INNOVATIONS 2050:
Metropolitan Transportation Plan

Table of Contents

PREFACE

Dover Kent Metropolitan Planning Organization has prepared this draft Metropolitan Transportation Plan (MTP) in accordance with applicable the provisions of Title 23 of USC and 23 CFR 450.324 . This version, referred to as Working Draft Number 1, is intended for public review and comment, and is expected to be amended prior to issuance of a Final Draft in November for formal review by the MPO Public Advisory Committee, the MPO Technical Advisory Committee, and the Dover Kent MPO Council. Council consideration of adoption is anticipated to occur in January 2025.

It is important to note that the Transportation Investment Plan (Chapter 10) element, including a priority list of Fiscally Constrained Priority Projects, remains under development at the time of this release. Performance and finalization of the requisite Air Quality Conformity Analysis (Chapter 7) is the final step in the MTP process and shall be accomplished upon completion of above-reference list of Fiscally Constrained Priority Projects.

Upon adoption by the MPO Council, this MTP shall remain in effect for a period of four (4) years and a new MTP shall be considered for adoption in 2029.

ACKNOWLEDGEMENTS

Dover Kent Metropolitan Planning Organization wishes to formally acknowledge and express appreciation to the following individuals for their personal and collective commitments to improving transportation in Central Delaware in the public interest. Without the leadership, oversight and dedication of these persons, this Metropolitan Transportation Plan would not be possible.

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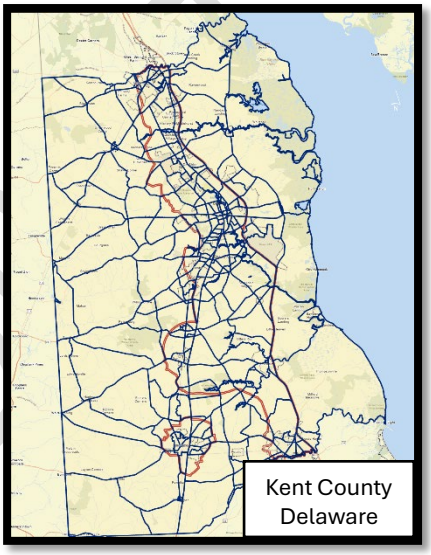
The Dover/Kent County MPO is committed to Title VI compliance. Title VI states "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

CHAPTER 1 : Introduction

The Metropolitan Transportation Plan

"*Innovations 2050: Metropolitan Transportation Plan*", is the long range transportation plan adopted by Dover Kent Metropolitan Planning Organization (MPO) to guide transportation investment activities, to identify present and emerging transportation system needs and to coordinate system improvements to address current issues and evolving growth and development patterns and trends throughout Central Delaware. The Metropolitan Transportation Plan, or MTP, establishes a broad Vision for the future state of transportation in Kent County and identifies overarching Themes and associated Goals for achieving the future state Vision.



The MTP planning process involves extensive public outreach and engagement with Citizens and Local Government Partners to examine existing conditions and concerns, explore opportunities for system improvements, and to identify needs and aspirations for the future.

A key element of this MTP effort is the development of a Growth Forecast for Kent County that projects growth in Population, Households and Employment over the next 25 years to 2050. The Growth Forecast is used for Future Travel Demand Modeling and Air Quality Conformity Analysis that are essential components of the MTP. Ultimately the MTP establishes a list of fiscally constrained and ranked priority Transportation Projects for Dover Kent MPO to pursue initiation of over the course of four (4) years beginning in 2025 and concluding at the end of 2029.

The Dover-Kent County Metropolitan Planning Organization

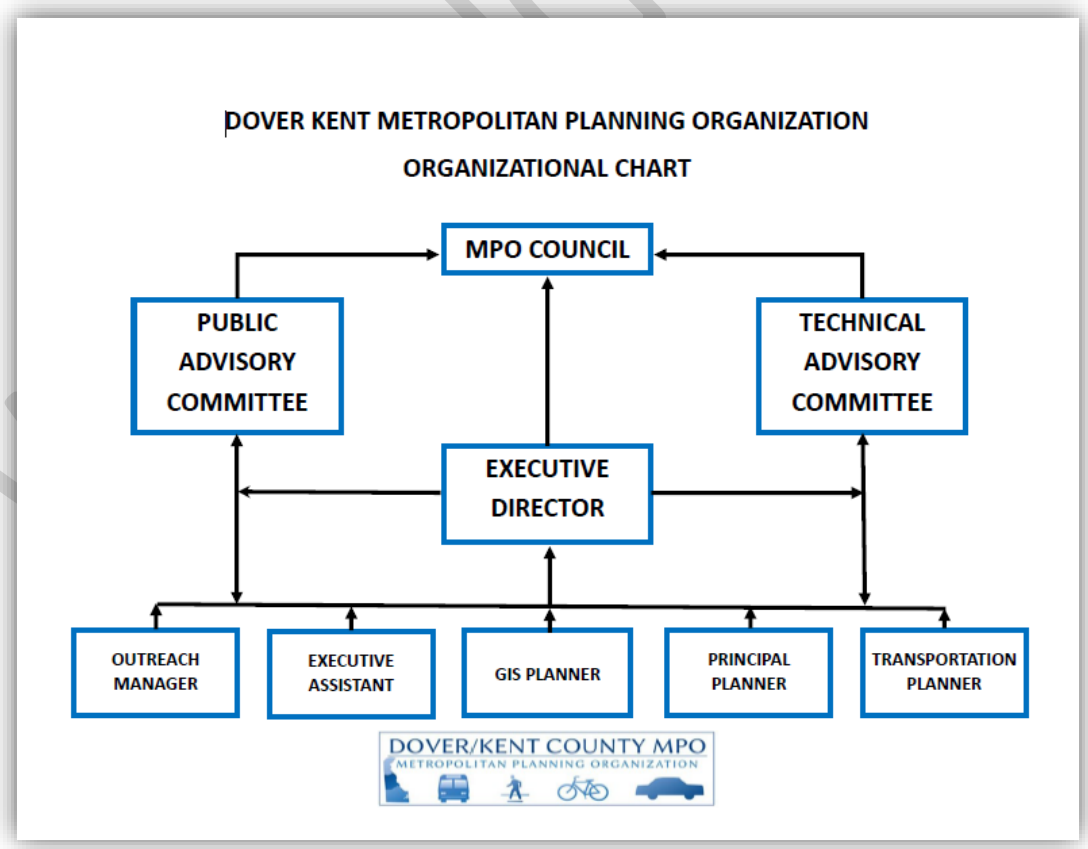
In 1991, upon completion of the 1990 Decennial Population Census, the United States Census Bureau determined that the Greater Dover Area had exceeded a resident urbanized population of 50,000 persons and thus became identified as a Metropolitan Statistical Area (MSA). MSA status brings with it certain opportunities and responsibilities for the MSA Area to share in and take advantage of federal financial and programmatic support. Part of this designation involves the establishment of a continuing, comprehensive, and cooperative Urban Transportation Planning process under the direction of a Metropolitan Planning

Organization. Thus, in 1992, the Dover Kent Metropolitan Planning Organization was established.

In accordance with federal regulations, Dover Kent MPO directs transportation planning activities and programs for the entirety of Kent County, Delaware, including all urbanized areas and municipalities within this designated metropolitan planning area. It is important to point out that while portions of the Towns of Smyrna and Clayton in northern Kent County, and the City of Milford in southern Kent County cross into the neighboring Counties of New Castle and Sussex respectively, Dover Kent MPO embraces a philosophy of complete community planning and will employ a wholistic approach to transportation planning as projects in these municipalities are proposed.

OUR STRUCTURE

Since that time, Dover Kent MPO has been in the business of identifying the near-term and long-range transportation needs of the Central Delaware Region and developing plans to address those needs. The Dover Kent MPO operates under the leadership and management of an Executive Director who directs professional staff in the implementation of a responsive and well-balanced planning process. The work of Dover Kent MPO involves substantial



reliance on public engagement, the resident technical expertise of State and Local Government agencies, and the representative insight and guidance of local Elected Officials. To that end, Dover Kent MPO is governed by an MPO Council which consists of executive level elected officials and transportation agencies leaders. The MPO Council is supported by a Technical Advisory Committee (TAC) which is comprised of technical/management level representatives of Federal, State, County and Local Government agencies, and a Public Advisory Committee (PAC) which is comprised of citizen representatives appointed by foundational agencies of the MPO Council reflecting the diverse communities within Kent County, Delaware.

FOUNDATIONAL PLANNING PROGRAMS

Unified Planning Work Program (URWP)

In accordance with the goals and objectives of the MTP, on an annual basis the Dover Kent MPO prepares a Unified Planning Work Program (UPWP) which is developed after an open solicitation and selection period during the third quarter each year. The UPWP, which is adopted by the MPO Council in the spring of each year, establishes a Work Plan of specific projects and studies to be undertaken by Dover Kent MPO during the new Fiscal Year. The selected UPWP projects and studies tend to be those that are relatively concise in scope and that can be completed within twelve to eighteen months of initiation. Specific attention is paid to assisting municipalities with safety and connectivity concerns, as well as more broad and regional transportation concerns.

Transportation Improvement Plan (TIP)

In accordance with Federal Law [49 U.S.C. 5303(j)], Dover Kent MPO is also responsible for the preparation and adoption of a document known as the Transportation Improvement Plan, or TIP. The TIP shall be prepared at least every four (4) and shall identify more complex transportation projects to be undertaken over the upcoming four (4) year period. The TIP is developed in cooperation with the Delaware Department of Transportation and the Delaware Transit Corporation and may include capital and non-capital surface transportation projects. The types of projects reflected in the TIP may consist of roadway and safety improvements, pedestrian facilities, bicycle transportation routes, and public transit enhancements. The TIP shall also include all regionally significant projects identified by the MPO including those receiving Federal funding and all that require approval of the Federal Highway Administration and/or the Federal Transit Administration.

CHAPTER 2 : Vision ~ Themes ~ Goals

Our Vision

The Plan Vision Statement is intended to be a concise expression of purpose that shall serve as the over-arching principle under which all aspects of the Plan shall be in aligned, in conformity with, measured by, adhered to, and advanced.

The Dover Kent MPO and this Metropolitan Transportation Plan are guided by the following statement of Vision:

> ***"The future transportation system in the Dover Kent County Metropolitan region is safe, resilient, and sustainable, supports economic development, allows easy access and mobility for all people and goods to reach their destinations, and serves desired growth patterns in a manner that is fair and just to all people and respectful of community character and our natural environment."***

Meetings with State and Municipal Partners

During the winter and spring of 2024, Dover Kent MPO staff spent time examining the Transportation Elements of local Comprehensive Plans and meeting with Municipal Leaders, Kent County and State agency representatives to discuss transportation concerns within local jurisdictions. A total of thirteen (13) individual partner agency sessions were completed in preparation for this Plan. While we were not able to meet with representatives from each of the twenty (20) local governments in Kent County for various reasons, we believe that our meeting sessions reflect an excellent representative sample that yielded valuable information concerning local and regional transportation issues and concerns. Several topics emerged as common concerns in cities, towns and unincorporated suburban areas. The Table below provides a brief summary of common concerns in rank order.

Issue/Concern	Frequency of Concern	Brief Description
Roadway Conditions	14	Issues include: functional classification deficiencies (i.e. lane widths; lack of shoulders); repair/resurfacing; frequency of site entrances; unsafe intersections; roadway flooding
Sidewalks	10	Lack of sidewalks; incomplete/dead-end sidewalks; non-ADA compliant sidewalks; damaged pavement; obstructions in sidewalk (i.e. utility poles); gaps; lack of curb ramps and marked crosswalks
Economic Development Support	7	Inadequate design of commercial corridors; improvements to support industrial developments; limited access to SR 1;

		need Transportation Improvement Districts (TIDs) to be operational
Transit	6	Expand routes; additional Stops; lack of Shelters; inadequate or no pedestrian access (sidewalks)
Truck Movements	5	Too many trucks on local roads; lack of off-street parking/storage for trucks
Residential Growth/Traffic	5	Traffic congestion on local roads
Speeding	4	Issue particularly in municipalities. Interest in use of speed cameras (small towns expressed frustration that they cannot participate due to lack of Police Force)
Bicycle Facilities	4	Incomplete, unconnected networks. Safety concerns with on street bicycle lanes. Some bike lanes come to an abrupt end.
Street Lighting	2	Concerns with low/no lighting of travel corridors. Inadequate lighting for pedestrians.
Micro-Transit	1	Concerns with safe use and storage locations of "shared-use" devices like bicycles and scooters

The information gathered from the partner sessions, coupled with input received from the General Public (see Chapter 8 – Public Participation) over the same time period have helped identify main themes and craft goals to pursue with this iteration of the Dover Kent Metropolitan Transportation Plan. These MTP Themes and Goals are articulated in detail below.

Themes and Goals

The Dover Kent MPO endeavors to vigorously advance our Statement of Vision through the implementation of this Metropolitan Transportation Plan. In charting a course toward attainment of this Vision, we have identified six (6) primary Themes that we seek to advance during this MTP planning period. Each Theme is paired with a specific Plan Goal that Dover Kent MPO shall pursue over the next four (4) years in furtherance of this MTP.

THEME 1: Enhanced Mobility – Network Continuity

The work of the Dover Kent MPO is targeted at improving the overall transportation system, ensuring that all modes of transportation are reasonably accommodated to the greatest extent possible in a seamless, safe, and integrated network of transportation alternatives. As transportation needs and preferences are ever evolving we seek opportunities to enhance existing transportation infrastructure, incorporate new modes of travel, and promote utilization of advances in transportation technologies.

GOAL 1: ***To foster the evolution of a seamless Transportation System for all modes of travel that is safe, efficient, continuous, and fluid that effectively accommodates local, regional, and interstate transportation.***

THEME 2: Inter-Jurisdictional Coordination & Concurrency

As a regional transportation planning agency representing all of Kent County, Delaware and the twenty (20) municipalities therein, Dover Kent MPO plays a significant unifying role in transportation planning with respect to inter-jurisdictional communication, information gathering, identification of local and regional challenges and opportunities for the future, and synthesizing this information into a coherent, fair, and accurate regional model for future growth and transportation investment. This work involves developing plans and support mechanisms to advance local, regional and state growth management, planning and investment strategies.

GOAL 2: ***To synthesize State, Regional and Local Transportation Objectives into a unified Vision and Implementation Plan for Central Delaware.***

THEME 3: Economic Vitality

The health and vitality of our local and regional economy is dependent upon an efficient, effective, and reliable system for the movement and delivery of goods, services and people. The Dover Kent MPO works closely with economic development professionals, the local business community, citizens, and local government leaders to support business activity, address current transportation issues that impact the local and regional economy, and to anticipate and plan for a vibrant economic future.

GOAL 3: ***To support an active and growing Business Development Community by proactively planning for transportation investments that strengthen the economic vitality of the Central Delaware Region.***

THEME 4: Social Equity

Dover Kent MPO seeks to maintain and promote a culture of fundamental fairness, equity and inclusion within the practice of transportation planning. Dover Kent MPO strives to establish abundant and accessible ways for all citizens to share their concerns, ideas, and aspirations, and to enjoy meaningful engagement in the transportation planning process. Transportation improvement plans undertaken by Dover Kent MPO shall endeavor to eliminate bias and to eradicate conditions that negatively impact disadvantaged communities and populations wherever such conditions exist. The fair and equitable distribution of transportation planning resources and transportation investments throughout Central Delaware are essential core values of this MPO.

GOAL 4: ***To establish opportunity for public participation by all persons in the Transportation Planning Process and to ensure that resultant plans for Transportation Investments are implemented fairly, justly, and equitably in the best interests of all members of the community.***

THEME 5: Resiliency & Sustainability

The degree to which transportation investments can be designed, built, and affordably maintained to withstand and adapt to natural impacts over time without losing their public usefulness or draining public coffers is an important quality of life consideration. As responsible stewards of public financial resources, Dover Kent MPO shall strive to promote transportation investments that minimize impacts to the natural environment, that contribute to improved quality of life for citizens, that are not subject to known threats or vulnerable to damage or destruction due to existing or forecasted environmental influences, and that can be maintained in an efficient and affordable manner.

GOAL 5: ***To give preference to Transportation Investments that demonstrate minimized risk of failure, or avoidance of impacts, due to climate change and extreme weather events, that avoid or minimize disruption to natural communities and processes, and that reduce or eliminate the need for future Investments due to obsolescence, climatic damage, or other loss.***

THEME 6: User Experience

For many years, the operational Level of Service emphasis for roadways has been focused almost entirely on motor vehicle travel, roadway capacity for movement of motor vehicles, and the degree to which the volume of the motor vehicle stream causes time delays for motorists. While this Level of Service metric is valuable for understanding and evaluating roadway capacity for motor vehicles, our roadways have evolved and continue to evolve as essential multi-modal travel ways for pedestrians, bicyclists and other non-motorized modes of travel. Dover Kent MPO endeavors to develop metrics that focus on improved safety, security and visual quality of roadways for all modes of travel.

GOAL 6: ***To incorporate Quality Level of Service features into Transportation Network Improvement Projects that yield a high level of user satisfaction and positive perceptions of user safety, security, and visual quality.***

Chapter 3: Community Profile

Geography: Physical Characteristics

Kent County is located in the center of the State of Delaware. To its north is New Castle County and to its south is Sussex County, the two other counties in the state. To its west is the Eastern Shore of Maryland, and to its east, across the Delaware Bay, is the State of New Jersey. Kent County's land area is approximately 586 square miles, or 29.6% of the state's total land area.[1]

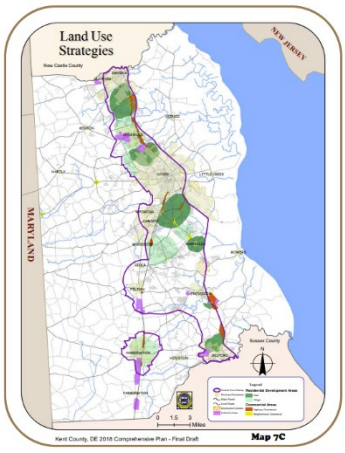


Figure 1: The Kent County growth zone overlay. Source: Kent County Comprehensive Plan (2018).

The largest urban area in the County is the City of Dover and its surroundings. Most of the new growth is taking place along major north-south roads, namely Delaware Route 1 (DE1) and US Route 13 (US13); this corresponds with the Kent County Growth Zone and the Delaware Strategies for State Policies and Spending. The land outside of these areas is mostly rural and predominantly used for agriculture.

Kent County has a low mean elevation and is prone to coastal flooding. Much of the coastline consists of salt marshes; Bombay Hook National Wildlife Refuge, for example, is a large salt marsh that provides vital habitat for migratory birds. Major rivers include the Smyrna River, Leipsic River, Little River, St. Jones River, Murderkill River, and Mispillion River. Historically these bodies of water played a significant role in shaping Kent County's communities, providing a means of transportation and producing an abundance of natural resources. Most of Kent County falls within the Delaware Bay watershed, but the western portion of the County drains into the Chesapeake Bay.

Agriculture is a central industry in the County, and farms depend on the networks of roads to move their equipment and produce. Some of the crops produced include corn, soybeans, wheat, barley, and various fruits and vegetables. Livestock, especially chickens, are also a key part of the local economy. According to the US Department of Agriculture, about 187,248 acres are used for farming.[2] In Delaware and in Kent County there are systems in place to preserve agricultural land, because after the land is developed, it is unlikely to be used for farming again.

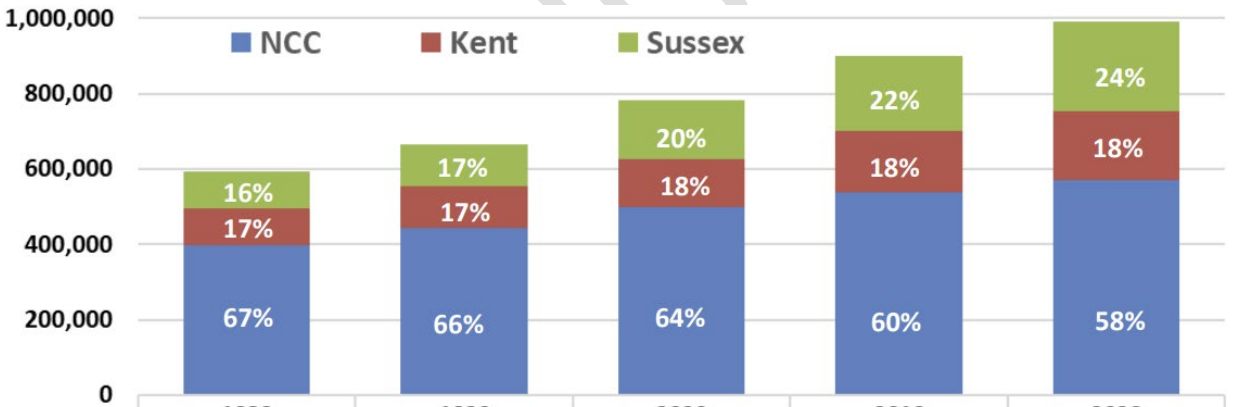
[1] "Cities and Towns." Kent County Levy Court. https://www.kentcountyde.gov/Visitors/Cities-and-Towns.
[2] "County Profile: Kent County, Delaware." US Department of Agriculture, 2022. https://www.nass.usda.gov/Publications/AgCensus/2022/Online_Resources/County_Profiles/Delaware/cp10001.pdf.

Population: Demographic Trends

Summary of Population Change

According to the 2020 Decennial Census from the US Census Bureau, Kent County had a population of 181,851 in 2020. This is about 18.4% of the state's total population. Kent County is the least populous of the three Delaware counties, but it is growing steadily, primarily within the Kent County Growth Zone. Analysis from the Delaware Population Consortium indicates that the majority of population increase is a result of "net migration" (or the difference between immigration and emigration), rather than "natural increase" (or the difference between births and deaths).

Between 1980 and 2020, Kent County has maintained approximately 17-18% of the state's total population; this percentage has not changed significantly between years. By contrast, Sussex County now has a higher percentage of the total population than in 1980, while New Castle County's percentage has decreased. Kent County is expected to remain at approximately 18% of the total population between 2020 and 2050. Note, however, that this does not mean growth is not happening; instead, it means the County's growth rate will remain stable, while the other two counties will be more dramatically impacted by net migration. It is also worth noting that the current projections are not guaranteed to align with future growth patterns, as there are many other factors that make the forecasting more challenging.



	1980	1990	2000	2010	2020
Sussex	98,004	113,229	156,638	197,970	237,390
Kent	98,219	110,993	126,697	162,310	181,839
NCC	398,115	441,946	500,265	538,479	570,719
DE Total	**594,338**	**666,168**	**783,600**	**898,759**	**989,948**

Figure 2: A graph depicting each of the three Delaware counties and their contribution to the state's total population over time. Source: Delaware Population Consortium.

In order to understand the expected changes in Kent County in the coming years, Dover Kent MPO forecasted the population, household, and employment numbers as far ahead as 2050. This was

done by extrapolating the growth outward from the 2020 baseline and factoring in the housing and economic developments that are currently known. These projections, along with the process, will be discussed in greater detail in Chapter 5: Growth Trends & Forecast.

Environmental Justice Data

In 2023, Dover Kent MPO completed its *Title VI / Environmental Justice Report*. This document describes the MPO's commitment to equity in transportation, which means ensuring all voices in Kent County are able to be heard during the transportation planning process, regardless of physical constraints, language barriers, transportation access, and other constraints. It also details the latest demographic information for Kent County, according to the US Census Bureau. Census data was analyzed not only at a countywide level, but also in a way that compares the numbers between locations. This was done using census block groups to represent the difference in percentages for each topic. Environmental justice topics in the report include racial demographics, age demographics, Limited English Proficiency (LEP), zero-vehicle households, poverty status, and disability status. Census information was verified using DelDOT's Equity Analysis Tool.

As an example, the document examines the racial demographics of Kent County. This was based on the findings of the 2020 Decennial Census. As a whole, the numbers show that 59.2% of the population identifies as "White alone." However, this is not the case throughout the entire county. When looking at the census block groups, it was revealed that specific neighborhoods in Dover, Milford, and other municipalities are far more diverse than the total numbers suggest. These findings can then be used by the MPO to understand which areas may have been historically overlooked and not given adequate transportation investment.

Racial Demographics (Kent County)	Population	% of Total
White alone	107,685	59.2%
Black or African American Alone	46,998	25.8%
American Indian and Alaska Native alone	1,149	0.6%
Asian alone	4,429	2.4%
Native Hawaiian and Other Pacific Islander alone	125	0.1%
Some Other Race alone	5,658	3.1%
Population of two or more races	15,807	8.7%
Total (of all categories)	181,851	100%

Hispanic and Latino Demographics (Kent County)	Population	% of Total
Hispanic or Latino	13,981	7.7%
Not Hispanic or Latino	167,870	92.3%
Total (of all categories)	181,851	100%

Data from the 2021 American Community Survey (ACS) was also used to examine these topics. According to the ACS, there are 34,595 people aged 65 and over in Kent County, which is about 18.5% of the County's population. This is lower than the State of Delaware's average of 20.9%. For comparison, this same demographic makes up about 17.1% of the population in New Castle County, and about 30.8% in Sussex County. According to the ACS, Kent County's median age is estimated at 37.7, while in New Castle County the median age is 39.8 and in Sussex County it is 52.7.

Age Demographics (Kent County)	Population	% of Total
65 to 69 years	11,744	6.3%
70 to 74 years	7,854	4.2%
75 to 79 years	6,912	3.7%
80 to 84 years	4,546	2.4%
85 years and over	3,539	1.9%
Total (of the above categories)	34,595	18.5%

Another example of ACS data is the poverty status of Kent County, which is estimated to include 9.3% of the population. This is roughly the same as the state average. Both age and poverty status are important considerations during the planning process, as they reveal which communities may have specific needs or are less likely to be represented.

Income Demographics (Kent County)	Population	% of Total
Income in the past 12 months below poverty level	16,932	9.3%
Income in the past 12 months at or above poverty level	165,297	90.7%
Total (of all categories)	182,229	100%

The above examples are a small sample of the census data used by the MPO to assist in its commitment to equity in transportation. The data does not provide a complete understanding of a community, and there are many additional factors that cannot be quantified. However, it does offer a useful starting point. For further information on environmental justice and equity topics, please refer to the MPO's *Title VI / Environmental Justice Report*.[3]

[3] *Title VI / Environmental Justice Report*. Dover/Kent County MPO, 2023. https://doverkentmpo.delaware.gov/files/2023/11/EJ-Report-2023-final-version.pdf.

Communities: Cities, Towns, Suburban & Rural

There are a total of twenty municipalities in Kent County. Of these, three of them (Dover, Milford, and Harrington) are designated as cities; the remaining are designated as towns. There are also unincorporated communities found throughout the County, such as Little Heaven, Kitts Hummock, and Marydel. The largest municipality is Dover, which has a population of approximately 39,403 and an incorporated area of approximately 25 square miles.

As previously discussed, most of the current growth is happening within the Kent County Growth Zone. Additionally, most of the urban and suburban land is found within this corridor. The areas farther from DE1 and US13, by contrast, are rural and less developed. Small municipalities outside of the Growth Zone include Kenton, Hartly, Leipsic, Little Creek, Bowers, Houston, and Farmington. Kent County has both urban and rural environments, and the transportation networks in each of these areas serve different needs and experience different volumes of traffic.

Figure 3 (l): Loockerman Street in Dover. This road is located in an important economic center of Central Delaware. It contains a sidewalk network for pedestrian access and is abutted by buildings that contain various businesses.

Figure 4 (r): Farmington Road in between Harrington and Farmington. Roads in Kent County's rural areas often lack shoulders and have higher speed limits than in downtown areas.

As defined by the 2020 Decennial Census, an urban area is a densely populated territory that contains at least 2,000 housing units or at least 5,000 people. The US Census Bureau no longer distinguishes between "urban areas" and "urban clusters," and any location that fits the above description is classified as an urban area.[4] Under the current definition, Kent County contains three separate urban areas: Dover (an area that extends between Smyrna and Felton), Milford, and Harrington. When an urban area contains more than 50,000 people, the Federal Highway Administration (FHWA) designates a new MPO to assist with transportation planning in the region. Approximately 72.2% of Kent County's population lives in an urban area.

Dover Kent MPO is committed to working with each of Kent County's municipalities and the unincorporated areas. It is important to provide planning services for the communities that typically

[4] "2020 Census Urban Areas FAQs." US Census Bureau, 2022. https://www2.census.gov/geo/pdfs/reference/ua/Census_UA_2020FAQs.pdf.

may not have the staff or resources to improve transportation conditions on their own. The safety and connectivity needs of small towns should not be overlooked, which is why the MPO has been tracking the geographic distribution of its annual planning studies and ensuring no area is left out of the process. For more information on this topic, please refer to Chapter 8: Public Engagement.

Economic Characteristics: Employment Centers & Work Force

According to the 2022 American Community Survey (ACS) from the US Census Bureau, there are 87,824 employed people in Kent County over the age of 16. The following is a summary of some of the larger employment sectors in the County. It will discuss the number of jobs in each sector and list a few of the relevant employers.

Figure 5: A C-5M Super Galaxy, US Air Force. Source: Dover AFB Public Affairs.

One of the largest employment centers in Kent County is Dover Air Force Base. First opened during the 1940s, the Base is a strategically vital facility for the US Department of Defense. It is used for a wide range of purposes, including overseas distribution of cargo and personnel; dignified transfers; and humanitarian efforts. According to the Dover Air Force Base Compatible Use Plan (2023), the employment at the Base in 2018 was approximately 6,076, and the additional employment throughout Kent County was approximately 1,954. This means in total the base contributes to 8,030 jobs, which is more than 10% of Kent County's total jobs. The Base keeps a close relationship with the City of Dover and other surrounding communities, and actively works to maintain compatible land use and avoid potential conflicting uses. Many former Base personnel have chosen to retire in Kent County. The Base has an approximate annual impact of $537 million.

Figure 6: Cover crops planted in an agricultural field in eastern Kent County.

Agriculture is very prevalent in Kent County, with poultry consisting of roughly two-thirds of the total market value, according to the US Department of Agriculture. The poultry sector includes chicken farms; grain production, storage, and distribution; and chicken processing facilities. Products are then sold by major distributors. Other farms sell locally grown produce that includes apples, peaches, strawberries, and other fruits and vegetables. Many Kent County farms are family-owned, and some have been in the same family for generations. The growing, processing, and distribution of agricultural products depend on a reliable transportation system and sustainable land use practices that preserve the land for farming. There are approximately 1,257 people working in agriculture and related industries in Kent

County. (Note that this number does not include the people involved in the manufacturing side of livestock and crop production.)

Healthcare is an important employment sector in Kent County. According to the 2022 ACS, there are 12,912 people working in healthcare and social assistance in the County. Bayhealth Medical Center's Kent General Campus includes a physician residency program, which is instrumental for training new physicians and maintaining a healthcare workforce within the County.

Education is another key sector. According to the 2022 ACS, there are 8,003 people working in educational services in the County. Colleges in the area include Delaware State University, Delaware Technical Community College, and Wilmington University. Kent County is home to six public school districts: Smyrna, Capital, Caesar Rodney, Lake Forest, Milford, and Polytech. Although a small part of Woodbridge School District extends into Kent County, it is based in Sussex County.

A final sector worth discussing is public administration. According to the 2022 ACS, there are 6,765 people working in this sector in the County. This includes the Delaware state government (such as the state legislature, DelDOT, DNREC, and other departments), the Kent County government, and municipal governments. Many of these employees reside in Kent County, while others commute from neighboring counties.

Additional employment sectors in Kent County include manufacturing, construction, tourism, and others. For further information on this topic, please refer to the latest data from the US Census Bureau.[5]

Transportation System: Composition & Services

Roadways

The major roads that run north to south in Kent County include DE1, US13, and a small part of US113. These roads have the highest volume of vehicle traffic in the County. The roads that provide east-west connections include DE300, DE8, DE10, and DE14, as well as several others. DelDOT is responsible for the ownership and maintenance of approximately 90% of all roads throughout the State of Delaware.

Annual Average Daily Traffic (AADT) is used to describe the volume of vehicle traffic of a road. DE1 has the highest AADT of Kent County's roads, with the segment near Smyrna having more than 55,000 vehicles per day, and the segments near Dover and Milford having more than 45,000 vehicles per day. Note that this is an average from throughout the year, and daily numbers can be much higher than a recorded AADT. For example, DE1 can experience higher volumes during the

[5] "DP03: Selected Economic Characteristics." US Census Bureau, 2022. https://data.census.gov/table/ACSDP1Y2022.DP03?t=Employment&g=050XX00US10001.

summer months. By comparison, many of Kent County's rural roads have an AADT of less than 1,000.[6]

An important part of the MTP process is determining when the County's roadways will no longer be able to support their daily traffic volume. This was determined by modeling the roadways with input data for future population growth and planned roadway projects. By doing this, Dover Kent MPO can then recommend projects in critical areas. The results of this exercise will be discussed further in Chapter 6: Travel Demand Model & Future Needs.

Figure 7: A diagram describing the Safe System Approach. Source: Federal Highway Administration (FHWA).

When studying a particular area, Dover Kent MPO examines the latest crash data to better understand the roadway's safety needs. This technique can also be used for the County as a whole, and it helps determine whether crashes are increasing or decreasing. According to data from the Delaware State Police, there were 32 roadway fatalities reported throughout the County in 2023, which was about 23% of the state's total. There were 33 fatalities reported in 2022, and 37 in 2021. This means despite state and local efforts to improve roadway safety, the number of fatalities has not decreased significantly in recent years. Roadway injuries have also not been reduced: there were 1,468 injuries reported in 2023, 1,429 in 2022, and 1,516 in 2021.[7]

Safety is the primary concern of Dover Kent MPO. This objective informs each of the MPO's regular tasks, including interaction with DelDOT and municipalities, public outreach and education, and the completion of studies. Dover Kent MPO, DelDOT, and other Delaware agencies follow a Safe System approach to transportation safety, which addresses several different aspects of the transportation network rather than focusing on a single aspect. The Safe System approach is part of the national strategy known as "Towards Zero Deaths," which looks at the entire transportation system with the goal of reducing the number of annual roadway deaths to zero.[8]

[6] "Traffic Counts." Delaware Department of Transportation (DelDOT), 2023. https://deldot.maps.arcgis.com/apps/webappviewer/index.html?id=4f76a1fa5b5c493cb3e1fad44a50dad1.
[7] Delaware's Annual Traffic Statistical Report. Delaware State Police, 2023. https://dsp.delaware.gov/wp-content/uploads/sites/118/2024/04/2023-Annual-Traffic-Statistical-Report.pdf.
[8] "Zero Deaths and Safe System. Federal Highway Administration (FHWA), 2024. https://highways.dot.gov/safety/zero-deaths.

Transportation Improvement Districts

To improve coordination between land use change and requisite improvements to the transportation system needed to support growth and development, DelDOT has instituted a system of Transportation Improvement Districts (TIDs). A TID is defined by DelDOT as: *"A geographic area defined for the purpose of securing required improvements to transportation facilities in the area."* TIDs have been established mostly in areas experiencing development pressure or that are planned for future growth as an alternative to individual development projects making limited roadway improvements on a development-by-development basis.

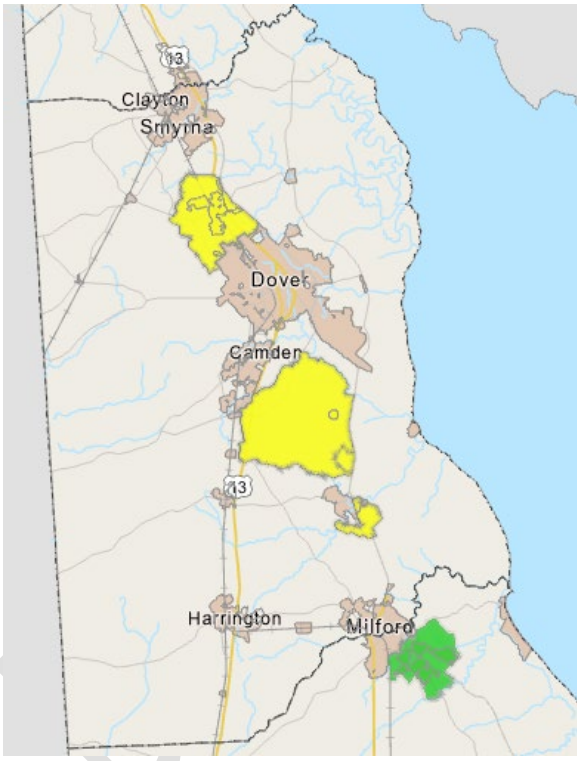


Figure 8: The locations of each of the four TIDs in Kent County, marked in yellow. Source: DelDOT.

