

Spring  
2011

# Officials Briefed on South Valley Parkway Project



On February 18, 2011, representatives from PENNDOT District 4-0 and Borton-Lawson Engineering briefed local, county and state officials on the progress of the South Valley Parkway (SVP) project.

George Roberts, District Executive of PENNDOT District 4-0 gave an overview of the history of the project, noting how the project has been downsized considerably from when it was first conceived. He explained that most of the available transportation funding has to go toward maintaining the existing roadway and bridge system, a practice known as asset management, and that the SVP was one of only two new construction projects currently being funded.

The new roadway will relieve an increasing amount of traffic on Middle Road (SR 2008) prompted by a rising student population at the Luzerne County Community College (LCCC). Homes along Middle Road in Upper and Lower Askam are situated very close to the street and the traffic has become a safety issue.

Originally planned as a four-lane highway that would stretch from Route 29 (South Cross Valley Expressway) to the Kirmar Parkway and connect to the Sans Souci Park-

way, the road design has undergone several revisions. As a result of right-sizing efforts and Smart Transportation principles, the roadway will now consist of two lanes only, except where climbing lanes or turning lanes are needed, and will extend from the Route 29 interchange to just east of Kosciuszko St.

The SVP will be classified as an urban principal arterial with 11-foot travel lanes and 8-foot shoulders. The posted speed limit will be 45 miles per hour.

The eastern terminus of the project, at the intersection of Middle Road and Route 29, will require the reconfiguration of Exit 2 of the South Cross Valley Expressway which now provides access to Middle Road. Three of the existing on-off ramps will be replaced with a new interchange which will be located beyond the current location (for drivers coming from Hanover Township to Nanticoke). Drivers wanting to access Middle Road will need to circle back from the new interchange to the new access point which will be controlled by a traffic signal.

The western terminus of the new roadway will tie into Middle Road near Kosciuszko Street, where a new ninety degree T-alignment intersection will be created. By doing this, traffic will be able to access the Lower Askam section of Hanover Township. Traffic signals are proposed for this new intersection, and signs will be posted here prohibiting tractor-trailers and other heavy vehicles from using this section of Middle Road.

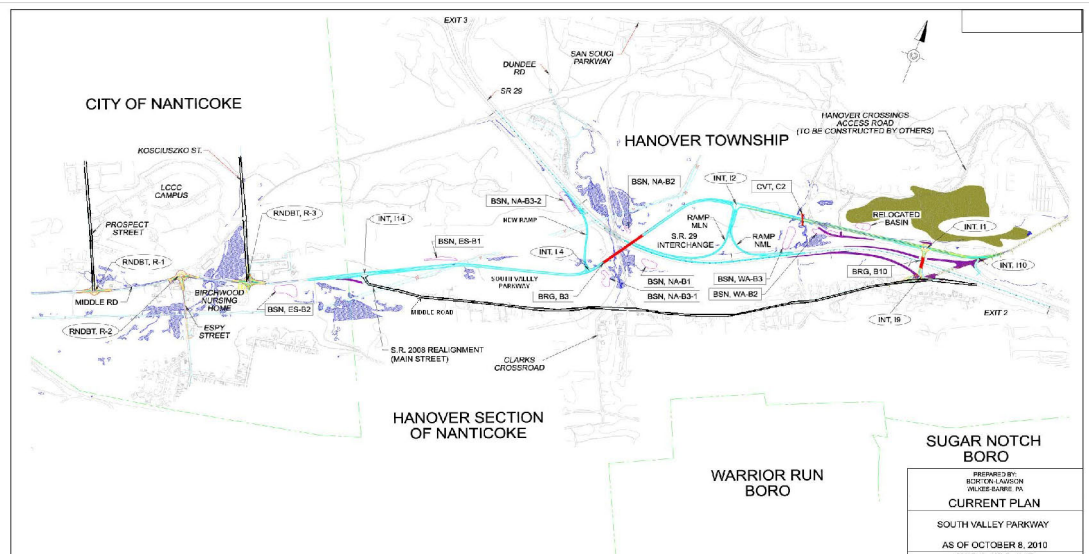
Three roundabouts are proposed for the intersections of Prospect, Espy and Kosciuszko Streets. They are being done to improve safety and increase capacity at these intersections. They will be single-lane roundabouts designed to accommodate a WB-7 tractor-trailer, the largest vehicle expected to use this portion of the road.

