



**STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION**

March 8, 2013

Mr. Dean Holden
Becker Morgan Group
309 S. Governors Avenue
Dover, DE 19901

RE: PLUS review – 2013-02-04; Delaware State Police Troop 3 Facility

Dear Mr. Holden:

Thank you for meeting with State agency planners on February 27, 2013 to discuss the proposed plans for the Delaware State Police Troop 3 facility to be located on South State Street, south of Locust Grove Road and north of Banning Road.

According to the information received, you are seeking site plan approval through Kent County for a 41,500 sq. ft. office and maintenance facility on 20 acres for the Delaware State Police.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. **The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as Kent County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

Strategies for State Policies and Spending

This project is located in Investment Level 2 according to the *State Strategies for Policies and Spending*. This site is also located in the Kent County Growth Zone. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas.

Code Requirements/Agency Permitting Requirements

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There are no known historic or cultural resources such as an archaeological site or National Register-listed property on this parcel. However, there is a known cemetery right next to the parcel, towards the east side, and a known archaeological site (K-600, 7K-D-024) northeast of the parcel. According to the Pomeroy and Beers Atlas of 1868 (a 19th-century historic map), it appears that there were some type of structures associated with a C. Frear, on this parcel, near the road, which is now South State Street (Alt. Rt. 113). With this in mind, it is very important that the developer be aware of the Delaware Unmarked Human Burials and Human Skeletal Remains Law, which is outlined in Chapter 54 of Title 7 of the Delaware Code.

Abandoned or unmarked family cemeteries are very common in the State of Delaware. They are usually in rural or open space areas, and sometimes near or within the boundary of an historic farm site. Even a marked cemetery can frequently have unmarked graves or burials outside of the known boundary line or limit. Disturbing unmarked graves or burials triggers the Delaware's Unmarked Human Burials and Human Skeletal Remains Law (Delaware Code Title 7, Chapter 54), and such remains or discoveries can result in substantial delays while the procedures required under this law are carried out. If there is a discovery of any unmarked graves, burials or a cemetery, it is very costly to have them archaeologically excavated and the burials moved. The Division of Historical & Cultural Affairs recommends that owners and/or developers have a qualified archaeological consultant investigate their project area, to the full extent, to see if there is any unmarked cemetery, graves, or burial sites. In the event of such a discovery, the Division of Historical & Cultural Affairs also recommends that the plans be re-drawn to leave the full extent of the cemeteries or any burials on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with the landowner association or development. If you need or would like to read more information in reference to unmarked human remains, burials or cemeteries, please go to the following websites for additional information: www.history.delaware.gov/preservation/umhr.shtml and www.history.delaware.gov/preservation/cemeteries.shtml.

- Prior to any demolition or ground-disturbing activities, the developer should consider hiring an archaeological consultant to examine the parcel for potential historic or cultural resources, such as a potential archaeological site, a cemetery or unmarked human remains. In addition, the developer should also include a barrier between the proposed development project and the known cemetery to protect it from the various construction activities that may adversely affect it, and sufficient landscaping to block the view of the development from the cemetery.
- If there is any federal involvement with the project, in the form of licenses, permits, or funds, the federal agency, often through its client, is responsible for complying with

Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider their project's effects on any known or potential cultural or historic resources. Owners and developers who may plan to apply for an Army Corps of Engineers permit or for federal funding, such as HUD or USDA grants, should be aware of the National Historic Preservation Act of 1966 (as amended). Regulations promulgated for Section 106 of this Act stipulate that no ground-disturbing or demolition activities should take place before the Corps or other involved federal agency determines the area of potential effect of the project undertaking. These stipulations are in place to allow for comment from the public, the Delaware State Historic Preservation Office, and the Advisory Council for Historic Preservation about the project's effects on historic properties. Furthermore, any preconstruction activities without adherence to these stipulations may jeopardize the issuance of any permit or funds. If you need further information or additional details pertaining to the Section 106 process and the Advisory Council's role, please review the Advisory Council's website at www.achp.gov.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- The proposed development does not meet DelDOT's volume-based criteria, found in Section 2.3.2 of the Standards and Regulations for Subdivision Streets and State Highway Access, for recommending that a TIS be required (400 vehicle trips per day or 50 vehicle trips per hour).
- The proposed development does meet DelDOT's volume-based criteria for possibly requiring a Traffic Operational Analysis (TOA, 200 vehicles per day) and we may require one as part of our review of the major subdivision or land development plan. TOAs are addressed in Section 3.9 of the Standards and Regulations.

Department of Natural Resources and Environmental Control – Contact Bahareh van Boekhold 735-3495

Wetlands

- State regulated wetlands **are** located **adjacent** to this property based on a review of the State wetland maps. Please refer to State Wetland map number 252. State regulated wetlands do not look to be directly impacted on this portion of the property based on a review of the State wetland maps. However, we recommend a Jurisdictional Determination to be sure wetlands are not physically impacted. Also, a review of County setback requirements regarding wetlands will be necessary.

State regulated wetlands are those wetlands identified on the State's official State Regulated Wetland Maps. Any activity in State regulated wetlands may require a permit from DNREC's Wetlands and Subaqueous Lands Section. The area indicated for the building does not look to directly impact the wetlands; however any construction in this area should remain clear of impacting the wetlands. Additional information about State

