



Comprehensive Development Plan

Shenango Township, Lawrence County, PA

Chapter 7 – Transportation and Circulation

Overview

Shenango Township's transportation network includes two (2) arterial roadways with segments carrying in excess of 6,500 annual average daily traffic (AADT) which is a measure of total volume of vehicular traffic for a year, divided by 365 days. US Route 422 located in the Township's northern tier and oriented east to west, the US 422 bypass south of South New Castle Borough and SR 65 oriented from northwest to southeast through the central and western portions of the Township, carry the highest volumes of pass-through traffic. These are Commonwealth owned and maintained roadways and segments carrying the highest volumes are located in the Township's northeast quadrant.

Several collector roadways provide links to these Commonwealth arterial roadways including Frew Mill Road (SR 1012) in the northeast, Savannah (T 715) and Old Pittsburgh Roads (T 718) in the northwest and Old State Road (SR 388) on the eastern boundary. These collectors carry between 1,201 and 2,500 AADT along certain segments where rural collector roads intersects to provide broader distribution. The Township owns and maintains a segment of Savannah Road and Old Pittsburgh Road. Rural collector roadways such as Union Valley Road (SR 2012), Fletcher Hill Road (T 389) and Turkey Hill Road (SR 2001) provide circulation and access to rural areas in the southwest quadrant, and Center Church Road (SR 2022) and Harmony Baptist Road (SR 2026) provide links to higher volume roadways in the central portion of the Township and southeastern quadrant.

According to PennDOT's Bureau of Planning and Research Type 5 Map, there are approximately 91.46 miles of roads and streets in the Township's transportation system. The Commonwealth owns and maintains 25.35 miles of roadway and the Township owns and maintains 66.11 miles of roadway including 10.06 miles of Act 32 turnback roadways.

Access and Development

Much of the Township's early development occurred in areas accessible from the US 422 Corridor and Business 422 in close proximity to the City of New Castle. Predominantly residential development also developed along the SR 65 corridor, also known as Ellwood Road.

At the interchange points, land was designated for commercial and service land uses which rely on higher traffic volumes. The Township's two (2) industrial zones, the MI General Industrial and IP Industrial Park Districts are also situated in the northeastern quadrant. The IP District is accessible from both Frew Mill Road and County Line Road and the MI District, which is located between two commercial districts between the US Business 422 corridor and the SR 65 corridor is accessible via access drives from the East Washington Street (SR 65) and US Business 422 rights-of-way.

While all of the Township's nonresidentially zoned land lies in the northeast quadrant, nearly all of the land zoned for moderate and high density residential use is also situated in this area, aside from approximately fifty (50) acres accessible from Marie Avenue and Mosser Drive zoned R-3 Urban Residential, between SR 65 and Center Church Road. The factors that led to this development pattern have to do with access and infrastructure. Land accessible via these high volume roadways corridors developed higher intensity uses such as general and specialty retail establishments, light industrial and processing uses and professional and personal service offices. Development patterns which emerged following World War II along arterial roadways connecting small towns and suburbs to urban employment centers became de facto commercial zones. This pattern was then formalized through zoning designations when municipalities sought to manage growth through the adoption of land use regulations.

Continued development of suburban residential areas on land abutting high volume transportation facilities adjacent to the City of New Castle dictated the need to provide public water and sanitary sewerage services. These utilities logically extended from the adjacent urban center where existing treatment facilities and collection/distribution systems were already in place. Public water is available in areas in proximity to South New Castle Borough and along Savannah Road to the intersection with Union Valley Road and south to just above the Gardner Center Road right-of-way. Sanitary sewers have been extended east to the Shenango Township Industrial Park and south to below Bessel Road on the west and Aiken Road on the east. Residential density is highest in the areas served by public utilities, with the exception of developments situated between the SR 65 corridor and Hollow Road in the southeast quadrant.

