and overall community development;
- Coordinate transportation system improvements with land use, infrastructure, and other community development and tourism policies and with key stakeholders;
- Encourage local support for transportation improvements as well as opportunities for private sector involvement;
- Support the economic vitality of Lebanon County by contributing to its competitiveness, productivity and efficiency, as well as enhancing its potential to attract visitors to experience its "scenic byways", historic communities and recreational trails;
- Protect and enhance the environment, promote energy conservation, preserve the county's small towns and agricultural landscapes, improve the quality of life and encourage a healthy lifestyle;
- Promote community and neighborhood livability, including the protection of scenic corridors; and
- Maintain the City/County Geographic Information Systems (GIS) geodatabase with up-to-date software and current data sets.

## LEBCO MPO's Primary Focus

Based upon the above vision, goals and policy statements, the LEBCO MPO intends to primarily focus on highway and transit projects, programs and services that (1) preserve, maintain and enhance the existing system; (2) provide properly-scaled operational improvements to the existing system; and (3) promote safety and efficiency in the existing system. Current guidance from PennDOT, FHWA and FTA recommends that at a minimum, at least 90% of the LEBCO MPO's funding for projects be dedicated to system preservation, including 85% of these funds for structurally deficient bridges. At this time, the LEBCO MPO views capacity-adding projects as the exception, not the rule, to solving the county's transportation problems.

Having the best possible understanding about "our assets" (roadway pavement, bridges, traffic signals, transit rolling stock, etc.) will enable the LEBCO MPO to make wise funding choices. **The LEBCO MPO strongly supports the federal and state emphasis on transportation performance management (PM) and asset management (AM) as a strategic approach that uses system information to make investment and policy decisions to achieve national, regional and local goals.** Over time, new performance measures will be established by the LEBCO MPO; some will be short-term in nature and others will be long-term endeavors. These strategies will be further identified in future LRTPs along with key milestones. This will be done to improve (1) safety; (2) infrastructure condition; (3) system reliability; (4) freight movement and economic vitality; (5) environmental sustainability; and (6) project delivery. The LEBCO MPO will work with PennDOT, FHWA and FTA to incorporate safety measures first into the LRTP. The other five measures will follow as per the current implementation schedule from USDOT and PennDOT.



The LEBCO MPO's future performance measures will be S.M.A.R.T. – **S**pecific, **M**easurable, **A**greed Upon by All Key Partners, **R**ealistic and **T**ime-Bound. Presently, the LEBCO MPO desires to:

- have all of its Interstate and NHS routes in excellent or good condition for pavement smoothness
- have all non-NHS state routes in excellent, good or fair condition for pavement smoothness
- reduce the number and percentage of structurally deficient bridges to below the nationwide average for state bridges and for local bridges
- lower fatalities and serious accidents based upon the previous years' statistics and the past rolling 5-year average
- improve travel times in the MPO's 6 corridors of concern (US Route 422, US Route 322, PA Route 72, PA Route 501, PA Route 934 and Rocherty/Evergreen Roads).

The above measures are qualitative but have helped to guide many of the planning and programming decisions made by the MPO since 2003.

The MPO adopted a Regional Operations Plan (ROP) for the southern portion of the county; it was developed to fully understand the impacts from major developments in the area ... North Cornwall Commons, The Preserve at Historic Cornwall Village, job expansion at the VA Medical Center, etc. The MPO completed a PA Route 241 Road Safety Audit (RSA) to address higher than normal crash rates in this corridor from US Route 322 into the City of Lebanon at PA Route 72. The MPO's Congestion Management Processes (CMP) Plan was updated; it's called Lebanon County Moves!. Projects, programs and services that were recommended in this CMP update will be incorporated into future plans and programs. Copies of the CMP update are available upon request or it can be viewed on the LEBCO MPO's website.

Implementation of the Lebanon Transit (LT) Business Plan has been fully completed as per various new projects, programs and services. Working with the Harrisburg MPO, Capital Area Transit (CAT), Commuter Services of PA and the Modern Transit Partnership (MTP), the LEBCO MPO and Lebanon Transit also intend to implement over time the bus service recommendations from the Corridor 2 Premium Transit Operations Plan for US Route 422/US Route 322/I-83 from Lebanon through Hershey on to Harrisburg as well as the key recommendations for Lebanon County from the Commuter Services of PA's 9-County Regional Transit Coordination Study. In late 2015, the MPO completed a new transit study to investigate a new route or routes and a new park-and-ride lot or lots to service the growing businesses and industries in NE Lebanon County and NW Berks County. The LEBCO MPO and Lebanon Transit are also active partners in PennDOT's ongoing Phase 2 Study entitled, SC PA Public Transportation Regionalization Study.

The recently completed Regional Bicycle Connectivity Study in Dauphin and Lebanon Counties will address some of the needs of bicyclists in Derry Township and western portions of Lebanon County.

The MPO began a multimodal transportation study in Cornwall Borough in July of 2015; it will be completed in the summer of 2016.

The LEBCO MPO is also working very closely with PennDOT staff to evaluate roadway pavement conditions based upon International Roughness Index (IRI) and Overall Pavement Index (OPI) information and to program (fund) projects accordingly, many of which are included in PennDOT’s Decade of Investment (DOI) list for Lebanon County.

All of these initiatives will help the LEBCO MPO in future years with regard to establishing new priorities for project implementation.

### Federal Planning Factors

As required by federal laws and regulations, eleven (11) planning factors are considered in this Long Range Transportation Plan and reflected in the LRTP’s Vision, Goals and Policy Statements. Table 6-1 lists the federal planning factors and the applicable goal or policy statement item(s) identified for the LEBCO MPO LRTP.

**Table 6-1 Federal Planning Factors and LEBCO MPO LRTP Compliance**

<b>Federal Planning Factor</b>	<b>LEBCO MPO LRTP Goal or Policy Statement Item(s)</b>
<ul style="list-style-type: none"> <li>Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency.</li> </ul>	<ul style="list-style-type: none"> <li>Support the economic vitality of Lebanon County by contributing to its competitiveness, productivity and efficiency, as well as enhancing its potential to attract visitors to experience its “scenic byways”, historic communities and recreation trails.</li> <li>Emphasize transit’s role in support of the continued economic health of Lebanon County and its integral relationship to mobility, land use and overall community development.</li> </ul>
<ul style="list-style-type: none"> <li>Increase the safety of the transportation system for motorized and non-motorized users.</li> </ul>	<ul style="list-style-type: none"> <li>Improve the safety and security of the transportation system for motorized and non-motorized users.</li> </ul>
<ul style="list-style-type: none"> <li>Increase the security of the transportation system for motorized and non-motorized users.</li> </ul>	<ul style="list-style-type: none"> <li>Improve the safety and security of the transportation system for motorized and non-motorized users.</li> </ul>
<ul style="list-style-type: none"> <li>Increase the accessibility and mobility for people and for freight.</li> </ul>	<ul style="list-style-type: none"> <li>Increase the efficiency and connectivity for moving both people and goods, including the protection of future transportation corridors.</li> <li>Enhance the integration and connectivity of the transportation system for people and freight.</li> <li>Ensure that the county’s bicycle and pedestrian network is fully integrated into the county’s multimodal transportation system.</li> <li>Emphasize transit’s role in support of the continued economic health of Lebanon County and its integral relationship to mobility, land use and overall</li> </ul>

<b>Federal Planning Factor</b>	<b>LEBCO MPO LRTP Goal or Policy Statement Item(s)</b>
	<p>community development.</p> <ul style="list-style-type: none"> <li>• Coordinate transportation system improvements with land use, infrastructure, and other community development and tourism policies and with key stakeholders.</li> <li>• With the county’s aging population, the age wave initiative must be thoroughly explored to meet these changing mobility needs.</li> </ul>
<ul style="list-style-type: none"> <li>• Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns.</li> </ul>	<ul style="list-style-type: none"> <li>• Protect and enhance the environment, promote energy conservation, preserve the county’s small towns and agricultural landscapes, improve the quality of life and encourage a healthy lifestyle.</li> <li>• Coordinate transportation system improvements with land use, infrastructure, and other community development and tourism policies and with key stakeholders.</li> </ul>
<ul style="list-style-type: none"> <li>• Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.</li> </ul>	<ul style="list-style-type: none"> <li>• Enhance the integration and connectivity of the transportation system for people and freight;</li> <li>• Ensure that the county’s bicycle and pedestrian network is fully integrated into the county’s multimodal transportation system.</li> </ul>
<ul style="list-style-type: none"> <li>• Promote efficient system management and operation.</li> </ul>	<ul style="list-style-type: none"> <li>• Promote efficient system management and operation, including the application of access management provisions in local regulations.</li> </ul>
<ul style="list-style-type: none"> <li>• Emphasize the preservation of the existing transportation system</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain and improve the existing transportation system.</li> </ul>
<ul style="list-style-type: none"> <li>• Increase system resiliency and reliability by (1) identifying the risks of climate change and/or extreme weather events to the current and planned transportation system and (2) considering these risks in the LEBCO MPO’s planning, operations, policies, programs and services</li> </ul>	<ul style="list-style-type: none"> <li>• Provide a safe and secure transportation system.</li> </ul>
<ul style="list-style-type: none"> <li>• Reduce or mitigate the stormwater impacts of surface transportation</li> </ul>	<ul style="list-style-type: none"> <li>• Promote a sustainable transportation system that complements the county’s natural and built environment.</li> <li>• Protect and enhance the environment, promote energy conservation, preserve the county’s small towns and agricultural landscapes, improve the quality of life and</li> </ul>

<b>Federal Planning Factor</b>	<b>LEBCO MPO LRTP Goal or Policy Statement Item(s)</b>
	encourage a healthy lifestyle.
<ul style="list-style-type: none"> <li>Enhance travel and tourism</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate transportation system improvements with land use, infrastructure, and other community development and tourism policies and with key stakeholders.</li> <li>Support the economic vitality of Lebanon County by contributing to its competitiveness, productivity and efficiency, as well as enhancing its potential to attract visitors to experience its “scenic byways”, historic communities and recreational trails.</li> </ul>

## *Conditions and Trends*

Throughout Pennsylvania, there is increasing recognition of the linkages between land use and transportation and how land use impacts the efficiency and effectiveness of the transportation system. Proactive planning in anticipation of growth is critical to mitigate the impacts of the population increases expected for Lebanon County as described in other locations within the Lebanon County Comprehensive Plan.

The evaluation of existing conditions and observable trends in the use of the transportation network provides a starting point for the development of strategies and projects for inclusion in the Long Range Transportation Plan (LRTP).

The Transportation System Profile contains a brief (but outdated) description of Lebanon County’s existing transportation network including an inventory of roads, bridges, public transit, rail freight lines, airports and bicycle and pedestrian facilities. The Profile revealed many of the locations where problems existed, which trends were changing the way that the system was being used, and how future demand may require enhancements to accommodate growth. The MPO intends to update the profile over a number of years in a systematic way, starting with the six (6) Corridors of Concern (see page 12 and the appendix for more details on the 6 corridors).

## **Overall Statewide Trends**

Listed below are a few of the statewide trends from the PennDOT 2015 Transportation Performance Report:

- Fatalities are down significantly. Seat belts are being used much more consistently and are saving lives. Distracted driving is trending upwards. Work zone crashes have increased in recent years.
- Congestion has held steady. Traveler information is available and helping to redirect traffic away from incidents and accidents. Traffic signals at key intersections are being updated with new equipment and new timing plans and left turn lanes are being extended or added to improve operations.
- Airport enplanements remain strong, as does public transportation ridership. Amtrak Keystone Corridor ridership has grown steadily.
- Businesses are depending more upon an integrated, agile and efficient freight network. Freight demand will grow by 66% between now and 2040.

- State-owned structurally deficient (SD) bridges are being reduced. Deficiencies on locally-owned bridges are growing slightly.
- Pavement conditions on all state roads have improved over the last year. Pavement conditions on local roads have worsened over the last several years.
- Interstate reconstruction remains underfunded and inadequate to address the needs of the National Highway System (NHS).

## **Overall Countywide Trends**

Recent and projected future residential and business/employment growth within Lebanon County has affected the transportation network's efficiency and changed the way residents, workers and others use the system. Some generally observed countywide trends include:

- The number of residents and jobs within Lebanon County are expected to grow until at least 2020.
- Residents are currently traveling longer and farther to work than they did ten years ago.
- Traffic fatalities remain too high ... 20 in 2006; 19 in 2007; 22 in 2008; 21 in 2009; 15 in 2010; 24 in 2011; 15 in 2012; 19 in 2013; 8 in 2014; and 15 in 2015.
- Transit ridership grew in 2007, 2008 and 2009, declined slightly in 2010, but grew slightly again in 2011, declined slightly in 2012 and increased slightly in 2013, 2014 and 2015.
- Traffic pressure from increasing demand for residential and business development will continue to impact the county's roadway infrastructure.
- Traffic on local roads and streets has increased in many locations, as more trips are diverted off of the state and federal roads based upon real or perceived congestion.
- Even with the recent increase in state transportation funds, no capacity adding projects will be done in Lebanon County over the next several years. For example, roads will not be widened to add additional traffic lanes. Consequently, we need to better maintain and operate what we have, and we need to focus more on emerging trends that development and higher densities bring ... more transit service, improved conditions for walking and bicycling, etc.
- Freight and goods movement is on the increase throughout the county based upon initial data provided by PennDOT's PA On Track effort to develop the Commonwealth's next Long Range Transportation Plan and the state's first-ever Comprehensive Freight Movement Plan. The County also has an excellent handle on current and future goods movement since it is involved in every major development subdivision, zoning and land development review, every

Transportation Impact Study (TIS)/Transportation Impact Assessment (TIA) and every PennDOT Highway Occupancy Permit (HOP).

- Based upon the Lebanon Emergency Management Agency's (LEMA's) 2014 Commodity Flow Study, hazardous materials are being moved in much larger numbers/quantities on state and local roads (I-81, I-78, US Route 22, US Route 322, US Route 422, PA Route 72, PA Route 419, PA Route 501, PA Route 897, Lincoln Avenue, State Drive, etc.), on the Norfolk Southern Railroad and in the five pipelines that traverse the county than they were in the past.
- PennDOT structurally deficient bridges in Lebanon County are declining rapidly. Local bridges with deficiencies are increasing significantly.
- PennDOT Interstate and National Highway System (NHS) roads in Lebanon County are in excellent (optimum) condition. Work on other lower order PennDOT roads need significant investments to bring them to the suggested pavement smoothness standards. Local roads in Lebanon County are falling behind in the various smoothness standards.

The net effect of the trends identified above reinforces the need for a coordinated planning approach that reinforces the link between land use, transportation and economic development to effectively accommodate sustainable residential and job growth and to systematically improve the County's transportation infrastructure.

## **What We Heard from County Residents**

In late 2014 and through the early summer of 2015, PennDOT and the State Transportation Commission (STC) conducted outreach via a survey mechanism. The data that resulted from the survey has been broken down by each MPO and rural planning organization (RPO). The priorities and investment recommendations for Lebanon County are as follow:

- The top three priorities were to (1) improve road pavement conditions, (2) to make our roads and bridges safer, and (3) to rehabilitate and/or replace bridges.
- The next three priorities were (4) walking and biking improvements, (5) mobility enhancements, and (6) transit improvements.
- The top three investment recommendations were for (1) road pavement, (2) bridges and (3) safety.
- The next three investment recommendations were for (4) mobility, (5) transit, and (6) walking and biking.

## **Key Trends by Mode**

The Transportation Profile focused on each transportation mode to highlight usage trends and key indicators that required further evaluation in the Long Range Transportation Plan. On the following three pages, Table 6-2 summarizes some of the key transportation trends identified in the Profile or information recently obtained from

other sources. Please note that when USDOT issues new performance indicators for all modes of transportation as part of its new strategic plan (“Transportation for a New Generation”) or FAST Act implementation, the LEBCO MPO will begin using them as key decision support tools.

**Table 6-2 Key Trends by Transportation Mode**

<b>Mode or Facility</b>	<b>Key Trends and Indicators for Additional Evaluation</b>
<b>Highway, Roadway, Bridges and ITS</b>	<ul style="list-style-type: none"> <li>• Traffic growth on the interstates is the result of additional goods movement, longer commutes to work, industrial, commercial and residential development in areas near interchanges, specifically along I-81, I-78 and US Route 22.</li> <li>• The LEBCO MPO will continue to coordinate with the I-81 Corridor Coalition as it continues its detailed assessment of the local industrial and commercial ecosystem along the entire corridor.</li> <li>• When substantial traffic growth occurs again on critical PA state roads and local roads, they must be examined to determine whether operational improvements, safety measures or capacity enhancements are necessary.</li> <li>• Congestion management will dictate evaluation of highway corridors instead of individual highway segment projects.</li> <li>• Countywide population and employment growth will increase traffic throughout the system. Capacity, traffic congestion, pavement and bridge conditions, access management and traffic signal operations will need to be examined to both ensure safety/efficiency and consistency with community character.</li> <li>• High Occurrence Crash Locations must be evaluated to identify the reason for the high number of traffic incidents as well as any trends or conditions that will continue to compromise system safety.</li> <li>• Posted and closed bridges must be addressed.</li> <li>• State and local bridge condition trends in the county need to improve.</li> </ul>
<b>Transit</b>	<ul style="list-style-type: none"> <li>• Local transit ridership increased slightly in calendar year 2015.</li> <li>• Regional express bus service is being enhanced to ease traffic congestion that heads west during the weekdays to Hershey and Harrisburg.</li> <li>• Lebanon Transit routes must continue to be restructured to eliminate routes with little or no ridership or ridership growth potential. A new route may be needed to NE Lebanon County and NW Berks County to get persons to and from these new major employment sites.</li> <li>• The majority of minority and low-income residents are located in and around the City of Lebanon, where transit opportunities currently exist and are being more effectively enhanced. These routes may need additional marketing and/or further restructuring.</li> <li>• Phase 2 of PennDOT’s SC PA Public Transportation Regionalization Study is underway and the LEBCO MPO and LT are involved in the study.</li> <li>• Over the long run, the Corridor 2 Feasibility Study’s rail recommendations need to be further analyzed via more detailed evaluations ... station locations, ridership projections, environmental analyses, and preliminary engineering. Working with Norfolk</li> </ul>



<b>Mode or Facility</b>	<b>Key Trends and Indicators for Additional Evaluation</b>
	<p>Southern to build a third track to operate passenger rail service and to expand freight rail operations will be a complicated and very long range endeavor.</p> <ul style="list-style-type: none"> <li>• Continue to work with Commuter Services of PA and the Modern Transit Partnership to help develop, promote and implement transportation options beyond the single occupancy vehicle and encourage choices that reduce those negative impacts. Assist these two non-profit organizations with the implementation of interactive websites and maps of transit routes and nodes (park-and-ride lots, for example).</li> <li>• In the future, we must make all major developments “transit friendly”, especially those parallel to or adjacent to the county’s key corridors (US Route 422, PA Route 72, etc.).</li> <li>• Marketing LT will continue to be very important in the coming years.</li> </ul>
<b>Freight Rail</b>	<ul style="list-style-type: none"> <li>• Traffic on Norfolk Southern’s Harrisburg Line is expected to continue to grow, including shipments of crude oil. A third rail line (as mentioned above, if it was ever built) would greatly help to enhance goods movement in this portion of the Crescent Corridor.</li> <li>• The 9<sup>th</sup> &amp; 10<sup>th</sup> Streets Bridges over Norfolk Southern project removed three at-grade crossings within the City of Lebanon. These bridges have improved traffic flow and access for emergency vehicles and at the same time permit a third track to be built under these structures for future rail service.</li> <li>• The safety of grade crossings countywide has been enhanced by the installation of gates and/or new signals, now at all public at-grade crossings.</li> <li>• If federal regulations are ever relaxed, automated horn zones and other options should be investigated to address noise complaints while preserving safety at rail crossings.</li> <li>• Via TISs, TIAs and HOPs, the county is heavily involved in every new development/redevelopment that brings more trucks and goods movement to the area, so we can assess key roads and intersections to insure that heavy trucks can be safely and efficiently integrated into the network.</li> <li>• The 2014 Commodity Flow Study in Lebanon County provides some excellent information on the movement of hazardous materials as they move through the county via roads/bridges, the Norfolk Southern Railroad and five private pipelines.</li> <li>• In the coming years, the LEBCO MPO will use the findings, conclusions and recommendations from the Commonwealth’s first-ever Comprehensive Freight Movement Plan to better address these issues and opportunities in Lebanon County. The MPO will also work with PennDOT and FHWA on (1) establishing PA’s portion of the National Highway Freight Network (NHFN) and (2) finalizing Critical Rural Freight Corridors (CRFCs) and Critical Urban Freight Corridors (CUFCs) to the Primary Highway Freight System (PHFS) in PA.</li> <li>• Detour routes should also be established to deal truck/freight issues that might be caused by an incident or accident involving crude oil shipments on Norfolk Southern’s Harrisburg Line.</li> </ul>
<b>Aviation</b>	<ul style="list-style-type: none"> <li>• Lebanon County has four privately-owned public use airports. The Lebanon County Airport Feasibility Study and Master Plan concluded that while there is local interest in a public general use airport,</li> </ul>



<b>Mode or Facility</b>	<b>Key Trends and Indicators for Additional Evaluation</b>
	<p>airport users are generally satisfied that the county's current capacity meets their needs.</p> <ul style="list-style-type: none"> <li>• Airport hazard zoning has been instituted to protect all four of these local, public-use airports.</li> <li>• The closest major commercial airport is in Harrisburg (33 miles away). Further examinations may be necessary in the future to determine whether improved airport access should be a priority.</li> </ul>
<b>Bicycle and Pedestrian</b>	<ul style="list-style-type: none"> <li>• The Lebanon Valley Rail-Trail (LVRT) continues to be used heavily and there are strong desires to take this spine line north to Swatara State Park and to add east-west connections.</li> <li>• The Lebanon County Bicycle Transportation Map was produced in 2012 and is updated annually. The map denotes approximately 500 miles of state and local roads that are most critical to bicyclists for destination and scenic/recreational riding. The Lebanon County Bicycle Transportation Priorities Map was completed in 2014, and it identifies the most needed immediate needs for safer bicycling. These maps are resources to assist with the establishment of priorities for shoulder widenings and other bicycle facility amenities in conjunction with state and local road projects and off-road projects. Both maps are available at <a href="http://lebcounty.org/Planning/Pages/MPO.aspx">http://lebcounty.org/Planning/Pages/MPO.aspx</a>.</li> <li>• Wider shoulders where possible on various state and local roads help to promote safer walking, bicycling and jogging.</li> <li>• Some communities like Annville, Cleona, Lebanon, Palmyra, Myerstown, Schaefferstown, Richland and Jonestown have areas that are walkable due to sidewalk systems and sidewalk ordinances. Continued maintenance, improvement and expansion of these pedestrian networks is needed.</li> <li>• The LEBCO MPO worked with the Harrisburg MPO and others, especially Derry Township, on the now completed Regional Bicycle Connectivity Study.</li> <li>• Implementation of bicycle and pedestrian projects that support destination trips need to be pursued by all key parties (municipalities, LEBCO MPO, Lebanon Transit, developers, etc.) to ensure mobility options for all travelers.</li> <li>• Bicycling and walking for destination purposes will increase as gas/diesel prices rise, more dense development occurs in our urban places, sidewalks are built/re-built, shoulders are widened, Complete Street concepts are implemented, etc.</li> <li>• Bicycle/motor vehicle crashes need to be reduced. Between 2008 and 2015, one bicyclist was killed in a motor vehicle-related crash. During that same time frame, on average, 2 bicyclists were seriously injured each year in motor vehicle-related crashes. There were numerous minor accidents as well.</li> <li>• Pedestrian/motor vehicle crashes need to be reduced. Between 2008 and 2015, on average, one pedestrian was killed each year in a motor vehicle-related crash. During that same time frame, on average, 3 pedestrians were seriously injured each year in motor vehicle-related crashes. There were numerous minor accidents as well.</li> <li>• As bridge replacement projects occur in the county, bike and ped access must be considered.</li> <li>• Continue to work with Commuter Services of PA on an interactive</li> </ul>

<b>Mode or Facility</b>	<b>Key Trends and Indicators for Additional Evaluation</b>
	regional map of key bike rack locations, bike share, etc.

