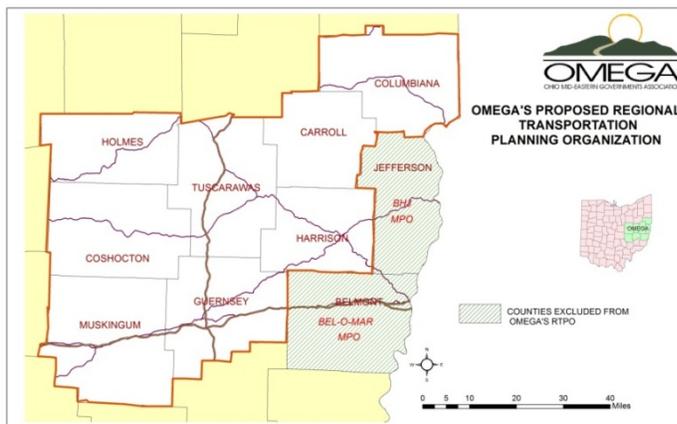




EXECUTIVE SUMMARY FOR FUTURE CONDITIONS

The Ohio Mid-Eastern Governments Association (OMEGA) is organized as an agency of local governments pursuant to Section 167 of the Ohio Revised Code and is designated by the Appalachian Regional Commission as a Local Development District and by the US Department of Commerce, Economic Development Administration, as an Economic Development District. OMEGA is a collaborative

body of member governments that serves as a facilitator between state and federal government agencies and local entities to provide opportunities in economic and community development through networking, education, planning, research, and allocation of resources. OMEGA serves ten counties in Ohio: Belmont, Carroll, Columbiana, Coshocton, Guernsey, Harrison, Holmes, Jefferson, Muskingum, & Tuscarawas.



On July 1, 2013, the Ohio Department of Transportation authorized OMEGA to participate in a two-year pilot program to develop a Regional Transportation Planning Organization (RTPO) to serve the eight counties in OMEGA's district which are not members of a Metropolitan Planning Organization. These eight counties include: Carroll, Columbiana, Coshocton, Guernsey, Harrison, Holmes, Muskingum, and Tuscarawas.

A regional voice and planning organization is needed to address the major transportation needs that will facilitate economic and community development, address safety and congestion issues, and improve the quality of life for our residents.

Our Regional Transportation Planning Organization will focus on the following planning efforts:

1. Development of a **Five Year** Regional Transportation Plan (RTP) by June 30, 2015.
2. Facilitation of a consultation process which will allow for OMEGA's members to discuss regional transportation issues with ODOT, and where ODOT will provide updates regarding current plans, programs and projects occurring within OMEGA's region.
3. Facilitation of public outreach efforts.

4. Development of transportation expertise amongst OMEGA staff.

The development of the Regional Transportation Plan will be a coordinated effort involving and engaging decision makers and stakeholders to include local elected officials, development agencies, private industry, ODOT, and the general public. We will coordinate with adjacent MPOs as many of our major transportation routes cross multiple jurisdictions. Our RTP will be financially responsible; promote the retention, expansion and redevelopment of regional industrial centers to include the shale industry; develop a public transit and human services transportation system to improve access and mobility; and develop a pedestrian and trail network to improve the quality of life for our residents.

Consistent with the eight planning factors that need to be considered under the Moving Ahead for Progress in the 21st Century (MAP-21), OMEGA in conjunction with the Transportation Advisory Committee (TAC) and Executive Board have adopted the following the goals for the development of a Regional Transportation Plan:

- **Goal 1:** Preserve, Maintain and Improve Existing Transportation Systems
- **Goal 2:** Address Safety and Congestion Issues
- **Goal 3:** Facilitate Economic and Community Development
- **Goal 4:** Improve Quality of Life
- **Goal 5:** Develop a Financially Responsible Regional Transportation Plan

Specific objectives to meet these goals were also developed and provided in Section 2.0 of the RTP. Documentation of existing conditions will provide the framework for plan development and will provide the baseline for quantitatively measuring the success of the plan implementation. Section 3.0 of the RTP provides a detailed analysis of the existing conditions of the transportation systems in the RTPO region. Specific baseline data in the Existing Conditions Section included: demographics, roads, bridges, transit, ports and rivers, aviation, rail, safety, economy, bicycle routes, and environmental concerns.

