

BUILD BUILD LEHIGH VALLEY LV

September 2016

Lehigh Valley Annual Development Report



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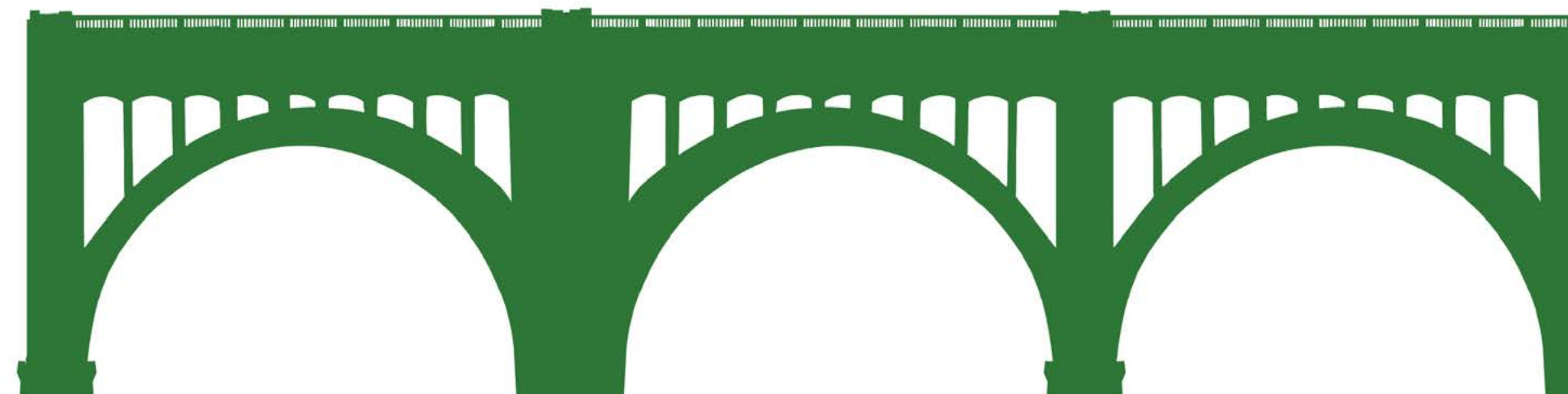
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EXECUTIVE SUMMARY



The subdivision and land development plans submitted to the Lehigh Valley Planning Commission (LVPC) provide important insights into the location, pace and character of development in Lehigh and Northampton counties. These insights into regional development activity, in turn, illuminate trends in the region's economy and can anticipate changes in the region's physical landscape. *BUILD LV 2016* is a summary of the subdivision and land development plans reviewed by the Lehigh Valley Planning Commission in 2015. The report analyzes development activity in 2015, assesses development trends between 2006 and 2015, and provides a brief summary of development activity in the first half of 2016.

Place matters in the Lehigh Valley, and the character of development between 2006 and 2015 was largely determined by its location. In 2015, **most land development in Lehigh County was associated with residential development, while most land development in Northampton County was associated with non-residential development** (particularly industrial development). Similarly, in the ten years before 2015, the hotspots for residential development were mostly

located in Lehigh County, and the hotspots for non-residential development were mostly located in Northampton County. In the residential sector, Upper Macungie Township and Allentown City saw the most approved residential units between 2006 and 2015, followed by Hanover Township in Northampton County, Upper Saucon Township and Forks Township. In the non-residential sector, Bethlehem City and Lower Nazareth Township saw the most approved building floor area between 2006 and 2015 (with 7.1 million square feet and 6.1 million square feet, respectively), followed by Lower Macungie Township (4.9 million square feet), Upper Macungie Township (4.2 million square feet) and Weisenberg Township (2.9 million square feet). Within the two counties, most new construction occurred in the townships, while most improvements occurred in the region's cities and boroughs.

Residential activity in 2015 reflected the challenges presented by the slow economic recovery, as well as the opportunities presented by new cultural preferences. After several years of limited residential activity, growth in multi-family development continued to drive a slow recovery. **The LVPC recorded 16% more approved residential units in 2015 than in 2014** (1,300 units compared to 1,117

units), and most of the approved units were in apartment, assisted living or condominium developments. Apartment development has become particularly important since the financial crisis, with the number of approved apartment units matching the number of approved single family homes in 2013, and exceeding single family homes by margins of more than 2 to 1 in 2014 and 2015. Condominium development also appears to be returning to the scene, with 2015 marking the first year that condominium projects were approved since 2008. On the one hand, the rise in apartment development reflects the challenges of the slow economic recovery. In an era of slow income growth and tight mortgage credit, many households are unable to finance home purchases. On the other hand, some of the rise in multi-family development (particularly condominium and townhouse development) may reflect new preferences for buying a first home later in life, or for living in more walkable neighborhoods.

Non-residential activity in 2015 reflected the challenges and opportunities presented by new economic drivers and cultural preferences. Non-residential development rebounded more quickly and more fully than residential development and was largely driven by indus-

trial activity. **The LVPC recorded 27% more approved non-residential floor area in 2015 than in 2014** (5.6 million square feet compared to 4.4 million square feet), and most of this approved floor area was industrial. The mix of non-residential uses was somewhat more balanced in 2015 than in previous years (with mixed-use and power-center developments adding significant office and retail space), but warehousing and light industrial activity continued to dominate the non-residential sector. The many brown-field redevelopment sites in the Lehigh Valley represent an important opportunity for non-residential development, allowing for development to occur in areas served by existing transportation, energy and sewer and water infrastructure. The rise of e-commerce represents both a challenge and an opportunity because e-commerce competes with brick-and-mortar stores for consumer dollars. On the other hand, e-commerce is playing a large role in the growth of warehousing in the Lehigh Valley.



SUBDIVISION AND LAND DEVELOPMENT

Land is one of our most precious resources, and land development today will shape not only our quality of life, but that of future generations for many years to come. To guide local land development activity, most municipalities in Pennsylvania regulate the division and development of land. Over 90% of Pennsylvania municipalities have subdivision and land development ordinances that control how land development relates to the land upon which it is located.¹ In the Lehigh Valley, 58 of the region's 62 municipalities have adopted subdivision and land development ordinances. It is important to note that subdivision and land development ordinances do not control where a use or activity can or cannot locate. This control is the role of zoning.

Subdivision and land development ordinances require certain procedures for submitting and reviewing subdivision and land development applications. While the Pennsylvania Municipalities Planning Code (Act 247) largely dictates the general procedures that must be followed, municipal officials are responsible for preparing and enacting reasonable design standards.

THE LEHIGH VALLEY PLANNING COMMISSION

The Pennsylvania Municipalities Planning Code requires all subdivision and land development applications to be submitted to the county planning commission for review prior to municipal action. The Lehigh Valley Planning Commission (LVPC) is the official county planning commission for Lehigh and Northampton counties and serves

¹ Pennsylvania Department of Community and Economic Development, 2015. Subdivision and Land Development in Pennsylvania. Available at: http://www.newpa.com/download/planning-series-08-subdivision-and-land-development-in-pennsylvania/#.V5_BJMrLBI.

as staff for the federally-designated metropolitan planning organization (Lehigh Valley Transportation Study). The LVPC reviews all subdivision and land development plans in Lehigh and Northampton counties for consistency with the policies of the *Comprehensive Plan: The Lehigh Valley ... 2030*.

THE DATA IN THIS REPORT

Through the plan review process, the LVPC collects extensive data on plan activity, residential development activity and non-residential development activity in the 62 municipalities of Lehigh and Northampton counties. Every year since 1972, the LVPC has released this data in an annual report. *BUILDLV 2016* provides the annual development report for 2015 as well as the outlook for 2016.

BUILDLV 2016 retains the most-requested and most-cited analyses from previous annual reports but also adds several new features. As in previous reports, plan activity is measured in terms of plans reviewed; residential activity is measured in terms of housing units; and non-residential activity is measured in terms of square feet of building floor area. Unlike previous reports, three development types are distinguished: residential, non-residential and non-development. Plans that involve only lot line adjustments or parking lot expansions are considered non-development rather than non-residential. Also, total development activity (the sum of residential, non-residential and non-development activity) is measured in terms of acres of land developed rather than "lots". To add to previous analyses, *BUILDLV 2016* includes per capita analyses of plan activity for each municipality and more extensive analyses of development densities. Finally, to enhance usability, *BUILDLV 2016* divides the analysis of land development activity into separate sections on 2015 activity and ten-year trends.



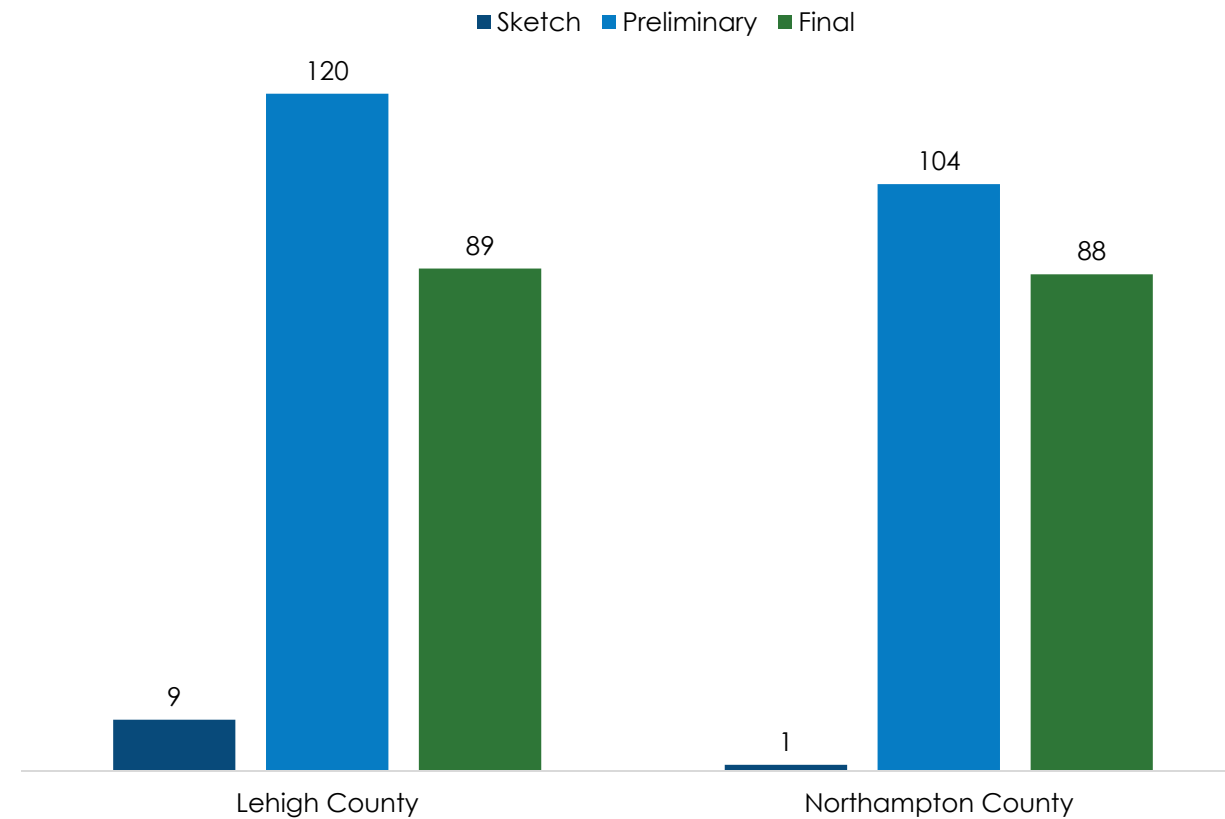
CURRENT
ACTIVITY

PLANS

Plans Submitted

In 2015, the Lehigh Valley Planning Commission received a total of 411 subdivision and land development plans for review. This represents a 7% increase from the 384 plans received in 2014. Lehigh County submitted slightly more plans than Northampton County, but both counties had a similar mix of plan phases. Of the 411 plans received in 2015, 57% were in the proposed phase (sketch or preliminary plans), and 43% were in the approved phase (final plans). Nearly half of the plans reviewed were non-development plans (181, or 44%). Of the remaining plans, 143 were for non-residential development (35%), and 87 were for residential development (21%).

Lehigh and Northampton Counties Submitted a Similar Mix of Plan Phases



Plan Location

As might be expected, the municipalities with the largest or fastest-growing populations submitted the greatest number of plans. The municipality that submitted the most plans in 2015 was Bethlehem City (34), followed by Allentown City (28), Upper Macungie Township (27) and Lower Macungie Township (24). The map of plan activity per 1,000 residents shows which municipalities are experiencing the most development activity relative to their populations. Generally speaking, plan

activity was highest in the townships and lowest in the cities and boroughs. While townships submitted an average of 1.09 plans per 1,000 residents, cities submitted 0.38 plans per 1,000 residents and boroughs submitted only 0.43 plans per 1,000 residents. Plan activity was particularly high in western Lehigh County, where the highest intensity of plan activity went to Lowhill Township (4.5), followed by Weisenberg Township (2.4), Coopersburg Borough (1.8) then Lynn

Township (1.6). Plan activity was also high in Lower Nazareth Township, which submitted 2.6 plans per capita. Only nine municipalities submitted no plans in 2015, and all nine were boroughs (Chapman, Fountain Hill, Freemansburg, Glendon, North Catasauqua, Portland, Stockertown, Tatamy and West Easton). Plan activity was highly concentrated in the townships, with nearly three-quarters of all plans submitted by townships.

Townships Submitted the Most Plans

Townships
(300 plans)

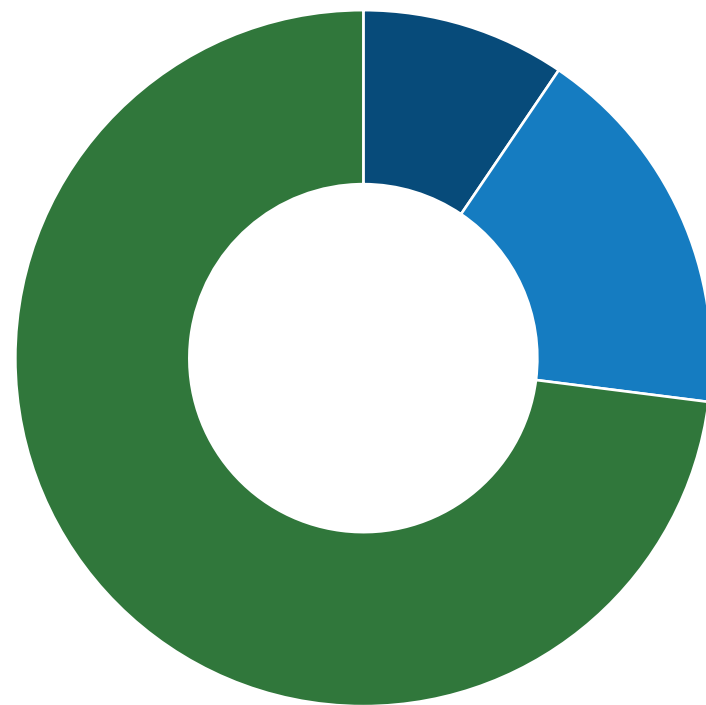
73.0%

Cities
(72 plans)

17.5%

Boroughs
(39 plans)

9.5%



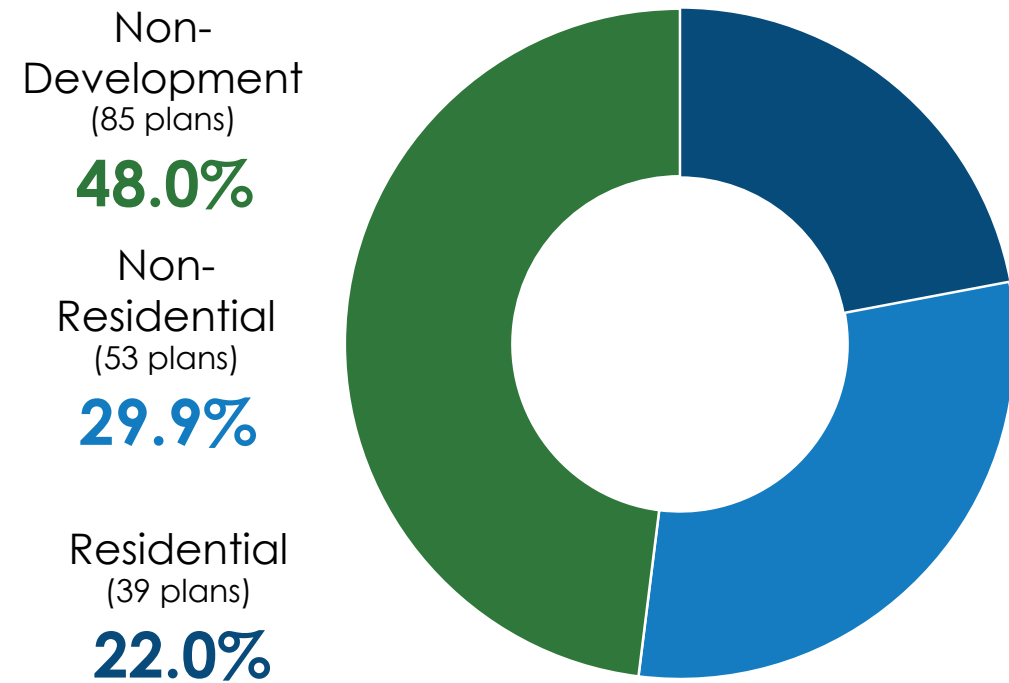
Final Plan Types and Area

In reviewing subdivision and land development plans, the LVPC tracks three development types: residential, non-residential and non-development. “Non-development” refers to lot line adjustments, simple subdivisions, lot consolidations or parking lot expansions that otherwise involve no new building construction. Of the final plans submitted in 2015, roughly half were for non-development, 22% were for residential development and 30% were for non-residential development. The distribution among development types was about the same in the two counties.