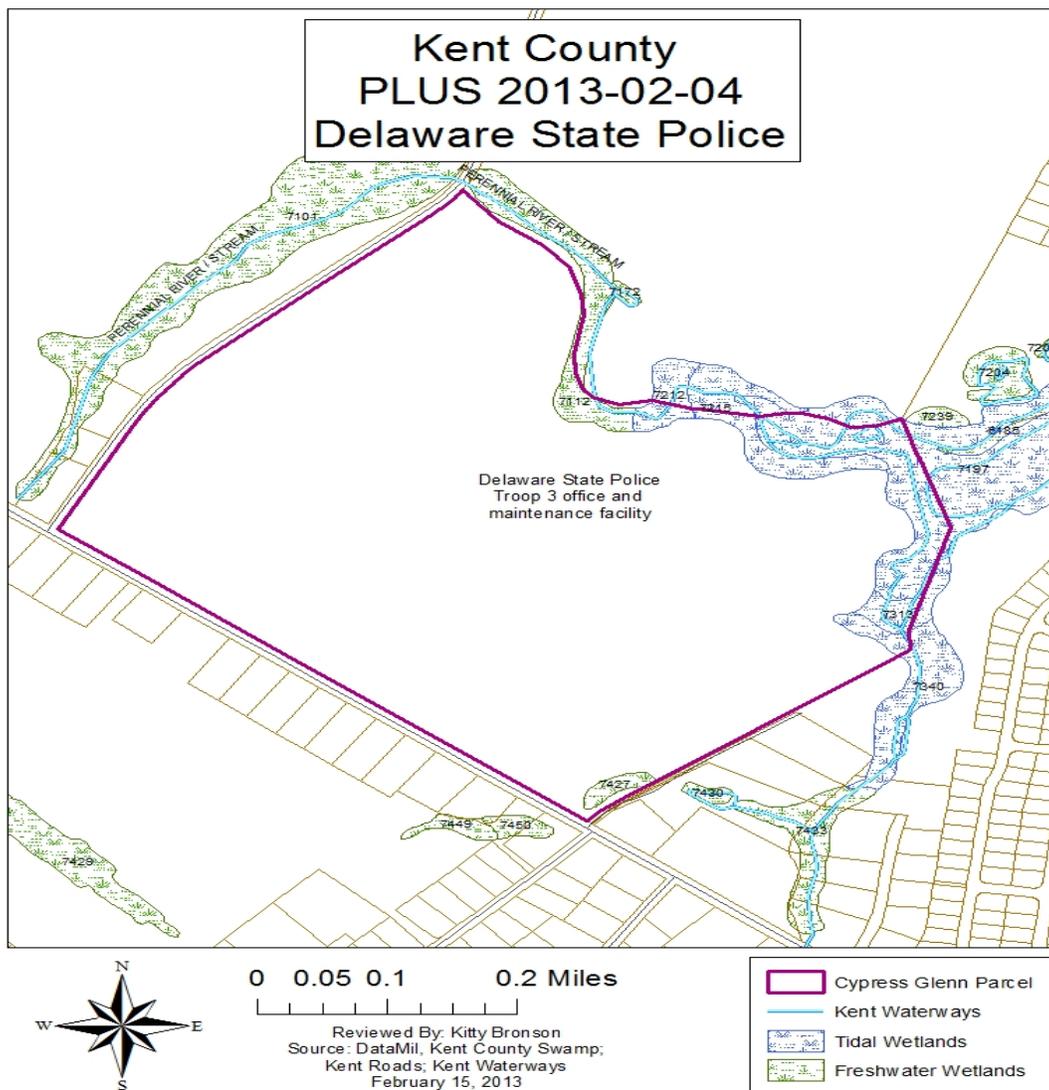
regulated wetlands is available by contacting the Wetlands and Subaqueous Lands Section at (302) 739-9943 or on line at

<http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx>.

- State regulated subaqueous lands are not likely to be directly impacted on this portion of the property based on a review State Wetland Mapping Project (SWMP) maps and Kent County Waterway maps. Review of the GIS information shows a perennial river or stream is located directly adjacent to this property. Again, a review of County setbacks from the waterways and wetlands will be necessary.

State subaqueous lands include all tidal waters (up to the mean high water line), most non-tidal rivers, streams, lakes, ponds, bays and inlets (up to the ordinary high water line), most perennial streams and ditches and many intermittent streams and ditches. State regulated subaqueous lands **are** likely to be located **adjacent to** this property based on a review of aerial photographs, SWMP maps, Soil Surveys and USGS topographic maps. An on-site inspection by a representative of the Wetlands and Subaqueous Lands Section or an environmental consultant is recommended to determine the limits of jurisdictional State subaqueous lands. Additional information about State regulated subaqueous lands is available by contacting the Wetlands and Subaqueous Lands Section at (302) 739-9943 or on line at

<http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx>.



TMDLs

- The project is located in the greater Delaware River and Bay drainage, specifically within the St. Jones River watershed. In this watershed, the State of Delaware has developed specific Total Maximum Daily Load (TMDL) pollutant reduction targets for nitrogen, phosphorus, and bacteria (under the auspices of Section 303(d) of the Clean Water Act). A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited water body” can assimilate and still meet State water quality standards (e.g., dissolved oxygen, nutrients, and bacteria; State of Delaware Surface Water Quality Standards, as amended July 11, 2004) to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. The

TMDL for the St. Jones River watershed calls for a 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 90 percent reduction in bacteria from baseline conditions.

- A nutrient management plan is required under the Delaware Nutrient Management law (3 Del. Chapter 22) for all persons or entities who apply nutrients to lands or areas of open space in excess of 10 acres. This project's open space may exceed this 10-acre threshold. Please contact the Delaware Nutrient Management Program at 739-4811 for further information concerning compliance requirements or view the following web link for additional information: <http://dda.delaware.gov/nutrients/index.shtml>

Water Supply

- The project information sheets state water will be provided to the project by Artesian Water Company via a public water system. Our records indicate that the project is located within the public water service area granted to Artesian Water Company under Certificate of Public Convenience and Necessity 04-CPCN-17.
- Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.
- All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Sediment and Stormwater Program

- A detailed Sediment and Stormwater Management Plan must be approved prior to any land disturbing activity taking place on the site. The project will be reviewed for compliance with the Delaware Sediment and Stormwater Regulations by the DNREC Sediment and Stormwater Program. A Notice of Intent (NOI) for Discharge of Stormwater from Construction Activities and the \$195 NOI fee must be submitted prior to DNREC prior to Sediment and Stormwater Plan approval. A pre application meeting is strongly recommended prior to putting a lot of effort into a design. Contact Elaine Webb, DNREC Sediment and Stormwater Program, at (302) 739-9921 or Elaine.Webb@state.de.us to schedule a pre application meeting.
- The first preferred practices for management of stormwater quality are practices that mimic the pre development hydrology and promote recharge, including Green

Technology BMPs. Other practices may only be considered for stormwater quality management when Green Technology BMPs have been ruled out for engineering reasons. The Sediment and Stormwater Regulations are currently undergoing a revision. It is anticipated that revised regulations will be effective in January 2014. Projects received for review after the effective date will be expected to comply with the revised regulations. (Title 7, Delaware Code, Chapter 40 and Delaware Regulations, Title 7, Administrative Code, 5101)

Hazardous Waste Sites

- If it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C. Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware Regulations Governing Hazardous Substance Cleanup shall be followed.

Delaware State Fire Marshall's Office – Contact Duane Fox 739-4394

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

- **Fire Protection Water Requirements:**
 - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
 - Where a water distribution system is proposed for business sites, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.
- **Fire Protection Features:**
 - All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
 - Buildings greater than 10,000 square feet are required to meet fire lane marking requirements
 - Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
 - Show Fire Lanes and Sign Detail as shown in DSFPR
- **Accessibility:**
 - All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are

- accessible to fire apparatus. Additionally, the access road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
 - The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
 - The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.
- **Gas Piping and System Information**
 - Provide type of fuel proposed, and show locations of bulk containers on plan.
 - **Required Notes:**
 - Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
 - Proposed Use
 - Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
 - Square footage of each structure (Total of all Floors)
 - National Fire Protection Association (NFPA) Construction Type
 - Maximum Height of Buildings (including number of stories)
 - Note indicating if building is to be sprinklered
 - Name of Water Provider
 - Letter from Water Provider approving the system layout
 - Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
 - Provide Road Names, even for County Roads

Recommendations/Additional Information

This section includes a list of site specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped (**but in no way required**) that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- DelDOT had a pre-submittal meeting with the applicant regarding their plan on January 8, 2013. They recommended that the applicant’s engineer maintain contact as necessary with Mr. Kevin Hickman, the DelDOT Subdivision Manager for this part of Kent County, as they proceed through the land development plan and entrance plan approval

process. Mr. Kevin Hickman can be reached at (302) 760-2461.