The next step in the process to develop the RTP is to project the future conditions of the region and the impact those conditions will have on the transportation systems. Analysis of the future conditions of the region focused on the impact of demographics, traffic, and shale development on the transportation systems in the region including roads, bridges, rivers, aviation, and transit. Assessment of the existing conditions and these future conditions will form the basis for identifying the needs of the region.

DEMOGRAPHICS

The population of the OMEGA RTP region is projected to decrease by approximately 2.64% by the year 2040. The population of Holmes County is projected to increase by almost 7% and modest growth (less than 1% is projected for Carroll and Tuscarawas Counties while the population of all other counties is projected to decrease. Noticeable shifts in population patterns were not observed upon comparison of the 2010 Census Data to the 2040 projections. As expected, population is and will continue to be centered around the cities and villages in the region. The impact of shale development on the permanent population of the region is not yet known and these population estimates may not account for the increased number of people who are now working and living in the region.

Available workforce is projected to increase by approximately 20% by 2040 with the greatest increases Carroll, Holmes, and Tuscarawas Counties. By 2040, the number of people employed in region is expected to be approximately 8% greater than the available workforce. This indicates that a significant number of workers will be traveling to the region for work.

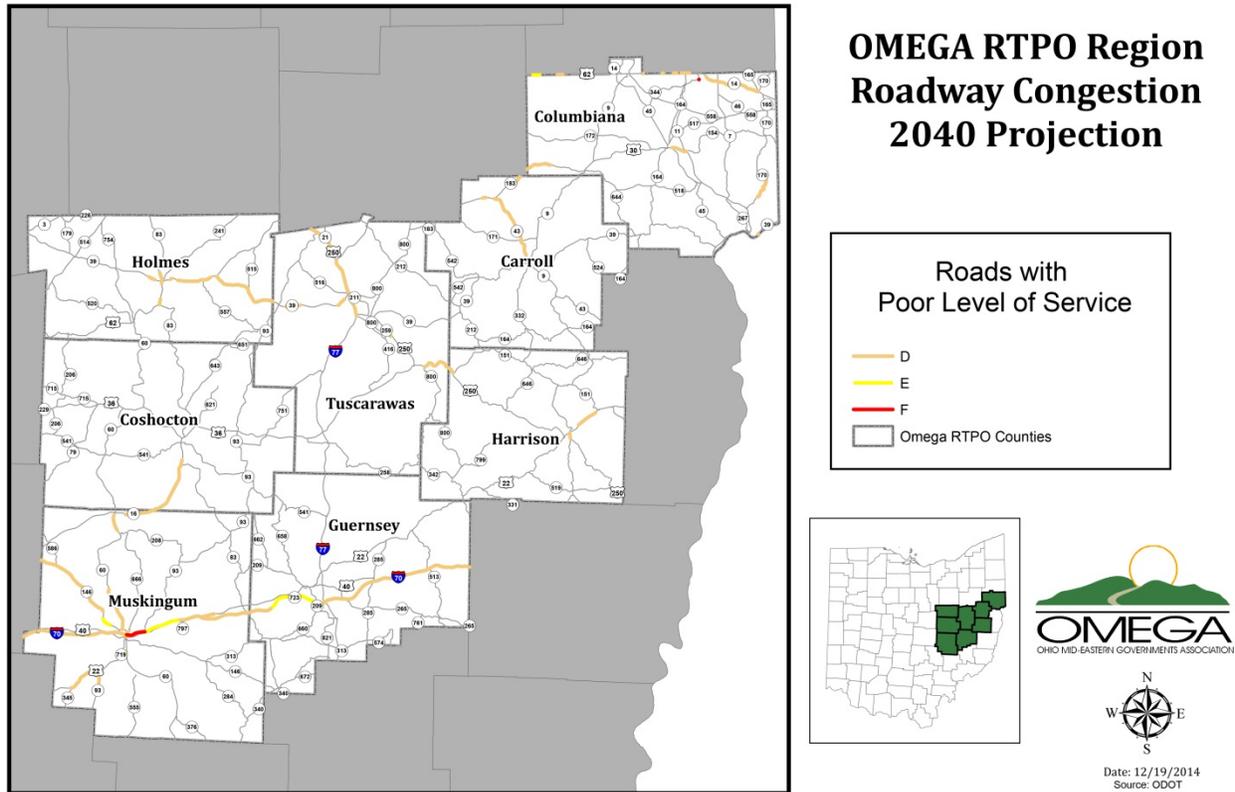
Between 2010 and 2040, the population of those age 60 and older is expected to increase by 14% and the population of those age 85 and older will increase by 69.3%. The aging population will most likely increase the need for demand response transit services for medical appointments, shopping, social visits, and other activities.

