Appendix B

Three Dynamic Drivers

An Insightful Exploration about Population Dynamics in Monmouth County
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There are many different forces that influence changes in cultural and governmental priorities. Three of the most influential are changes in housing, population and school enrollments. Simple increases in housing drive demand for infrastructural expansions ranging from roads to public safety and education. Changes in the character of housing shapes and is shaped by changes in population. School costs now account for 58.6% of property taxes in Monmouth County while only 30% of households have children. Changes in enrollment drive changes in demand for school related resources and reflect trends in the overall population with implications for future housing demand. Today 208,575 parcels of land are classified as "Residential" out of a total of 235,498 counted in the 2013 Abstract of Ratables. This represents 88.6% of the total. These properties also account for 83.0% of the assessed value of the county.

By looking at how these three great shaping forces have interacted over the last sixty years we may be able to anticipate their future influences over our planning period as we move from mass suburbanization to a more stable maturity. For housing we can follow subdivision and site plan approvals through building permits and certificates of occupancy. Population, in addition to the decennial U.S. Census counts, can be tracked through the more frequent American Community Surveys, migration tracking and natality and mortality reports. School enrollments, which are the most variable of the three drivers, can be followed through the annual ASSA Fall Reports that include data such as grade by grade enrollments broken down by gender, race and ethnicity

as well as free and reduced price lunch data that can be used as a surrogate for poverty rates.

In 1950 there were 225,327 people in Monmouth County and 82,668 housing units yielding just over 2.7 persons per unit. Public school enrollments totaled approximately 35,000 or 15.5% of the population. Four years later the Garden State Parkway opened and the era of mass suburbanization began. In the two years 1954 and 1955, the Monmouth County Planning Board approved over 10,000 new building lots in major subdivisions alone. By the 1970 U.S. Census the population had increased to 461,849 and school enrollments soared, reaching an all-time peak for both the state and county two years later. In the 1972-3 school year Monmouth County had 111,289 public school students. The county had added 67,252 new housing units.

During the following two decades housing growth continued at the same pace with the county adding another 68,488 homes. Population, however, did not experience comparable growth, reaching only 553,124 while school enrollments actually fell, dropping from the 1972-73 peak of 111,289 to a low in 1989-90 of 81,253, a loss of 30,036 students. At first glance these changes may seem counter-intuitive. Why would an increase of 67,252 homes yield a population growth of 236,522 or 3.5 persons per new unit over one twenty year period and an increase of only 91,275 or 1.3 persons per new unit in the next twenty years? Even more seemingly unlikely was the actual decline in students as housing and population both continued to increase. These seeming incongruities

are explained by looking at the role of the school-age population as the key driver in this growth dynamic.

It is no accident that the all-time peak for school enrollments was reached in the 1972-73 school year. That is the year the births of 1954 turned 18 and became high school seniors. It takes 18 years for the wave of births from a growth event - in this case the opening of the Parkway - to fully saturate a K-12 school enrollment. Births decline and spread out over the years following the event and after the 18 year later peak is reached that declining number is reflected in declining enrollments. This happens even though housing and population growth continues. This is because the initial growth overwhelmed the existing more stable population base and more than doubled the population. It also changed it. The 1950 population had 2.7 persons per housing unit and 15.5% of the population was in public schools. This amounted to just over 0.4 students per housing unit. The 20 year boom period that added 67,252 housing units added approximately 75,000 students or more than one for every unit and by 1970 and raised the overall yield from 0.4 to 0.7 students per unit. Over the ensuing twenty years, while housing growth continued at the same pace, it was now on top of a base of almost 150,000 units and an already aging population of close to 500,000.

Other factors such as the move toward smaller families and the rising divorce rate that divide many households also contributed to the limiting of population growth. By the time school enrollments reached their bottom in 1989-90 the 111,289 students that had driven the total to its peak were all gone and the students replacing them were fewer in number, coming from both smaller families and fewer housing units – 68,488 new units versus the 1970 base of 149,920. When we add the

approximate 75,000 increase of the 1950-70 period that did not occur again to the 30,036 student decline that did happen and add this to the actual growth of the 1970-90 period we get approximately 196,000. This number, when compared with the 236,522 person increase from the same number of homes, is much more understandable, especially in light of the other social factors cited above. It should also be noted that by 1990 when enrollments bottomed the percentage of the population enrolled had returned to close to the 15.5% it was in the stable pre-boom era, actually dipping below 14.7%. This compares to the 23.9% that were students at the point of peak enrollments.

This pattern was repeated in the mid-1980's. In 1986 New Jersey saw an all-time high in building permits - over 42,000 statewide. In the three years 1985-87 the Monmouth County Planning Board approved over 12,000 new lots in major subdivisions. The second housing construction boom was underway. Eighteen years after this, in 2005-06, both Monmouth County and the state of New Jersey reached a secondary peak in school enrollments. In Monmouth the total was 109,074. Housing growth overall was not as great or as sustained as in the four decades from 1950 to 1990. The period from 1990 to 2000 saw 22,476 homes added and the decade from 2000 to 2010 added 17,526. This boom added only 27,281 students from the bottom in 1989-90 but it was on top of a much larger base - 81,253 versus approximately 35,000. This secondary boom saw the enrollment percentage rise to only 17.5% and a yield of just over 0.4 students per unit. Over the years since the secondary peak enrollments have dropped to 101,161 on a 2010 population base of 630,380 and 258,410 homes. So what does this hold for the future?