This Long Range Transportation Plan identifies various strategies and projects to address the trends and indicators listed above.

## *Project and System Improvement Evaluation*

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### **Introduction**

The recommended projects and improvements of the plan represent a significant effort to achieve better land use/transportation relationships and to place a priority on the improvement of the existing transportation system wherever feasible. Projects are categorized as short-term (1-4 years); medium-term (5-12 years); or long-term (13-23 years) and presented by transportation mode.

The list of projects for consideration in the plan emerged from numerous sources:

- The Lebanon County Metropolitan Planning Organization FFY 2015-2018 Transportation Improvement Program (TIP) carryover projects
- PennDOT’s 12-Year Transportation Program (TYP) and Decade of Investment (DOI)
- Data and analyses from the completed update of the MPO’s Congestion Management Processes (CMP) Plan called Lebanon County Moves!
- PennDOT District 8-0
- Municipal Officials meetings
- Pennsylvania Turnpike Commission
- Lebanon Transit (LT) (formerly County of Lebanon Transit) Vision, Goals and Objectives
- Lebanon Valley Rails to Trails (LVRT), Inc., Lebanon Valley Bicycle Coalition, other bike/ped advocates
- “Keyperson” interviews
- Transportation outreach to all of the county’s municipalities and responses to letters/e-mails/phone calls received from municipalities and individuals in 2015 and 2016
- Analysis of crash cluster data and Road Safety Audit (RSA) data
- Pennsylvania State Police
- Commuter Services of PA and Modern Transit Partnership initiatives
- Past and ongoing studies within the county and region

- Lebanon Valley Chamber of Commerce and Lebanon Valley Economic Development Corporation meetings
- TV, newspaper, radio and social media information and outreach.
- Level #2 Linking Planning and NEPA Forms.

## **Project Prioritization Process**

Beginning in the 1990s, the United States Department of Transportation has required that all long range transportation plans are “fiscally constrained,” meaning that the funding for the projects identified in the plan must be reasonably available. The LEBCO MPO Long Range Transportation Plan focuses on maintenance and preservation of the existing system first and safety and operational improvements second. The total potential cost of all candidate projects in the plan is well below the amount of projected funding available, since the LEBCO MPO takes a very conservative approach to adding projects to the plan. **It should be noted that more than 90% of the base highway, bridge and transit funding in the TIP goes to maintain, preserve, operate, and enhance the existing transportation system, including making it safer.** Therefore, the plan and TIP are constrained and include numerous projects and some line items for future (yet to be identified) projects. Funding limitations and practical realities require that transportation improvements be prioritized. As a result, a set of evaluation criteria are used to select projects for the TIP based on the Vision, Goals and Policy Statements were applied to the large list of candidate projects and improvements to comply with the fiscal constraint provisions of the US DOT statewide and metropolitan transportation planning regulations.<sup>2</sup>

## **Methodology for Evaluating Candidate Improvements**

The selection process that produced the list of recommended projects and improvements was developed to balance the variety of community concerns in a clear and defensible manner with an emphasis on system preservation and local public support. The methodology is designed to be used for future plan updates as well.

There are several steps to the project selection process:

- a. Inclusion of previously-programmed projects and improvements.** The LEBCO MPO TIP and the PennDOT 12-Year Transportation Program contain projects that have already been screened through an approved federally-endorsed, comprehensive process and were “grandfathered” into the LEBCO MPO LRTP. The LEBCO MPO FFY 2017 – 2020 TIP is also included in this plan.
- b. Application of vision, goals and policy statements to the Candidate Projects.** The list of candidate LRTP projects were evaluated to ensure compliance with the vision, goals and the policy statements described in the Introduction. This process places a priority on projects that enhance the operation of the current system and enjoy a significant level of local support to ease project implementation and produced the draft list of LRTP preferred projects.

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<sup>2</sup> 23 CFR 450.322(b)(11)

**c. Use of revenue Projections.** In order to plan and prioritize needs effectively, there must be a common understanding of the projected financial resources available over the 20+ year planning horizon. The revised financial guidance for highways, bridges and transit that includes Act 89 of 2013 revenue projections, which was issued on January 11, 2016 by PennDOT, was used to generate a fiscally-constrained TIP. Existing revenue sources include:

- PennDOT
- Federal Highway Administration
- Federal Transit Administration
- Pennsylvania Department of Conservation and Natural Resources
- Pennsylvania Department of Environmental Protection
- Municipal contributions
- Private sector contributions

**d. Public Review and Comment on the Draft Long Range Transportation Plan.** Throughout the development of the LEBCO MPO Long Range Transportation Plan, the public, the business community, representatives from the various modes of transportation, etc. had the opportunity to meet with MPO staff at a variety of public meetings, special one-on-one sessions and other concurrent events linked to other meetings (i.e., Lebanon Valley Chamber of Commerce Roundtable Sessions). The plan's public outreach efforts are described under the Public Outreach, Stakeholder Review and Environmental Justice Compliance section.

**e. Environmental Justice Review.** As a subset of the public review process, the Federal Highway Administration and Federal Transit Administration require that Long Range Transportation Planning processes are inclusive and that input from traditionally underserved and underrepresented groups be pursued. The LEBCO MPO LRTP development process included a specific effort to involve all stakeholders as part of the public review strategy in compliance with FHWA and FTA guidance with Title VI/Environmental Justice guidance. The plan's public outreach efforts to the Environmental Justice communities are described under the Public Outreach, Stakeholder Review and Environmental Justice Compliance section.

For a more detailed discussion on project prioritization and selection, the LEBCO MPO has a stand-alone document that is also available for public review and comment. It is called LEBCO MPO Project Prioritization and Selection Process, and it was also adopted in June of 2016.

## **Methodology for Year of Expenditure (YOE) Project Calculations**

Based upon guidance from PennDOT and FHWA, the costs for the 2017 – 2020 Transportation Improvement Program (TIP) projects and the remaining projects in the plan have been adjusted for inflation. This is called year of expenditure (YOE) estimates. The LEBCO MPO has always taken a very conservative approach with the projects in the later (non-TIP) years of the LRTP. We are using the 03% annual rate of inflation for every project as recommended in the Financial Guidance for the Pennsylvania 2017 Transportation Program that was issued in January of 2016 by PennDOT Program Center staff.

## *L RTP Recommended Projects and Strategies*

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Based upon the L RTP project and system improvement evaluation criteria, as well as public and stakeholder input and review, the following seven charts identify LEBCO MPO’s regional priorities by type of mode. These project lists represent Lebanon County’s long range vision for transportation projects, programs and services based on the Vision, Goals and Policy Statements identified for this L RTP and complies with the guidance and requirements of USDOT and PennDOT. A list of proposed studies to help identify future needs and projects for subsequent plan updates is included at the end of this section.

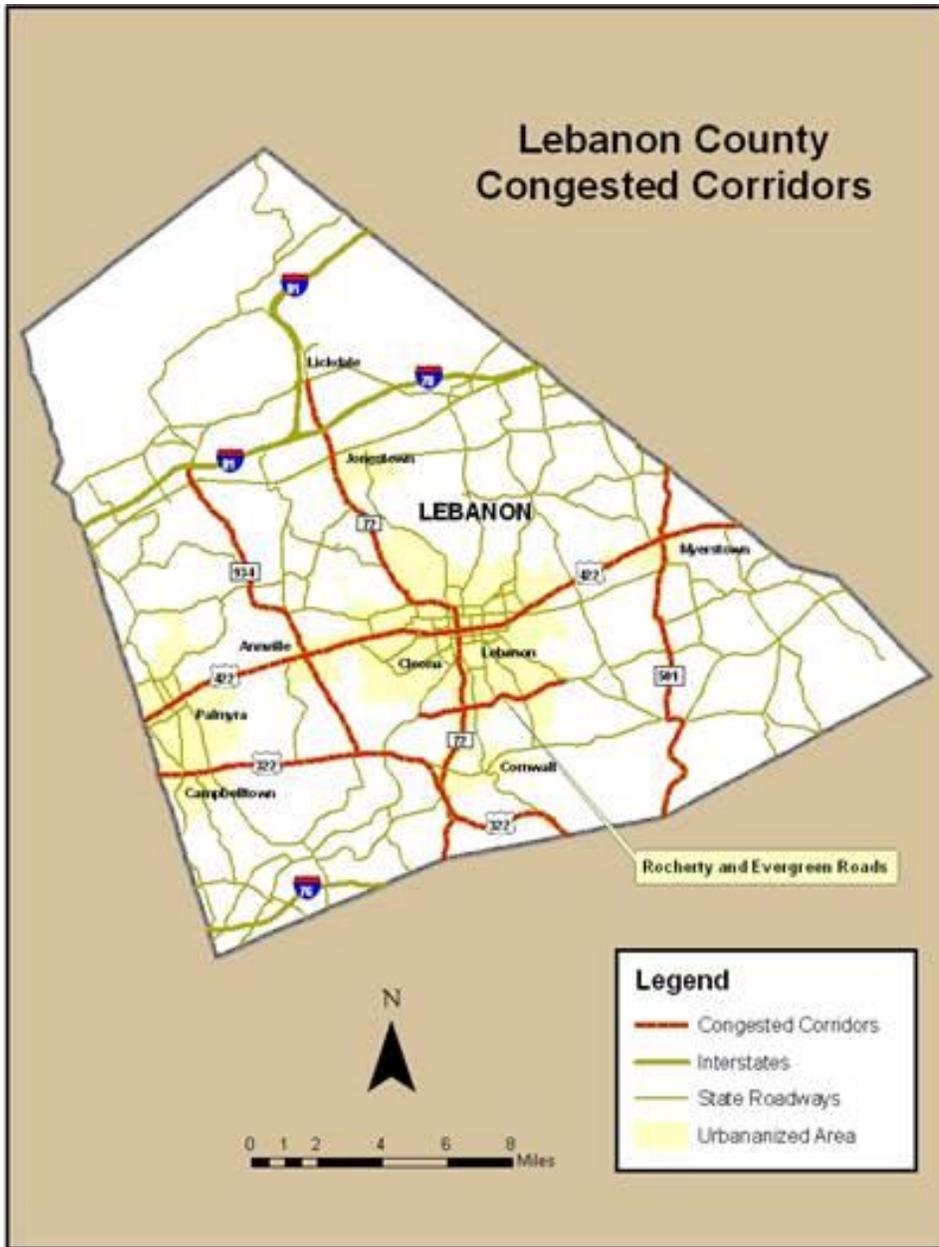
Projects and other strategies relevant to Lebanon County that have appeared in other PennDOT- or USDOT-approved documents, such as the PennDOT 12-Year Program, the Harrisburg Area Transportation Study L RTP/TIP and the LEBCO MPO Transportation Improvement Program (TIP), are included in this document.

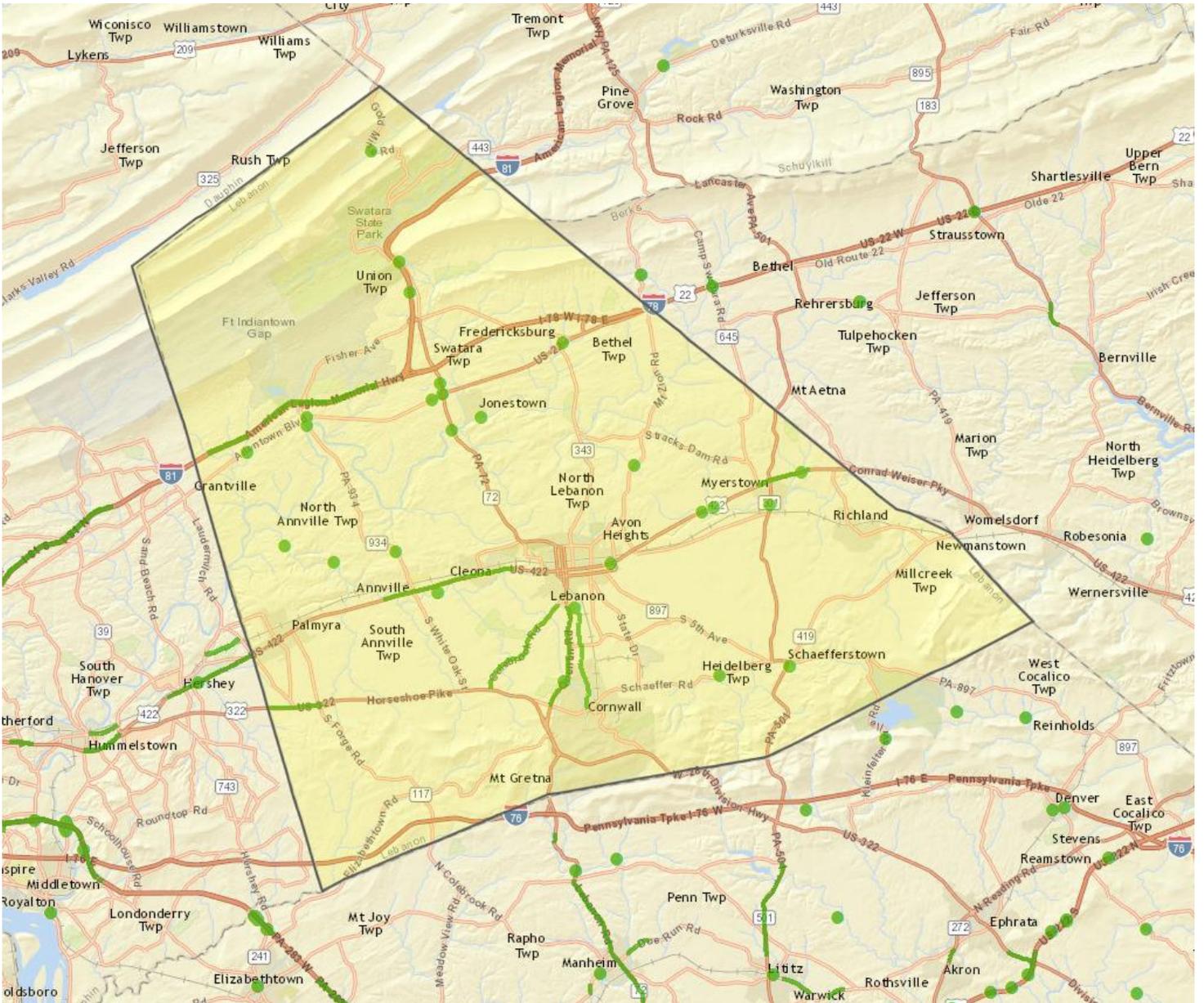
Every FFY 2017 – 2020 Transportation Improvement Program (TIP) project and line item is included in the plan and identified as a TIP project. The plan also includes other short-term (1-4 years) projects, medium-term (5-12 years) projects and long-term (13-24 years) projects and strategies to advance steady progress toward short, medium and long range system goals. These project groupings are distinguished by the following color coding:

2017-2020 TIP Projects
Short-Term (1-4 years)
Medium-Term (5-12 years)
Long Term (13-24 years)

The list of potential projects is expected to expand during future plan updates. The inaugural L RTP (which was adopted in June of 2006) did not contain line items or placeholders beyond the 2007 – 2010 Transportation Improvement Program. Beyond the 2017–2020 Transportation Improvement Program, only a few line items are included in this plan. As a result, the plan has significant additional financial capacity in the medium-term and long term elements, so when/if new projects need to be added to the plan, the MPO can do so.

On the next two pages are maps of the MPO’s six “corridors of concern” and the highway, bridge and rail-trail projects that are included in the 2017 – 2020 TIP.





## Highway and Bridge

The LEBCO MPO LRTP identifies **\$242,095,914** in Table 6-3 in highway/roadway-related improvements and bridge improvements over the 24 year span of the Long Range Transportation Plan which includes programmed projects, new projects and proposed studies, like the Cornwall Center Multimodal Transportation Study in 2015-2016.

**Table 6-3 Highway / Bridge Improvements**

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
Box Culvert Line Item	District Force Work in FFY 2018	Programmed (TIP) Construction	\$225,000	TIP
Box Culvert Line Item	District Force Work in FFY 2019	Programmed (TIP) Construction	\$225,000	TIP
Box Culvert Line Item	District Force Work in FFY 2020	Programmed (TIP) Construction	\$225,000	TIP
Lebanon City Resurfacing	US Route 422 and PA Route 72 in FFY 2019	Programmed (TIP) Construction	\$2,194,999	TIP
Lebanon City Resurfacing	US Route 422 and PA Route 72 in FFY 2020	Programmed (TIP) Construction	\$2,879,000	TIP
Road Safety Audit Line Item	Audit in FFY 2018	Programmed (TIP) Construction	\$30,000	TIP
Highway Reserve	Reserve in FFY 2018	Programmed (TIP) Construction	\$61,894	TIP
Highway Reserve	Reserve in FFY 2020	Programmed (TIP) Construction	\$12,000	TIP
CMAQ Line Item	In FFY 2018	Programmed (TIP) Construction	\$496,377	TIP
Delivery/Consultant Assistance	In FFY 2017	Programmed (TIP) Pre. Eng.	\$400,000	TIP
Delivery/Consultant Assistance	In FFY 2018	Programmed (TIP) Pre. Eng.	\$400,000	TIP
Delivery/Consultant Assistance	In FFY 2019	Programmed (TIP) Pre. Eng.	\$400,000	TIP
Delivery/Consultant Assistance	In FFY 2020	Programmed (TIP) Pre. Eng.	\$400,000	TIP
Delivery/Consultant Assistance	In FFY 2017	Programmed (TIP) Construction	\$200,000	TIP

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
Delivery/Consultant Assistance	In FFY 2018	Programmed (TIP) Construction	\$200,000	TIP
Delivery/Consultant Assistance	In FFY 2019	Programmed (TIP) Construction	\$200,000	TIP
Delivery/Consultant Assistance	In FFY 2020	Programmed (TIP) Construction	\$200,000	TIP
HSIP Line Item	In FFY 2018	Programmed (TIP) Construction	\$564,000	TIP
HSIP Line Item	In FFY 2019	Programmed (TIP) Construction	\$82,000	TIP
STU (HATS) Line Item	In FFY 2017	Programmed (TIP) Construction	\$359,550	TIP
STU (HATS) Line Item	In FFY 2018	Programmed (TIP) Construction	\$374,355	TIP
STU (HATS) Line Item	In FFY 2019	Programmed (TIP) Construction	\$388,665	TIP
STU (HATS) Line Item	In FFY 2020	Programmed (TIP) Construction	\$405,090	TIP
Lebanon Transit One Bus Purchase – Highway Flex	In FFY 2017	Programmed (TIP) Construction	\$400,000	TIP
Lebanon Transit One Bus Purchase – Highway Flex	In FFY 2018	Programmed (TIP) Construction	\$400,000	TIP
SRTP Rideshare Program Support	In FFY 2017	Programmed (TIP) Construction	\$88,867	TIP
SRTP Rideshare Program Support	In FFY 2018	Programmed (TIP) Construction	\$89,756	TIP
SRTP Rideshare Program Support	In FFY 2019	Programmed (TIP) Construction	\$90,654	TIP
SRTP Rideshare Program Support	In FFY 2020	Programmed (TIP) Construction	\$91,560	TIP
LVRT Phase 7	Rail-Trail Project in FFY 2017	Programmed (TIP) Construction	\$269,241	TIP
LVRT Phase 7	Rail-Trail Project in FFY 2017	Programmed (TIP) Construction	\$617,694	TIP
LVRT Phase 7	Rail-Trail Project in FFY 2018	Programmed (TIP) Construction	\$213,065	TIP

*· Transportation Plan ·*

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
US Route 22 Bridge over Kevins Run	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$250,000	TIP
US Route 22 Bridge over Kevins Run	Final Design in FFY 2018	Programmed (TIP) Final Design	\$30,000	TIP
US Route 22 Bridge over Kevins Run	Final Design in FFY 2019	Programmed (TIP) Final Design	\$95,000	TIP
US Route 22 Bridge over Kevins Run	Utilities in FFY 2019	Programmed (TIP) Utilities	\$10,000	TIP
US Route 22 Bridge over Kevins Run	Right-of-Way in FFY 2019	Programmed (TIP) ROW	\$25,000	TIP
US Route 22 Bridge over Kevins Run	Construction in FFY 2020	Programmed (TIP) Construction	\$243,460	TIP
US Route 22 East Bridge	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$89,959	TIP
US Route 22 East Bridge	Preliminary Engineering in FFY 2018	Programmed (TIP) Pre. Eng.	\$110,041	TIP
US Route 22 East Bridge	Final Design in FFY 2019	Programmed (TIP) Final Design	\$125,000	TIP
US Route 22 East Bridge	Utilities in FFY 2019	Programmed (TIP) Utilities	\$10,000	TIP
US Route 22 East Bridge	Right-of-Way in FFY 2017	Programmed (TIP) ROW	\$35,000	TIP
US Route 22 over Beach Creek	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$225,000	TIP
US Route 22 over Beach Creek	Final Design in FFY 2019	Programmed (TIP) Final Design	\$125,000	TIP
US Route 22 over Beach Creek	Utilities in FFY 2019	Programmed (TIP) Utilities	\$10,000	TIP
US Route 22 over Beach Creek	Right-of-Way in FFY 2019	Programmed (TIP) ROW	\$50,000	TIP
PA Route 72 Bridge over Swatara Creek	Preliminary Engineering in FFY 2018	Programmed (TIP) Pre. Eng.	\$200,000	TIP
PA Route 72 Bridge over Swatara Creek	Final Design in FFY 2020	Programmed (TIP) Final Design	\$100,000	TIP
PA Route 72 Bridge over US Route 22	Preliminary Engineering in FFY 2018	Programmed (TIP) Pre. Eng.	\$220,000	TIP