TRAFFIC VOLUME

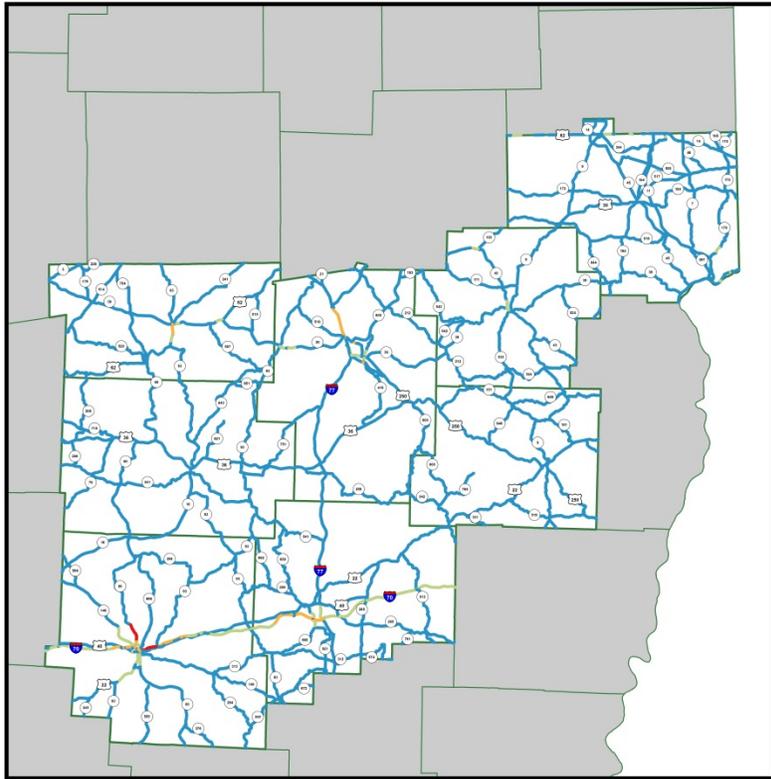
Projected traffic counts and car and truck growth rates from ODOT's 2040 Congestion Management System were analyzed and compared to actual traffic data collected between 2010 and 2014. In many instances, the data from the state's model does not appear to accurately reflect the growth that has occurred since the onset of shale development in the region. In the most active shale counties, truck volumes have increased by over 50% in three years, while the model is projecting an increase of less than 1% per year. For instance, in Harrison County, on US 22 between SR 800 and SR 331, truck volumes increased by over 63% between 2011 and 2013. However, the model is predicting a growth rate of less than 3% per year. Please note that these comparisons may be somewhat misleading since the model was based upon 2010 data. As shale development continues to move south and west, significant increases in the volume of traffic is expected to occur.

This increase in traffic volume, especially commercial trucks, will require increased pavement maintenance (resurfacing, full depth pavement replacement, pavement markings, etc.) on those roads not covered by Road Use Maintenance Agreements (RUMAs). Increased traffic volumes may also lead to congestion, and may increase safety concerns on the roads especially on the windy, hilly two lane state and local system that extends through much of our region.

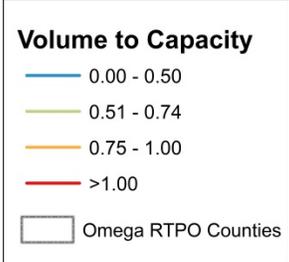
Increased traffic may also impact congestion and capacity leading to the need for turn lanes, alternative routes or bypasses, and multiple drive lanes. Roads with a 2040 projected level of service of D or worse are shown in the figure below.



Another measure of congestion is the Volume to Capacity (V/C) ratio. Those roads that are projected to be at or over capacity are shown in the figure on the next page.



OMEGA RTPO Region Roadway Congestion 2040 Projection



These projected increases in the V/C ratio as well as the degradation in level of service illustrate the need for long term planning to prevent congestion from occurring on these roads.