Safety Issues

As with most rural Townships in transition to suburban development patterns, the horizontal and vertical curvature of existing secondary roadways and lack of stormwater management facilities are continuing deficiencies. As discussed in Chapter 5, Socio-Economic Profile, Shenango Township's top annual budgetary priority is to maintain the Township's 66 miles of streets and roads. Most of the Township owned and maintained roadways carry low

volumes of traffic and functions as a collector system which distributes vehicle trips to the major transportation corridors, US 422, US 422 bypass and SR 65. Local streets and roads provide access to home sites and residential neighborhoods.

In July of 2014, PennDOT provided the Township with a Crash Summary Report with reportable accident data on Commonwealth roads. Between 2003 and 2013 there were 887 crashes reported or about 68 accidents annually on average, with a high of 103 in 2004 and a low of 56 in 2013. Forty-eight percent (48%) of those involved property damage only, however nine (9) fatalities were also recorded. Locations were not identified in this report. Friday and Saturday were the days of the week with the highest percentage of the total and around 4 p.m. was the time of day the highest percentage of crashes were reported.

Other data included road conditions (61% on dry roads), illumination/daylight (69%), clear conditions (69%) and contributing roadway factors (68% reported no factors). For the last four (4) years, PennDOT has been repairing and replacing bridges but indications are that capacity and safety improvements to high volume facilities may begin to be programmed. However due to the relatively low volumes of traffic on Township roads approaching and intersecting with higher volume Commonwealth owned and maintained roadways, safety improvements affecting Township maintained facilities are not likely to be included in the scope of work.

Future Transportation Options/Land Use

The Township's past development patterns were dependent on access to developable land from two arterial corridors, US 422 and SR 65. In addition, as the City of New Castle continued to grow through the decades following World War II, suburban residential development pushed the extension of public utilities into those areas east and south of New Castle to support the demand for housing, commercial development and employment opportunities in light industrial plants. While vehicle trips for pass-through traffic continue to decrease in those corridors, access to points of destination outside the region remains adequate for property owners and businesses in the Township's northeast quadrant in terms of travel times and lane capacities. Links to interstate highways beyond Shenango Township's municipal boundaries provide options to both residential and commercial developers to invest in the Township's future. This approach variously called "smart growth" or "green growth" emphasizes infill development in areas already served by adequate infrastructure.

However, there are related issues to be addressed as the available land in the infill or growth area in the northeast quadrant becomes exhausted. Access to these infill sites could at some point not be the key factor in projecting future growth and development in the Township.

Viable options for land with adequate infrastructure or the potential for public utility service will dictate to some extent, the Township's future potential for growth.

The characteristics of a local transportation network which evolved from an agrarian history do not lend themselves to safety and capacity improvements which are affordable and/or justifiable. The southern two-thirds of the Township's roadway network consists almost exclusively of two rod (2 x 16.5 or 33 feet) rights-of-way widths, with significant horizontal and vertical curvature issues and minimal stormwater management facilities to protect the integrity of the existing cartways. These are vestiges of the agrarian history of the Township and evolved from cart and tractor paths as agricultural products were sent to the County seat to support the burgeoning population. Poor sight distances and oblique angle intersections are prolific along segments of many of these roadways.

If a boundary line were drawn through the Denny Drive, Savannah Gardner Road, Gardner Center Road and Center Church Road rights-of-way, east to west, no roadway south of this line carries even 1,200 two-directional vehicle trips in a twenty-four (24) hour period with the exception of SR 65 and a segment of SR 388, and many carry far fewer trips. Traffic volumes on PennDOT owned and maintained roadways are taken at varying intervals, but Township owned and maintained roads and streets are not typically monitored for traffic volumes. As plans for future growth and development are discussed, the condition and function of the transportation system in the most rural areas should be considered.

It is likely that agricultural operations, timber harvesting and outdoor recreation will dominate land use in the Township's southwest quadrant for years to come. The lack of adequate safety and capacity characteristics of the roadways will be a factor in the preservation of this quadrant of the Township as a rural resource area, with little development potential. No expectation of public utility extensions further casts this area of the Township as a conservation or agricultural district with limited options for development. In the southeastern quadrant however, there are potential growth nodes at or near several intersections of rural collector roads with SR 65. In addition, dwelling unit densities in close proximity to these intersections indicate that access to SR 65 via either Harmony Baptist Road, Hollow Road or Old State Road could be a factor in future land use decisions.