Once a TID area has been identified and formalized, DelDOT performs a detailed traffic analysis and determines the future cost of needed roadway improvements in the TID at full build-out. Developers in the TID are then assessed a predetermined Transportation Impact Fee that represents a pro rata share of the cost of roadway improvements within the TID as a whole. Within a TID, DelDOT controls the timing and completeness of necessary roadway improvements, and developers are not burdened with the additional time associated with traffic analysis and making piecemeal road improvements themselves.

In Kent County, currently there are four (4) TIDs "under development" by DelDOT shown in Yellow on the Map above. These TIDs are situated as follows: 1) in the Cheswold Area north of Dover; 2) Magnolia Area southeast of Camden; 3) Little Heaven Area adjoining SR 1 at the Bowers Beach Interchange; and, 4) South Frederica Area north of Milford. These TIDs remain under development at this time and are not yet "operational". The area shown in Green on the south side of the City of Milford is known as the Southeast Milford TID located in Sussex County and is operational.

Dover Kent MPO fully endorses the formation of TIDs in Kent County and anticipates the four (4) areas defined to be advanced to "operational" status during this MTP Planning period.

Freight System

The freight industry is one of the key pieces to Kent County's economy. This industry includes several different types of transportation, including trucks, railways, and air cargo. Goods such as agricultural products, fuel, pharmaceuticals, and manufactured products are transported by freight in the County. Businesses in Dover and Harrington rely on the rail network to transport goods. The

roadways as routes to move freight are essential to the success of various businesses, as well as the mission of Dover Air Force Base.

The freight industry depends on a reliable transportation system. For trucks, this means well-maintained roads, designated truck routes that avoid excessive delays, and a sufficient number of rest areas and designated parking. For trains, it means well-maintained rail lines, safe railroad crossings, and compatible use between freight operators and neighbors. It is also important to have available properties along rail lines and designated truck routes that may be used for freight purposes.

One of the recurring concerns throughout Kent County is the lack of available truck parking. This is a problem because when truck drivers cannot find a place to leave their vehicle, they resort to parking on residential streets and near the exit ramps of DE1, which creates challenges for both the drivers and the municipalities. A safe, designated truck parking area in a strategic location would help address this concern.

For more information on Delaware's freight industry, please refer to the 2022 *Delaware State Freight Plan*.[9]

Public Transportation

Public transportation in Delaware is handled by Delaware Transit Corporation (DTC). The multi-modal transit system run by DTC is known as the Delaware Administration for Regional Transit (DART), which uses both diesel and electric buses to meet the public transportation needs of Kent County. Fixed-route buses are currently in use, and paratransit services are also available. Note that the *DART Reimagined* transit report was recently completed, and if its findings are implemented statewide, then DART services may transition from primarily fixed-route to "microtransit" (or on-demand transportation).[10]

Figure 9: A DART bus on New Street in Dover.

According to the 2022 ACS, approximately 0.6% of Kent County workers take public transportation to their place of employment. This is lower than the state average of 1.4%, and significantly lower than the national average of 3.1%. Most of the County's rural communities do not have DART bus service, as well as some neighborhoods in urban areas.

Passenger rail services were present in Kent County until the 1960s, with stations located in each of the major communities (such as George V. Massey Station in Dover). Today there is no passenger

[9] *Delaware State Freight Plan*. Delaware Department of Transportation (DelDOT), 2022. https://deldot.gov/Business/freight/.
[10] *DART Reimagined: Reshaping Transit Services to Meet the Needs of Today and Beyond*. Delaware Transit Corporation (DTC), 2024. https://www.dartreimagined.com/.

rail in the County. There are, however, rail lines that serve commercial purposes. A currently in-progress study, funded by the Federal Railroad Administration (FRA), will determine the feasibility of a new passenger rail connection from Wilmington/Newark in New Castle County to Salisbury/Berlin in Maryland; this line, if completed, will pass through Kent and Sussex Counties.

Bicycle and Pedestrian Connectivity

Dover Kent MPO contributes to bicycle and pedestrian connectivity in several ways. In addition to transportation studies, municipal plans, and regional bicycle plans, the MPO recommends specific projects through the MTP. These projects are then able to be studied further by DelDOT and added to the project pipeline. There are various sources of funding that Dover Kent MPO and other agencies regularly use to improve bicycling and walking conditions, including the Transportation Alternatives Program (TAP), the Congestion Mitigation and Air Quality (CMAQ), the DelDOT Bicycle and Pedestrian Pool, and the Bikeway Innovation Grant.

Figure 10: A bicyclist alongside motor vehicles on Saulsbury Road in Dover.

While there are many gaps in the bicycle and pedestrian networks of Kent County, there are some existing trails that provide excellent off-road connectivity. These include the Capital City Trail, St. Jones Greenway, and Senator Bikeway in Dover; the shared use path along DE10; the shared use path along the POW-MIA Parkway; and the shared use path on Front Street in Milford. Note that these trails are all located in urban areas.

Rural areas are more challenging to navigate without a personal vehicle, due to the lack of separation from vehicle traffic. The roads in rural areas also tend to be narrower and sometimes have high speed limits. One way to measure roadway safety for bicyclists is to use the road's Level of Traffic Stress (LTS), which is a score between 1 (safe for all types of bicyclists) and 4 (accessible to only the most experienced bicyclists). As an example, many of the rural roads to the west of Dover (such as Denneys Road, Nault Road, and Pearsons Corner Road) have an LTS of 4. This means the dangerous conditions make this area largely inaccessible for bicyclists.

According to the 2022 ACS, approximately 2.2% of Kent County workers either walk or bike to their place of employment. This is lower than the state average of 2.5% and the national average of 2.9%. Historically these modes of transportation have often been overlooked, which is why Dover Kent MPO works hard to ensure those without a personal vehicle can safely reach their destination.

Air Facilities

Dover Air Force Base is by far the largest air facility in Kent County, but it is primarily used for military purposes. The exception to this is the Civil Air Terminal, which, through a joint-use agreement with the US Department of Defense, allows certain non-military aircraft to use the

facility's runways. The largest non-military air facility in Kent County is Delaware Airpark, which is located to the west of Cheswold and is also home to the Delaware State University Aviation School. The remaining airports in the County are small in comparison, though they are used for a wide range of purposes, including firefighting, law enforcement, air medical services, search-and-rescue, crop-dusting, mosquito-spraying, aircraft salvaging, and recreation. For more information on the air facilities of Kent County, please refer to the 2023 *Kent County Airport Inventory*.[11]

[11] *Kent County Airport Inventory*. Dover/Kent County MPO, 2023. https://doverkentmpo.delaware.gov/files/2023/03/Airport-Inventory-Final-3.2023.pdf.

CHAPTER 4: Performance Measures & Targets

The Metropolitan Transportation Plan (MTP) has adopted a total of four (4) specific Performance Measures. Three (3) of these Performance Measures were established by the Federal Highway Administration (FHWA) and adopted by the Delaware Department of Transportation and Dover Kent MPO in 2018. They are: 1) PM 1 (Safety); 2) PM 2 (Pavement & Bridge Condition); and 3) PM 3 (System Performance, Freight and Congestion Mitigation & Air Quality). The fourth Performance Measure adopted by Dover Kent MPO is known and referred to as the Transit Asset Management Performance Measure (or TAMP) developed by the Delaware Transit Corporation and adopted by Dover Kent MPO in 2019.

It is important to point out that while Dover Kent MPO does not promulgate jurisdiction-specific performance measures or targets on its own, nor gather performance data on a regular and ongoing basis, it has adopted these specific statewide Performance Measures and associated Targets to guide and inform our program of work and to strive in support of the Delaware Department of Transportation in the pursuit thereof.

Below is a summary of our adopted Performance Measures (or PM's) and attendant Targets:

PM1 Safety: (Dover Kent MPO Goal: Safely moving people and commodities efficiently on connected and reliable transportation networks). ***Adopted on 03-07-18.***

PM1 Targets:

A) Reduction of Motor Vehicle Crash Fatalities:

- Reduce Statewide Vehicle Crash Fatalities over 5 Years from 119.4 to 119
- Reduce Statewide Motor Vehicle Crash Fatalities by 3 per Year
- Reduce Statewide Motor Vehicle Crash Fatalities 50% by 2035

B) Reduction in Ratio of Fatalities per 100 Million Vehicle Miles Traveled (VMT):

- Reduce Statewide Ratio over 5 Years from 1.226 to 1.190 Fatalities Per 100 Million VMT

C) Reduction in Number of Serious Injuries from Motor Vehicle Crashes:

- Reduce Number of Serious Injuries over 5 Years from 577.4 to 507.4
- Reduce Number of Serious Injuries by 15 per Year
- Reduce Number of Serious Injuries 50% by 2035

D) Reduction in Number of Non-Motorized Fatalities & Serious Injuries Combined:

- Reduce Combined Statewide Number of Non-Motorized Fatalities/Serious Injuries over 5 Years from 97 to 85 (12%)

PM2 Pavement & Bridge Conditions: (Infrastructure Conditions) ***Adopted on 11-14-18.***

PM2 Road Pavement Condition Targets:

- % of Interstate Pavement in Good Condition - ≥ 50%
- % of Interstate Pavement in Poor Condition - ≤ 5%
- % on Non-Interstate NHS Pavement in Good Condition- ≥ 50%
- % of Non-Interstate NHS Pavement in Poor Condition- ≤ 2%

PM2 Bridge Condition Targets:

- % of Bridges Classified as in Good Condition - ≥ 10%
- % of Bridges Classified as in Poor Condition - ≤ 10% of Bridge Deck Structurally Deficient

PM3 Travel Time Reliability, System Performance, Freight & CMAQ: ***Adopted 0n 11-14-18.***

PM3 Travel Time Reliability:

- % Person-Miles Traveled on Interstate that are "Reliable"- >75%
- % Person-Miles Traveled on Non-Interstate NHS that are "Reliable" - >89%
- Annual Hours of Peak Hour Excessive Delay (PHED) per Capital – 17.2 Hrs/Capita

Freight Movement:

State Long Range Transportation Plan:

- Truck Travel Time Reliability (TTTR) Ratio of Peak Hr Delay /Normal Delay – < 2.5

Congestion Management & Air Quality (CMAQ):

- % Non-Single Vehicle Occupancy (N-SOV) Travel – 4 Year Target of 28.1%
- Total Emissions Reduction

- Volatile Organic Compounds (VOC) kg/D – 2 Year Target – 10.521
  – 4 Year Target – 26.23 kg/D
- Nitrogen Oxides (NOx) - 2 Year Target – 7.354 kg/D
  – 4 Year Target – 16.084 kg/D
- Particulate Matter-Fine (PM 2.5) - 2 Year Target - 3.291 kg/D
  - 4 Year Target – 3.294 kg/D

TAM Performance Measures: ***Adopted 03-06-19.***

- % of Revenue Vehicles that meet or exceed FTA Useful Life Benchmark - <10%
- % of Other Equipment that meets or exceeds FTA Useful Life Benchmark - <10%
- % of Facilities Rated Less than Adequate (<3 TERM Score) - <20%
  (TERM -Transit Economic Requirement Model Scoring System)

In addition to the above Performance Measures, on March 6, 2024, the MPO Council unanimously adopted the 2022 Transit Safety Performance Targets as promulgated and adopted by the Delaware Transit Corporation. The Table below provides a summary of the 2022 Transit Safety Performance Targets as adopted:

Transit Safety Performance Management

2022 Delaware Transit Corporation (DTC) Safety Performance Targets

**MDBF: Mean Distance Between Major Mechanical Failures (in miles)*

	Three-Year Average System Results for DTC		Performance Target
Mode of Service	**FIXED ROUTE**	**PARATRANSIT**	
Vehicle Miles (VRM)	**8,518,626**	**6,544,790**	
Fatalities			
Total	**0**	**0**	**Maintain at 0%**
Rate per 100K VRM	**0**	**0**	
Injuries			
Total	**59**	**16**	**Reduce by 10%**
Rate per 100K VRM	**0.69**	**0.19**	
Safety Events			
Total	**26**	**9**	**Reduce by 10%**
Rate per 100K VRM	**0.31**	0.11	
System Reliability			
Total MMFs	**1,742**	**221**	
VRM/MMF*	4,894	**29,614**	Increase by 10%

SOURCE: **Delaware Transit Corporation Safety Plan – December 2022**

Similar to the other Performance Measures and Targets discussed above, while Dover Kent MPO is not directly in the business of providing Public Transportation Services, it endeavors to support the mission of the Delaware Transit Corporation in attaining adopted Performance Targets through the projects and studies undertaken by Dover Kent MPO.

Performance Measure Targets Summary Report

On an annual basis, the Delaware Department of Transportation and the Delaware Office of Highway Safety work collaboratively to collect essential highway safety performance data and to monitor statewide progress toward attainment of adopted Performance Targets. Part of their collective work involves adjustments to Performance Targets based upon data collected over a 5 Year rolling average. Below is a Summary Table from their recent 2024 Safety Performance Measure Targets Report dated 07-25-23:

Year	SPM # 1 Number of Fatalities	SPM # 2 Rate of Fatalities	SPM # 3 Number of Serious Injuries	SPM # 4 Rate of Serious Injuries	SPM # 5 Combined Number of Non-Motorized Fatalities & Serious Injuries
2018	111	1.09	377	3.70	93
2019	132	1.29	402	3.92	104
2020	116	1.39	447	5.36	95
2021	139	1.37	558	5.50	114
2022	165	1.61	587	5.72	110
2022 Baseline* ***(2018-2022 Rolling Average)***	**132.6**	**1.349**	**474.2**	**4.841**	**103.2**
Required CY2023 and CY2024 Average to Match Baseline	121.5	1.189	389.5	3.814	98.5
2024 Targets ***(2020-2024 Rolling Average)***	**108.2**	**1.104**	**424.3**	**4.328**	**82.4**
Required CY2023 and CY2024 Average to Match Target	60.5	0.576	264.75	2.531	46.5

** 2022 Baseline values are based on best available data at time of target setting and are subject to change when FARS and HPMS data are finalized.*

Delaware's 2024 safety performance measure targets based on 5-year rolling averages are summarized below:

1. Delaware's 2024 5-year rolling average target for the *number of fatalities* is **108.2**.
2. Delaware's 2024 5-year rolling average target for the *rate of fatalities* (per 100 million vehicle miles traveled) is **1.104**.
3. Delaware's 2024 5-year rolling average target for the *number of serious injuries* is **424.3**.
4. Delaware's 2024 5-year rolling average target for the *rate of serious injuries* (per 100 million vehicle miles traveled) is **4.328**.
5. Delaware's 2024 5-year rolling average target for the *combined number of non-motorized fatalities and serious injuries* is **82.4**.

SOURCE: **Delaware Office of Highway Safety – 2024 Safety Performance Measures Summary**

CHAPTER 5: Growth Trends & Forecast

The value of the Metropolitan Transportation Plan as a long range plan for the community is directly connected to the veracity of a credible Growth Forecast for the jurisdiction of Kent County, Delaware. For purposes of this MTP, a Growth Forecast Model has been developed that projects the quantities and locations of future growth in Population, Households, and Employment at the Traffic Analysis Zone (TAZ) level. Traffic Analysis Zones are units of geography developed by the Delaware Department of Transportation for analysis and planning purposes that are fairly homogeneous in terms land use and built composition, and the TAZ boundaries are generally defined by physical features such as roads, rivers and other waterbodies, railroads, and geo-political boundaries. At the present time, Kent County, Delaware is comprised of a total of 266 individual Traffic Analysis Zones.

In developing the Growth Forecast Model for this MTP, we began with base year 2020 Decennial Census data for total Population, Households, and Employment as recorded by the US Census Bureau. The 2020 Census Data has been georeferenced to the Traffic Analysis Zone (TAZ) level. Future Growth in Population, Households, and Employment is then analyzed and modeled for the years 2030, 2040 and 2050 utilizing the Demographic Projection Series for Kent County, Delaware developed by The Delaware Population Consortium.

Kent County Growth Projections
Control Totals

DELAWARE POPULATION CONSORTIUM PROJECTIONS **					
Growth Metric	2020*	2030	2040	2050	% Change
Population	181,497	196,709	205,139	211,150	16.3% ↑
Households	68,224	77,683	82,151	84,615	24.0% ↑
Employment	66,246	74,416	77,965	81,136	22.5% ↑

* Source: US Census Bureau - 2020 Census (adjusted to remove Group Quarters Population)

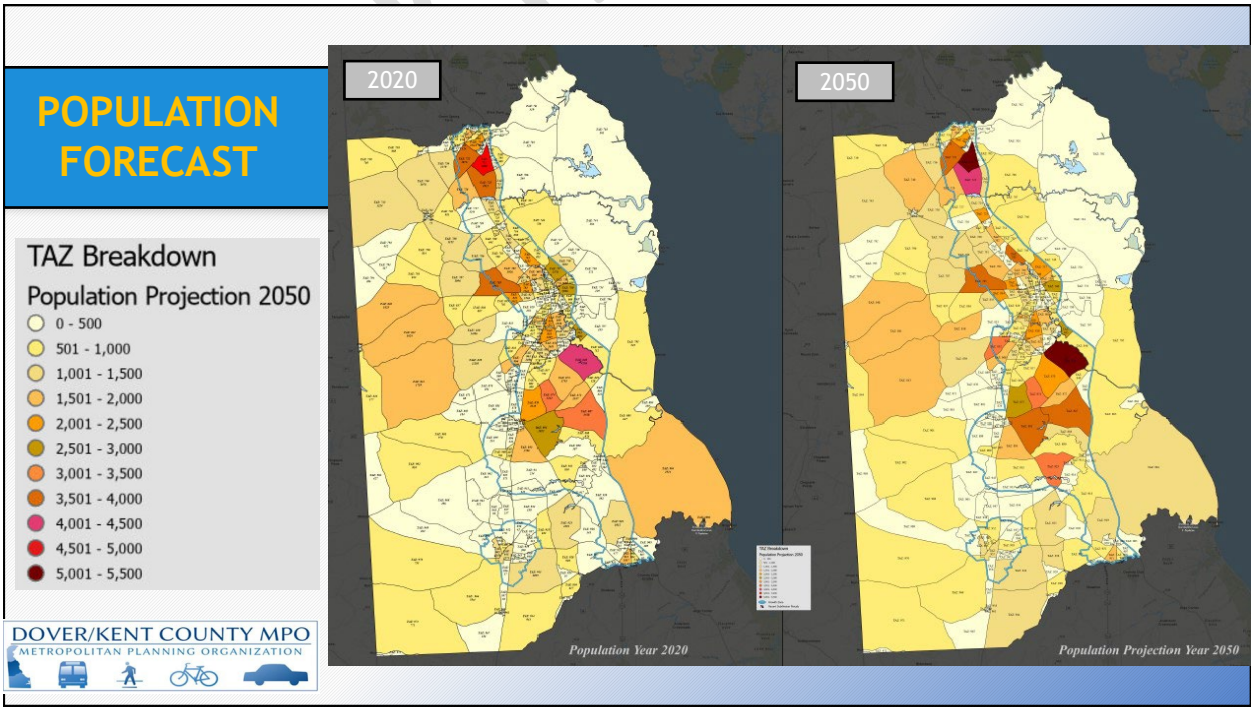
** Source: Delaware Population Consortium Projection Series - 10/26/23 (adjusted to remove Group Quarters Population)

DOVER/KENT COUNTY MPO
METROPOLITAN PLANNING ORGANIZATION

For this MTP, DelDOT [through the Wilmington Area Planning Council (WILMAPCO)] provided Dover Kent MPO with a preliminary Growth Forecast for the years 2030, 2040 and 2050 with Control Totals for Population, Households and Employment for each projection year. Dover Kent MPO then analyzed this preliminary data for relative accuracy and reasonableness for each Traffic Analysis Zone and applied "ground-truthing adjustments" to the Growth Forecast to more accurately reflect locations of existing and future growth in Kent County. As we met with our Municipal and County partners through the winter and spring of 2024, we shared the TAZ Forecast Data in map form as received from DelDOT and solicited review and input to further verify accuracy.

Our georeferencing of Projection Data is based upon several factors including: recent growth patterns and trends; current development activity; approved but not built development projects; the availability of supporting infrastructure such as central sanitary sewer and water services; and, local and regional growth management and land preservation policies, strategies, and regulatory programs.

The Growth Forecast Model was completed in June of 2024 and submitted to DelDOT for the purposes of developing Future Travel Demand Models for each of the projection years 2030, 2040 and 2050. The Travel Demand Models project future traffic volumes based upon increases in Population, Households and Employment for each of the projection years and identify road segments, intersections, and corridors that may require improvements in the future to increase roadway capacity to accommodate future traffic volumes. Various roadway improvement scenarios are incorporated into the Travel Demand Modeling to analyze the beneficial impacts of certain roadway improvements on traffic flows through the roadway network.



The results of the Travel Demand Modeling is discussed further in Chapter 6 (Travel Demand Model & Future Needs).

Growth Trends

The Delaware Population Consortium forecasts a continued modest rate of Population Growth for Kent County through the planning period to 2050 at an annual rate of 0.55%. Over the 30 year period from 2020 to 2050, the resident population is expected to increase by 29,653 persons resulting in a total population of 211,150 by 2050. Nearly all of this new population will reside within the regulatory Growth Zone established by Kent County Government following the north/south Delaware Route 1/US Route 13 transportation corridor. Significant population growth is expected in and around the towns of Smyrna, Camden-Wyoming, Frederica, Milford and Harrington, and in the unincorporated area surrounding the town of Magnolia. The City of Dover is forecast to grow to 44,653 people, an increase of over 6,700 new residents.

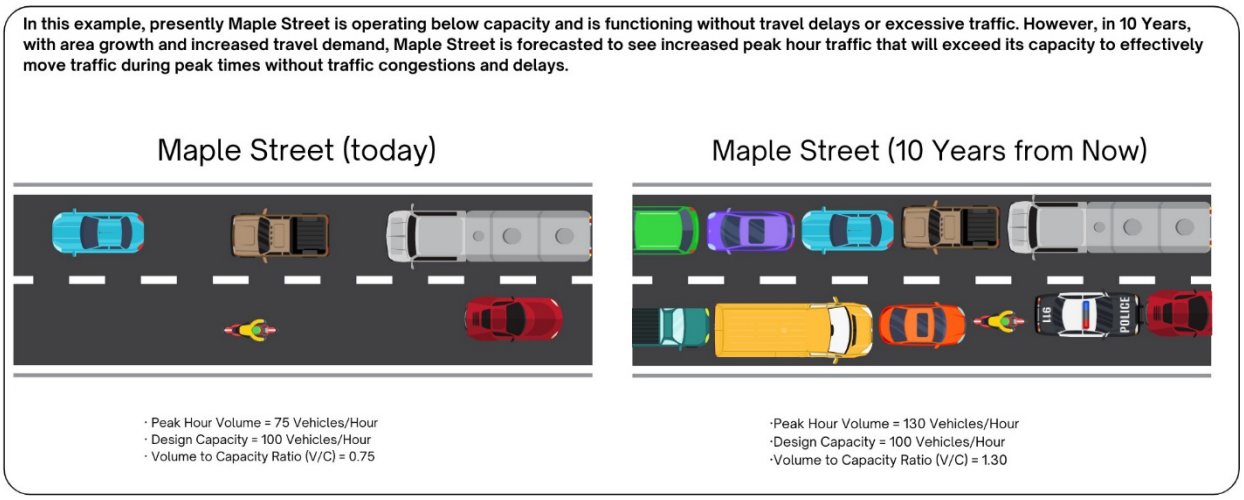
The rate of growth in Households is forecast to outpace growth in Population reflecting a trend toward fewer persons per household. Employment Growth is forecast to occur mostly within the Growth Corridor described above, mostly within municipal boundaries, at an annualized rate of about 0.75%.

CHAPTER 6: Travel Demand Model & Future Needs

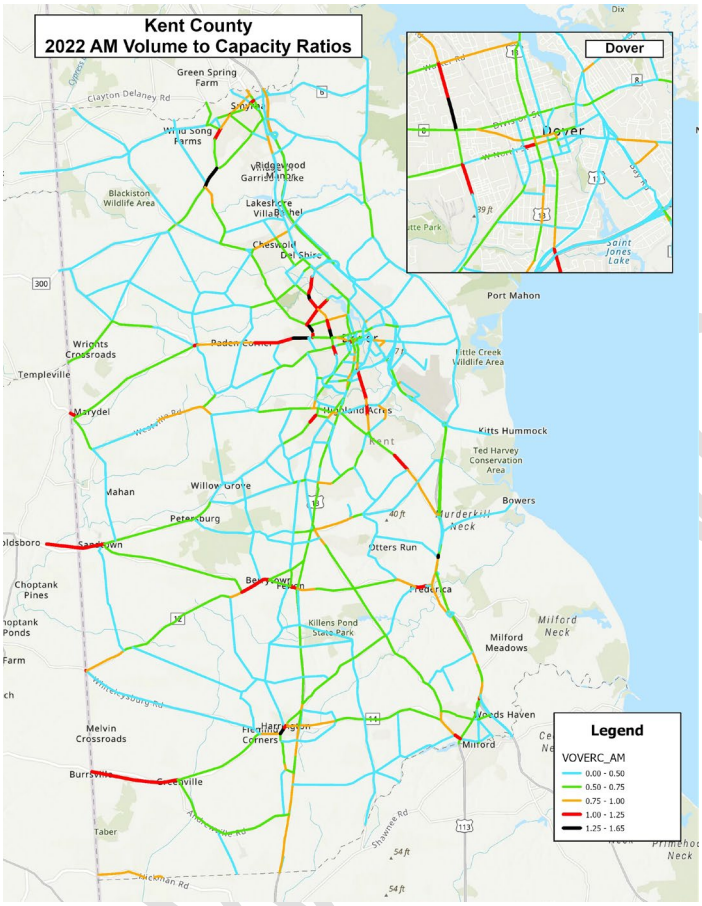
As explained in Chapter 5, the Growth Forecast Model was developed at the Traffic Analysis Zone (TAZ) level to depict future growth in Population, Households, and Employment for the Projection Years of 2030, 2040, and 2050. The Growth Forecast Model data for the Projection Years was then utilized to model future Travel Demand in the form of future motor vehicle traffic volumes and resultant impacts to the existing roadways system. For the analysis of Future Travel Demand, all roadways within Kent County have been analyzed including all Major and Minor Arterial and Collector Roadways. For purposes of this Plan, local streets in residential and commercial subdivisions, industrial parks, and private roads are not included in this Travel Demand Modeling. However, the trip generation and distribution of motor vehicles from such local and private streets is captured and analyzed as they contribute to the volume impacts on the roadway network.

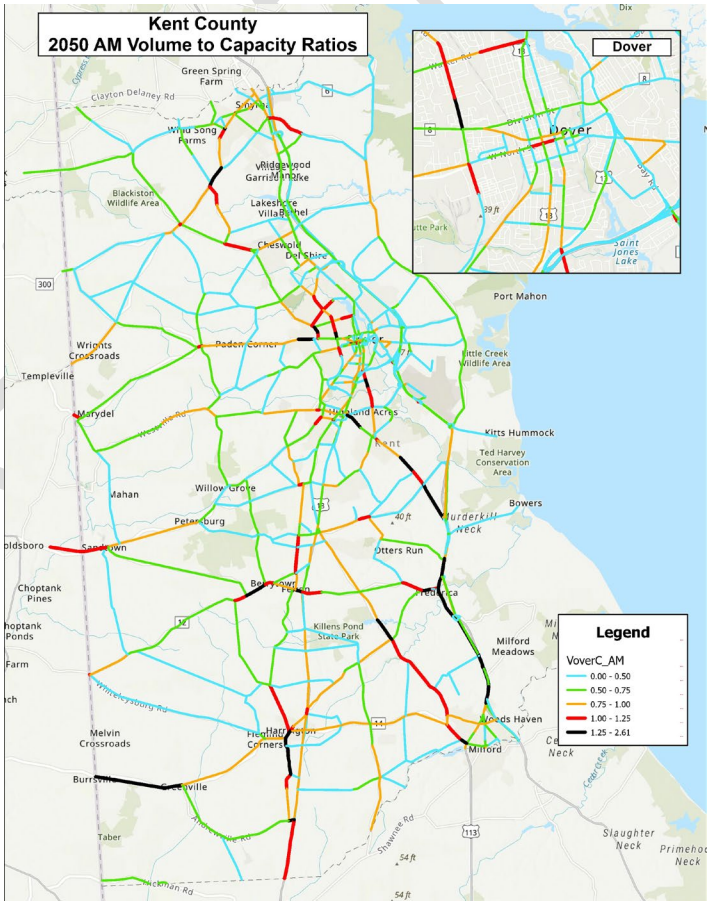
Each roadway (and roadway segment) has an established design capacity for adequately accommodating travel and traffic loading and distribution which we refer to as Existing Capacity. Road segments are linear sections of a roadway between nodal points (or intersection points) such as intersections with other roadways, site entrances, railroad crossings and terminal points. Travel Demand modeling software calculates Future Motor Vehicle Trip Generation and Distribution for Peak Hours in the morning and evening within the transportation network based upon future growth data inputs (i.e. Growth Forecast Data). Future Vehicle Trip Generation and Distribution is expressed as Future Volumes of motor vehicles at the road segment level for each roadway segment within the Plan Area.

Future Traffic Volume is analyzed against the Existing Traffic Capacity for each road segment during the AM and PM Peak Hour (commonly referred to as “Rush Hour”). The resultant Volume to Capacity Ratio (or V/C Ratio) is a measure of the capability of the existing roadway segment to accommodate future traffic. The concept of Volume to Capacity Ratio is further explained in the example below.



For this Plan, Travel Demand Modeling was performed by Whitman Requardt Associates (WRA) under contract with the Delaware Department of Transportation (DelDOT). Below are two (2) maps of the Kent County roadway network. The map on the left depicts Existing AM Peak Hour Volume to Capacity Ratios. The map on the right depicts Future AM Peak Hour Volume to Capacity Ratios for the year 2050. Road Segments highlighted in Red and Black reflect those for which Future Volumes will exceed existing Capacities without roadway improvement interventions. Similar maps for AM and PM Peak Hour Volume to Capacities Ratios for 2030, 2040 and 2050 may be found in Appendix A.





The Travel Demand Modeling series for 2030, 2040 and 2050 has enabled MPO Staff to analyze forecasted V/C Ratio data and to identify travel corridors and specific locations within our Roadway Network that will experience significant capacity deficiencies in the future. The following section provides a list and description of the most significantly impacted corridors and locations and offers recommendations for addressing forecasted impacts through the transportation planning process.

Travel Corridors Recommended for Future Study

Studies recommended in this section would involve a wholistic analysis of the travel corridor from point to point. Existing conditions for all modes of travel would be evaluated and projected travel demand modeling will serve as the targeted benchmark for the corridor. All studies will include plan recommendations for accommodating for all modes of travel through the corridor in accordance with Complete Streets principles advanced by the Delaware Department of Transportation (DelDOT).

SR 300 Corridor from SR 6 (Glenwood Avenue) south to Shaws Corner Road (Kenton). Roadway Capacity is currently exceeded between Underwoods Corner Road and School Lane in Clayton and between Sunnyside Road and Mt. Friendship Road during the AM Peak Hour. The segment from Underwoods Corner Road to School Lane has been selected for immediate study as part of the 2024 Unified Project Work Plan. By 2030, the segment of SR 300 from SR 42 to Shaws Corner Road is forecast to experience volumes exceeding the existing roadway capacity during both the AM and PM Peak Hours. Recommended Study Initiation: Spring 2026.

South State Street Corridor from US 13 south to SR1. This corridor currently exhibits Peak Hour deficiencies on segments between SR 10 and US 13, especially during the AM Peak. Roadway capacity challenges are forecast to continually worsen through 2040 and beyond, with particularly significant impacts during the AM Peak Hour. A phased Corridor Study is recommended in this instance, with Phase I focusing on segments between US 13 and SR 10. Phase II would study segments from SR 10 south to Irish Hill Road in Magnolia. Phase III would study segments from Irish Hill Road south to SR 1. Recommended Study Initiation Schedule: Phase I – Spring 2026; Phase II – upon completion of Phase I Study; Phase III – upon completion of Phase II Study.

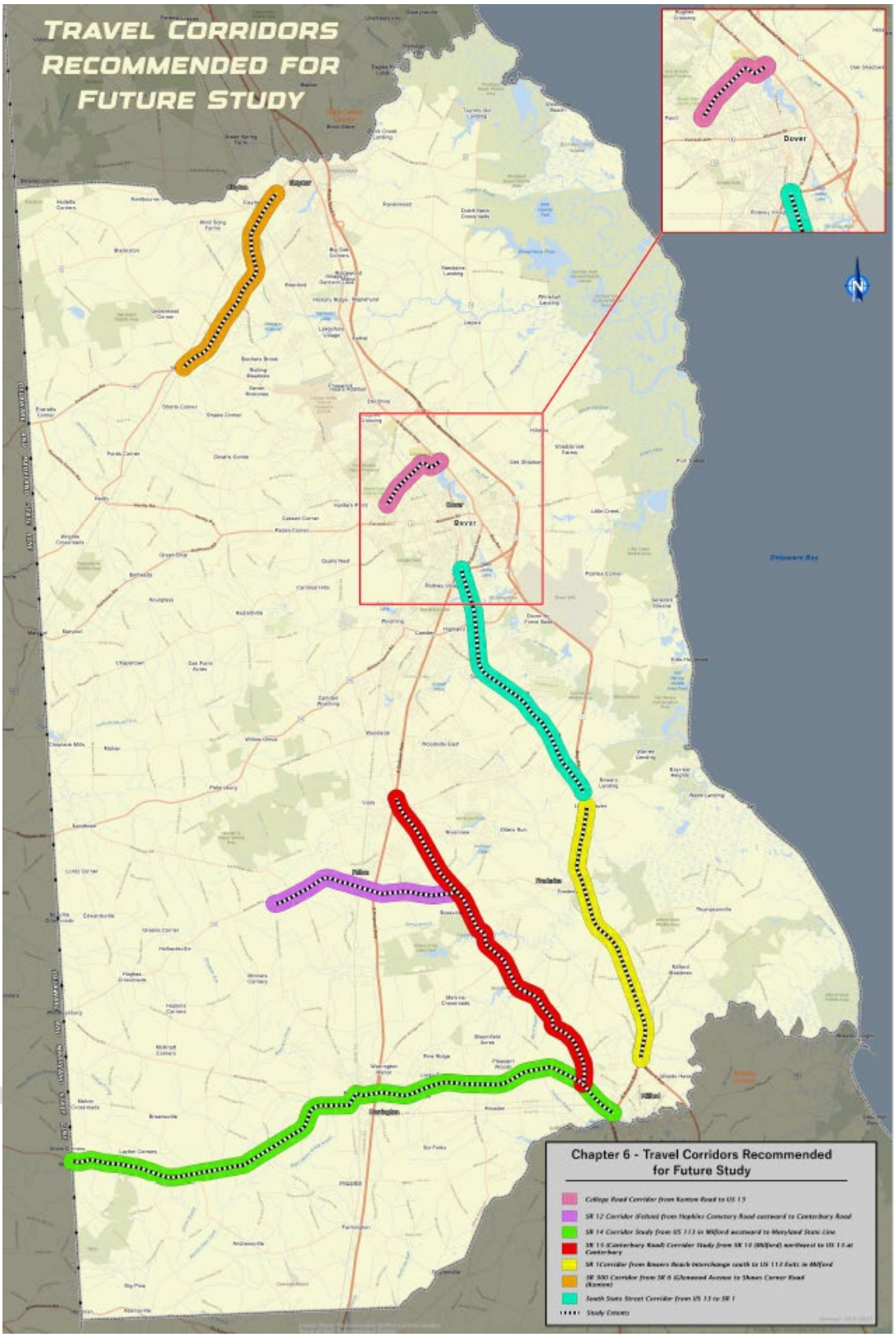
College Road Corridor from Kenton Road to US 13. Currently College Road experiences capacity deficiencies during both the AM and PM Peak Hours. An improvement project is slated to begin in 2026 to incorporate sidewalk on the section of College Road from Kenton Road to McKee Road. Travel Demand Model runs indicate that the section of College Road from McKee Road to Delaware State University will experience AM Peak Hour deficiencies beginning in 2030 and the entire corridor is forecast to suffer Peak Hour deficiencies beginning in 2040. Recommended Study Initiation: Spring 2027.