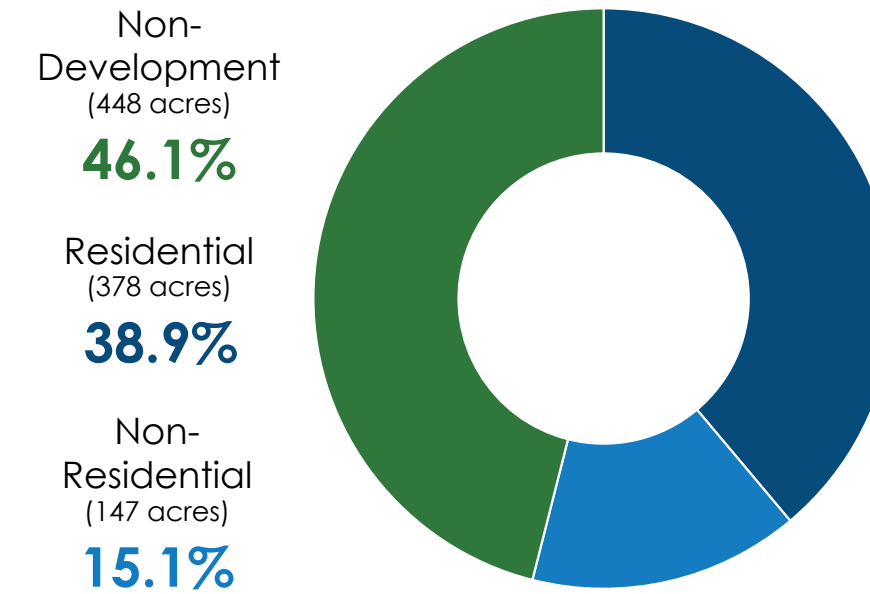
Each final plan also includes data on the land area associated with approved subdivision and land development activity. In 2015, the total land area associated with the final plans reviewed by the LVPC was 1,579 acres. For reference, the entire Borough of Northampton (in Northampton County) is about 1,679 acres. Of the land area affected by approved subdivision and land development plans, 38% were associated with non-development, 35% with residential development, and 27% with

non-residential development. Interestingly, the mix of development types varied greatly between Lehigh and Northampton counties, with more residential development in Lehigh County and more non-residential development in Northampton County. In Lehigh County, 2.6 acres of residential activity occurred for every one acre of non-residential activity. In Northampton County, on the other hand, about 0.6 acres of residential activity occurred for every one acre of non-residential activity.

A Large Share of Final Plans were Non-Development Plans

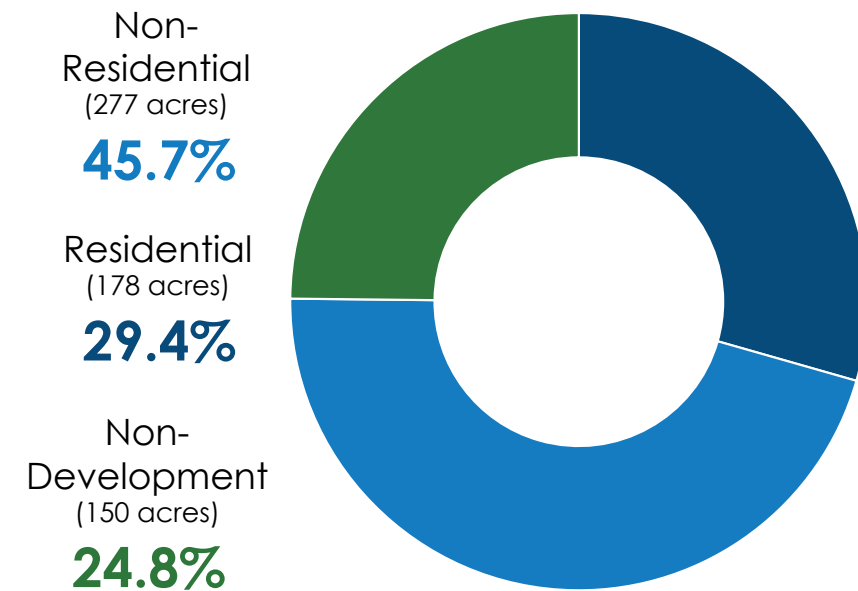


Most Approved Land Area in Lehigh County was Associated with Non-Development and Residential Development



Upper Macungie Township and Upper Saucon Township were hotspots for approved residential development in 2015, with the region's three cities not far behind. As multi-family housing continued to dominate the residential sector, a mix of multi-family housing types was approved. Medium and high density housing types were not confined to the region's urban centers, but were approved in its suburban townships as well.

Most Approved Land Area in Northampton County was Associated with Non-Residential Development



RESIDENTIAL DEVELOPMENT

Residential Plans

The LVPC reviewed 87 residential subdivision and/or land development plans in 2015. For every residential plan received, the LVPC tracks the type of residential development, the number of new units and the land area of the development (measured in acres).

The 87 residential plans reviewed by the LVPC included 3,130 units—1,830 proposed units and 1,300 approved units. Of these 87 residential plans, 16 were for projects that were submitted twice in 2015, once in a preliminary plan and once in a final plan. If a preliminary plan is received early enough and/or is advanced quickly enough, the LVPC sometimes reviews both the preliminary and final plans in the same year.

Location of Proposed Residential Development

Most of the proposed residential units in 2015 were concentrated within a handful of municipalities. In Lehigh County, proposed residential development in Allentown City, South Whitehall Township and Lower Macungie Township represented 83% of all proposed residential units. In Northampton County, proposed residential development in Palmer Township, Bethlehem Township and East Allen Township represented 78% of all proposed residential units.

Location of Approved Residential Development

The number of approved residential units was significantly larger in 2015 than in 2014. While 1,117 approved residential units were recorded

in 2014, the LVPC recorded 1,300 approved residential units in 2015—an increase of approximately 16%. The vast majority of these units were located in Lehigh County. While the final plans submitted in Northampton County included a total of 254 units, final plans submitted in Lehigh County included a total of 1,046 units. Most of the approved residential units were concentrated in a handful of municipalities. In Lehigh County, 95% of approved residential units were located in Upper Macungie Township, Upper Saucon Township and Allentown City. In Northampton County, 90% of approved residential units were located in Bethlehem City, Easton City and Lower Nazareth Township.

Municipal Ranking - Proposed Residential Units

	Lehigh County	Units	% of Total
1	Allentown City	277	34.7%
2	South Whitehall Township	264	33.1%
3	Lower Macungie Township	118	14.8%
4	Upper Macungie Township	53	6.6%
5	Coopersburg Borough	38	4.8%
6	Lowhill Township	22	2.8%
7	Salisbury Township	7	0.9%
8	Lynn Township	4	0.5%
9	Weisenberg Township	3	0.4%
10	North Whitehall Township	3	0.4%
	All Other Municipalities	9	1%
	TOTAL	798	100%

	Northampton County	Units	% of Total
1	Palmer Township	316	30.6%
2	Bethlehem Township	262	25.4%
3	East Allen Township	232	22.5%
4	Allen Township	135	13.1%
5	Easton City	37	3.6%
6	Bethlehem City	31	3.0%
7	Williams Township	6	0.6%
8	Forks Township	3	0.3%
9	Lehigh Township	3	0.3%
10	Moore Township	2	0.2%
	All Other Municipalities	5	0%
	TOTAL	1,032	100%

Municipal Ranking - Approved Residential Units

	Lehigh County	Units	% of Total
1	Upper Macungie Township	619	59.2%
2	Upper Saucon Township	242	23.1%
3	Allentown City	129	12.3%
4	Coopersburg Borough	23	2.2%
5	Lowhill Township	18	1.7%
6	Salisbury Township	6	0.6%
7	Whitehall Township	3	0.3%
8	Washington Township	2	0.2%
9	Weisenberg Township	2	0.2%
10	Lower Milford Township	1	0.1%
	All Other Municipalities	1	0.1%
	TOTAL	1,046	100.0%

	Northampton County	Units	% of Total
1	Bethlehem City	104	40.9%
2	Easton City	85	33.5%
3	Lower Nazareth Township	40	15.7%
4	Williams Township	11	4.3%
5	Bethlehem Township	2	0.8%
6	Bushkill Township	2	0.8%
7	Lower Saucon Township	2	0.8%
8	Moore Township	2	0.8%
9	Washington Township	2	0.8%
10	East Allen Township	1	0.4%
	All Other Municipalities	3	1.2%
	TOTAL	254	100.0%

BUILD LV

Lehigh Valley Annual Development Report

Much of the approved residential activity in 2015 was driven by the top ten largest residential projects. These ten projects included 1,108 units, or 85% of all approved residential units in the Lehigh Valley. Note that five of these projects were apartment developments, and only one was a single family development.

The accompanying map shows the location of the ten largest approved residential projects in 2015.

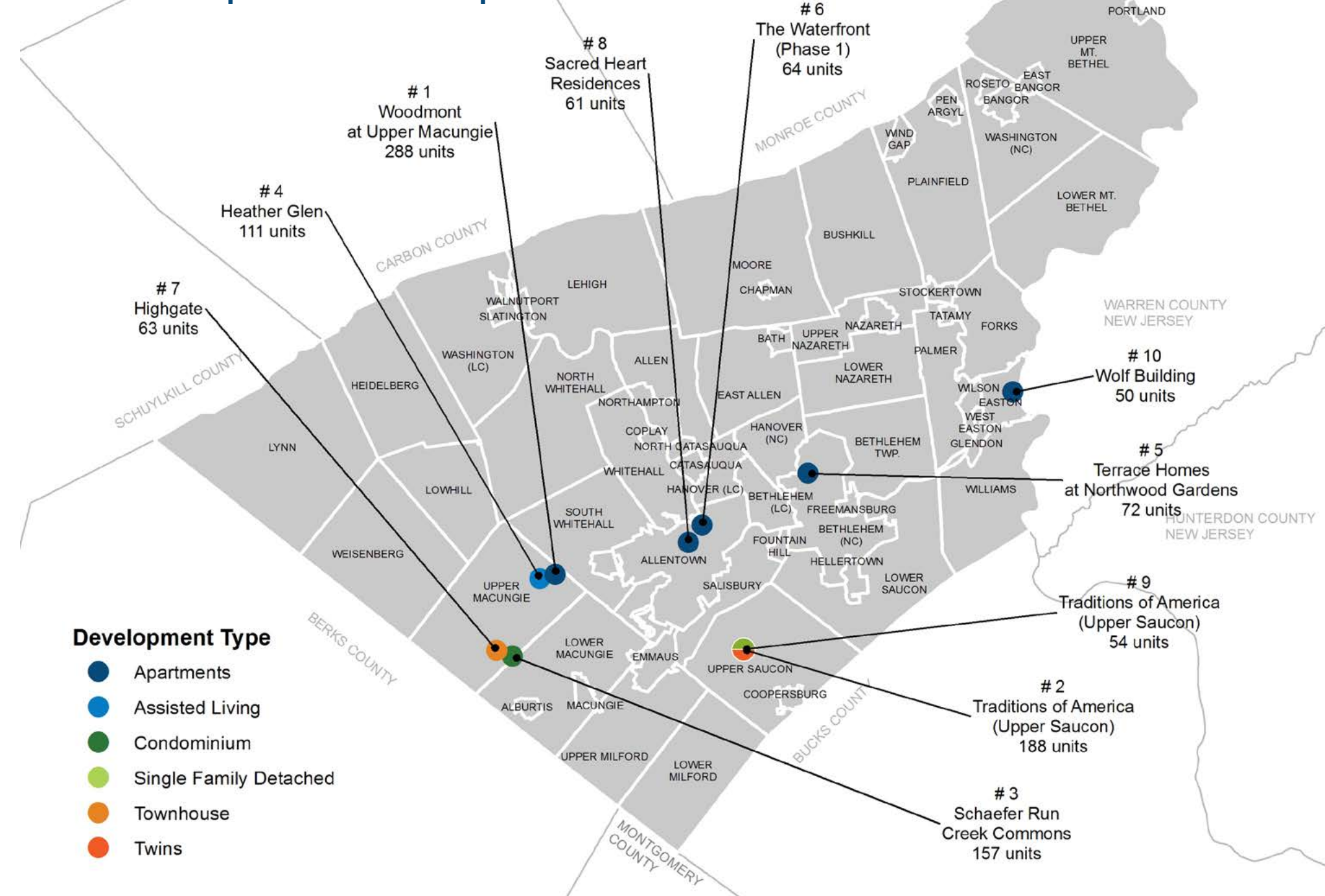
At the regional scale, it is important to note the distribution of residential activity among the region's townships, cities and boroughs.

Nearly three-quarters of all approved residential units were concentrated in the townships, and almost all of the remaining residential activity was located in the cities. Of the 342 approved residential units that were not located in the region's townships, only 24 were located in its boroughs.

Top Ten Largest Approved Residential Projects

Municipality	Project	Units	Land Use
1 Upper Macungie Township	Woodmont at Upper Macungie	288	Apartments
2 Upper Saucon Township	Traditions of America	188	Single Family
3 Upper Macungie Township	Schaefer Run Creek Commons	157	Condominiums
4 Upper Macungie Township	Heather Glen	111	Assisted Living
5 Bethlehem City	Terrace Homes at Northwood Gardens	72	Apartments
6 Allentown City	The Waterfront (Phase 1)	64	Apartments
7 Upper Macungie Township	Highgate	63	Townhouses
8 Allentown City	Sacred Heart Residences	61	Apartments
9 Upper Saucon Township	Traditions of America	54	Twins
10 Easton City	Wolf Building	50	Apartments

Many of the Largest Residential Projects were Apartment Developments

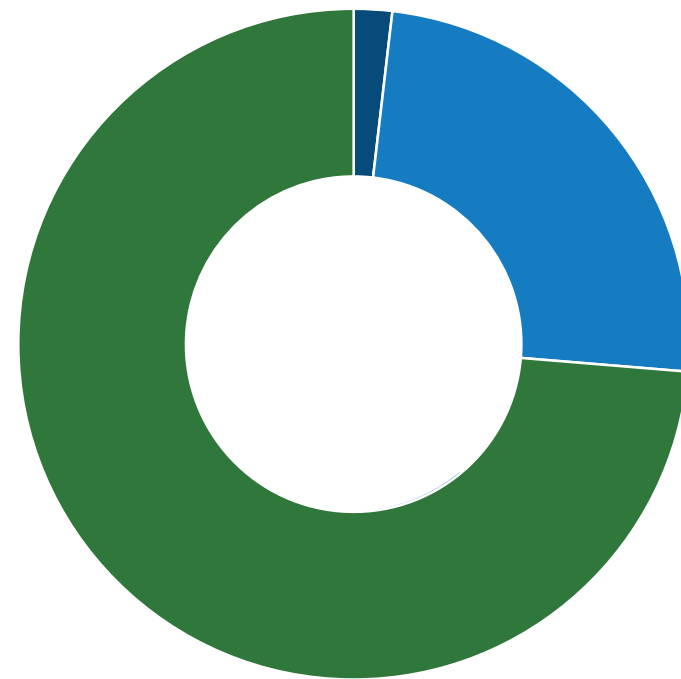


Most Approved Residential Units were Located in the Townships

Townships
(958 units)
73.7%

Cities
(318 units)
24.5%

Boroughs
(24 units)
1.8%



Approved Residential Types

For each plan with a residential component, the LVPC records the number and type of housing units included in the plan, as well as the type of water and sewer infrastructure. The eight types of housing units in the LVPC database are illustrated in the accompanying graphic. Twins are also known as semi-detached houses or duplexes. Unlike single family houses, which have no shared walls, twins share one wall with their neighbor. Mobile home parks and planned residential developments have become relatively uncommon in the Lehigh Valley. No final plans have included either housing type since 2009.

Data on the types of residential units submitted in final plans provide some insight into the character of new residential development. As in 2014, apartments accounted for the largest share of approved residential units in 2015 (44%), followed by single family

Residential Housing Types



APARTMENT



DETACHED SINGLE FAMILY HOUSE



TOWNHOUSE



MOBILE HOME



ASSISTED LIVING



TWIN



CONDO



PLANNED RESIDENTIAL

detached houses (19%). Some important differences are observed, however, between 2014 and 2015. First, apartments constituted a smaller share of approved residential units in 2015 (44% in 2015 compared to 58% in 2014), while condominiums constituted a larger share (13.8% in 2015 compared to 0% in 2014). 2015 was the first year with approved condominium development since 2008. Of the 180 approved condominium units, 157 were associated with a single age-restricted residential community (Schaefer Run Creek Commons). 2015 also saw a larger share of townhouses than in 2014 (7.8% compared to 0.7%) and a smaller share of assisted living units (11% compared to 17.1%). As in 2014, no mobile home parks or planned residential developments were approved across the Lehigh Valley in 2015.

Most Approved Residential Units were Apartments or Single Family Homes



Data on the types of water and sewer infrastructure included in final plans can also provide some insight into the character of new residential development. Very low density housing that is far from urban centers (also known as exurban housing) tends to be served by on-lot systems, while higher density suburban and urban housing tends to be

served by public or community systems. In 2015, the percentage of approved residential units served by on-lot sewer systems was only 3.8%, suggesting that, across the Lehigh Valley, only a small percentage of residential units were exurban in character. The percentage was much higher in Northampton

County, however, where nearly 8% of residential units were served by on-lot sewer systems. These units were all single family homes and had a median lot size of 3.8 acres. Taken together, these observations indicate that exurban housing development is more common in Northampton County.

Water and Sewer Infrastructure

County	% of Units with On-Lot Water	% of Units with On-Lot Sewer
Lehigh County	2.7%	2.8%
Northampton County	6.7%	7.9%
Lehigh Valley	3.5%	3.8%

Approved Residential Density

The data recorded by the LVPC for subdivision and land development plans can be analyzed to estimate the average density of residential units. In 2015, the average density of approved residential development was 2.2 units per acre in Lehigh County, 0.8 units per acre in Northampton County and 1.7 units per acre in the Lehigh Valley. This average density falls well below the minimum density recommended in the Lehigh Valley Comprehensive Plan of four units per acre for single family detached housing in “urban development” areas. The median density, however, tells a different story. The median density is the density that falls in the middle of all approved residential units. Half of the approved units will have a higher density than the median, and half of the approved units will have a lower density.

In 2015, the median density of approved residential development was 9.2 units per acre. Comparing the average and the median suggests that many residential projects in the Lehigh Valley are occurring at recommended densities for urban areas, but a few projects have such low densities that they are skewing the average.