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
PA Route 72 Bridge over US Route 22	Final Design in FFY 2020	Programmed (TIP) Final Design	\$125,000	TIP
PA Route 72 Bridge over US Route 22	Utilities in FFY 2020	Programmed (TIP) Utilities	\$25,000	TIP
PA Route 72 Bridge over US Route 22	Right-of-Way in FFY 2020	Programmed (TIP) ROW	\$25,000	TIP
PA Route 72 at Isabel Drive Intersection Improvement	Preliminary Engineering in FFY 2018	Programmed (TIP) Pre. Eng.	\$250,000	TIP
PA Route 72 at Isabel Drive Intersection Improvement	Final Design in FFY 2020	Programmed (TIP) Final Design	\$100,000	TIP
PA Route 72 at Isabel Drive Intersection Improvement	Utilities in FFY 2020	Programmed (TIP) Utilities	\$6,000	TIP
PA Route 72 and Cornwall Road Congested Corridor Study	Study in FFY 2019	Programmed (TIP) Study	\$300,000	TIP
PA Route 72 Bridge over Snitz Creek	Construction in FFY 2017 with Statewide NHPP Funds	Programmed (TIP) Construction	\$2,700,000	TIP
PA Route 72 Bridge over tributary of Swatara Creek	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$250,000	TIP
PA Route 72 Bridge over tributary of Swatara Creek	Final Design in FFY 2019	Programmed (TIP) Final Design	\$125,000	TIP
PA Route 72 Bridge over tributary of Swatara Creek	Utilities in FFY 2019	Programmed (TIP) Utilities	\$10,000	TIP
PA Route 72 Bridge over tributary of Swatara Creek	Right-of-Way in FFY 2019	Programmed (TIP) ROW	\$30,000	TIP
PA Route 72 Bridge over tributary of Swatara Creek	Construction in FFY 2020	Programmed (TIP) Construction	\$69,725	TIP
PA Route 241 Improvement Project	Final Design in FFY 2017	Programmed (TIP) Final Design	\$350,000	TIP
PA Route 241 Improvement Project	Utilities in FFY 2018	Programmed (TIP) Utilities	\$100,000	TIP
PA Route 241 Improvement Project	Right-of-Way in FFY 2018	Programmed (TIP) ROW	\$150,000	TIP
PA Route 241 Improvement Project	Construction in FFY 2019	Programmed (TIP) Construction	\$1,298,750	TIP
PA Route 241 Improvement Project	Construction in FFY 2020	Programmed (TIP) Constriction	\$1,298,750	TIP

· *Transportation Plan* ·

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
US Route 322 Resurfacing	Dauphin County Line to PA Route 117 in FFY 2018	Programmed (TIP) Construction	\$1,388,999	TIP
US Route 322 Resurfacing	Dauphin County Line to PA Route 117 in FFY 2019	Programmed (TIP) Construction	\$581,001	TIP
PA Route 419 Bridge over Hammer Creek	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$61,000	TIP
PA Route 419 Bridge over Hammer Creek	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$188,900	TIP
PA Route 419 Bridge over Hammer Creek	Final Design in FFY 2019	Programmed (TIP) Final Design	\$125,000	TIP
PA Route 419 Bridge over Hammer Creek	Utilities in FFY 2019	Programmed (TIP) Utilities	\$10,000	TIP
PA Route 419 Bridge over Hammer Creek	Right-of-Way in FFY 2019	Programmed (TIP) ROW	\$30,000	TIP
US Route 422 Bridge over a tributary of the Tulpehocken Creek	Preliminary Engineering in FFY 2018	Programmed (TIP) Pre. Eng.	\$75,000	TIP
US Route 422 Bridge over a tributary of the Tulpehocken Creek	Final Design in FFY 2020	Programmed (TIP) Final Design	\$50,000	TIP
US Route 422 Bridge over a tributary of the Tulpehocken Creek	Utilities in FFY 2020	Programmed (TIP) Utilities	\$10,000	TIP
US Route 422 Bridge over a tributary of the Tulpehocken Creek	Right-of-Way in FFY 2020	Programmed (TIP) ROW	\$15,000	TIP
US Route 422 Bridge over the Quittapahilla Creek	Construction in FFY 2017 with Statewide NHPP Funds	Programmed (TIP) Construction	\$1,300,000	TIP
US Route 422 Safety Project	Construction in FFY 2017	Programmed (TIP) Construction	\$729,000	TIP
US Route 422 Safety Project	Construction in FFY 2018	Programmed (TIP) Construction	\$36,000	TIP
US Route 422 Resurfacing	Construction in FFY 2017	Programmed (TIP) Construction	\$2,875,000	TIP
US Route 422 Resurfacing	Construction in FFY 2018	Programmed (TIP) Construction	\$1,381,001	TIP
US Route 422 Bridge over a tributary to the Tulpenhocken Creek	Preliminary Engineering in FFY 2018	Programmed (TIP) Pre. Eng.	\$250,000	TIP
US Route 422 Bridge over a tributary to the Tulpenhocken Creek	Final Design in FFY 2020	Programmed (TIP) Final Design	\$225,000	TIP

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
US Route 422 Bridge over a tributary to the Tulpenhocken Creek	Utilities in FFY 2020	Programmed (TIP) Utilities	\$30,000	TIP
US Route 422 Bridge over a tributary to the Tulpenhocken Creek	Right-of-Way in FFY 2020	Programmed (TIP) ROW	\$50,000	TIP
US Route 422 Bridge over Owl Creek	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$400,000	TIP
US Route 422 Bridge over Owl Creek	Final Design in FFY 2018	Programmed (TIP) Final Design	\$225,000	TIP
US Route 422 Bridge over Owl Creek	Utilities in FFY 2018	Programmed (TIP) Utilities	\$30,000	TIP
US Route 422 Bridge over Owl Creek	Right-of-Way in FFY 2018	Programmed (TIP) ROW	\$50,000	TIP
US Route 422 Bridge over Owl Creek	Construction in FFY 2019	Programmed (TIP) Construction	\$30,000	TIP
US Route 422 Bridge over Owl Creek	Construction in FFY 2019	Programmed (TIP) Construction	\$702,904	TIP
US Route 422 Bridge over Owl Creek	Construction in FFY 2020	Programmed (TIP) Construction	\$203,735	TIP
US Route 422 Bridge over Owl Creek	Construction in FFY 2020	Programmed (TIP) Construction	\$325,000	TIP
PA Route 501 Bridge over Tulpehocken Creek	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$400,000	TIP
PA Route 501 Bridge over Tulpehocken Creek	Final Design in FFY 2019	Programmed (TIP) Final Design	\$221,540	TIP
PA Route 501 Bridge over Tulpehocken Creek	Final Design in FFY 2019	Programmed (TIP) Final Design	\$3,460	TIP
PA Route 501 Bridge over Tulpehocken Creek	Utilities in FFY 2019	Programmed (TIP) Utilities	\$95,000	TIP
PA Route 501 Bridge over Tulpehocken Creek	Right-of-Way in FFY 2019	Programmed (TIP) ROW	\$60,000	TIP
PA Route 501 Bridge over Tulpehocken Creek	Construction in FFY 2020	Programmed (TIP) Construction	\$731,000	TIP
PA Route 934 over Indiantown Run	Preliminary Engineering in FFY 2018	Programmed (TIP) Pre. Eng.	\$75,000	TIP
PA Route 934 over Indiantown Run	Final Design in FFY 2020	Programmed (TIP) Final Design	\$75,000	TIP

· *Transportation Plan* ·

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
PA Route 934 over Indiantown Run	Utilities in FFY 2020	Programmed (TIP) Utilities	\$25,000	TIP
PA Route 934 over Indiantown Run	Right-of-Way in FFY 2020	Programmed (TIP) ROW	\$25,000	TIP
PA Route 934 Bellegrove Road Bridge	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$126,000	TIP
PA Route 934 Bellegrove Road Bridge	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$199,000	TIP
PA Route 934 Bellegrove Road Bridge	Final Design in FFY 2019	Programmed (TIP) Final Design	\$175,000	TIP
PA Route 934 Bellegrove Road Bridge	Utilities in FFY 2019	Programmed (TIP) Utilities	\$10,000	TIP
PA Route 934 Bellegrove Road Bridge	Right-of-Way in FFY 2019	Programmed (TIP) ROW	\$35,000	TIP
PA Route 934 Bellegrove Road Bridge	Construction in FFY 2020	Programmed (TIP) Construction	\$400,000	TIP
Lancaster Street Bridge over Little Swatara Creek	Final Design in FFY 2017	Programmed (TIP) Final Design	\$200,000	TIP
Lancaster Street Bridge over Little Swatara Creek	Utilities in FFY 2017	Programmed (TIP) Utilities	\$50,000	TIP
Lancaster Street Bridge over Little Swatara Creek	Construction in FFY 2017	Programmed (TIP) Construction	\$1,036,100	TIP
Lancaster Street Bridge over Little Swatara Creek	Construction in FFY 2018	Programmed (TIP) Construction	\$304,125	TIP
Lancaster Street Bridge over Little Swatara Creek	Construction in FFY 2018	Programmed (TIP) Construction	\$1,927,000	TIP
Lancaster Street Bridge over Little Swatara Creek	Construction in FFY 2019	Programmed (TIP) Construction	\$263,886	TIP
Mt. Zion Road Bridge	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$350,000	TIP
Mt. Zion Road Bridge	Final Design in FFY 2019	Programmed (TIP) Final Design	\$175,000	TIP
Mt. Zion Road Bridge	Utilities in FFY 2019	Programmed (TIP) Utilities	\$10,000	TIP
Mt. Zion Road Bridge	Right-of-Way in FFY 2019	Programmed (TIP) ROW	\$60,000	TIP

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
Mt. Zion Road Bridge	Construction in FFY 2019	Programmed (TIP) Construction	\$253,214	TIP
Mt. Zion Road Bridge	Construction in FFY 2020	Programmed (TIP) Construction	\$746,786	TIP
Bohns Lane over I-81	Preliminary Engineering in FFY 2019	Programmed (TIP) Pre. Eng.	\$250,000	TIP
Cornwall Road and Wilhelm Avenue Intersection Project	Final Design in FFY 2017	Programmed (TIP) Final Design	\$150,000	TIP
Cornwall Road and Wilhelm Avenue Intersection Project	Utilities in FFY 2017	Programmed (TIP) Utilities	\$250,000	TIP
Cornwall Road and Wilhelm Avenue Intersection Project	Right-of-Way in FFY 2017	Programmed (TIP) ROW	\$111,133	TIP
Cornwall Road and Wilhelm Avenue Intersection Project	Right-of-Way in FFY 2018	Programmed (TIP) ROW	\$38,867	TIP
Cornwall Road and Wilhelm Avenue Intersection Project	Construction in FFY 2019	Programmed (TIP) Construction	\$958,346	TIP
Cornwall Road and Wilhelm Avenue Intersection Project	Construction in FFY 2020	Programmed (TIP) Construction	\$984,440	TIP
Market Street Bridge	Final Design in FFY 2017	Programmed (TIP) Final Design	\$250,000	TIP
Market Street Bridge	Utilities in FFY 2017	Programmed (TIP) Utilities	\$20,000	TIP
Market Street Bridge	Right-of-Way in FFY 2017	Programmed (TIP) ROW	\$20,000	TIP
Market Street Bridge	Construction in FFY 2018	Programmed (TIP) Construction	\$506,000	TIP
Palmyra-Bellegrave Road Bridge #2	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$175,000	TIP
Palmyra-Bellegrave Road Bridge #2	Final Design in FFY 2018	Programmed (TIP) Final Design	\$150,000	TIP
Palmyra-Bellegrave Road Bridge #2	Utilities in FFY 2018	Programmed (TIP) Utilities	\$10,000	TIP
Palmyra-Bellegrave Road Bridge #2	Construction in FFY 2018	Programmed (TIP) Construction	\$460,000	TIP
Palmyra-Bellegrave Road Bridge #2	Construction in FFY 2019	Programmed (TIP) Construction	\$440,000	TIP

· *Transportation Plan* ·

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
Syner Road Bridge	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$280,200	TIP
Syner Road Bridge	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$169,800	TIP
Syner Road Bridge	Final Design in FFY 2018	Programmed (TIP) Final Design	\$225,000	TIP
Syner Road Bridge	Utilities in FFY 2018	Programmed (TIP) Utilities	\$30,000	TIP
Syner Road Bridge	Right-of-Way in FFY 2018	Programmed (TIP) ROW	\$75,000	TIP
Syner Road Bridge	Construction in FFY 2019	Programmed (TIP) Construction	\$230,000	TIP
Syner Road Bridge	Construction in FFY 2020	Programmed (TIP) Construction	\$975,790	TIP
Jonestown Road Bridge	Preliminary Engineering in FFY 2017	Programmed (TIP) Pre. Eng.	\$350,000	TIP
Jonestown Road Bridge	Final Design I FFY 2019	Programmed (TIP) Final Design	\$175,000	TIP
Jonestown Road Bridge	Utilities in FFY 2019	Programmed (TIP) Utilities	\$70,000	TIP
Jonestown Road Bridge	Right-of-Way in FFY 2019	Programmed (TIP) ROW	\$60,000	TIP
Gold Mine Road Bridge / Box Culvert over Evening Branch of Spring Creek	Construction in FFY 2017	Programmed (TIP) Construction	\$225,000	TIP
South Spruce Street Bridge	Construction in FFY 2018	Programmed (TIP) Construction	\$663,500	TIP
South Spruce Street Bridge	Construction in FFY 2018	Programmed (TIP) Construction	\$269,000	TIP
South Spruce Street Bridge	Construction in FFY 2019	Programmed (TIP) Construction	\$277,500	TIP
Inwood Iron Bridge	Final Design in FFY 2017	Programmed (TIP) Final Design	\$236,000	TIP
Inwood Iron Bridge	Utilities in FFY 2017	Programmed (TIP) Utilities	\$5,000	TIP
Inwood Iron Bridge	Right-of-Way in FFY 2017	Programmed (TIP) ROW	\$5,000	TIP

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
Inwood Iron Bridge	Construction in FFY 2019	Programmed (TIP) Construction	\$425,446	TIP
Inwood Iron Bridge	Construction in FFY 2019	Programmed (TIP) Construction	\$426,786	TIP
Inwood Iron Bridge	Construction in FFY 2020	Programmed (TIP) Construction	\$611,054	TIP
Inwood Iron Bridge	Construction in FFY 2020	Programmed (TIP) Construction	\$59,214	TIP
		<b>Subtotal</b>	<b>\$52,378,179</b>	
<b>ADDITIONAL LONG RANGE TRANSPORTATION PLAN ROAD &amp; BRIDGE PROJECTS</b>				
US Route 422 and PA Route 72 Resurfacing in the City of Lebanon (border to border)	Milling, superpave asphalt resurfacing, new loop sensors, new thermoplastic pavement markings, bicycle-safe inlets, minor utility adjustments, ADA ramps, etc.	Plan Project Remaining Construction in FFY 2021	\$1,993,000	Partially funded in the 2017-2020 TIP
Bridge Reserve	FFY 2022	Plan Project Construction	\$748,350	Short
Bridge Reserve	FFY 2023	Plan Project Construction	\$682,000	Short
Bridge Reserve	FFY 2024	Plan Project Construction	\$477,000	Short
Highway Reserve	FFY 2022	Plan Project Construction	\$825,000	Short
Highway Reserve	FFY 2022	Plan Project Construction	\$666,000	Short
Highway Reserve	FFY 2023	Plan Project Construction	\$812,000	Short
Highway Reserve	FFY 2024	Plan Project Construction	\$6,212,000	Short
CMAQ Line Item	FFY 2021	Plan Project Construction	\$1,076,000	Short
CMAQ Line Item	FFY 2022	Plan Project Construction	\$1,076,000	Short
CMAQ Line Item	FFY 2023	Plan Project Construction	\$1,076,000	Short



· *Transportation Plan* ·

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
CMAQ Line Item	FFY 2024	Plan Project Construction	\$1,076,000	Short
Delivery/Consultant Assistance	FFY 2021	Plan Project Pre. Eng.	\$400,000	Short
Delivery/Consultant Assistance	FFY 2022	Plan Project Pre. Eng.	\$400,000	Short
Delivery/Consultant Assistance	FFY 2021	Plan Project Construction	\$200,000	Short
Delivery/Consultant Assistance	FFY 2022	Plan Project Construction	\$200,000	Short
HSIP Line Item	FFY 2021	Plan Project Construction	\$823,000	Short
HSIP Line Item	FFY 2022	Plan Project Construction	\$1,145,000	Short
HSIP Line Item	FFY 2023	Plan Project Construction	\$1,145,000	Short
HSIP Line Item	FFY 2024	Plan Project Construction	\$1,145,000	Short
STU (HATS)	FFY 2021	Plan Project Construction	\$405,090	Short
STU (HATS)	FFY 2022	Plan Project Construction	\$405,090	Short
STU (HATS)	FFY 2023	Plan Project Construction	\$405,090	Short
STU (HATS)	FFY 2024	Plan Project Construction	\$405,090	Short
Earlkill Run Bridge on US Route 22	FFY 2023	Plan Project Construction	\$1,200,000	Short (partially funded on 2017 – 2020 TIP)
Fisher Avenue Bridge on US Route 22	FFY 2024	Plan Project Construction	\$570,000	Short (partially funded on 2017 – 2020 TIP)
US Route 22 Bridge over Deep Run	FFY 2023	Plan Project Construction	\$93,000	Short (partially funded on 2017 – 2020 TIP)
US Route 22 Bridge over Deep Run	FFY 2024	Plan Project Construction	\$293,000	Short (partially funded on 2017 – 2020 TIP)

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
US Route 22 Bridge over a tributary of Raccoon Creek	FFY 2024	Plan Project Construction	\$1,000,000	Short (partially funded on the 2017 – 2020 TIP)
US Route 22 Bridge over Reeds Creek	FFY 2023	Plan Project Construction	\$2,400,000	Short (partially funded on the 2017 – 2020 TIP)
US Route 22 Bridge over Kevins Run	FFY 2021	Plan Project Construction	\$156,540	Short (partially funded on the 2017 – 2020 TIP)
US Route 22 East Bridge	FFY 2021	Plan Project Construction	\$900,000	Short (partially funded on the 2017 – 2020 TIP)
US Route 22 Bridge over Beach Creek	FFY 2021	Plan Project Construction	\$700,000	Short (partially funded on the 2017 – 2020 TIP)
PA Route 72 Bridge over Swatara Creek	FFY 2021	Plan Project Utilities	\$25,000	Short (partially funded on the 2017 – 2020 TIP)
PA Route 72 Bridge over Swatara Creek	FFY 2021	Plan Project ROW	\$25,000	Short (partially funded on the 2017 – 2020 TIP)
PA Route 72 Bridge over Swatara Creek	FFY 2022	Plan Project Construction	\$1,750,000	Short (partially funded on the 2017 – 2020 TIP)
Pa Route 72 Bridge over US Route 22	FFY 2022	Plan Project Construction	\$233,650	Short (partially funded on the 2017 – 2020 TIP)
Pa Route 72 Bridge over US Route 22	FFY 2022	Plan Project Construction	\$1,966,350	Short (partially funded on the 2017 – 2020 TIP)
PA Route 72 Bridge over Kevins Run	FFY 2024	Plan Project Construction	\$534,000	Short (partially funded on the 2017 – 2020 TIP)
PA Route 72 Bridge over a tributary of Swatara Creek	FFY 2021	Plan Project Construction	\$346,665	Short (partially funded on the 2017 – 2020 TIP)
PA Route 72 Bridge over a tributary of Swatara Creek	FFY 2021	Plan Project Construction	\$83,610	Short (partially funded on the 2017 – 2020 TIP)
PA Route 72 / Isabel Drive Intersection Improvement Project	FFY 2021	Plan Project ROW	\$250,000	Short (partially funded on the 2017 – 2020 TIP)

· *Transportation Plan* ·

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
PA Route 72 / Isabel Drive Intersection Improvement Project	FFY 2022	Plan Project Construction	\$1,100,000	Short (partially funded on the 2017 – 2020 TIP)
PA Route 241 Improvement Project	FFY 2021	Plan Project Construction	\$402,500	Short (partially funded on the 2017 – 2020 TIP)
PA Route 419 Bridge over Hammer Creek	FFY 2021	Plan Project Construction	\$300,000	Short (partially funded on the 2017 – 2020 TIP)
US Route 422 Bridge	FFY 2022	Plan Project Construction	\$375,000	Short (partially funded on the 2017 – 2020 TIP)
US Route 422 Bridge #3	FFY 2021	Plan Project Construction	\$1,191,000	Short (partially funded on the 2017 – 2020 TIP)
US Route 422 Bridge #3	FFY 2022	Plan Project Construction	\$609,000	Short (partially funded on the 2017 – 2020 TIP)
PA Route 501 Bridge	FFY 2021	Plan Project Construction	\$107,350	Short (partially funded on the 2017 – 2020 TIP)
PA Route 501 Bridge	FFY 2022	Plan Project Construction	\$461,650	Short (partially funded on the 2017 – 2020 TIP)
PA Route 934 Bridge over Indiantown Run	FFY 2021	Plan Project Construction	\$498,000	Short (partially funded on the 2017 – 2020 TIP)
PA Route 934 Bridge over Indiantown Run	FFY 2022	Plan Project Construction	\$52,000	Short (partially funded on the 2017 – 2020 TIP)
PA Route 934 over Swatara Creek	FFY 2022	Plan Project Pre. Eng.	\$300,000	Short
East Main Street Bridge	FFY 2022	Plan Project Pre. Eng.	\$75,000	Short
Weaver Road Bridge over NS RR	FFY 2022	Plan Project Pre. Eng.	\$225,000	Short
Millbach Road Bridge over Mill Creek	FFY 2023	Plan Project Construction	\$450,000	Short (partially funded on the 2017 – 2020 TIP)
Sheridan Road Bridge over Mill Creek	FFY 2023	Plan Project Pre. Eng.	\$50,000	Short

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
22 <sup>nd</sup> Street Bridge over the Quittapahilla Creek	FFY 2023	Plan Project Construction	\$600,000	Short (partially funded on the 2017 – 2020 TIP)
SR 4005 Bridge over a tributary of Swatara Creek	FFY 2023	Plan Project Construction	\$500,000	Short (partially funded on the 2017 – 2020 TIP)
Harrison Road over Spring Creek	FFY 2023	Plan Project Construction	\$600,000	Short (partially funded on the 2017 – 2020 TIP)
Syner Road Bridge	FFY 2021	Plan Project Construction	\$494,210	Short (partially funded on the 2017 – 2020 TIP)
Jonestown Road Bridge over Raccoon Creek	FFY 2023	Plan Project Construction	\$750,000	Short (partially funded on the 2017 – 2020 TIP)
Pleasant View Drive Bridge	FFY 2023	Plan Project Pre. Eng.	\$150,000	Short
Pleasant View Drive Bridge	FFY 2023	Plan Project Remaining Phases	\$400,000	Short
Jonestown Road Bridge	FFY 2021	Plan Project Construction	\$800,000	Short (partially funded on the 2017 – 2020 TIP)
Harrison Road over I-81	FFY 2022	Plan Project Pre. Eng.	\$200,000	Short
SR 4019 over Vesle Run	FFY 2023	Plan Project Pre. Eng.	\$150,000	Short
Clement Avenue (SR 4022) Resurfacing	FFY 2023	Plan Project Pre. Eng.	\$50,000	Short
Gold Mine Road Resurfacing	FFY 2023	Plan Project Pre. Eng.	\$50,000	Short
Levan's Iron Bridge (County Bridge – 5)	FFY 2023	Plan Project Pre. Eng.	\$150,000	Short
Inwood Iron Bridge	FFY 2021	Plan Project Construction	\$642,500	Short (partially funded on the 2017 -2020 TIP)
Inwood Iron Bridge	FFY 2021	Plan Project Construction	\$185,000	Short (partially funded on the 2017 -2020 TIP)