- DelDOT supports the Dover/Kent County Metropolitan Planning Organization's comments regarding the 2005 South State Street Land Use and Transportation Study and the desirability of having bicycle and pedestrian facilities on South State Street. A copy of the Executive Summary from the study is attached. More information on the study is available from Mr. Bruce Allen in our Statewide and Regional Planning Section. Mr. Allen can be reached at (302) 760-2135.

Department of Natural Resources and Environmental Control – Contact Bahareh van Boekhold
735-3495

Soils Assessment

- Based on soils survey mapping update, following soil mapping units were mapped on subject parcel (grouped on the basis of drainage class; see figure 1):
 - 1) Well drained – Downer (DnB & DnC), Ingleside (IeB), & Sassafras (SaA & SSD)
 - 2) Moderately well drained – Woodstown (WdA)
 - 3) Variable drainage – Ingleside-Hammonton-Fallsington complex (ImB); though listed as well drained in map, this soil mapping unit is likely to contain well-drained, moderately well drained & poorly drained (hydric) soil mapping components in same map unit.
 - 4) Poorly to very poorly drained (hydric) - Zakiah (Za) & Transquaking-Mispiration (TP)
- It is recommended that Sassafras (SSD) be avoided because of steeply-sloping topography (10-15% slopes). DNREC also recommends that Zekiah & Transquaking be avoided because of severe limitations (hydric).
- Based on apparent soil variability, DNREC recommends a certified and licensed soil scientist (ARCPACs certified and Class D licensed) make a site-specific evaluation of the soils in this parcel. Please contact the Underground Discharges Branch at 739-9948 for a list of soil scientists.
- The Statewide Wetland Mapping Project (SWMP) often uses the soil survey as the basis for mapping and delineating wetlands. The presence of a hydric soil is one of three parameters that must be met in order to meet jurisdictional wetland requirements (as specified by the USACOE). The other parameters are hydrophytic vegetation and hydrology. Thus the presence of hydric soils is a correlate with wetland presence. Building on hydric soils is likely to increase the potential for on-site and off-site flooding potentials. DNREC strongly recommends avoiding those areas containing hydric or potentially hydric soil mapping units.

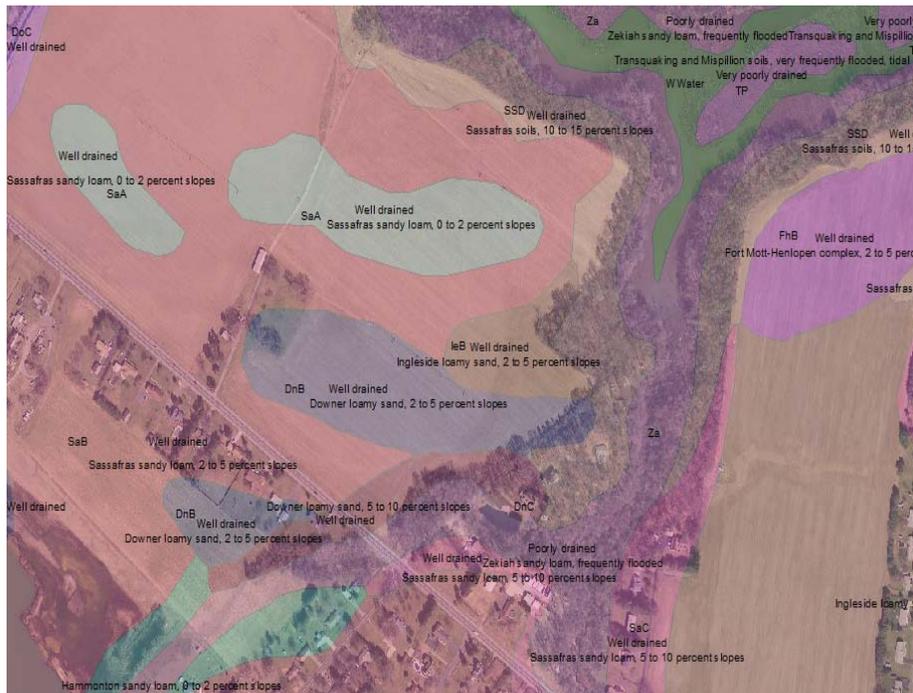


Figure 1: NRCS soil mapping in the vicinity of the proposed project

Additional information on hazardous waste sites

- SIRS strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Environmental Site Assessment (including a title search to identify environmental covenants) in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA). While this is not a requirement under HSCA, it is good business practice and failure to do so will prevent a person from being able to qualify for a potential affirmative defense under Section 9105(c) (2) of HSCA.

Additional remediation may be required if the project property or site is re-zoned by the county.

- Should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRB should also be contacted as soon as possible at 302-395-2600 for further instructions.

Additional information on TMDLs and water quality.

- A United States Army Corps of Engineers (USACE) approved field wetlands delineation is strongly recommended before commencing any development activities on this parcel(s). Based on the information submitted in the PLUS application, the ACOE has not approved the wetlands delineation. The USACE can be reached by phone at 736-9763.
- Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements – A Review*. J. Environ. Qual. 23: 878-882.), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all water bodies (including ditches) and wetlands (field delineated and approved by the USACE). The applicant's proposed 50-foot buffer is insufficiently protective of protect water quality
- DNREC encourages the applicant to preserve as much of the existing forest cover as possible, and consider additional native tree or herbaceous cover plantings.
- DNREC recommends that the applicant calculate post-construction surface imperviousness with all forms of created surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, and roads) included in the calculation.
- Since this project will create additional impervious surface that will increase the probability for increased pollutant load runoff to the adjoining stream and wetlands, we strongly encourage the use of pervious paving materials (instead of conventional asphalt and concrete) to mitigate the negative impacts from pollutant runoff.
- Use of rain gardens and green-technology storm water management structures (in lieu of open-water management structures) as BMPs to reduce nutrient pollutant impacts are highly encouraged for this project.
- The applicant should voluntarily assess nutrient and bacterial pollutant loading at the preliminary project design phase. To this end, the Watershed Assessment Section has developed a methodology known as the "Nutrient Load Assessment protocol." The protocol is a tool used to assess changes in nutrient loading (e.g., nitrogen and phosphorus) that result from the conversion of individual or combined land parcels to a different land use(s), while providing applicants with quantitative information about their project's impact(s) on baseline water quality. We strongly encourage the applicant/developer use this protocol to help them design and implement the most

effective BMPs. Please contact Lyle Jones at 302-739-9939 for more information on the protocol.