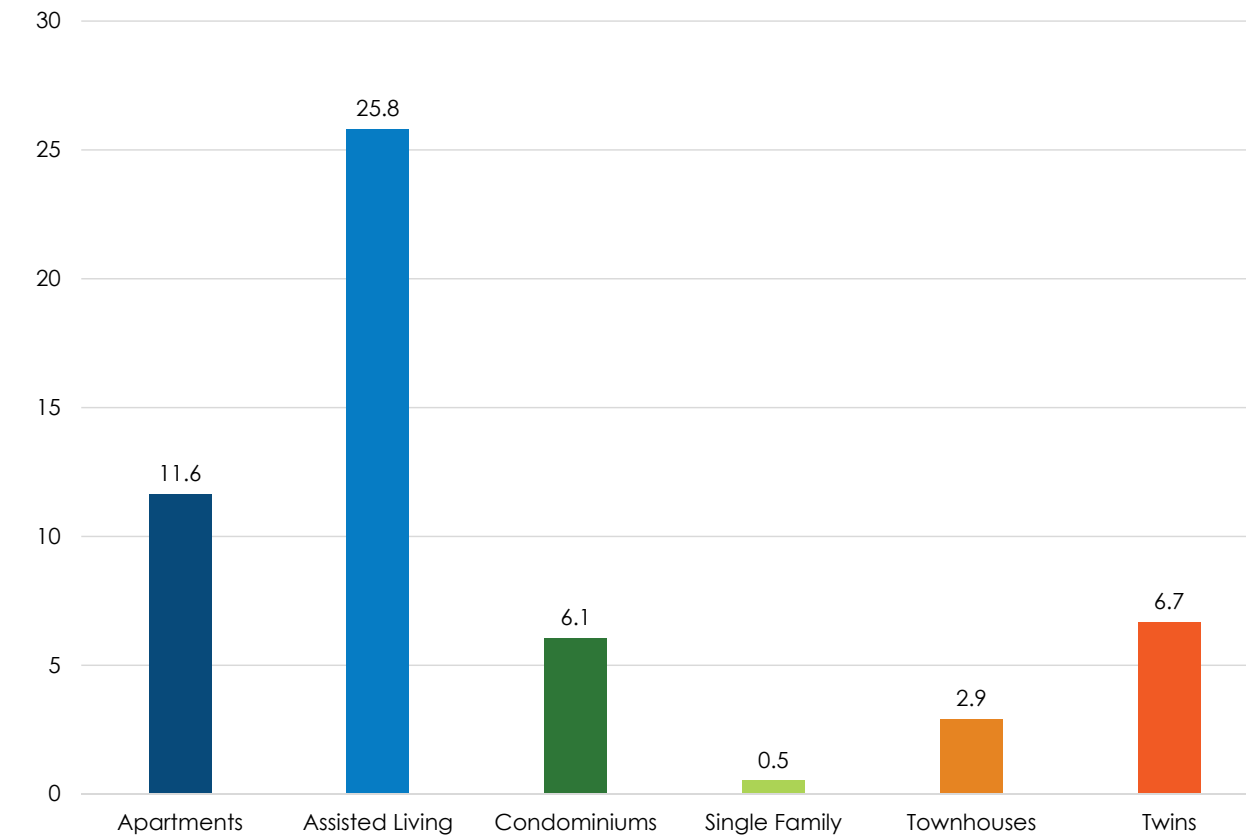
Single family and townhouse developments appear to be driving the low average density observed in 2015. The average density of approved single family houses was 0.5 units per acre (only 13% of the recommended minimum density of four units per acre), while the average for approved townhouses was 2.9 units per acre (only 36% of the recommended minimum density of eight units per acre). For single family and townhouse development, the

median density does not depart significantly from the average density. The median density of all approved single family development was 1.8 units per acre, or nearly half the density recommended in the Lehigh Valley Comprehensive Plan. The median density of all approved townhouse development remained at 2.9 units per acre, well below the recommended minimum.

While low and medium density housing types (single family, townhouses, twins and condos) were confined almost exclusively to the townships, higher density apartment and assisted living developments were approved throughout the region, in both urban and suburban locations. Indeed, the townships had more approved high density housing units in 2015 than the cities and boroughs combined.

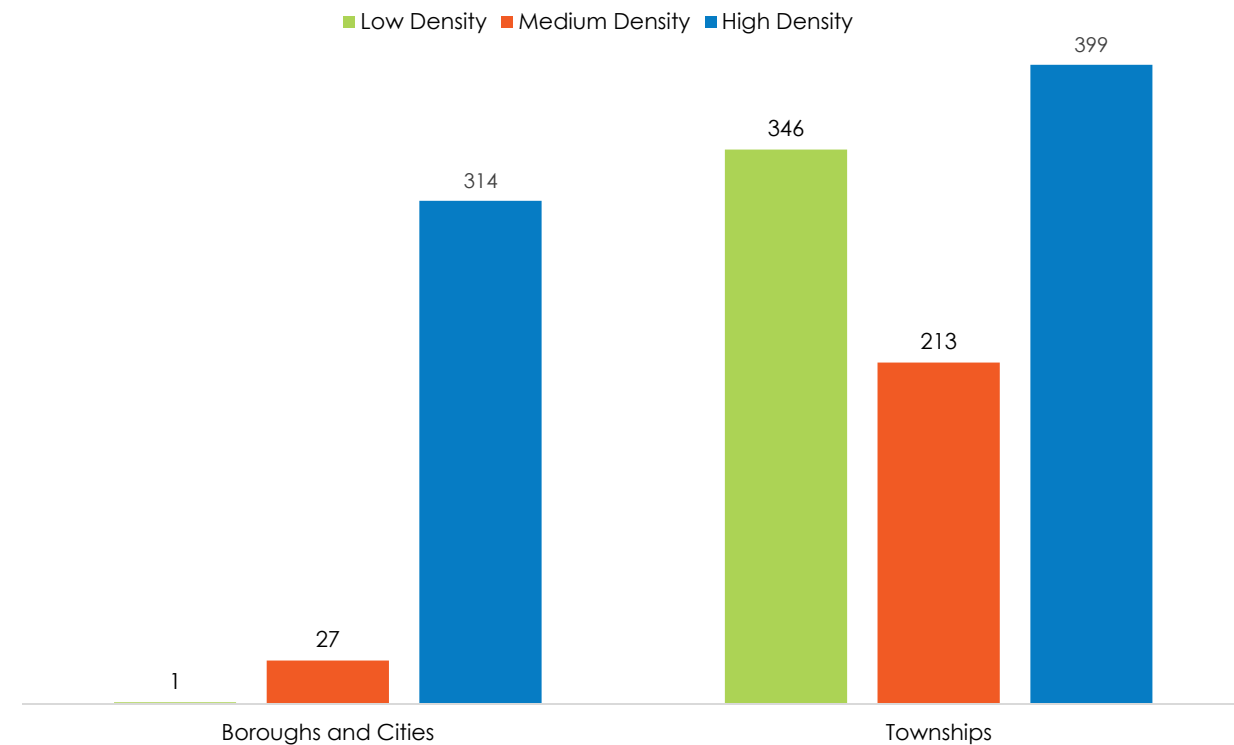
Approved Residential Densities Varied Dramatically Among Housing Types

Average Density of Approved Residential Units (Units per Acre)



High Density Residential Units were Approved in both Urban Centers and Townships

Location of Approved Residential Units

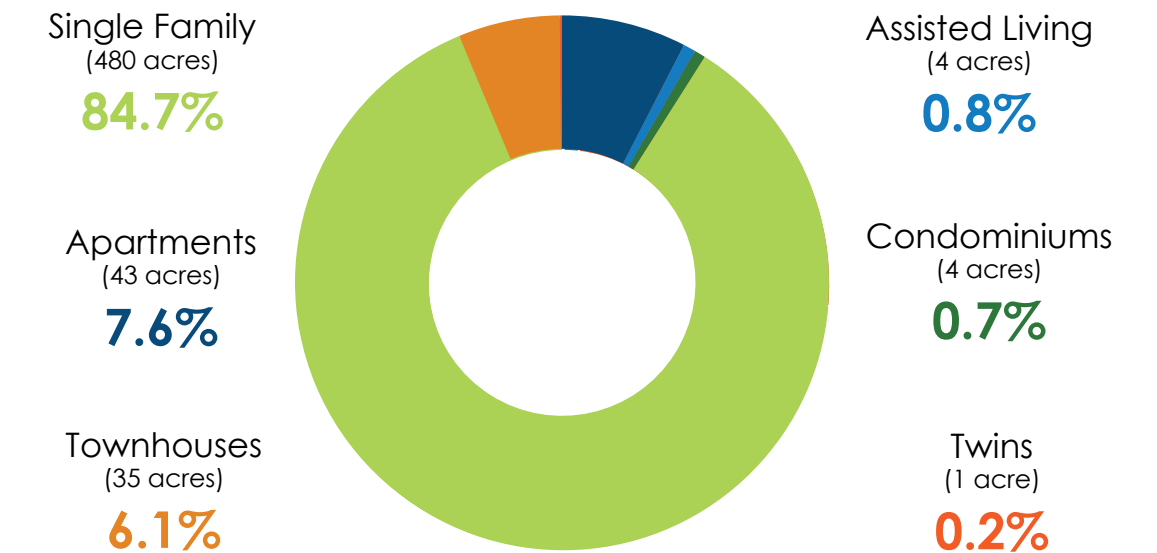


Note: Low Density includes single family homes and townhouses; Medium Density includes condominiums and twins; High Density includes apartments and assisted living.

Approved Residential Area

The impact of approved residential development on the landscape of the Lehigh Valley will be determined as much by the area of land developed as by the number and density of units built. In 2015, the land area associated with approved residential development was 566 acres. This area is 50% larger than the 376 acres included in approved residential projects in 2014. While single family housing accounted for less than a fifth of all approved units in 2015, the single family housing type dominated the land area associated with residential development. Approved single family development accounted for 480 of the 566 acres approved for residential development, followed by apartments (with 43 acres) and townhouses (with 35 acres). Despite playing a smaller role in the mix of housing types in the Lehigh Valley, single family housing still plays a leading role in the transformation of the landscape.

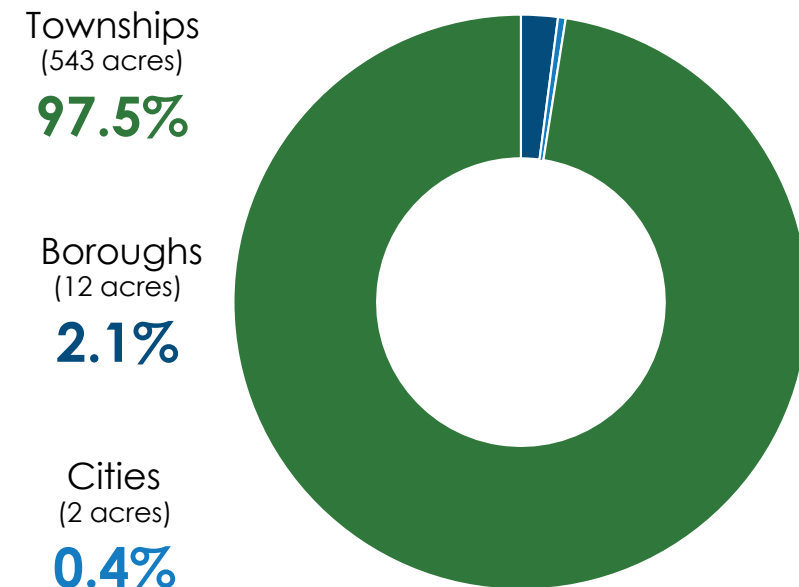
Most Approved Residential Area was Associated with Single Family Homes



A handful of large, high profile projects drove non-residential activity in 2015. While warehousing and light industrial activity continued to dominate the non-residential sector, mixed-use projects and power centers (large, open-air shopping centers) were important players as well. Non-residential activity was largely absent from the region's boroughs.

The land area associated with approved residential development is overwhelmingly located in the townships. While the townships accounted for 74% of approved residential units in the Lehigh Valley, they accounted for about 98% of approved residential area. This finding is not particularly surprising, given the character of new residential development in the townships as compared to the cities and boroughs. Most of the approved residential units in the cities and boroughs were apartment units (282 of 342). In contrast, approved residential development in the townships was a mix of low density and high density housing types. The most common housing types in the townships were apartments (288 of 958 units) and single family homes (245 of 958 units).

A Disproportionate Share of Residential Area was Located in the Townships



NON-RESIDENTIAL DEVELOPMENT

Non-Residential Plans

The LVPC reviewed 143 non-residential subdivision and/or land development plans in 2015, representing 35% of all plans reviewed. For every non-residential plan received, the LVPC tracks the types of non-residential uses, the building floor area associated with each use (measured in square feet) and the land area of the development (measured in acres). Because the site plan can change significantly between a project's preliminary and final plans, the LVPC only tracks the floor area of approved non-residential developments.

Of the 143 non-residential plans reviewed in 2015, 90 were submitted as proposed plans (63%) and 53 were submitted as approved plans (37%). The approved developments included a total floor area of 5.6 million square

feet. As with residential development, there is some overlap between proposed and approved developments in a given year. Of the 143 non-residential plans submitted in 2015, 19 were submitted twice—once in a proposed plan and once in a final plan.

Location of Proposed Non-Residential Development

Non-residential development was more evenly distributed among the region's municipalities than residential development, but a significant share of proposed non-residential plans in 2015 was still concentrated in a handful of municipalities. In Lehigh County, proposed plans in Upper Macungie Township, Allentown City, South Whitehall Township and Lower Macungie Township represented

60% of all proposed non-residential plans. In Northampton County, proposed plans in Bethlehem City, Bethlehem Township, Hanover Township and Forks Township represented 46% of all proposed plans.

Location of Approved Non-Residential Development

The LVPC saw similar numbers of approved non-residential plans between 2015 and 2014. Fifty-three final non-residential plans were reviewed in 2015, compared to 52 in 2014. The two counties submitted almost equal numbers of final non-residential plans. Within the two counties, however, many of the approved non-residential plans were concentrated in a handful of municipalities. In Lehigh County, 64% of approved non-residential

plans were submitted by Lower Macungie Township, Upper Macungie Township, Upper Saucon Township and Allentown City. In Northampton County, 64% of approved non-residential plans were submitted by Bethlehem City, Hanover Township, Lower Nazareth Township and Bethlehem Township.

Just as the quantity of approved residential development is more precisely measured by units than by plans, the quantity of approved non-residential development is more precisely measured by building floor area than by plans. The final non-residential plans submitted in 2015 included a total of 5.6 million square feet of building floor area. This total is 27% higher than the 4.4 million square feet of non-residential development approved in 2014. Interestingly, the approved building floor area was not as evenly distributed between the two

Municipal Ranking - Proposed Non-Residential Plans

	Lehigh County	Plans	% of Total
1	Upper Macungie Township	10	18.9%
2	Allentown City	9	17.0%
3	South Whitehall Township	7	13.2%
4	Lower Macungie Township	6	11.3%
5	Whitehall Township	5	9.4%
6	Bethlehem City	3	5.7%
7	North Whitehall Township	2	3.8%
8	Upper Saucon Township	2	3.8%
9	Lynn Township	2	3.8%
10	Macungie Borough	2	3.8%
	All Other Municipalities	5	9.0%
	TOTAL	53	100%

	Northampton County	Plans	% of Total
1	Bethlehem City	6	16.2%
2	Bethlehem Township	4	10.8%
3	Hanover Township	4	10.8%
4	Forks Township	3	8.1%
5	Lower Saucon Township	2	5.4%
6	Plainfield Township	2	5.4%
7	Palmer Township	2	5.4%
8	Easton City	2	5.4%
9	Allen Township	2	5.4%
10	Lower Nazareth Township	2	5.4%
	All Other Municipalities	8	22.0%
	TOTAL	37	100%

Municipal Ranking - Approved Non-Residential Plans

	Lehigh County	Plans	% of Total
1	Lower Macungie Township	6	21.4%
2	Upper Macungie Township	5	17.9%
3	Upper Saucon Township	4	14.3%
4	Allentown City	3	10.7%
5	Whitehall Township	2	7.1%
6	Slatington Borough	2	7.1%
7	South Whitehall Township	2	7.1%
8	Bethlehem City	1	3.6%
9	Weisenberg Township	1	3.6%
10	Upper Milford Township	1	3.6%
	Lynn Township	1	4.0%
	TOTAL	28	100%

	Northampton County	Plans	% of Total
1	Bethlehem City	5	20.0%
2	Hanover Township	5	20.0%
3	Lower Nazareth Township	3	12.0%
4	Bethlehem Township	3	12.0%
5	Forks Township	2	8.0%
6	Walnutport Borough	1	4.0%
7	Northampton Borough	1	4.0%
8	Upper Mt. Bethel Township	1	4.0%
9	Lower Mt. Bethel Township	1	4.0%
10	Williams Township	1	4.0%
	All Other Municipalities	2	8.0%
	TOTAL	25	100%

counties as the approved non-residential plans. While only 1.84 million square feet of non-residential development was approved in Lehigh County, 3.77 million square feet was approved in Northampton County. The difference between industrial floor area in Lehigh and Northampton counties is even more stark. While only 347,000 square feet of industrial development was approved in Lehigh County, nearly 3.1 million square feet of industrial development was approved in Northampton County. These observations build on the earlier finding of distinct devel-

opment mixes in the two counties, with more residential development activity in Lehigh County, and more non-residential development activity (particularly industrial development activity) in Northampton County.

As with residential development activity, much of the approved non-residential activity in 2015 was driven by the top ten largest non-residential projects. These ten projects totaled 4.67 million square feet of building floor area, or 83% of the total for the Lehigh Valley. Five of these projects were industrial develop-

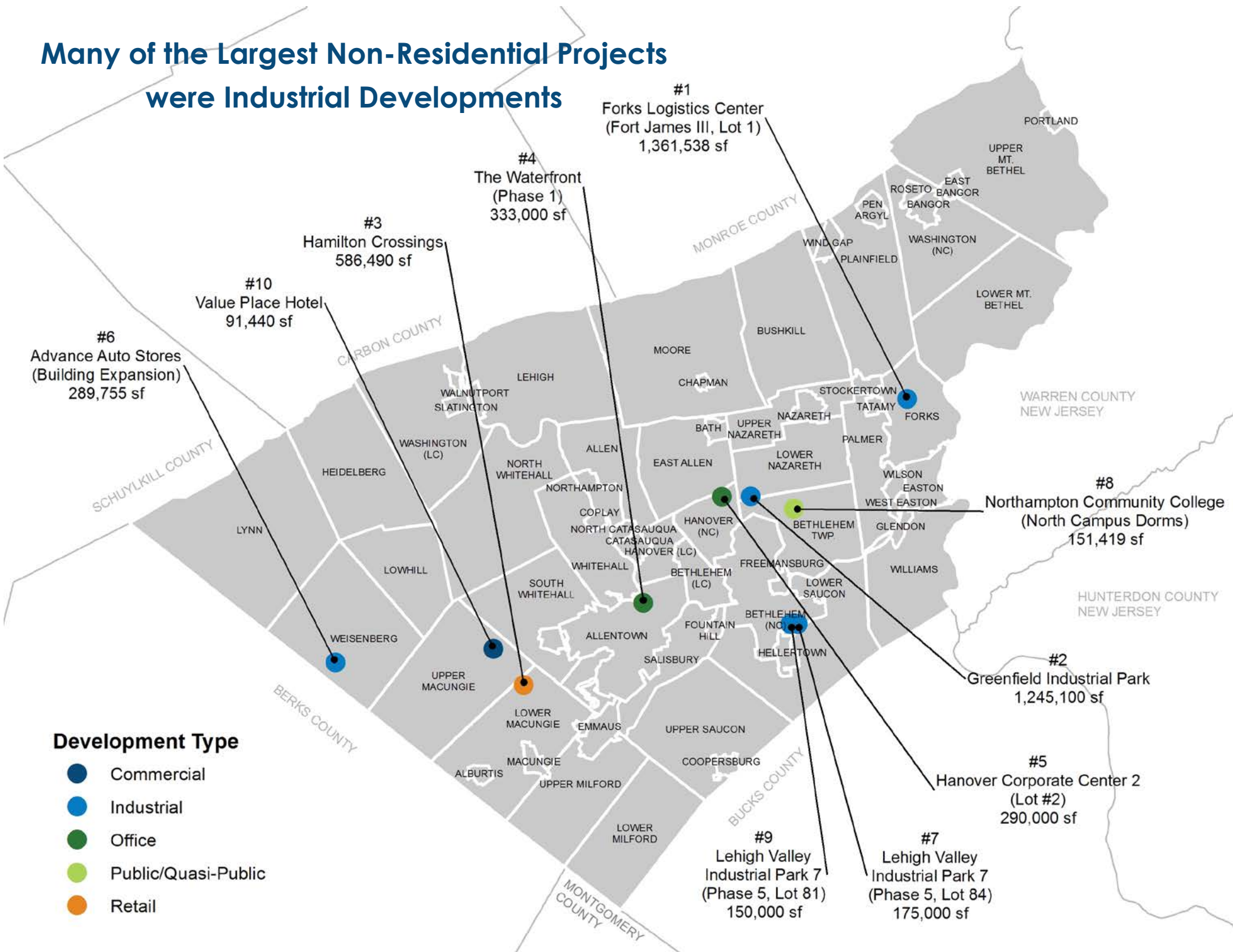
ments, two were office developments and the remaining three were retail, commercial and public/quasi-public. Note also that three of the top ten projects are located in the region's cities.