*· Transportation Plan ·*

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
Intersection Improvements at PA Route 72 and Tunnel Hill Road (SR 4002), Old Ebenezer Road, Hill Street and 22 <sup>nd</sup> Street (SR 4001) in North Lebanon Township	Intersection improvements, new traffic signals, left-turn lanes and possible additional thru lane as part of a P3 with the LVEDC Rail Business Park and other nearby developers (possible roundabout location)	Plan Project All Phases	\$2,000,000	Short (if nearby development occurs in the next several years)
Intersection Improvements at Airport and South Forge Roads in South Londonderry Township	Intersection improvements, possibly including left and right-turn lanes and a new traffic signal or a roundabout as a possible STU-funded project	Plan Project All Phases	\$1,400,000	Short
PA Route 419 "Cornwall Center" Roadway and Intersections Improvement Project in Cornwall Borough	Various intersection and roadway improvements to address growing traffic congestion and safety issues on PA Route 419 and at the Cornwall Road and Burd Coleman Road intersections (possible roundabout location) (UPWP Special Study in 2015-2016)	Plan Project All Phases	\$2,000,000	Study to be completed in July of 2016 Short
South Lingle Avenue (SR 3017) Project in South Londonderry Township	Eliminate the flooding condition by elevating the roadway and/or new drainage, improve the roadway surface, realign a small portion of the road, and widen the shoulders where ROW exists for better bike/ped use as a possible STU-funded project along with PennDOT County Maintenance funds	Plan Project All Phases	\$1,500,000	Short
Study and Implement Protected Left Turn Phases from PA Route 934 onto US Route 422 in Annville. Add new signal equipment and pavement markings as needed.	Determine whether warrants are met for protected left-turns and program a project if necessary	Plan Study and Project	\$200,000	Short
City of Lebanon Traffic Signal Enhancements	Verify controller programming, revisit and possibly revise signal timing plans, revise rest in walk configurations and terminate spare fibers	Plan Project All Phases	\$100,000	Short

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
North Lincoln Avenue Bridge over Quittapahilla Creek in the City of Lebanon	Replace bridge with a pre-cast box culvert or rehabilitate superstructure	Plan Project All Phases	\$1,500,000	Short
Intersection Improvements at "5 Points" in the City of Lebanon	Based upon the build out within the surrounding area, provide improvements at Lincoln Avenue/State Drive/Pershing Avenue, including but not limited to adjusting signal timing and phasing, roadway restriping, extending turning lanes, etc.	Plan Project All Phases	\$475,000	Short
Traffic Signal Battery Pack Installations	Install battery pack back-ups at key signalized intersections along NHS Routes and along CMP Corridors in Lebanon County	Plan Project All Phases	\$150,000	Short
Market Street Turnback and Roadway Improvement Project in Jonestown Borough	Turnback, streetscape, bike/ped and/or drainage improvements along portions or all of Market Street (possible roundabout location at the intersection of Market and Lancaster Streets)	Plan Project All Phases	\$2,600,000	Short
Intersection Improvements at Lehman Street (SR 4001) and 16 <sup>th</sup> Street in the City of Lebanon	Intersection improvements and turning lanes as part of a P3 with the LVEDC Rails Business Park	Plan Project All Phases	\$200,000	Short (if nearby development occurs in the next two years)
Intersection Improvements at Carpenter Street (old PA Route 501) and PA Route 419 in Schaefferstown, Heidelberg Township	New traffic signal or remove traffic signal; geometric improvements; and ADA accommodations	Plan Project All Phases	\$1,700,000	Short
Replace traffic signals on PA Route 72 at Summit Street and York Street in North Cornwall Township	Remove the cable-hung signals; install new signals, posts and overhead mast arms; interconnect the signals; and add any appropriate pavement markings and signs for the turning movements	Plan Project All Phases	\$500,000	Short

· *Transportation Plan* ·

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
Improve and/or widen shoulders within existing rights-of-way on one or more segments of US Route 322 and/or PA Routes 72, 117, 241, 419, 501 and/or 934. A single contract will be bid and awarded for shoulder work at various locations to promote safe walking and bicycling for destination purposes.	The LCPD will work with PennDOT District 8-0, PennDOT Lebanon County Maintenance and Lebanon Valley Bicycle Coalition to identify the most cost effective segments for shoulder improvements/widenings. The Bicycle Transportation Map will be used to identify some road segments to be screened and evaluated.	Plan Project All Phases	\$400,000	Short
Yordy's Bridge Road Bridge Replacement over Swatara Creek in N. Annville Township	Bridge Replacement	Plan Project Remaining Phases	\$4,600,000	Short (partially funded on the 2015 - 2018 TIP)
7 <sup>th</sup> and Maple Streets intersection improvement, City of Lebanon	Milling, superpave resurfacing, thermoplastic pavement markings, bicycle-safe inlets, ADA ramps, etc.	Plan Project All Phases	\$225,000	Short
Green Point School Road Bridge over Trout Run in Union Township	Major bridge rehabilitation	Plan Project All Phases	\$750,000	Short
I-78/US Route 22 Point of Access Study in Bethel Township (could include partial interchange at Fredericksburg, PA Route 343, too)	Point of Access (POA) Study for potential full interchange between I-78 and US Route 22 in Bethel Township	Candidate Study	\$1,500,000	Medium
Install New Traffic Signal and Improve Intersection Sight Distance at State Drive (SR 2003) and Klein Avenue in South Lebanon Township	Intersection Improvement	Plan Project All Phases	\$450,000	Medium
Implement Appropriate Bicycle and Pedestrian Safety Improvements in Palmyra Borough, N. Londonderry Township and S. Londonderry Township	Based upon walking audits, completed studies, etc., put together a package of bike and ped safety enhancements in the 3 municipalities possibly using STU Funds	Plan Project All Phases	\$400,000	Medium



<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
PA Route 72 and Fisher Avenue (SR 4020) intersection improvements in Lickdale, Union Township	Widen intersection, improve turning lanes, upgrade traffic signals to accommodate increased traffic and high percentage of truck traffic	Plan Project All Phases	\$1,400,000	Medium
Install signal and left turn lanes at PA Route 343 (North 7th Street) and Kimmerlings Road/Kochenderfer Road in North Lebanon Township	Install new signal and other needed intersection improvements, possibly sight distance on 343 as a safety (HSIP-funded) project	Plan Project All Phases	\$1,400,000	Medium
Intersection Improvement at PA Route 934 and Old US Route 22 near Harper's Tavern in East Hanover Township	Improve channelization and possible new demand-actuated signal installation in East Hanover Township	Plan Project All Phases	\$750,000	Medium
Intersection improvement at Narrows Drive and US Route 422 in North Lebanon Township	Improve channelization and new demand-actuated traffic signal in North Lebanon Township	Plan Project All Phases	\$850,000	Medium
Intersection improvement at Prescott Road (SR 2005) and US Route 422 in North Lebanon Township	Improve channelization and possible new demand-actuated signal installation in North Lebanon Township	Plan Project All Phases	\$725,000	Medium
US Route 422 Intersection improvements at PA Route 501 and PA Route 645 in Jackson Township	Improve channelization and turning movements at both locations; consider signal interconnection	Plan Project All Phases	\$2,300,000	Medium
Intersection improvements at PA Route 501 and Hergelrode Drive in Jackson Township	Reduce curve and improve sight distance at hard curve, south of Myerstown	Plan Project All Phases	\$1,900,000	Medium
Intersection Improvements at West Lehman Streets and 22 <sup>nd</sup> Street (SR 4001) in West Lebanon Township and roadway improvements on Lehman Street from 18 <sup>th</sup> Street to 25 <sup>th</sup> Street	Improve channelization and turning movements and consider traffic signal installation and roadway resurfacing	Plan Project All Phases	\$950,000	Medium

*· Transportation Plan ·*

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
Intersection improvements including a new traffic signal at Mt. Pleasant Road and US Route 422 in South Annville Township	New traffic signal that is CCIP-project compatible and geometric improvements	Plan Project All Phases	\$850,000	Medium (100% developer funds)
Relocation of Mt. Pleasant Road from US Route 422 to north of Reigerts Lane	A PPP with developer, LEBCO MPO and DCED to improve access to a mixed use development and to improve traffic flow and safety in the area (could also serve as part of a mini-bypass of Annville) for PA Route 934)	Plan Project All Phases	\$1,800,000	Medium (possible developer, LEBCO MPO and DCED funded)
I-78/PA Route 72 Point of Access Study in Union Township	Point of Access (POA) Study for potential interchange between I-78 and PA Route 72 in Union Township	Candidate Study	\$1,500,000	Medium
Intersection Improvements at Cornwall Road (SR 2001) and Hauck Street in the City of Lebanon	Improve channelization and pedestrian safety in conjunction with any school district plans	Plan Project All Phases	\$400,000	Medium
Reilly Road Bridge Replacement over Tulpehocken Creek in Jackson Township	Bridge Replacement	Plan Project All Phases	\$1,600,000	Medium
Coon Creek Road Bridge replacement over Coon Creek in E. Hanover Township	Bridge Replacement (bridge closed from flood)	Plan Project All Phases	\$1,000,000	Medium
Replace Zinns Mill Road Bridge over abandoned RR line in Borough of Cornwall	Bridge Replacement east of Cornwall Road (could be a GRS-IBS candidate)	Plan Project All Phases	\$1,500,000	Medium
Golf Road Bridge over Little Swatara Creek in Bethel Township	Bridge Rehabilitation of superstructure	Plan Project All Phases	\$4,200,000	Medium
Greenpoint School Road Bridge Replacement over Trout Run in Union Township	Bridge Replacement	Plan Project All Phases	\$1,400,000	Medium
Shirksville Road Bridge replacement over Earlackill Run in Bethel Township	Bridge Replacement	Plan Project All Phases	\$1,300,000	Medium
Obie Road Bridge over Hammer Creek in Heidelberg Township	Bridge Rehabilitation of superstructure	Plan Project All Phases	\$1,200,000	Medium
Jonestown Road Bridge over Swatara Creek in Jonestown Borough	Rehabilitate sidewalk	Plan Project All Phases	\$1,800,000	Medium



<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
Lawn Road (SR 3015) Bridge over Little Conewago Creek in South Londonderry Township	Replace one-lane bridge	Plan Project All Phases	\$500,000	Medium
Lawn Road (SR 3015) Bridge over Conewago Creek in South Londonderry Township	Replace one-lane bridge	Plan Project All Phases	\$500,000	Medium
Construct full interchange between US Route 22 and I-78 in Bethel Township	Current half interchange needs to be upgraded to a full interchange for current and future traffic patterns	Plan Project All Phases	\$54,000,000	Long
Replace one-lane North 25 <sup>th</sup> Street Underpass of Norfolk Southern with a two-lane underpass and improve approaches and sight distance in West Lebanon Township (New underpass must also be able to safely handle bicycle and pedestrian traffic.)	Bridge underpass and roadway realignment	Plan Project All Phases	\$35,000,000	Long
		Subtotal	\$189,717,735	
		<b>TOTAL</b>	<b>\$242,095,914</b>	

*Interstate Management Program Funding*

For informational purposes only, the following projects for **\$8,000,000** are being listed in the plan. These and other PennDOT “3R” (resurfacing, rehabilitation and reconstruction) projects in Lebanon County and elsewhere in the Commonwealth will be funded from PennDOT’s Interstate Management Program Fund. As Interstate projects get included in the Statewide Transportation Improvement Program (STIP) from Lebanon County, they will be added to the LEBCO MPO LRTP for reference only, since the funding for these projects rests with PennDOT and the funding isn’t included in the TIP financial tables in the appendix. The following projects came from PennDOT.



**Table 6-4 Interstate Management Improvements**

<i>Improvement</i>	<i>Description</i>	<i>Status</i>	<i>Estimated Total Cost</i>	<i>Time Frame of Improvement</i>
<b>LONG RANGE TRANSPORTATION PLAN PROJECTS</b>				
I-81 ITS CC TV Cameras and VMS	Install Six (6) New Closed Circuit TV Cameras and Replace 1 Variable Message Sign on the I-81 Corridor in Lebanon County	Plan Project All Phases	\$2,000,000	Medium
I-78 Preventative Maintenance, Diamond Grinding	Preventative maintenance on I-78 in Lebanon County from I-81/I-78 split to Berks County line in Swatara and Bethel Townships	Plan Project All Phases	\$3,000,000	Medium
I-81 Preventative Maintenance, Diamond Grinding	Preventative maintenance on I-81 in Lebanon County from I-78/I-81 split to Schuylkill County line in Swatara and Bethel Townships	Plan Project All Phases	\$3,000,000	Medium
		Subtotal	\$8,000,000	
		<b>TOTAL</b>	<b>\$8,000,000</b>	

## Transit

The LEBCO MPO LRTP identifies **\$21,740,321** in Table 6-5 in transit-related improvements over the 24 year span of the Long Range Transportation Plan which includes programmed projects, new projects and proposed studies. With PennDOT approving the new Lebanon Transit Park-and-Ride Lot off of PA Route 934 at Mill Road in East Hanover Township, the plan/TIP benefitted from a new funding source ... the Pennsylvania Community Transportation Initiative (PCTI). Future projects could be added to the plan from the Commuter Services of PA's 9-County Regional Transit Coordination Study and the recently completed Lebanon Transit New Service / Route Study in 2014-2015. And the ongoing PennDOT Phase 2 SC PA Public Transportation Regionalization Study may yield future projects for the plan/TIP. The Corridor 2 Premium Transit Operations Plan and the advancement of express bus service to and from Lebanon-Hershey-Harrisburg will continue to be promoted by Lebanon Transit, Capital Area Transit (CAT) and the two MPOs (Harrisburg and Lebanon).

Listed in Table 6-11 are several studies or initiatives that may become a future task or tasks in future Unified Planning Work Programs.

**Table 6-5 Transit Improvements**

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
Purchase 2 Paratransit Vans	Purchase two (2) vans in FFY 2017	Programmed (TIP) Construction	\$126,000	TIP
Purchase 2 Paratransit Vans	Purchase two (2) vans in FFY 2018	Programmed (TIP) Construction	\$128,000	TIP
Purchase 2 Paratransit Vans	Purchase two (2) vans in FFY 2019	Programmed (TIP) Construction	\$130,000	TIP
Purchase 2 Paratransit Vans	Purchase two (2) vans in FFY 2020	Programmed (TIP) Construction	\$132,000	TIP
Operating Assistance	Federal Fiscal Year 2017 operating assistance for Lebanon Transit	Programmed (TIP) Construction	\$1,907,032	TIP
Operating Assistance	Federal Fiscal Year 2018 operating assistance for Lebanon Transit	Programmed (TIP) Construction	\$1,912,383	TIP
Operating Assistance	Federal Fiscal Year 2019 operating assistance for Lebanon Transit	Programmed (TIP) Construction	\$1,918,003	TIP
Operating Assistance	Federal Fiscal Year 2020 operating assistance for Lebanon Transit	Programmed (TIP) Construction	\$1,923,903	TIP
Vehicles	Replace Vehicles in FFY 2017	Programmed (TIP) Construction	\$1,400,000	TIP
Vehicles	Replace Vehicles in FFY 2018	Programmed (TIP) Construction	\$1,400,000	TIP
Vehicles	Replace Vehicles in FFY 2019	Programmed (TIP) Construction	\$1,400,000	TIP
Vehicles	Replace Vehicles in FFY 2020	Programmed (TIP) Construction	\$1,400,000	TIP
Buildings and Grounds	Buildings and Grounds Maintenance in FFY 2017	Programmed (TIP) Construction	\$47,000	TIP
Buildings and Grounds	Buildings and Grounds Maintenance in FFY 2018	Programmed (TIP) Construction	\$47,000	TIP
Buildings and Grounds	Buildings and Grounds Maintenance in FFY 2019	Programmed (TIP) Construction	\$47,000	TIP
Buildings and Grounds	Buildings and Grounds Maintenance in FFY 2020	Programmed (TIP) Construction	\$47,000	TIP
Bus Purchase	Purchase one (1) replacement bus in FFY 2017	Programmed (TIP) Construction	\$100,000 (state and local funds)	TIP (\$400,000 in CMAQ Funds also listed in highway portion of the TIP)

· *Transportation Plan* ·

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
Bus Purchase	Purchase one (1) replacement bus in FFY 2018	Programmed (TIP) Construction	\$100,000 (state and local funds)	TIP (\$400,000 in CMAQ Funds also listed in highway portion of the TIP)
		Subtotal	\$14,15,321	
<b>ADDITIONAL LONG RANGE TRANSPORTATION PLAN PROJECTS</b>				
Continue Marketing Plan for Lebanon Transit Park-and-Ride Lot at PA Route 934 and Mill Road	Secure necessary planning funds or other funds for this effort	Plan Marketing Implementation	\$25,000	Short
Implement Marketing Recommendations from Lebanon Transit Business Plan	Hire a consultant to continue to implement the Lebanon Transit Business Plan's marketing recommendations	Plan Project Construction	\$75,000	Short
Add a second floor to the Lebanon Transit Building	Seek a federal earmark for this project	Plan Project Construction	\$1,750,000	Short
Implement Security Improvements at Lebanon Transit Building	Seek a federal earmark for this project	Plan Project Construction	\$300,000	Short
Purchase and Install New Security System	Install new system at Schneider Drive facility	Plan Project Construction	\$200,000	Medium
Repair Fuel Tank Cover	Repair cover at Willow Street facility	Plan Project Construction	\$150,000	Medium
Pavement Sealing	Seal pavement at Willow Street facility	Plan Project Construction	\$250,000	Medium
Replace Two Roofs	Replace roofs at Willow Street facility	Plan Project Construction	\$800,000	Medium
Install New Air Conditioning Unit	Install AC at Willow Street facility	Plan Project Construction	\$225,000	Medium
Purchase Shop Maintenance Equipment	Purchase maintenance equipment	Plan Project Construction	\$350,000	Medium
Implement Homeland Security Measures	Implement measures	Plan Project Construction	\$950,000	Medium
Purchase Lift Equipment	Purchase equipment for Schneider Drive facility	Plan Project Construction	\$425,000	Medium
Purchase and Install Bus Announcing System	Install system at key Lebanon Transit facilities in the region	Plan Project Construction	\$800,000	Medium

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
Purchase Wrecking/Towing Equipment	Purchase equipment	Plan Project Construction	\$1,250,000	Medium
Purchase and install sheltered bike parking at key Lebanon Transit facilities	Purchase and install equipment	Plan Project Construction	\$25,000	Medium
		Subtotal	\$7,575,000	
<b>TOTAL</b>			<b>\$21,740,321</b>	

### Non-Motorized

The LEBCO MPO LRTP identifies **\$7,397,500** in Table 6-6 in non-motorized-related improvements over the 24 year span of the Long Range Transportation Plan which includes new projects. Two LVRT, Inc. projects (like LVRT Phase 7 in North Lebanon Township) are listed in the highway and bridge portion of the TIP/plan since they are using regular highway (STP and CMAQ) funds for implementation. Projects in this category include bicycle and pedestrian improvements either as stand alone projects or features within other road, bridge and/or transit projects, possibly including the Transportation Alternatives Program/Home Town Streets/Safe Routes to School federal reimbursement programs. The LEBCO MPO no longer receives its own allocation of funds for these types of improvements; it must now seek funding from PennDOT (statewide Transportation Alternatives Program (TAP)) or from long-standing DCNR grant programs. As future candidate TAP-funded or DCNR-funded projects are identified, they will be placed on an auxiliary list off of the 2017-2020 Transportation Improvement Program (TIP). When these projects are ready to proceed into project development, the MPO will seek the appropriate federal and state grants.

**Table 6-6 Non-Motorized Improvements**

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
See highway and bridge TIP for carryover rail-trail projects or other projects where there are bike/ped enhancements				
		Subtotal	\$000	
<b>ADDITIONAL LONG RANGE TRANSPORTATION PLAN PROJECTS</b>				
Lebanon Valley Rail-Trail, Phase 6	Secure the needed ROW for the preferred alignment and construct from Cumberland Street north to Lebanon Valley Mall / Union Canal Tunnel Park in the City of Lebanon, West Lebanon Township and North Lebanon Township	Plan Project Construction	\$1,100,000	Short



· *Transportation Plan* ·

<b>Improvement</b>	<b>Description</b>	<b>Status</b>	<b>Estimated Total Cost</b>	<b>Time Frame of Improvement</b>
Lebanon Valley Rail-Trail, Phases 8 and 10	Complete the two remaining sections (5.8 miles) of LVRT as the preferred alignments are identified, ROW secured and funds obtained	Plan Projects Construction	\$2,100,000	Short
County-wide Program for Bike Rack Installation and/or Purchase of Special Event Bike Racks	Work with the Lebanon Valley Bicycle Coalition, municipalities, public agencies, and private organizations to secure public and private funds for the non-federal match for bike racks	Plan Project Construction	\$40,000	Short
Bike Safety Public Service Announcements (PSAs) in English and Spanish	Work with the Lebanon Valley Bicycle Coalition and others to fund, develop and implement bike safety PSAs	Plan Project Construction	\$5,000	Short (possible task to be funded in 2016-2018 UPWP)
Bike PowerPoint Presentations to High School Students	Work with interested school districts to fund, develop and conduct Driver – Bicyclist Safety Training	Plan Project Construction	\$2,500	Short (possible task to be funded in 2016-2018 UPWP)
Lickdale Streetscape Project	Sidewalk and intersection improvements in Lickdale – pre-construction phases were started but the project was stopped by Union Township due to ROW and cost concerns	Plan Project Construction	\$550,000	Short
South Lebanon Township Trail Project, Phase 2	Phase 2 is the eastern section	Plan Project Construction	\$600,000	Medium
Various Extensions and Connections to the Lebanon Valley Rail Trail	Spur and feeder routes	Plan Project Construction	\$3,000,000	Medium
		Subtotal	\$7,397,500	
		<b>TOTAL</b>	<b>\$7,397,500</b>	

Other bike/ped improvements that have not been fully evaluated or implemented but appear to have significant merit are (1) making Cherry Street in Palmyra Borough a Complete Street even though borough council rejected this concept; (2) developing financial packages to make shoulder improvements on state roads (SRs) and local streets based upon recommendations from the Lebanon Valley Bicycle Coalition (LVBC) and others; (3) creating on-road and off-road bike/ped networks in developing areas like South Lebanon Township, North Cornwall Township, N. and S. Londonderry Townships, N. and S. Annville Townships, etc. in association with the new residential, commercial and mixed use development. The completed Regional Bicycle Connectivity Study in Dauphin and Lebanon Counties may yield new candidate projects. The various “downtowns” of Jonestown, Myerstown, Palmyra, Annville, etc; are also prime areas for bike/ped enhancements. As LVRT, Inc., municipalities, agencies, LVBC and other advocates identify additional candidate projects for the plan, they will receive



consideration for possible TAP Fund statewide grant applications or other Act 89 of 2013 statewide funding sources (Multimodal Transportation Fund) or from other TIP highway funding sources like STP and CMAQ. As the PA Route 419 Byway Modified Corridor Management Plan is implemented over time, additional projects could also be added to the plan. Future safe routes to school audits may also lead to additional ped/bike projects in our existing communities.

Listed in Table 6-11 are several studies or initiatives that may become a future task or tasks in future Unified Planning Work Programs.

And as USDOT provides more guidance through its strategic plan (“Transportation for a New Generation”) and as future federal (FAST Act) transportation rulemaking and legislation becomes a reality, the LEBCO MPO will address any new planning mandates to be bike/ped compliant and to be compliant with all of the modes of surface transportation.

## Aviation

The LEBCO MPO LRTP identifies **\$800,000** in Table 6-7 in aviation-related improvements over the 24 year span of the Long Range Transportation Plan. Funding for aviation projects falls outside of the LEBCO MPO TIP but is included in PennDOT’s Twelve Year Program (TYP). Aviation sponsors request funding directly from PennDOT, and approved projects are then listed in the TYP.