Delaware State Fire Marshall's Office – Contact Duane Fox 739-4394

- It is further recommended that the structure(s) not over 10,000 square feet aggregate be provided with automatic sprinkler protection.
- Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

Dover/Kent MPO – Contact James Galvin 387-6030

- The project is located on the northeast corner of South State Street and Golden Oak Drive between Ponderosa Drive and Locust Grove Road, across from Banning Road. The Dover/Kent County MPO completed a study of the S. State Street Court corridor in May, 2002. The South State Street Area and Access Study made several recommendations for improvements to the corridor between US 13 and SR 1 at Little Heaven. The study cited several intersections that required improvements, though the golden oak Drive intersection was not included. It did provide a basis for future road improvements that DelDOT should consider when becomes necessary to perform road upgrades. The 2005 functional classification map included the first mile of South State Street, south of US 13 to Webbs Lane, as an Other Principal Arterial. From that point south to SR 1, South State Street including Clapham Road, is classified as a Minor Arterial.

The South State Street Area and Access Study was completed prior to the adoption of significant policies and design preferences. The most significant policy is the requirement that the Department of Transportation design all new and substantially improved Streets considering Complete Streets. The policy requires the road segments to be built with bicycle access and sidewalks. The study was intended as a guide to DelDOT when making or requiring improvements.

The full study can be found on the Dover/Kent County MPO website at:
<http://doverkentmpo.delaware.gov/publications/archived-reports/> under South State Street Study.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

A handwritten signature in cursive script that reads "Constance C. Holland".

Constance C. Holland, AICP
Director, Office of State Planning Coordination

CC: Mark Devore, State of Delaware FM

South State Street Land Use & Transportation Plan

Executive Summary



November 2005

Introduction



The South State Street Land Use and Transportation Plan was initiated in June of 2003 as a joint effort between DeIDOT and Kent County. The goal of the plan was to develop a set of integrated transportation and land use strategies to support the area's designation as a Growth Zone while maintaining or improving the quality of life for residents.

The area has been growing at a rapid pace. Households have increased by 33% between 1990 and 2005. During that time new certificates of occupancy have increased over 400% while traffic along the corridor has grown at a steady pace. These trends have led to increases in delay for the traveling public and a perception of quality of life impacts for local residents.

The **Goals** of the Plan are to:

- Assess the impact of future land development on the transportation system
- Identify land development, transit, roadway, bicycle and pedestrian strategies to be considered in developing scenarios

Community Input and Outreach

Information and feedback from the community was crucial in the development of the plan. A Public Advisory Committee (PAC) was formed to bring together various members of the public, elected officials, government agencies, and other community stakeholders.

The PAC had two main functions:

1. Help DeIDOT and Kent County identify land use scenarios and transportation strategies for consideration
2. Provide feedback to DeIDOT and Kent County on each alternative plan

The PAC met eight times and was instrumental in completing this study.

Public Meetings

In addition to input from the PAC, two public meetings were held at the Postlethwait Middle School to gather input and advice from the community.

The meetings were advertised in local newspapers, on message boards along South State Street and the DeIDOT website (www.deldot.gov). A total of 140 people attended both meetings.



Study Area & Process

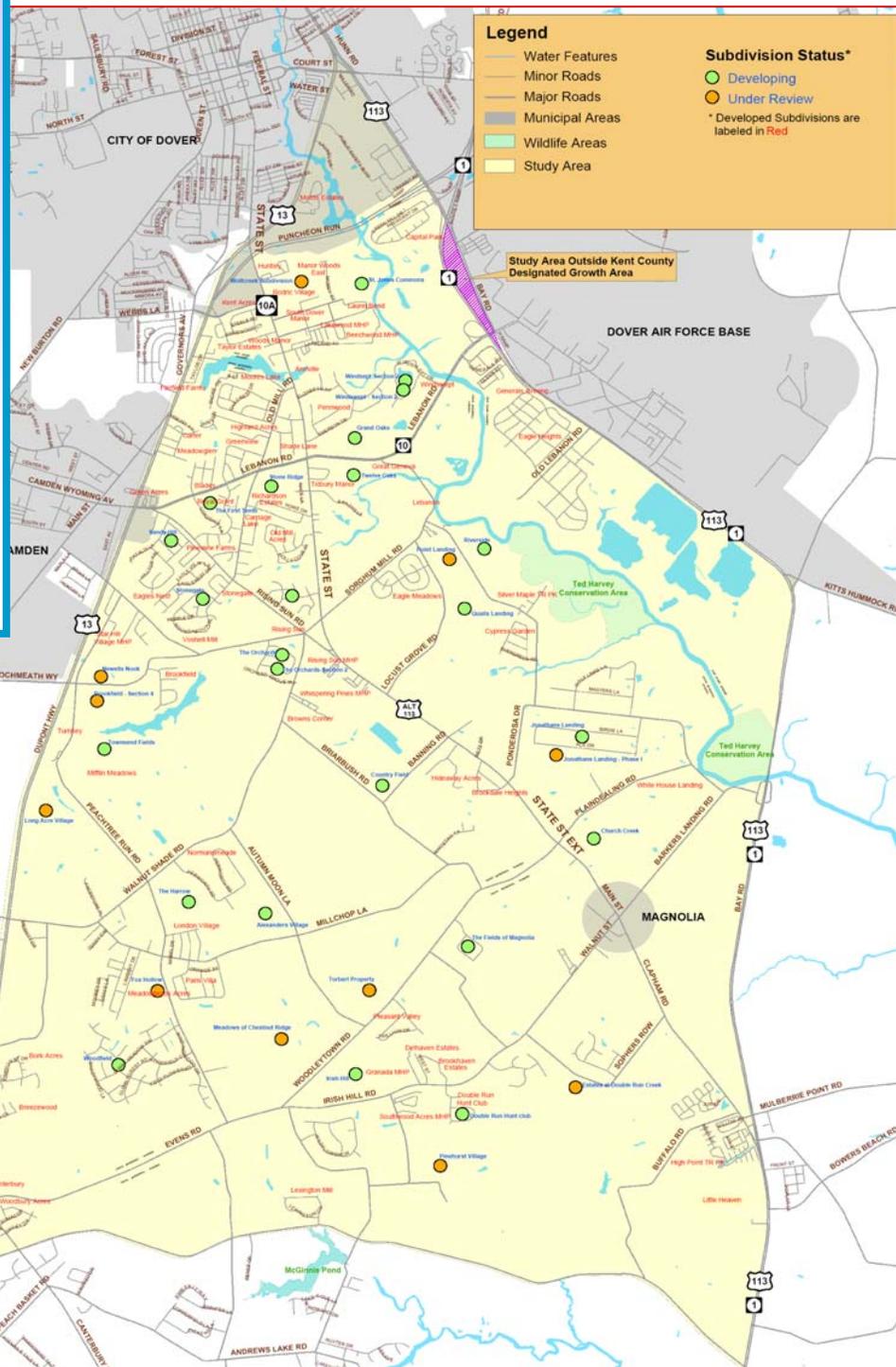
Study Area

The study area for the Plan consists of South State Street from SR 1 in the south to US 13 in the north and is bounded by US 13 in the west and US 113/ SR 1 in the east (approximately 32 square miles).