At the regional scale, it is important to note the distribution of non-residential activity among the Lehigh Valley's townships, cities and boroughs. As with residential activity, the vast majority of non-residential activity was concentrated in the townships, and almost all of the remaining non-residential activity occurred in the cities.

Top Ten Largest Approved Non-Residential Projects

	Municipality	Project	Square Feet	Land Use
1	Forks Township	Forks Logistics Center	1,361,538	Industrial
2	Lower Nazareth Township	Greenfield Industrial Park	1,245,100	Industrial
3	Lower Macungie Township	Hamilton Crossings	586,490	Retail
4	Allentown City	The Waterfront (Phase 1)	333,000	Office
5	Hanover Township (Northampton County)	Hanover Corporate Center 2	290,000	Office
6	Weisenberg Township	Advance Auto Stores	289,755	Industrial
7	Bethlehem City (Northampton County)	Lehigh Valley Industrial Park 7 (Phase 5, Lot 84)	175,000	Industrial
8	Bethlehem Township	Northampton Community College (North Campus Dorms)	151,419	Public/Quasi-Public
9	Bethlehem City (Northampton County)	Lehigh Valley Industrial Park 7 (Phase 5, Lot 81)	150,000	Industrial
10	Upper Macungie Township	Value Place Hotel	91,440	Commercial

Many of the Largest Non-Residential Projects were Industrial Developments

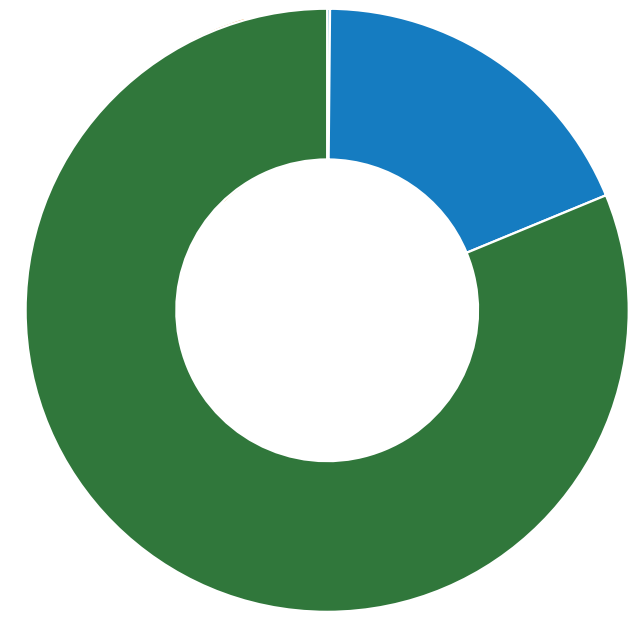


Approved Non-Residential Floor Area was Largely Concentrated in the Townships and Mostly Absent from the Boroughs

Townships
(4,555,261 square feet)
81.2%

Cities
(1,044,444 square feet)
18.6%

Boroughs
(8,427 square feet)
0.2%



Approved Non-Residential Types

For each plan with a non-residential component, the LVPC records the types of uses included in the plan, as well as the building floor area for each use. The six types of non-residential uses in the LVPC database are illustrated in the accompanying graphic. While both commercial and retail uses include businesses that sell directly to consumers, retail generally refers to businesses that sell goods for personal use across a counter. Dunkin' Donuts, for example, would be classified as a retail use, while a Chili's Restaurant would be classified as a commercial use. Public/quasi-public uses include many different activities that promote the public welfare and may be offered by public, private or nonprofit enterprises. Examples include healthcare, education and fire protection. Finally, industrial uses include many different activities involved

in the manufacturing, packaging, processing and distribution of goods. Warehousing is an increasingly common industrial activity in the Lehigh Valley.

Data on the types of non-residential uses submitted in final plans provide some insight into the character of new non-residential development. In both 2014 and 2015, most approved non-residential floor area was for industrial uses. Some important differences are observed, however, between 2014 and 2015. In 2015, the mix of non-residential uses was somewhat more balanced, with less industrial development and more commercial, office, public/quasi-public and retail development. While industrial development accounted for 89% of non-residential floor area in 2014, it accounted for only 61% in 2015. Offsetting this loss in the industrial share of non-residential

development were gains in all other non-residential uses.

Office and retail uses showed the greatest increases in absolute terms. Office development in 2015 was driven largely by two projects (The Waterfront in Allentown City and Hanover Corporate Center 2 in Hanover Township, Northampton County) and rose from 203,000 square feet in 2014 to 779,000 square feet in 2015. Retail development in 2015 was driven largely by a single project (Hamilton Crossings) and climbed from 84,000 square feet in 2014 to 658,000 square feet in 2015.

Retail and public/quasi-public uses showed the greatest increases in relative terms. While nearly seven times as much retail floor area was approved in 2015 as in 2014, about 3.4 times as much public/quasi-public floor area

Non-Residential Land Uses



COMMERCIAL



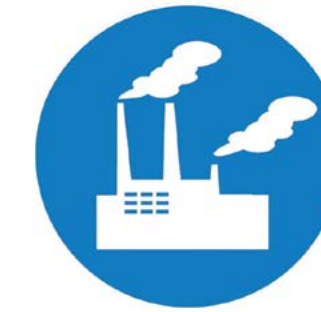
RETAIL



RECREATION



PUBLIC/
QUASI-PUBLIC



INDUSTRIAL



OFFICE

Most Approved Non-Residential Floor Area was Industrial

Industrial
(3,431,858 square feet)

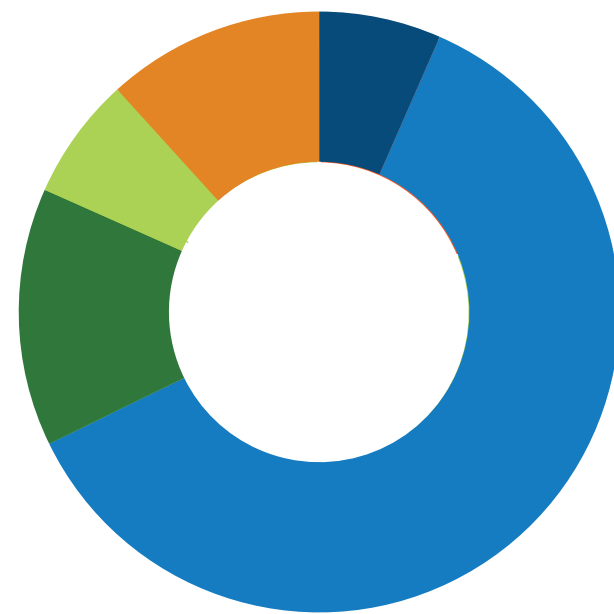
61.2%

Office
(779,116 square feet)

13.9%

Retail
(657,801 square feet)

11.7%



Public/
Quasi-Public
(370,502 square feet)

6.6%

Commercial
(368,855 square feet)

6.6%

was approved in 2015 as in 2014. Public/quasi-public development in 2015 was driven by several large school projects (including projects by Northampton Community College, Nitschmann Middle School, Southern Lehigh School District and DeSales University).

The LVPC has found that approved non-residential projects are of particular interest to the residents and businesses of the Lehigh Valley. Each approved non-residential project is therefore listed in the tables below. Many of the largest projects are warehouses and other light industrial developments located in close proximity to the region's major highways. The two projects with more than one million square feet of building floor area, for example, are warehouse/light industrial projects located in close proximity to Route 33 and Route 22. Other light industrial projects are located near the interchange between I-78 and Route 412 (for example, the two Lehigh

Valley Industrial Park 7 projects), and near the western segment of Route 22 in Upper and Lower Macungie townships (for example, the Advance Auto Stores project). Of the remaining non-residential development, office and retail were the next most common uses.

The two largest office projects in 2015 (Phase I of The Waterfront in Allentown and the Hanover Corporate Center 2 in Northampton County) were both roughly double the size of the largest office development in 2014 (Three

City Center in Allentown). The largest retail project in 2015 (the Hamilton Crossings retail development in Lower Macungie Township) was seven times larger than all approved retail development in 2014.

Approved Non-Residential Floor Area - All Projects

	Municipality	Development Name	Square Feet
COMMERCIAL	Upper Macungie Township	Value Place Hotel	91,440
	Lower Nazareth Township	Keystone Real Estate Management	89,150
	Easton City	Easton Silk Mill (Phase 3)	54,748
	Upper Saucon Township	HMB Management (Hotel and Banquet Center)	31,502
	Bethlehem City (Northampton County)	Mechanic Street Development Association	21,380
	Allentown City	The Waterfront (Phase 1)	16,000
	Upper Macungie Township	Heather Glen	12,600
	Bethlehem Township	Madison Farms (Phase 1-Daycare)	11,423
	Williams Township	Easton Auto Salvage	8,808
	Allentown City	Sacred Heart Residences	6,496
	Whitehall Township	Chili's Restaurant	6,100
	Whitehall Township	Kroiz, Kevin	5,145
	Lower Nazareth Township	Sparkle Car Wash	3,675
	South Whitehall Township	Dorney Park	3,200
	Upper Macungie Township	Lehigh Hills Lot 3D	2,050
	Upper Macungie Township	Hometown Diner	1,994
	Lower Macungie Township	Trainer and Kenney	1,800
	Walnutport Borough	Doggy Style	1,047
	Bethlehem Township	ALL-Jaindl Cell Tower Site	297
TOTAL COMMERCIAL			368,855

Approved Non-Residential Floor Area - All Projects (cont.)

RETAIL	Lower Macungie Township	Hamilton Crossings	586,490	
	Allentown City	The Waterfront (Phase 1)	37,600	
	Lower Macungie Township	Trexlertown Shopping Center	12,000	
	Upper Mt. Bethel Township	Dollar General	9,100	
	Upper Macungie Township	Lehigh Hills Lot 3D	7,262	
	Lower Macungie Township	Trainer and Kenney	3,694	
	Bath Borough	Dunkin' Donuts	1,655	
	TOTAL RETAIL			657,801
INDUSTRIAL	Forks Township	Forks Logistics Center	1,361,538	
	Lower Nazareth Township	Greenfield Industrial Park	1,245,100	
	Weisenberg Township	Advance Auto Stores	289,755	
	Bethlehem City (Northampton County)	Lehigh Valley Industrial Park 7 (Phase 5, Lot 84)	175,000	
	Bethlehem City (Northampton County)	Lehigh Valley Industrial Park 7 (Phase 5, Lot 81)	150,000	
	Hanover Township (Northampton County)	DTC Innovation Way/HTI (Northgate Business Center II)	67,200	
	Hanover Township (Northampton County)	Freshpet	61,204	
	Allentown City	The Waterfront (Phase 1)	30,000	
	Forks Township	Victaulic County (Customer Experience Center)	13,153	
	Allentown City	Acme Cryogenics	13,000	
	Bethlehem City (Northampton County)	Bethlehem Precast, Inc.	11,990	
	Lower Macungie Township	Penn Sheet Metal	9,600	
	South Whitehall Township	Compass Business Center North	3,368	
	Upper Milford Township	Davis, Scott	950	
	TOTAL INDUSTRIAL			3,431,858

Approved Non-Residential Floor Area - All Projects (cont.)

OFFICE	Allentown City	The Waterfront (Phase 1)	333,000
	Hanover Township (Northampton County)	Hanover Corporate Center 2	290,000
	Allentown City	Butz Corporate Center Phase 3	69,540
	Upper Macungie Township	Lehigh Hills	40,000
	Allentown City	Hospital Central Services	21,443
	Easton City	Easton Silk Mill (Phase 3)	16,600
	Hellertown Borough	708 Main Street	5,725
	Lower Macungie Township	Maydick, Kevin	1,800
	Hanover Township (Northampton County)	Bright Dental Office	1,008
	TOTAL OFFICE		
PUBLIC/ QUASI-PUBLIC	Bethlehem Township	Northampton Community College (North Campus Dorms)	151,419
	Bethlehem City (Lehigh County)	Nitschmann Middle School	76,247
	Upper Saucon Township	Southern Lehigh School District	58,666
	Upper Saucon Township	DeSales University	53,400
	Bethlehem City (Northampton County)	Lehigh University Police Station	11,400
	Lower Macungie Township	Concordia Lutheran Church	11,000
	Hanover Township (Northampton County)	Hanover Township Volunteer Fire County #1	4,234
	Lynn Township	New Tripoli Fire Company	4,136
TOTAL PUBLIC/QUASI-PUBLIC			370,502
GRAND TOTAL			5,608,132

Approved Non-Residential Area

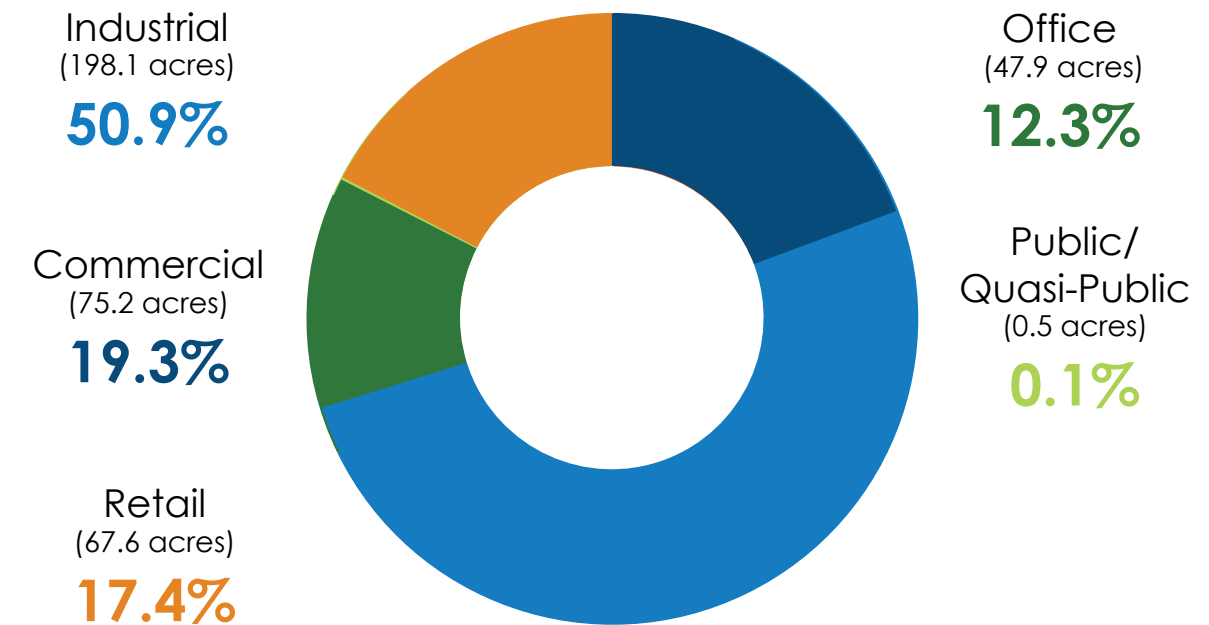
As with residential development, the impact of approved non-residential development on the landscape of the Lehigh Valley will be determined as much by the area of land developed as by the floor area of the structures built. In 2015, the land area associated with approved non-residential development was 439 acres—only slightly larger than the 406 acres associated with approved non-residential projects in 2014. About 50 acres of the approved non-residential development in 2015 were for recreation projects

with no structures, and the remaining 389 acres were for the five uses discussed above.

Comparing the proportion of the approved floor area associated with each of these five land uses to the proportion of the approved land area yields two interesting observations. First, commercial and retail projects account for a much larger share of the approved land area (37%) than the approved floor area (18%). This is mostly likely related to the larger parking and landscaped areas required for commercial and retail uses.

Second, industrial projects account for a somewhat smaller share of the approved land area (51%) than the approved floor area (61%). This is related to the mix of new development and building expansion projects. In 2015, nearly 400,000 square feet of industrial floor area was associated with building expansion projects for which no land area was recorded. Most of this industrial building expansion occurred in Lehigh County, where approximately 313,000 square feet of the approved industrial floor area was associated with building expansion projects, compared

Commercial and Retail Uses Consumed a Disproportionate Share of Approved Non-Residential Land Area



to 33,000 square feet for new development or redevelopment. Industrial development in Northampton County, in contrast, was dominated by new development and redevelopment. Of the approximately 3.1 million square feet of industrial floor area approved in Northampton County, only 86,000 was associated with building expansions.

As with the non-residential floor area, the land area associated with approved non-residential development is mostly located in the townships. Of the 439 acres of approved non-residential development, ten acres were located in the boroughs, 84 in the cities and 345 in the townships.