**Table 6-7 Aviation Improvements**

<i>Improvement</i>	<i>Description</i>	<i>Status</i>	<i>Estimated Total Cost</i>	<i>Time Frame of Improvement</i>
		Subtotal		
<b>ADDITIONAL LONG RANGE TRANSPORTATION PLAN PROJECT</b>				
Conduct aviation study	Conduct countywide aviation study	Plan Study	\$800,000	Medium
		Subtotal	\$800,000	
		<b>TOTAL</b>	<b>\$800,000</b>	

## Rail Freight

The LEBCO MPO LRTP identifies **\$9,750,000** in Table 6-8 in rail freight-related studies and improvements over the 24 year span of the Long Range Transportation Plan. Funding for these projects falls outside of the TIP but is included in PennDOT’s Twelve Year Program (TYP). In future years, this will be an emphasis area since more data and information will be available from the PennDOT Long Range Transportation Plan and Comprehensive Freight Movement Study.

**Table 6-8 Rail Freight Improvements**



<i>Improvement</i>	<i>Description</i>	<i>Status</i>	<i>Estimated Total Cost</i>	<i>Time Frame of Improvement</i>
<b>ADDITIONAL LONG RANGE TRANSPORTATION PLAN PROJECTS</b>				
Conduct countywide automated horn system study	Work with all key partners and stakeholders to perform an automated horn feasibility study	Plan Study	\$750,000	Medium
Install automated horn system for all City of Lebanon RR/highway grade crossings	Work with Norfolk Southern to install automated horn system in the City of Lebanon	Plan Project All Phases	\$4,000,000	Medium
Install automated horn system for the remainder of Lebanon County's RR/highway grade crossings	Work with Norfolk Southern to install automated horn system across the remainder of Lebanon County	Plan Project All Phases	\$5,000,000	Medium
		Subtotal	\$9,750,000	
		<b>TOTAL</b>	<b>\$9,750,000</b>	

## Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) encompasses a broad range of technologies that help monitor and manage traffic flow, reduce congestion, enhance safety, provide alternative routes for travelers and/or notify transit riders of bus availability in key corridors. Examples include on-board navigation systems; automated rail crossing safety enhancements; electronic toll payment systems (EZ-Pass); integrated signal systems; traffic video/control technologies; variable message signs; ITS boards at park-and-ride lots, roadway weather information systems (RWIS), etc.

The LEBCO MPO LRTP identifies **\$7,600,000** in Table 6-9 in ITS-related studies and improvements over the 24 year span of the Long Range Transportation Plan. As TIP funding becomes available, the LEBCO MPO desires to implement key recommendations from the PennDOT District 8-0 Regional Operations Plan (ROP). In the future, additional coordination will also be taking place with PennDOT District 8-0 and local and county emergency management services to determine if ITS solutions are needed in Lebanon County.

Listed in Table 6-11 are several studies or initiatives that may become a future task or tasks in future Unified Planning Work Programs.

**Table 6-9 Intelligent Transportation Systems Improvements**

<i>Improvement</i>	<i>Description</i>	<i>Status</i>	<i>Estimated Total Cost</i>	<i>Time Frame of Improvement</i>
<b>LONG RANGE TRANSPORTATION PLAN PROJECTS</b>				
		Subtotal		

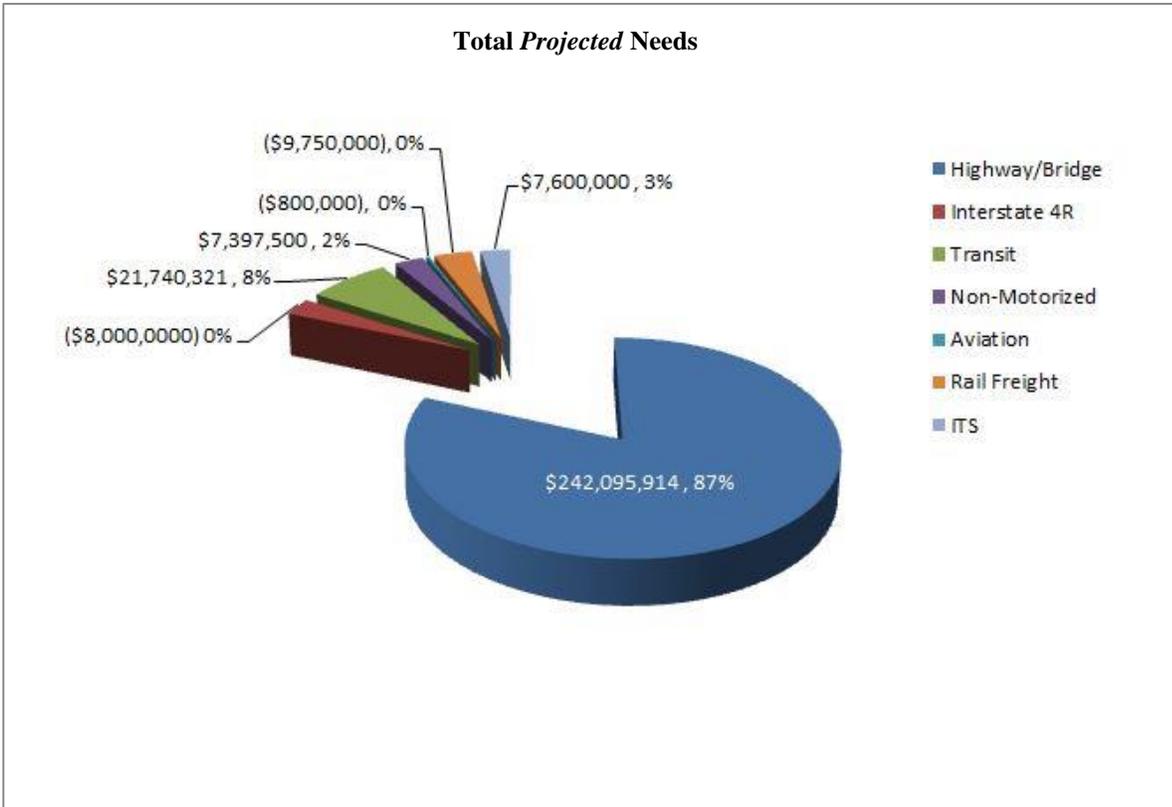
Implement small-scale ROP projects within Lebanon County	As defined in ROP for District 8-0	Plan Project All Phases	\$2,000,000	Medium
Incident management system on Interstate 81 in Lebanon County	6 closed circuit cameras and replace 1 variable message sign along I-81 corridor in Lebanon County	Plan Project All Phases	\$2,100,000	Medium
Incident management system on other major routes in Lebanon County	Detour and advanced warning system on other major highways in Lebanon County	Plan Project All Phases	\$3,500,000	Medium
		Subtotal	\$7,600,000	
		<b>TOTAL</b>	<b>\$7,600,000</b>	

## Total Projected Needs

The LEBCO MPO LRTP identifies **\$297,383,735** in transportation improvements over the 24 year span of the plan. The estimated project costs of **\$278,833,735** that are the responsibility of the LEBCO MPO are below the projected revenue (**\$396,350,000**) for this same time period. The MPO takes a very conservative approach concerning the addition of projects to the plan ... they will only be added when they are justified by the county or others. Also, only a few line items or place holders for groupings of projects (e.g., highways, bridges, bike/ped projects, transit operating assistance, etc.) beyond the TIP have been added to the plan. Ongoing and future studies will better define projects for inclusion in the plan. Therefore, there is sufficient financial capacity to add projects to the plan when necessary. **It is important to remember that the Long Range Transportation Plan is not a funding program in and of itself. It sets the framework for the MPO to establish project priorities and make difficult funding decisions when developing the biennial update of the Transportation Improvement Program.**

Table 6-10 Total Projected Needs

<b>Mode</b>	<b>Estimated Total Need</b>
Highway/Bridge*	\$242,095,914
Interstate 4R	(\$8,000,000)**
Transit	\$21,740,321
Non-Motorized	\$7,397,500
Aviation	(\$800,000)**
Rail Freight	(\$9,750,000)**
ITS	\$7,600,000
<b>TOTAL</b>	<b>\$297,383,735</b>
<p>* Rapid Bridge Replacement (RBR) Funds from PennDOT may be used in the future on some deficient bridges in Lebanon County.</p> <p>**Interstate maintenance, aviation and rail freight projects and funds are shown for information purposes only. Funding is outside of the LEBCO MPO financial envelope and is not included in the above total. See earlier discussion.</p>	



### Ongoing and Future Studies/Initiatives

In addition to the studies noted above as part of the modal sections, additional ongoing and future studies/initiatives will identify proposed improvements to enhance mobility and the economic health of Lebanon County. Table 6-11 identifies current and possible future efforts that are likely to produce projects to be included in future updates of the LEBCO MPO Long Range Transportation Plan.

Every other year as the 2-year unified planning work program (UPWP) is developed, the MPO decides which, if any, studies or initiatives will be submitted to PennDOT for consideration for additional planning funds. The activities listed in Table 6-11 along with any “new comers” are shared with the Technical Committee and Policy Board for prioritization, future scope development and submittal to PennDOT with the draft UPWP.

**Table 6-11 Ongoing and Future Studies/Technical Analysis/Initiatives to Support the Inclusion of Future Projects in the LEBCO MPO Long Range Transportation Plan\***

<i>Name</i>	<i>Status</i>
<b>Susquehanna Regional Transportation Partnership / Commuter Services of PA Initiatives</b>	Ongoing in conjunction with SC and SE PA MPOs

<b>Name</b>	<b>Status</b>
<b>Corridor 2 Rail Transit Service Feasibility Study</b>	Initial study completed in late 2009; future short-term efforts will focus on express bus service and then the maximum bus option for the 422/322/I-83 corridor (known as Corridor 2 or C2). C2 Study on Premium Transit Operations Plan was completed in late 2012 and implementation is underway by Lebanon Transit.
<b>PennDOT SC PA Public Transportation Regionalization Study</b>	Phase 2 of the study is now underway and the LEBCO MPO and Lebanon Transit are actively involved in this PennDOT study.
<b>Lebanon Transit Study of Additional Service to NE Lebanon County and NW Berks County, possibly including one or two small park-and-ride lots</b>	Study was recently completed
<b>Highway Regional Operations Planning (ROP)</b>	Recently approved the North Cornwall Commons TIS as the ROP for the southern portion of Lebanon County
<b>Inventory and Asset Management Plan for US Route 422 and PA Route 72 in the City of Lebanon</b>	Candidate study for 2016-2018 Unified Planning Work Program (UPWP) as part of the incremental update of the MPO's Transportation Profile.
<b>Congested Corridor Improvement Program (CCIP) Studies</b>	The next CCIP Study will focus on PA Route 72 and Cornwall Road (SR 2001) and will begin after development (North Cornwall Commons, for example) occurs in the corridor.
<b>Lebanon County Transit Support and Groundwork Study</b>	Gannett Fleming has proposed a study for Lebanon Transit that keys on future transit service to major new developments within the county.
<b>Prepare a Working Map of Roads and Adjacent Land Uses to Assist with Future Project Development</b>	No map currently exists, but neighboring MPOs like Lancaster use such a map for coordination with PennDOT and others to integrate bike/ped, transit, safety improvements or cultural/historic site preservation into scheduled projects
<b>Highway Safety (HSIP) Planning</b>	Initiated in the FY 2007-2008 Unified Planning Work Program and ongoing ever since. Incorporate safety performance measures in all future LRTPs as per USDOT guidance issued in the September 2009 report entitled A Primer on Safety Performance Measures for the Transportation Planning Process. Recently completed the Road Safety Audit for PA Route 241 between US Route 322 and PA Route 72. Future RSAs will be conducted as staffing and funding permits from PennDOT and the LEBCO MPO.
<b>Lebanon County Traffic Signal Initiative</b>	Phase 1 was completed in June of 2009 (development of a database format for all Lebanon County traffic signals). Phase 2 involves the detailed inventory of all Lebanon County traffic signals, which is a short-term endeavor and should be completed in 2017 or 2018.

<b>Name</b>	<b>Status</b>
<b>PA Route 419 Intersection/Area Study in Cornwall Borough in the vicinity of "Cornwall Center"</b>	Conduct a study with some preliminary engineering with TIP Funds for PA Route 419 and the key intersections (Cornwall Road, Boyd Street, Burd Coleman Road, the entrance to Cornwall Manor, etc.) in Cornwall Borough and ensure that the safe and efficient movement of vehicles, people and goods is balanced with this historic setting (This is a possible location for a roundabout.) A special study has been added to the UPWP for 2015-2016; it is called the Cornwall Center Multimodal Transportation Study. It will be completed in mid-2016.
<b>Bike/Ped Low Cost Improvement Study</b>	Work with interested municipalities, agencies, the Lebanon Valley Bicycle Coalition and others on a study that identifies and prioritizes low cost improvements county-wide that will enhance destination and recreational bicycling.
<b>Airport/Heliport Hazard Zoning</b>	Work with all adjacent municipalities on airport and heliport hazard zoning in the short term
<b>Short-Span Bridges</b>	Conduct a study in the short term to evaluate all structures under 20 feet in length to better prioritize local, state and federal funding
<b>Access Management Training and Access Management Study/Ordinances in Key Congested Corridors</b>	Initial training took place in May of 2007; a second round of training occurred on April of 2009. Access management ordinances were developed for the County, N. Cornwall Twp., N. Lebanon Twp. and S. Lebanon Township. An ordinance was recently completed for Jackson Township. Develop new ordinances as municipal interest is generated
<b>PennDOT HOP and ECMS Training</b>	LTAP-related training may take place in 2017 or 2018.
<b>Bicycle Master Plan</b>	Undertake a comprehensive planning process for bike accommodations
<b>Rail-Trail Detailed Planning</b>	Rail-Trail North Planning Study was completed in June of 2009 as was the Phase 6 Study in the City of Lebanon in late 2014; future studies may be required for phases (like Phase 8) where an appropriate alignment has not been identified.
<b>FEMA/PEMA Funding for Projects</b>	Seek PEMA and/or FEMA funding for transportation projects listed in the Lebanon County Hazard Mitigation Plan; additional study may be needed to clarify projects scopes and costs.
<b>Work jointly with PennDOT on Interstate Management Program projects to be included in future LEBCO MPO LRTPs</b>	Ongoing with TIP development and implementation (FFY 2017 thru FFY 2020)
<b>Pedestrian Master Plan</b>	Undertake a comprehensive planning process for pedestrian accommodations
<b>Transportation Planning for the Amish</b>	If there is interest, support and involvement from the Amish community and/or representatives of the Amish, conduct a study of their transportation issues, needs and opportunities.
<b>Transportation System Operations Planning (TSOP) and Regional Operations Planning (ROP) Studies</b>	Future studies may result from CMP planning or from PennDOT District 8-0 ROP; medium-term initiatives may relate to traveler information along the interstates and major expressways caused by incidents, weather-related conditions, etc.

<b>Name</b>	<b>Status</b>
<b>Student Drivers' Safety Programs</b>	Programs occurred in May of 2006, 2007 and 2008. The status of future programs will depend upon the needs and interests of the various Lebanon County school districts and future funding from outside sources. It was hoped that the next program would occur in the fall of 2012 but that did not happen.
<b>Lebanon County Developed and Sponsored LTAP Training</b>	Work with PennDOT LTAP and Municipal Services staff to develop, sponsor and conduct Lebanon County "home grown" training courses
<b>Rail Accessibility</b>	Conduct a study that identifies and proposes needed improvements and markets rail accessible sites in Lebanon County
<b>Bridge and Structural Safety Seminar with PennDOT and Local Municipalities</b>	Based upon PennDOT's Strike-Off Letter, conduct training in the next several years on a plan of action (POA) for all inspected structures
<b>LEBCO MPO-hired engineers to help with pre-construction phases of project development (local bridges and TAP/SRTS projects)</b>	Possible short-term endeavor (FFY 2015 thru FFY 2018) tied to TIP-funded projects and PennDOT support that would be listed in future UPWPs. LCPD has hired Gannett Fleming to assist with traffic signal analysis.
<b>Reprint Existing Materials (or Prepare New Materials) and Distribute Bike and/or Ped Safety Materials in English and Spanish</b>	Continue to work with the Lebanon Valley Bicycle Coalition, interested municipal officials and local community leaders to print and distribute safety materials.
<b>Truck Parking Study</b>	Conduct a study of potential overnight parking areas near the interstates in coordination with other commercial/industrial developments
<b>Lebanon Transit Land Use Toolkit</b>	Conduct a study to prepare SALDO language for the county and municipalities to insure that major developments are designed and constructed to be "transit friendly"
<b>PA Route 934 Relocation Study</b>	Consider doing a study of 934 to relocate a portion of the roadway around Annville using Clear Spring Road and Mount Pleasant Road as a "mini-bypass" of Annville and evaluate the potential impacts to local historic sites, Annville's historic district and the community
<b>Point of Access (POA) Studies for New/Expanded Interstate Interchanges</b>	Not a short-term endeavor (If the POA is funded with a federal earmark, the study could begin sooner.)
<b>County-wide Highway/Rail Grade Crossing Feasibility Study for Automated Horn System</b>	Medium to long-term endeavor due to the study's cost and depending upon the interest from local elected officials
<b>Others as needed, possibly including a Bridge Asset Management Study or an Aviation Needs Study</b>	Possible medium-term endeavors
<b>Feasibility Study of Route 422/322/72/934 Mini-Bypasses</b>	Long term endeavor
<b>Develop overlay mapping to identify public utilities (water, sewer, etc.) to understand where developable land is located and where future transportation improvements may be needed</b>	Short-term GIS initiative

\* The above studies and initiatives came from a variety of sources over a number of years. A few of them are somewhat duplicative. However, it is the practice of the MPO to keep an active list of such recommendations for future planning considerations.

## **Liquid Fuels Funding**

The Lebanon County Commissioners with assistance from the Lebanon County Planning Department annually re-distribute some of the County Liquid Fuels Funds to municipalities that need additional funds to undertake projects beyond their base allocation of Liquid Fuels Funds. This re-distribution usually takes place in February and March. The program has become a source of funding outside of the federal and state funds in the LEBCO MPO's Transportation Improvement Program (TIP). Local roads get repaired; drainage is improved; bridges are rehabilitated with these funds. This program may be restructured in calendar years 2017 and 2018, and the details will be incorporated into the next LEBCO MPO Long Range Transportation Plan.

## **PA On Track**

The Commonwealth's new Long Range Transportation Plan and its first-ever Comprehensive Freight Movement Plan will provide key data, findings, conclusions and recommendations to all MPOs and RPOs in 2016 and 2017 for use as appropriate. When completed, the LEBCO MPO intends to "marry" these new statewide visions, goals, objectives, projects and action items into its plan. Both plans will support improved transportation planning, better linkages to land use planning, the implementation of "smart" transportation projects, promoting institutional change, and developing strategic approaches to transportation project financing. The LEBCO MPO also will continue to utilize the outputs from PennDOT's statewide transportation model for various projections and analyses.

## **Transportation Systems Operations Plan Coordination**

PennDOT's Transportation Systems Operations Plan (TSOP) and Regional Operations Planning (ROP) are efforts aimed at developing statewide and regional (District 8-0) operations programs respectively to look at and to develop projects through communication and exchange between PennDOT, its planning partners, and other key stakeholders.

PennDOT's guidance maintains that MPO Long Range Transportation Plans should look at projects that use or incorporate goals of these programs which include strategies such as ITS (Intelligent Transportation Systems), Smart Transportation initiatives, and Project Right Sizing efforts.

The LEBCO MPO Long Range Transportation Plan has been developed to ensure compatibility with PennDOT's near-term and long-term directions.

## ***Financing the Future***

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### **Introduction**

Federal regulations require that Long Range Transportation Plans include a financial plan to demonstrate that proposed investments are reasonable in the context of anticipated future revenues over the life of the plan. The finances for any Long Range Transportation Plan, therefore, should use past and current revenue streams to make future revenue projections, as detailed in the previous Project Prioritization section.

The Lebanon County Long Range Transportation Plan is fiscally constrained. The transportation investments proposed to meet the vision, goals and policy statements are well below the revenue projections for the next 24 years.

The following information summarizes the methods for projecting future revenues, calculating future project/line item costs and reconciling the plan with future revenue projections.

### **Financial Assumptions**

The revenue forecasts that follow are based upon a number of financial assumptions, as outlined in the PennDOT reports entitled, Pennsylvania's 2017 Transportation Program Financial Guidance, dated January 11, 2016. There are still uncertainties regarding the Highway Trust Fund and future reauthorization of federal transportation legislation, but that is no different than in the recent past. These assumptions have been developed by evaluating previous federal, state and local expenditures and the most recent relevant federal and state financial guidance.

### **Revenue Forecasts**

Revenue forecasts were developed after a review of previous federal, state and local expenditures and likely future funding levels. Figures, as shown in Table 6-12, are presented in current 2016 dollars.

**Table 6-12 Lebanon County MPO 2017-2040 Revenue Forecasts**

<b>Mode</b>	<b>Estimated Funding Short-Term (2017 – 2020)</b>	<b>Estimated Funding Medium-Term (2021 – 2028)</b>	<b>Estimated Funding Long-Term (2029 – 2040)</b>	<b>Total</b>
Highway and Bridge**	\$62,330,000*	\$105,564,000	\$183,737,000	\$351,631,000
Transit	\$14,483,000	\$28,726,000	\$50,270,000	\$93,479,000
<b>TOTAL</b>	<b>\$76,813,000</b>	<b>\$134,290,000</b>	<b>\$234,007,000</b>	<b>\$445,110,000</b>

\* Includes \$5.0 million in “Economic Development Funds” (now called Transportation Infrastructure Investment Funds) and \$4.0 million in NHPP Statewide Reserve Funds.

\*\* Rapid Bridge Replacement (RBR) Funds will be administered by PennDOT, and some of these statewide funds may be used for the replacement of deficient bridges in Lebanon County.

The four years of the short range element of the Financial Plan coincide with the FFY 2017-2020 Transportation Improvement Program (TIP) and the financial guidance for FFYs 2017, 2018, 2019 and 2020. The mid-range element coincides with the remainder of the Commonwealth’s Twelve Year Transportation Program. The balance of the financial plan covers the long range element or the “out years.”

Tables that provide the year-by-year details on the various highway, bridge and transit revenue projections are included in the references section at the end of the transportation plan. The first table contains the **highway and bridge revenue forecast** and the second table contains the **transit revenue forecast**. **These two tables comply with the procedures included in PennDOT’s General and Procedural Guidance and Financial Guidance for the Pennsylvania 2017 Transportation Program, as well as the year of expenditure (YOE) requirements.** The FFY 2017-2020 LEBCO MPO Transportation Improvement Program as of late April of 2016 is also included in the appendix.

## **Other Term-Related Assumptions**

### *Short-Term Element*

The short-term element of the plan coincides with the FFY 2017-2020 Transportation Improvement Program (TIP) and the financial guidance for FFYs 2017, 2018, 2019 and 2020. The federal highway and bridge figures are based upon the pro-rated share of Pennsylvania’s allocations that were included in the FAST Act of 2015. The same applies to the federal transit funds for Lebanon Transit. Act 89 of 2013 state revenue streams are also included in these financial estimates.

Funding allocations for highway, bridge, safety, air quality, urban, rail and/or transportation enhancement projects to the LEBCO MPO and all other MPOs and rural planning organizations (RPOs) for TIP development are done via formulas agreed to by all parties (MPOs, RPOs and PennDOT).