The build-out analysis shows a residual capacity of between 12,000 and 15,000 additional homes possible under existing zoning on a base of 258,410 which equals approximately 5%. With 258,410 units and 630,380 people the population per unit is approximately 2.4. This sense of declining household size is supported by the fact that only 30% of households have children and virtually half of all new homes are age-restricted senior housing. The majority of the rest are multi-family units such as townhouses or condominiums. All of these are aimed at smaller households. Only ten percent of current construction is unrestricted single family homes. Added to this are the record low birth rates of recent years. All of these should point toward lower school enrollments, smaller households and less housing growth to the planning horizon. But there are other factors. As the decline in enrollments in the traditional population base continues, a new population is rising that is not tied to housing growth. This is the arrival of a new Hispanic population that is disproportionately concentrated in the older urban centers with an existing stock of rental housing. This growing population has, at least temporarily, stopped the decline in school enrollments on a countywide basis and while only students are part of an annual population count, it is reasonable to infer from the enrollment growth that these students represent an increase in households as well. The question that is yet to be answered is whether the availability of rental housing will ultimately limit the growth of this population.

In conclusion, it appears reasonable to assume a relatively stable population to the planning horizon in the range of 625-640,000 with public school enrollments at or below 15% of that total or approximately 90-95,000 and a yield of 0.4 students per unit. It is likely that housing growth will be approximately 5,000 units countywide, though this could vary more widely depending on changes in zoning to

support growth in the older urban centers. The ultimate aim of this analysis is to identify a longer term stable relationship among these three powerful elements.

We are now moving from the era of mass suburbanization to one of redevelopment, revitalization and rediscovery. As we attempt to look further into the future, we need to identify and assess the emerging trends and their likely longer term capacities. This begins with looking back at the residual impacts of the era that has just ended.

Among the best windows we have on the continuing impacts of the last era are the trends in age-restricted senior housing which is now the dominant component of new single-family home construction. This is happening as the children born in 1954 turn 60. With longer life spans and improved health it is likely that this population will continue to look to the single-family home model as a housing choice for an extended period, though often on a smaller scale and in more specialized settings. The questions for future decades is whether this same population will drive demand for "continuum-of-care" facilities as well as they continue to age and whether or not they will choose to remain in New Jersey.

A way of looking at the demographic progress of this generation is to look at households as they age. This can be done by looking at household sizes, ranging from a 2010 Census high of 3.20 in Millstone to a low of 1.78 in Sea Bright, and the percentage of households with children under 18. This measure showed a similarly broad range from 57.1% in Millstone down to 14.3% in Sea Bright. Remembering that the boom of the mid-80's was focused disproportionately on the western part of the county, it is not surprising to see municipalities there accounting for the highest percentages. The accompanying map shows

the location and percentage of households with children under 18. These should then be compared with the municipal graphs showing the one year age cohorts up to 20 years of age.

A number of municipalities with the highest percentages of households with children under 18 also show a downward trend toward the younger end of the graph. Because this is only a snapshot of the 2010 population, public school enrollment by grade is presented as an overlay of the 6-18 year old cohorts. The second overlay represents the resident births. These overlays, when maintained annually, reveal trends since the last Census including the in-migration of young families into the population.

Because there is a general consistency between households with children under 18 and household sizes, it is reasonable to assume that municipalities with a significant downward trend in their youth population will see a concurrent decline in household size. Those that also have limited potential for residential development may see a resultant stabilization or decline in population in the 2020 Census and beyond. This brings us to trends likely to continue into the new era.

 The build-out analysis showed the potential for new housing under existing zoning. What it could not show is the extent to which municipalities were willing to make changes to zoning to accommodate residential development. This will vary greatly both from town to town and also among types of redevelopment that will be permitted. The last sixty years have been dominated by the single-family home and as a result the supply of such homes is both plentiful and increasingly coming onto the resale market as the original owners continue to transition. As the boom of the 60's and 70's drove school construction,

the aging populations demand for senior housing is now dominant in the single-family market. Just as school enrollment peaked and dropped, the demand for senior housing should also do the same.

Clearly, the most interesting trends for the longer term future that are still emerging are in the character of the population. One is the growth of the Hispanic population which has been ongoing for more than a decade and is disproportionately concentrated in the older urban centers where affordable rental housing is most available. One of the best ways to see this ongoing movement is through tracking school enrollments. The second graph breaks down enrollment trends by race and ethnicity. When the graph is looked at on a municipal or district level it is possible to see the local trends.

The second trend is the re-urbanization that is being driven by both the twenty-something "millennials" and older "empty-nesters" in search of life on a more pedestrian scale with access to mass transit and urban amenities. These populations are driving the gentrification of older centers. This trend is also being seen in the redevelopment of older industrial and commercial sites that are being transformed into mixed-use projects. The question for the future is whether this trend will persist and become the next real societal evolution just as the post-World War II generation fled from the economic decline and social problems of the cities and gave rise to a new suburban culture. This trend appears toward a new vision of urban life that is on a smaller scale and balanced with access to suburban and rural amenities. The most advanced example of this model in Monmouth County is Red Bank which also has the eighth lowest percentage of households with children under 18 at 21.5% and a household size of 2.43. Monitoring of

new housing prices in these urban markets should be an indicator of the population trends.

With the exception of the Hispanic population, which has a greater tendency toward traditional families, the other drivers in the population all point toward a larger number of smaller households in the redeveloping urban and denser suburban communities. As younger adults continue to put off traditional household formation and order residents continue to live longer, healthier more independent lives, the number of 1 and 2 person households, which are already a majority is likely to continue to grow. Traditional single-family communities will continue to provide opportunities for large families with children. Unknowns will include the direction of coastal redevelopment and the second home/seasonal market, the future of agriculture and the evolving regulatory environment. Trends in the state and regional economy will also be influential with indicators such as the current increase in ferry ridership being worth watching closely. Overall, population over the longer future is likely to essentially stabilize as housing growth is relatively slow and household sizes moves slowly lower. The turnover in single-family homes in the western part of the county will likely serve as a counter-balance to population decline in other areas.