SR 1 Corridor from Bowers Beach Interchange south to US 113 Exits in Milford. This corridor is currently experiencing capacity exceedances during Peak Hours at both the Bowers Beach Exits and at Barratt's Chapel On-Ramp. Travel demand modeling reveals increasing capacity deficiencies in 2030 with increasing volumes in 2040 through 2050. Significant congestion and delays are forecast by 2050 during the AM and PM Peak Hours. It is anticipated that a Study of a corridor of this magnitude would span multiple budget cycles. Recommended Study Initiation: Spring 2028.

SR 12 Corridor (Felton) from Hopkins Cemetery Road eastward to Canterbury Road. Roadway capacity exceedances occur currently during the AM and PM Peak Hours on the segment between Sandtown Road and Peach Basket Road. AM Peak Hour congestion also currently occurs on Main Street from Little Mastens Corner Road eastward to US 13. These conditions are forecast to persist and worsen through 2050. Recommended Study Initiation: Spring 2029.

SR 14 Corridor Study from US 113 in Milford westward to the Maryland State Line. This Study is recommended to be accomplished in two (2) phases. The Phase I Study is recommended to focus on the corridor from US 13 in Harrington, westward to the Maryland State Line. This section of the corridor is currently experiencing peak hour capacity deficiencies from the Maryland State Line to Arthursville Road and in central Harrington on Commerce Street between Walt Messick Road and Clark Street. Volumes on these road segments are forecast to increase further by 2030. A Phase II Study is recommended from US 13 eastward to US 113 in Milford. SR 14 from US 113 to Williamsville Road is currently experiencing Peak Hour deficiencies. Traffic volumes are forecast to increase through 2050 resulting in capacity shortfall between US 113 and SR 15 (Canterbury Road) by 2040. Recommended Study Initiation: Phase I - Spring 2030; Phase II – Spring 2035.

SR 15 (Canterbury Road) Corridor Study from SR 14 (Milford) northward to US 13 at Canterbury. Canterbury Road is an important travel route between Milford and Central Kent County and US 13. Travel Demand Model runs reflect increasing volumes and minor capacity exceedances at a few intersections by 2030. Peak Hour capacity exceedances appear more significant by 2040 on segments between Carpenter Bridge Road and Waterside Drive and between Andrews Lake Road and Plymouth Road. By 2050, the AM Peak Hour traffic volume is forecast to exceed capacity from SR 14 to Waterside Drive south of SR 12 (Mid-State Road). Recommended Study Initiation: Spring 2033.


TRAVEL CORRIDORS RECOMMENDED FOR FUTURE STUDY
Dover
Chapter 6 - Travel Corridors Recommended for Future Study
College Road Corridor from Kenton Road to US 13
SR 12 Corridor (Fulton) from Hopkins Cemetery Road eastward to Canterbury Road
SR 14 Corridor Study from US 113 in Milford westward to Maryland State Line
SR 15 (Canterbury Road) Corridor Study from SR 14 (Milford) northward to US 13 at Canterbury
SR 1 Corridor from Rehoboth Beach Interchange south to US 113 Exit 1 in Milford
SR 300 Corridor from SR 6 (Glenwood Avenue to Shaws Corner Road (Kenton)
South State Street Corridor from US 13 to SR 1
Study Extents

Potential Studies for Future Consideration

In addition to travel corridors with existing and future capacity shortfalls, Travel Demand Modeling also reveals specific road segments and locations where volumes will exceed capacity that may be the subject of future study by Dover Kent MPO. The following is a list of potential location specific studies for consideration during this MTP planning period.

Rising Sun Road Study. Model runs reveal excessive peak hour volumes from SR 10 to Old Mill Road beginning in 2030 with worsening conditions during the AM Peak Hour.

SR 8 Study from Mifflin Road to Dover High Drive. This segment of SR 8 is currently experiencing capacity exceedances during the AM and PM Peak Hours with the more severe volumes during the AM Peak Hour.

Frederica Road/SR 12 Study. Frederica Road runs parallel to SR 1 along the east side of the Town of Frederica and serves as the primary access point to SR 1 for north and south bound travelers to and from Frederica and SR 12 (Mid-State Road). Model Runs indicate that the AM Peak Hour roadway capacity of Frederica Road will be exceeded by 2030. The SR 12 approach to Frederica from the west is forecast to experience AM and PM Peak Hour deficiencies by 2030 as well between Carpenters Bridge Road and W. David Street. Peak Hour deficiencies are forecast to increase by 2040 with capacity exceedance of SR 12 extending westward to Andrews Lake Road.

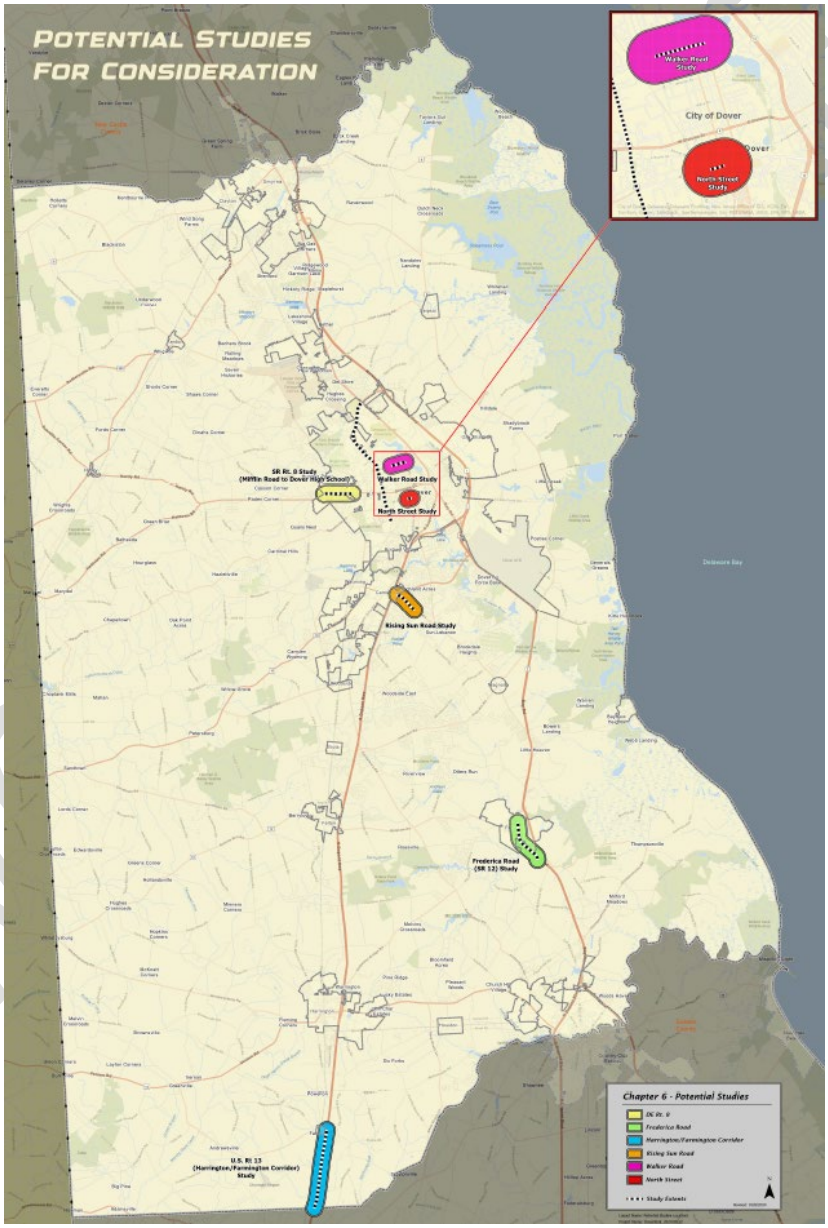
Walker Road Study. Beginning in 2030, Travel Demand Model runs forecast capacity deficiencies in the AM Peak Hour for the segment of Walker Road from Pear Street to North State Street. Currently this section of Walker Road lacks bicycle travel accommodations as well.

North Street Study. Currently, North Street in Central Dover experiences capacity exceedances during the AM Peak Hour between South Queen Street and South Governors Avenue. This segment is also impacted during the PM Peak by 2030. The AM Peak Hour shortfall is forecast to extend to South State Street by 2030 as well.

US 13 Harrington/Farmington Corridor. By 2030, model runs begin to reveal capacity shortfall between Farmington and the Sussex County Line. By 2040, capacity stress appears

to negatively impact SR 14 TR (Harrington Truck Route) that runs parallel and to the west of US 13 south of the Delaware State Fair Complex during the AM Peak Hour. The volume impact becomes significant into Central Harrington from Dorman Street south to SR 14 TR.

US 113 North/South Study – Milford. In recognition of ongoing dialogue between the City of Milford and DelDOT concerning growth impacts affecting the US 113 Corridor we acknowledge that DelDOT is evaluating the need for potential improvements and/or alternative alignments to this important travel route. Dover Kent MPO is prepared to support this effort as it advances.



This list of Potential Studies are identified as possible projects that have considerable merit and that may or may not be pursued by Dover Kent MPO during this MTP planning period depending upon the backlog of active projects, available funding, and Staff resources. Dover Kent MPO will evaluate this list of the potential studies listed annually along with other active requests for consideration of inclusion above in our annual Plan of Work.

Travel Demand Modeling: Collector and Arterial Roads Not Reflected in Model

It is important to point out that several Collector Roads and/or portions of Collector Roads are not reflected in the Volume to Capacity Ratio modeling performed by DelDOT consultants WRA, Incorporated. While most are presently low volume roads in sparsely populated areas, there are several situated within areas that are in transition from rural areas to burgeoning suburbs. The absence of such Collector Roads from the Travel Demand Modeling should not be construed to mean that they do not currently experience capacity deficiencies or will not at a future time during this plan horizon. The following Table lists those Collector Roads and Collector Road Segments that are not reflected in the Travel Demand Model, but that are experiencing development induced capacity deficiencies and thus warrant further Volume to Capacity Analysis and improvement planning:

TAZ #	ROAD NAME	DelDOT Maint #	Road Class
721,723,728	Brenford Road	42	Major Collector
721,723	Rabbit Chase Road	145	Minor Collector
785	Chestnut Grove Road	158	Major Collector
891	Barratt's Chapel Road	371	Major Collector
893	Andrews Lake Road	380,385	Minor Collector
798	Bay Road (Dover)	7	Minor Arterial
955	Clark Street (SR 14 – Harrington)	60	Minor Arterial

With future iterations of the Metropolitan Transportation Plan, all roads designated in the DelDOT Functional Classification System as "Collector Road" (including "Minor" and "Major") and "Arterial Road" (including "Minor", "Other Principal", and "Expressway & Freeway") shall be reflected in the Travel Demand Modeling.

The full list of Collector Roads and Collector Road Segments not reflected in the Travel Demand Modeling may be found in Appendix B of this document.

Looking Toward the Future of Transportation

Much like the rest of the country, the future of transportation in Kent County, Delaware, is set to undergo a transformative shift driven by technological advancements, environmental

sustainability, and the community's demand for safer, more accessible options. At the heart of this transformation is a growing focus on electric vehicles (EVs), a network of charging stations, autonomous vehicles, improved infrastructure for non-motorized transportation, alternative fuels, and the possible expansion of passenger rail services, all working together to create a cleaner, safer, and more efficient transportation network.

Electric Vehicles and Charging Stations

As the demand for electric vehicles continues to rise, Kent County is poised to embrace this change by expanding its network of EV charging stations. These stations should be strategically located along key corridors, public parking areas, and workplaces, ensuring drivers can recharge their vehicles conveniently. The goal is to build a comprehensive charging infrastructure that not only supports the current demand but also anticipates the growth of EV ownership in the years to come. Encouraging EV adoption will reduce greenhouse gas emissions, improve air quality, and promote a more sustainable transportation system. Partnering with private companies and public utilities will be critical in meeting this demand and providing reliable, fast-charging solutions across the region.

Autonomous Vehicles

One of the most significant benefits of autonomous vehicles is their potential to drastically reduce traffic-related accidents and fatalities. With advanced sensors, machine learning algorithms, and real-time data processing, AVs can react more quickly and accurately to dynamic road conditions than human drivers. They are equipped to detect obstacles, pedestrians, and other vehicles with a level of precision that minimizes the risk of human error, which is responsible for over 90% of traffic accidents today. Autonomous vehicles also have the potential to significantly improve mobility for many underserved residents, particularly for those who are elderly, disabled, or otherwise unable to drive. With self-driving cars, individuals who previously relied on public transportation, taxis, or ridesharing services can regain independence and mobility, allowing for greater participation in community life and access to employment, healthcare, and social activities. In addition to passenger vehicles, autonomous technology is expected to revolutionize freight and delivery services. Kent County could see an increase in autonomous trucks and delivery vehicles that will streamline logistics, reduce transportation costs, and increase supply chain efficiency. Autonomous trucks can operate continuously without breaks, reducing travel times and increasing the reliability of goods delivery.

Passenger Rail Expansion

With the region's growing population and economic development, the idea of creating passenger rail services in Kent County has resurfaced. This could play a pivotal role in reducing traffic

congestion and offering residents an efficient and sustainable alternative to driving. While passenger rail has always seemed to be a “pipe dream, " the MPO with other stakeholders and partner agencies are currently studying how it can increase accessibility, provide connections to larger urban centers, and reduce the need for single-occupancy vehicle trips. By integrating passenger rail with other modes of transportation, such as bus services and bike-sharing programs, Kent County can create a seamless, multi-modal transportation system that enhances mobility and reduces the region's overall carbon footprint.

Alternative Fuels

In addition to electric vehicles, the future of clean transportation will be shaped by the development and deployment of alternative fuels, such as hydrogen, biofuels, and compressed natural gas (CNG). These cleaner energy sources could power a variety of vehicles, including public transit buses, commercial fleets, and heavy-duty trucks, helping to reduce emissions and dependence on traditional fossil fuels. Encouraging alternative fuels will require public and private investment in infrastructure, such as fueling stations and vehicle conversion capabilities. By embracing these alternatives, we can significantly reduce our environmental impact while supporting the local economy through green jobs and innovation.

Bicycle and Pedestrian Safety

Ensuring the safety of bicyclists and pedestrians is a crucial priority for the future of transportation in Kent County. As more residents choose active modes of transportation, such as biking and walking, we will invest in infrastructure improvements that prioritize safety and connectivity.

Expanding the network of dedicated bike lanes, improving crosswalks, and adding pedestrian-friendly signal timing at intersections will help make roads safer for everyone. Additionally, the development of off-road trails, multi-use paths, and traffic-calming measures in residential areas will encourage more people to consider biking or walking as a viable option for commuting and leisure.

By adopting a complete streets approach all over the county, Kent County will create a transportation environment that accommodates all users, regardless of their mode of travel. This will improve safety, promote healthier lifestyles, reduce traffic congestion, be more equitable, and support the region’s sustainability goals.

Looking Ahead

In the coming decades, Kent County’s transportation landscape will evolve into a more sustainable, connected, and inclusive system that meets the diverse needs of its residents. Through investments

in EV infrastructure, passenger rail, alternative fuels, and road safety for bicyclists and pedestrians, the region will create a resilient transportation network that benefits the environment, economy, and quality of life for all. By embracing these innovations, Kent County will position itself as a forward-thinking community, prepared to meet the challenges and opportunities of the future.

Chapter 7: Air Quality Conformity Analysis

Background

Importance of Air Quality Monitoring

Transportation is a sector that contributes heavily to poor air quality. Air pollutants that come from motor vehicles include carbon monoxide (CO), particulate matter (PM), nitrogen oxides (NO_x), and volatile organic compounds (VOCs). These pollutants can cause respiratory issues and other health issues in humans. Due to the dangers associated with them, they are classified as "criteria air pollutants" by the Environmental Protection Agency (EPA) and are regulated at the federal level.

Ozone (O_3) is created through a chemical reaction between VOCs, NO_x, sunlight, and heat. There are two types of ozone: 1) Ozone that naturally forms in the Earth's upper atmosphere and provides a barrier against the sun's ultraviolet rays; 2) Ground-level ozone, which forms through emissions and is hazardous to human health. Ground-level ozone is classified as a criteria air pollutant, as it can lead to coughing, difficulty breathing, and the increased risk of an asthma attack. The pollutants that form ground-level ozone come from motor vehicles, factories, and other sources. These pollutants are some of the main contributors to smog.[12]

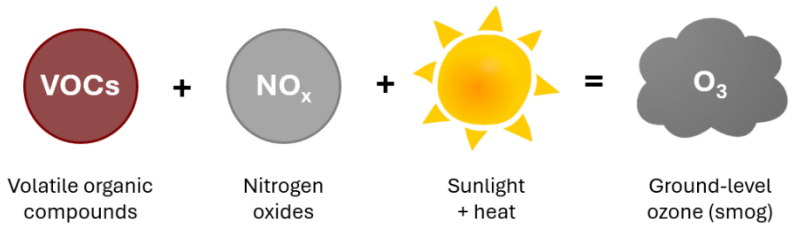


Figure 11: A simplified process of the creation of ground-level ozone.

Vehicles also release carbon dioxide (CO_2), which, while not a criteria air pollutant, is one of the largest contributors to global climate change. According to Delaware's Climate Action Plan (2021), transportation is the largest contributor of in-house greenhouse gas (GHG) emissions in Delaware; and within the transportation sector, light-duty passenger vehicles make up 61% of emissions. Climate change is expected to lead to higher average sea levels, higher average temperatures, and other consequences in Delaware. Please refer to Chapter 9: Operations & Management for more information on the impacts of sea level rise.

Air quality in Delaware is affected by both internal and external sources. For example, in the summer of 2023, wildfires in eastern Canada led to air quality alerts in Delaware and across the Mid-Atlantic, even in areas that did not traditionally experience poor air quality. Monitoring is an important part of

[12] "Ground-level Ozone Basics." United States Environmental Protection Agency (EPA), 2024. https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics.

keeping the public safe when there are harmful levels of ozone and particulate matter in the air. When this happens, it is advised that people limit the amount of time they spend outdoors, especially children, older adults, and those with pre-existing health conditions. Updates on current air quality are provided online by the Delaware Department of Natural Resources and Environmental Control (DNREC), Dover Kent MPO, and the Air Quality Partnership of Delaware (AQP).

Color	Level of Concern	Value	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

Figure 12: The Air Quality Index (AQI), which uses colors and numeric values between 0 and 500 to show the current level of concern for air pollution. Source. Delaware Department of Natural Resources and Environmental Control (DNREC).

History of Regulation

The Clean Air Act (or US Code, Title 42, Chapter 85) was first enacted in 1963. This was done in response to increasing concern about the impact of air pollution on public health. Amendments to the law were made in 1970, 1977, and 1990 to further bolster the Clean Air Act and clarify its role in monitoring air pollution in various sectors, including transportation.[13]

A key part of the Clean Air Act is the National Ambient Air Quality Standards (NAAQS), which monitors and sets limits for six criteria air pollutants. Those that stem from the transportation sector include ozone (O_3), carbon monoxide (CO), particulate matter (PM_{10} and $PM_{2.5}$), and nitrogen dioxide (NO_2). Areas that do not meet NAAQS requirements are designated as "nonattainment areas." Areas the previously did not meet the requirements are designated as "maintenance areas."

Transportation conformity has been a part of the Clean Air Act since 1977. The conformity requirements pertaining specifically to MPOs were enacted by the EPA in 1993 and have undergone several amendments since then. Section 176(c) of the Clean Air Act outlines the procedures for determining air quality conformity.

[13] "Evolution of the Clean Air Act." United States Environmental Protection Agency (EPA), 2023. https://www.epa.gov/clean-air-act-overview/evolution-clean-air-act.

Current Policy

Federal Standards

The Clean Air Act is one of the primary pieces of legislation that oversees air quality conformity in the transportation sector. The Environmental Protection Agency (EPA) sets the Federal standards for ambient air quality, and these standards determine which areas are designated as nonattainment. The work behind air quality conformity is a collaboration between the Federal Highway Administration (FHWA), State DOTs, MPOs, and various other entities.

The goal of Section 176(c) of the Clean Air Act is to ensure that federally funded transportation projects are consistent with State air quality goals, as listed in the State Implementation Plan (SIP). In other words, by looking at each of the transportation projects and their projected emissions, MPOs can then determine whether the projects as a whole exceed the emissions budget. Projects that are consistent with State air quality goals are eligible for FHWA and Federal Transit Administration (FTA) funding.[14]

Note that there are many other examples of Federal legislation focused on air quality. These include emission standards for motor vehicles, reporting requirements for industries, and goals and strategies for reducing emissions. There are also various funding opportunities for increasing the energy efficiency of homes and businesses, enhancing nonmotorized transportation, and similar purposes.

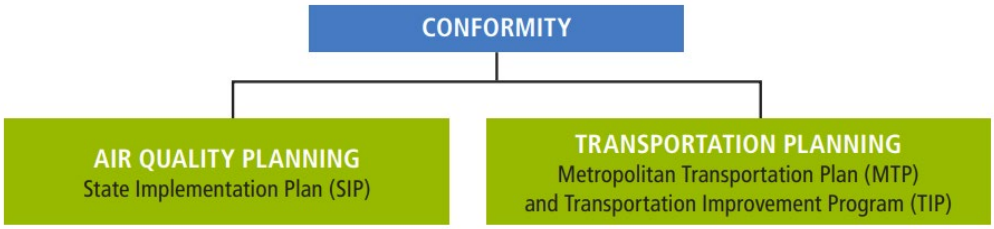


Figure 13: A diagram showing the connection between air quality and transportation planning through air quality conformity. Source: Federal Highway Administration (FHWA).

State Goals and Actions

The State of Delaware's air quality goals are outlined in its State Implementation Plan (SIP). This document is a roadmap for how Delaware plans to meet Federal emissions requirements. It includes details of ambient air quality standards, emissions limits from various sources, and the step-by-step process of carrying out air quality conformity alongside MPOs. DelDOT is the entity responsible for facilitating modeling of air quality conformity. Many of the steps listed in the SIP require coordination between FHWA, DelDOT, Delaware MPOs, and the EPA.

[14] *Transportation Conformity: A Basic Guide for State & Local Officials*. Federal Highway Administration (FHWA), 2017. https://www.fhwa.dot.gov/environment/air_quality/conformity/2017_guide/fhwahep17034.pdf.

Delaware's Climate Action Plan outlines the steps being used by the State for both mitigating greenhouse gas emissions and improving resilience against global climate change. While climate and greenhouse gases are the focus of this document, these steps have the added benefit of reducing emissions of harmful pollutants such as carbon monoxide and particulate matter. Many of the transportation goals are focused on improving access to electric vehicles (EV) or hybrid vehicles and adding charging stations throughout the state. (Municipalities in Kent County have recently been applying for Federal and State programs which have allowed them to acquire EVs and charging stations.) Aside from this, there are goals that relate to other modes of transportation, such as creating new opportunities for walking and biking, and lowering the cost of public transit.

Figure 14: Traffic on US Route 13 in Dover.

Across all sectors, the State of Delaware intends to reduce greenhouse gas emissions by 26% to 28% by 2025 (as compared to 2005 levels). A goal specific to transportation is to reduce vehicle miles traveled (VMT) within the state by 10% by 2030 by offering more opportunities for nonmotorized travel. A more recent goal from the State is to have 82% of new vehicles sold in Delaware to be zero-emission by 2032; rather than restricting the use of internal combustion engine vehicles, these rules are intended to expand the availability of EVs and hybrid vehicles for consumers. Other steps are also being taken to maintain clean air at the State level.

For more details on greenhouse gas mitigation, please refer to Delaware's Climate Action Plan.[15] For more information on transportation conformity in Delaware, please refer to the Delaware SIP.[16]

MPO Goals and Actions

As a Metropolitan Planning Organization, Dover Kent MPO is responsible for carrying out air quality conformity for transportation projects. Included in the State of Delaware's SIP is a description of tasks the MPOs must complete to meet Federal requirements. These include regularly developing a Unified Planning Work Program (UPWP), Metropolitan Transportation Plan (MTP), and Transportation Improvement Program (TIP); approving transportation and socioeconomic data for use in air quality analysis; and demonstrating that Transportation Control Measures (TCMs) are implemented in a timely fashion. The MTP is updated every four years.

Maintaining healthy air is a goal that Dover Kent MPO actively works towards. The expected impact to air quality is one of the criteria used by the MPO during project scoring, and projects that reduce roadway emissions are given a higher score. The MPO also works closely with DNREC and DelDOT in initiatives such as promoting alternative modes of transportation; seeking funding for bicycle and

[15] *Delaware's Climate Action Plan*. Delaware Department of Natural Resources and Environmental Control (DNREC), 2021. https://dnrec.delaware.gov/climate-plan/.
[16] "Delaware SIP: Regulation 1132, Transportation Conformity." United States Environmental Protection Agency (EPA), 2008. https://www.epa.gov/air-quality-implementation-plans/delaware-sip-regulation-1132-transportation-conformity.

pedestrian projects; filling gaps in the DART public transportation network; researching the potential for passenger rail in southern Delaware; planning for EV charging networks in Kent County; and supporting the use of alternative fuels such as hydrogen.

Another significant activity from the MPO is its participation in the Air Quality Partnership of Delaware (AQP), a public/private coalition of businesses, agencies, and individuals interested in clean air. The AQP regularly conducts outreach with the goal of raising awareness and informing Delawareans about practices that improve air quality and public health. It also uses social media to alert the public of changes in regional air quality. Additional members of the AQP include WILMAPCO, DNREC, DART First State, Delaware Commute Solutions, and others.

Air quality connects to the broader MPO goals of Equity and Environmental Justice. It has been found that low-income communities are often at greater risk of exposure to air pollution, due to their proximity to local pollution sources such as industrial sites and busy roadways. In many parts of the country these neighborhoods were historically used to build new highways, which further eroded the buffer between residential areas and air pollution. With this in mind, Dover Kent MPO uses DelDOT's Equity Analysis Tool and data from the US Census Bureau to determine which communities may be the most vulnerable to changes in air quality and related environmental concerns, and which would benefit the most from alternative modes of transportation.

Note: *A description of the air quality modeling process and an outline of the results will be added after the process is completed. Please refer to the final version of the MTP.*

CHAPTER 8: Public Outreach

Why Public Outreach is Important

Effective transportation planning hinges on understanding the community it serves. Transportation systems and programs impact people's daily lives, facilitating their movement from Point A to Point B and beyond. This makes transportation planning a critical component in addressing infrastructure needs. No matter how comprehensive the plans and programs are, they hold little value without community engagement and use.

Moreover, there is a legal responsibility for transparency and opportunity for public participation. The roads, trails, and other facilities resulting from transportation plans and programs are usually funded by public money. As a metropolitan planning organization, the Dover Kent MPO is legally bound to have a detailed public involvement plan, as Title 23 of the Code of Federal Regulations on the Federal U.S. Department of Transportation and the Federal Highway Administration stipulates. With an increasing demand for government transparency, the importance of involving community members in the planning process has grown.

Transportation planners must strive to understand and incorporate the desires and needs of the community, particularly those traditionally underserved, including individuals with low incomes, disabilities, older adults, and minorities. Ensuring the inclusion of all people is a legal obligation and fundamental to creating effective and equitable transportation systems.

Public engagement is a cornerstone of compelling transportation planning, ensuring our community's diverse needs and perspectives are understood and addressed. For the MTP Innovations 2050, we prioritized a robust and inclusive public outreach strategy to gather input from a broad cross-section of Kent County's population.

The Money Game

Central to our outreach efforts was an interactive and engaging activity known as the Money Game. This game was designed to gather input on transportation priorities by allowing participants to allocate funds to various transportation projects and initiatives. Recognizing the importance of reaching residents where they live and gather, we took the Money Game to over 30 festivals, trade shows, community events, grocery stores, and local libraries. These venues provided a diverse array of participants, reflecting the varied demographics and perspectives within our community. The response was substantial, with 944 individuals participating in the Money Game. (see Appendix C)

The Money Game was comprised of giving each player 10 million "MPO Bucks" and allowing them to decide how the funds should be spent. Participants made their decisions by placing the money, one million at a time, into baskets labeled Fixing Roads, Building New Roads, Transit, Sidewalks/Crosswalks, Bike Paths, Passenger Rail, Traffic Calming, New Tech, Drivers Education, and Air Quality. The money was also color-coded to distinguish the age bracket of each player. This interactive approach made the engagement process enjoyable and gave valuable insights into the community's transportation priorities.

In addition to the Money Game, we conducted an online survey to further broaden our reach. While the online survey garnered 57 responses, it complemented our in-person efforts. It ensured that those who prefer digital engagement had the opportunity to contribute their insights.

	average
Fixing Roads	17.3%
Driver's Education	12.1%
Passenger Rail	11.1%
Air Quality	10.9%
Sidewalks/Crosswalks	10.1%
Transit	9.7%
Traffic Calming	8.0%
Bike Paths	7.3%
New Technology	7.0%
Building New Roads	6.7%

See Appendix C for more information on the results from the Money Game and online surveys.

	Under 18 yrs	18 - 35 yrs	36 - 55 yrs	Over 55 yrs
Fixing Roads	13.9%	17.2%	19.1%	18.8%
Building New Roads	7.6%	5.2%	7.0%	6.8%
Transit	8.1%	10.5%	10.0%	10.0%
Sidewalks/Crosswalks	8.3%	12.6%	10.2%	9.4%
Bike Paths	7.6%	7.3%	7.3%	6.9%
Passenger Rail	8.9%	10.0%	12.7%	12.9%
Traffic Calming	8.0%	6.2%	8.9%	9.0%
New Technology	9.1%	8.1%	4.8%	5.8%
Driver's Education	14.5%	11.6%	11.6%	10.6%
Air Quality	14.0%	11.3%	8.5%	9.9%

Outreach Strategies

We implemented an extensive public engagement campaign to maximize our outreach and drive people to our website (https://doverkentmpo.delaware.gov/innovations2050). There, we hosted informative videos explaining the MTP and highlighting the importance of public involvement. The website also provided links to the online surveys and schedules for the live Money Game events. Our outreach strategy included ads with QR codes, which we disseminated via social media, our website, the local newspaper, restaurant placemats, business cards, and sandwich boards around the county. We released several ads, videos, and press releases, significantly boosting public engagement.

Prioritization Working Group

The Dover Kent MPO Principal Planner organized a working group from the MPO Public Advisory Committee (PAC) and Technical Advisory Committee (TAC), along with several representatives from DelDOT and the MPO staff. This working group met to establish the priority criteria by which each project would be graded. The members then participated in an exercise that established the weights and measures for each prioritization criterion.

General Comments at Meetings

All MPO Committee and Council meetings include time for public comments. The committees considered all comments received during these meetings. Since these meetings are open to the public, any citizen attending had their comments or concerns taken under advisement.

Meetings with Municipalities/Comprehensive Plans

The Dover Kent MPO partners include all towns, cities, and the county land area within Kent County, Delaware. According to Delaware State Code (22 Delaware Code §702), municipal governments must develop and regularly update land use plans. Although smaller cities and towns (with populations under 2,000) only need to establish a municipal development strategy, all 20 municipalities in Kent County have developed Comprehensive Land Use Plans, updated every ten years. Each plan identifies specific projects crucial to that municipality. MPO Staff conducted 12 meetings with municipal leaders to better understand their needs and the projects they want to see.

Public Workshops

We scheduled public workshops at different process stages to ensure comprehensive public involvement. The first workshop, held on May 30, 2024, after concluding the information-gathering phase, provided a foundational understanding of our public outreach efforts. During this session, we detailed the meetings conducted to date, explained the outreach goals, and offered direction for the overall plan. This initial workshop was crucial in setting the stage for continued community involvement and feedback.

The second workshop series was designed as a drop-in workshop format, consisting of three in-person sessions and a virtual session. This approach was intended to maximize participation and ensure that all community members had the opportunity to review and comment on the draft MTP. We met in Milford on September 16, in Smyrna on the 17th, and in Camden on the 18th. We had small but engaged crowds, and the feedback we received was very helpful. It was great to hear directly from the community about what they feel are the most important transportation needs and projects in the region. The workshops provided an overview of growth patterns, transportation needs, and infrastructure improvements projected over the next 20 years. Attendees had the opportunity to review plans, ask questions, and make suggestions in an open-house format.

We also made the draft MTP accessible for public review and comments on our website. We aimed to incorporate various perspectives and insights into the final plan by releasing the draft and actively seeking public comments. This iterative process of feedback and revision is essential for creating a transportation plan that truly reflects the needs and desires of Kent County's residents.

Final Presentation

The final draft of the MTP will be posted on the MPO website. The final MTP will then be presented to the PAC and TAC, who will recommend it to the Council for adoption. The Council will then vote to adopt the MTP, which will be officially recorded by January 2025.

This comprehensive outreach initiative underscores our commitment to inclusivity and community involvement in planning. We have captured a rich and representative data set by engaging nearly a thousand residents through the Money Game and online surveys and leveraging a multi-faceted marketing approach. This input will play a critical role in shaping the transportation priorities and policies of Innovations 2050, ensuring that our plans reflect the aspirations and needs of Kent County's residents.

CHAPTER 9: Operations & Management Strategies

In previous chapters, this Plan establishes a 25 Year Growth Forecast and models Future Travel Demand that results from projected growth. Later, in Chapter 10, we propose a prioritized list of fiscally constrained transportation projects to address the impacts of growth for consideration of inclusion in future State Capital Transportation Plans.

In this Chapter we set forth four (4) distinct management strategies for advancing the MTP Themes and Goals established in Chapter 2 as essential elements of all activities and projects undertaken by Dover Kent MPO.

1) Social Equity – Performance & Policy Guidance

Dover Kent MPO strives to promote the fair and equitable distribution of transportation planning resources and transportation investments throughout Central Delaware. Goal 4 of this MTP is reiterated below:

GOAL 4: ***To establish opportunity for public participation by all persons in the Transportation Planning Process and to ensure that resultant plans for Transportation Investments are implemented fairly, justly, and equitably in the best interests of all members of the community.***

On November 3, 2023, Dover Kent Metropolitan Planning Organization adopted an Environmental Justice Report and Policy that shall serve to guide the organization generally in all respects to maintain compliance with Title VI of the Civil Rights Act of 1964. The EJ Report and Policy outline the MPO's intent to affirmatively pursue and maintain equity and environmental justice in all actions and investments in transportation planning that this organization undertakes.

Dover Kent MPO hosted its first-ever Equity Roundtable on June 6, 2023. Several Action Items were identified that could be pursued by attendees, either independently or collectively. The MPO is committed to hosting the Equity Roundtable on a biennial basis.

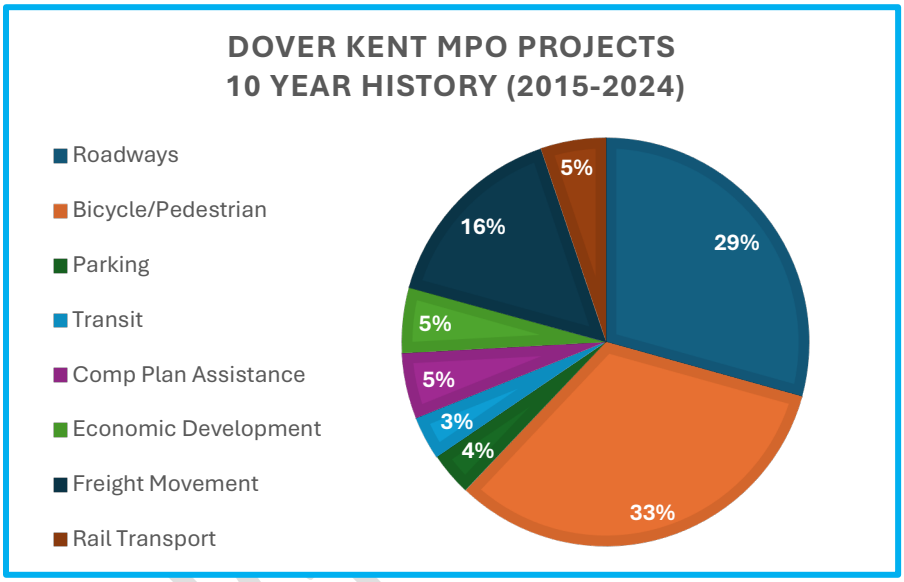
Dover Kent Metropolitan Planning Organization intends to utilize the recently completed Equity Analysis Tool developed by the Delaware Department of Transportation (DelDOT) as part of its evaluation and ranking of potential Projects and Studies.