Support for neighborhood scale retail, personal and professional services or restaurants in the southern end of the SR 65 corridor could be argued given the number of home sites created in that area, but the lack of public utilities will be a deterrent. Modular sanitary sewage treatment plants and private wells can support less intensive development, but a marketing plan to encourage private sector development anywhere but in the US 422 and Business 422 corridors and northernmost segment of SR 65 would have to be compelling. Township officials are faced with narrow choices concerning their support for future growth. If they encourage

infill development in the northeast quadrant, they need to identify it as a “designated growth area” which by definition in the Pennsylvania Municipalities Planning Code (PaMPC) it is:

“Designated growth area,” a region within a county or counties described in a municipal or multimunicipal plan that preferably includes and surrounds a city, borough or village, and within which residential and mixed use development is permitted or planned for at densities of one unit to the acre or more, commercial, industrial and institutional uses are permitted or planned for and public infrastructure services are provided or planned.

This is discussed in more detail in Chapter 9, Current and Future Land Use.

The other option available to the Township is to identify one or more areas where utilities could be extended in the future, as “future growth areas,” defined in the PaMPC as follows:

“Future growth area,” an area of a municipal or multimunicipal plan outside of and adjacent to a designated growth area where residential, commercial industrial and institutional uses and development are permitted or planned at varying densities and public infrastructure services may or may not be provided, but future development at greater densities is planned to accompany the orderly extension and provision of public infrastructure services.

The key here is the “orderly extension and provision of public infrastructure services.” These may include in addition to public water or sanitary sewerage, lobbying PennDOT for additional turning lanes to tracts of land adjacent to intersections, with development potential. At present, and based on traffic counts taken in the late 2000’s, SR 65 carries between 4,500 and 6,500 annual average daily trips between Center Church Road and the Township boundary at Gibson Street. From Gardner Center Road north, segments of SR 65 carry more than 6,500 vehicle trips a day.

Summary

Two (2) arterial roadways have provided the primary access to developing areas in Shenango Township since the mid-20th century, US 422 including Business 422 and the US 422 bypass, and SR 65. These transportation facilities will continue to function as Township assets well into the future. As demand for additional housing and business development declined in the City of New Castle, suburban residential and retail development patterns emerged in Shenango Township. However, with the population decline, traffic volumes in the northeast quadrant also declined while moderate traffic volumes along segments of SR 65 remained fairly constant. The task before the elected officials is to use these transportation assets to full advantage, whether to promote infill development in the US 422 corridor or encourage new

development in an area with development potential, but no public utilities. The commitment of Township funds designed to broaden the tax base, in this day of reduced tax revenues, must be weighed in the context of the best long-term interests of the community. Widespread support for the community's planning objectives can increase the likelihood of success but a concerted effort will be needed to maintain the delivery of the current level of services to residents and business owners.

2015-2018 Transportation Improvement Program, Southwestern Pennsylvania Commission

SR 65/Fridays Hill – 422 Ramp SR, Highway 91575

Highway reconstruction project located on SR 65, Ellwood Road, from Fridays Hill Road to SR 422 Ramps Wayne, Slippery Rock and Shenango, Lawrence County.

PROJECT FUNDING - \$200,000.00 (2013)

SR 2010/Garden City Rd Bridge – Bridge 73187

Replacement of the structure located on State Route 2010/Gardner Center Road over the Branch of Big Run, in Shenango Township, Lawrence County.

PROJECT FUNDING - \$1,500,000 (2016)

SR 2012 over McKee Run – Bridge 29388

Bridge replacement on State Route 2012 (Union Valley Road) over McKee Run in Shenango Township, Lawrence County.

PROJECT FUNDING - \$1,400,0090 (2016)