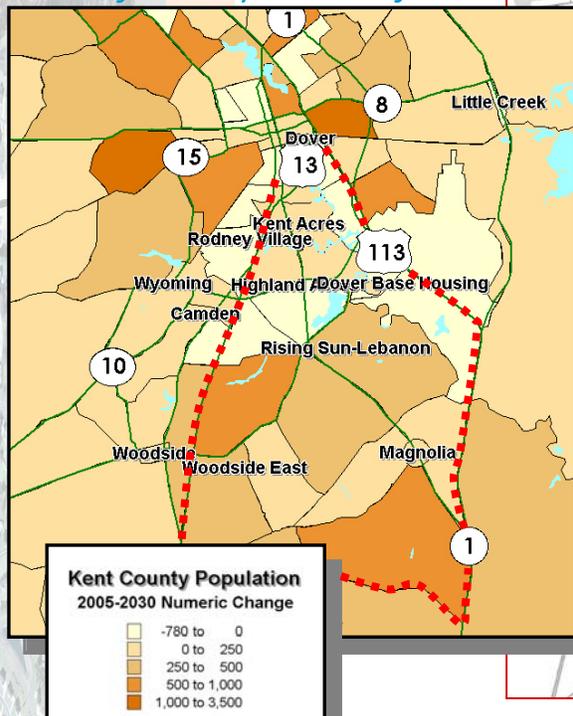
Process

DeIDOT and Kent County collected a wide variety of land use and transportation data for the study including:

- Existing and projected traffic volumes
- Accident data
- Pedestrian / Bicycle / Transit facilities
- Zoning and land use plans
- Recent construction activity
- Existing environmental features
- Population and household projections



Study Area Population Projections



Future Development Scenarios



To assess the impact of future land development on the transportation system a set of three possible future growth scenarios were modeled and tested. Population and housing estimates were made for a range of possible future development levels for the Study to analyze.

Existing & Approved (2010)

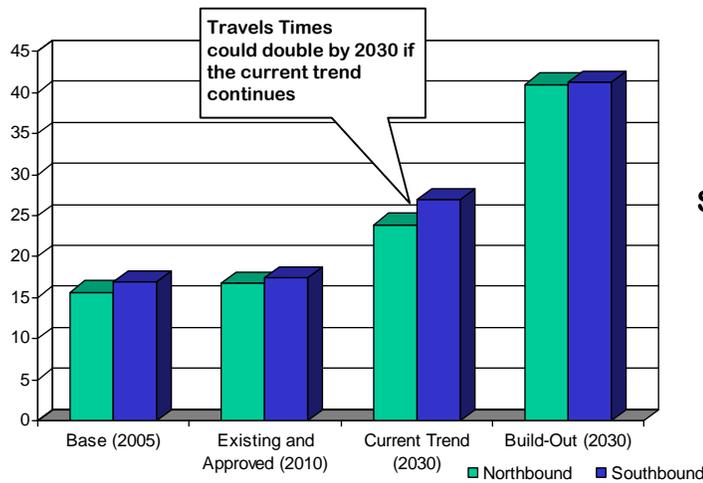
- Year 2010 Population Consortium land use and development trends and committed development identified by Kent County Department of Planning

Current Trend (2030)

- Current land use and development trends projected out to year 2030
- Assumes 1/3 of developable land will be built-on under existing zoning designations
- Assumes 80% of existing areas already zoned commercial will develop

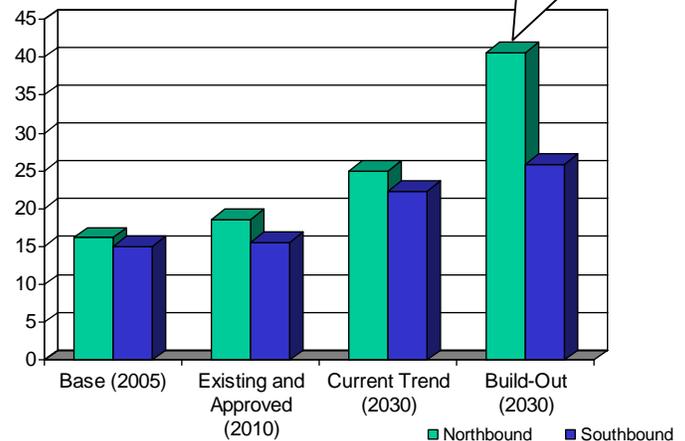
Build-Out (2030)

- Assumes total build-out of the study area would occur by 2030
- Assumes existing lots sub-divided but not yet built on would develop



Travel Times
South State Street
AM Peak Hour
SR 1 to US13

Travel Times
South State Street
PM Peak Hour
SR 1 to US13



Scenarios

we used to develop estimates of how travel times along South State Street might change in the future

What You Told Us



Both the PAC and public provided valuable insight into where improvements should be made along South State Street. Questionnaires were provided at each public meeting and many of the comments were incorporated into the final recommended plan.

Sample Question and Answers Received

“What Type of Transportation Improvements Would You Like Us to Consider?”