Retrospective (10 Year review)

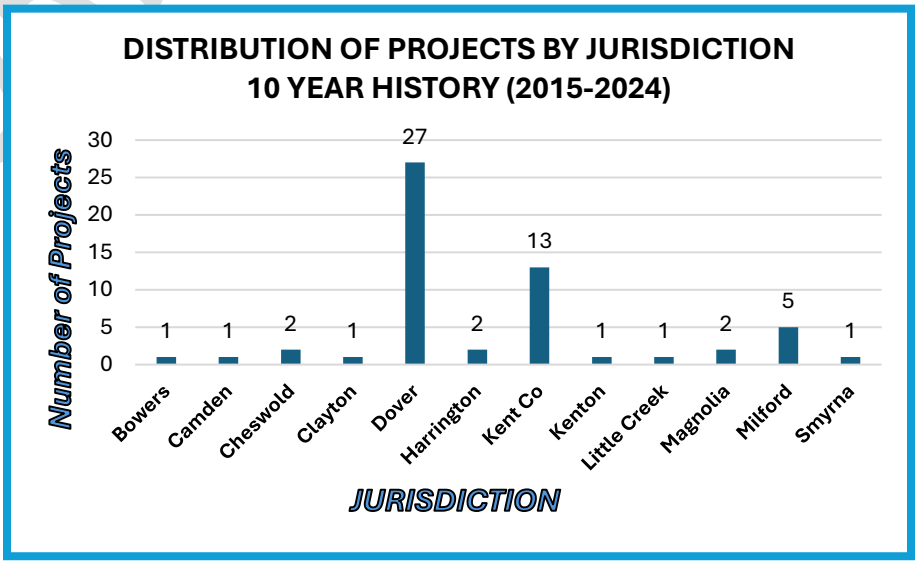
In order to chart a course for the future, it is beneficial and informative to evaluate past performance. In this section, Dover Kent MPO examines the past 10 Years of its Project History to understand the socio-geographic distribution of transportation planning

activities. The objective here is to gauge how well Dover Kent MPO has performed in achieving fairness, justice and equity in transportation planning investments and avoiding bias.

As the chart to the right indicates, the vast majority of projects and studies undertaken by Dover Kent MPO over the last 10 years have focused on improving Roadways (29%) and Bicycle and Pedestrian Facilities (33%). While Roadway Projects over this period largely examined motor vehicle traffic congestion and roadway volume and capacity issues on existing roadways, Bicycle and Pedestrian Studies focused on accommodating safe and effective bicycle and pedestrian travel. The third most significant consideration over this period has been analysis of Freight Movement (16%) in and through Central Delaware as an essential element of our local economy.



The Chart below illustrates the locational distribution of Transportation Studies undertaken by the MPO during the 10 Year review period. It is obvious that a high concentration of transportation planning work has occurred in and around the City of Dover, the capital city of Delaware. The corporate limits of the City of Dover, comprising an area of over 25 Square Miles, making it the largest incorporated area in the State of Delaware. Situated in the center of our metropolitan planning area, Dover has a resident population of 38,879[17].

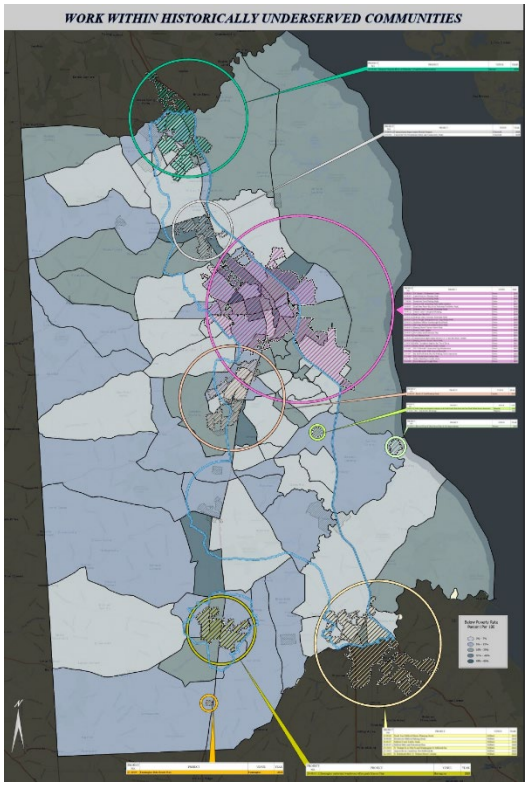


[17] 2022 American Community Survey Estimate, US Census Bureau

The Dover metropolitan region is home to well over half of the resident population of Kent County. As the economic center of Central Delaware, Dover is home to abundant commerce, industry, healthcare, higher education, State and Local Government, and our largest single employer, Dover Air Force Base. Dover like all expanding metropolitan cities, is challenged with addressing the transportation needs of a growing region. Since the inception of Dover Kent MPO, Dover has been the most intensely urbanized area and is expected to remain as a leading area of transportation focus through this MTP plan horizon.

On an annual basis, Dover Kent MPO opens a County-wide solicitation for the submission of projects by local jurisdictions for consideration of inclusion in its annual Unified Planning Work Program (UPWP). The UPWP process is a great opportunity for local jurisdictions to examine local transportation concerns and to develop plans in a way that is very affordable. The typical UPWP Project will cost the local sponsoring jurisdiction about 10% of the total project cost.

In recent years, we have seen increasing number of submissions from smaller towns and cities as indicated in the referenced Chart. This may be attributed to a number of factors including improved public outreach and awareness of submission cycles, and increased travel demand in small towns and cities on roadways that have historically been low volume travel routes. Additionally, with greater promotion of alternative modes of travel such as mass transit, bicycling and walking in all localities, many jurisdictions have come to realize deficiencies in local accommodations which has led to greater interest in planning through the UPWP process. Through the UPWP process, local jurisdictions are equipped with actionable plans and better positioned to seek capital funding for transportation improvements. While some projects undertaken by Dover Kent MPO are fairly concise and address a very specific local issue (e.g. a Railroad Crossing), most are more regional in capture and have jurisdiction-wide implications. For example, Dover Kent MPO has completed a number of Bicycle and Pedestrian Master Plan documents that address these modes of travel throughout an entire jurisdiction or region. Similarly, Roadway Corridor Studies will examine impacts of traffic and potential improvements along a corridor as it traverses a municipality.



The Map to the right highlights several projects undertaken by Dover Kent MPO over the past 10 Years that were broad in scope and reflect community wide benefits. The vast majority of these projects were within urbanized centers within Kent County.

Policy Guidance Implementation

Prior to selection for inclusion in future work programs of the Dover Kent MPO, each project shall be evaluated utilizing the Equity Analysis Tool developed by the Delaware Department of Transportation. The degree to which each proposal addresses the social equity objectives of Dover Kent MPO Environmental Justice Policy shall be reported as part of the written evaluation and ranking of candidate projects.

Each Project or Study accepted by Dover Kent MPO for inclusion in any future Unified Planning Work Program or Transportation Improvement Plan shall be accompanied by a written Social Equity Narrative prepared by Dover Kent MPO that describes how the Project or Study will conform with MTP Goal 4 as stated above and with the overall objectives the Dover Kent MPO Environmental Justice Policy.

2) Transportation Systems – Layer Analysis

An over-arching objective of this MTP is to promote the evolution and maintenance of a safe, efficient, attractive and complete Transportation Network that supports all modes of travel within the Dover Kent MPO Region. Our guidepost in pursuit of enhanced mobility and network continuity is expressed in Goal 1 below:

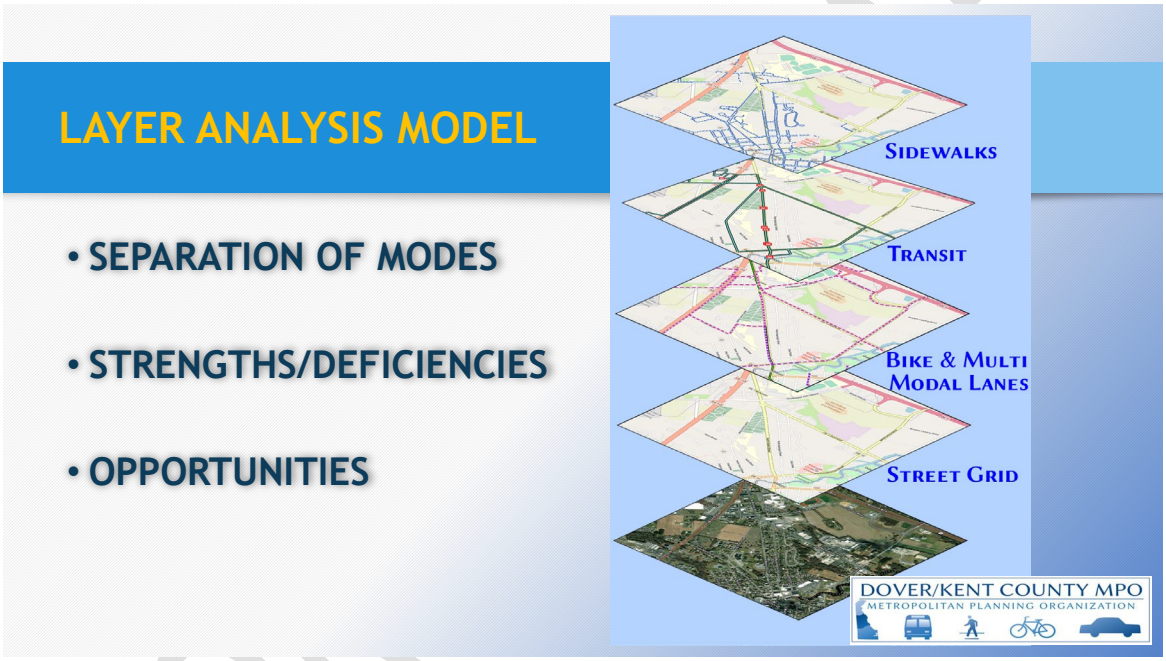
GOAL 1: ***To foster the evolution of a seamless Transportation System for all modes of travel that is safe, efficient, continuous, and fluid that effectively accommodates local, regional, and interstate transportation*.**

Whether by evolutionary urban/suburban forces or by advanced design, Transportation Networks consist of various transportation sub-networks that function to accommodate different modes of travel. Ideally, these sub-networks form complete modal systems that connect with and support each other in a seamless Transportation Network environment. In a very real sense, the "as-built" Transportation Network may reflect the dominant transportation priorities and capital spending choices and constraints within a region or municipality.

While levels of roadway maintenance may vary from place to place, it is fairly universal that the roadway sub-network supporting motor vehicle travel is continuous and complete, reflecting its relative high degree of importance. In any given locality, other sub-networks such as pedestrian sidewalks, bicycle pathways, or transit support facilities may not be as continuous or complete but may be fragmented, incomplete, or non-existent, reflecting relative low priority for such amenities. The reasons for such disparate treatment can be

attributable to a variety of situations including but not limited to: awareness of deficiencies; real or perceived public demand; inertia; unclear authority and responsibility; insufficient regulatory controls; and/or, limited capital resources.

In the purest sense, these sub-networks will equitably coexist and intersect in time and space at specific nodal points to form a continuous, connected Transportation Network that accommodates multiple travel modes. In analyzing the effectiveness of a Transportation Network, we believe it is beneficial to examine each sub-network in isolation to understand existing conditions, strengths, deficiencies, and completeness of each sub-network. The illustration below graphically describes the Layer Analysis Concept.



The illustrations below compare the Existing Street Grid Layer and the Pedestrian Sidewalk Layer for a specific quadrant of a local municipality. While the Existing Street Grid Layer reflects a continuous and connected street sub-network, the Pedestrian Sidewalk Layer reflects a discontinuous and disconnected pedestrian sub-network. Using this simple analysis exercise, we can easily identify deficiencies in a sub-network (in this case, the Pedestrian Sidewalk Layer), and locate opportunities for improvements to yield a complete sub-network.

EXISTING STREETS LAYER

EXISTING SIDEWALKS LAYER (with Streets)

As we compare two Existing Conditions Layers of the Transportation Networks displayed above, Existing Streets and Existing Sidewalks, it becomes very clear that gaps and terminal points exist within the existing Sidewalk Sub-Network. We can see that safe pedestrian circulation is limited and compromised. From this simple, yet effective analysis we can develop a Sidewalk Futures Layer that depicts improved pedestrian circulation with elimination of gaps and terminal points within the Pedestrian Sub-Network. With System gaps and terminal points identified, priorities for improving the Pedestrian Sub-Network can be developed.

For the same location, we examine the existing Transit Service Layer in association with the Pedestrian Sidewalk Layer to determine how well these Sub-Networks support each other. This analysis helps to understand how well the pedestrian is served when traveling to or from a Transit Stop and whether deficiencies exist that make connections difficult, unwelcoming, or unsafe.

EXISTING SIDEWALKS LAYER (with Streets)

TRANSIT LAYER (with Streets)

Application of Layer Analysis

Dover Kent MPO intends to employ the Layer Analysis Model as a standard study element when conducting Community Level Transportation Studies and Plans involving multi-modal system analysis. Analysis by Layer will aid in identifying gaps in the Transportation Network that may be prioritized and addressed through the planning process.

3) Transportation Investment Areas

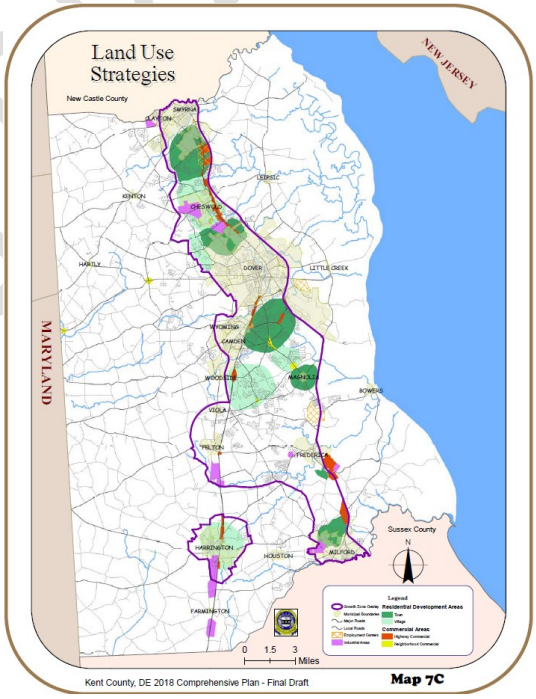
Transportation officials often find themselves in a reactive response role to expansive development pressure and working to catch up with the seemingly random timing of land use change as transportation facility design capacities are stressed and exceeded. Various public agencies have been working for many years to curb sprawling suburban development in part to improve delivery and management of support infrastructure and associated costs. At the same time, levels of government have been actively promoting growth and economic development while also advancing programs to preserve and protect working agricultural lands and natural resource areas.

Viewed in isolation, these public goals may seem inherently at odds with one another. However, planning agencies at the State, County and Local levels work to coordinate plans

and to articulate goals and objectives to manage growth, promote a vibrant economy, and to mitigate potential conflicts.

The common thread upon which the human landscape built is our transportation system. As a long-range plan, this MTP intends to establish strong bonds with partner agencies that are actively addressing some of the most complex planning challenges of our time. Dover Kent MPO is in a unique position to be a vital transportation planning integration link to support and advocate for the implementation of plans and policies of partner agencies. To that end, we propose a system of Transportation Investment Areas that is built upon contemporary regional planning programs and policies affecting Kent County, Delaware discussed below.

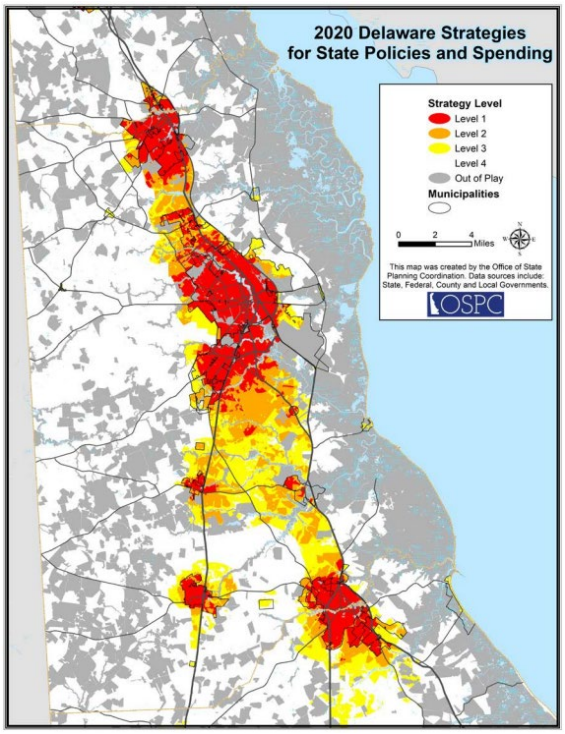
Growth Management Strategies



Several years ago, in response to random outward suburban expansion, Kent County Government established a growth management strategy and associated regulatory controls to better direct growth into areas best suited to accommodate urban and suburban development. The Kent County Growth Zone Overlay District is situated in the central portion of the County and generally aligns with the US Route 13/113 and Delaware Route 1 transportation corridors. The Growth Zone occupies roughly 20 Percent of the land area of Kent County and encompasses all major cities and towns in the County including the State Capital of Dover, Delaware. The Growth Zone is comprised of urban, suburban, and vacant developable lands where more compact, higher density, and mixed use development patterns are permitted in close proximity to principal transportation facilities and other support infrastructure and services[18].

The Office of State Planning Coordination (OSPC) plays a significant role in reviewing Comprehensive Plans to coordinate community land use and development goals and to weed out conflict.

[18] Kent County 2018 Comprehensive Plan



More recently, the Delaware OSPC has developed a system for guiding regional growth into areas where support infrastructure exists and where the State expects to invest the majority of its resources to improve and/or expand support services and infrastructure in such areas. This State system, known as "Delaware Strategies for State Policies and Spending" adopted in 2020, establishes a fully mapped hierarchy of State Spending Areas. Areas designated as Spending Levels 1 and 2 include existing cities, towns and surrounding areas with concentrations of population and places of employment, exhibiting urban/suburban characteristics, where the State expects to concentrate investment. Level 3 areas are those locations outside of Levels 1 and 2 that that are not expected to experience growth pressure in the near term. Rural, sparsely populated, open lands are designated as Level 4 Areas and are those places where the State of Delaware does not expect to invest in services and infrastructure to promote growth. Lands that are permanently preserved through conservation easement or other form of protective covenant are considered "Out of Play" Areas under the State Policy[19].

This MTP seeks to support and strengthen the efforts of our County and State Partners. To that end, a broadly stated theme of this MTP is the promotion of Inter-Jurisdictional Coordination & Concurrency. In furtherance of this theme, Goal 2 of this Plan is:

GOAL 2: ***To synthesize State, Regional and Local Transportation Objectives into a unified Vision and Implementation Plan for Central Delaware.***

As this Plan seeks to strengthen inter-jurisdictional coordination and concurrency, it also seeks to advance transportation plans and projects that support the health and vitality of the regional economy in Central Delaware. With Goal 3, Dover Kent MPO is dedicated to:

GOAL 3: ***To support an active and growing Business Development Community by proactively planning for transportation investments that strengthen the economic vitality of the Central Delaware Region.***

In considering the local economy, Agriculture is a major industry in Central Delaware that plays a significant role in the overall economic wellbeing of the Region and State. According to the USDA's 2022 Farm Census, there are 770 working farms in Kent County totaling

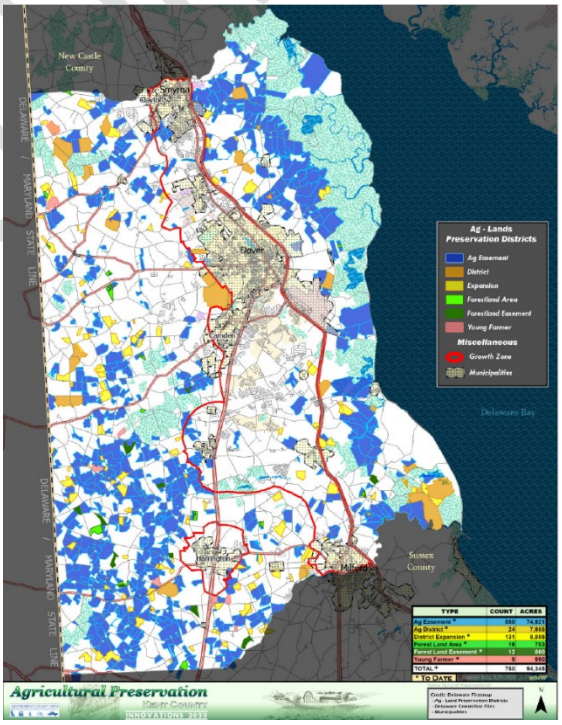
[19] "*Delaware Strategies for Policies and Spending 2020*" - OSPC

187,248 Acres (49.9% of County land area). The Delaware Department of Agriculture's 2022-23 Statistical Bulletin indicates that the 2022 economic value of Agricultural Production in Kent County exceeded $570 Million annually.

The State of Delaware and Kent County have invested substantially in the permanent preservation of working farmlands and forests in Kent County. Over 73,000 Acres have been permanently preserved for Agriculture in Kent County alone at a public investment cost of over $112 Million. The Table below provide a brief summary of Agland Preservation investments through 2023.

2023 Agland Preservation Program Summary – Kent County, Delaware				
Preservation Item	**Agland Preserved**	**Forestland Preserved**	**Young Farmer Program**	**TOTALS**
Easement	**564**	**12**	**9**	**585**
Acreage	**73,698**	**869**	**985**	**75,552**
Cost	**$112,819,978**	**$1,017,105**	**$2,644,657**	**$116,481,740**

The Map to the right shows the locations of Farm Parcels that are in the Agland Preservation Program in Kent County. Parcels shown in Blue are those upon which a Preservation Easement has been purchased. Parcels shown in Orange are in the Agland District Program which is a voluntary 10 Year agreement and a precursor to qualifying for Easement Purchase. With a very few exceptions, the vast majority of Agricultural Preservation Easements are situated outside of the Kent County Growth Zone in areas characterized as rural, low density and agricultural.



With this iteration of the MTP, we endeavor to support the transportation needs of the Agricultural Industry as a vital part of the regional economy, while respecting the rural character of working lands in Central Delaware.

Resiliency & Sustainability

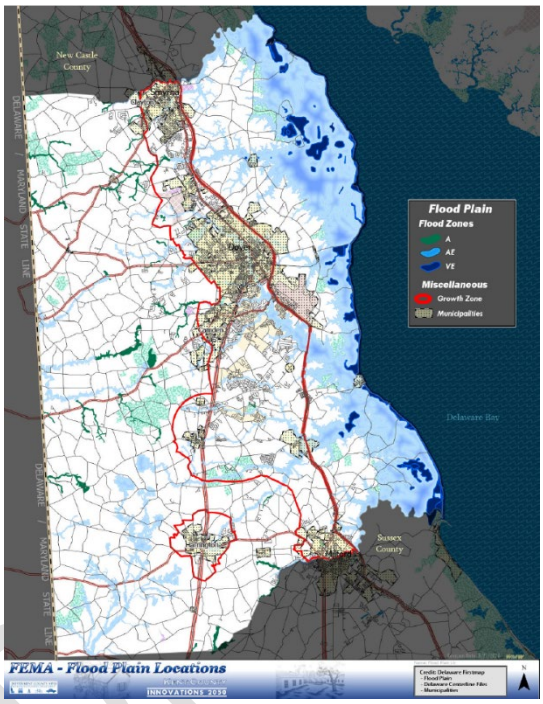
While Dover Kent MPO pursues appropriately planned transportation investments that support economic vitality and growth in areas best suited, it will also seek to advance plans

that avoid impacts associated with flood prone areas, forecasted climatic impacts, and sea level rise. Over the past several years, the planning disciplines have been focused on ways to best position communities and the built environment to be more resilient to the ever changing forces of nature, and for public investments to be economically sustainable over time. The resiliency and sustainability interests of Dover Kent MPO are captured in Goal 5 below:

GOAL 5: ***To give preference to Transportation Investments that demonstrate minimized risk of failure, or avoidance of impacts, due to climate change and extreme weather events, that avoid or minimize disruption to natural communities and processes, and that reduce or eliminate the need for future Investments due to obsolescence, climatic damage, or other loss.***

Flood Prone Areas

The National Flood Insurance Program (NFIP) administered by the Federal Emergency Management Agency (FEMA) was initiated by Congress in 1968 with the passage of the National Flood Insurance Act. This program establishes a regulatory system for mitigating risk and for making property insurance available to properties that are situated within designated flood prone areas. A significant part of this program is the Flood Insurance Rate Map Program (FIRM) which maps out the physical locations and attributes of regulatory Flood Plan Boundaries (e.g. 100 Year Flood Plain) and related features. It is important to note that the NFIP does not prohibit development within flood prone areas. However, it does establish flood protection measures to be incorporated into construction of buildings. It also establishes minimum regulations that preserve the flood discharge capacities of flowing streams and rivers (e.g. Floodways). Maintaining the floodway flow capacity of stream corridors is an extremely important aspect of roadway and bridge design considerations to avoid impedance of flood and tidal flows. This important consideration may be amplified as mean sea levels increase along the coast and within stream corridors. As increasing sea level is realized, FEMA will need to adjust its Base Flood Elevation Modeling on the Flood Insurance Rate Maps accordingly.



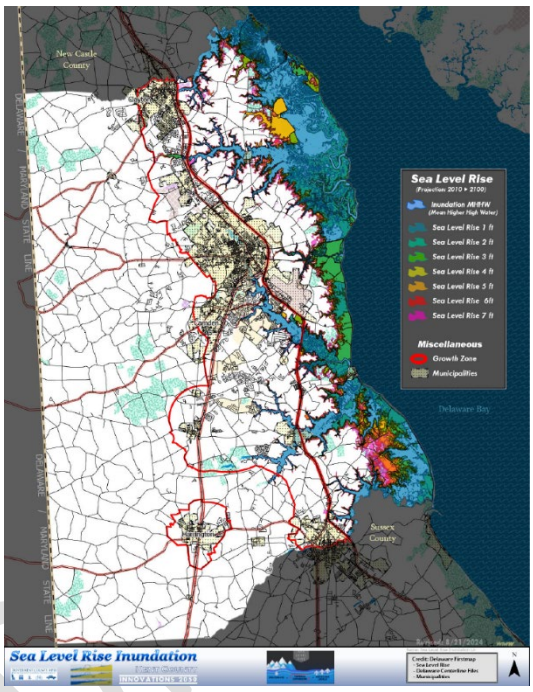
The Map to the right depicts the limits of the Regulatory Flood Plain in Kent County, Delaware (in Green). When we consider this information within a Resiliency and Sustainability framework for potential Transportation Improvements, certain questions arise. Is a project proposed within a location that is threatened by increased frequency or probability of inundation and/or flood damage? Will a transportation project be subject to the impacts of flooding accompanied by wave action and tide cycles that could reduce the lifecycle of a proposed improvement or cause recurring damage? Does a proposed transportation project represent a safety enhancement for existing populations or communities located within flood prone areas? Will a proposed transportation project enable (or result in) increased development pressure in flood prone areas or within the Regulatory Flood Plain?

While the NFIP does not prohibit development in flood prone areas, the FIRM Maps are useful in locating places where floodwater inundation is to be expected with regularity and/or frequency. As Dover Kent MPO seeks to pursue resilient and sustainable investment in the transportation system the impact of flooding and periodic inundation should be made part of the project evaluation process. Dover Kent MPO views the NFIP as an informative resource for consideration in the project evaluation process.

Sea Level Rise

Since 2009, the Delaware Department of Natural Resources and Environmental Control (DNREC) has been studying sea level rise and potential impacts for coastal Delaware. Projections for the rate of sea level rise and its effects on Delaware have been refined over the course of analysis. DNREC in conjunction with the Delaware Geological Survey have developed sea level rise projections and probabilities extending to 2100. According to the "*Delaware's Climate Action Plan*" document released in late 2021 by DNREC, sea levels along the coast of Delaware are projected to rise another 9 to 23 Inches by 2050 with increases up to 5 Feet by 2100. Projected increases in sea level are directly correlated to rising global temperatures. Sea level increase is projected as a range (9 to 23 Inches) that correlates to the degree of success realized in reducing greenhouse gas emissions and resultant global temperatures.

Several factors contribute to projected sea level rise in the Mid-Atlantic Region including receding polar ice caps resulting in increasing ocean water, subsidence of the flat coastal plain that forms most of the Delmarva Peninsula, thermal expansion of ocean water due to rising global temperatures, and slowing of the Atlantic Ocean Gulf Stream resulting in higher seas in the Mid-Atlantic. With the convergence of these factors, Delaware is deemed a sea level rise "Hotspot" where sea level rise is accelerating faster that in most places around the world[20]. The Map to the right depicts the possible extent of projected sea level rise developed by DNREC for Kent County. Through the end of the 21st Century, substantial inundation is projected along the Kent County coast and into several major drainage basins including Duck Creek, Leipsic River, St. Jones River, Murderkill River, and Mispillion River basins.



A more recent study commissioned by DNREC in 2022 titled "*An Economic Analysis of the Impacts of Climate Change in the State of Delaware*" examines the probable physical and economic impacts of climate change and sea level rise over three future time periods: Near Century (2020 -2039) at plus 0.75 Feet; Mid-Century (2040-2059) at plus 1.5 Feet; and Late Century (2080-2099 at plus 3.0 Feet). The Table below from this recent study reflects projected sea level elevations for each County in Delaware in Feet above the year 2000 mean sea level elevation, plus increases associated with storm surges for the 10% (10 Year Flood) and 1% (100 Year Flood) storm events.

TABLE 2-4. SEA LEVEL RISE AND STORM SURGE HEIGHTS (FEET)

Sea level elevations, in feet, above the year 2000 mean higher high water, for 10- and 1-percent storm events (measured by NOAA tide gauges) during three future eras, by county.

	NEAR CENTURY (0.75 FT SLR)		MID-CENTURY (1.5 FT SLR)		LATE CENTURY (3.0 FT SLR)	
	SLR + 10% STORM	SLR + 1% STORM	SLR + 10% STORM	SLR + 1% STORM	SLR + 10% STORM	SLR + 1% STORM
Kent County	3.427	4.089	4.177	4.839	5.677	6.339
New Castle County	3.344	4.314	4.094	5.064	5.594	6.564
Sussex County	4.337	6.652	5.087	7.402	6.587	8.902

Notes: SLR + storm surge heights are capped at 7 ft in the analysis due to data availability (capping applied to the scenarios highlighted in orange). The term "mean higher high water" is a technical expression representing the average height of the highest tide recorded at a tide station for the subject year. It is used here, and in NOAA technical analyses of climate change, as a common base datum from which to measure future SLR.

[20] "*Delaware's Climate Action Plan*", DNREC – November 2021

According to DNREC's Climate Action Plan, a 5-foot rise in sea levels could inundate 5% of the state's roads and bridges and 6% of evacuation routes[21]. Such impacts to the roadway network would present an eminent threat to public safety and would hinder the movement of goods and services in the region. With changing weather patterns and more intense coastal storms, DNREC projects up to a 10% increase in annual precipitation by the end of this century. Flood events affecting roadways can result in structural damage to roads, bridges and culverts further impacting public safety and travel. The combined effect of sea level rise and the heavy precipitation from more intense climate events may also present challenges for evacuation of people from coastal areas with limited accessibility.

The Table below projects the added cost of maintenance and repair of roadways in Kent County resulting from climate change and sea level rise under two (2) scenarios for greenhouse gas emissions reductions. RCP4.5 and RCP8.5 (representative concentration pathways) represent lower and higher greenhouse emission levels respectively. As indicated, costs are projected to be excessively higher with higher concentrations of greenhouse gas emissions.

TABLE 5-4. ANNUAL ECONOMIC IMPACTS TO ROADWAYS FROM CLIMATE CHANGE ($MILLION)

Economic impacts are defined as repair and delay costs on paved and unpaved roads above the baseline climate scenario (1986-2005) costs. Impacts are measured in millions of dollars (2019) per year and averaged over 5 GCMs. Values may not sum due to rounding.

	NEAR CENTURY (2020-2039)		MID-CENTURY (2040-2059)		LATE CENTURY (2080-2099)	
	RCP8.5	RCP4.5	RCP8.5	RCP4.5	RCP8.5	RCP4.5
Kent County	$2.8	$3.2	$4.9	$4.2	$14	$6.0

Source: DNREC Publication – "Economic Analysis of the Impacts of Climate Change in the State of Delaware" by Industrial Economics, Inc. 2022

Transportation Improvement Areas Concept

How can Dover Kent MPO contribute to improved inter-jurisdictional coordination? What can Dover Kent MPO do to aid in the advancement of established growth management strategies through focused transportation planning? Should Dover Kent MPO concern itself with transportation system choices that lead to a more resilient and sustainable future?

To support the regional plans and objectives of partner agencies, and to advance the notion of improved inter-jurisdictional coordination and concurrency, Dover Kent MPO establishes Transportation Investment Areas. Transportation Investment Areas are based upon existing

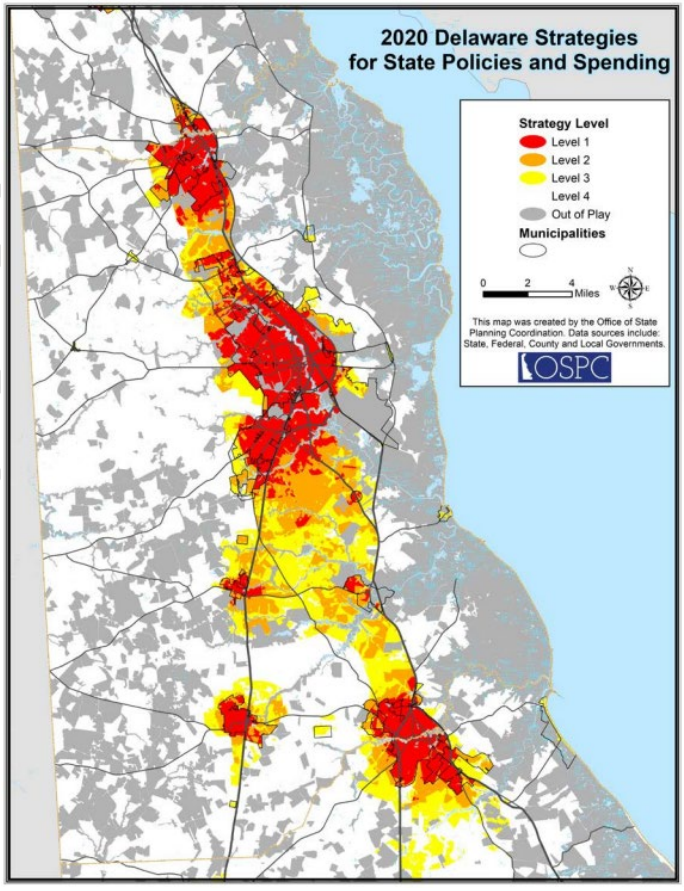
[21] "*Delaware's Climate Action Plan*", DNREC – November 2021

long-range planning tools established by partner agencies and identify locations that are most favored for investment in transportation infrastructure.