The final design phase of the project is scheduled to begin in September of this year and be completed by May, 2013.

The estimated let date for the project is October of 2012, and the SVP is estimated to be open to traffic as of January of 2016.

## CONNECTIONS

LACKAWANNA/LUZERNE METROPOLITAN PLANNING ORGANIZATION



*Diagram of the South Valley Parkway (SVP - blue; bridges - red; ramps to be removed - purple; municipal boundaries - green; for larger version of map, go to MPO web page).*

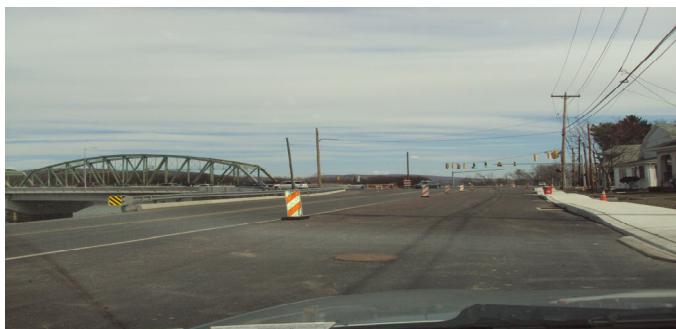
## New 8th Street Bridge Opens To Traffic

The new 8th Street Bridge, which spans the Susquehanna River and connects Jenkins Township and Wyoming Borough in Luzerne County, opened to traffic on March 29th.

The new 10-span bridge provides wider lanes and shoulders than the old bridge, and has sidewalks for pedestrian use.

Intersection improvements on the River Road and 8th Street sides of the bridge have also been made, including new signals and turning lanes. Drainage work was also part of the project improvements. Construction of the \$23 million structure began in the fall of 2008.

Some finishing work will continue through the spring. The existing 1,280-foot steel bridge was built in 1900 and rehabbed in 1948 and 1986. It is categorized as being structurally-deficient and functionally obsolete, and was posted due to weight limits. It will be demolished over the next few months.



*View of the widened intersection on River Road approaching the new bridge*



*Cars exiting and entering the new bridge*

## May LTAP Course Schedule Set

The following LTAP courses will be held in May:

### **May 3, 2011: Unpaved and Gravel Roads Maintenance**

Location: PPL Wallenpaupack Environmental Learning Center (Wayne County)

126 PPL Drive (Off Route 6)

Hawley, PA 18428

Time: 8:30 AM - 12:30 PM

Telephone: 570-253-7076

Web: [www.pplweb.com](http://www.pplweb.com)

### **May 5, 2011: Work Zone Traffic Control**

Location: Monroe County Public Safety Center

100 Gypsum Rd.

Stroudsburg, PA 18360

Time: 9:00 AM - 1:00 PM

Telephone: 570-992-4113

Web: [www.co.monroe.pa.us](http://www.co.monroe.pa.us)

### **May 11, 2011: Traffic Signals**

Location: PENNDOT District 4-0, Room 233 (Lackawanna County)

55 Keystone Industrial Park

Dunmore, PA

Time: 8:30 AM - 3:30 PM

Telephone: 570-963-4061

Web: [www.dot.state.pa.us](http://www.dot.state.pa.us)

For more information, contact Kate McMahon, NEPA, at 655-5581

## Long Range Transportation Plan Update

The Long Range Transportation Plan (LRTP) portion of the *Lackawanna-Luzerne Regional Plan*, is currently undergoing air quality conformity analysis. This is the last step before the plan can be put out for public review and comment. The air quality analysis is done to ensure that the overall impact of the LRTP projects will not adversely affect air quality in the region.

Once the air quality conformity has been approved, the plan will be ready to be made available to the MPO committees and the

general public for a 35-day review and comment period.