- Add Turn Lanes
- Add Thru Lanes
- Improve Signal Timing
- Limit Entrances Directly on South State Street
- Add Sidewalks and Bicycle Lanes
- Provide more DART Bus Stops
- Limit South State Street to Local Traffic only
- Limit Development along South State Street

Recommendations

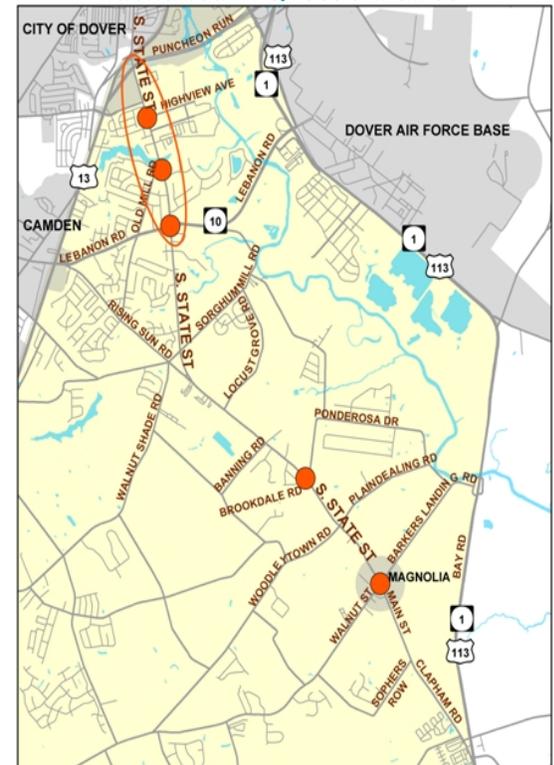
The recommendations made by the PAC and the public fall into several categories:

- Transportation Improvements
- Land use policy
- Bicycle / Pedestrian / Transit
- Study area monitoring

Time Frame

Travel demand modeling allowed the Study Team to forecast the amount of traffic that may result as development occurs. Traffic forecasts for selected future years (2010, 2020, and 2030) were analyzed to determine which improvement projects may be needed by what years. Some of the proposed improvements will be influenced by the actual pace of growth in the study area. Other factors that could influence the implementation of the improvements include the availability of funding for the larger capital projects and the completion of State and Federal environmental reviews. For the purpose of estimating when projects may be needed, short range was considered to be by the year 2010, mid-range was considered to be 2020 and long range was considered to be 2030.

Existing Problem Areas Identified in Questionnaires



How We Responded

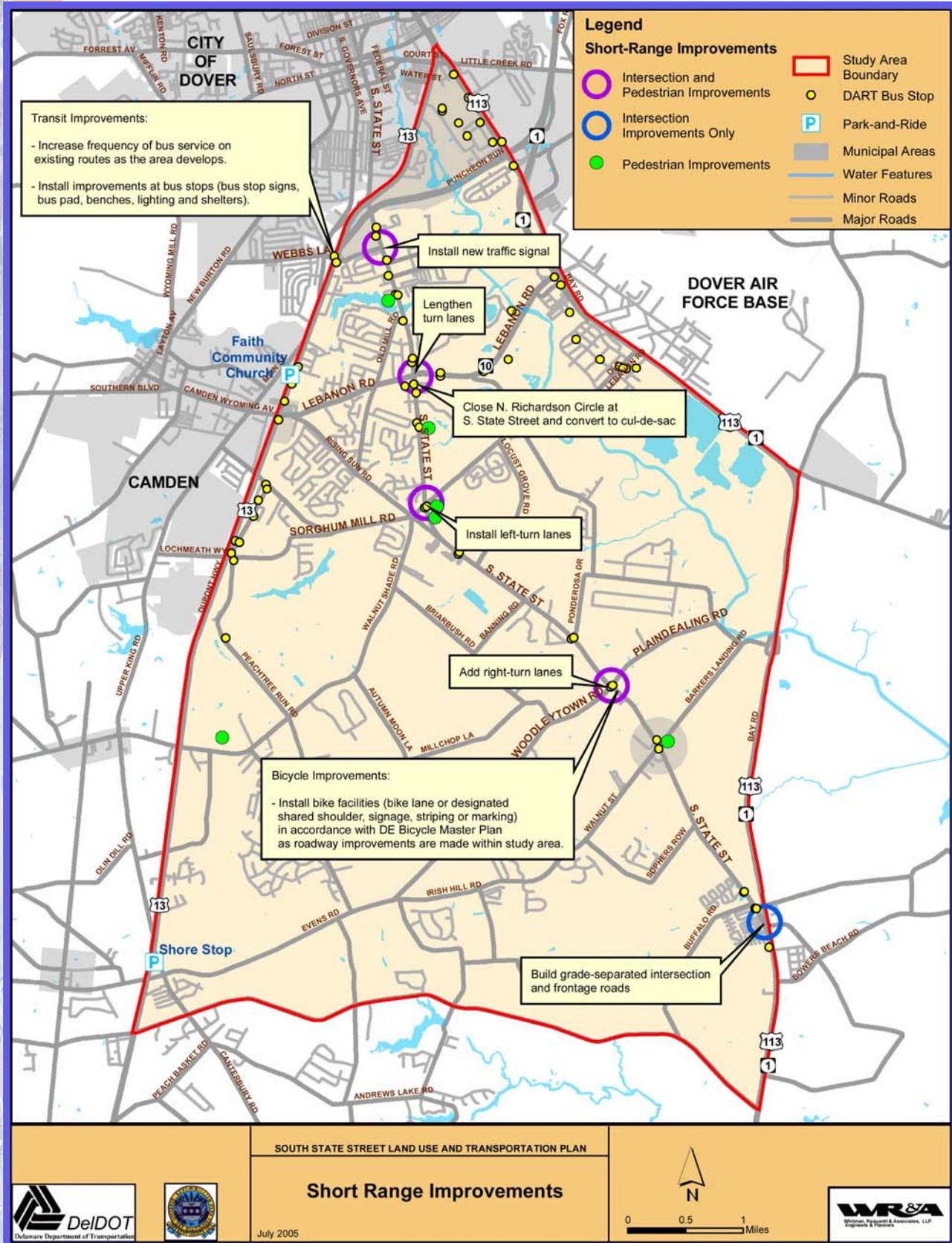


Improvements Potentially Needed in Short Range (by 2010)