BRIDGES

Approximately 8% of the bridges under local jurisdiction in the RTPO region have a General Appraisal of 4 or less and should be replaced within the next five years or by 2020. The estimated cost to replace these bridges is approximately \$35.35 million. In addition, 266 bridges under local jurisdiction were constructed on or before 1950 and have not been rehabilitated or reconstructed. Although these bridges may now be adequate, by 2040 these bridges will be 90 years or older and approaching the end of their useful life. The total cost to replace these older bridges is approximately \$37.8 million. One major bridge in our region under local jurisdiction, the Philo Bridge (CR 32) in Muskingum County has an estimated replacement cost of \$15.3 million. This bridge is currently scheduled to be replaced in 2019. Therefore the total estimated cost for replacement of local bridges in the RTPO region is approximately **\$88.5 million**. Please note that as outlined in Section 3.4 of the Existing Conditions, the original data provided by ODOT does not appear to include all bridges under local jurisdiction. ODOT is currently updating the bridge data and OMEGA will revise the bridge data once the database is updated to include the general appraisal ratings. For these reasons, the current estimate of \$88.5 million may underestimate the cost for bridge repairs and replacement as all bridges under local jurisdiction may not be included in this analysis.

TRANSIT

In 2013, 368,100 passengers were served by the four transit agencies and two coordinated transportation agencies in the RTPPO. According to the Ohio Statewide Transit Needs Study, the average ridership for demand response services by the four transit agencies in the RTPPO increased by approximately 29% or 5% per year for the period between 2008 and 2012. Using this rate of 5% per year, the transit and transportation agencies in the RTPPO may need to serve over 1.3 million passengers by the year 2040. The aging population will contribute to this increase in demand for services.

With the projected increased ridership, the need for both fixed route and on demand services will increase resulting in the need for more vehicles and drivers. To address this need in a more efficient manor, transit agencies may need to consider new innovative alternatives to providing on demand services. Concerns about wait times, the need to call 24 to 48 hours in advance for service, weekend service, and service outside the normal 8 to 5 workday will need to be addressed. In addition, approximately 25% of the fleet used by the four transit agencies has reached the end of its useful life.

As outlined in the Ohio Statewide Transit Needs Study, the transit systems and coordinated transportation agencies within the RTPPO region are facing the following challenges:

- Reduced funding for vehicle replacement, staff, and equipment
- Low population density outside the cities and major villages
- Increase in passengers from human service agencies as population ages
- Increased truck traffic and congestion by shale development is slowing transit vehicles and reducing services
- Scheduling
- Transportation for medical services (long distance to Columbus, Cleveland, and in some cases out of county for dialysis)
- Effective and efficient coordination with other counties and agencies
- Service to higher poverty levels
- Difficulty finding drivers especially with competition from the oil and gas (shale) industry

Additional revenue streams are needed to meet the projected increased ridership and additional interagency coordination is needed to improve service efficiency and effectiveness especially for out of county trips.

RIVERS AND PORTS

Three major rivers pass through the OMEGA RTPPO region, the Ohio, Muskingum, and Tuscarawas Rivers. Of these three rivers, only the Ohio River is suitable for commercial shipping while the Muskingum and Tuscarawas Rivers are used primarily for recreation.

Of primary importance to the OMEGA RTPPO region is the Intermodal Facility in Wellsville, the New Cumberland Pool Terminals between River Miles 40 and 54.3, and the New Cumberland Lock at River Mile 54.3. Approximately 15 million tons of materials are currently shipped within the New Cumberland Pool. The material shipped through this region will most likely increase as a result of the shale industry. The need to ship materials for well development such as aggregate, sand, steel, etc. as well as product will increase. As the economy increases, businesses located in adjacent counties may also have a need to ship their products and to receive raw materials by barge and then transport those materials by either rail or truck to the final destination. Transportation systems to support these businesses, such as the US 30 Ohio's Energy Corridor, as well as rail may need to be upgraded in the future to meet the increased demand. Barriers to full utilization of these port facilities along the Ohio River will need to be identified and addressed.



As indicated in Section 3.6.2 of the Existing Conditions, restoration of the Ellis Lock and Dam is needed in order to once again open the transportation corridor along the Muskingum River from the City of Coshocton to the Ohio River. This may provide the opportunity for limited commercial shipping using quarter barges. The need for dredging sections of the Muskingum to accommodate commercial shipping may also be required.