Hard copies of the plan will be available in the offices of the Luzerne and Lackawanna County planning commissions as well as the PENNDOT District 4-0 Building. In addition, the plan will be placed in the Scranton Public Library, the Carbondale Library, The Osterhaut Public Library and the Greater Hazleton Area Library. A copy will also be placed in the office of El Mensajero in Hazleton, and an electronic ver-

sion will be available on the MPO web page (see page 4 for web address).

The public hearing on the plan will be held immediately prior to the MPO Technical Committee meeting on May 25th at 10:00 AM in Conference Room 233 at the PENNDOT District 4-0 Building.

The LRTP is expected to be approved by the MPO at their June 1st Coordinating Committee meeting which will also be held at 10:00 AM at the District 4-0 Building in Conference Room 233.

# PENNDOT District 4-0 Undertaking Highways for Life Project

PENNDOT District 4-0 recently received approval from the Federal Highway Administration (FHWA) to do a Highways for Life (HfL) project on Keyser Avenue (SR 3011) in Lackawanna County. The purpose of the HfL Program is to advance longer-lasting highway infrastructure using innovations.

In this context, innovation is defined as a “tool or process that the state has never before or rarely used. It must be available and ready for use, and not require further testing or evaluating.” It must also have “standards, specifications, test procedures, training and operations guidance to support the application of a particular innovation in routine highway design and construction.”

The areas in which innovations are being sought are materials, tools, equipment, procedures, paving technologies, specifications, financing, and design and construction of highways.

The three goals of HfL are: to improve safety during and after construction, reduce congestion caused by construction, and improve the quality of the highway infrastructure.

## ***Project Purpose and Scope***

The purpose of the Keyser Avenue project is to reduce congestion and roadway deterioration, thereby improving safety conditions and accessibility for social and emergency services in the area. The project will also improve local and regional commerce.

The project extends for four miles from the Turnpike interchange in Taylor Borough through the City of Scranton. The rehabilitation project will include the following improvements: paving of two 12-foot travel lanes with 8-foot shoulders; replacement of existing curbing; installation of new curbing; addition of two left-turning lanes at four intersections (Oak, Continental, Jackson and Loop Streets); cleaning or replacement of drainage facilities; replacement of two deficient structures; and Americans with Disability Act (ADA) accommodations.

The current Average Daily Traffic (ADT) count for Keyser Avenue is about 16,000 vehicles/day. The ADT is expected to increase to about 23,000 vehicles per day in the future due to the large number of warehouses and industrial facilities located along the roadway.

The project will also try to decrease the number of accidents along this stretch of highway even though it is now experiencing a crash rate of only 1.09, which is lower than the state average of 1.26.

## ***Safety Measures***

To help achieve this goal, the project will incorporate some new safety measures, one of which is FHWA’s Safety Edge paving technique. Safety Edge is a bituminous paving technique that places a 30-35 degree wedge at the graded material interface. This would replace the typical near-vertical edge technique currently used. The near-vertical edge can impact drivers who lose control when attempting to recover from a roadway departure.

Other factors affecting safety improvement include increased ride quality, smoother pavements, improved surface friction, and the addition of the turning lanes.

Another safety technique that will be used is a Road Safety Audit. The Road Safety Audit is an examination of the safety performance of a roadway or intersection by an independent multi-disciplinary team. The team consists of people from highway safety, traffic engineering, planning, operations, geometric design, construction, maintenance, human factors, emergency responders, and enforcement. The team will make a formal review of the project and make safety recommendations based on personal experience with the roadway.

## ***Tools and Materials Innovations***

One of the innovations that will be used in this project is Intelligent Compaction (IC). Compaction refers to the process of reducing the volume of a mass of material, such

as asphalt. Achieving appropriate compaction is critical to the performance of an asphalt pavement because it locks the asphalt-coated aggregate together. This results in greater stability and resistance to deformations of the pavement, and reduces the permeability of the asphalt mixture which, in turn, improves its durability. The expectation is that by using IC, the compaction efforts will be more efficient, and the compaction densities will be much more consistent. This IC process will show the Department and the construction industry the inadequacies of the current compaction process and the potential for improved compaction uniformity along longitudinal joints.