Improvement	Area or Location	Type	Goal
Bicycle	<ul style="list-style-type: none"> Statewide Bike Route 2-State St Regional Bike Route K-4- SR 10 Recreational Connector- US 13 	Install bike facilities in accordance with Delaware Bicycle Facility Master Plan as roadway improvements are made	Improve multi-modal options for residents
Pedestrian	<ul style="list-style-type: none"> Existing DART Bus Stop Locations Charlton-Frear Elementary School Mcllvaine Elementary School Postelthwait Middle School Polytech South High School Moore's Lake Recreation Area Tidbury Creek Park At improved intersections listed below (except SR 1 interchange improvements) 	<p>Provide safe pedestrian access to stops</p> <p>Provide pedestrian improvements</p> <p>Provide pedestrian improvements (sidewalks, crosswalks, lighting)</p>	Improve multi-modal options for residents
Transit	<ul style="list-style-type: none"> Along existing bus routes in the South State Street Study area At existing bus stops in the South State Street Study Area 	<p>Increase frequency of bus service consistent with DART Business Plan (2003-2009) (e.g. provide a trip every 20 min. during peak period)</p> <p>Install improvements at bus stops (bus stop signs, bus pad, benches, lighting, shelters)</p>	<p>Improve multi-modal options for residents</p> <p>Improve multi-modal options for residents</p>
Park and Rides	<ul style="list-style-type: none"> Faith Community Church Shore Stop 	Promote use of transit service and use of existing P&R lots	Improve multi-modal options for residents
Intersection Upgrades	<ul style="list-style-type: none"> South State St. at Webbs Lane South State St. at SR 10 South State St. at Sorghum Mill Rd South State St. at Woodleytown Rd 	<p>Install new signal</p> <p>Lengthen southbound and northbound left and right turn lanes</p> <p>Add eastbound and westbound left turn lanes (with shared through/right turn lanes)</p> <p>Add eastbound and westbound right turn lanes</p>	<p>Provide gaps for side-street traffic</p> <p>Reduce delay</p> <p>Improve safety / Reduce delay</p> <p>Improve safety / Reduce delay</p>
Other			
Roadway	<ul style="list-style-type: none"> North Richardson Circle 	Cul-de-sac Richardson Circle (North)	Reduce delay at SR 10
Roadway	<ul style="list-style-type: none"> Irish Hill Road 	Upgrade from South State Street to US13 with curbing, shoulders, turn lanes and sidewalks; identify bus stops for transit service (as per Dover / Kent County MPO Long Range Transportation Plan)	Improve safety and multi-modal options for residents
Traffic Signal Location Study	<ul style="list-style-type: none"> South State Street- from Little Heaven to US 13 	Study	Determine optimal locations fro new traffic signals

How We Responded

Improvements Potentially Needed in Short Range (by 2010)



How We Responded

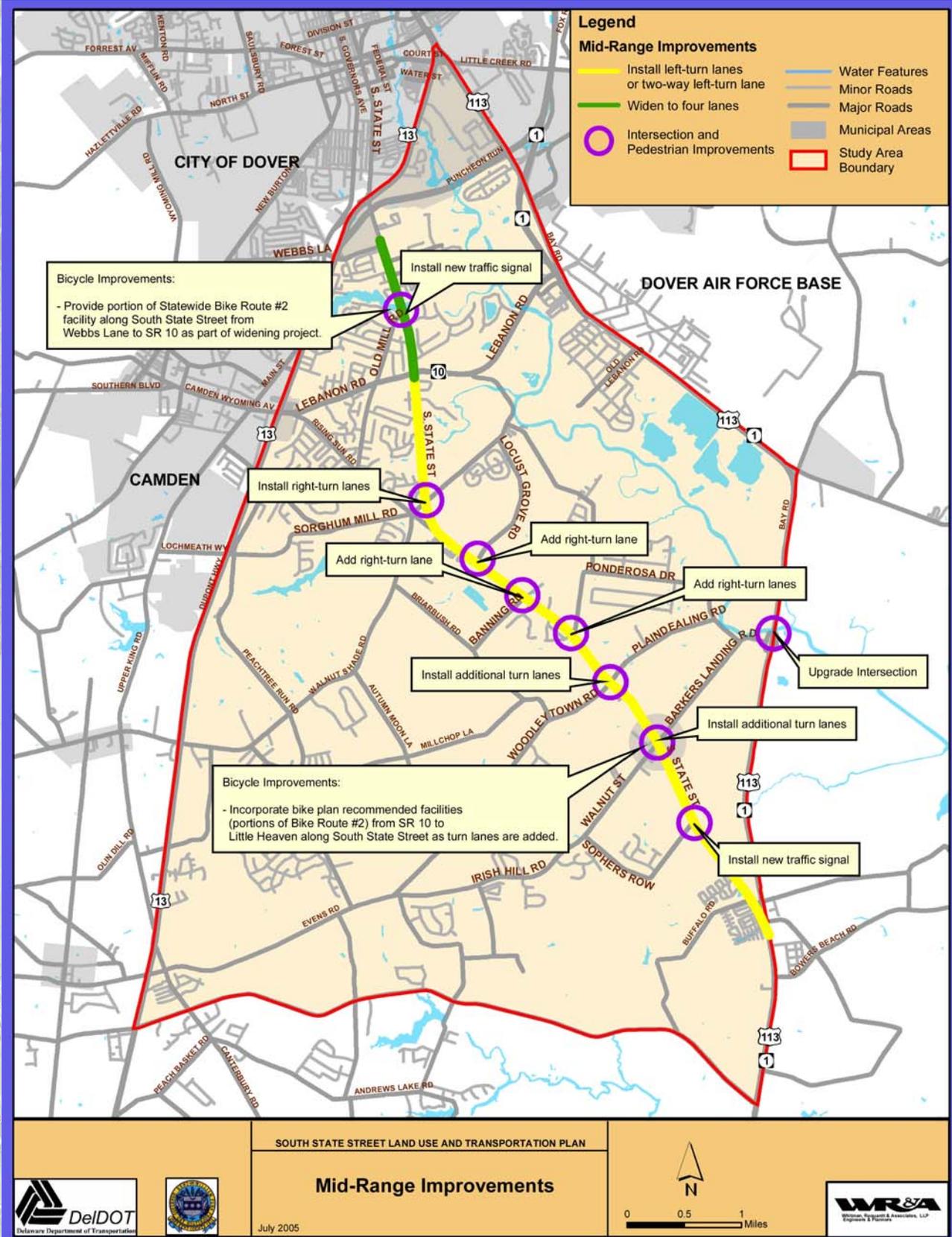


Improvements Potentially Needed in Mid Range (by 2020)