Most Non-Residential Land Area was Located in the Townships

Townships
(345 acres)

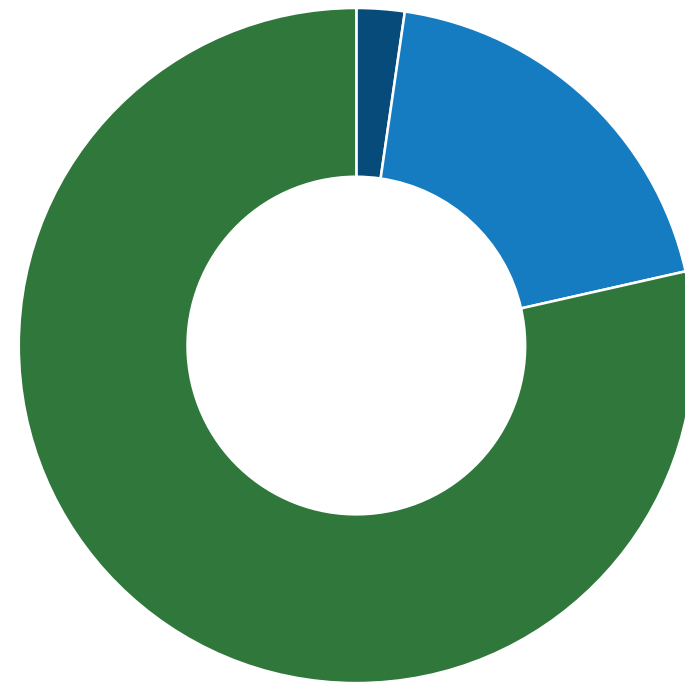
78.5%

Cities
(84 acres)

19.2%

Boroughs
(10 acres)

2.3%



Proposed

Sketch Plan



NON-BINDING CONCEPT REVIEW

The sketch plan is an informal attempt to indicate existing features of a tract and the general layout of the proposed subdivision. In some cases, the sketch plans may depict the early vision for the layout of buildings and utilities. Sketch plans are not required by law.

Preliminary Plan



LEGALLY BINDING ENGINEERED LAYOUT

The preliminary plan is required by law and shows proposed streets, lot layout, building dimensions, and other critical information with engineering and surveying detail, per the requirements of a municipal Subdivision and Land Development Ordinance (SALDO).

Approved

Final Plan



LEGALLY BINDING CONSTRUCTION READY

The final plan offers complete, exact detail with a professional seal affixed to it, depicting all of the content in the preliminary plan but with final dimensional specifics that will go to the county Recorder of Deeds for official recording, defining all proposed improvement to the land as required by the municipal SALDO.



AT A GLANCE

In the first six months of 2016, the pace of plan activity and approved non-residential activity was similar to the pace observed in 2015. About 205 plans were reviewed in the first half of the year, compared to 411 in 2015. As in 2015, about 30% of approved plans in the first half of the year were non-residential.

The pace of residential activity appears to be somewhat greater in 2016, however, than in 2015. While 1,300 residential units were approved in 2015, the first six months of 2016 saw 825 approved residential units, or 63% of last year's total. In keeping with previous years, the housing type driving this growth is apartments. While 570 apart-

ment units were approved in 2015, the first six months of 2016 saw more than 630 approved apartment units, or 111% of the 2015 total. Single family development appears to be occurring at a similar pace as last year, with 136 units approved in the first half of 2016 compared to 246 units in 2015.

Within the non-residential sector, office development activity appears to be occurring at a greater pace than in 2015, while industrial development activity has so far lagged. In the first half of 2016, more than 580,000 square feet of office development was approved, compared to 780,000 square feet in 2015. The Lehigh Valley has seen significant approved industrial space in the first half of 2016, but

the 1.2 million square feet of industrial floor area approved in the first half of 2016 pales in comparison to the 3.4 million square feet of industrial floor area approved in 2015. This total could change quickly, however, if plans are submitted for large industrial projects. The vast majority of the industrial floor area approved in the first half of the year, for example, comes from the FedEx Ground Hub in Allen Township.

Finally, the LVPC has also received plans for several mixed-use projects in the first half of 2016, the highest profile of which is Phase 1 of The Waterfront in Allentown—a mix of commercial, office, industrial and residential space.

Plan Activity

Plans	Lehigh	Northampton	Total
Proposed	60	62	122
Approved	44	39	83
TOTAL	104	101	205

Approved Residential

Residential	Units	Acres
Apartment	633	29.7
Single Family	136	204.1
Townhouse	30	1.4
Twin	26	89.3
TOTAL	825	324.5

Approved Non-Residential

Non-Residential	Square Feet	Acres
Commercial	81,321	21.4
Industrial	1,267,617	357.2
Office	583,612	3.6
Public/Quasi-Public	22,436	0.2
Retail	67,849	0.1
TOTAL	2,022,835	382.5



DATA

Approved land development and subdivision plans indicate where development could occur, but may not be an accurate measure of construction activity. In the first place, plan review is not required for many improvements to existing buildings. In the second place, plan review is only one step in the property development process. Following plan approval, the landowner and/or developer must apply for a building permit to receive legal permission to begin construction.

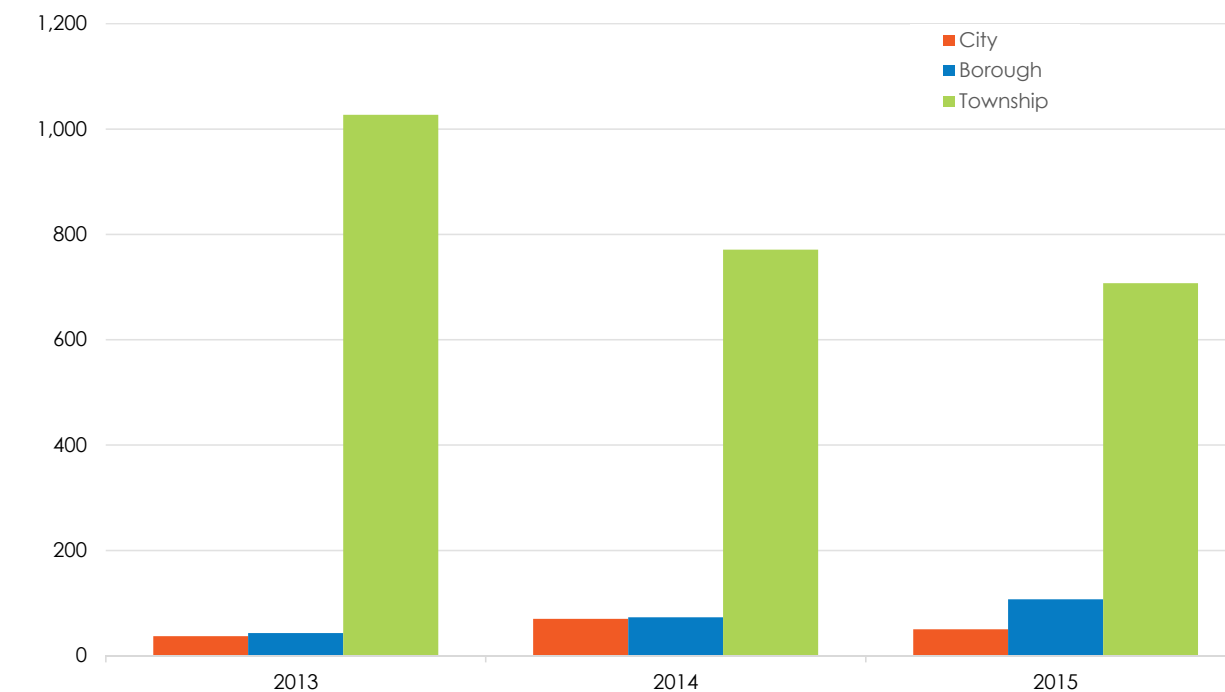
Permit data collected by the state can provide greater insight into the location of new construction and improvements in the Lehigh Valley. Since 2004, Pennsylvania law has required all municipalities to adopt the Uniform Construction Code. Intended to protect public health while reducing

compliance burdens, the Uniform Construction Code requires municipalities to issue permits for: 1) residential new construction, 2) residential additions, alterations or changes of occupancy, 3) commercial new construction, and 4) commercial additions, alterations or changes of occupancy. The state defines residential buildings as “detached one-family and two-family dwellings...which are not more than three stories in height” and defines commercial buildings to include multi-family dwellings. Municipalities are required to report the number of building permits issued on a quarterly basis. Although Pennsylvania municipalities were first required to adopt the Uniform Construction Code in 2004, a uniform system for data collection was not implemented until 2013, and permit data is only available for 2013, 2014 and 2015.

Comparing the number of building permits issued in the Lehigh Valley’s cities, boroughs and townships shows that most new construction in the Lehigh Valley is occurring in the townships, while most improvements are occurring in the region’s cities and boroughs. New construction of one- and two-family dwellings was overwhelmingly concentrated in the townships, with 2,505 of all 2,885 residential permits for new construction issued in the townships (87%). Commercial new construction was somewhat less concentrated in the townships, with 360 of all 525 commercial permits for new construction issued in the townships (69%). This may be attributed in part to the expansive definition of commercial construction, which includes multi-family dwellings. In contrast, most residential improvements are located in cities and boroughs (48% and 11%, respectively), and most commercial improvements are located in cities (63%).

Most New Construction of One- and Two-Family Dwellings is Occurring in the Townships

Number of Residential Permits Issued for New Construction

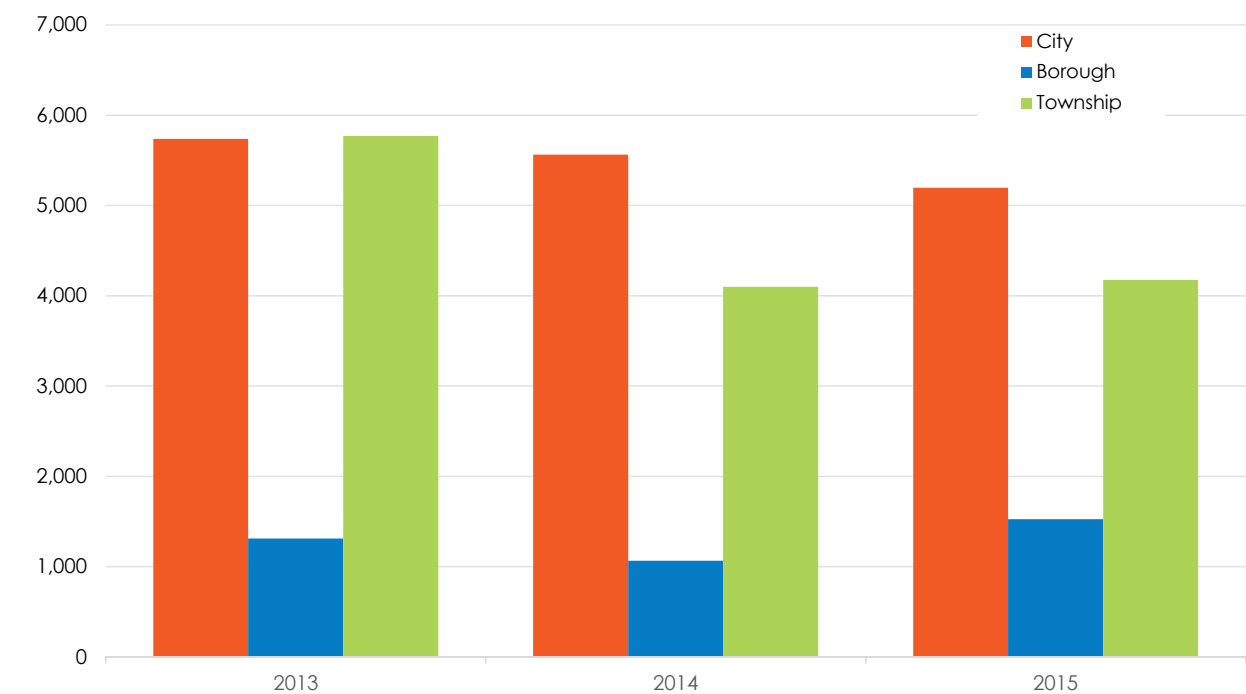


Notes: The Pennsylvania Uniform Construction Code Act defines residential buildings as “detached one-family and two-family dwellings and multiple single-family dwellings which are not more than three stories in height.”

Source: Pennsylvania Department of Community and Economic Development

Significant Reinvestment in One- and Two-Family Dwellings is Occurring in Cities

Number of Residential Permits Issued for Additions, Alterations, and Changes of Occupancy

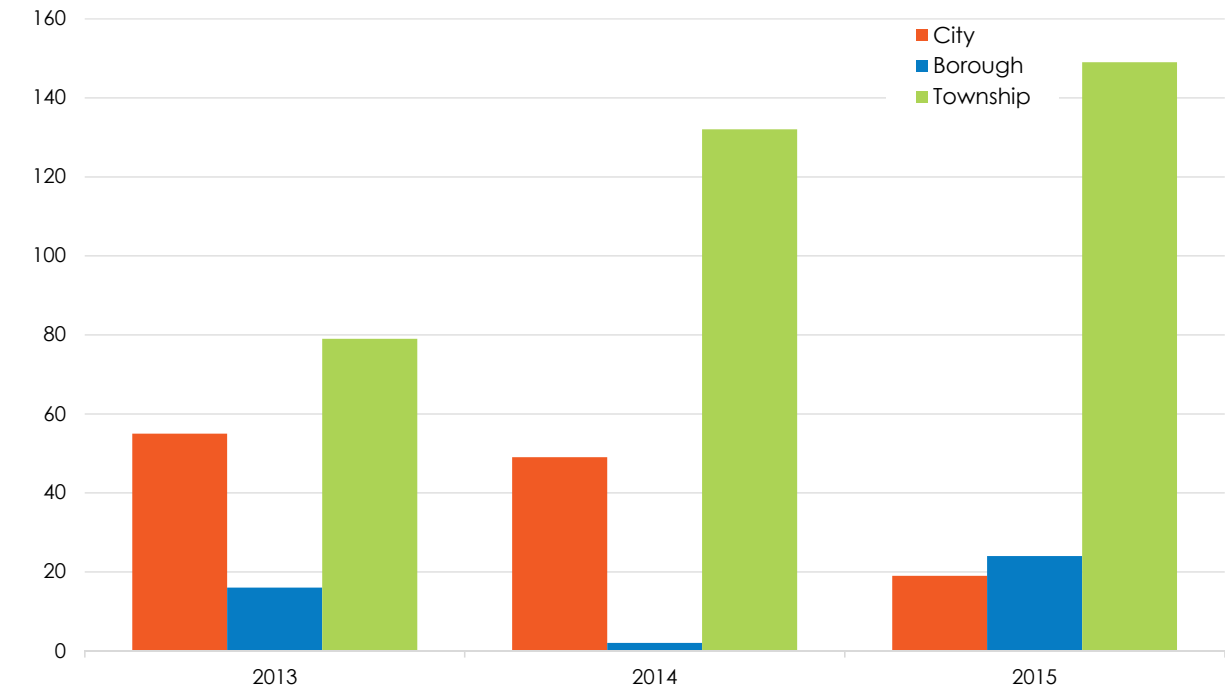


Notes: The Pennsylvania Uniform Construction Code Act defines residential buildings as "detached one-family and two-family dwellings and multiple single-family dwellings which are not more than three stories in height."

Source: Pennsylvania Department of Community and Economic Development

New Construction of Commercial Buildings is Increasingly Occurring in the Townships

Number of Commercial Permits Issued for New Construction

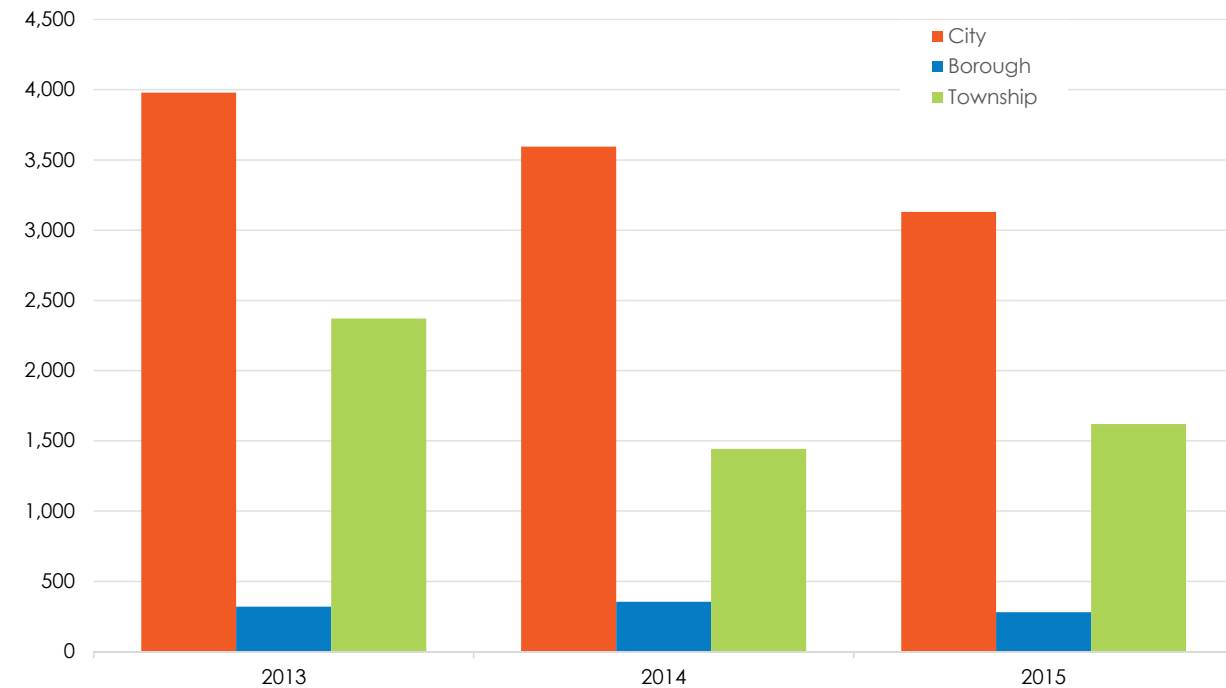


Notes: The Pennsylvania Uniform Construction Code Act defines commercial buildings as including multi-family dwellings.