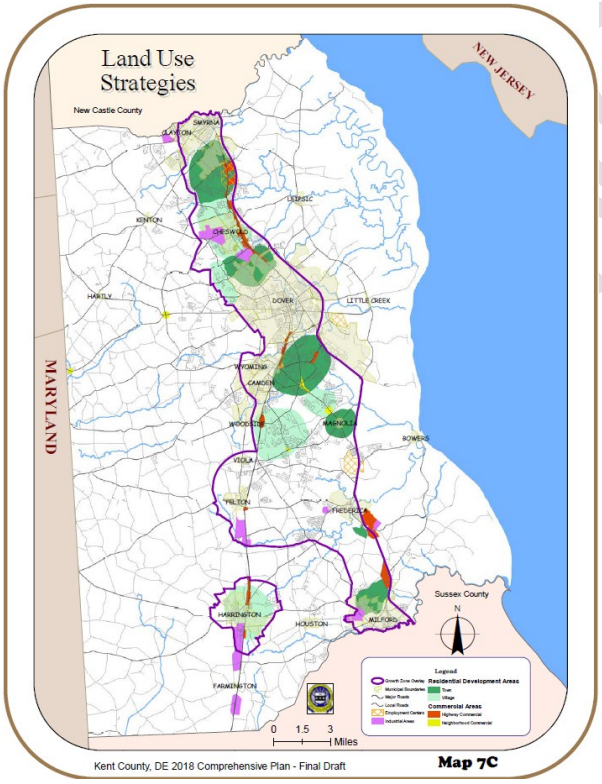
Presented below in Concept Form is a Project Evaluation Metric for Regional Concurrency that proposes a Scoring System that is aligned with and supportive of State and Regional growth management plans and policies. As envisioned, this metric would be employed by Dover Kent MPO in conjunction with existing project evaluation tools as an aid in establishing organizational work plans and priorities.

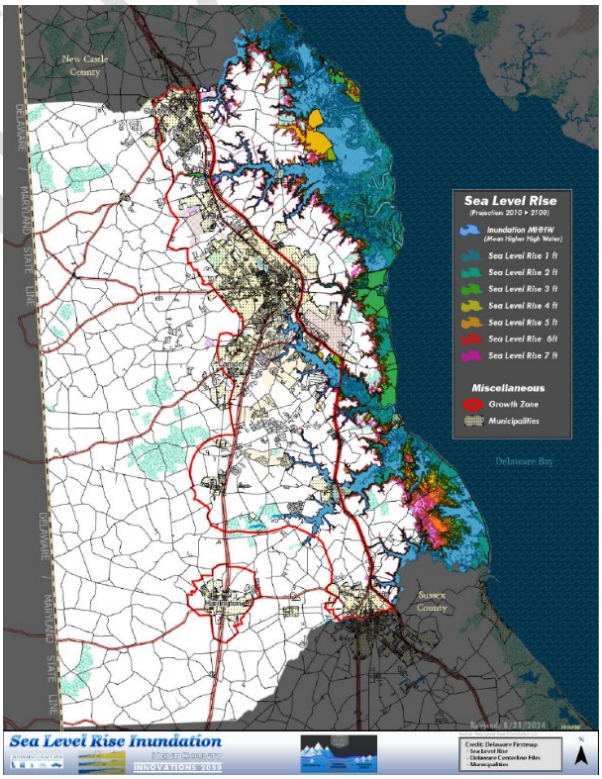
Investment Areas *	Points
❑ Urban Core – Level 1	+ 1.0
❑ Urban – Level 1	+ 0.75
❑ Suburban – Level 2	+ 0.50
❑ Suburban Fringe – Level 3	+ 0.30
❑ Rural – Level 4	+ 0.15
❑ Out of Play Areas	- 0.50

* **Based on "*Delaware Strategies for Policies and Spending 2020*" - OSPC**

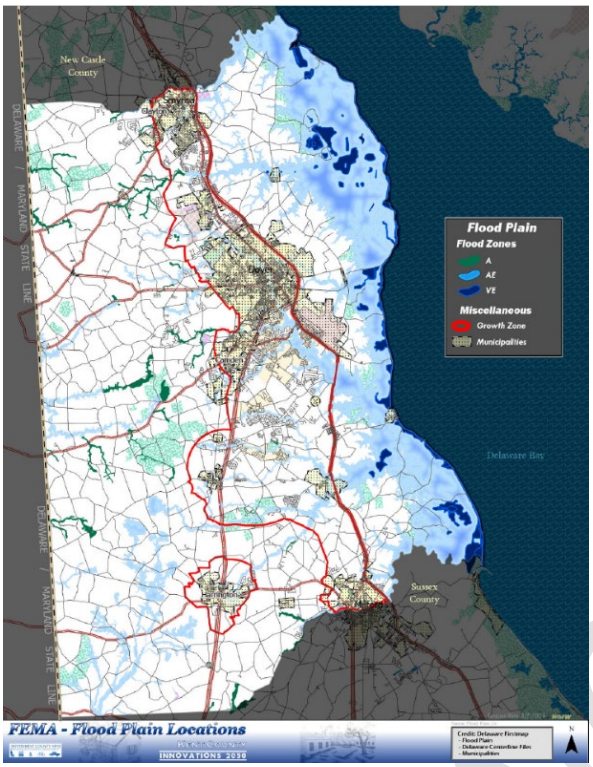


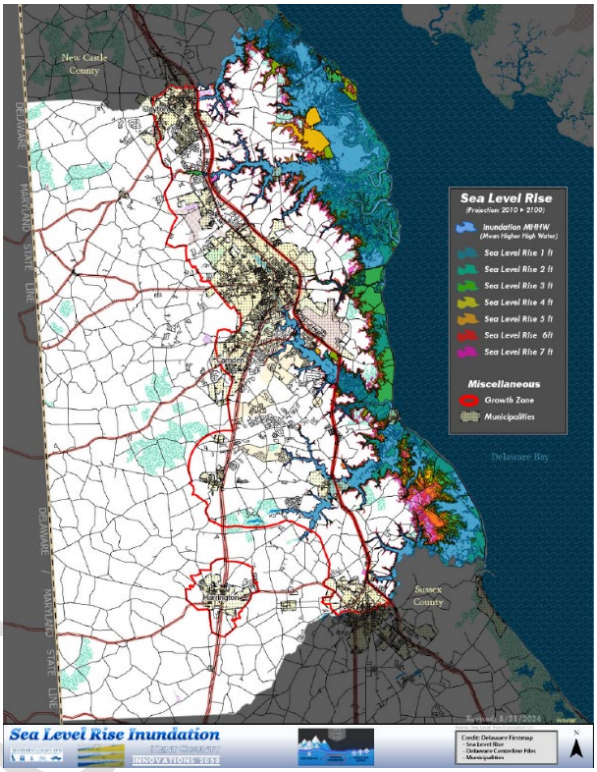
Impact Area Additions/Deductions	Points
❑ In County Growth Zone[22]	+ 0.50
❑ Outside County Growth Zone	+ 0.15
❑ Transportation Improvement District[23]	+ 0.50
❑ Regulatory Flood Plain[24]	- 0.20
❑ Projected Sea Level Rise Area[25]	- 0.15
❑ Agland Preservation Easement - PDR[26]	- 0.10
❑ Exception for Ag Industry Transportation Support in PDR	+ 0.20





[22] Kent County 2018 Comprehensive Plan
[23] DelDOT Transportation Improvement Districts
[24] FEMA Flood Insurance Rate Map (FIRM)
[25] Delaware FirstMap – DNREC & DGS
[26] DE Department of Agriculture Report May 2024





Recommendations

1) Prepare and adopt a detailed Transportation Investment Areas (TIA) Policy and Program as a project evaluation and prioritization tool for use by MPO Staff. The TIA Policy shall formalize the Purpose, Applicability, and Implementation Processes and Metrics of the Program for consideration of enactment by the MPO Council.

4) Enhancement Index

As indicated in Chapter 2, the Dover Kent MPO endeavors to develop a process for evaluating and ranking transportation projects for the degree to which they will address enhancement factors for all modes of transportation while focusing on improved safety, security and visual quality of travel ways in our jurisdiction. This objective is articulated in Goal 3 and Goal 6 of this MTP are follows:

GOAL 3: ***To support an active and growing Business Development Community by proactively planning for transportation investments that strengthen the economic vitality of the Central Delaware Region.***

GOAL 6: ***To incorporate Enhancement Index elements into Transportation Network Improvement Projects that yield a high level of user satisfaction and positive perceptions of user safety, security, and visual quality.***

The Enhancement Index (EI) provides an evaluation framework for proposed multi-modal transportation projects to gauge the degree to which such projects incorporate design features that promote environmental balance, visual quality, and a sense of user safety and security. For purposes of this MTP, we will consider the quality of the user experience for four (4) major modes of travel in Kent County, Delaware: motor vehicle; pedestrian (including device assisted mobility); bicycling; and, transit. Traditionally, the notion of transportation system safety, security and effectiveness has been almost entirely a quantitative analysis of traffic volume, roadway capacity, peak hour volumes and delays, and accident data. The Level of Service (LOS) metric is centered on comparative analysis of traffic volumes, roadway capacity, and travel times at intersections and on roadway segments. While quantitative measures are essential to understanding the relative effectiveness and performance of roadways for maximizing efficiencies in carrying vehicles, we should also concern ourselves with the quality of the experience for all users of the transportation system. The system users include pedestrians, cyclists, and transit riders, along with operators and occupants of motor vehicles. As humans spend increasing amounts of our days in the travel stream in various modes, how we perceive and interact with the spaces we travel through becomes a real quality of life matter. This Enhancement Index (EI) establishes a generalized scoring metric that is an expression of the degree of attainment of specific quality factors within the transportation facility.

In this Section, we consider our travel ways beyond mere conduits to convey vehicles, people, goods and services from point to point within the Community. As physical features of the human landscape, our roadways, sidewalks, bike paths, trails systems, and bus stops are places we all utilize, interact with, and inhabit. This Section begins a dialogue about the

physical qualities of our travel ways and how they are significant contributors to community character and sense of place. Human perceptions of place may be influenced by physical features that are unique to a location, the built attributes that exist in a place, and the degree to which there is a balancing between built attributes and natural features. Attractive travel ways support local business and tourism activity by creating pleasant places that people want to visit and to live. Here we contemplate human perceptions of security, the preservation of natural features, landscape improvements, and other enhancements to the functional and visual quality of transportation facilities.

The following Table identifies specific types of Enhancement Factors that form the basis of the Enhancement Index scoring system. As conceptualized below, you will notice that each Enhancement Factor is given an equal EI Point Value. It is anticipated that the Dover Kent MPO Public Advisory Committee and the Technical Advisory Committee will evaluate each Enhancement Factor and may recommend alternative EI points values for consideration of adoption by the MPO Council.

ENHANCEMENT FACTORS	DESCRIPTION	EI POINTS
Sidewalk	Minium width of 5 Feet. Typically comprised of Portland cement. Designed to comply with ADA in all respects. Preference is given to sidewalk that is separated from the back-of-curb (edge of cartway) an optimal distance of 4 Feet+/- to provide space from vehicular travel lanes for pedestrian safety purposes (real and perceived) and to provide space for green edges, tree plantings and landscaping within the transportation corridor.	.083
Multi-Use Paved Pathway	Minimum width of 8 Feet. Typically comprised of bituminous asphalt. Designed to comply with ADA in all respects.	.083
Pervious Surfaces/Green Space	Include: vegetated surface treatments at pavement edges, traffic islands, and medians; biofiltration stormwater management features; pervious Sidewalk and Pathway surfacing; and other non-impervious surface treatments.	.083
Shade Trees	Native shade canopy trees – preferred plant spacing of 10' to 15' on-center.	.083
Landscape Features	Intersection edges and traffic islands associated with pedestrian cross walks where traffic is frequently stopped offer good opportunities for low maintenance landscape enhancements that give definition and emphasis to the pedestrian way and improve community image from roadway.	.083
Preservation of Natural Features	Planned preservation of existing natural features such as trees, woodlands, wetland areas, and open meadows along travel corridors to include installation of perimeter protection measures during construction period.	.083
Corridor/Facility Lighting	Over 75% of fatal pedestrian crashes occur during dark hours. Pedestrian facilities and crosswalks should be illuminated to levels recommended by Federal Highway Administration[27] .	.083

[27] Research Report: Street Lighting for Pedestrian Safety – FHWA (Report No. FHWA-SA-20-062)

Underground Utilities	Minimize aerial utility lines in the public right-of-way by underground installation. Projects should remove aerial lines and replace with underground utility runs to minimize visual clutter. Visual enhancement.	.083
Transit Shelters	Provision for safe and conveniently located structures for transit riders to await connection that provide seating, shade and protection from precipitation, road noise and wind. Supports transit ridership.	.083
Wayfinding Signage	Within town and city environments, a system of Wayfinding Devices can be very beneficial navigation features that assist visitors and add visual interest to streetscapes. Uniquely designed, thematic, easily identifiable wayfinding signage that is built at the pedestrian scale and visually connected to the locality can go a long way in directing traveler to key destinations. Scoring credit shall be offered for proposals incorporating a pedestrian scale Wayfinding System where appropriate.	.083
Community Gateway Features	For the purpose of presenting an attractive, landscaped, pedestrian scaled "welcome" treatment, emphasizing the unique qualities of the locality and that conveys the message that you have arrived at a "special place". Considered important community identifiers for villages, towns and cities that define main entrance points, and work to reenforce community character and sense of place. Gateway treatments present opportunities for incorporating special materials into the street scape such as stone/precast paver surfacing, precast curbing; thematic crosswalk designs, and informational kiosks. Typically situated in the public right-of-way or on land in public ownership.	.083
Local Historic Elements	Many of our dominant travel routes have been in use since the earliest settlement periods. It is fairly common for historic structures, landmarks, and events to be associated with historic travel routes. Towns and cities more often than not, evolved from mere crossroads where travel routes intersected. Because travel routes themselves played (and continue to play) such a significant role in the history of a place, they present opportunities for sharing that history with the public along travel corridors. Historic markers, monuments, interpretive message boards, and the preservation of historic structures and viewsheds along travel corridors are ways that communities can emphasize and promote their unique character. Such features provide visual interest and authentic aesthetic quality that can elicit a pleasure response and foster positive perceptions of the travel experience for users. Scoring credit shall be given for the preservation of existing historic elements and inclusion of interpretive features where appropriate in the public right-of-way.	.083

Towns and Cities should be provided meaningful input and latitude into the transportation corridor design process to incorporate a variety of corridor design elements that create and/or re-enforce the image and character of their particular jurisdiction.

Recommendations:

1. Employ Enhancement Index (EI) metric as an internal tool for promoting the incorporation of aesthetic and complete street elements into transportation improvement plans as an organizational goal as DK/MPO conducts transportation studies and projects for sponsor organizations. To accomplish this recommendation, the Enhancement Index (EI) metric shall be incorporated into the overall candidate project scoring process utilized by DK/MPO to evaluate and prioritize projects.

2. Commission the development of a Transportation Corridor Design Manual that will establish a Master Design Template for Transportation Corridors by corridor type. The Transportation Corridor Design Manual will refine the Enhancement Index (EI) metric and serve as a resource for Communities and agencies in promoting the evolution of superior transportation corridors that are safe for all modes of travel, aesthetically attractive and promote desired community image and character, and that better incorporate green infrastructure into the built environment.

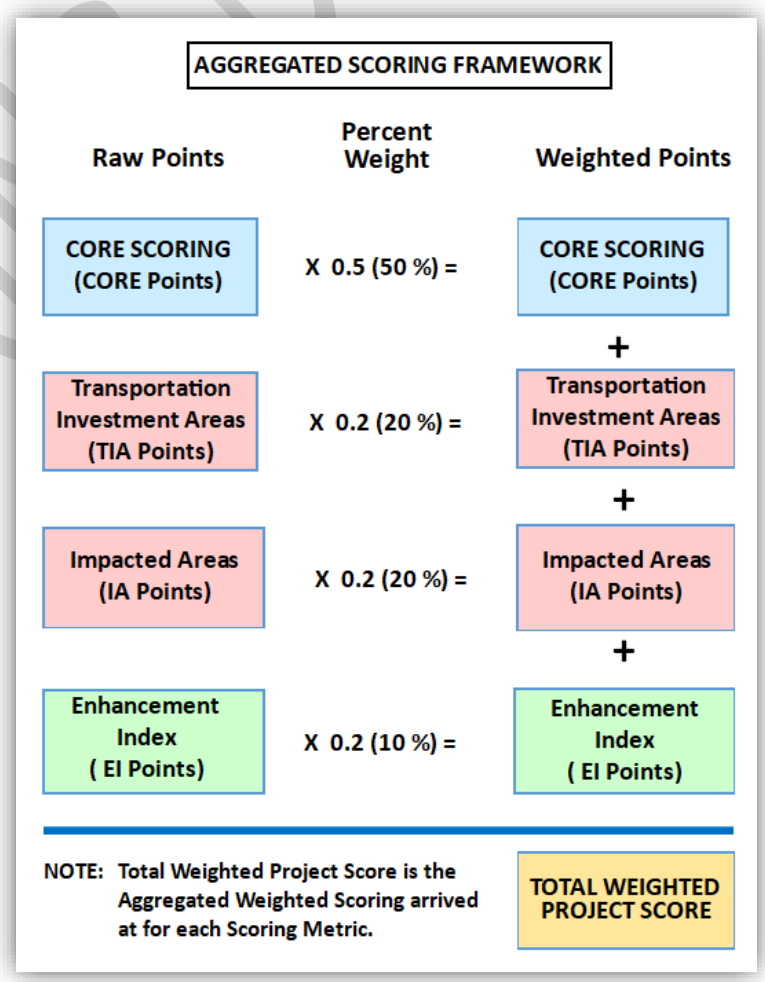
Incorporating Proposed TIA, IA and EI Project Scoring Metrics

Since the formation of Dover Kent MPO in 1992, this organization has utilized various forms of a Project Scoring Metric Process to evaluate and prioritize transportation project proposals for inclusion in the UPWP, the TIP and the MTP. In 2014, DelDOT began to utilize a software product known as "Decision Lens®" for the purpose of ranking and prioritizing transportation projects as part of development of the annual Capital Transportation Plan (CTP). With assistance from DelDOT, Dover Kent MPO began utilizing Decision Lens in 2016 for project prioritization and ranking in preparing the 2017 TIP document. This project prioritization solution has been in use by Dover Kent MPO since that time until the end of 2023 when DelDOT determined that it would no longer maintain its license with the Decision Lens software vendor.

In preparation for the expiration of the Decision Lens relationship, Dover Kent MPO Staff developed a commensurate Core Scoring Metric System in-house for project ranking and prioritization purposes. This Core Scoring systems remains in use at this time.

With this iteration of the MTP, Dover Kent MPO Staff has conceptualized three (3) additional project ranking criterion for the expressed purpose of advancing specific goals established by Dover Kent MPO as set forth in Chapter 2. Specifically, in this Chapter we have modeled the following expanded scoring concepts for consideration: 1) Transportation Investment Areas Metric (or TIA's); 2) Impacted Areas (or IA's); and, 3) the Enhancement Index Metric (or EI). As envisioned, these three (3) new scoring matrices would be employed alongside the existing Core Scoring Platform.

The Chart to the right illustrates how an expanded Scoring Platform would be arranged with considerable weight being maintained in the Core Scoring Platform (50%). Under this scenario, Transportation Investment Areas and Impacted Areas would be weighted at 20% respectively while the Enhancement Index would be given a weight of 10% of total project score.



CHAPTER 10: Transportation Investments Plan

Roadway Projects in the State Capital Transportation Plan

At the time of release of this first Working Draft of the 2050 MTP, the Dover Kent MPO's Future Investment Plan remains under development. The Final Draft MTP will include a list of fiscally constrained priority transportation projects that Dover Kent MPO will consider for incorporation into the MPO's Transportation Improvement Plan (TIP). Projects listed in the MPO TIP become eligible for advancement to DelDOT for evaluation and consideration of inclusion in future iterations of the Delaware Capital Transportation Plan (CTP). The term "fiscally constrained" simply means that the estimated cost of listed priority projects set forth in this MTP in the aggregate shall demonstrate conformity with the estimated capital expenditure budget developed by DelDOT for future year investments in transportation improvements in Kent County.

In the Exhibit to the right, you will find a list of Kent County Transportation Projects that are already listed in the current FY25 – FY30 Capital Transportation Budget. Several of the listed projects began as studies conducted by Dover Kent MPO and are now in the CTP at various stages in the journey toward completion.

PROJECT LIST – CAPITAL TRANSPORTATION PLAN (CTP)

A list of recommended roadway improvements (shoulder widening, additional lanes, intersections, new roads, etc.)

Based on latest DelDOT Capital Transportation Plan (CTP)

Will be sorted by short-range (0-5 years), mid-range (5-10 years), and long-range (10+ years)

Current list:

- HEP KC, US 13, Lochmeath Way to Puncheon Run Connector
- HEP KC, US 13, Walnut Shade Road to Lochmeath Way
- North Main Street Smyrna, Glenwood Ave to Duck Creek Parkway
- East Camden Bypass
- West Camden Bypass
- Kenton Road, SR8 to Chestnut Grove Road
- NE Front Street (Rehoboth Blvd to SR 1)
- Garrison Oak Connector Road (SR 1 via White Oak Road)
- College Road (Kenton Road to Saulsbury / McKee Road)
- Walnut Shade Road, US 13 to Peachtree Run Road
- West Street, New Burton Road (Queen Street) to North Street
- Irish Hill Road, Fox Chase Road to McGinnis Pond Road
- South State Street/Plaindealing Road/Woodlytown Road Intersection Improvements
- Duck Creek Parkway (Bassett St. to Main St.)
- HSIP KC, SR 15 and SR 42 Intersection Improvements
- US 13 at White Oak Road Intersection Improvements
- Irish Hill Road Upgrade (US 13 to Glen Forest Road)
- Banning Street/Clarence Street Improvements
- Canterbury Road Upgrade (DE Rt 12 to US 13)
- Peachtree Run Road (Voshells Mill Road to Irish Hill Road)
- Brenford Road (SR 13 to DE 42)

21 of 108 statewide projects (19.4%)

DOVER/KENT COUNTY MPO METROPOLITAN PLANNING ORGANIZATION

Roadway Projects for Future Consideration

In addition to those transportation projects that have already been incorporated into the DelDOT CTP, Dover Kent MPO maintains a list of potential projects that have been identified as important priorities by partner agencies through local Comprehensive Planning processes and by Dover Kent MPO through previous MTP planning efforts and other transportation studies. The Exhibit below details the list of previously identified roadway projects. These potential projects will be considered along with any new projects that are identified and through this MTP plan development for evaluation ranking and inclusion in the MPO TIP and for future consideration in the State CTP process.

PROJECT LIST – ADDITIONAL ROADWAY PROJECTS

A list of roadway projects that are not yet included in DelDOT CTP

Based on comprehensive plans, MPO studies, and previously completed project lists

Will be sorted by short-range (0-5 years), mid-range (5-10 years), and long-range (10+ years)

Current list:

- McKee Road/Saulsbury Road Corridor Improvements
- Smyrna Clayton Blvd (DE 6) and Wheatleys Pond Road (DE 300) Intersection Improvements
- Glenwood Avenue Upgrade
- Mifflin Road Widening Upgrade (Shoulder from West North Street to DE Rt 8)
- SR1-Trap Shooters Road Interchange Improvements
- Existing Horsepond Road Improvements - S Little Creek Road to Starlifter Avenue and Lafferty Lane
- Irish Hill Road Upgrade (McGinnis Pond Road to Magnolia)
- Horsepond Road Extension - N Little Creek Road to S Little Creek Road
- Starlifter Avenue Extension
- Rabbit Chase Road Upgrade
- DE Rt 15 Widening (Moose Lodge Road & Dundee Road)

DOVER/KENT COUNTY MPO
METROPOLITAN PLANNING ORGANIZATION

Bicycle & Pedestrian Projects for Consideration

As indicated throughout this MTP, a primary goal of Dover Kent MPO is the evolution of a fully integrating and seamless system of transportation options. Based on recently completed local Comprehensive Plans, City and Regional Bicycle and Pedestrian Plans, MPO studies, and previous iterations of the MTP, Dover Kent MPO maintains a list of priority bicycle and pedestrian facility improvement projects for Kent County. These projects along with any additional pedestrian and bicycle improvement projects identified through this MTP process will be evaluated and ranked for future consideration. The following Exhibit details the current list of bicycle and pedestrian projects previously identified as important.

PROJECT LIST – BIKE & PEDESTRIAN

A list of recommended bicycle and pedestrian improvements (sidewalks, shared use paths, crosswalks, bike lanes, etc.)

Based on comprehensive plans, MPO studies, and previously completed project lists

Will be sorted by short-range (0-5 years), mid-range (5-10 years), and long-range (10+ years)

Current list:

- Bay Road Shared Use Paths
- Connection between Bay Road and St. Jones River Greenway Trail
- Energy Lane Pedestrian Improvements
- Connection Between Energy Lane and Village at Blue Hen
- Blue Hen Boulevard and Levy Court Lane Pedestrian Improvements
- New Burton Road Shared Use Path
- Mifflin Road Sidewalks
- Mallard Pond Park Trail Extension
- Dover High Drive Crossing at Entrance to Leander Lakes
- Traffic Signal and Crosswalks at Hazlettville Road, Cannon Mill Drive, and Brittingham Drive
- Smyrna School Link
- Camden to Dover Trail
- Cheswold US13 Shared Use Path
- Cheswold Main Street Pedestrian Crossings
- North Rehoboth Boulevard / North Walnut Street Shared Use Path
- Crosswalk at Rehoboth Boulevard / Walnut Street / 10th Street
- Pine Cabin Road Improvements
- The Green to Capital City Trail
- West Street Improvements from North Street to Queen Street/New Burton Road

DOVER/KENT COUNTY MPO
METROPOLITAN PLANNING ORGANIZATION

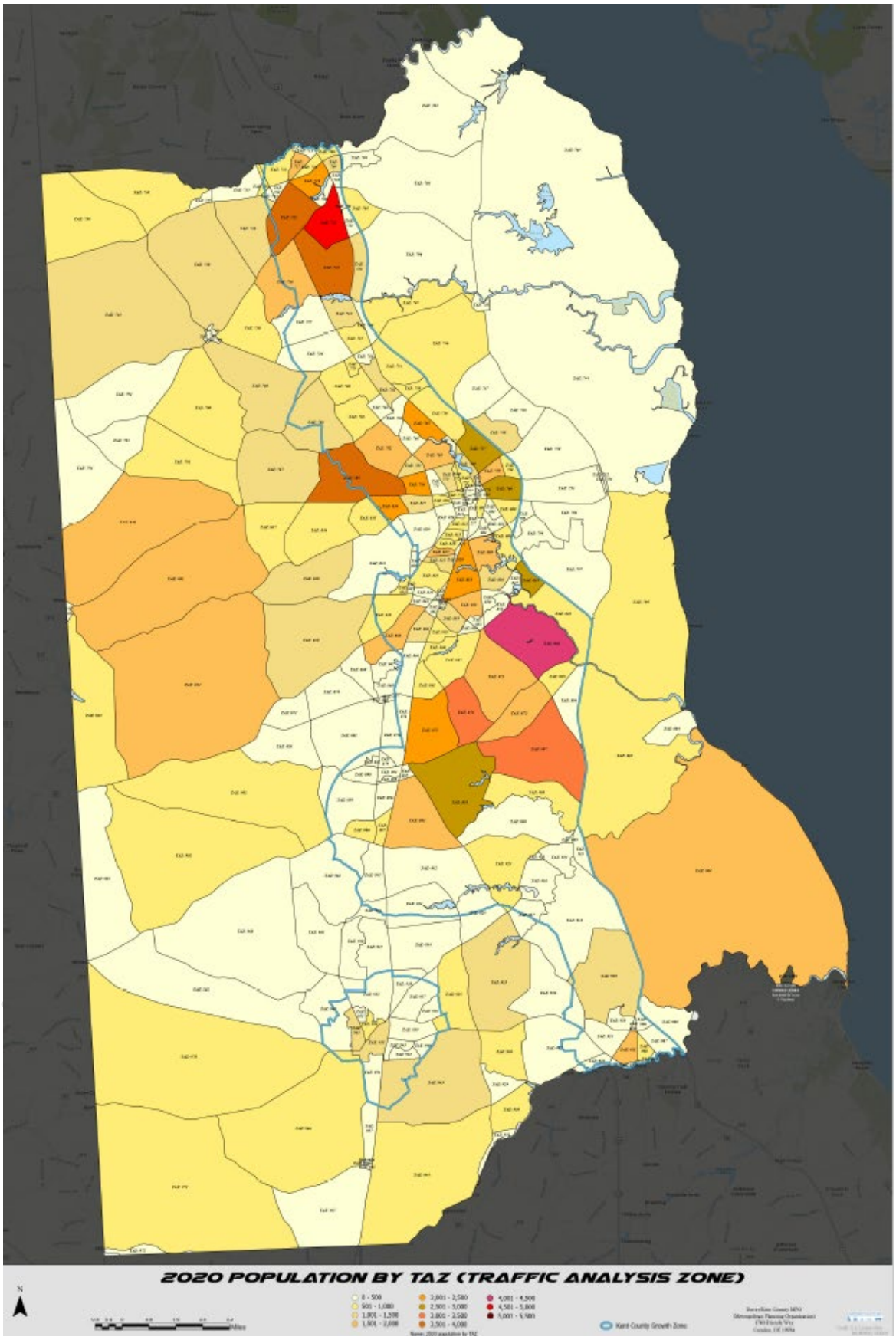
2050 Transportation Investment Plan

As mentioned above, with this release of Working Draft Number 1, the Transportation Investment Plan element of the MTP remains in development. It is anticipated that a list of Fiscally Constrained Priority Projects will be incorporated into Working Draft Number 2 in October.

APPENDIX A

GROWTH FORECAST MAP SERIES

Contents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N
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2,001 - 2,500
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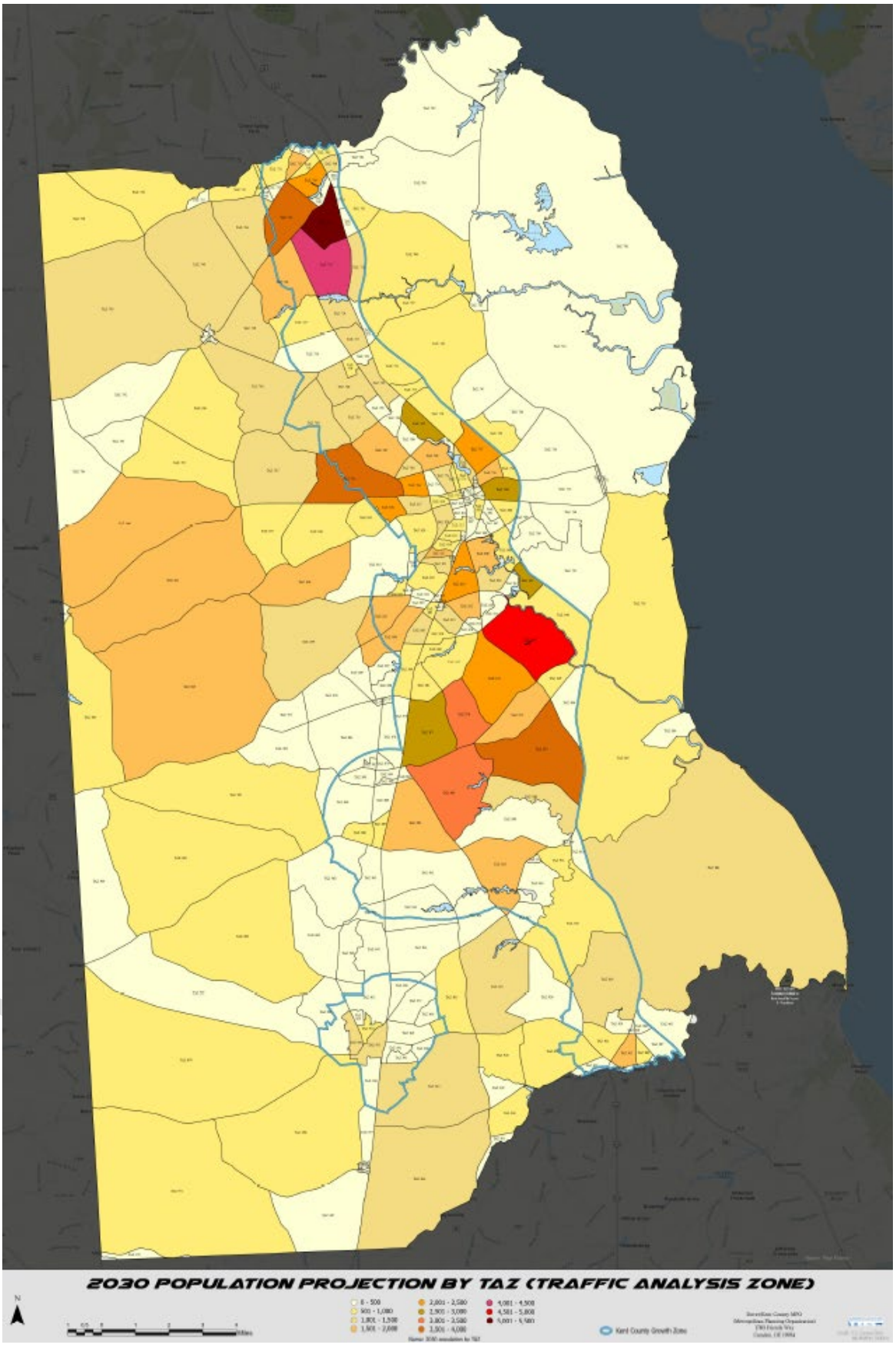
3,501 - 4,000
4,001 - 4,500
4,501 - 5,000
5,001 - 9,500
Kent County Growth Zone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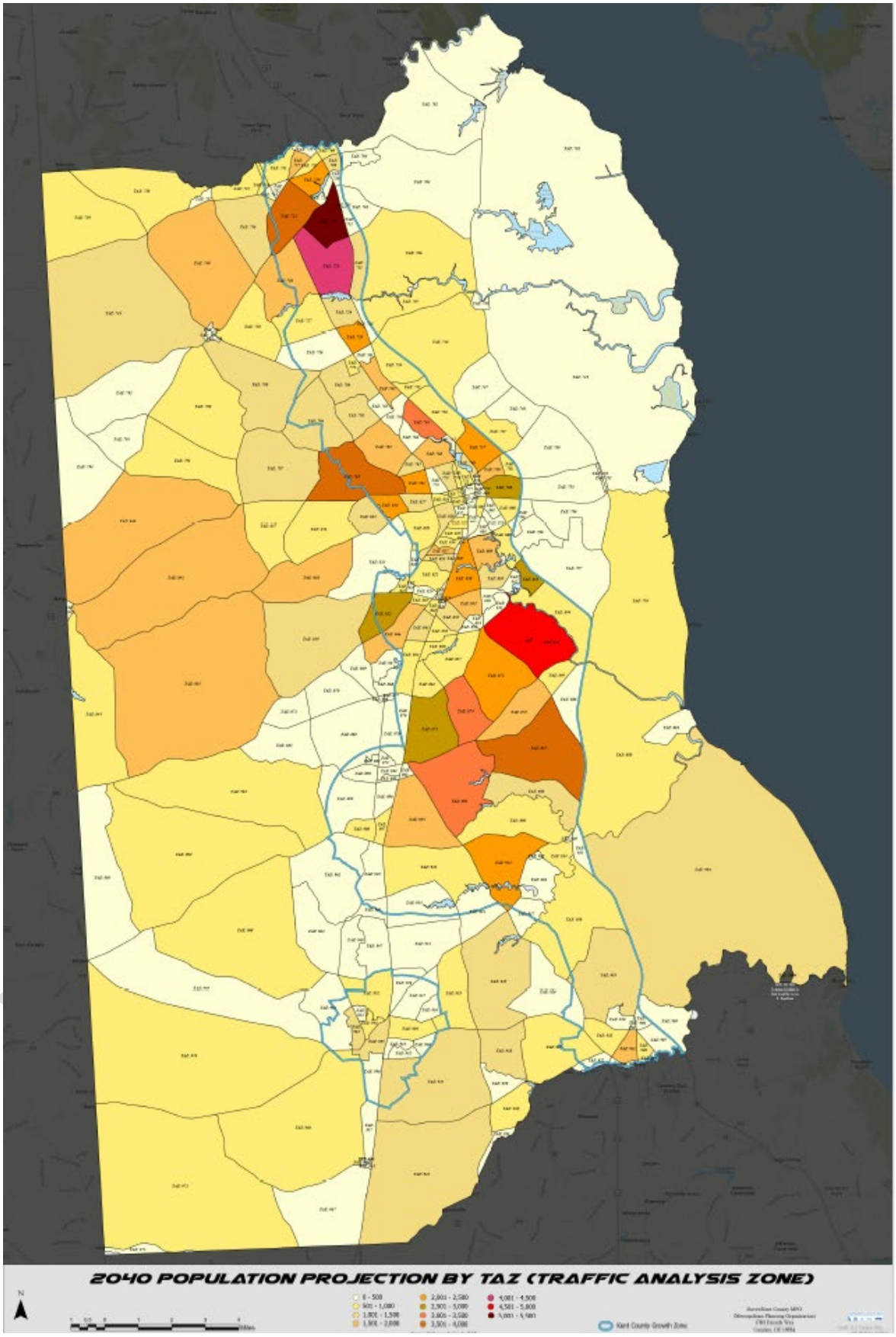
1,501 - 2,000
2,001 - 2,500
2,501 - 3,000
3,001 - 3,500
3,501 - 4,000
4,001 - 4,500
4,501 - 5,000
5,001 - 5,500
Kent County Growth Zone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1,801 - 1,500
1,501 - 2,000
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2,501 - 3,000
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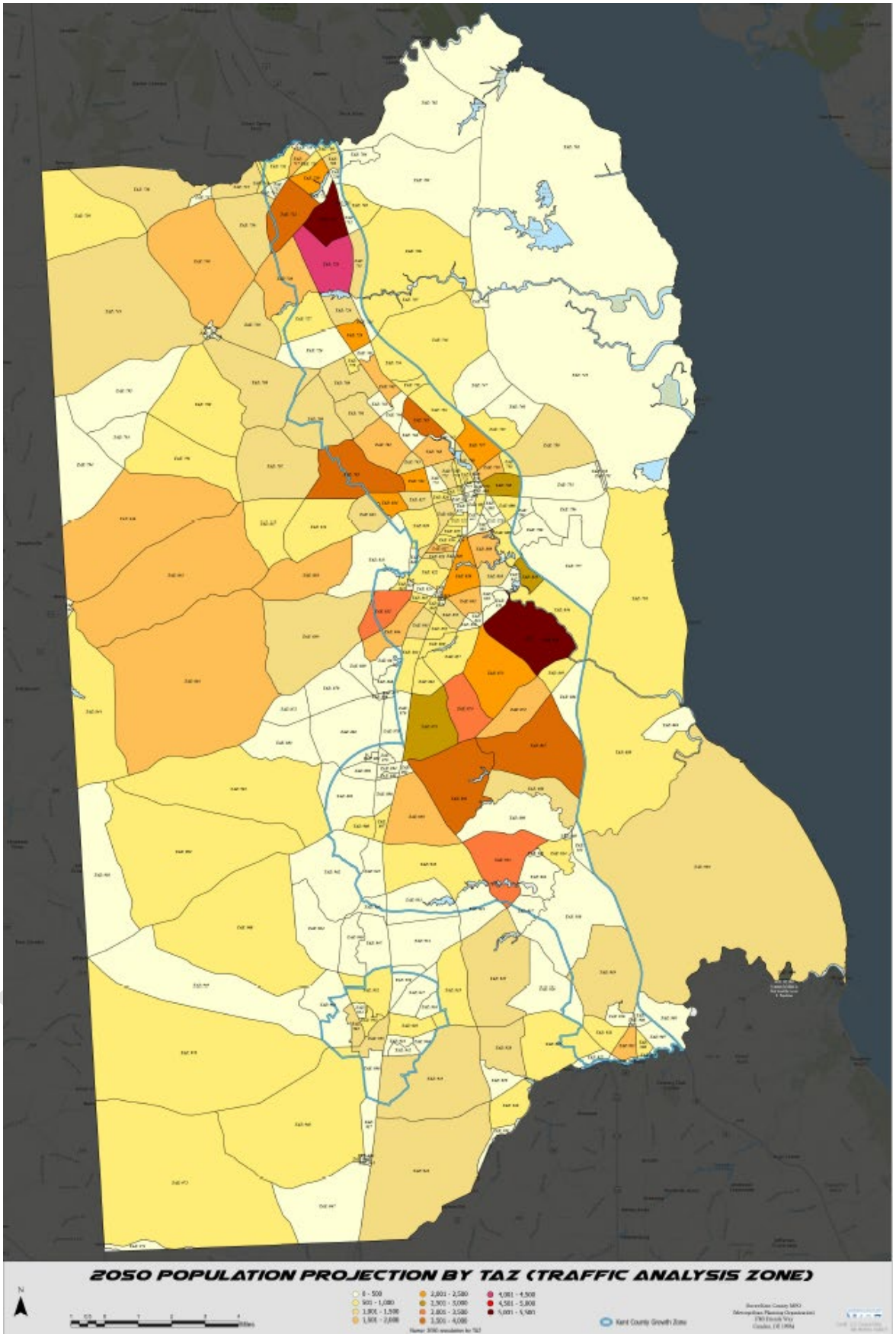
3,501 - 4,000
4,001 - 4,500
4,501 - 5,800
5,001 - 9,500
Kent County Growth Zone