Funding for transit projects in Pennsylvania comes from a combination of federal, state, local and/or private sources. Federal funding for Lebanon Transit is provided from FAST Act. State funds are provided from formulas included in Act 44 of 2007, Act 26 of 1991, amendments included in Act 3 of 1997, and in Act 89 of 2013. In addition, state capital budget funding is released annually for capital improvements.

Municipal financial support for Lebanon Transit only comes from the Lebanon County Commissioners (\$97,081 in 2015-2016).

### *Medium-Term Element*

The mid-range element of the plan coincides with the remainder of the Commonwealth's Twelve Year Transportation Program. It includes FFYs 2021 through 2028. Many of the assumptions previously mentioned have been applied to estimate revenue projections. Knowing that the LEBCO MPO's Transportation Improvement Program (TIP) is updated every two years, including the financial projections, these new revenue estimates (when available) will be used to periodically update the plan's financial assumptions. In doing so, the plan's estimated revenue stream will be refreshed and updated.

### *Long-Term Element*

The long-term element of the plan covers the remaining years of the plan (2029 through 2040). Many factors will influence these revenue projections over time, including the above mentioned TIP update cycles and new state and federal transportation legislation. Again, as new developments in these areas happen, the plan's revenue estimates will be updated.

## ***Public Involvement, Stakeholder Review and Environmental Justice***

### **Introduction**

The LEBCO MPO LRTP effort has emphasized the inclusion of public and stakeholder input throughout its creation and continuing with all major plan updates. For this update, outreach started with letters and e-mails to 25 of the 26 municipalities within Lebanon County in the summer of 2015 (not including Cold Spring Township, since it's largely state forest and game lands and has no governing body) to solicit candidate projects for the plan. Municipalities were told that adding any new projects to the TIP at this time will be very difficult, but projects will be added to the plan.

### **Public Involvement**

Meaningful public involvement ensures that the communities, businesses, public and private operators of transportation services, various interest groups and the general public most affected by the Long Range Transportation Plan have the opportunity to provide input at critical junctures throughout plan development and refinement. Community participation is critical to making the LRTP a successful document.

The LEBCO MPO has solicited public input in numerous settings throughout the development of the plan. Public outreach efforts have included:

- LEBCO MPO's Congestion Update social media web page
- Individual municipal meetings
- Special meetings with key organizations like the Chamber of Commerce, the Lebanon Valley Economic Development Corporation, the Lebanon Valley Bicycle Coalition (LVBC), Coleman Memorial Park Board of Directors, etc.
- Newspaper, radio and television stories about the plan/TIP and various ways to provide input
- LEBCO MPO's web page
- Draft LRTP/TIP Public Outreach sessions on May ??, 2016
- Numerous special interest group sessions took place in 2015 and early 2016 to "fine tune" the draft final LRTP before the formal 30+-day comment period began.

The initial draft plan and the 2017-2020 Transportation Improvement Program (TIP) were also presented at the Lebanon County MPO Technical Planning Committee and Policy Board meetings held on two (2) separate occasions in 2016. The past year of project expenditures and the future financial projections were also shared with and approved by both committees.

## Stakeholder and Affected Party Reviews

In addition to input from the general public, the LEBCO MPO LRTP development process afforded the opportunity for local agencies, organizations, government officials and others affected to participate in identifying needs and determine the best future transportation improvements for Lebanon County. Many one-on-one meetings took place over the last two years.

In 2005, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was signed into law. In 2012 Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) was signed into law. This legislation expands the organizations to be consulted as part of the long range transportation planning process. The groups specifically identified for Long Range Transportation Plan consultation include entities responsible for planned growth; economic development; environmental protection; natural resources; historic preservation; airport operations; freight movement; bicycle and pedestrian advocacy; land use management; and Native American Indian Tribes. We also added PennDOT to this list to fully address safety issues, crash clusters and road departure accidents at key locations and within key corridors.

### *Planned Growth*

With the objective to manage the effects of past growth and strengthen guidance for future community development and resource protection in mind, the LRTP was updated in conjunction with the 2007 Lebanon County Comprehensive Plan.

The Lebanon County Comprehensive Plan, including the LEBCO MPO Long Range Transportation Plan, was one of the first county plans in Pennsylvania to take advantage of the tools listed below in crafting a vision and action plan that directs local, county, and state activities toward objectives that distinguish and benefit the county as a whole.

- Amendments to the [Municipalities Planning Code \(MPC\)](#) in 2000 gave new tools, authority and responsibility to local and county governments.
- More effective communication and coordination between state agencies and local government is being fostered.
- New investment and revitalization programs, resulting in part from prior administrations, provided new tools and financial resources to both the public and private sectors.

Planned and well managed (“smart”) growth is the focus of both plans. This will take many forms, including but not limited to:

- Creating a range of housing opportunities and choices
- Promoting walkable and bike-friendly communities
- Encouraging community and stakeholder collaboration
- Fostering distinctive areas with a strong sense of place

## *—Public Involvement, Stakeholder Review and Environmental Justice—*

- Mixing land uses
- Making development decisions predictable, fair and cost-effective and coordinating land use and transportation decision-making early on
- Preserving open space, farmland, natural beauty and critical environmental features
- Providing a variety of transportation choices over time
- Directing development toward existing communities and where proper infrastructure exists
- And taking advantage of compact building design.

Both the LRTP and the County Comprehensive Plan were developed with significant consultation from local, regional and statewide entities. Key stakeholders consulted from the planned growth community include:

- Lebanon County Builders Association
- Lebanon County Housing and Redevelopment Authority
- Lebanon County Association of Realtors

### *Economic Development*

The Lebanon County Comprehensive Plan and the LEBCO MPO Long Range Transportation Plan, as part of the joint development process, shared local economy and employment trends as part of the initial data collection effort. An Economic Development Plan may result now that the comprehensive plan has been adopted and is being implemented.

A goal for the Comprehensive Plan is to retain and expand existing businesses and attract new businesses that enhance the overall quality of life of county residents. Many of the comprehensive plan efforts to outreach to the economic development community included discussion on transportation strategies necessary to support and enhance the economic viability of Lebanon County.

Both plans were developed with significant consultation from local, regional and statewide entities. Key stakeholders consulted from the economic development community included:

- Lebanon County Tourist Promotion Agency
- The Expo Center
- Lebanon Valley Economic Development Corporation
- Lebanon Valley Chamber of Commerce
- Lebanon's Main Street and Elm Street Programs.

### *Environmental Protection, Natural Resources and Historic Preservation*



As part of the data collection effort for the Lebanon County Comprehensive Plan, profiles were developed for natural resources (water, agriculture and open spaces/greenways), cultural/historic resources, and other key county features. A Natural Resource Conservation Plan, a Cultural/Historic Preservation Plan and a Recreation, Open Space and Greenways Plan resulted. Lebanon County's goals, objectives, key recommendations and action items that were prepared for natural resources, recreation and cultural/historic preservation are very supportive of and consistent with the goals, objectives and action steps in Pennsylvania's Statewide Historic Preservation Plan. Common themes are (1) to increase preservation planning at the local level; (2) to strengthen federal, state and local partnerships; (3) to assist preservation advocates and partners; (4) to reach out to new partners; and (5) to administer an effective and proactive preservation program locally and statewide.

The goal is to identify significant historic resources and areas of archaeological sensitivity within Lebanon County, especially along key transportation corridors and in critical areas where historic resources may be potentially affected by economic decline, urban/suburban growth, proposed or ongoing transportation projects, etc.

Lebanon County is rich in history and natural/cultural amenities which distinguishes it from others in the region. As transportation projects are advanced from the plan to the Transportation Improvement Program (TIP) for implementation, the staff of the Lebanon County Planning Department (LCPD) will continue to (1) utilize the resources listed in the Lebanon County Comprehensive Plan and (2) to work with key local groups and the Pennsylvania Historical and Museum Commission (PHMC) to insure that these resources are protected and preserved. Key local preservation partners will include but are not limited to Cornwall Historic Alliance, Cornwall Iron Furnace Associates, Friends of Old Annville, Historic Schaefferstown, Mt. Gretna Area Historical Society, Lebanon County Historical Society, Historic Preservation Trust of Lebanon County and the Lebanon County Conservancy.

For example, Appendix I of the County Comprehensive Plan includes an entire chapter (Chapter 7) on historic and cultural amenities. The LCPD staff will continue to use these inventories and the data provided by the Pennsylvania Historical and Museum Commission (PHMC) as a "first step" in evaluating the potential impacts that future transportation projects may have on these resources. Potential future urban and rural historic districts, as well as view sheds along key transportation corridors and other "character-defining" landscapes and man-made structures are also being identified and mapped. PHMC completed an analysis of the MPO's six congested corridors of concern, and it is included in the appendix to this plan, which is used quite often during environmental and engineering (E&E) scoping field views for active projects.

*Consultation with Other Agencies, which includes state and local agencies responsible for land use management, natural resources, environmental protection, conservation and historic preservation*

The LEBCO MPO received input from the various federal and state resource agencies at the June 25, 2014 Agency Coordination Meeting (ACM) sponsored by PennDOT. The PowerPoint presentation that was used at that meeting to guide the discussions is available upon request. The MPO will next "visit" ACM in 2018.

The PennDOT-required Linking Planning and NEPA (LPN) Level 2 Forms will continue to be populated with data and information from a wide variety of sources as new transportation projects are identified and constructed over time.

The initial LRTP, subsequent updates to the LRTP (including this one) and the 2007 County Comprehensive Plan were developed with meaningful consultation from local, regional and statewide entities. Related to environmental protection, natural resources, historic preservation and recreation, key stakeholders at those times and now were/are:

- Preservation Trust of Lebanon County
- Northern Lebanon Parks and Recreation Commission
- Lebanon County Historical Society/Friends of the Union Canal
- Lebanon County Conservation District
- Penn State Cooperative Extension
- Pennsylvania Historical and Museum Commission (PHMC)
- Lebanon County Federation of Sportsmen
- Appalachian Trail Staff
- The Nature Conservancy
- Watershed Association of Lebanon County
- Lebanon Valley Conservancy
- Audubon Society – Kittatinny Ridge
- PA Highlands

The LEBCO MPO utilized the PHMC-developed and PennDOT-approved “streamlined approach for incorporating historic and archaeological resources into long range transportation plans”. In 2012 and 2013, the LCPD staff worked with PHMC staff to identify high-priority significant places, character-defining corridors and bridges, historic districts, areas with a high probability for archaeological sites and to compare these locations with TIP projects. PHMC staff also facilitated a half-day session on March 20, 2013 with all municipalities in the county to further pin-point other important sites that should be preserved and/or protected. By having all of this information now in the city/county Geographic Information System (GIS), the LEBCO MPO can get an early start on the practicality and costs of alternative alignments and context-sensitive solutions to avoid or minimize or mitigate the impacts to these important resources. And if mitigation strategies are required, the MPO and PennDOT can begin to explore them in the planning and programming development processes. And as mentioned above, the PHMC’s analysis of the MPO’s six congested corridors of concern is attached as an appendix to this plan and is being used extensively as projects are advanced in those six key corridors.

This is considered a minor update of the plan, which does not require the MPO to consult with ACM. In the future (2018), this will be done again (1) for the required

consultation process and (2) for the identification of new initiatives from the state and federal resource agencies.

### *Airport Operations*

The Lebanon County Transportation Profile was developed as a companion/support document to the Long Range Transportation Plan, inventoried the county's four privately-owned public use airports and one heliport??????. They include Deck, Farmer's Pride, Keller Brothers and Reigle Airports. Lebanon Valley Aviation or Millard Airport just west of Annville became a private airport solely for private use in the summer of 2007. The Central PA Heliport just east of Reigle Airport began operations in April of 2012 offering tourist rides and various services for business customers.

Key persons at these operations were interviewed. Data and information on Muir Field at the Indiantown Gap Military Reservation was obtained from the January 2002 report Airport Flexibility Study and Master Plan for Lebanon County; from a tour of the facilities on September 27, 2005; and from PennDOT in 2009.

Related to airport operations, key stakeholders were the owners of the above-mentioned private airports, Indiantown Gap Military Reservation, PennDOT's Bureau of Aviation and the municipalities where these facilities are located.

Airport Hazard Zoning (AHZ) exists in all of the municipalities adjacent to these airports.

Listed in Table 6-12 are studies or initiatives that may become a future task or tasks in future Unified Planning Work Programs.

### *Freight Movement*

As part of the data collection effort for the Transportation Profile, Norfolk Southern (NS) was interviewed and information was provided on its Reading to Harrisburg Main Line. Freight information was also collected from the Pennsylvania State Transportation Advisory Committee's 2004 report, entitled The Economic Impact of Rail Freight. Information on the movement of freight in the region was also shared with the LEBCO MPO since it was a member of the ongoing 8-county goods movement planning activities that were directed by the Harrisburg MPO.

The Pennsylvania Turnpike Commission shared trend information on the comings and goings of heavy trucks at the Lebanon/Lancaster Interchange at PA Route 72.

The December 2009 Pennsylvania Intercity Passenger and Freight Rail Plan provided much valuable information for the LEBCO MPO's use. Key businesses were also interviewed during 2014 and 2015. The 2014 Commodity Flow Study in Lebanon County provided very valuable information on the movement of hazardous materials on key roads/bridges, the Norfolk Southern Railroad line and on the six private pipelines in the county. And the PennDOT Comprehensive Freight Movement Plan is also providing valuable new information to the LEBCO MPO for use in future updates of this plan.

Listed in Table 6-12 are studies or initiatives that may become a future task or tasks in future Unified Planning Work Programs.

### *Bicycle and Pedestrian*

Individuals from urban, suburban and rural communities have spoken to the need to make our cities, towns and villages more livable by improving opportunities for walking and bicycling. The Lebanon Valley Bicycle Coalition (LVBC) and the Lebanon Valley Rails-to-Trails (LVRT), Inc. have provided significant input into the kinds of plans and projects that are needed to promote destination and recreational bicycling. Based upon this input, there needs to be a clear focus on incorporating “bike/ped friendly” features wherever practical into projects currently being planned, designed and/or constructed, and this will be done through the PennDOT Linking Planning and NEPA Level #2 forms for (1) each TIP project, just as it is for all other project-related issues (threatened and endangered species, prime soils, high quality streams, etc.) and (2) rail-trail projects in the northern portion of Lebanon County.

PennDOT’s Lebanon County Maintenance Office has been very supportive of “bike/ped friendly” features with its Betterment projects (e.g., Cornwall Road and PA Route 117 resurfacing projects) with improved shoulders for walking, jogging and bicycling. In fact in 2008-2009, the MPO provided over \$1.2 million in LEBCO MPO TIP funds to PennDOT Lebanon County Maintenance to “enhance” the previously-mentioned 117 corridor betterment project to stabilize and widen where possible the shoulders for the non-motoring public. County Maintenance staff have improved shoulders on sections of PennDOT roads like Rocherty and Evergreen Roads and the Palmyra Campbelltown Road. They have also responded to requests for replacing dangerous grates.

In 2011-12, LEBCO MPO partnered with the Lebanon Valley Bicycle Coalition (LVBC) to improve bicycling safety. A county-wide session was held and included police departments, school districts, recreation programs, Safe Kids Lebanon County, FASP and others.

Walking audits have been completed for the Annville and Cleona Elementary Schools.

Past and current Transportation Improvement Programs (TIPs) have included the following projects which have incorporated bike/ped enhancements into the projects ... PA Routes 72/419 road and intersection project; Cornwall and Rocherty Roads intersection project; PA Route 72 and Rocherty Road intersection project; Cornwall Road and Isabel Drive intersection and road project, new access off of US Route 322 for the Preserve at Historic Cornwall Villages; the PA Route 934 Bridge over the Norfolk Southern Railroad and related roadway project; and the US Route 422 and relocated Killinger Road intersection project.

Sporadic bike safety events are held for youth by the LVBC and several local police departments. To date, there is no county-wide effort to educate youth on how to bicycle safely and to know the traffic laws and “rules of the road”. LVBC has recommended that a County Bicycle Safety Committee be formed.

The completed PA Route 419 Scenic Byway Modified Corridor Management Plan, the Market Street Feasibility Study in Jonestown Borough and the Main Street (US Route 422) Corridor Study in Palmyra Borough have provided additional bike/ped projects for future consideration. The Rail-Trail North Planning Study focused on the feasibility of extending the Lebanon Valley Rail-Trail (LVRT) north from the City of Lebanon to Swatara State Park, and the recently completed LVRT Phase 6 Planning Study focused on the alignment between Chestnut Street in the City of Lebanon and

25<sup>th</sup> Street behind the mall in West Lebanon Township and North Lebanon Township. And the previously mentioned Regional Bicycle Connectivity Study has identified many opportunities for low cost improvements in eastern Dauphin and western Lebanon Counties. Listed in Table 6-12 are several studies or initiatives that may become a future task or tasks in future Unified Planning Work Programs.

Excellent bicycle reference material can be obtained from [www.saferoutespa.org](http://www.saferoutespa.org) and [www.bikelebanon.org](http://www.bikelebanon.org).

The Lebanon County Bicycle Transportation and Priorities Maps of key roads/streets that need wider shoulders and other facilities will help PennDOT, the LEBCO MPO and municipalities as road and bridge projects are advanced to determine if, when, and where more improvements can be made for bicyclists and pedestrians. It must also be noted that an additional and critical purpose of the Bicycle Transportation Map is to prevent good roads already identified for bicycling from becoming worse due to designs and reconstruction that may not support all modes of transportation.

On September 26, 2013, Lebanon County Planning Department staff members attended an all-day training session at the Fort Hunter Conference Center, north of Harrisburg, PA on the 2012 AASHTO Bike Guide.

### *Land Use Management*

The staff from the Lebanon County Planning Department and the LEBCO MPO Technical Planning Committee/Policy Board understand the need to link land use and transportation decisions. That's why a request was made to PennDOT, DCED, DEP and DCNR to jointly fund and develop both plans several years ago.

This Long Range Transportation Plan is recommending future access management initiatives in the two most heavily developing corridors, US Route 422 and PA Route 72. PennDOT's model access management is being used to support this vital work in North Cornwall Township and North Lebanon Township, as well as in other municipalities. On the land use side, sound land use planning concepts are already taking hold in Lebanon County, and an early warning system is in place within County Planning to insure that the transportation planners know about significant development and redevelopment plans in order to provide "just in time" transportation facilities and services. Transportation Impact Studies (TISs) and Highway Occupancy Permits (HOPs) that are coordinated with local municipalities and PennDOT are also being coordinated with county planning department staff, via scoping meetings early in the process. The county just finished working with Jackson Township on an access management ordinance for that municipality.

Proper land use management has been a discussion at every event where the comprehensive plan and/or the Long Range Transportation Plan have been discussed. The previous planned growth discussion also speaks to this subject. Both plans were developed with significant consultation from local, regional and statewide parties, especially as it relates to this topic. A future new initiative may be the development of transit overlay districts in key corridors as part of the County's Subdivision and Land Development Ordinance (SALDO) to promote transit-friendly development.

### *Native American Indian Tribes*

Consultation with Native American Indian Tribes that once lived in Lebanon County or southcentral Pennsylvania was initiated in March of 2016. The draft 2017-2020 LRTP/TIP was e-mailed/mailed to the Shawnee Tribe of Oklahoma, the Delaware Nation living in Oklahoma, the Eastern Shawnee Tribe of Oklahoma, the Oneida Nation of Wisconsin, the Onondaga Nation in New York, the Seneca-Cayuga Tribe of Oklahoma, the St. Regis Mohawk Tribe living in New York, and the Shawnee Tribe of Oklahoma.

Tribes that once prospered in the region were the Leni-Lenape (Delaware), the Shawnee, the Mengwe, the Allegewi and the Iroquois. The Leni-Lenape (or Lenni Lenapi) were members of the Algonquin family and had three separate tribes that once lived in the Lebanon Valley ... the Unamis (turtle), the Unalachtgo (turkey) and the Minsi (wolf).

To date, none of the tribes/nations provided any comments or concerns about any of the projects on the FFY 2017-2020 Transportation Improvement Program (TIP) or in the plan. Some of this correspondence is attached to the back of this document.

### *Safety Planning*

The Lebanon County Planning Department (LCPD) staff receives accident and fatality data and crash cluster data from PennDOT on a routine basis to better determine how, when and where to spend federal safety funds. Several conference calls and meetings were held in 2013 and 2014 to identify corridors and isolated locations where crash and fatality data appear to be higher than the current statewide averages for accidents/fatalities on similar types of facilities. The July 2014 and July 2015 reports entitled, LEBCO MPO Highway Safety Guidance Report, from PennDOT's Highway Safety Section in the Bureau of Maintenance and Operations and the top 25 crash locations (including roadway departure accidents) from PennDOT District 8-0 served as the starting point for these discussions. A sit-down meeting of all key safety stakeholders will be held in late 2016.

US Route 422 east and west of the City of Lebanon, US Route 422 in Palmyra Borough, PA Route 72 north and south of the City of Lebanon, US Route 322 in the Campbelltown area, PA Route 934 north and south of Annville, PA Route 897 south of the City of Lebanon, and a few other state routes are candidates for mitigation with federal Highway Safety Improvement Program (HSIP) Funds.

Via a legal agreement with PennDOT, the LCPD does receive detailed accident and fatality reports, but we are not permitted to share this information with the general public. With assistance from PennDOT, it is the LEBCO MPO's objective to reduce fatalities and major injuries in Lebanon County by 50% over the next two decades.

Roadway Safety Audits (RSAs) are an excellent way to bring together all concerned parties to study and implement safety improvements in corridors of concern. An RSA was done on US Route 422 in the Myerstown area, and now two safety projects are being funded through the LEBCO MPO's Transportation Improvement Program (TIP). The PA Route 241 RSA from US Route 322 to PA Route 72, a distance of 3.55 miles, was just completed, and several low and moderate cost projects were completed with PennDOT Lebanon County Maintenance Funds and statewide safety funds, including the high friction surface on the travel lanes at the "S" curve. Future projects were

added to the MPO's plan and TIP in the near future that will be completed over the next several years.

The LEBCO MPO anticipates doing another RSA in 2016, possibly on the PA Route 72 corridor north and south of the City of Lebanon and through the City of Lebanon.

## **Environmental Justice Compliance**

Environmental Justice has its roots in a Warren County, North Carolina dispute over the transport and storage of hazardous waste materials in a landfill in a minority and low-income community that was not responsible for the generation of the waste.

In 1994, Executive Order 12898 mandated that recipients of federal funding make achieving environmental justice part of their mission by identifying as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low income populations. This requires outreach to stakeholders who have traditionally tended to not become involved through the regular informational or public involvement process and evaluate the impact of the plan on minority and low-income populations.

The Lebanon County Planning Department developed a Title VI / Environmental Justice Implementation Plan and Status Report. The document is intended to insure that "every voice counts" and that transportation decision making does not adversely affect targeted low income and minority populations. And the plan clearly spells out how the LEBCO MPO has reached out and will continue to reach out to everyone in the county for input into all transportation planning and programming matters.

Consultation with low income and minority populations is being done in a variety of ways, including:

- Preparing and distributing key documents in Spanish
- Having a Spanish interpreter at key events
- Operating a booth with an interpreter at past Unity Day celebrations
- Posting materials at the Hispanic Outreach Center and the Salvation Army in the City of Lebanon
- Working with Habitat for Humanity
- Coordinating with the Community Action Partnership (CAP) and its numerous agencies on various human service initiatives.