Source: Pennsylvania Department of Community and Economic Development

Most Reinvestment in Commercial Buildings is Occurring in Cities

Number of Commercial Permits Issued for Additions, Alterations, and Changes of Occupancy



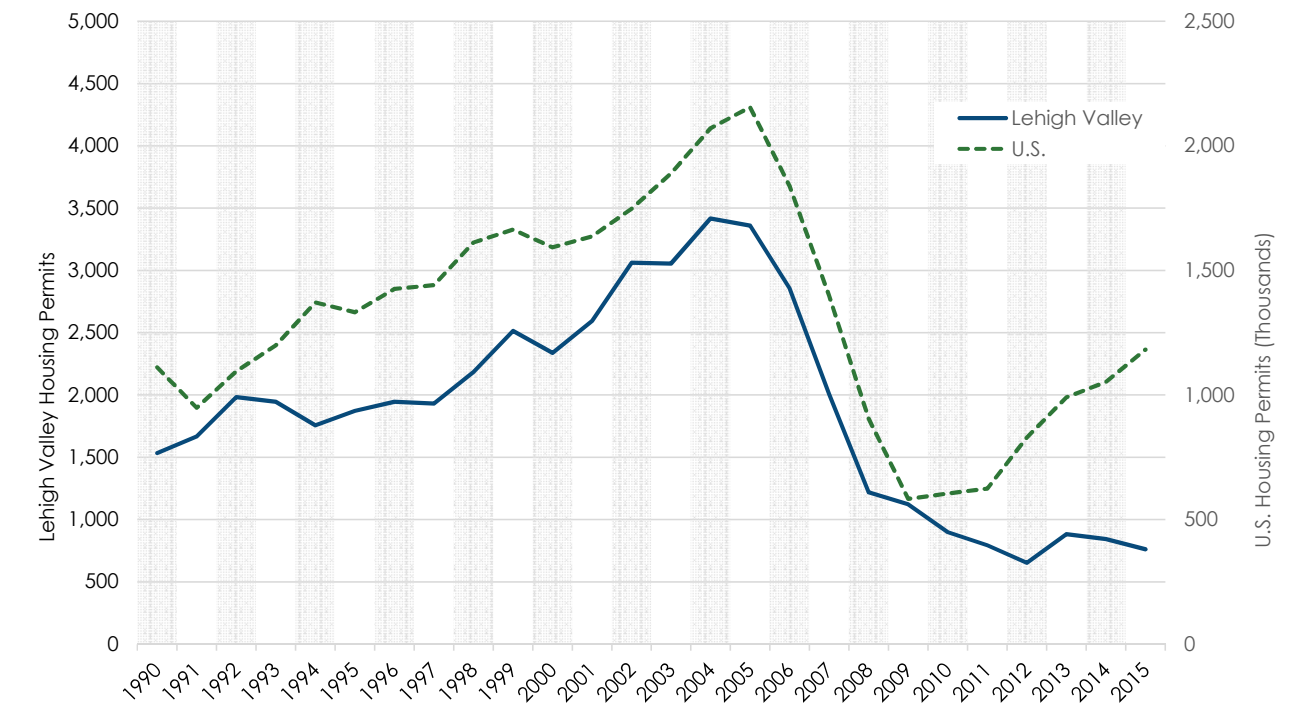
Notes: The Pennsylvania Uniform Construction Code Act defines commercial buildings as including multi-family dwellings.

Source: Pennsylvania Department of Community and Economic Development

New residential construction in the Lehigh Valley is rebounding more slowly than new residential construction nationally. While U.S. housing permits have rebounded to slightly more than half their 2005 peak, Lehigh Valley housing permits remain at only 22% of their 2004 peak. New residential construction is particularly sluggish in the region's boroughs, one-third of which have seen no approved residential units since 2006 and 90% of which have seen fewer than 100 approved residential units since 2006.

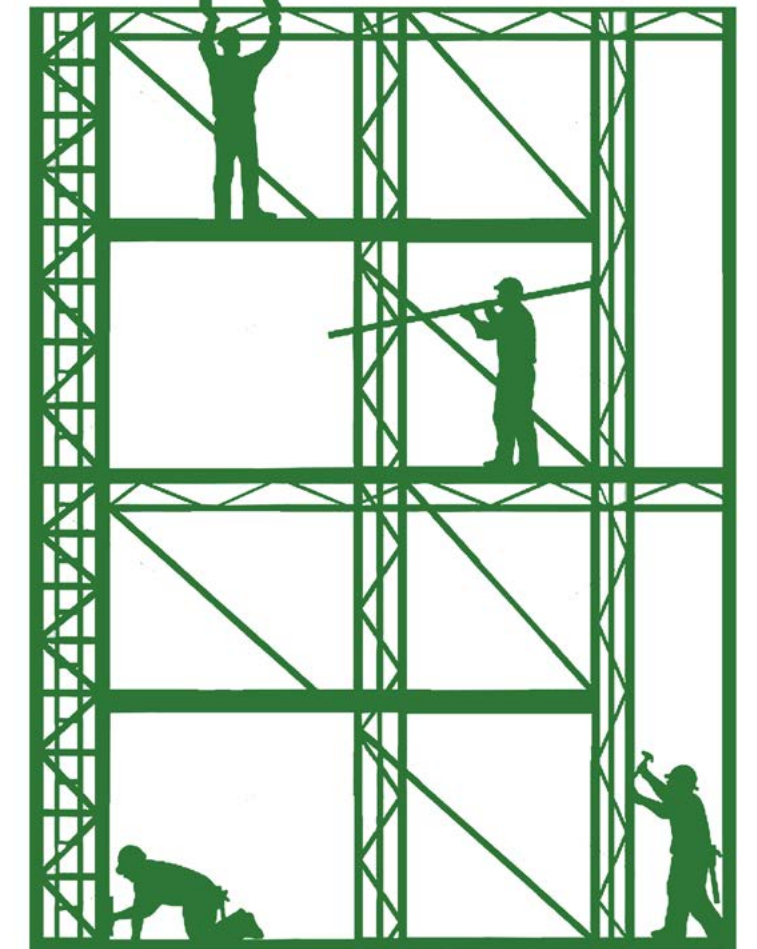
Housing Permits in the Lehigh Valley are Rebounding More Slowly than U.S. Housing Permits

Lehigh Valley Housing Permits and U.S. Housing Permits



Source: U.S. Census Bureau, New Privately-Owned Housing Units Authorized by Building Permits in Permit-Issuing Places

TRENDS



Plan submissions are rebounding slowly following the financial crisis of 2008-2009, with the residential sector struggling the most. While the amount of plan activity varies significantly from year to year, its location has remained remarkably stable. Throughout the last ten years, most development activity has occurred in the townships, and only a quarter of final plans have come from cities or boroughs.

PLANS

Plans Submitted

This section of the report places the data collected for 2015 in a historical context. The number of plans reviewed annually by the LVPC tends to rise and fall with changes in the U.S. housing market and economy. Since 1981, plan activity has experienced one peak and two abrupt declines. The peak occurred in the late 1980s and likely reflects rising housing demand as more households moved to the area from New Jersey. This peak was followed by a steep decline in the early 1990s as the U.S. experienced a recession, the Lehigh Valley experienced lower migration from New Jersey, and the savings and loan crisis led to tighter lending criteria.

From the early 1990s to 2005, plan reviews remained relatively stable in the Lehigh

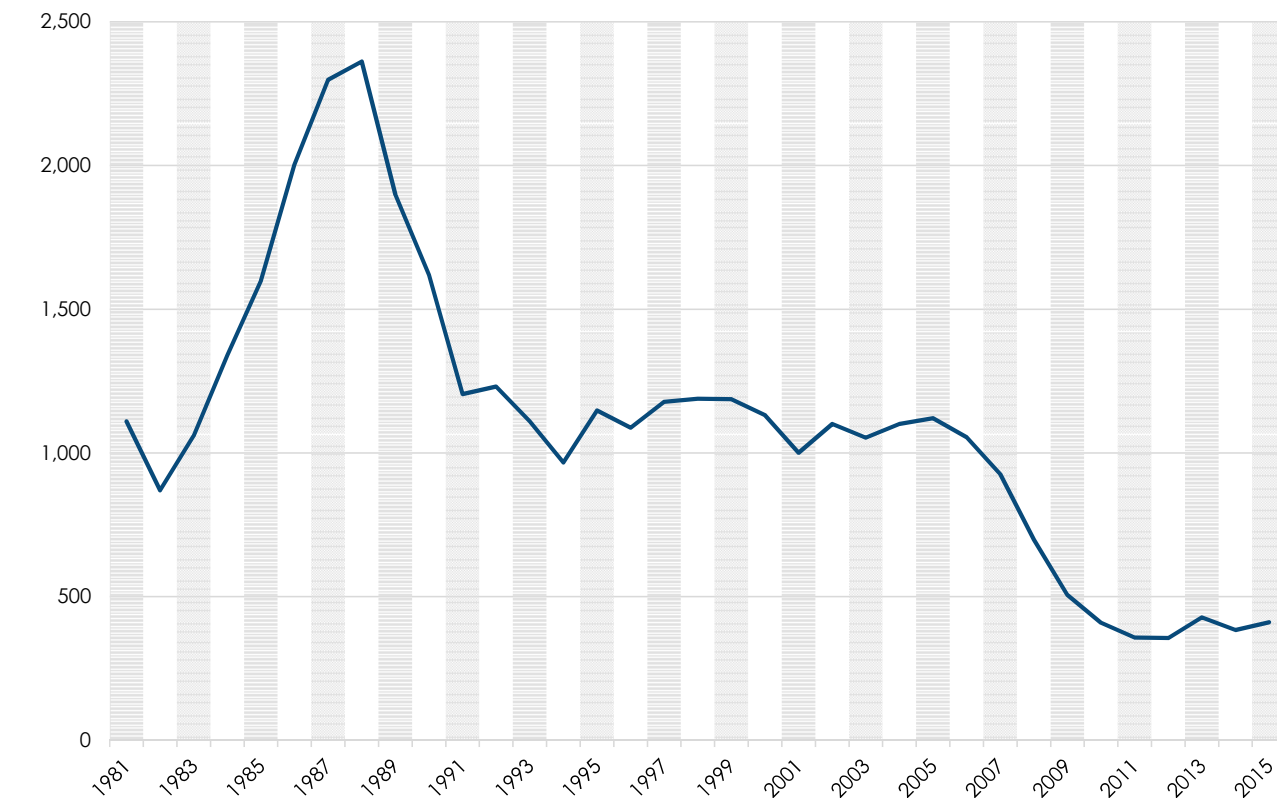
Valley. By the time the recent recession began in 2006, the number of subdivision and land development plans reviewed by the LVPC had returned to the level observed in 1981—about 1,100 plans per year. Lehigh Valley plan reviews experienced a second abrupt decline after 2006. Following the financial crisis of 2008-2009, plan activity tumbled to its lowest levels in the recorded history of the LVPC—falling to only 356 plans in 2012.

In the last several years, development activity in the Lehigh Valley has stabilized and begun to rebound. Since falling to its record low in 2012, the number of plans reviewed annually by the LVPC has climbed 15%. Comparing the number of plans submitted in the last 16 years to the regional unemployment rate

provides some insight into the links between regional development activity and the regional economy. Unemployment peaked at 9.3% in 2010, and has since fallen steadily. This decline in unemployment has occurred despite the slow growth in plan reviews, suggesting that the regional economy is recovering without relying on the real estate and construction sectors. This, in turn, suggests that the Lehigh Valley's economy is more diversified than that of other regions that were more dependent on construction and real estate and more devastated by the financial crisis (most notably Las Vegas, parts of southern Florida and Southern California's inland counties).²

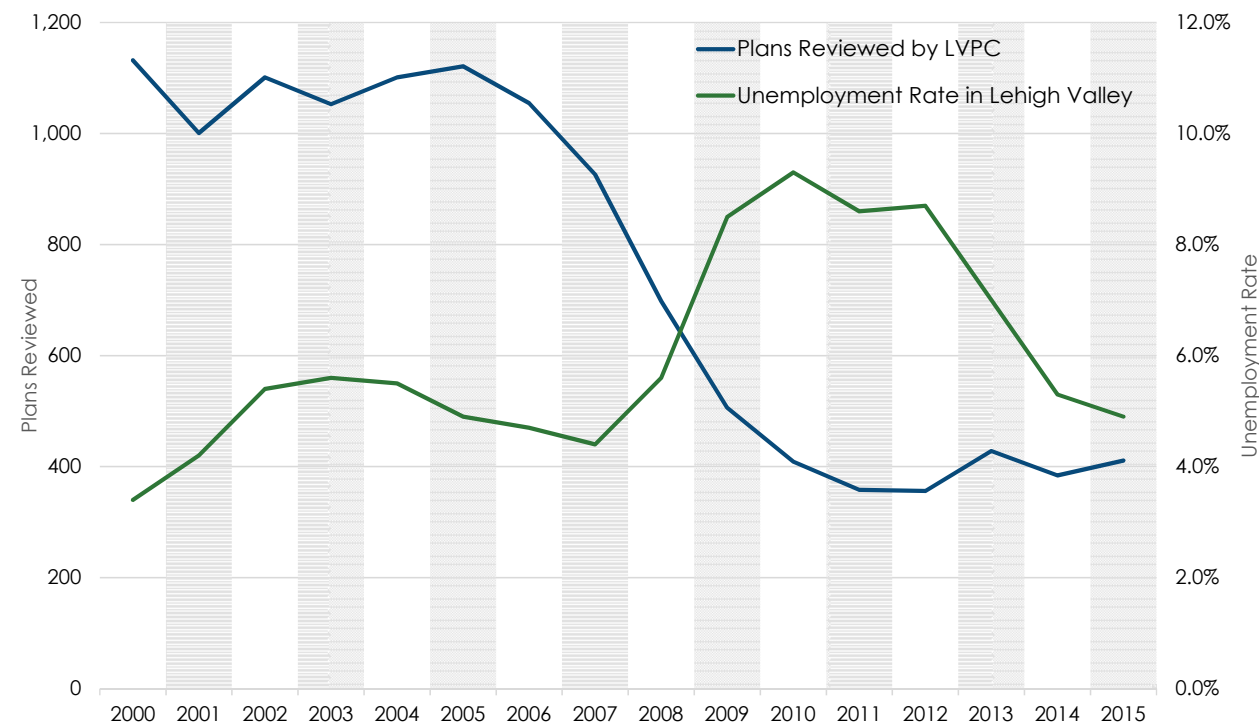
² *New York Times*, 2009. "Construction that Fueled Growth in the Sun Belt Slows."

Plan Reviews in the Lehigh Valley are Rebounding Slowly Following the 2008-2009 Financial Crisis
Plans Reviewed by LVPC



Unemployment Continues to Fall Despite Slow Growth in Building Activity

Plans Reviewed by LVPC and Lehigh Valley Unemployment Rate



Source: Lehigh Valley Workforce Development Board, Inc., Job and Labor Market Outlook

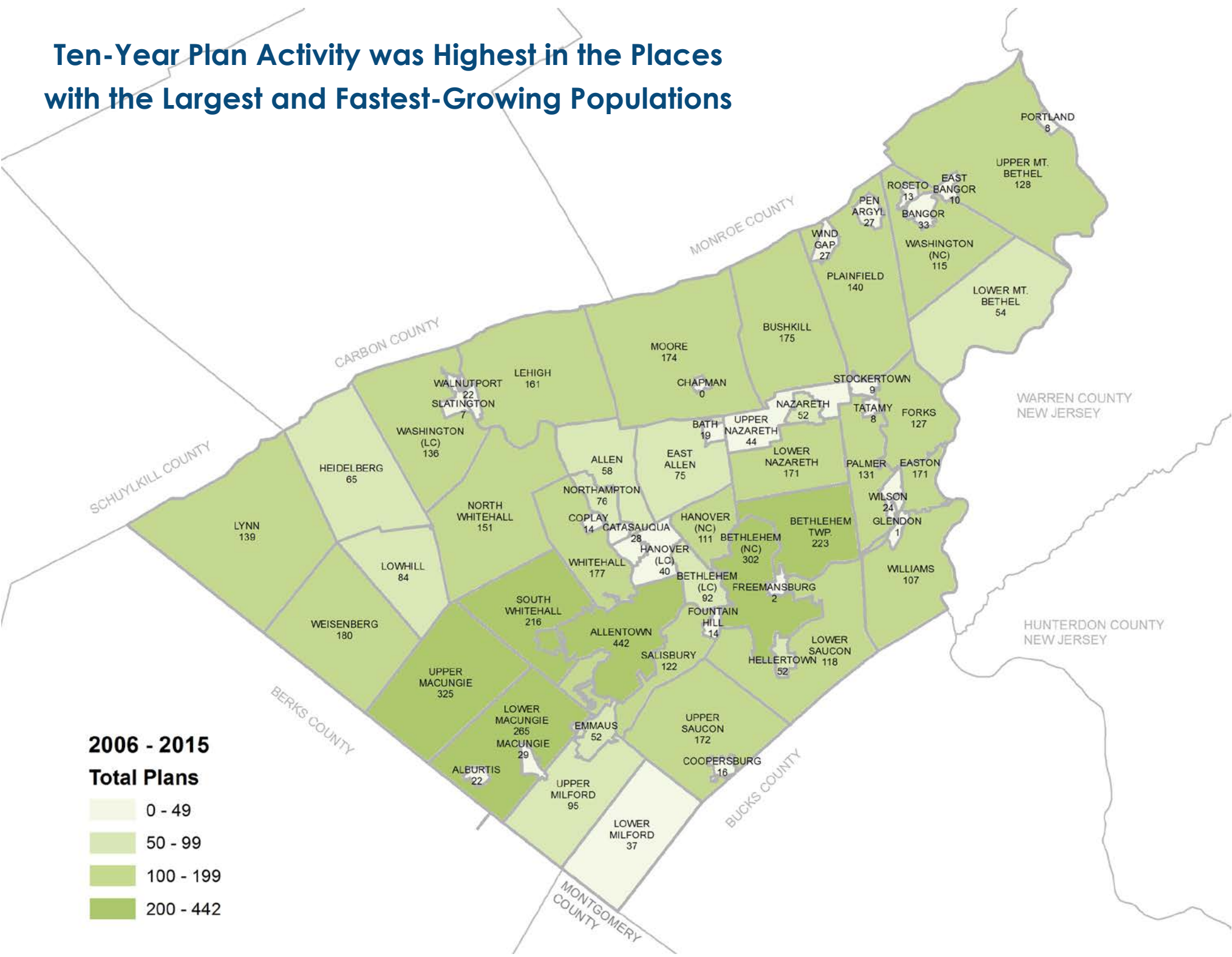
Plan Location

The remaining analysis of subdivision and land development trends will present only data from the last ten years—from 2006 to 2015. To examine the location of plan activity over the last ten years, the cumulative number of plans