2050 POPULATION PROJECTION BY TAZ (TRAFFIC ANALYSIS ZONE)
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501 - 1,000
1,001 - 1,500
1,501 - 2,000
2,001 - 2,500
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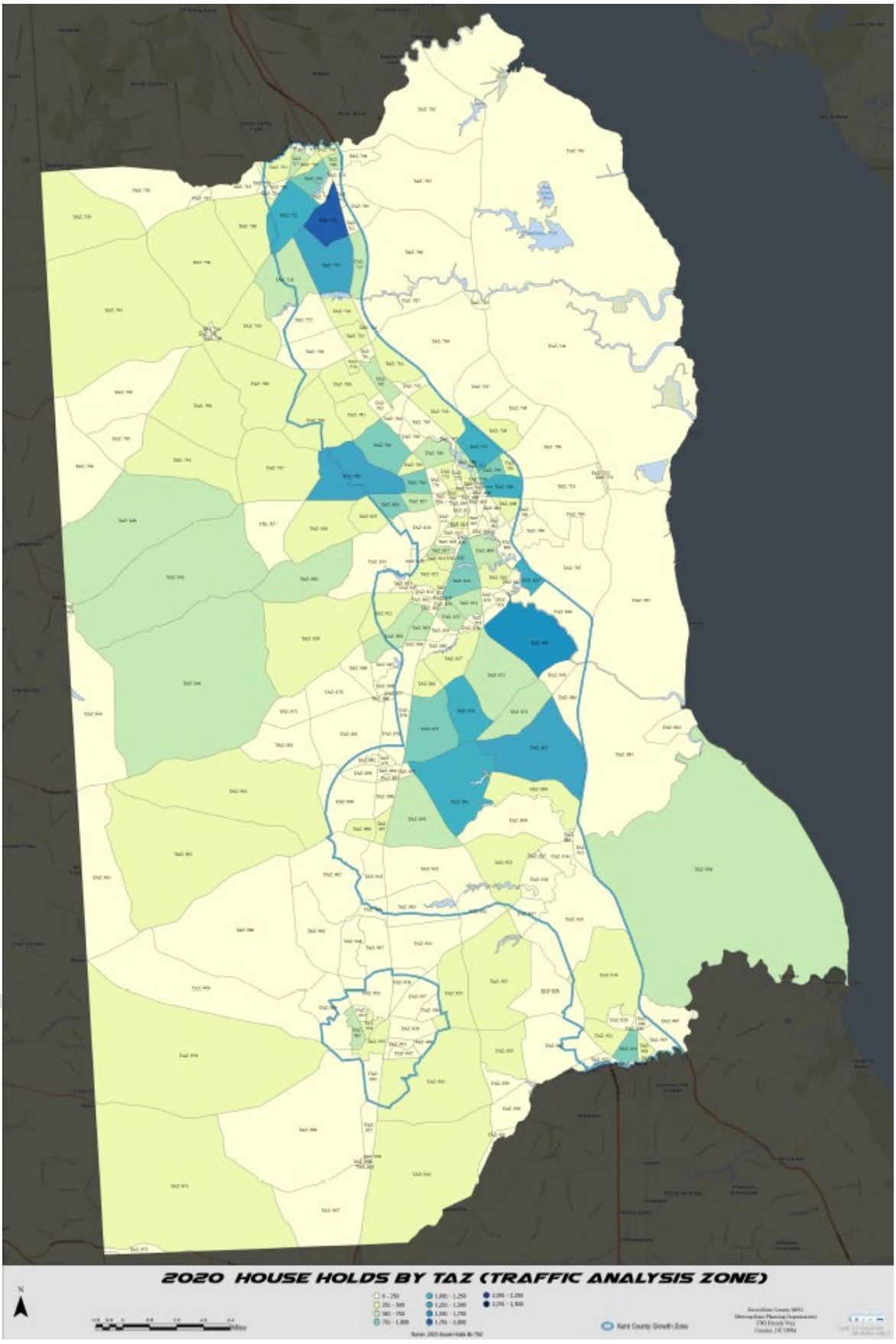
3,001 - 3,500
3,501 - 4,000
4,001 - 4,500
4,501 - 5,000
5,001 - 5,501
Kent County Growth Zone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250 - 500
501 - 750
751 - 1,000
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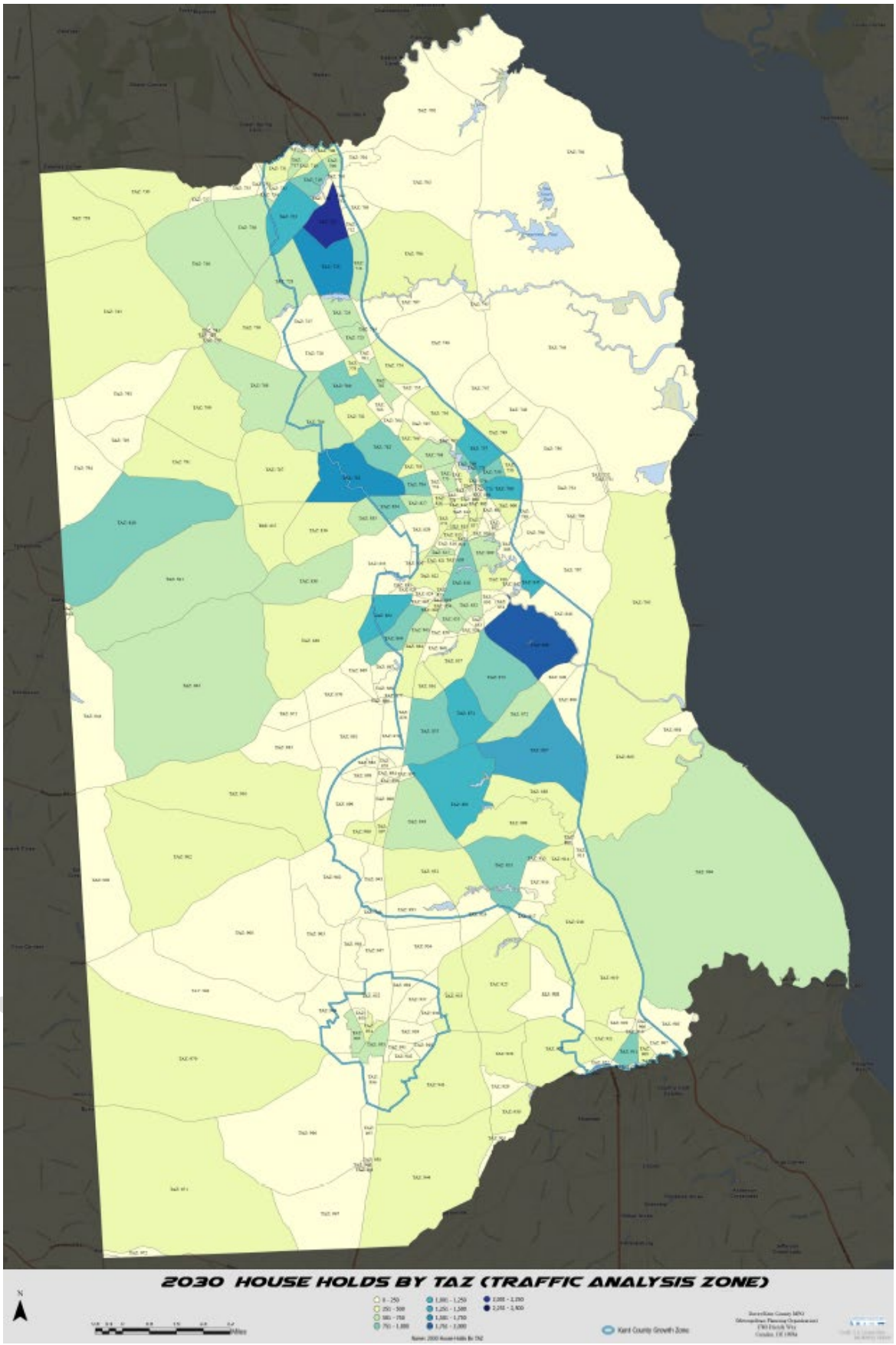
2,001 - 2,250
2,251 - 2,500
Kent County Growth Zone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250 - 500
500 - 750
750 - 1,000
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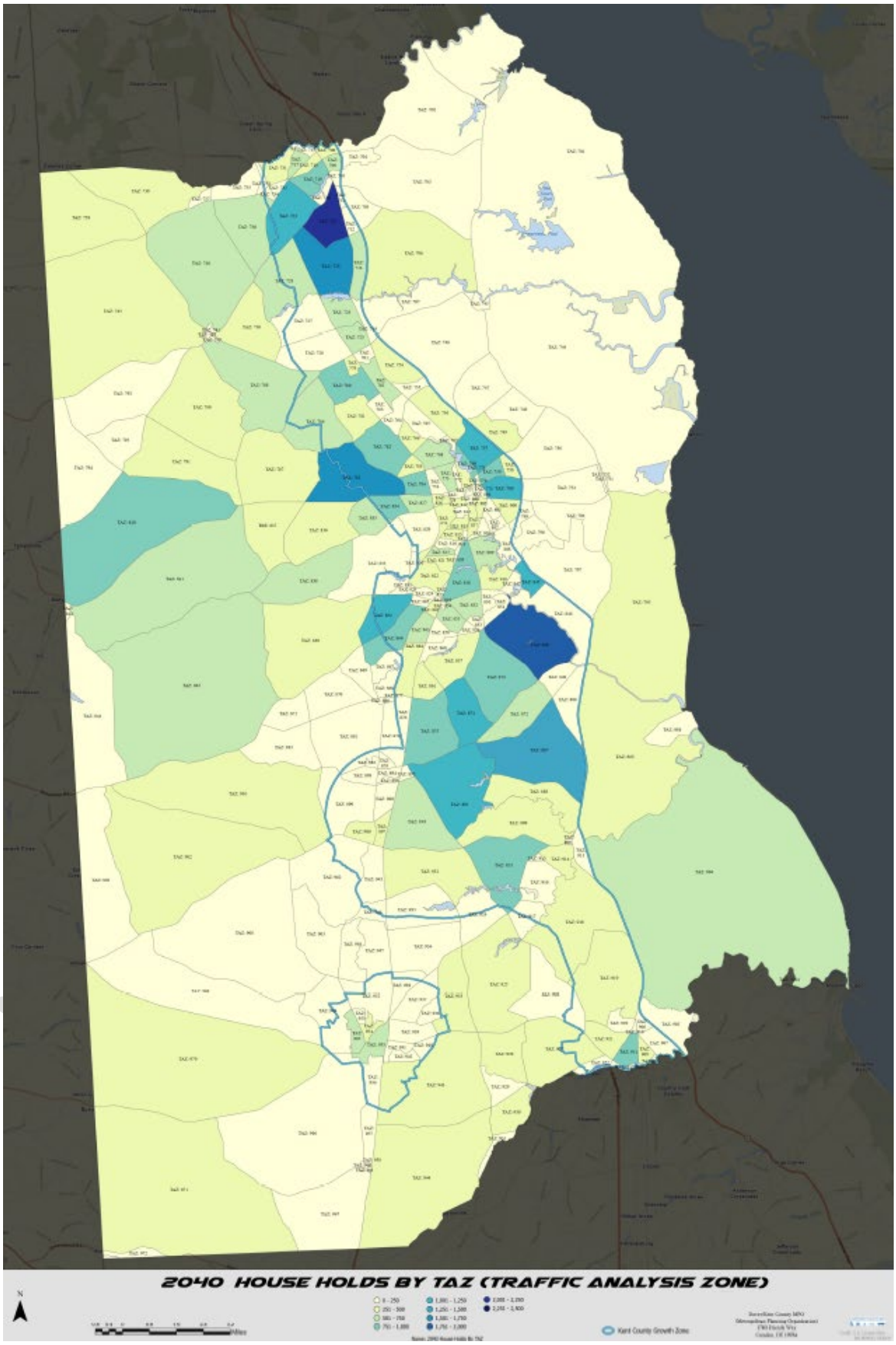
2,250 - 2,500
Kent County Growth Zone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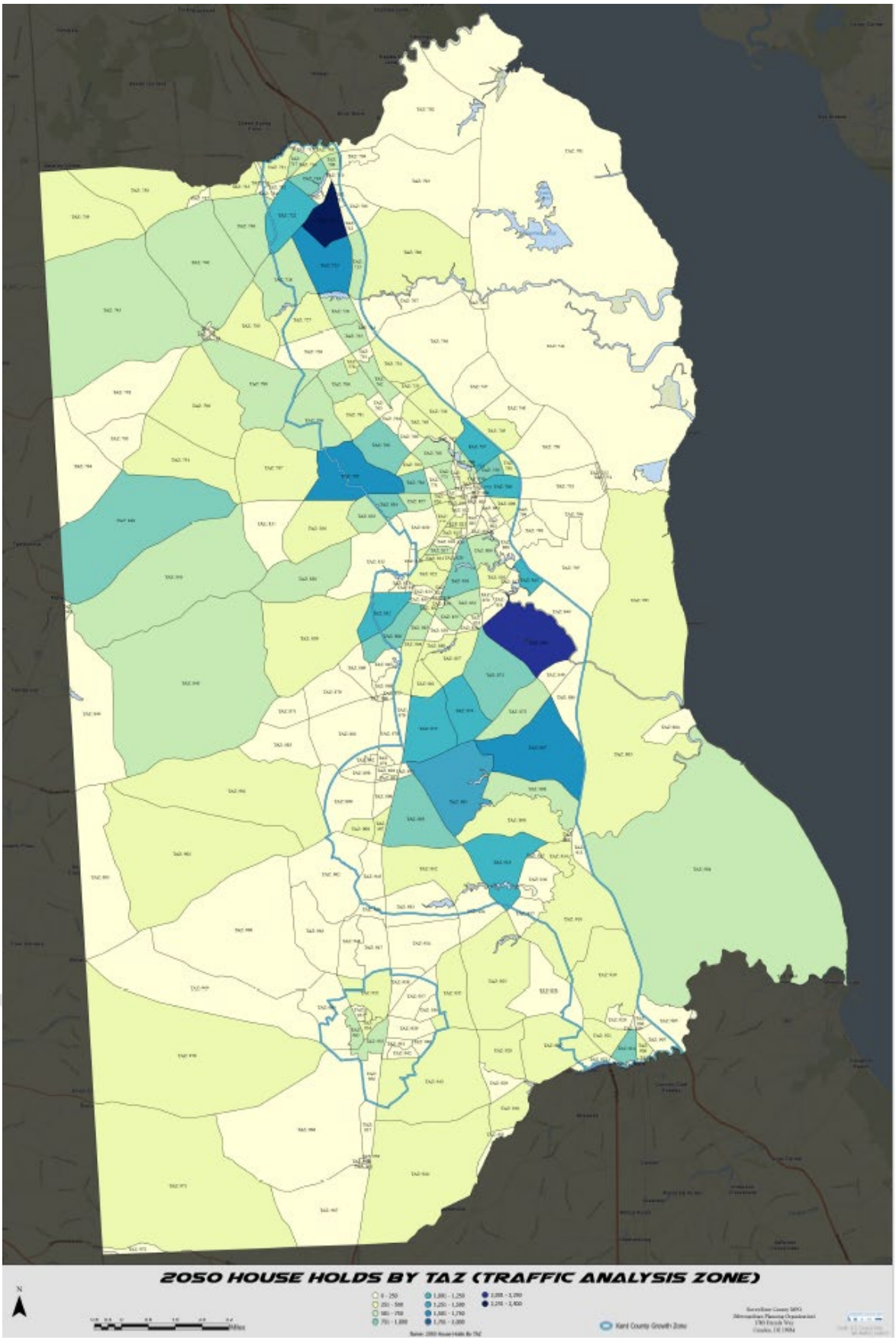
Miles
Kent County Growth Zone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250 - 500
501 - 750
751 - 1,000
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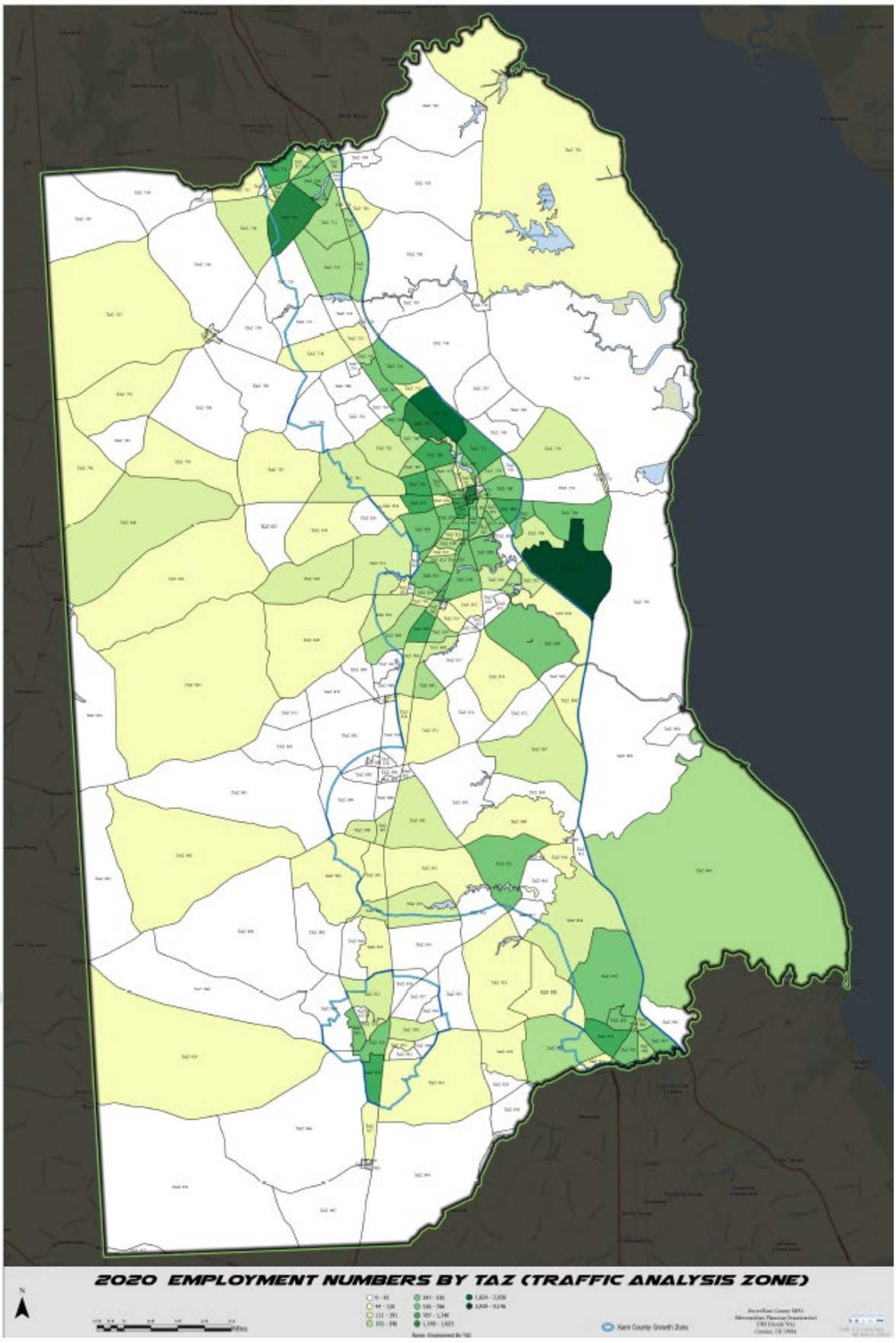
2,251 - 2,500
Miles
Kent County Growth Zone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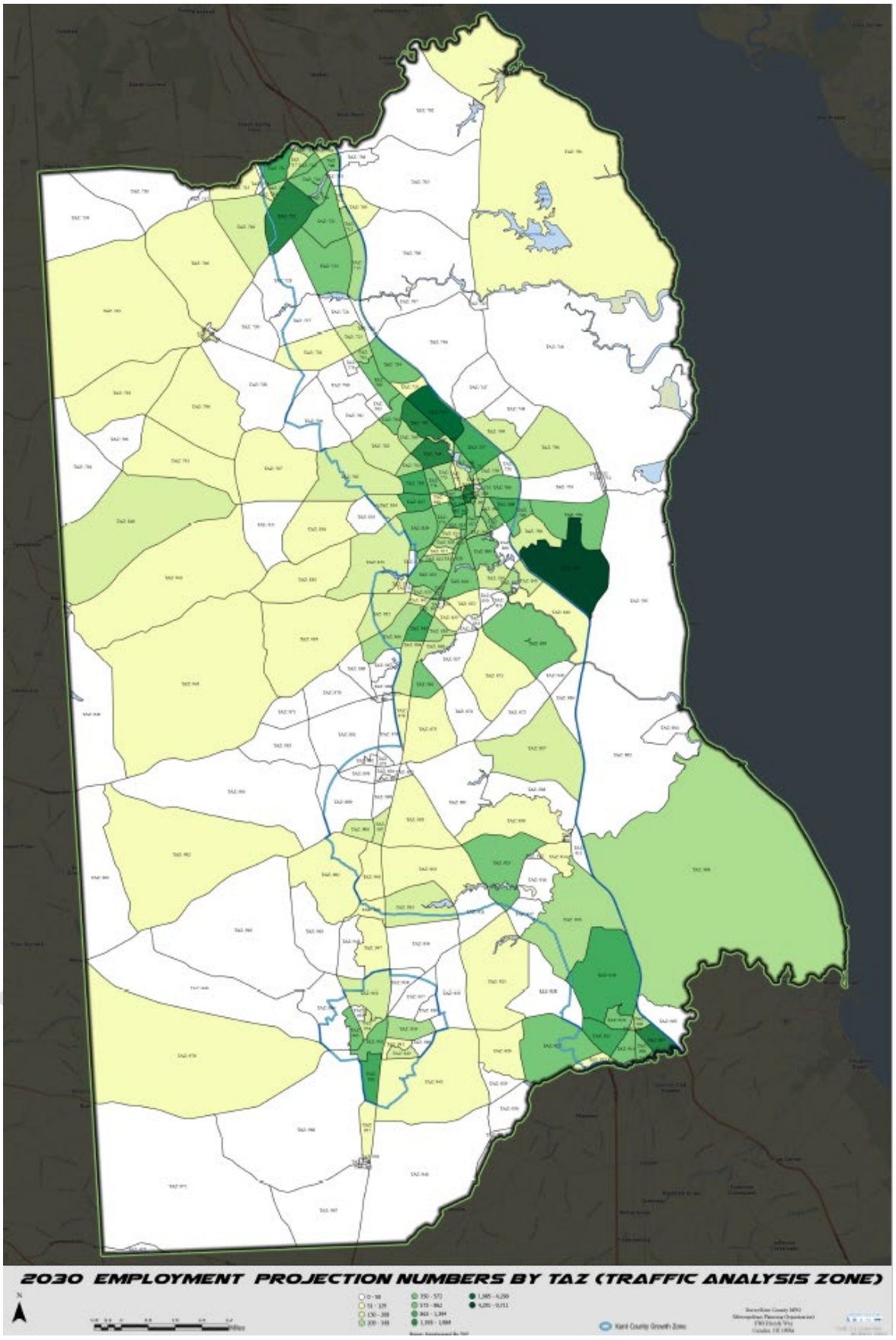
Kent County Growth Zone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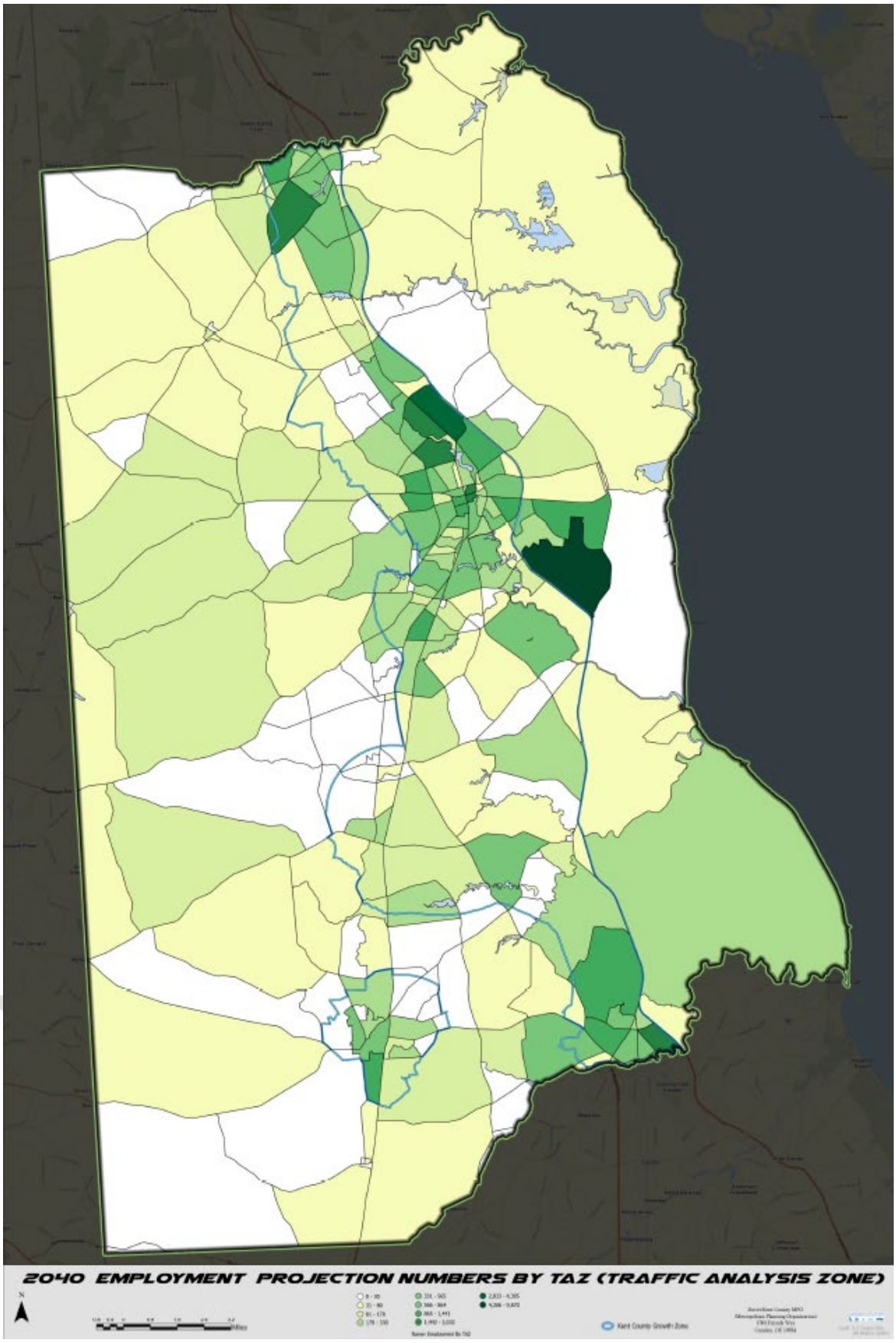
Miles
Kent County Growth Zone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Miles
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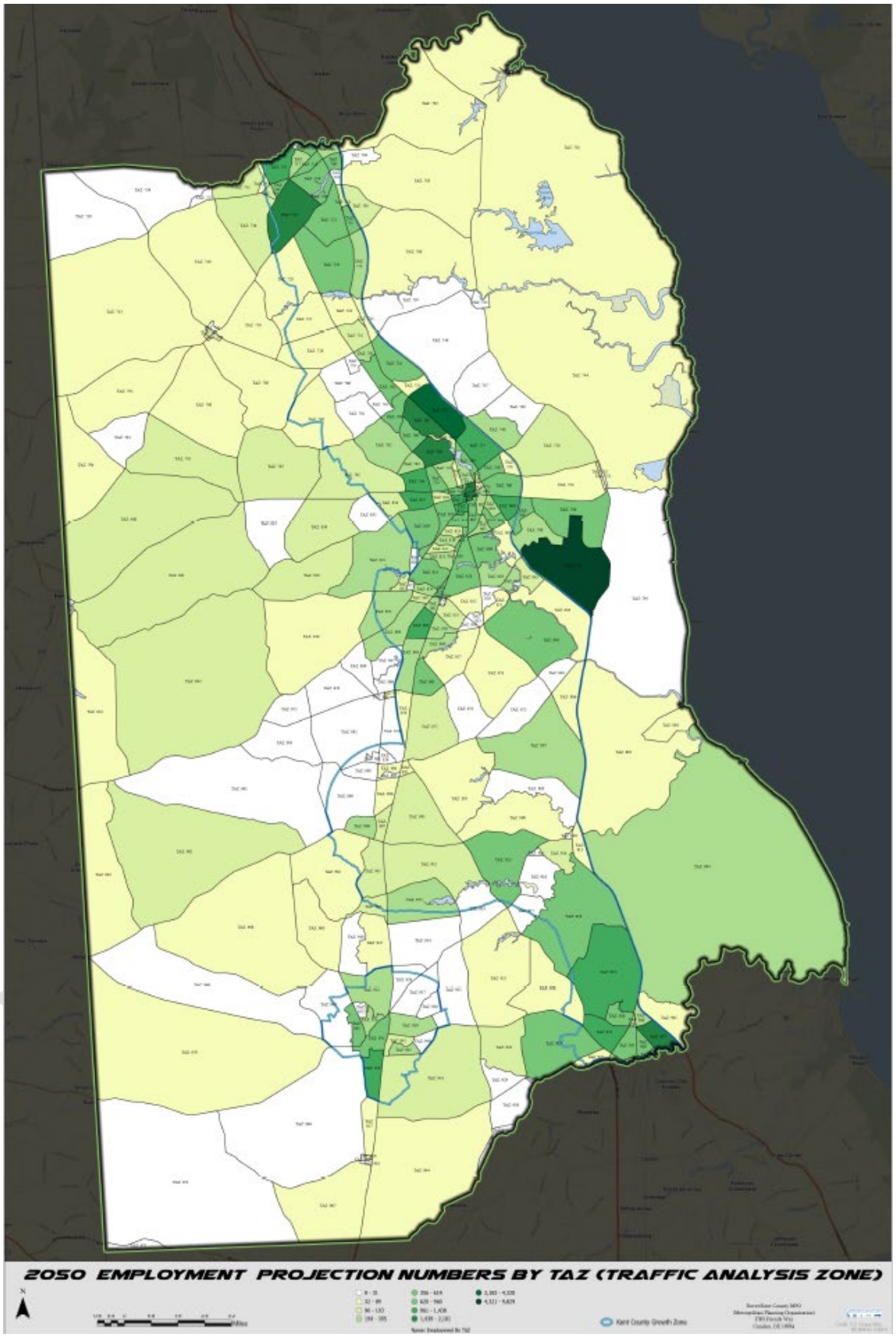
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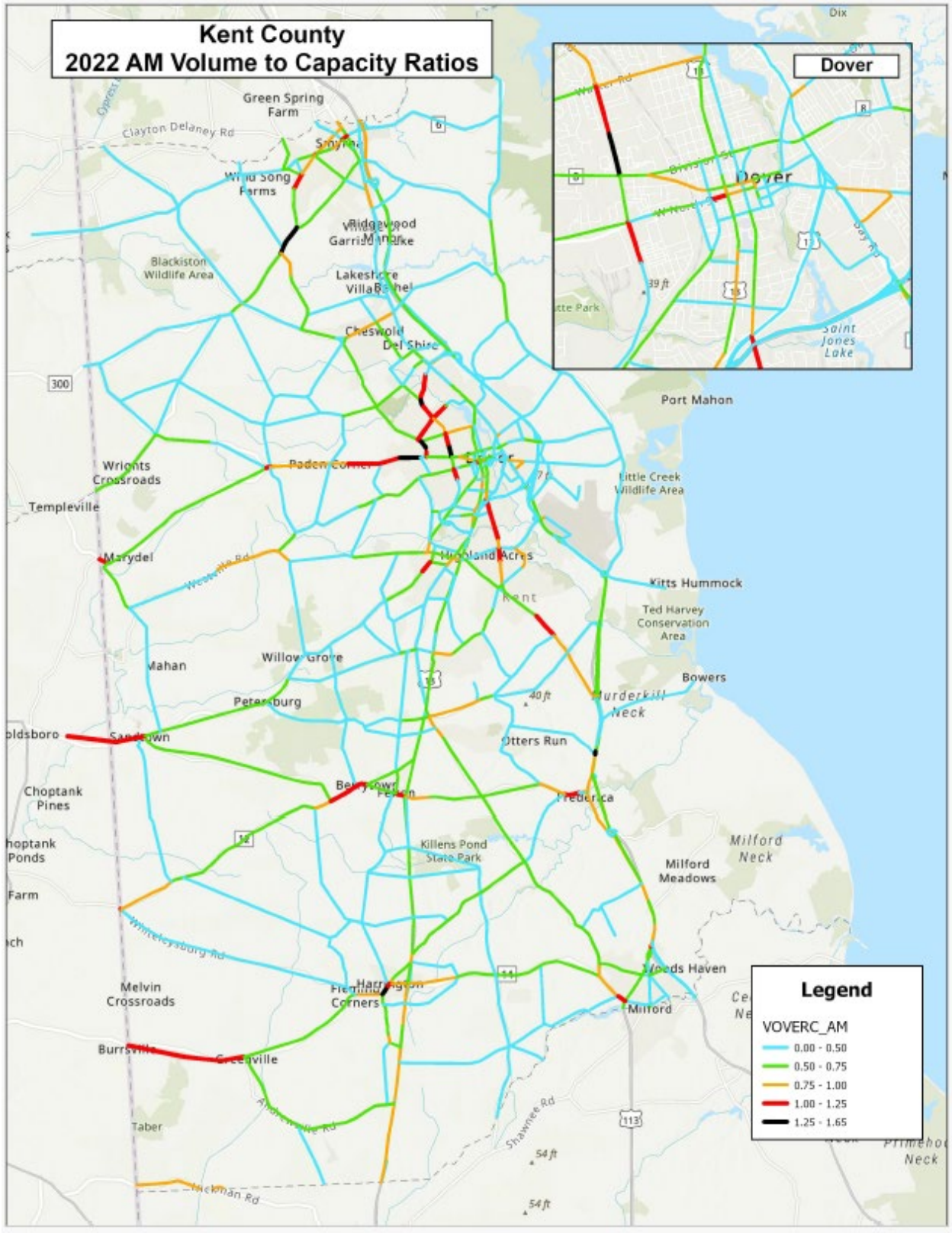
Miles
Kent County Growth Zone