Longitudinal joints are the interfaces between two adjacent and parallel lanes being paved (the place where the lane dividing line is placed). If these are improperly constructed, they can cause premature deterioration of the pavement in the form of cracking and raveling. This is caused by relatively low density which commonly occurs at these interfaces because the pavement is cooler and unconfined. If the density can be improved, it will prolong the life of the pavement. Echelon paving, in which two lanes are paved simultaneously and the pavers are slightly off-set, is one way to address this problem because both lanes are hot when initially compacted.

PENNDOT has recently developed a specification aimed at improving performance at the longitudinal joint areas which will provide incentives for contractors to use higher density pavement. This practice, combined with IC practices, will help achieve improved pavement durability.

Warm Mix Asphalt, another innovation being used on this project, is discussed in more detail on page 4.

Work on the project is slated to begin this spring and take two construction seasons to complete. The anticipated cost is \$9.6 million, with the split being 80% federal and 20% state.



*Example of echelon paving technique*



**LACKAWANNA/LUZERNE METROPOLITAN  
PLANNING ORGANIZATION**

**Published By: Luzerne County Planning  
Commission  
Contact:: Nancy Snee**

**Telephone: 570-825-1564  
E-Mail: [nancy.snee@luzernecounty.org](mailto:nancy.snee@luzernecounty.org)**

**MPO Web Page: [http://www.luzernecounty.org/  
county/departments\\_agencies/  
planning\\_commission/lackawannaluzerne-  
metropolitan-planning-organization](http://www.luzernecounty.org/county/departments_agencies/planning_commission/lackawannaluzerne-metropolitan-planning-organization)**



**PennDOT Web Site:  
[www.neparoads.com](http://www.neparoads.com)**

## Innovative Warm Mix Asphalt To Be Tested on Keyser Avenue

PENNDOT District 4-0 will use an innovative type of asphalt on the Keyser Avenue paving project detailed on page 3. The product is known as Warm Mix Asphalt (WMA). WMA is defined as “a group of technologies that allow a reduction in the temperature at which asphalt mixes are produced and placed.”

The major benefits of using WMA include:

Reduction of greenhouse gases being emitted into the air because less energy is used to produce it;

Improved compaction on the roadway surface;

Allows the mix to be transported over longer distances; and

Permits roads to be paved at cooler air temperatures.

The lower temperatures also benefit road crews due to reduced thermal radiation emanating from the road during the paving process.

This process has been used in many European countries for several years. A team of 13 materials experts from the United States traveled to Belgium, France, Germany and Norway to study various WMA technologies, and determine how the European WMA process could be adapted to American materials and production practices.

WMA technologies can be categorized in a few different ways, one of which is by the degree of temperature reduction attained. The production temperature of WMA can range from 215-282 degrees Fahrenheit (F) in contrast to the average production temperature range of Hot Mix Asphalt (HMA) which is 275-375 degrees F.

WMA can also be categorized by type depending on whether water, or some type of organic additive or wax, is used to lower the temperature at which asphalt coats the aggregate.

For the Keyser Avenue project, PENNDOT will use three different WMA processes - organic, foaming, and chemical.

The organic process uses paraffin wax beads which have a melting point of about 208 degrees F. These can be used to modify the binder or added directly to the mix. The use of this technique typically produces temperatures 50 degrees F less than those used for the HMA process.

In the foaming process, an emulsion is mixed with hot aggregate to produce a temperature range of between 185 and 240 degrees F.

In the chemical process, the incorporation of asphalt additives enables the application temperature to be reduced by about 50%, while retaining the same properties as asphalt that is produced at HMA temperatures.

Each of the three WMA technologies will be used on a little less than a mile of the 4-mile project. The District will use a HMA process for a 1500-foot stretch of Keyser Avenue to compare results with the WMA sections.

For more information on WMA, go to [www.international@fhwa.dot.gov](mailto:www.international@fhwa.dot.gov)