The Muskingum River has been formally designated as a water trail by the Ohio Department of Natural Resources. This designation has and will continue to increase the recreational use and tourism opportunities along the Muskingum River. Repair of the Ellis Lock and Dam will also enhance these opportunities.

Designation of the Tuscarawas River as a water trail by ODNR is currently being considered. Once designated as a water trail, the opportunities for recreation and tourism along the Tuscarawas River are expected to increase as well. Additional boat ramps and launch areas are needed to expand these opportunities as well as coordination of these access areas with regional trails in order to expand the recreational opportunities of the region.

AVIATION

Each of the eight counties in the RTPO is served by a General Aviation Airport. Three airports, Carroll County – Tolson, Cambridge Municipal, and Harry Clever Field have identified the need to expand the primary runway to 5,000 feet. In addition to these major expansions, several compliance and benchmark recommendations for each of the eight airports in the region have been identified in the Ohio Airports Focus Study.

The Critical Compliance Factors are implemented by the FAA to describe the manner in which general aviation airport runways comply with their given classification level. This includes the runway safety areas (RSA), runway protection zones (RPZ), and the general pavement condition index (PCI) of the runway and surrounding pavement.

The total estimated cost for these eight airports to maintain system compliance with the current classification level is approximately \$33 million. Approximately **\$31 million (94%)** will be needed over the next 20 years for maintenance of the primary runway and other pavements and approximately \$1.47 million will be needed for land acquisition for runway protection zones. The remaining \$443,000 is needed for the primary runway safety area for the Harry Clever Field in New Philadelphia.

The cost to comply with system benchmarks may range from \$12.3 million to \$23.1 million depending upon whether or not the Richard Downing Airport decides to upgrade from an Airport Reference Code (ARC) B-II to C-II. This upgrade would allow the airport to increase the design aircraft's approach speed.

In summary, the total cost for the eight general aviation airports in the OMEGA RTPO to meet the FAA Critical Compliance Factors, System Benchmarks, and the runway extension for the Cambridge Municipal Airport over the next 20 years may range from **\$45.3 to \$56.1 million**. Please note that costs for the runway extensions for Carroll County – Tolson and Harry Clever Field are not yet available.

SHALE DEVELOPMENT

The shale industry will continue to impact the transportation systems within the RTPO planning area. As of May 15, 2015, 1,456 wells in the Utica formation have been permitted, drilled, in the process of being drilled, or in production in the OMEGA RTPO. This represents an increase of 36% since June 2014. Currently, 744 wells are in production in the region which is an increase of 90% since June 2014. The shale play appears to be moving south from Carroll County and extending into Harrison, Guernsey, Belmont, Noble, and Monroe Counties.

This level of development is projected to continue well into the future and will extend further to the west as newer extraction technologies become more cost effective to implement. Approximately 3,300 trucks are needed per well from initial site development through the hydraulic fracturing process and placing the well into production. Current statewide modeling conducted by ODOT does not yet indicate that the increased volume of traffic will lead to congestion or capacity issues in the shale area.

However, the increased volume of traffic is impacting pavement maintenance to include the need for more frequent resurfacing, full depth pavement replacement, pavement markings, and guardrail replacement. Many of the direct impacts to local county and township roads are being addressed through Road Use Maintenance Agreements (RUMAs); however, the state system and some local roads not covered by RUMAs are being adversely impacted by this development. Pipeline construction is also adding to the increased truck volume in the region.

Six processing plants are now located in the RTPPO region with a seventh planned. Construction of these facilities also contributed to the increased truck traffic in the region along with a number of superload permits. Shipment of product from these processing facilities will also impact transportation systems as product and raw materials may be shipped by pipeline, truck, rail, and potentially barge. For instance, Momentum Utica East Ohio Midstream located in Scio in Harrison County has 10 rail lines and is currently able to fill 32 rail cars with product (such as propane) in 1-1/2 hours and when in full operation will be able to fill 64 rail cars with product in 1-1/2 hours. Both rail and road systems will need to be assessed so that product and raw materials can be shipped effectively and safely to and from these facilities.

In addition, 41 injection wells are currently located in the RTPPO region, an increase of 27% since June 2014. The impact of the increased volume of trucks hauling wastes for disposal at these wells on local and state routes in close proximity to cities (such as the City of Cambridge) and commercial areas will need to be assessed.