APPENDIX B

TRAVEL DEMAND MODEL MAP SERIES

Contents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Dover
Legend
VOVERC_AM
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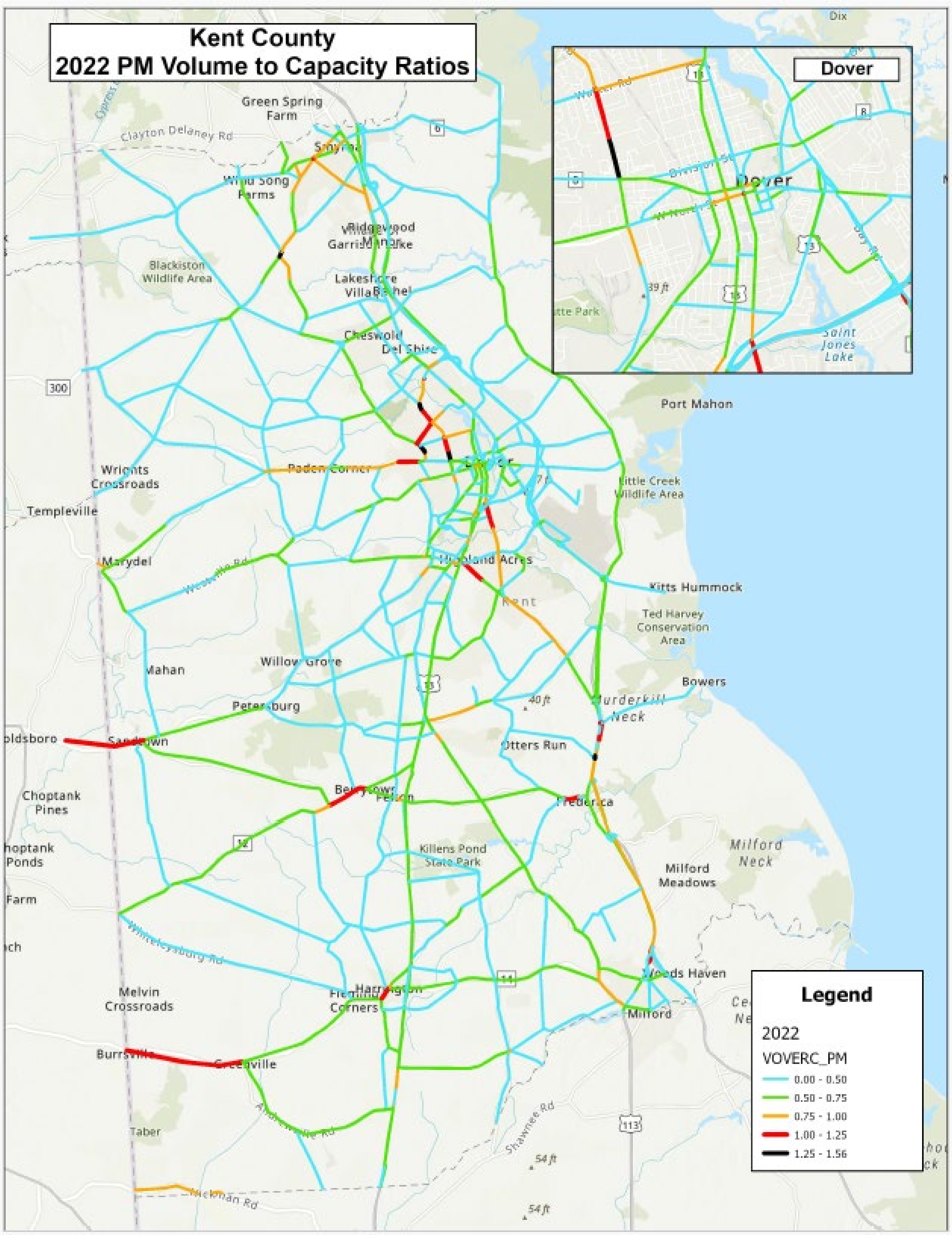
0.50 - 0.75
0.75 - 1.00
1.00 - 1.25
1.25 - 1.65
Green Spring Farm
Clayton Delaney Rd
Wild Song Farms
Blackiston Wildlife Area
Cheswold
300
Port Mahon
Wrights Crossroads
Templeville
Marydel
Little Creek Wildlife Area
Kitts Hummock
Ted Harvey Conservation Area
Bowers
Murderkill Neck
Otters Run
Choptank Pines
Killens Pond State Park
Milford Neck
Milford Meadows
Melvin Crossroads
Harrington Corners
Milford
Burrsville
Greenville
Taber
Shawnee Rd
Hickman Rd
Saint Jones Lake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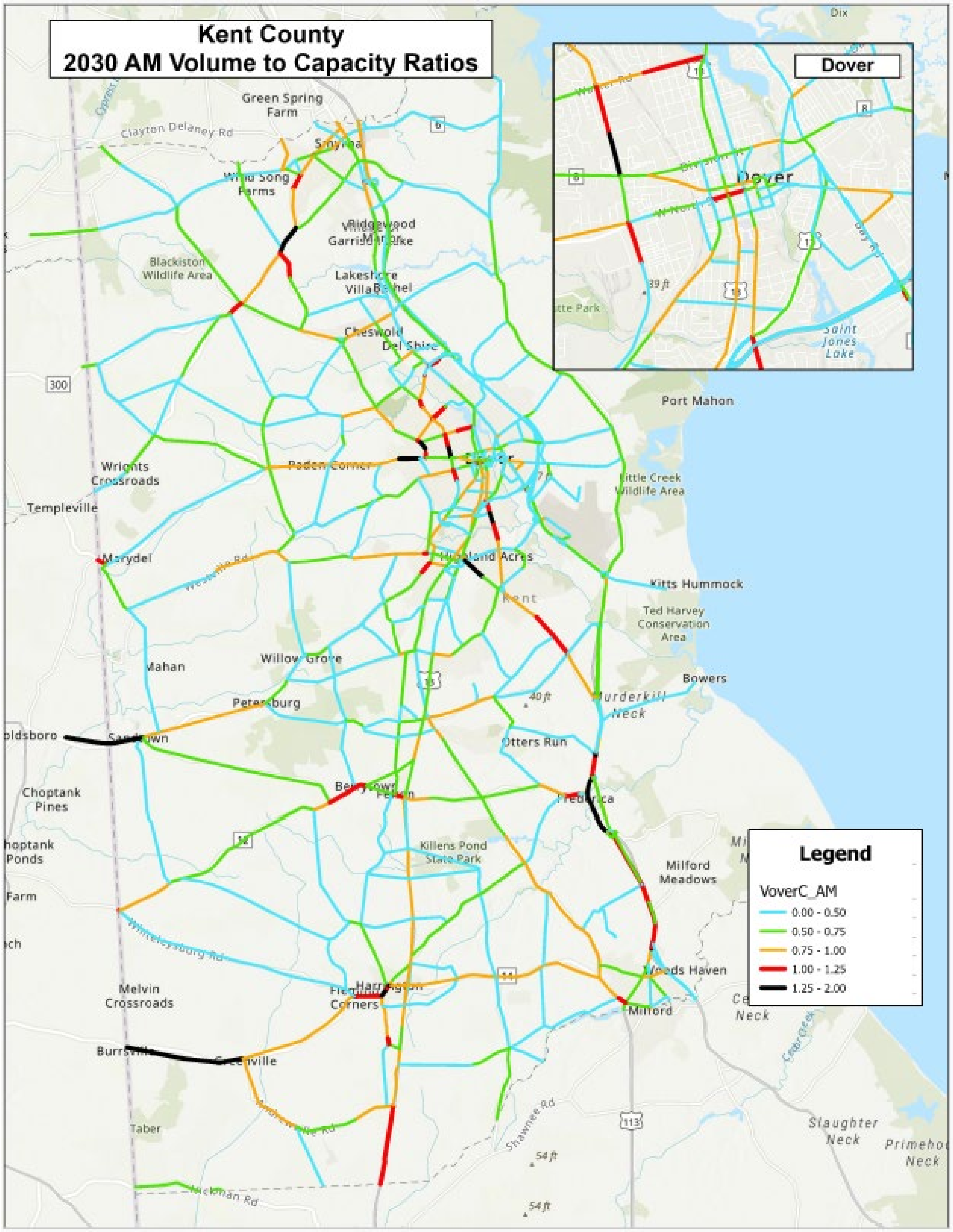
2022 PM Volume to Capacity Ratios
Dover
Legend
2022
VOVERC_PM
0.00 - 0.50
0.50 - 0.75
0.75 - 1.00
1.00 - 1.25
1.25 - 1.56
Green Spring Farm
Clayton Delaney Rd
Smyrna
Wind Song Farms
Blackiston Wildlife Area
Lakeshore Village
Cheswold
Del Shire
Port Mahon
Paden Corner
Wrights Crossroads
Templeville
Little Creek Wildlife Area
Marydel
Highland Acres
Kitts Hummock
Ted Harvey Conservation Area
Willow Grove
Mahan
Bowers
Petersburg
Murderkill Neck
Otters Run
Sandtown
Choptank Pines
Felton
Frederica
Killens Pond State Park
Milford Neck
Milford Meadows
Whiteleysburg Rd
Melvin Crossroads
Harrington
Woods Haven
Milford
Burrsville
Greenville
Taber
Shawnee Rd
Dix
Saint Jones Lake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0.75 - 1.00
1.00 - 1.25
1.25 - 2.00
Green Spring Farm
Clayton Delaney Rd
Blackiston Wildlife Area
Cheswold
Port Mahon
Wrights Crossroads
Templeville
Little Creek Wildlife Area
Marydel
Kitts Hummock
Ted Harvey Conservation Area
Mahan
Willow Grove
Bowers
Petersburg
Otters Run
Choptank Pines
Killens Pond State Park
Milford Meadows
Melvin Crossroads
Woods Haven
Milford
Taber
Slaughter Neck
Shawnee Rd


Kent County
2030 PM Volume to Capacity Ratios
Dover
Legend
2030
VoverC_PM
0.00 - 0.50
0.50 - 0.75
0.75 - 1.00
1.00 - 1.25
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Green Spring Farm
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Smyrna
Blackiston Wildlife Area
Cheswold
Port Mahon
Wrights Crossroads
Templeville
Paden Corner
Little Creek Wildlife Area
Marydel
Highland Acres
Kitts Hummock
Ted Harvey Conservation Area
Kent
Mahan
Willow Grove
Bowers
Petersburg
Otters Run
Choptank Pines
Frederica
Killens Pond State Park
Milford Meadows
Whiteleysburg Rd
Melvin Crossroads
Harrington
Corners
Woods Haven
Milford
Greenville
Taber
Shawnee Rd
Slaughter Neck
Primehook Neck
Saint Jones Lake
Dix


Kent County
2040 AM Volume to Capacity Ratios
Dover
Legend
VoverC_AM
0.00 - 0.50
0.50 - 0.75
0.75 - 1.00
1.00 - 1.25
1.25 - 2.30
Green Spring Farm
Clayton Delaney Rd
Blackiston Wildlife Area
Cheswold
Port Mahon
Wrights Crossroads
Templeville
Marydel
Little Creek Wildlife Area
Kitts Hummock
Ted Harvey Conservation Area
Willow Grove
Bowers
Petersburg
Otters Run
Choptank Pines
Killens Pond State Park
Milford Meadows
Melvin Crossroads
Milford
Taber
Slaughter Neck
Saint Jones Lake


Kent County
2040 PM Volume to Capacity Ratios
Dover
Legend
2040
VoverC_PM
0.00 - 0.50
0.50 - 0.75
0.75 - 1.00
1.00 - 1.25
1.25 - 1.87
Green Spring Farm
Clayton Delaney Rd
Blackiston Wildlife Area
Lakeshore Village
Cheswold
Port Mahon
Wrights Crossroads
Templeville
Paden Corner
Little Creek Wildlife Area
Marydel
Kitts Hummock
Ted Harvey Conservation Area
Mahan
Willow Grove
Bowers
Petersburg
Otters Run
Choptank Pines
Killens Pond State Park
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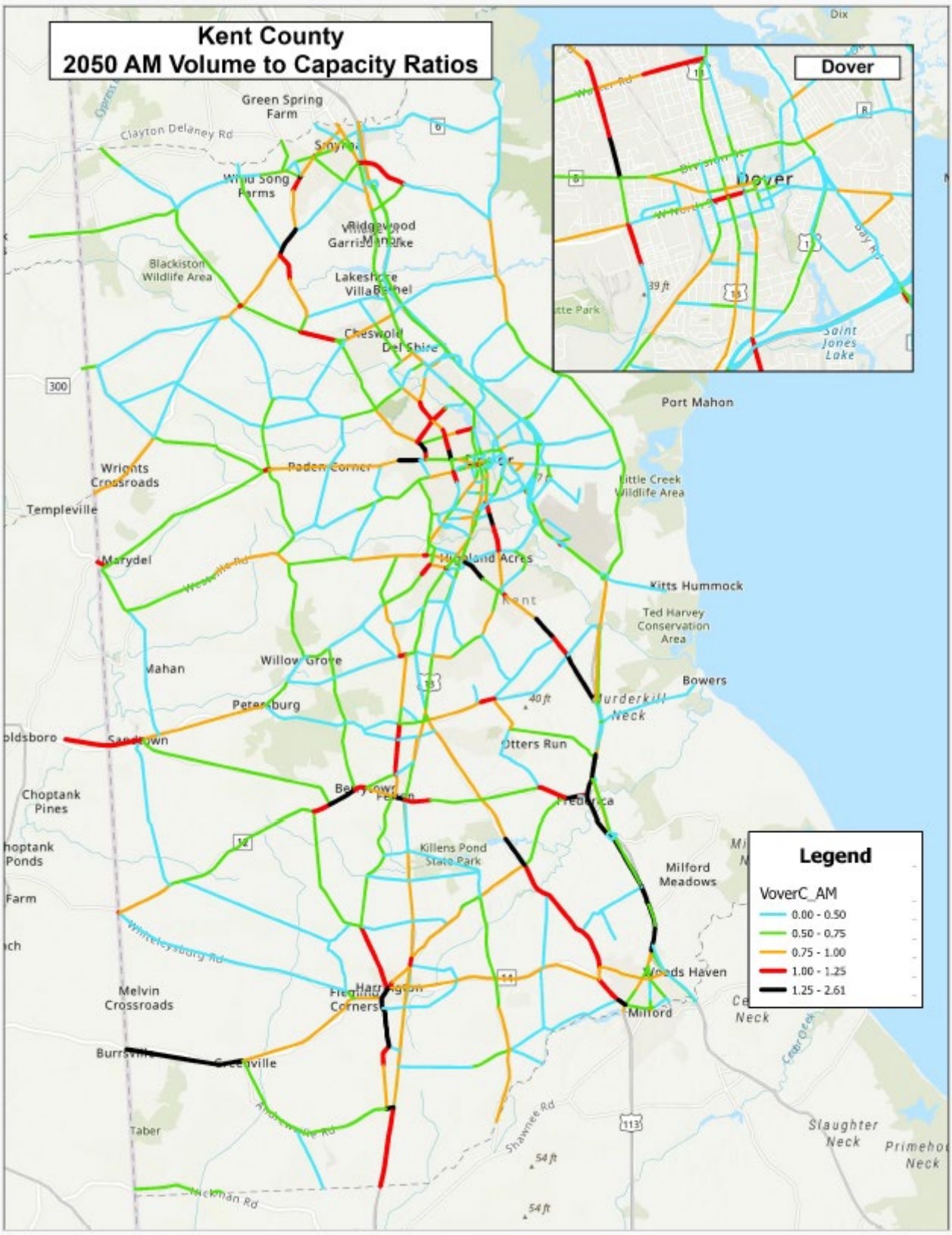
Milford
Burrsville
Taber
Slaughter Neck
Whiteleysburg Rd
Shawnee Rd
Saint Jones Lake
Dix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0.75 - 1.00
1.00 - 1.25
1.25 - 2.61
Green Spring Farm
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Willu Song Farms
Ridgewood Manor
Garrisville
Blackiston Wildlife Area
Lakeshore Villa
Bethel
Cheswold
Del Shire
300
Port Mahon
Wrights Crossroads
Templeville
Paden Corner
Little Creek Wildlife Area
Marydel
Westville Rd
Highland Acres
Kitts Hummock
Kent
Ted Harvey Conservation Area
Willow Grove
Bowers
Peterburg
Murderkill Neck
Sandtown
Otters Run
Choptank Pines
Killens Pond State Park
Milford Meadows
Farm
Whiteleysburg Rd
Woods Haven
Melvin Crossroads
Corners
Milford
Neck
Burrsville
Greenville
Taber
Andrew Neck Rd
Shawnee Rd
Slaughter Neck
Primehook Neck
Hickman Rd
54 ft
40 ft
39 ft
Saint Jones Lake

Kent County
2050 PM Volume to Capacity Ratios
Dover
Legend
2050_0823204
VoverC_PM
0.00 - 0.50
0.50 - 0.75
0.75 - 1.00
1.00 - 1.25
1.25 - 1.93
Green Spring Farm
Smyrna
Cheswold
Paden Corner
Wrights Crossroads
Templeville
Marydel
Willow Grove
Petersburg
Sandtown
Choptank Pines
Killens Pond State Park
Harrington
Felton
Frederica
Milford
Woods Haven
Milford Meadows
Melvin Crossroads
Burrsville
Greenville
Port Mahon
Little Creek Wildlife Area
Kitts Hummock
Ted Harvey Conservation Area
Bowers
Murderkill Neck
Otters Run
Highland Acres
Blackiston Wildlife Area
Slaughter Neck

Roads & Road Segments that DO NOT Appear on Travel Demand Model Map Runs

TAZ #	Roadway Name	DelDOT Maintenance #	Road Classification
731	Duck Creek Parkway	134	Major Collector
718,719	S Main Street (Smyrna)	65	Major Collector
719	W South Street (Smyrna)	136	Major Collector
721	S Carter Road	137	Major Collector
721,723,728	Brenford Road	42	Major Collector
745	Denny Street (Leipsic)	12	Major Collector
762	Fork Branch Road	153	Major Collector
765	Crawford Carroll Boulevard	?	Major Collector
747	Persimmon Tree Road	337	Major Collector
785	Chestnut Grove Road	158	Major Collector
891	Barratt's Chapel Road	371	Major Collector
844	Westville Road	52,206	Major Collector
907	NE Front Street	22	Major Collector
739	Underwoods Corner Road	94	Minor Collector
728	Hilyard Road	147	Minor Collector
727	Moorton Road	92	Minor Collector
781,786	Central Church Road	155	Minor Collector
843,844	Mud Mill Road	207	Minor Collector
893	Andrews Lake Road	380,385	Minor Collector
701	Woodland Beach Road	9	Minor Collector
724	Messina Hill Road	102	Minor Collector
798	Bay Road (Dover)	7	Minor Arterial
955	Clark Street (SR 14) Harrington	?	Minor Arterial

Methodology: The above list is derived from a GIS analysis involving layering of TAZ Boundaries on top of the Functional Classification Map to locate Collector (and higher) road segments that do not form part of a TAZ Boundary. This approach was predicated on the notion indicated to Dover Kent MPO that only road segments forming part of a TAZ Boundary are reflected in the Travel Demand Model. This exercise revealed that some Collector (and higher order roads) Roads as well as some TAZ Boundary Roads are not reflected in the Travel Demand Modeling.

APPENDIX C

AIR QUALITY CONFORMITY ANALYSIS

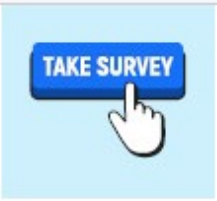
[To Be Developed]

APPENDIX D

PUBLIC ENGAGEMENT DOCUMENTATION

Contents

RESULTS FROM OUR SURVEY ONLINE



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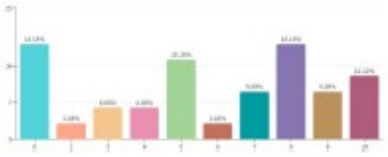

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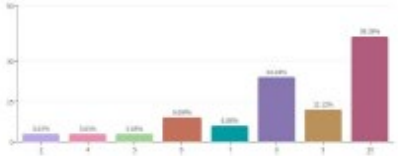

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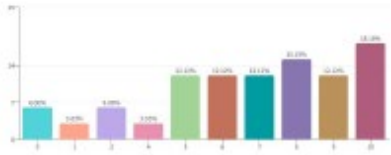

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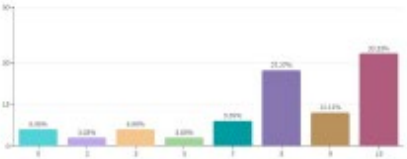
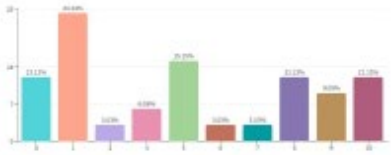


New Tech (electric vehicles, autonomous vehicles, hyperloops, etc...)



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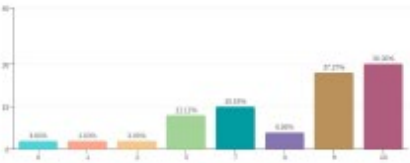
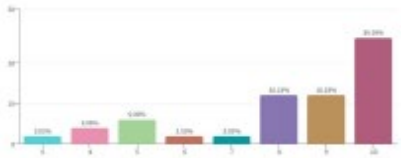


Air Quality



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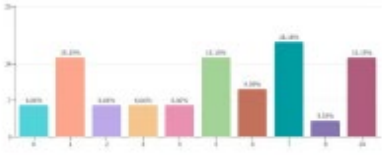
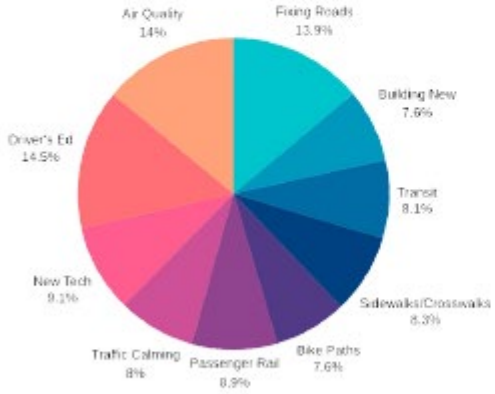


DOVER/KENT COUNTY MPO
METROPOLITAN PLANNING ORGANIZATION

MONEY GAME BY AGE

Under 18



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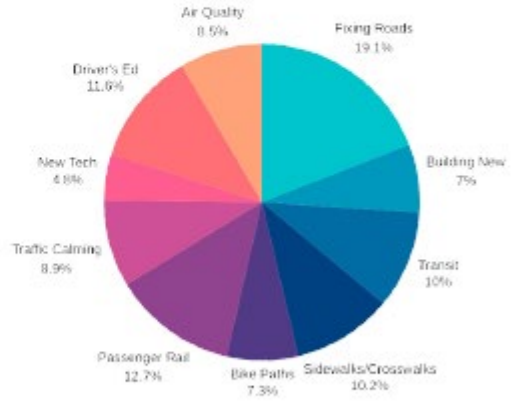

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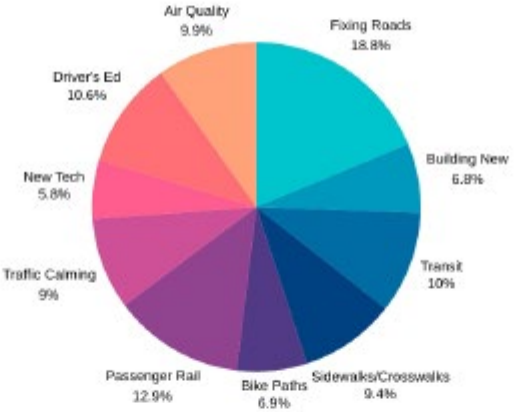

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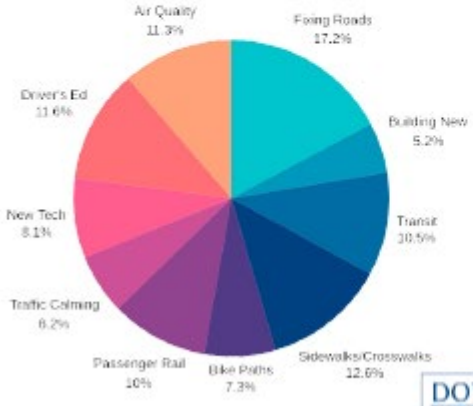

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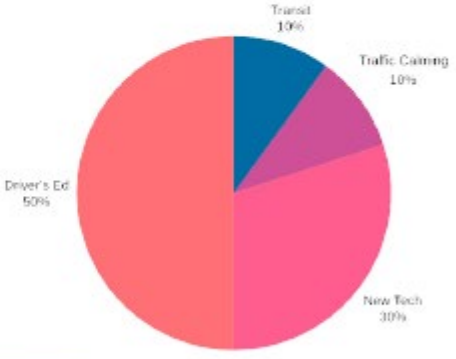
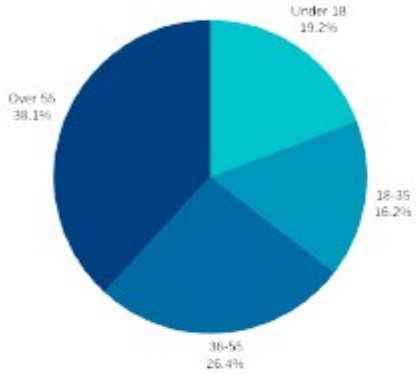


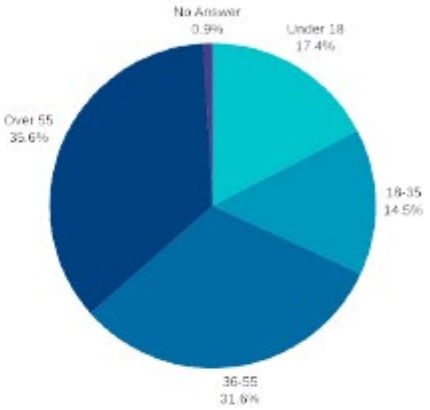
DOVER/KENT COUNTY MPO
METROPOLITAN PLANNING ORGANIZATION

MONEY GAME BY CATEGORY

Air Quality



Drivers Education



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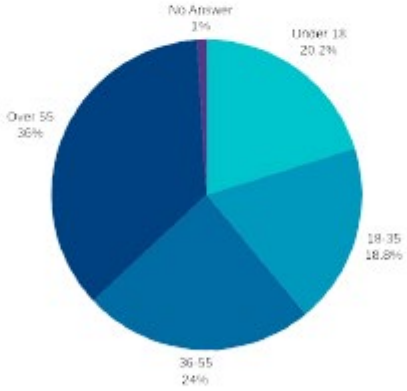

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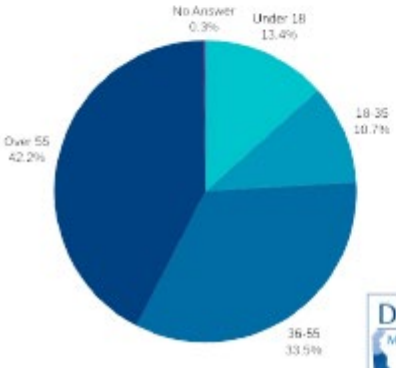

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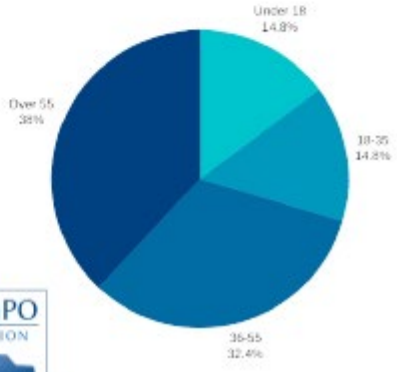
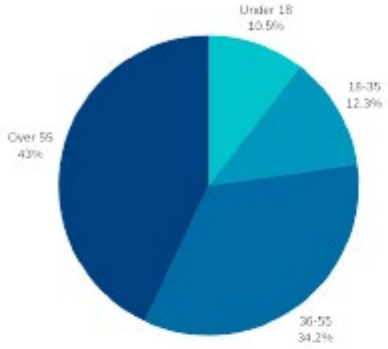


DOVER/KENT COUNTY MPO
METROPOLITAN PLANNING ORGANIZATION

MONEY GAME BY CATEGORY CONTINUED

Passenger Rail



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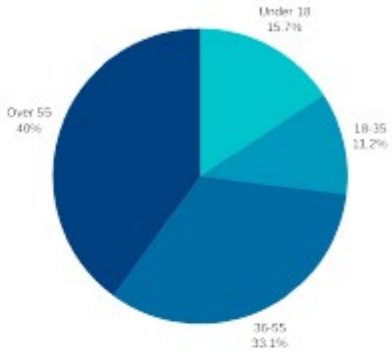

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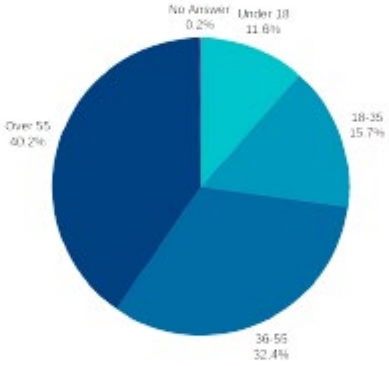

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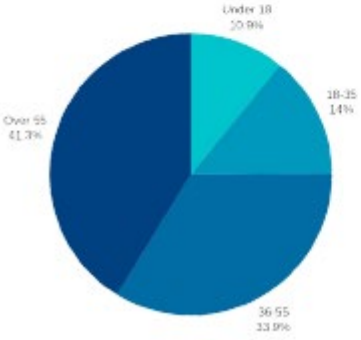

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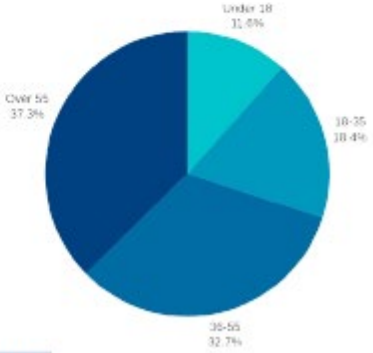


DOVER/KENT COUNTY MPO
METROPOLITAN PLANNING ORGANIZATION

Schedule for Money Game

Venue	Date
Redner's Camden	2/14/2024
Redner's Camden	2/14/2024
Redner's Milford	2/20/2024
Redner's Milford	2/20/2024
Smyrna Library	2/22/2024
Home & Garden Show CDCC (fairgrounds)	2/23/2024
Home & Garden Show CDCC (fairgrounds)	2/24/2024
Redner's West Dover	2/28/2024
Redner's West Dover	2/28/2024
Redner's North Dover	3/5/2024
Redner's North Dover	3/5/2024
Council Town Hall	3/7/2024
Smyrna Library	3/12/2024
Redner's Camden	3/13/2024
Redner's Camden	3/13/2024
Redner's West Dover	3/19/2024
Redner's West Dover	3/19/2024
Redner's Milford	3/21/2024
Redner's Milford	3/21/2024
Youth Leadership Solid Rock Community Center	3/23/2024
Milford Library	3/25/2024
Redner's North Dover	3/26/2024
Redner's North Dover	3/26/2024
Magnolia Youth Event	4/6/2024
Restore	4/9/2024
Over 55 Expo CDCC (Bally's)	4/11/2024
Delaware State University Student Event	4/13/2024
Smyrna High Career Fair	4/18/2024
Old Dover Days	5/9/2024

APPENDIX E

PROJECT LIST – FISCALLY CONSTRAINED PRIORITY PROJECTS

The following is a list of items to be included in the MTP project list. The list is sorted into short-range (0 – 5 years), mid-range (5 – 10 years), and long-range (10+ years) projects. It consists of capital projects (typically larger in scale and can include roadway improvements and bicycle and pedestrian pathways), as well as system maintenance projects (typically smaller in scale and can include improvements such as crosswalks and streetscaping). This current working draft version does not contain the attributes corresponding to each item (including location, project type, description, origin, sources, and estimated cost). For this additional information, please refer to later versions of this document.