The staff from the Lebanon County Planning Department (LCPD) has also analyzed the 2010 Census data to identify minority and EJ populations. The American Community Survey (ACS) 2012 data on non-institutionalized persons with vision and hearing difficulties in Lebanon County was also reviewed. The total estimated numbers range from 15,000 to 17,000, and if they request better MPO services to be more participatory, the LCPD staff will do whatever is required to get them fully engaged.

A number of years ago, the Lebanon County Planning Department participated in its first Radio Omega talk show program, focusing on community issues and opportunities that need to be addressed in the comprehensive plan and/or the transportation plan. Radio Omega was Lebanon's only Hispanic radio station. Again, two interpreters were used and some basic information was provided to the listeners and then the talk show answered questions and responded to concerns "on the air". The program was deemed very successful by Radio Omega, such that City and County staff members returned for other programs dealing with (1) the Lebanon Transit Business Plan Study and (2) the impacts of the 9th and 10th Streets Bridges project on the residents in the northwest portion of the City, which is largely Hispanic. Unfortunately, this radio station went off the air in mid-2009, leaving the area without any continuous radio programming for Latinos and Hispanics. The local AM station, WLBR 1270, does a Spanish radio broadcast every Sunday afternoon where Mr. ?????? provides news, information and music in Spanish, and the LEBCO MPO does use this broadcasting to "get the word out" regarding transportation planning and programming matters.

"Keyperson" interviews included individuals in Lebanon County from all walks of life, including low income and minority populations. The Lebanon Transit Business Plan public outreach effort also included one-on-one interviews with Hispanic leaders in Lebanon County and a transit survey in Spanish.

The LEBCO MPO Long Range Transportation Plan was developed with modest, but very effective input, from local persons and groups who either fall within this grouping or who represent such groups via their place of employment or their volunteer efforts. As the successes build, the Title VI / Environmental Justice Implementation Plan and Status Report will be amended and further outreach efforts will be conducted. The 2015 PennDOT and FHWA Planning Process Review of the LEBCO MPO will also lead to new, better and more cost-effective ways to engage minority, low income, EJ and non-English speaking populations in the day to day work of the MPO.

The LEBCO MPO has also done an EJ benefits and burdens analyses for TIP projects. Since most of the funding (over 90%) for TIP projects and most of the funding (over 90%) for plan projects covers maintenance and operation of the existing system, these projects were deemed to be benefit everyone and nor burden anyone. Several ridesharing and transit projects on the TIP will benefit Lebanon County's EJ community. No TIP projects were identified that would negatively impact any EJ community.

However, it must be stated that Act 89 of 2013 does not permit the City of Lebanon to apply for any Green Light GO Funds for its traffic signals, which has serious long-term negative consequences for the City and its residents, many of which are minority, low income, non-English speaking and EJ populations.

Obviously, the enhanced transit service in the City of Lebanon and the expanded transit service to key destinations within and outside of the county have also improved travel options for low income and minority populations.

The 9<sup>th</sup> and 10<sup>th</sup> Streets Bridges project in the NW section of the City of Lebanon improved walking with one sidewalk on the 9<sup>th</sup> Street overpass and one sidewalk on the 10<sup>th</sup> Street overpass which has resulted in new housing and business opportunities in this key corridor (PA Route 72) as excess ROW was used to redevelop the area. The safe sidewalks to school project around the NW Elementary School also improved

walking in this section of the City of Lebanon. Phase 5 of the Lebanon Valley Rail-Trail (LVRT) was also in the City of Lebanon from 9<sup>th</sup> Street to Cumberland Street. All of these projects are in high concentration areas of low income and minority populations and were just completed using funds from previous TIPs.

## *Action Plan*

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The Transportation Action Plan presents a summary list of actions to address the maintenance and planned improvement of the county’s transportation system. The Transportation Action Plan recognizes that the Lebanon County MPO is a young organization that is steadily building its technical capacity, its partnerships, and its level of awareness in the community. Several action items recommend continued efforts in these areas. The action plan also recognizes the importance of coordinating transportation maintenance and improvements with comprehensive planning goals, particularly land use, utility infrastructure, and natural and cultural resource protection, in order to sustain the economic vitality and quality of life found in Lebanon County. The action plan follows the goals outlined earlier in the plan. For each action, an intended outcome, a proposed time horizon, lead and support partners, and funding sources are included to foster clear implementation of each item.

## **Recommendations**

**Objective A:** *Provide a safe and secure transportation system.*

<b>Action 1:</b>	<b><i>Implement Highway Safety Improvement Program (HSIP) projects from current and future Transportation Improvement Programs (TIPs).</i></b>
<b>Intended Outcome:</b>	Reduce accidents and fatalities at high crash occurrence locations
<b>Time Horizon:</b>	2016 - 2018 and ongoing
<b>Lead Partners:</b>	PennDOT, FHWA, LEBCO MPO Committees and staff
<b>Support Partners:</b>	Municipalities, local police departments, State Police, etc.
<b>Funding Sources:</b>	HSIP Line Items in current and future TIPs
<b>Action 2:</b>	<b><i>Insure that the operations of the Lebanon Transit are addressing security issues in the post 9/11 era.</i></b>
<b>Intended Outcome:</b>	Prevent and/or be prepared to deal with security issues throughout the transit system
<b>Time Horizon:</b>	2016 - 2018 and ongoing
<b>Lead Partners:</b>	Lebanon Transit, local police departments and State Police, South Central Regional Counter-Terrorism Task Force, other first responders
<b>Support Partners:</b>	FTA, LEBCO MPO Committees and staff, municipalities and users of the Lebanon Transit system, PennDOT’s transit staff
<b>Funding Sources:</b>	Current and future TIPs, South Central Regional Counter-Terrorism Task Force



<b>Action 3:      <i>Conduct Student Drivers Safety Symposiums annually.</i></b>	
<b>Intended Outcome:</b>	Reduce accidents and fatalities involving Lebanon County's young (under 21 years of age) drivers
<b>Time Horizon:</b>	Ongoing when the school districts re-start the Student Drivers' Safety Symposiums
<b>Lead Partners:</b>	Lebanon County Planning Department, Center for Highway Safety, school districts, local police, State Police, Norfolk Southern, DUI Associations and other symposium participants
<b>Support Partners:</b>	Local financial supporters
<b>Funding Sources:</b>	Current and future Unified Planning Work Programs (UPWPs) and private contributions
<b>Action 4:      <i>Improve Shoulders for Safe Walking, Bicycling, Jogging, etc..</i></b>	
<b>Intended Outcome:</b>	Stabilize, resurface, reconstruct and/or widen shoulders on key roads for a variety of non-motorized uses
<b>Time Horizon:</b>	2016-2017 and ongoing
<b>Lead Partners:</b>	Lebanon County Planning Department, LEBCO MPO, PennDOT, municipalities, Lebanon Valley Bicycle Coalition (LVBC), etc. (Bike Lebanon's County Bicycle Transportation Map and Priorities Map are two resources that can be used in this effort.)
<b>Support Partners:</b>	Lebanon County, LEBCO MPO, PennDOT, municipalities, LVBC, etc.
<b>Funding Sources:</b>	Current and future TIPs, county/municipal budgets, PennDOT County Maintenance Funds, advocates like LVBC, etc.
<b>Action 5:      <i>Establish a County Bicycle Safety Committee.</i></b>	
<b>Intended Outcome:</b>	Work with all key parties and stakeholders to establish a County Bicycle Safety Committee and to implement programs
<b>Time Horizon:</b>	2016-2017 and ongoing
<b>Lead Partners:</b>	LVBC, area school districts, municipalities, police departments, parks and recreation commissions and other advocates
<b>Support Partners:</b>	Lebanon County, Lebanon County Planning Department, LEBCO MPO, PennDOT, DCNR, hospitals, insurance companies, etc.
<b>Funding Sources:</b>	Private funds, municipal/school district funds, LVBC funds, County funds, LEBCO MPO planning funds, etc.

**Objective B:** *Provide a multi-modal system that is efficient, interconnected and accessible*

<b>Action 1:</b>	<b><i>Implement Long Range Transportation Plan (LRTP) projects via current and future Transportation Improvement Programs (TIPs)</i></b>
<b>Intended Outcome:</b>	Provide a balanced transportation system that provides real travel options to its users
<b>Time Horizon:</b>	2017 – 2020 TIP and beyond
<b>Lead Partners:</b>	PennDOT, FHWA, FTA, LEBCO MPO Committees and staff
<b>Support Partners:</b>	Municipalities, SC PA Goods Movement Task Force, Susquehanna Regional Transportation Partnership, LVBC, etc.
<b>Funding Sources:</b>	Current and future TIPs

<b>Action 2:</b>	<b><i>Continue to update and refine the LRTP transportation profile</i></b>
<b>Intended Outcome:</b>	Maintain current datasets and transportation benchmarks to facilitate better decisions through the LEBCO MPO
<b>Time Horizon:</b>	2016 -2017 and beyond as funding permits on an incremental basis
<b>Lead Partners:</b>	LEBCO MPO Committees and staff, TE project sponsors, local police departments, State Police
<b>Support Partners:</b>	PennDOT (PA On Track information, PennDOT safety data, etc.), FHWA, FTA, FRA, FAA, Lebanon Transit, aviation sponsors, Norfolk Southern, municipalities, non-profit groups that own and maintain transportation enhancement, users of the various modes of transportation, planning and engineering firms
<b>Funding Sources:</b>	Current and future Unified Planning Work Programs (UPWPs)

<b>Action 3:</b>	<b><i>Develop bridge and pavement asset management systems for the LEBCO MPO.</i></b>
<b>Intended Outcome:</b>	Attain a working database of bridge and roadway rehabilitation or replacement priorities
<b>Time Horizon:</b>	2016 - 2018 and ongoing for local roads and bridges
<b>Lead Partners:</b>	PennDOT, LEBCO MPO Committees and staff, FHWA
<b>Support Partners:</b>	Planning and engineering firms
<b>Funding Sources:</b>	Special studies funding from PennDOT via the annual Unified Planning Work Programs (UPWPs) and/or future TIP funding



<b>Action 4:</b>	<b><i>Conduct Traffic Signal Inventory Study.</i></b>
<b>Intended Outcome:</b>	Establish a traffic signal data base to make better, more informed decision on funding for these infrastructure items
<b>Time Horizon:</b>	2016 - 2017 and ongoing
<b>Lead Partners:</b>	LEBCO MPO Committees and staff
<b>Support Partners:</b>	PennDOT, FHWA, municipalities, planning and engineering firms
<b>Funding Sources:</b>	Current and future Unified Planning Work Programs (UPWPs) and/or TIPS
<b>Action 5:</b>	<b><i>Monitor and Update the congestion management processes (CMP) plan.</i></b>
<b>Intended Outcome:</b>	Develop and implement an ongoing and proactive approach to all forms of congestion in Lebanon County, including speed and delay monitoring in key corridors
<b>Time Horizon:</b>	2013 - 2014 via a special study (called Lebanon County Moves) approved by PennDOT
<b>Lead Partners:</b>	LEBCO MPO Committees and staff, planning and engineering firm, PennDOT, FHWA
<b>Support Partners:</b>	FTA, municipalities, elected officials, Harrisburg MPO, general public
<b>Funding Sources:</b>	Past (2005-2006) and current/future UPWPs
<b>Action 6:</b>	<b><i>Monitor the US Route 422 Congested Corridor Improvement Program (CCIP) Study short-term recommendations.</i></b>
<b>Intended Outcome:</b>	Continue to monitor the project
<b>Time Horizon:</b>	Project completed for the 422 CCIP adaptive traffic signal system project in 2013
<b>Lead Partners:</b>	PennDOT, planning and engineering firm, LEBCO MPO Committees and staff
<b>Support Partners:</b>	Municipalities, FHWA, developers along the corridor
<b>Funding Sources:</b>	current and future TIPS or UPWPs

<b>Action 7: <i>Conduct the PA Route 72 and Cornwall Road CCIP Study.</i></b>	
<b>Intended Outcome:</b>	Undertake the study when the area begins to build out
<b>Time Horizon:</b>	Possibly in 2021 or later
<b>Lead Partners:</b>	LEBCO MPO Committees and staff, PennDOT, planning and engineering firm
<b>Support Partners:</b>	Municipalities, developers along these roadways, FHWA , general public
<b>Funding Sources:</b>	Subsequent CCIP funding from PennDOT or LEBCO MPO TIP Funds
<b>Action 8: <i>Assist PennDOT with implementation of Interstate Maintenance (IM) projects.</i></b>	
<b>Intended Outcome:</b>	Be partner to PennDOT on IM Planning and project development in Lebanon County
<b>Time Horizon:</b>	Ongoing, as needed
<b>Lead Partners:</b>	LEBCO MPO Committees and staff, PennDOT
<b>Support Partners:</b>	FHWA, planning and engineering firms
<b>Funding Sources:</b>	Current and future TIPs
<b>Action 9: <i>Conduct Point of Access (POA) Studies, as required.</i></b>	
<b>Intended Outcome:</b>	Following PennDOT/FHWA requirements, do POA Study for a full interchange at I-78 and US Route 22 in Bethel Township, Lebanon County
<b>Time Horizon:</b>	2021 - 2022 to 2024 - 2025
<b>Lead Partners:</b>	LEBCO MPO Committees and staff, PennDOT, FHWA
<b>Support Partners:</b>	Planning and engineering firms, Bethel and Swatara Townships
<b>Funding Sources:</b>	Future Unified Planning Work Programs (UPWPs) and/or TIPs

**Action 10:** *Conduct and/or participate in local and regional transportation planning initiatives and project implementation, including but not limited to the Lebanon Transit Studies, Rail-Trail North implementation, Corridor 2 Studies, Regional Operations Planning, Regional Goods and Freight Movement, etc.*

**Intended Outcome:** Identify projects, programs and services for future implementation  
**Time Horizon:** Ongoing  
**Lead Partners:** PennDOT, FHWA, FTA, LEBCO MPO Committees and staff, Harrisburg MPO, York MPO  
**Support Partners:** Lebanon Transit, aviation sponsors, municipalities, planning and engineering firms  
**Funding Sources:** Base funding or special studies funding from PennDOT via the annual Unified Planning Work Programs (UPWPs)

**Action 11:** *On average, spend a minimum of 90% of TIP funds on maintenance and improvement of the existing transportation system.*

**Intended Outcome:** Carry out a "Maintenance First" philosophy  
**Time Horizon:** FFY 2017 to FFY 2020  
**Lead Partners:** LEBCO MPO Committees and staff, Lebanon Transit, PennDOT, FHWA, FTA  
**Support Partners:** Elected officials  
**Funding Sources:** Current and future TIPs

**Objective C:** *Coordinate transportation improvements with land use, infrastructure and other community development decisions*

**Action 1:** *Conduct and/or participate in integrated planning activities and their implementation, including but not limited to congestion management processes, congested corridor improvement program, access management ordinance development, Traffic Impact Study/Highway Occupancy Permit training, airport hazard and clear zoning, scenic byways planning, etc.*

**Intended Outcome:** Identify projects, programs and services for future implementation  
**Time Horizon:** 2016 - 2018 and ongoing  
**Lead Partners:** PennDOT, FHWA, FTA, FFA, aviation sponsors, LEBCO MPO Committees and staff  
**Support Partners:** Municipalities, planning and engineering firms  
**Funding Sources:** Base funding or special studies funding from PennDOT via the annual Unified Planning Work Programs (UPWPs)



<b>Action 2:</b>	<b><i>Coordinate with municipalities and developers on major traffic impact studies and the implementation of recommended transportation projects.</i></b>
<b>Intended Outcome:</b>	Establish partnerships with the private sector and municipalities to guide the development and fund the construction of timely transportation improvements
<b>Time Horizon:</b>	Ongoing
<b>Lead Partners:</b>	Municipalities, developers, PennDOT, LEBCO MPO Committees and staff
<b>Support Partners:</b>	Planning and engineering firms
<b>Funding Sources:</b>	Current and future TIPs, Pennsylvania Infrastructure Bank (PIB) Loans, formal and informal partnerships, County Liquid Fuels Funds, etc.
<b>Action 3:</b>	<b><i>Work with municipalities and developers via formal and informal partnerships to support LEBCO MPO TIP projects.</i></b>
<b>Intended Outcome:</b>	Leverage more funding and advance projects to construction in a more expedited fashion
<b>Time Horizon:</b>	Ongoing
<b>Lead Partners:</b>	LEBCO MPO Committees and staff, municipal managers, developers, PennDOT, Lebanon Transit, etc
<b>Support Partners:</b>	Local elected officials
<b>Funding Sources:</b>	Current and future TIPs, private funds, PIB Loans, Liquid Fuels Funds, etc.
<b>Action 4:</b>	<b><i>Assist with the administration of the County Liquid Fuels Program.</i></b>
<b>Intended Outcome:</b>	Manage the day-to-day activities and recommend funding priorities to the County Commissioners
<b>Time Horizon:</b>	2016 or 2017 if a new approach is approved and implemented and ongoing thereafter
<b>Lead Partners:</b>	Lebanon County Planning Department, PennDOT, County Commissioners
<b>Support Partners:</b>	Municipalities
<b>Funding Sources:</b>	County Liquid Fuels Program, current and future TIPs, PIB Loans, etc.

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<b>Action 5:</b>	<b><i>Petition the Harrisburg MPO, PennDOT, FHWA and FTA to bring Palmyra Borough and outstanding portions of N. &amp; S. Londonderry Townships into the LEBCO MPO.</i></b>
<b>Intended Outcome:</b>	Have the ability to do countywide transportation planning and programming
<b>Time Horizon:</b>	Completed in April of 2009 and now using STU Funds for local projects in the three municipalities and within Lebanon County
<b>Lead Partners:</b>	Lebanon County Planning Department, LEBCO MPO Committees and staff
<b>Support Partners:</b>	PennDOT, FHWA/FTA, the municipalities and the Harrisburg MPO
<b>Funding Sources:</b>	Funds not needed

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<b>Action 6:</b>	<b><i>Participate in community revitalization projects with related streetscape, sidewalk and/or cartway improvements.</i></b>
<b>Intended Outcome:</b>	Coordinate comprehensive community improvements with multiple funding sources and provide direct transportation planning input
<b>Time Horizon:</b>	Ongoing
<b>Lead Partners:</b>	Lebanon County Planning Department staff, LEBCO MPO, FHWA/FTA, DCNR, DCED, DEP
<b>Support Partners:</b>	Public/private partnerships
<b>Funding Sources:</b>	LEBCO MPO TIP, PennDOT, FHWA/FTA, DCNR, DCED, DEP and private funds

<b>Action 7:</b>	<b><i>Integrate "consistency with the county's growth management strategy" into the evaluation and rating criteria for candidate transportation projects.</i></b>
<b>Intended Outcome:</b>	Prioritize transportation maintenance and improvements within designated growth areas per the county's land use plan
<b>Time Horizon:</b>	Ongoing
<b>Lead Partners:</b>	LEBCO MPO Committees and staff, Lebanon County Planning Department
<b>Support Partners:</b>	Municipalities
<b>Funding Sources:</b>	Funds not needed

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**Objective D:** *Protect and enhance the environment and support energy conservation*

<b>Action 1:</b>	<b><i>Conduct wetlands banking planning, air quality analyses for the LRTP/TIP projects, etc.</i></b>
<b>Intended Outcome:</b>	Identify projects, programs and services for future implementation
<b>Time Horizon:</b>	2008/2009 and ongoing ... first wetland at Snitz Creek Park under reconstruction in 2014 and 2015
<b>Lead Partners:</b>	PennDOT, FHWA, FTA, LEBCO MPO Committees and staff, Harrisburg MPO, York MPO
<b>Support Partners:</b>	Municipalities, planning and engineering firms
<b>Funding Sources:</b>	Base funding or special studies funding from PennDOT via the annual Unified Planning Work Programs (UPWPs) and current and future TIPs
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<b>Action 2:</b>	<b><i>Continue to use CMAQ Funds in innovative ways to improve the environment.</i></b>
<b>Intended Outcome:</b>	Manage these funds effectively so that congestion is reduced and air quality is improved via LRTP/TIP projects
<b>Time Horizon:</b>	Ongoing
<b>Lead Partners:</b>	LEBCO MPO Committees and staff, PennDOT, FHWA, FTA
<b>Support Partners:</b>	Municipalities, developers, LVRT, Inc., LVBC, etc.
<b>Funding Sources:</b>	Current and future TIPs, public/private partnerships, etc.
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<b>Action 3:</b>	<b><i>Use federal and state laws, rules and regulations to address key environmental, cultural and historic issues.</i></b>
<b>Intended Outcome:</b>	Insure that transportation planning, programming and project delivery fully satisfy federal laws like National Environmental Policy Act (NEPA) and use new processes like context sensitive solutions and right sizing to preserve/protect the natural and manmade environment
<b>Time Horizon:</b>	2016 - 2018 with data from PHMC for 6 CMP Corridors of Concern and ongoing
<b>Lead Partners:</b>	LEBCO MPO Committees and staff, PennDOT, PHMC, FHWA, FTA
<b>Support Partners:</b>	Project sponsors
<b>Funding Sources:</b>	Current and future UPWPs, current and future TIPs, public/private partnerships, etc.

**Objective E:** *Promote community and neighborhood livability; improve the quality of life; and encourage a healthy lifestyle*

<b>Action 1:</b>	<b><i>Conduct a feasibility study to implement an automated horn system and "quiet crossings" at the Norfolk Southern Railroad at-grade crossings in the City of Lebanon; implement, if feasible.</i></b>
<b>Intended Outcome:</b>	Minimize audible warning without comprising safety at neighborhood rail crossings
<b>Time Horizon:</b>	If and when federal rules make this cost-effective and feasible
<b>Lead Partners:</b>	City of Lebanon, LEBCO MPO Committees and staff, Norfolk Southern, PennDOT, FHWA, FRA
<b>Support Partners:</b>	Planning and engineering firms
<b>Funding Sources:</b>	Special studies funding from PennDOT via the annual Unified Planning Work Programs (UPWPs)
<b>Action 2:</b>	<b><i>Solicit candidate transportation enhancement (now called TAP) projects.</i></b>
<b>Intended Outcome:</b>	Identify, evaluate and program TAP projects that enhance livability within Lebanon County
<b>Time Horizon:</b>	Submit TAP grant applications to PennDOT beginning in 2014 and thereafter
<b>Lead Partners:</b>	Lebanon County Planning Department, LEBCO MPO Committees and staff
<b>Support Partners:</b>	Municipalities, non-profit groups like LVRT, Inc. and LVBC, school districts, PennDOT, FHWA
<b>Funding Sources:</b>	Current and future TIPs, public/private partnerships, DCNR Recreational Trails Funding, etc.
<b>Action 3:</b>	<b><i>Obtain training from PennDOT, Penn State Hershey PRO Wellness Center, LTAP and other bicycle/pedestrian planning experts on how to promote biking and walking and how to develop and implement related projects, programs and/or services.</i></b>
<b>Intended Outcome:</b>	Learn about and implement best practices related to bike/ped projects, programs, services, on-road riding skills, etc.
<b>Time Horizon:</b>	Ongoing
<b>Lead Partners:</b>	Lebanon County Planning Department, PennDOT, Penn State Hershey PRO Wellness Center, LVBC, other health and wellness advocates, etc.
<b>Support Partners:</b>	Municipalities, planning and engineering firms
<b>Funding Sources:</b>	Current and future UPWPs, public/private partnerships, DCNR grants, private funding from organizations like LVBC, etc.