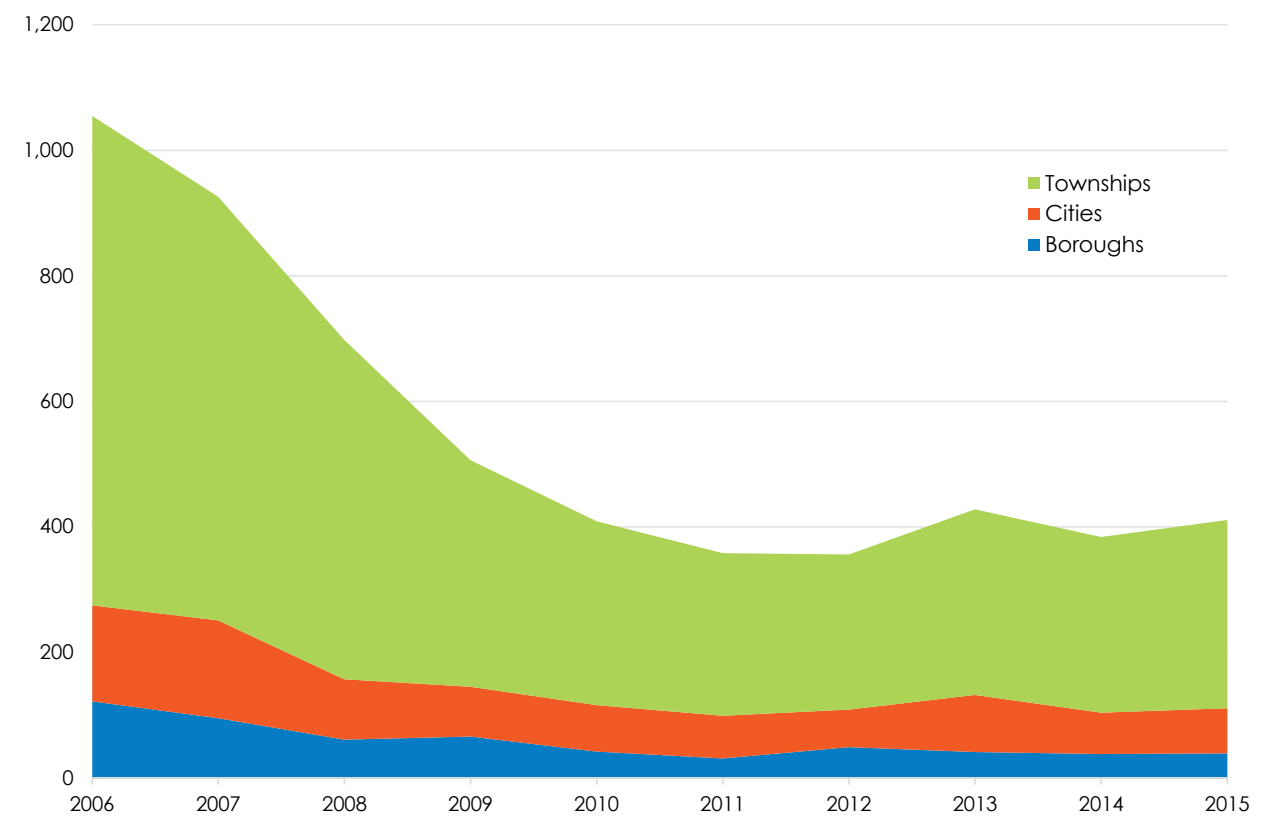
submitted since 2006 was calculated for each municipality. As might be expected, the largest and fastest-growing municipalities submitted the most plans over the last ten years. The five municipalities with the highest plan

totals were Allentown City, Bethlehem City, Lower Macungie Township, Upper Macungie Township and Bethlehem Township. Since 2006, the share of all plans submitted by the townships has remained about 75%.

Ten-Year Plan Activity was Highest in the Places with the Largest and Fastest-Growing Populations



Most Building Activity Continues to Occur in the Townships Plans Reviewed by LVPC



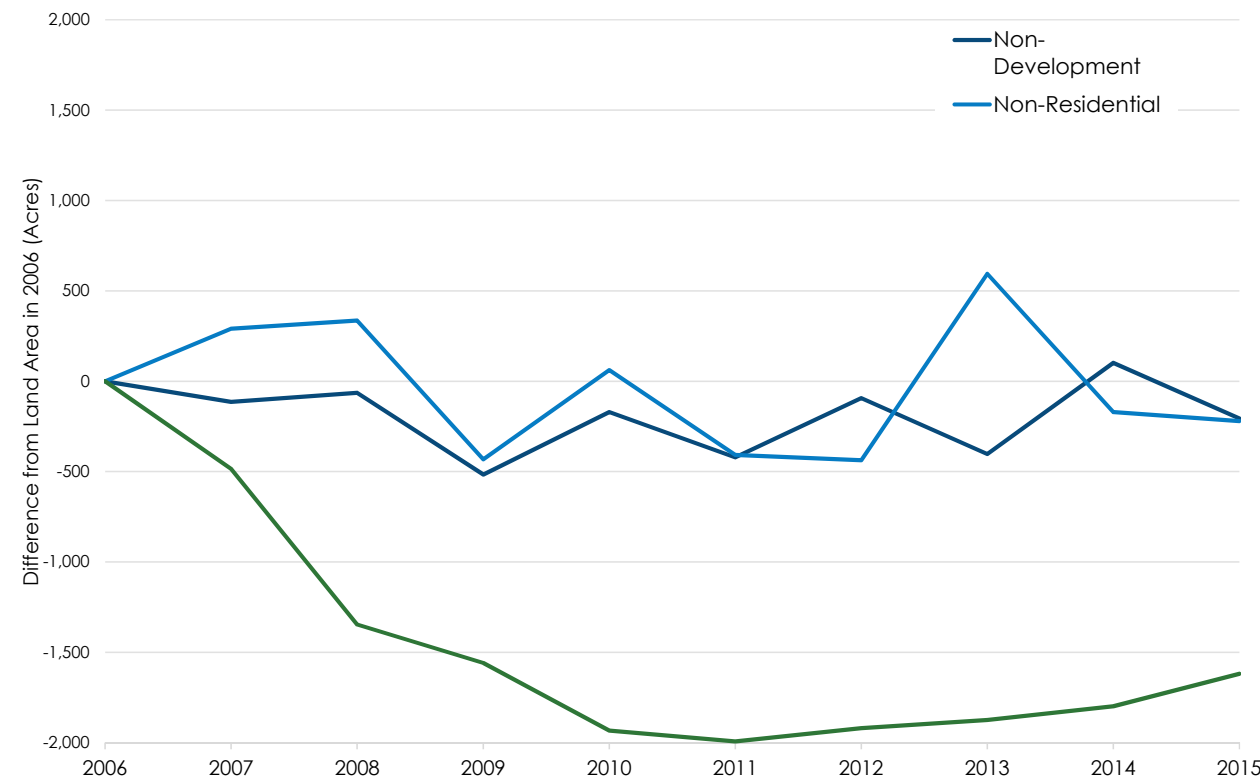
After several years of limited residential activity, growth in the development of multi-family homes is driving a slow recovery. Apartment and assisted living developments have shown particular strength, and condominiums now appear to be returning to the scene. While most new units are now multi-family, most land consumption is still driven by single family housing.

Final Plan Types and Area

In reviewing subdivision and land development plans, the LVPC tracks three development types: residential, non-residential and non-development. The only characteristic consistently recorded for all three development types is the land area affected by submitted plans. Between 2006 and 2011, the land area associated with residential development fell by approximately 2,000 acres. Despite a steady rise since 2011, approved residential land area remains more than 1,500 acres below its 2006 level. The land area associated with non-residential and non-development, in contrast, has varied from year to year but remained relatively stable. In 2015, the land area associated with these development types was within 200 acres of its 2006 level.

Non-Residential and Non-Development Activity Have Remained Relatively Stable Compared to Residential Activity

Land Area in Final Plans (Compared to 2006 Baseline)



RESIDENTIAL DEVELOPMENT

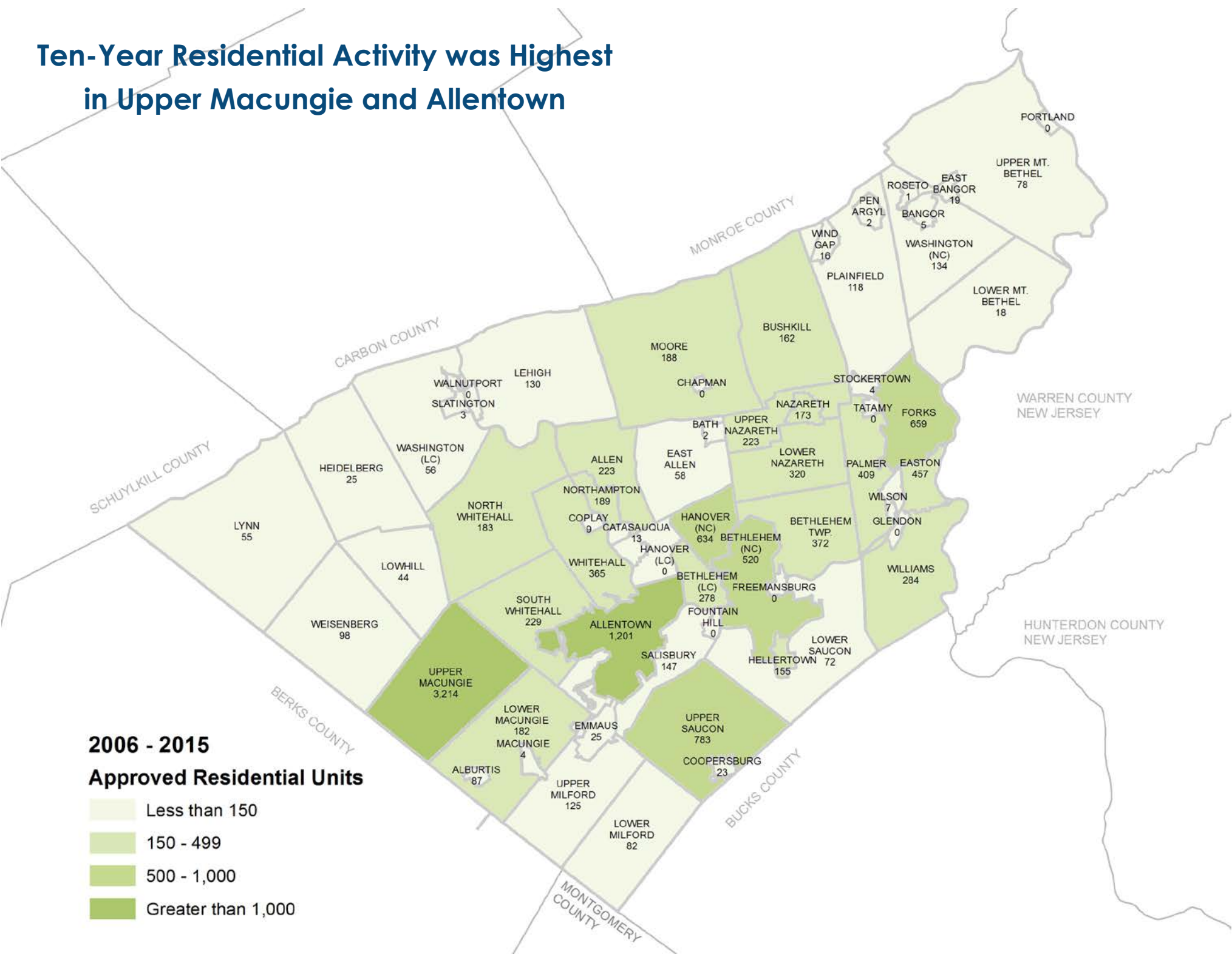
Location of Approved Residential Development

To examine the location of residential activity over the last ten years, the cumulative number of units approved since 2006 was calculated for each municipality. Upper Macungie Township and Allentown City saw the most approved residential units over the last ten years, followed by Hanover Township in Northampton County, Upper Saucon Township, Forks Township and Bethlehem City. Of these five municipalities, the two that experienced the most residential activity

per capita were Upper Macungie Township and Hanover Township. In Upper Macungie Township, 150 units were approved for every 1,000 residents (2014 population), while in Hanover Township, 57 units were approved for every 1,000 residents. The region's boroughs have experienced limited residential development activity since 2006. Of the Lehigh Valley's 27 boroughs, 17 saw fewer than ten approved units over the last ten years, and

only three saw more than 100 approved units. The three boroughs with significant residential development activity were Hellertown (with 155 approved units), Nazareth (with 173 approved units), and Northampton (with 189 approved units). Of the region's three cities, Easton had the most approved units per capita (17 units per 1,000 residents), followed by Bethlehem (11 units per 1,000 residents), and Allentown (ten units per 1,000 residents).

Ten-Year Residential Activity was Highest in Upper Macungie and Allentown

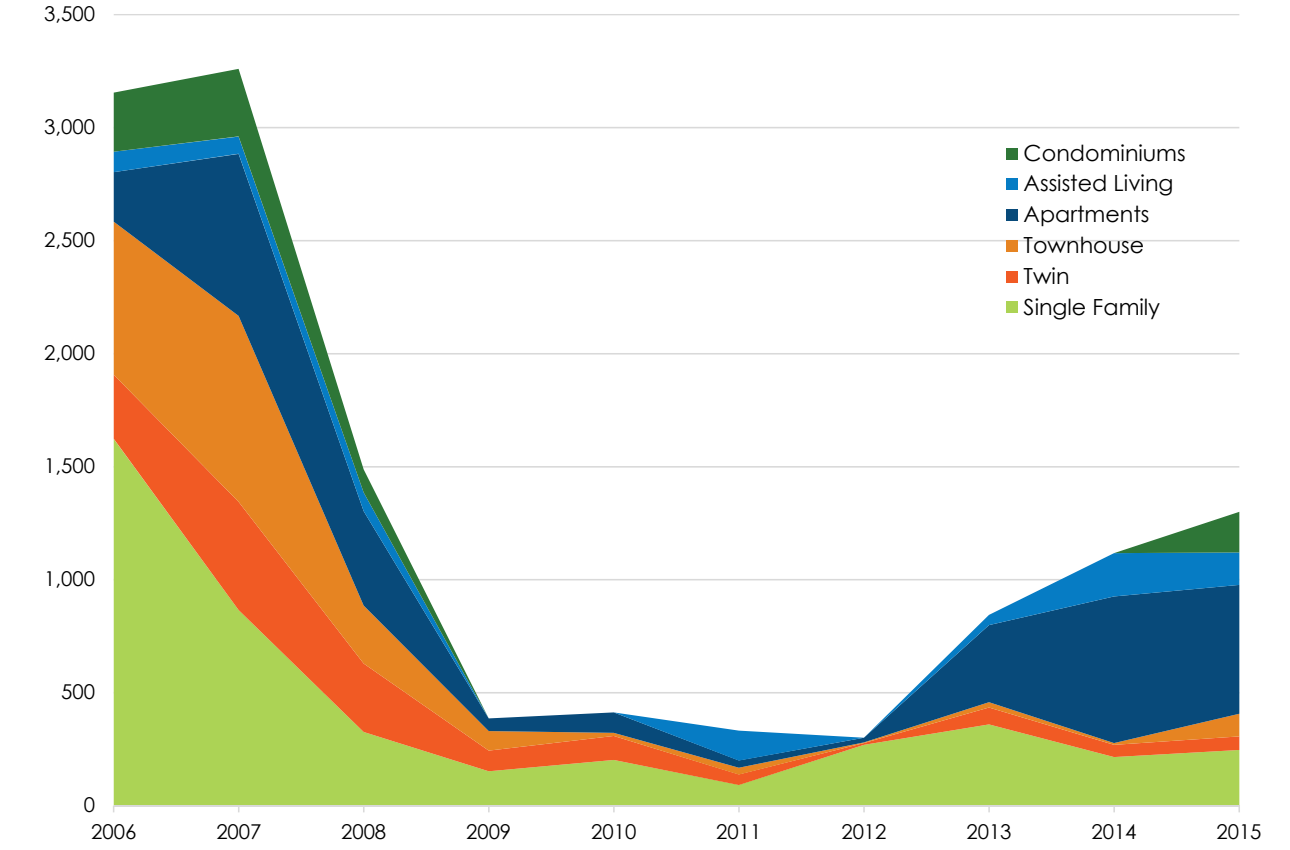


Approved Residential Types and Area

The character of approved residential development has changed dramatically since 2006. Before the financial crisis of 2007-2008, more than 80% of approved residential units were single family, twin or townhouse units, and more than 3,000 units were approved each year. After the crisis, approved residential units of all types plunged to record lows, and fewer than 500 units per year were approved for several years. As residential development began to recover in 2013, the growth in approved units was driven by apartment, assisted living and condominium development. Apartment development became particularly important, with the number of approved apartment units matching the number of approved single family homes in 2013 and exceeding single family homes in 2014 and 2015 by margins of more than 2 to 1.

Growth in Multi-Family Development Continues to Drive Housing Recovery

Approved Residential Units by Type



Apartments, Condominiums and Assisted Living

Ten years after the financial crisis, income growth remains slow, mortgage credit remains tight, and the demand for single family housing has yet to recover. While surveys indicate that most households continue to aspire to homeownership, the ability of many households to finance home purchases is likely to remain constrained in the near future. At the same time, rental demand has risen among all age and income groups, and rental vacancy rates are at their lowest levels in decades.³ Reflecting these trends, apartment development has experienced robust growth since 2012 and now exceeds the level of development observed in 2006. Given this

economic context, apartment development is likely to continue to drive growth in new residential construction in the coming years.

In the wake of the economic downturn, many condominium projects were converted to apartments. After remaining dormant from 2009 to 2014, the condominium market now appears to be rebounding, with 180 units approved in 2015. This rebound could reflect growing homebuyer demand for multi-family housing types. Meanwhile, the number of approved assisted living units, although down from last year, remains well above the 2006 level.