Capital Projects (Including Corridor Studies)

Short-Term Projects (0 – 5 Years)
McKee Road/Saulsbury Road Corridor Improvements
Smyrna Clayton Blvd (DE 6) and Wheatleys Pond Road (DE 300) Intersection Improvements
New Burton Road Shared Use Path
North Main Street Smyrna, Glenwood Ave to Duck Creek Parkway
Bay Road Shared Use Paths
Garrison Oak Connector Road (SR 1 via White Oak Road)
Intersection of Rehoboth Boulevard, Walnut Street, and 10th Street
North Rehoboth Boulevard / North Walnut Street Shared Use Path
West Street, New Burton Road (Queen Street) to North Street
Glenwood Avenue Upgrade
Duck Creek Parkway (Bassett St. to Main St.)
Mifflin Road Improvements (North Street/Hazlettville Road to DE Rt 8)
Cheswold US13 Shared Use Path
Connection Between DSU Campuses
US 133 and Cluckey Drive Intersection Improvements
Cluckey Drive Vehicle Access
SR 300 Corridor (Study)
South State Street Corridor (Study)
College Road Corridor (Study)
SR 1 Corridor (Study)
SR 12 Corridor (Felton) (Study)
SR 14 Corridor (Study)
SR 15 (Canterbury Road) Corridor (Study)
Rising Sun Road (Study)
SR 8 from Mifflin Road to Dover High Drive (Study)

Frederica Road/SR 12 (Study)
Walker Road (Study)
North Street (Study)
US 13 Harrington/Farmington Corridor (Study)
Kent County School Walk Zone Studies
First and Final Mile Study for Kent County
Smyrna Commerce Street Connections Study
POW-MIA Parkway Intersection Safety Study
DART Bus Stop Improvements

Mid-Term Projects (5 – 10 Years)
US 13 at White Oak Road Intersection Improvements
SR1-Trap Shooters Road Interchange Improvements
Existing Horsepond Road Improvements - S Little Creek Road to Starlifter Avenue and Lafferty Lane
Irish Hill Road Upgrade (McGinnis Pond Road to Magnolia)
Irish Hill Road Upgrade (US 13 to Fox Chase Road)
Horsepond Road Extension - N Little Creek Road to S Little Creek Road
Starlifter Avenue Extension
Banning Street/Clarence Street Improvements
Canterbury Road Upgrade (DE Rt 12 to US 13)
Rabbit Chase Road Upgrade
Peachtree Run Road (Voshells Mill Road to Irish Hill Road)
Brenford Road (SR 13 to DE 42)
DE Rt 15 Widening (Moose Lodge Road & Dundee Road)
North Rehoboth Boulevard Left Turn Lane
Hazlettville Road Left Turn Lane
Energy Lane Pedestrian Improvements
Connection Between Energy Lane and Village at Blue Hen
Blue Hen Boulevard and Levy Court Lane Pedestrian Improvements
Mallard Pond Park Trail Extension
Traffic Signal/Crosswalks at Intersection of Hazlettville Road, Cannon Mill Drive, and Brittingham Drive
Camden to Dover Trail
Cheswold Improved Right Turn Lane
Intersection of US13 and Pinewood Acres Ave
The Green to Capital City Trail
Bowers Beach Road Bicycle and Pedestrian Improvements
Dover US13 Sidewalk Connections
Smyrna to Bombay Hook Connection
Buccaneer Loop
Benjamin Banneker Bypass Loop

Delaware Veterans Loop
Harrington Multimodal Freight Terminal and Rail Connection
Diamond State Line Development

Long-Term Projects (10+ Years)
SR 300 Corridor (Project Engineering)
South State Street Corridor (Project Engineering)
College Road Corridor (Project Engineering)
SR 1 Corridor (Project Engineering)
SR 12 Corridor (Felton) (Project Engineering)
SR 14 Corridor (Project Engineering)
SR 15 (Canterbury Road) Corridor (Project Engineering)
Rising Sun Road (Project Engineering)
SR 8 from Mifflin Road to Dover High Drive (Project Engineering)
Frederica Road/SR 12 (Project Engineering)
Walker Road (Project Engineering)
North Street (Project Engineering)
US 13 Harrington/Farmington Corridor (Project Engineering)

System Maintenance Projects

Project Name
Smyrna Bus Stop Improvements
Smyrna School Link
Cheswold Main Street Pedestrian Crossings
Cheswold US13 Streetscaping
Harrington Street Lighting
Rose Valley School Road Resurfacing
Wyoming Street Lighting
Little Creek Main Street Pedestrian Crossings
Connection between Bay Road and St. Jones River Greenway Trail
Pine Cabin Road Improvements
Bowers Streetscaping and Recreational Improvements
Forrest Ave Sidewalk and Crosswalk to Dover High Drive
Dover High Drive Crossing at Entrance to Leander Lakes
Dover High Drive Intersection Signal Conversion
Mifflin Road Crosswalk
Crosswalks in Village of Westover and Cannon Mills Neighborhoods
Loockerman Plaza Sidewalk and Crosswalk
Camden Bus Stop Improvements
Crosswalk at Rehoboth Boulevard / Walnut Street / 10th Street

Crosswalk at Rehoboth Boulevard and Washington Street
Crosswalk at Rehoboth Boulevard and Front Street
North Rehoboth Boulevard Streetscaping

APPENDIX F

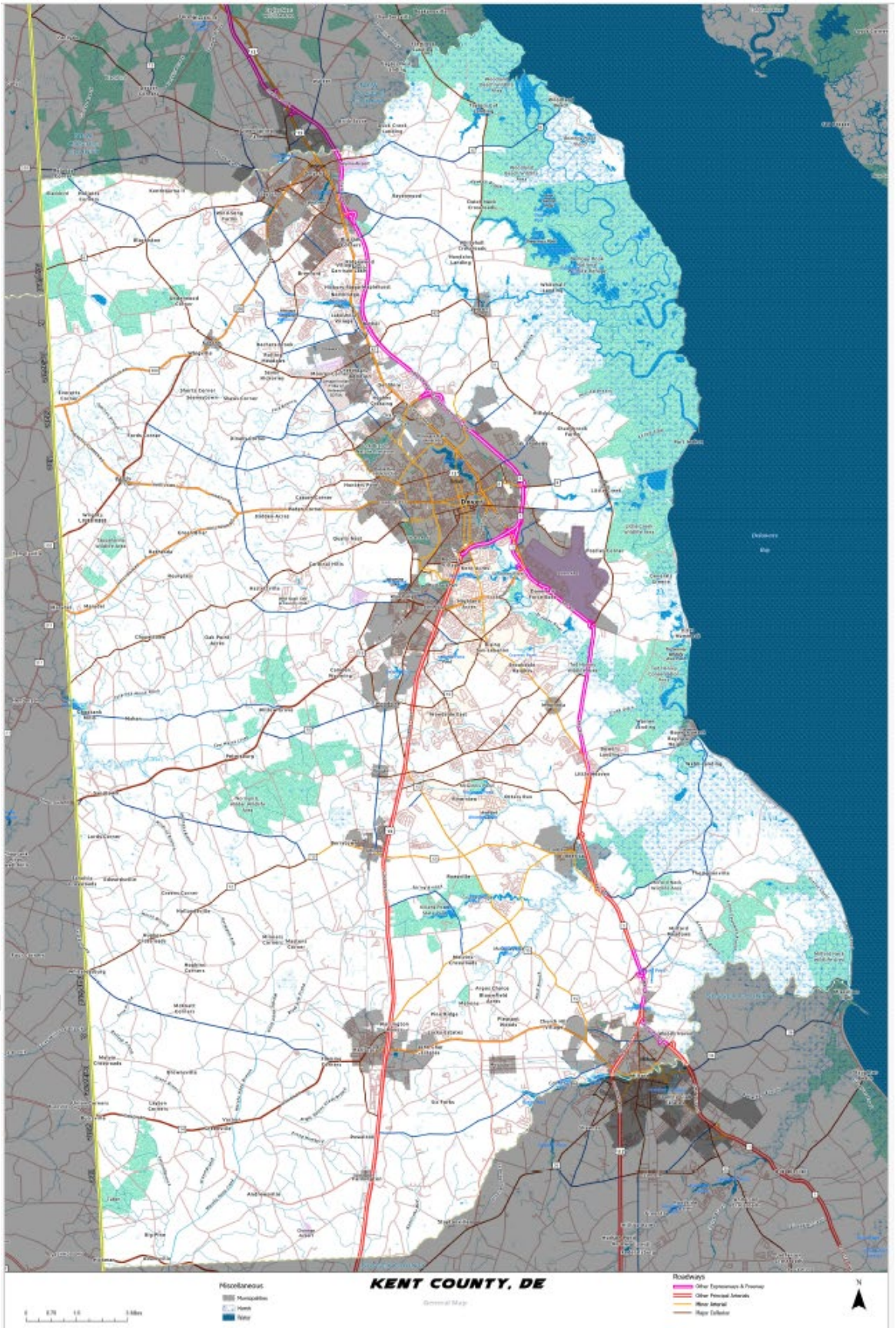
PROJECT LIST – ASPIRATIONAL PROJECTS

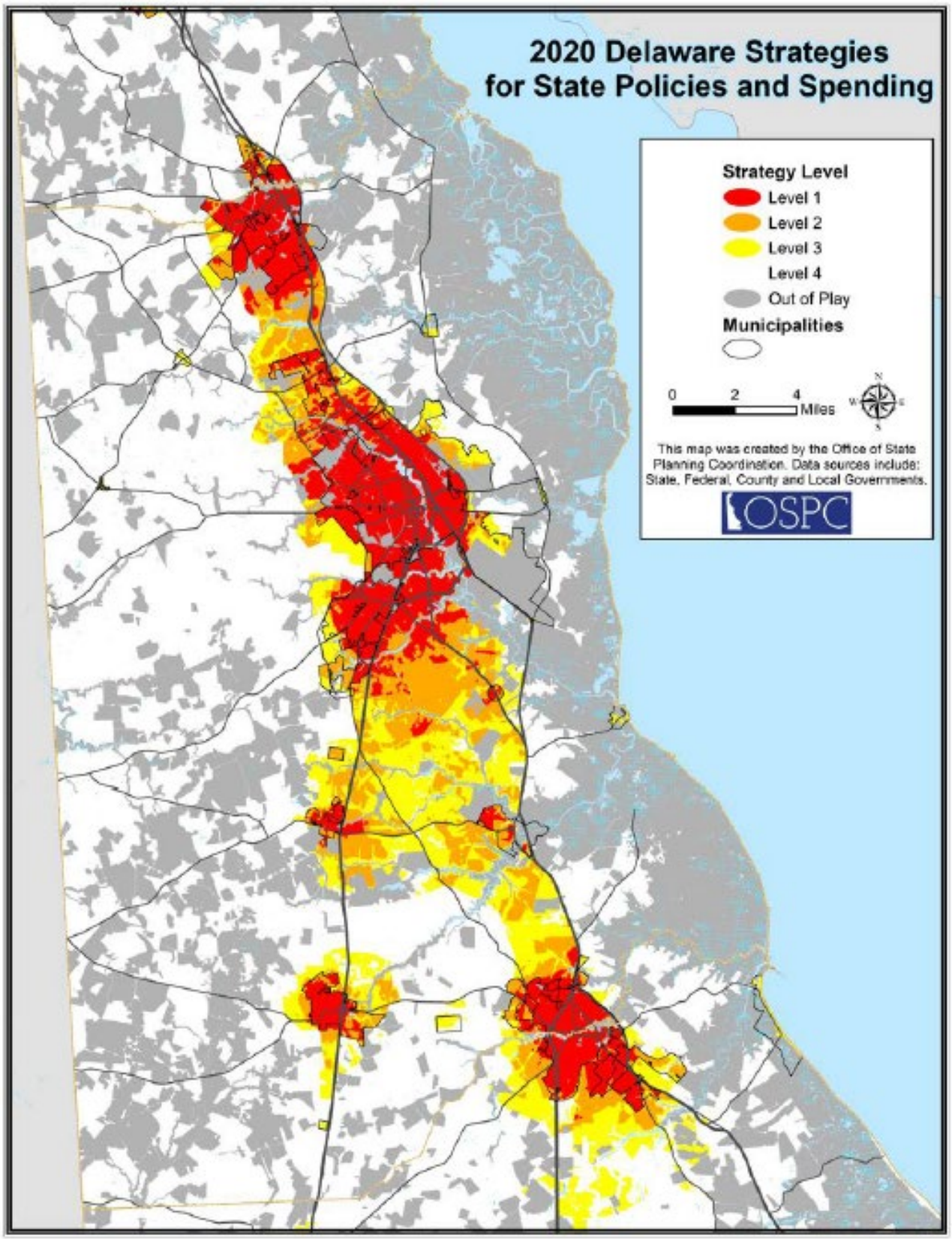
[To Be Developed]

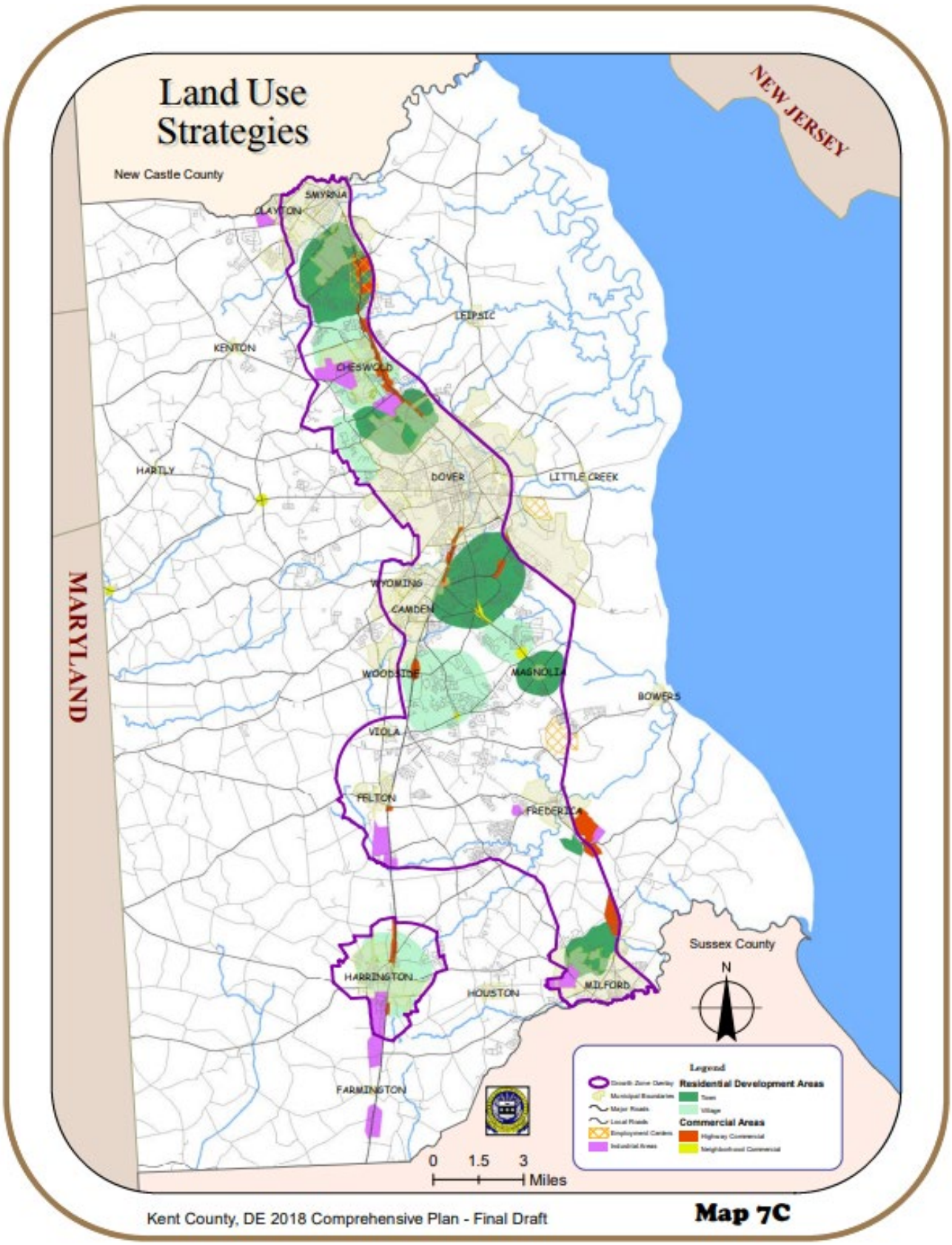
APPENDIX G

ADDITIONAL PROJECT RESOURCE MAPS

Contents

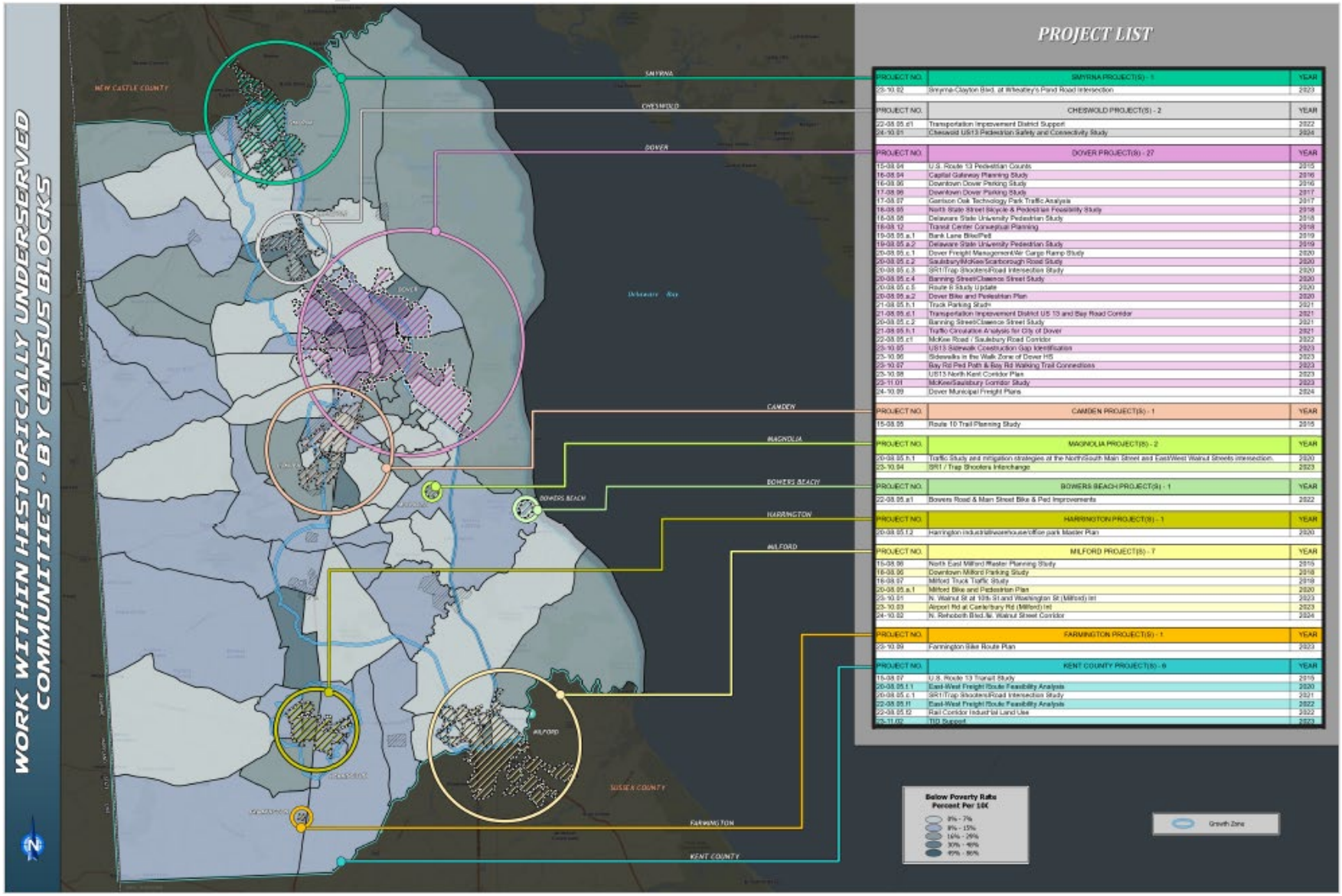

KENT COUNTY, DE
Miscellaneous
Roadways


2020 Delaware Strategies
for State Policies and Spending
Strategy Level
Level 1
Level 2
Level 3
Level 4
Out of Play
Municipalities
0
2
4
Miles
N
W
E
S
This map was created by the Office of State Planning Coordination. Data sources include: State, Federal, County and Local Governments.
OSPC



Kent County, DE 2018 Comprehensive Plan - Final Draft

Map 7C



PROJECT LIST

PROJECT NO.	SMYRNA PROJECT(S) - 1	YEAR
23-10.02	Smyrna-Clayton Blvd. at Wheatley's Pond Road Intersection	2023

PROJECT NO.	CHESWOLD PROJECT(S) - 2	YEAR
22-08.05.d1	Transportation Improvement District Support	2022
24-10.01	Cheswold US13 Pedestrian Safety and Connectivity Study	2024

PROJECT NO.	DOVER PROJECT(S) - 27	YEAR
15-08.04	U.S. Route 13 Pedestrian Counts	2015
16-08.04	Capital Gateway Planning Study	2016
16-08.06	Downtown Dover Parking Study	2016
17-08.06	Downtown Dover Parking Study	2017
17-08.07	Garrison Oak Technology Park Traffic Analysis	2017
18-08.05	North State Street Bicycle & Pedestrian Feasibility Study	2018
18-08.08	Delaware State University Pedestrian Study	2018
18-08.12	Transit Center Conceptual Planning	2018
19-08.05.a.1	Bank Lane Bike/Ped	2019
19-08.05.a.2	Delaware State University Pedestrian Study	2019
20-08.05.c.1	Dover Freight Management/Air Cargo Ramp Study	2020
20-08.05.c.2	Saulsbury/McKee/Scarborough Road Study	2020
20-08.05.c.3	SR1/Trap Shooters/Road Intersection Study	2020
20-08.05.c.4	Banning Street/Clarence Street Study	2020
20-08.05.c.5	Route 9 Study Update	2020
20-08.05.a.2	Dover Bike and Pedestrian Plan	2020
21-08.05.h.1	Truck Parking Study	2021
21-08.05.c.1	Transportation Improvement District US 13 and Bay Road Corridor	2021
20-08.05.c.2	Banning Street/Clarence Street Study	2021
21-08.05.h.1	Traffic Circulation Analysis for City of Dover	2021
22-08.05.c1	McKee Road / Saulsbury Road Corridor	2022
23-10.05	US13 Sidewalk Construction Gap Identification	2023
23-10.06	Sidewalks in the Walk Zone of Dover HS	2023
23-10.07	Bay Rd Ped Path & Bay Rd Walking Trail Connections	2023
23-10.08	US13 North Kent Corridor Plan	2023
23-11.01	McKee/Saulsbury Corridor Study	2023
24-10.09	Dover Municipal Freight Plans	2024

PROJECT NO.	CAMDEN PROJECT(S) - 1	YEAR
15-08.05	Route 10 Trail Planning Study	2015

PROJECT NO.	MAGNOLIA PROJECT(S) - 2	YEAR
20-08.05.h.1	Traffic Study and mitigation strategies at the North/South Main Street and East/West Walnut Streets intersection.	2020
23-10.04	SR1 / Trap Shooters Interchange	2023

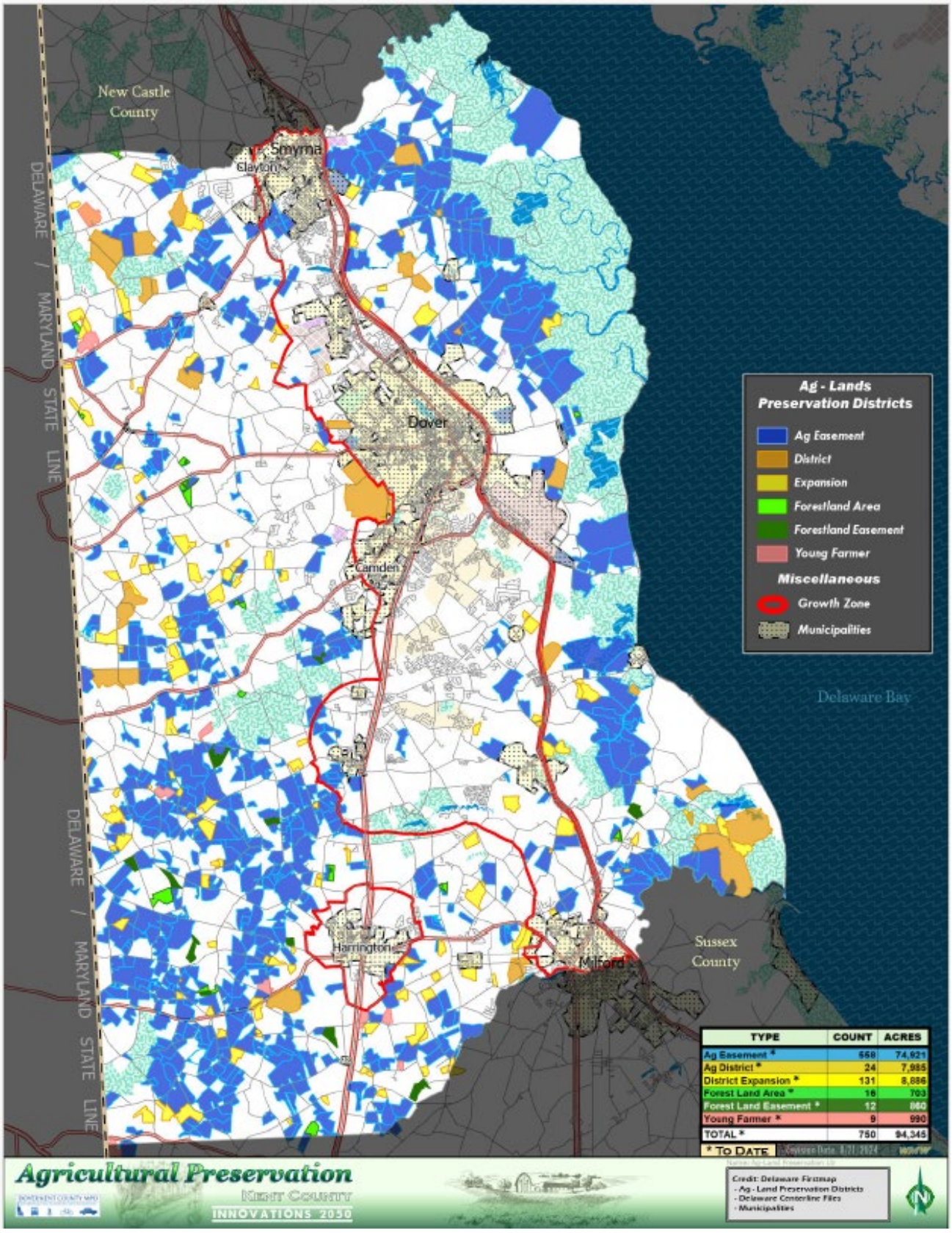
PROJECT NO.	BOWERS BEACH PROJECT(S) - 1	YEAR
22-08.05.a1	Bowers Road & Main Street Bike & Ped Improvements	2022

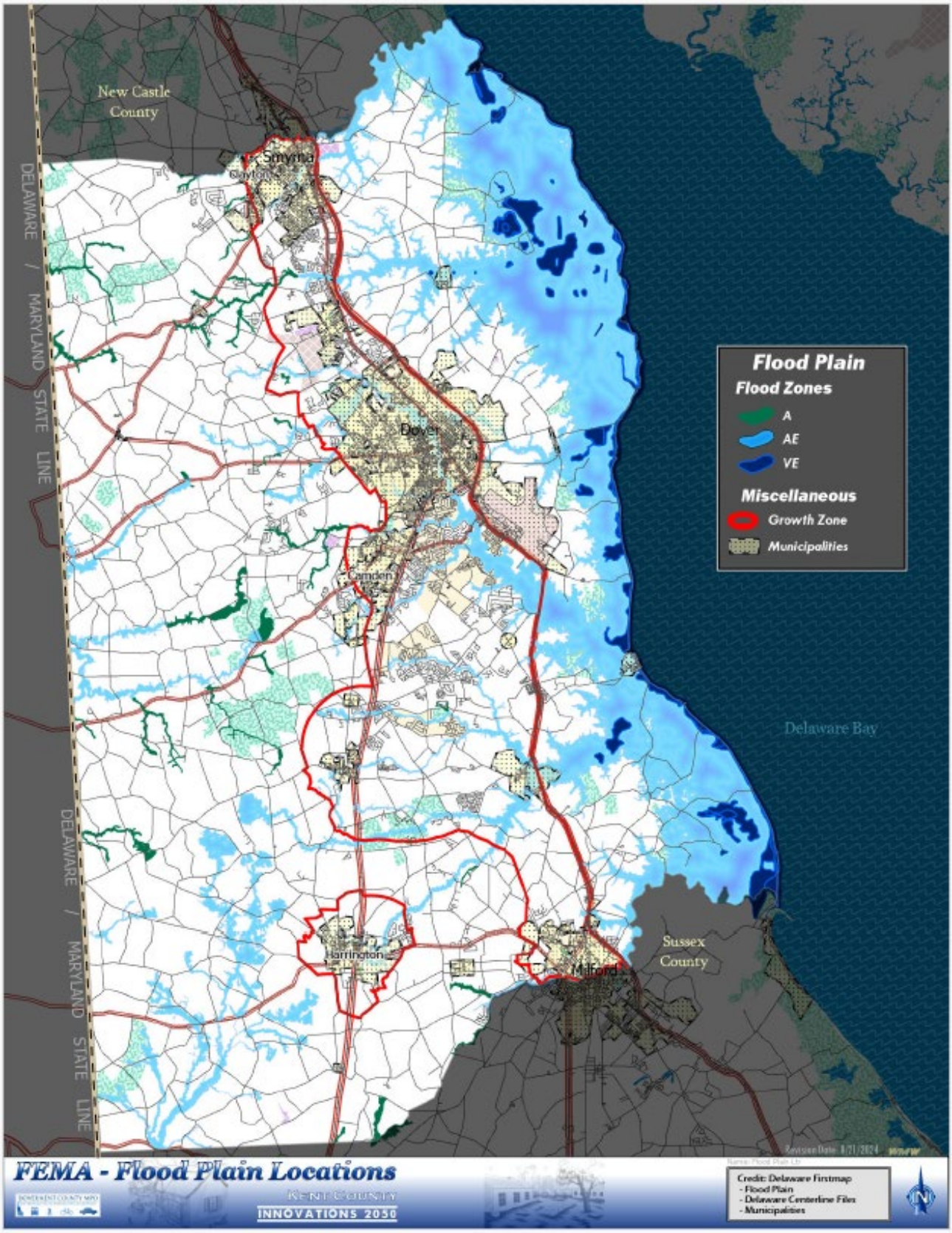
PROJECT NO.	HARRINGTON PROJECT(S) - 1	YEAR
20-08.05.f.2	Harrington industrial/warehouse/office park Master Plan	2020

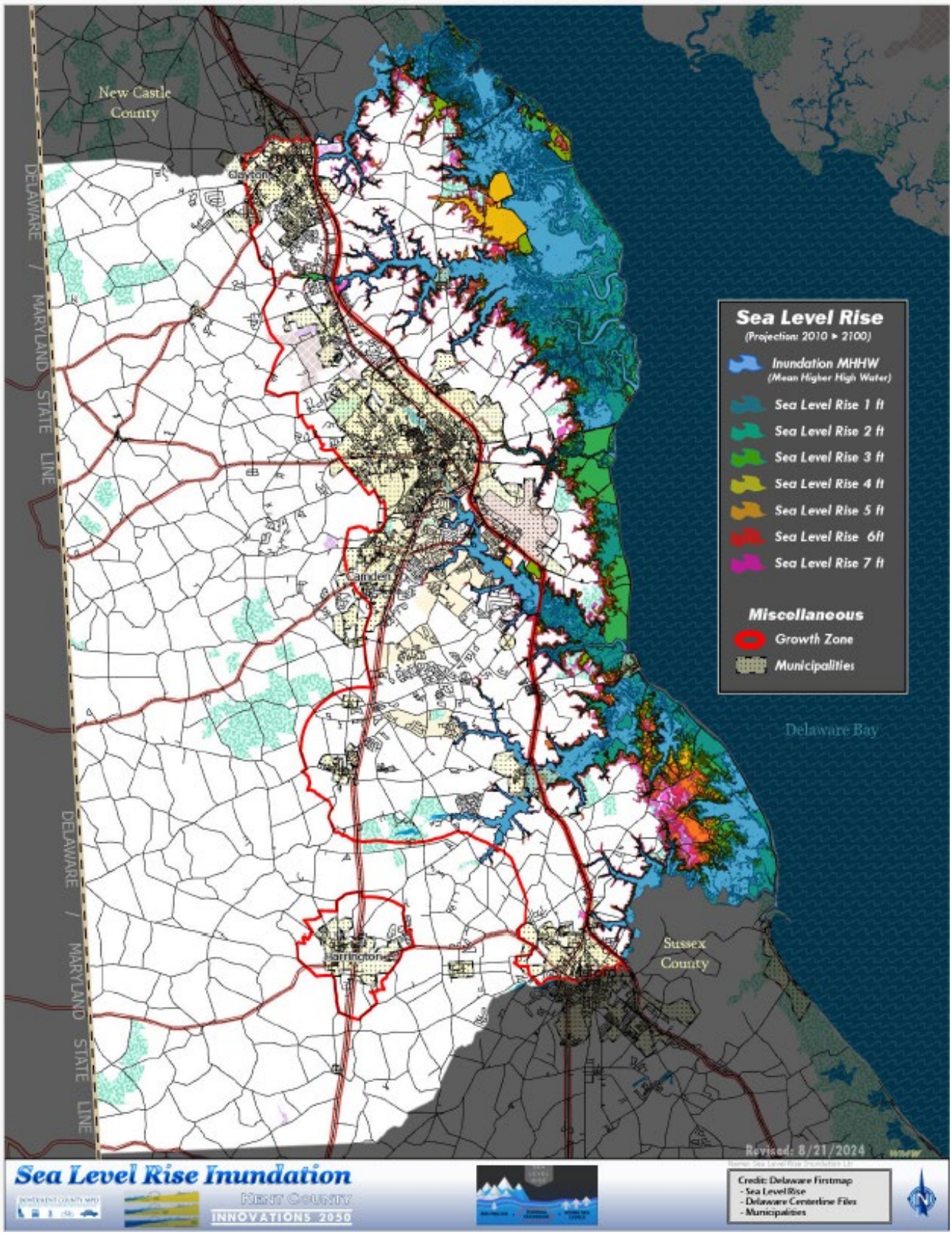
PROJECT NO.	MILFORD PROJECT(S) - 7	YEAR
15-08.06	North East Milford Master Planning Study	2015
16-08.06	Downtown Milford Parking Study	2016
16-08.07	Milford Truck Traffic Study	2016
20-08.05.a.1	Milford Bike and Pedestrian Plan	2020
23-10.01	N. Walnut St at 10th St and Washington St (Milford) Int	2023
23-10.03	Airport Rd at Canterbury Rd (Milford) Int	2023
24-10.02	N. Rehoboth Blvd./N. Walnut Street Corridor	2024

PROJECT NO.	FARMINGTON PROJECT(S) - 1	YEAR
23-10.09	Farmington Bike Route Plan	2023

PROJECT NO.	KENT COUNTY PROJECT(S) - 9	YEAR
15-08.07	U.S. Route 13 Transit Study	2015
20-08.05.f.1	East-West Freight Route Feasibility Analysis	2020
20-08.05.c.1	SR1/Trap Shooters/Road Intersection Study	2021
22-08.05.f1	East-West Freight Route Feasibility Analysis	2022
22-08.05.f2	Rail Corridor Industrial Land Use	2022
23-11.02	TID Support	2023


New Castle County
Smyrna
Clayton
Dover
Camden
Harrington
Milford
Sussex County
Delaware Bay
DELAWARE / MARYLAND STATE LINE
DELAWARE / MARYLAND STATE LINE
Ag - Lands Preservation Districts
Ag Easement
District
Expansion
Forestland Area
Forestland Easement
Young Farmer
Miscellaneous
Growth Zone
Municipalities
TYPE | COUNT | ACRES
Ag Easement * | 558 | 74,921
Ag District * | 24 | 7,985
District Expansion * | 131 | 8,886
Forest Land Area * | 16 | 703
Forest Land Easement * | 12 | 860
Young Farmer * | 9 | 990
TOTAL * | 750 | 94,345
* To Date
Agricultural Preservation
Kent County
INNOVATIONS 2050
Credit: Delaware Firstmap
- Ag - Land Preservation Districts
- Delaware Coastline Files
- Municipalities


New Castle County
Smyrna
Clayton
DELAWARE / MARYLAND STATE LINE
Dover
Camden
Harrington
Milford
Sussex County
Delaware Bay
Flood Plain
Flood Zones
A
AE
VE
Miscellaneous
Growth Zone
Municipalities
FEMA - Flood Plain Locations
KENT COUNTY
INNOVATIONS 2050
Credit: Delaware Firstmap
- Flood Plain
- Delaware Centerline Files
- Municipalities


New Castle County
Clayton
DELAWARE / MARYLAND STATE LINE
Camden
Harrington
Sussex County
Delaware Bay
Sea Level Rise
(Projection: 2010 ▸ 2100)
Inundation MHHW
(Mean Higher High Water)
Sea Level Rise 1 ft
Sea Level Rise 2 ft
Sea Level Rise 3 ft
Sea Level Rise 4 ft
Sea Level Rise 5 ft
Sea Level Rise 6ft
Sea Level Rise 7 ft
Miscellaneous
Growth Zone
Municipalities
Revised: 8/21/2024
Sea Level Rise Inundation
KENT COUNTY
INNOVATIONS 2050
Credit: Delaware Firstmap
- Sea Level Rise
- Delaware Centerline Files
- Municipalities

APPENDIX H

GLOSSARY

[To Be Developed]