<b>Action 4:</b>	<b><i>Determine how best to partner with agencies like Grace@Home, Lebanon County Age-Wave Initiative and iTNAmerica to address the growing transportation needs of the elderly.</i></b>
<b>Intended Outcome:</b>	Learn more about and help to implement best practices related to new transportation options for the elderly
<b>Time Horizon:</b>	2016-2017 and beyond
<b>Lead Partners:</b>	Lebanon County Planning Department, PennDOT, Penn State Hershey PRO Wellness Center, Grace@Home, Lebanon County Age-Wave Initiative, iTNAmerica, and other health and wellness advocates
<b>Support Partners:</b>	Municipalities, social service agencies, religious institutions, etc.
<b>Funding Sources:</b>	Current and future TIPs or UPWPs, public/private partnerships, etc.

**Objective F:** *Lead transportation planning with trained staff, current data, modern technology, and effective outreach.*

<b>Action 1:</b>	<b><i>Provide continuing education and technology training for LEBCO MPO and LCPD staff and for municipalities.</i></b>
<b>Intended Outcome:</b>	Improve the ability to provide effective transportation planning leadership
<b>Time Horizon:</b>	Ongoing
<b>Lead Partners:</b>	Lebanon County Planning Department
<b>Support Partners:</b>	Lebanon City/County GIS
<b>Funding Sources:</b>	Current and future Unified Planning Work Programs (UPWPs) via the LTAP Task

<b>Action 2:</b>	<b><i>Maintain the City/County Geographic Information System, (GIS) database with up-to-date software and current data sets.</i></b>
<b>Intended Outcome:</b>	Utilize current data and modern technology to make better, more informed decisions
<b>Time Horizon:</b>	Ongoing
<b>Lead Partners:</b>	LEBCO MPO Committees and staff, City/County GIS staff
<b>Support Partners:</b>	PennDOT, PHMC, FHWA, FTA, Lebanon Transit, airport providers, municipalities
<b>Funding Sources:</b>	Current and future UPWPs



<b>Action 3:</b>	<b><i>Continue to update and implement the Public Participation Plan and the Title VI/Environmental Justice Implementation Plan and follow the soon-to-be-developed process for coordination with Indian Tribal Governments.</i></b>
<b>Intended Outcome:</b>	Have a proactive, cost-effective public involvement process that is of value to decision-making
<b>Time Horizon:</b>	Ongoing
<b>Lead Partners:</b>	LEBCO MPO Committees and staff
<b>Support Partners:</b>	PennDOT, FHWA, FTA, Lebanon Transit, airport providers, municipalities
<b>Funding Sources:</b>	Current and future UPWPs

<b>Action 4:</b>	<b><i>Utilize a wide range of accessible media to educate and inform the public on LEBCO MPO and Other Key Activities in the County</i></b>
<b>Intended Outcome:</b>	Have a more informed and involved citizenry, with positive and constructive community input to transportation decision-making
<b>Time Horizon:</b>	Ongoing
<b>Lead Partners:</b>	Lebanon County Planning Department, LEBCO MPO Committees and staff, LVBC, Lebanon Transit, Commuter Services of PA, etc.
<b>Support Partners:</b>	Municipalities, local radio stations, newspapers, television stations, county website/webmaster
<b>Funding Sources:</b>	Current and future UPWPs, advocates like LVBC, Commuter Services of PA, etc.

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## ***Implementation Plan***

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### **Introduction**

The LEBCO MPO Long Range Transportation Plan is built on a foundation of cooperation between the MPO, local, regional, state and federal agencies, the county's municipalities, the county's residents and employers, and other stakeholders. This cooperation and coordination is essential to ensure that the Plan is implemented. With a very limited (small) Transportation Improvement Program (TIP) "budget", it is critical that the LEBCO MPO develop and implement plans and projects that are "on par" with the available federal, state, local and private resources.

The Long Range Transportation Plan will be implemented through the Transportation Improvement Program (TIP) and the day-to-day activities of the staff of the Lebanon County Planning Department and the Lebanon City Authority / Lebanon County GIS Department. The various State and Federal agencies that approve the expenditure of state and federal transportation funds will use this LRTP as part of the basis for their decisions.

Municipal and private sector partnerships will play a growing role in the implementation of plan/TIP projects. The Lebanon County Planning Department staff will continue to work with local elected officials and business leaders that have an interest in and a willingness to fund studies, programs and/or projects that will improve the transportation network in Lebanon County and beyond. Diversity in funding sources will obviously lessen the dependency on public funding. Project development is often slowed by the lack of federal and state funding in any given federal fiscal year. By infusing local/private funds into the mix, project delivery has been and will continue to be enhanced. The LEBCO MPO's efforts to use taxpayer dollars better by leveraging them with private funding will enable more projects to advance sooner.

Businesses involved in shipping and heavy truck movements could be great allies in supporting and financing roadway and/or bridge improvements. Some may choose to supply materials to be used in a project's construction. These companies and industries will be recognized for their leadership.

### **Staging the Improvements**

The recommended improvements are presented as Transportation Improvement Program (TIP) items, short-term (1-4 years), medium-term (5-12 years) and long-term (13-24 years), in order to match the estimated project cost to available funding. Future LRTP updates should see projects rise to the shorter term and eventually placed on the TIP.

The TIP projects and the short-term projects and strategies represent LEBCO MPO's current priorities.

### **Coordination with Other Ongoing Planning Efforts**

The LEBCO MPO LRTP will reflect the MPO's coordination with other regional ongoing planning efforts and, when practical, include the studies and projects in LRTP updates. For example, the LEBCO MPO and the Harrisburg MPO both have Congestion Management Processes (CMP) Plans; therefore, coordination was required in key corridors like US Route 422. A few of the ongoing regional or statewide

planning studies that will produce projects to be included in future LRTP updates are listed below. The LEBCO MPO also has existing agreements in place with the Harrisburg, Reading and Lancaster MPOs to coordinate more closely on key transportation matters as the overall region grows more dense and there are less distinctions between these urbanized areas.

### *PA On Track ... the 2040 Statewide Plan*

The state's ongoing Statewide Long Range Transportation Plan and the Comprehensive Freight Movement Plan were completed in late 2014, producing data, analysis and project/program recommendations that have been included in this LRTP and TIP update.

### *Corridor 2*

The Corridor 2 commuter rail project is a proposed long term investment for express bus and/or regional rail service between the City of Lebanon and Harrisburg using the Norfolk Southern Harrisburg Line. The completed Corridor 2 Feasibility and Alternative Alignment Study was sponsored by private interests (Hershey Corporation), Capital Area Transit, the public transit provider for the Harrisburg area, and the Modern Transit Partnership, a nonprofit transit advocacy organization that was created by the Capital Area Transit Board in 1997. The LEBCO MPO had several of its Technical Committee and Policy Board members on the 40-member Steering Committee for this study.

### *Susquehanna Regional Transportation Partnership (SRTP) or Commuter Services of PA*

The SRTP is a multi-county, nonprofit corporation dedicated to identifying and implementing transportation options beyond the single occupancy vehicle (SOV) to help reduce SOV trip making in South Central Pennsylvania and to improve air quality. The SRTP advocates numerous programs to increase transit service and availability and provides a variety of transportation options, including ridesharing and emergency/guaranteed ride home. The LEBCO MPO participates actively in the SRTP and will accommodate any SRTP projects or programs in future LRTP updates. SRTP's new name is Commuter Services of PA.

## **Plan Update Schedule**

Federal regulations require that the Long Range Transportation Plan be updated every four years. The term of this LRTP is 2017-2040. This update began in calendar year 2015 and will conclude in late June of 2016. The next update will be a major one, and it will conclude by late June of 2018. The LEBCO MPO has agreed to make appropriate small changes to the plan as needed, especially with the updates of the TIP ever two years.

## **Air Quality Conformity**

The US Department of Transportation (USDOT) and the US Environmental Protection Agency (EPA) require that metropolitan planning organizations in

metropolitan areas that are designated nonattainment for the 8-hour ozone and/or PM<sub>2.5</sub> standard must determine conformity of metropolitan transportation plans and TIPs.<sup>3</sup> For the LEBCO MPO, air quality evaluations for this LRTP will be conducted by PennDOT and its consultant to ensure compliance with the Clean Air Act. The LEBCO MPO will also continue to coordinate air quality analyses with the Harrisburg and York MPOs. The LEBCO MPO will work with PennDOT and its consultant, the Harrisburg MPO and the York MPO as analyses are performed with current or future (MOVES2010) mobile source emission models.

In 2014, the region's airshed (Harrisburg-Lebanon-Carlisle-York) did reach attainment status for 1997 Annual and 2006 24-Hour Fine PM standards. However, Lebanon County did not satisfy 2012 annual PM<sub>2.5</sub> standards.

In the future, the LEBCO MPO will continue to rely on PennDOT and its air quality consultant to undertake plan/TIP conformity determinations since the Lebanon County Planning Department will not have the staff or expertise (transportation model) to ensure compliance with USDOT and EPA ambient air quality mandates.

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<sup>3</sup> 69 FR 40008-40014



## ***REFERENCE ITEMS***

**I. LEBCO MPO Long Range Transportation Plan Highway and Bridge Financial Forecast Table**

**II. LEBCO MPO Long Range Transportation Plan Transit Financial Forecast Table**

**III. Correspondence from Native American Tribes – no responses as of June ??, 2016 ????**

**IV. LEBCO MPO FFY 2017 – 2020 Transportation Improvement Program (Highways and Bridges)**

**V. LEBCO MPO FFY 2017 – 2020 Transportation Improvement Program (Interstate Maintenance) – no projects during this update cycle**

**VI. LEBCO MPO FFY 2017 – 2020 Transportation Improvement Program (Transit)**

**VII. PHMC's Analysis of the LEBCO MPO's Corridors of Concern**

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*I. LEBCO MPO Long Range Transportation Plan Highway and Bridge  
Financial Forecast Table (\$000)*

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*II. LEBCO MPO Long Range Transportation Plan Transit Financial  
Forecast Table (\$000)*



*III. Correspondence from Native American Tribes*

**NONE RECEIVED TO DATE**

*IV. LEBCO MPO FFY 2017 – 2020 Transportation Improvement Program  
(TIP) (Highways and Bridges)*

**TO BE ADDED IN LATE JUNE of 2016**

*VI. LEBCO MPO FFY 2017 – 2020 TIP (Transit)*

**TO BE ADDED IN LATE JUNE OF 2016**

*VII. PHMC's Analysis of the LEBCO MPO's Corridors of Concern*

**CORRIDORS ADDRESSED IN THE 2011 ANNUAL REPORT  
ON CONGESTION PHMC (SHPO) COMMENTS – 2014**

**US ROUTE 422**

Even though this is a historic transportation route, there are relatively few resources outside of the City of Lebanon that have already been identified in this corridor.

**Palmyra** – New construction and open lots within the borough may make a potential historic district unlikely, but one should be documented and evaluated if any work is proposed on Main Street. It appears that our office has never identified a district in Palmyra, however CRGIS shows a number of buildings at the corner of Lingle Avenue that are *not* eligible for the National Register of Historic Places (NR). The 1860 map shows several hotels along Main Street. Churches, storefront buildings, mills, and pre-1965 highway commercial properties should be individually evaluated if there is no historic district.

**Annville** – West of the core community are several facilities, homes, and quarries apparently associated with the local limestone industry. (Lime kilns first appear in this area on the 1875 map.) Some of these may need to be individually documented and evaluated, particularly the large Victorian period mansion on the north side of the road. The National Register-listed Annville Historic District (Key # 000784) includes the Route 422 corridor roughly from the Quittapahilla Creek east to Saylor Street. There may also be properties beyond the district boundaries that should be individually evaluated.

**Cleona** – Route 422 through the borough is lined with older houses between Grant St. and Rosemont Ave., however current aerial photos suggest that the community lacks the architectural significance and integrity to be eligible as a NR historic district. Some properties may need to be documented depending on the proposed project(s). Sunnyside Church (Key # 028245) and several 19<sup>th</sup> century houses around it were identified but not evaluated. The former school which houses the borough offices is *not* eligible for listing (Key # 089219).

**West and North Lebanon Townships** - Between 22<sup>nd</sup> and 16<sup>th</sup> Streets are brick semi-detached houses on the south side, a long row of frame semi-detached houses on the north side, and a stone chapel. These were likely built by the Coleman family for workers in the adjacent limestone quarries. These resources are not yet recorded in CRGIS but have the potential to be eligible for the Register. The 1956 aerial photo shows a number of buildings between the worker housing and the former railroad crossing to the east. It is likely that these represent early automobile related businesses and should be evaluated if they are in a project's area of potential effect (APE).

**Lebanon** - In the city, the west bound alignment runs downtown through the NR-eligible Cumberland Street Historic District (Key # 086478), and several blocks of the east bound alignment are in the NR-eligible Chestnut Street/Hathaway Park Historic District (Key # 106197). Individually listed properties in the corridors include the Josiah Funck Mansion (Key # 000775) at 450 Cumberland Street and Tabor Reformed Church (Key # 000764) at the corner of Tenth and Walnut Streets. In addition, there are dozens of identified, yet unevaluated, properties outside of the districts on both streets. In short, any improvement projects in the city will likely affect one or more resources or potential resources.

**East Lebanon (North and South Lebanon Townships)** – The 1860 map of the county shows a small cluster of houses and the Farmers & Drovers Inn near the intersection of Old Cumberland Street, the railroad, and King Street (labeled Avon P.O. on the 1875 map), and a 1940 aerial photo shows houses on nearby Lehman Street. Improvements to the overpass could potentially affect this area and will likely involve a survey of some of these properties. East of there, near the intersection of East Street, the highway crossed the Union Canal. While there is little if anything left of this historic structure, improvements in this area have the potential to disturb archaeological evidence of the canal and the limekilns shown on the 1875 map.

A small village at the intersection of Prescott Road appears on the 1860 Lebanon County map. The 19<sup>th</sup> century houses in this village may need to be evaluated for historical significance. West of the village is a large brick house on the north side of the highway that should be documented if it is in a project area.

**Jackson Township/Myerstown area** – Route 422 borders the northern edge of the NR-listed Tulpehocken Manor Plantation (Key # 000763), just west of Myerstown. Although there are a number of potential resources along the historic Main Avenue/Tulpehocken Road corridor through Myerstown, the postwar bypass that runs north of the borough to the Berks County border was built on open agricultural land. So nearly everything along the highway dates to the mid-20<sup>th</sup> century: The 1958 aerial photo shows a row of houses on the south side of the bypass and a cluster of houses on N. Railroad Street and Oak Court, and there are several small postwar commercial buildings on the north side of the bypass, west of Locust Street. Because these properties are over 50 years old, they should be evaluated if there is a project that might affect any of them.

A GENERAL NOTE ABOUT BRIDGES: There are 9 bridges in Lebanon County that are listed in, or eligible for listing in, the National Register. However it appears that none of them are on the congested highways identified in the 2011 report. Unless a pre-1964 bridge is located in a potential historic district, then all other PennDOT-owned bridges in these corridors have been individually evaluated and are not considered to be eligible for the Register.

A GENERAL NOTE ABOUT AGRICULTURAL AREAS AND RURAL HISTORIC DISTRICTS: Several of the corridors pass through areas that are notable as intact, traditional agricultural landscapes, and there is the potential for one or more rural historic districts in the county. US Route 322 (east of Campbelltown), PA Route 72 (north of Lebanon), and PA Routes 934 and 501 (south of Myerstown) in particular retain this historic character.

To expedite the planning process for highway improvements in these corridors, our staff recommends that the MPO outline the potential rural historic districts and submit a PA Historic Resource Survey Form for each one, evaluating its agricultural significance using the context defined for the Great Valley region in the *Historic Agricultural Resources of Pennsylvania, 1700-1960* (Pennsylvania's statewide agricultural context). This approach will be more efficient than waiting until the project design phase to evaluate every farm separately as a unique resource, each with its own character-defining features and mitigation considerations. If our office instead finds an area to be a NR-eligible historic district, then transportation improvements can be planned and reviewed to minimize their effects on the historic district as a whole. Likewise, when the proposed work will have an adverse effect on the historic district, then PennDOT and the MPO can consider mitigation alternatives with the goal of preserving and enhancing the historic character of the overall landscape

### US ROUTE 322

The community of Campbelltown was evaluated in 2003, and the BHP concluded that most of it is part of a NR-eligible historic district (Key # 126313). As a matter of policy, this district needs to be re-evaluated by our office, but the County should assume that any work along Route 322 will likely have an effect on the district or individual resources. For instance, the Dr. B. Stauffer House (Key # 000765) is independently listed in the Register, and just east of the district, on the east side of PA Route 117, is the Bowman Farm (Key # 026800), which is individually eligible.

As mentioned above, South Annville Township between Campbelltown and Fontana is largely an intact agricultural landscape. It should be evaluated as a potential rural historic district. CRGIS maps a church and at least one historic schoolhouse in this corridor, and there are a number of unevaluated farmsteads. So even if this area is not eligible as a rural district, then individual properties may need to be evaluated using the agricultural context. Because this was a major transportation route, historic maps of this area show a variety of stores, hotels, blacksmith shops, and lime kilns along this

corridor. It appears that most of those buildings that are still standing have been converted to farmhouses or sheds over the years.

There are also unevaluated farms east of Fontana, however current aerial photos suggest that many of the properties along the corridor between PA Route 934 and Quentin are larger commercial enterprises. So it is less likely that this area would be included in a rural historic district. The original highway ran through Quentin to Cornwall, so the Route 322 corridor east of its intersection with PA Route 419 is on a new alignment through forested land that historically was cleared to produce charcoal for the Cornwall area iron furnaces. CRGIS shows no historic resources between that intersection and the Lancaster County line. There are only two or three properties shown in this area on the historic maps or the mid-20th century aerial photos, but if any of these houses are still standing they should be evaluated to determine if they were associated with the Coleman Family and/or the local iron industry.

## PA ROUTE 72

For most of the route between Lickdale and Lebanon, there are very few properties identified in CRGIS. The highway crosses the historic Union Canal trace just south of the Swatara Creek Bridge, but since the road alignment is modern, there should be no canal era buildings there. Aerial photos of the corridor show concentrations of older buildings at the villages of Bunker Hill, Ebenezer, and North Lebanon. As noted above, churches, cemeteries, and former school buildings in this corridor should be documented if they are in an APE. Likewise farms should be evaluated using the statewide agricultural context, however it does not appear that there are any potential rural historic districts in this area.

In the city, West Maple Street runs alongside the former Coleman Estate and follows the course of the Union Canal east of Jonestown Road, however there appears to be little physical evidence of either of these sites in the highway corridor. Christ Presbyterian Church is documented in the PHMC files, but a final NR evaluation was never made. It may be eligible for listing. Surprisingly, it seems that the former Webster School at the corner of Maple and Jonestown Road has never been documented; however it should definitely be evaluated if there are any improvements to that intersection. “Light’s Fort” is *not* considered to be eligible for listing. Some of the properties on the north side of Maple Street between Ninth and Tenth Streets appear on CRGIS (one of which is identified as the Exchange Hotel), but none of them has been evaluated. Further documentation will be needed if any improvements are made to the highway in this block of Route 72 North.

The blocks of Route 72 between Guilford and Lehman Streets are included in the NR-eligible North Lebanon Historic District (Key # 106196), and the eligible Cumberland Street Historic District (Key # 086478) covers the blocks from the Quittapahilla Creek to the Chestnut Street corridor. Tabor Reformed Church (Key # 000764) at the corner of Tenth and Walnut Streets is individually listed in the Register. South of Chestnut

Street are a number of individual buildings that have been identified but never evaluated. To be efficient, this area should first be documented and reviewed as a potential historic district. Blocks that are not eligible should be surveyed to identify any properties that may be individually significant.

Much of the development along Route 72 south of Oak Street occurred in the postwar period, but there is a cluster of streetcar-era houses at the south end of the city near the intersection with PA Route 241. Nothing is recorded in CRGIS in this area. In addition, between the city and Quentin there may be roadside commercial properties, architecturally significant homes, or residential subdivisions that are more than 50 years old. Any of these may need to be documented prior to improvement projects in these sections of the corridor. In North Cornwall Township between Rocherty Road and Quentin there are several farms and a stone meetinghouse that are identified in CRGIS and need to be further evaluated. Because of the level of new development in this part of the township, there does *not* appear to be the potential for a rural historic district. The section of the highway below Zinn's Mill Road is on a modern alignment, so nearly all of the buildings along it are from the postwar period. Our staff re-evaluated the Quentin Riding Club in 2011 and determined that it is no longer eligible for the National Register.

There are a few older buildings below the interchange with US Route 322. They may need to be documented if there is a project in that segment of the highway. The Farmers Hope Inn is the only one shown in CRGIS, and it is eligible for the Register.

### PA ROUTE 501

Only a few scattered properties are identified along the southern end of the Route 501 corridor, but none of them have been evaluated. Farms in this area should be individually evaluated using the statewide agricultural context. Near Schaefferstown are three resources: Old Mill Road Historic District (Key # 097828 – NR eligible rural district), Brendle Farms (Key # 000780 – NR listed), and the Schaefferstown Historic District (Key # 050912 – NR eligible district). As part of the recent Route 501 realignment here, the houses at 700 and 705 West Main Street were found to be not eligible.

Between Schaefferstown and Myerstown is an agricultural landscape that should be evaluated as a potential rural historic district. A number of individual farms are mapped in CRGIS. National Register eligible resources in this stretch include the W. Iba/ Moses LappFarmstead (Key # 119881) and the Reistville Historic District (Key # 095293). Both of these were evaluated more than 5 years ago and will need to be re-evaluated.

The Isaac Meier Homestead (Key # 000771) in Myerstown is listed in the National Register. It appears that our office has no information on a historic district in Myerstown, however there are dozens of properties in the borough that are recorded in CRGIS. Evaluating the core of the borough as a potential district would be the most efficient approach if any improvement projects are anticipated there. If Myerstown

lacks integrity as a historic district, then individual resources such as school buildings, churches, commercial and industrial properties, and architecturally significant houses will need to be documented for evaluation. Any older farms that remain north of Myerstown along Route 501 will need to be evaluated using the agricultural context.

### PA ROUTE 934

The Annville Historic District (Key # 000784) is the only National Register-listed or eligible resource already identified along Route 934. CRGIS maps 13 additional properties along the corridor or near its intersections; however none of these have been evaluated. If no rural historic district is identified around the project area, then the individual farms will need to be evaluated using the statewide agricultural context. Other than the farms, potential resources include former school buildings, churches and cemeteries, and commercial properties. The Union Canal crossed Route 934 a short distance southeast of the Swatara Creek bridge. The historic trace appears to be visible in aerial photos, so there may be archaeological evidence of the canal prism along the highway corridor.

### ROCHERTY/EVERGREEN ROADS

There are a number of properties mapped along this route in CRGIS, however none of them have been evaluated. Aerial photos show several historic farms, but the overall landscape includes too much modern residential and commercial development to be included in a rural historic district. Individual farms that may be affected by road improvements will need to be documented using the statewide agricultural context.

#### Acronyms

PHMC -- Pennsylvania Historical and Museum Commission – This agency is designated as Pennsylvania’s State Historic Preservation Office (SHPO) under the provisions of the National Historic Preservation Act.

BHP -- Bureau for Historic Preservation – This bureau of the PHMC is responsible for all of the required SHPO duties, including evaluating properties and providing recommendations on their eligibility for listing in the National Register.

NR -- National Register of Historic Places

CRGIS -- Cultural Resources Geographic Information System (<http://crgis.state.pa.us>).

Comments provided by Bryan Van Sweden, Central PA Community Preservation Coordinator, PHMC BHP  
February 2014