Single Family Houses, Townhouses and Twin Units

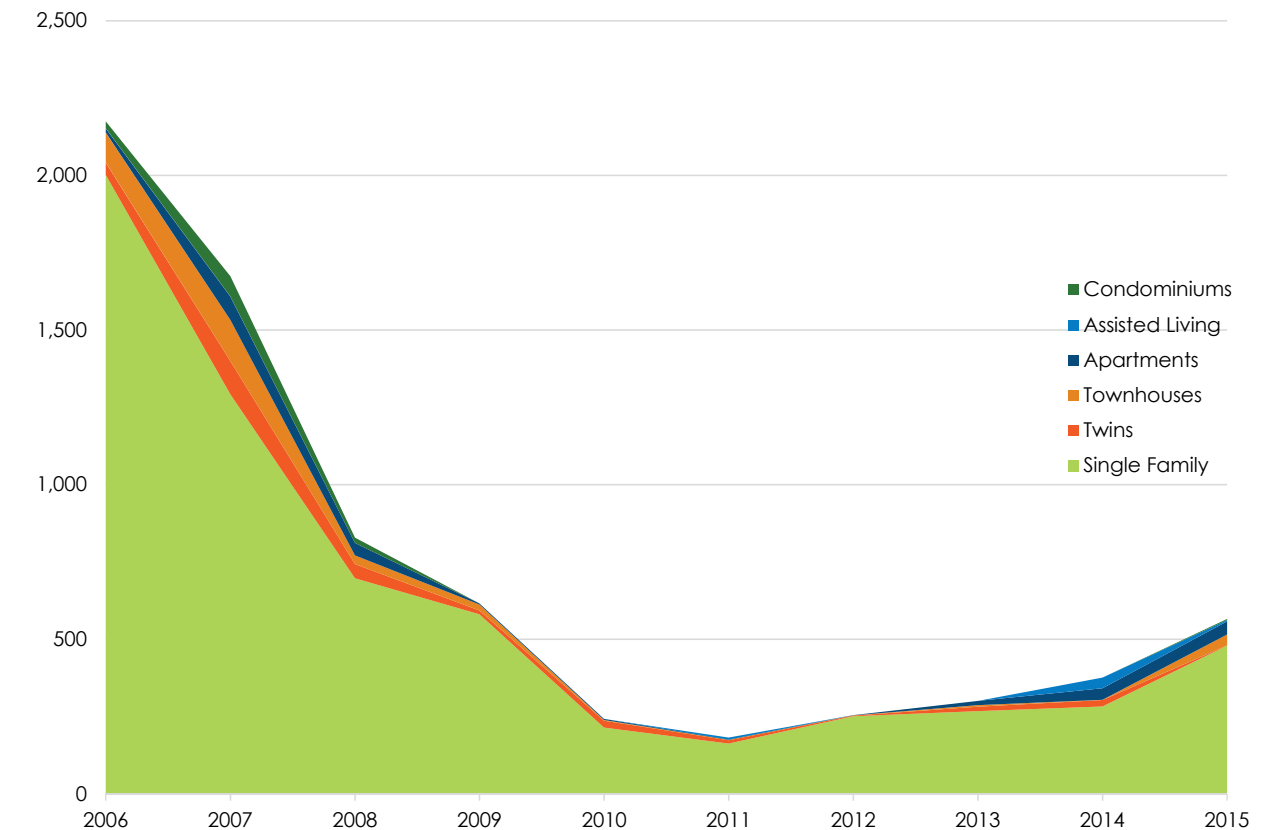
Single family residential development declined dramatically following the financial crisis of

2007-2008 and has yet to return to pre-recession levels. In 2015, the number of approved single family units (246) was only 11% of the number at the pre-recession peak (2,249 in 2004). Development activity for townhouses and twin units also remains weak compared to pre-recession levels. However, townhouse development experienced a robust resurgence in 2015, potentially signaling a broader recovery in the homebuying market.

Approved Residential Area

Despite the steep decline in the share of residential units attributed to single family development, the single family housing type continues to have the greatest impact on the region's landscape. Single family development has accounted for more than 75% of approved residential area for every year since 2006.

Most Approved Residential Land Area is Associated with Single Family Development
Approved Residential Land Area by Type (Acres)



³ Joint Center for Housing Studies of Harvard University, 2016. The State of the Nation's Housing 2016.

Approved Non-Residential Types and Area

In the post-recession era, non-residential development recovered more quickly and more fully than residential development. The total approved non-residential floor area for 2015 increased by 27% over the previous year and reached the second highest level of any year since 2008. The post-recession peak year remains 2013, when 7.4 million square feet of non-residential floor area was approved. Conversely, 2010 represented the post-recession trough, with only 1.8 million square feet approved that year.

Industrial

Industrial development has dominated non-residential development in the Lehigh Valley for most of the last decade. Much

of this industrial development is related to logistics (in other words, the movement of goods). With its easy access to New York and New Jersey, large labor force and cheap land prices, the region is an attractive location for large-scale warehouse and distribution properties. Indeed, according to the Wall Street Journal, "no U.S. industrial market has grown as fast as the Interstate-78/Interstate-81 corridor" between 2010 and 2016. Since the second quarter of 2010, developers have added 56 million square feet of space along this corridor, increasing the size of the market by over 25% and exceeding the pace of growth in Houston; Columbus, Ohio; and California's Inland Empire.⁴ The recent growth in industrial development in the Lehigh Valley is only expected to be amplified by the comple-

⁴ *The Wall Street Journal*, August 9, 2016. "E-Commerce Forces Shift in Warehouse Building."

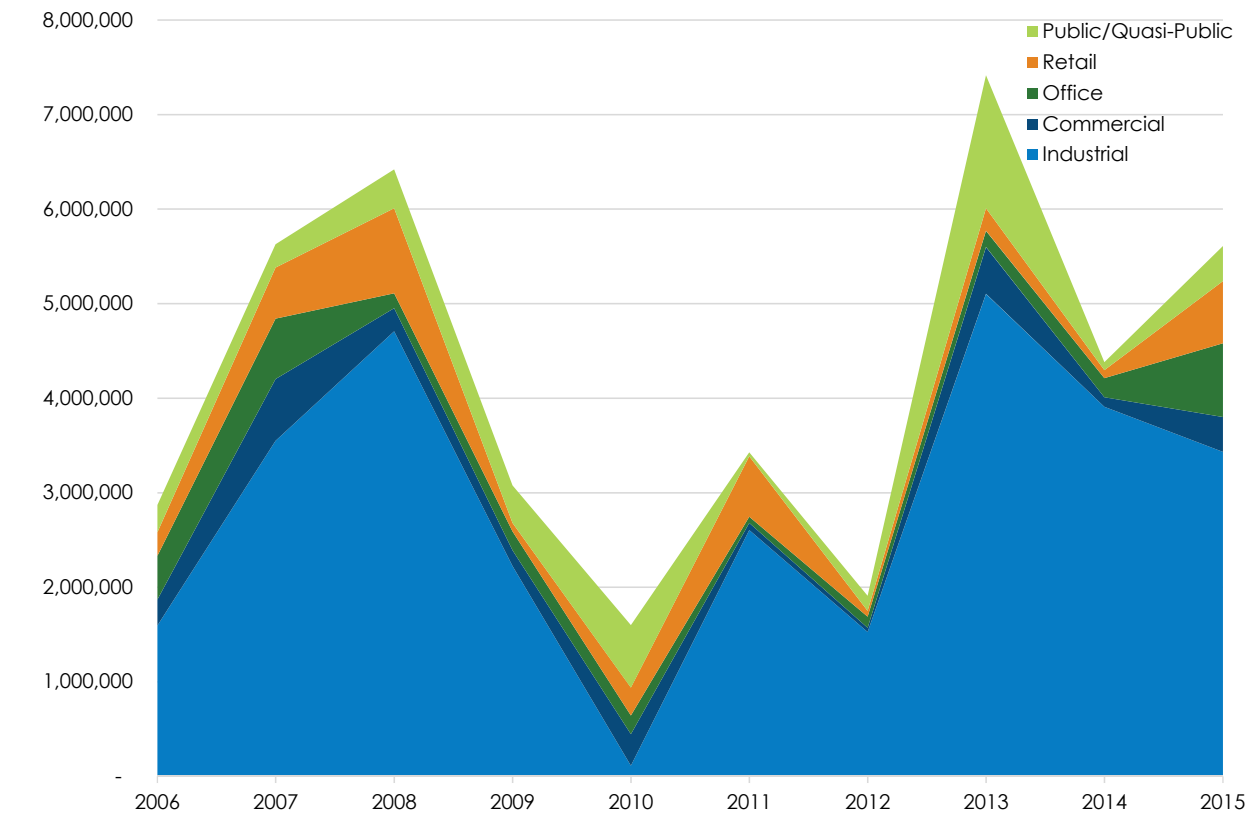
tion of the Panama Canal expansion and the rise of online retailing. These trends are also expected to converge with the region's abundant water supply to attract more food and beverage manufacturers.

Retail and Commercial

Retail and commercial development activity varies widely from year to year and has not shown any decisive trends since 2006. Approved commercial floor area, for example, fell to its lowest ten-year level in 2012, then rose to its highest ten-year level in 2013. By 2015, both retail and commercial activity exceeded their 2006 levels.

One trend that is likely to affect the character, if not the amount, of commercial and retail development is the rise of online shopping. As incomes stagnate and more and more millennials become consumers, online shopping

Industrial Development Continues to Dominate Non-Residential Floor Area
Approved Non-Residential Floor Area by Type (Square feet)



is replacing shopping at brick-and-mortar stores. Even in the fashion industry, which for years had resisted online retailing, e-commerce is “starting to take significant market share from traditional department stores.”⁵ Amazon, for example, only accounts for about 7% of the overall U.S. apparel market in 2016, but is expected to account for nearly 20% in 2020. To compete with online retailers, many brick-and-mortar stores are attempting to create a distinct experience by offering novel locations, designs or amenities. In the Lehigh Valley, the increasingly competitive retail environment is reflected in the rise of downtown redevelopment and new urbanist “lifestyle

⁵ *The Wall Street Journal*, May 12, 2016. “Retail Slump Shows Amazon Effect.”

centers.” Both offer shoppers a distinct spatial experience that is not available online.

Office

Office development activity appears to have gained momentum in recent years, mostly driven by large-scale office projects. Since 2014, these projects have included high-profile urban infill projects (such as The Waterfront in 2015 and Three City Center in 2014), as well as greenfield projects in the adjacent suburban townships.

Public/Quasi-Public

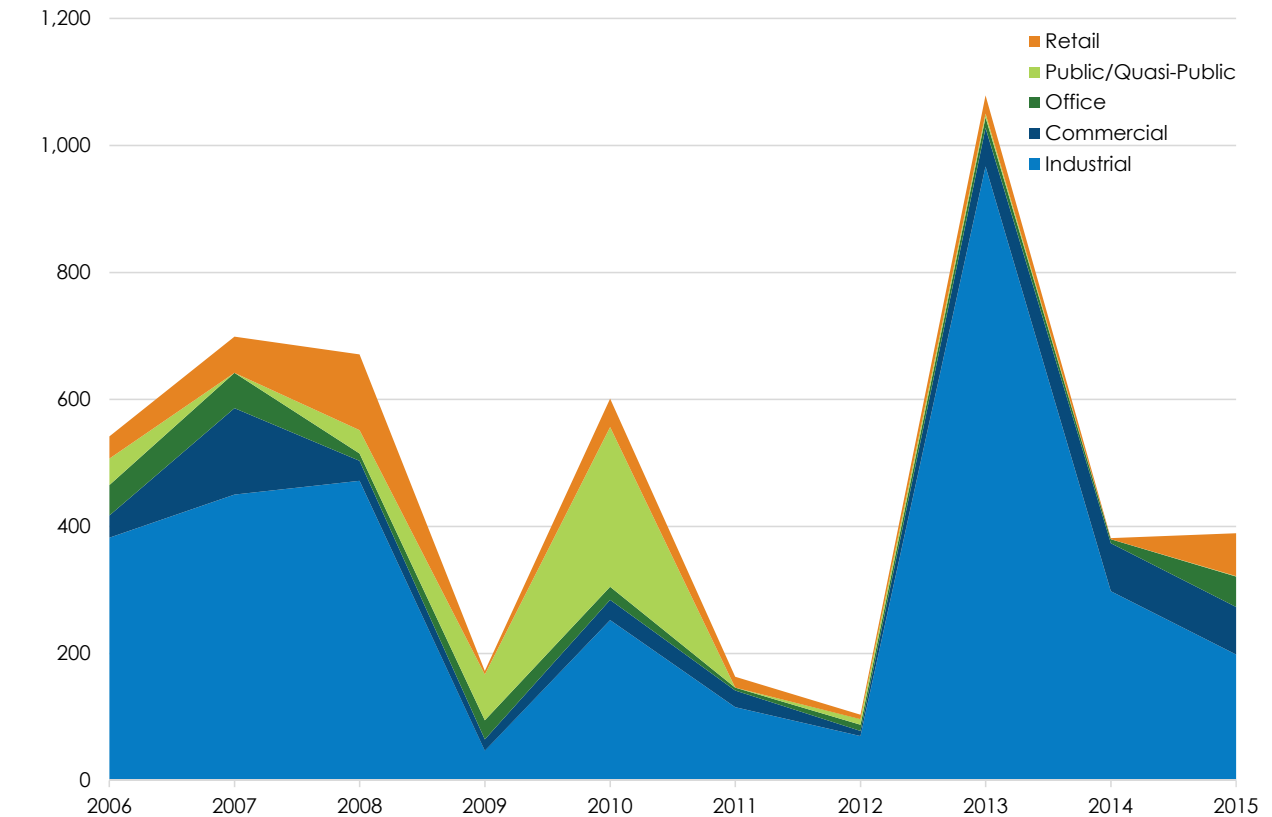
Public/quasi-public development also varies widely from year to year and often reflects one

or two large-scale projects. In recent years, many of these projects were education or medical facilities developed by the region’s school districts, colleges and hospitals.

Approved Non-Residential Area

The land area included in final non-residential plans varies widely from year to year and is often driven by a handful of large projects. In general, however, industrial activity is seen to dominate the mix of land uses, particularly in the years since 2012.

Approved Non-Residential Land Area Varies Widely from Year to Year
Approved Non-Residential Land Area by Type (Acres)



CONCLUSION



BUILD LV

Lehigh Valley Annual Development Report

Plan submissions in the Lehigh Valley indicate that the region has experienced a gradual recovery in development activity since 2012. In the residential sector, apartment and assisted living developments have largely driven this recovery, with condominiums and townhomes emerging as key players in 2015. This shift away from single family detached housing reflects fundamental economic, demographic and cultural trends that are transforming not only the regional housing landscape, but the national housing landscape as well. The non-residential sector has recovered more quickly and more fully than the residential sector, with industrial development activity largely driving the recovery. Within the industrial sector, warehouse development has emerged as a key player. This shift reflects

the rise of e-commerce, which demands supply chains that can provide same-day or two-day delivery to the East Coast's largest population centers.

Plan submissions not only reflect changes in the region's economy, but anticipate changes in the region's physical landscape as well. Land is one of our most precious resources, and land development today will shape not only our quality of life, but that of future generations for many years to come. Even as single family detached housing becomes a smaller player in the mix of housing types, it remains the dominant player in the development of the land base within the residential sector. Year after year, new single family housing consumes far more land than all other housing types combined, and much of this land is open space. As the residential sector has strug-

gled to rebound, non-residential development has played an increasingly important role in shaping the region's landscape. Within the non-residential sector, industrial development has emerged as the dominant player in the development of the land base. Industrial development, however, is occurring on brownfield as well as greenfield sites, with Bethlehem City in particular emerging as a champion of brownfield redevelopment.

As the economy and landscape of the Lehigh Valley continue to evolve, it is critical that the region work together to achieve the balance of development, redevelopment and conservation that best meets the needs of its residents.





Approved Development: The land development activity described in approved final plans. Once the final plan is approved and recorded, lot sales and/or development may commence. According to the Pennsylvania Governor’s Center for Local Government Services, “no building permit should be issued unless the lot or parcel of ground is part of an approved and recorded plan.”⁶

Building Permit: A permit to build or construct improvements to real estate. Only once the county has recorded the final plan can the developer or lot purchaser apply for building permits. The LVPC does not issue building permits, nor oversee any aspect of the building permit process.

Final Plan: The final plan is generally the second plan to be reviewed by the municipality and the LVPC. The final plan depicts all of the content in the preliminary plan, but adds detailed survey, construction, and engineering data and is signed and sealed by a licensed engineer. Once the final plan is determined to comply with the requirements of the municipal Subdivision and Land Development Ordinance (SALDO), the municipality will generally approve the plan, and the developer/landowner will submit the plan to the county Recorder of Deeds. Only after the plan is recorded can the landowner commence lot sales and/or development. It is important to note that for smaller proposals the preliminary plan may double as the final plan.

Land Development: The construction of public or private improvements. Land development plans are submitted in two to three stages: an optional sketch plan, followed by a preliminary plan, followed by a final plan. All land development plans must be approved by the municipality and reviewed by the LVPC in their preliminary stage.

Note that the LVPC follows the state definition of “land development.” This definition is articulated in the Pennsylvania Municipalities Planning Code as including:

- 1) The improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving:

- (i) a group of two or more residential or non-residential buildings, whether proposed initially or cumulatively, or a single non-residential building on a lot or lots regardless of the number of occupants or tenure; or
 - (ii) the division or allocation of land or space, whether initially or cumulatively, between or among two or more existing or prospective occupants by means of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups or other features.
- 2) A subdivision of land.

Non-Development: Subdivision activity that creates new lots, expands a parking lot or involves some other physical improvements,

but otherwise involves no new proposed construction.

Non-Residential Development: Subdivision or land development activity for commercial or industrial uses, including warehouses, retail, transportation, recreation, office, agriculture and non-development. Plans for non-residential development include information on non-residential acreage and square feet of building floor area.

Preliminary Plan: The preliminary plan is generally the first plan to be reviewed by the municipality and the LVPC. Required by law, the preliminary plan includes information about the existing conditions of the site and the general plan of development. Information on proposed streets, lot layout, building dimensions and other project attributes are provided

with engineering and surveying detail, as required by the municipal Subdivision and Land Development Ordinance (SALDO). In general, once a municipality has approved a preliminary plan, the landowner must submit a final plan responding to any conditions required by the municipality.

Proposed Development: The land development activity described in sketch and preliminary plans. Note that years may pass between the approval of the preliminary plan and the submission of the final plan, and sometimes no final plan is ever submitted.

Residential Development: Subdivision or land development activity for residential uses, including single family homes, twins, townhouses, apartments, condominiums, mobile home parks, assisted living and

⁶ Pennsylvania Governor’s Center for Local Government Services, 2015. Planning Series #8: Subdivision and Land Development in Pennsylvania.

planned residential development. Plans for residential development include information on residential acreage and number of units.

Sketch Plan: Sketch plans provide the developer and the municipality an opportunity to discuss a proposed project on an informal basis. Though not required by law, a municipality may mandate a sketch plan for projects meeting certain criteria. Since sketch plans are less expensive to prepare than preliminary and final plans and are drafted much earlier in the development process, a developer may be more willing

to respond to comments on a sketch plan than comments on a preliminary plan. Sketch plans will usually include a location map, a property line map, and the general layout of the proposed subdivision or land development.

Subdivision: The creation of new property lines. Subdivision plans are typically submitted in two stages: a preliminary plan followed by a final plan. All subdivision plans must be approved by the municipality and reviewed by the LVPC.

Note that the LVPC follows the state definition of “subdivision.” This definition is articulated in

the Pennsylvania Municipalities Planning Code as follows:

The division or redivision of a lot, tract or parcel of land by any means into two or more lots, tracts, parcels or other divisions of land including changes in existing lot lines for the purpose, whether immediate or future, of lease, partition by the court for distribution to heirs or devisees, transfer of ownership or building or lot development.



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