Improvement	Area or Location	Type	Goal
Bicycle	• South State Street at widening project from Webbs Lane to SR 10 and new turn lane locations	Complete portions of Statewide Bike Route 2	Improve multi-modal options for residents
	• Incorporate recommended bike (portions of Bike Route #2) facilities from SR 10 to Little Heaven along South State Street as turn lanes are added	Bike facilities	Improve multi-modal options for residents
	• Encourage Kent County to use the subdivision process to allow developers to seek multi-use paths to meet their requirements for active recreation	Multi-use paths	Improve multi-modal options for residents
Pedestrian	• Frequent Pedestrian Accident Locations	Provide pedestrian facilities improvements	Improve multi-modal options for residents
	• At improved intersections listed below	Provide pedestrian facilities improvements	Improve multi-modal options for residents
	• Encourage Kent County to use the subdivision process to allow developers to seek multi-use paths to meet their requirements for active recreation	Multi-use path	Improve multi-modal options for residents
	• Identify gaps in sidewalk network and seek means to complete network	Sidewalk connections	Improve multi-modal options for residents
Transit	• Along existing bus routes in the South State Street Study area	Provide more frequent bus service in the South State Street Study Area	Improve multi-modal options for residents
	• New bus routes in the South State	Provide new bus service to match emerging origin-destination patterns	Improve multi-modal options for residents
Park and Rides	• Additional park and ride sites within South State Street Study area	Identify new P&R locations to improve transit service	Improve multi-modal options for residents
Intersection Upgrades	• Old Mill Rd / South State St.	Install traffic signal/Turn lane improvements	Reduce delay
	• Sorghum Mill / South State St.	Install EB and WB right turn lanes	Reduce delay
	• Locust Grove Rd / South State St.	Add westbound right turn lane	Reduce delay
	• Banning Road / South State St.	Add eastbound right turn lane	Reduce delay
	• Ponderosa & Brookdale Rd / South State St.	Add EB and WB right turn lanes	Reduce delay
	• Woodley Town Rd & Plaindealing Rd/ South State St.	Install additional turn lanes	Reduce delay
	• Irish Hill Rd / South State St.	Add left and right turn lanes	Reduce delay
	• South State St. at Sophers Row Rd.	Install new signal in accordance with Webb Property Traffic Impact Study recommendations	Improve safety / Reduce delay
Corridor Upgrades	• South State Street Corridor (from south of SR10 to Webbs La.)	Widen to provide a four-lane section (<i>Justified in approx. 2023 under Current Trend Scenario and in approx. 2016 under Build-Out Scenario</i>)	Improve safety / Reduce delay
	• South State Street Corridor (from south of SR10 to SR1)	Install two-way left turn lane or left turn lanes	Improve safety / Reduce delay
Other	• Improve / Add shoulders to Major Collector and Local Roads within Study Area	As per DelDOT Design Manual	Improve safety
	• Additional off-road pedestrian or multi-use paths with South State Street Study area	In cooperation with State, County and Municipal authorities	Improve multi-modal options for residents
	• Implementation of connector road between Allan Frear Elementary School and Postlethwait Middle School	In cooperation with Caesar Rodney School District	Reduce delay along South State St.

How We Responded

Improvements Potentially Needed in Mid Range (by 2020)



SOUTH STATE STREET LAND USE AND TRANSPORTATION PLAN

Mid-Range Improvements

July 2005



How We Responded

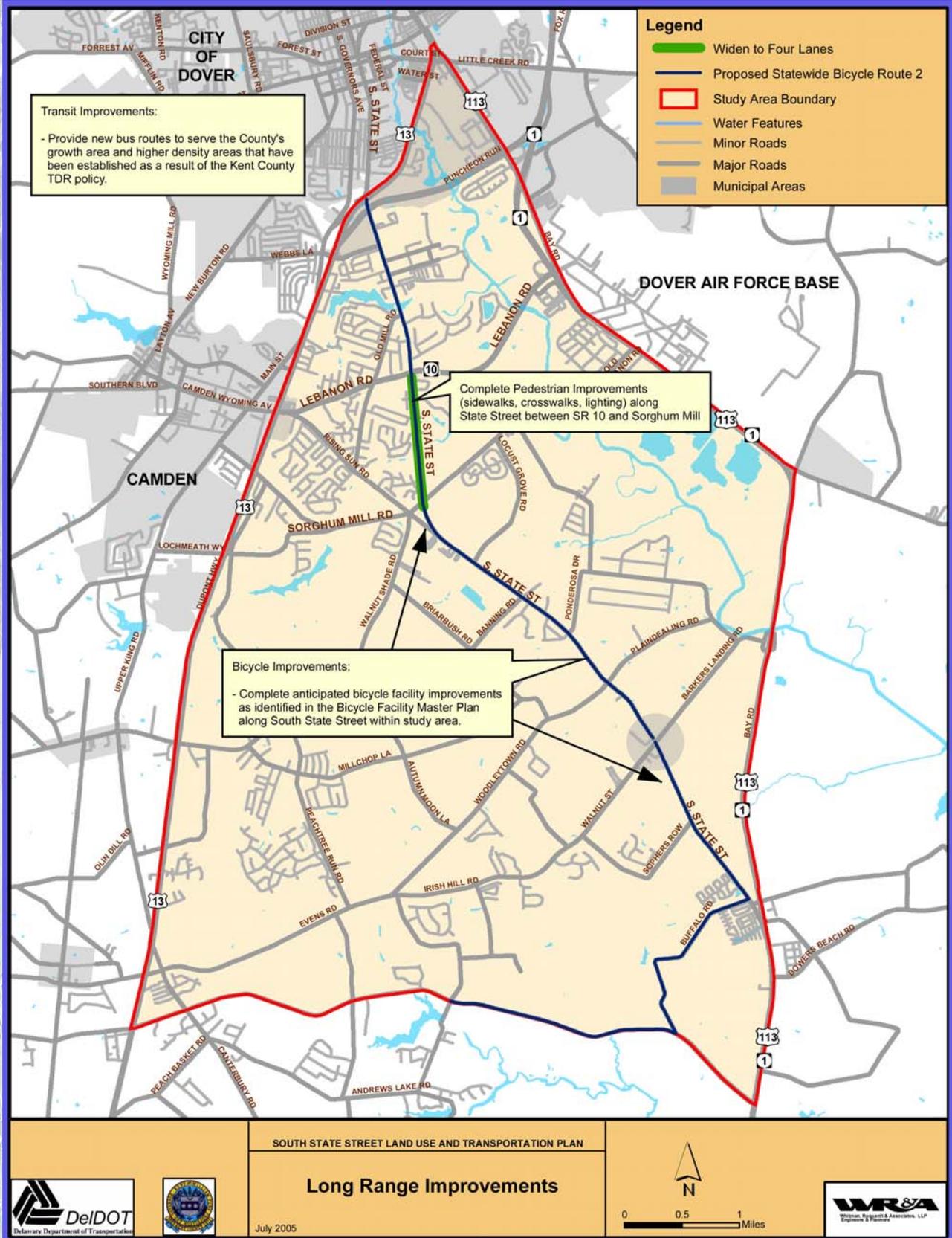


Improvements Potentially Needed in Long Range (by 2030)

Improvement	Area or Location	Type	Goal
Bicycle	<ul style="list-style-type: none"> • South State Street from SR10 to Sorghum Mill Road • Additional off-road pedestrian or multi-use paths within South State Street Study Area as alternative active recreation requirement for new developments) 	<p>Complete bicycle facility improvements in cooperation with State, County and Municipal authorities</p>	<p>Improve multi-modal options for residents</p> <p>Improve multi-modal options for residents</p>
Pedestrian	<ul style="list-style-type: none"> • South State Street from SR10 to Sorghum Mill Road • Frequent Pedestrian Accident Locations • Work with County to seek inclusion of sidewalks requirement in any Adequate Public Facilities Ordinance (APFO) that may be adopted 	<p>Complete pedestrian improvements (sidewalks, crosswalks, lighting)</p> <p>Improve pedestrian facilities</p> <p>Improve pedestrian facilities</p>	<p>Improve multi-modal options for residents</p> <p>Improve multi-modal options for residents</p> <p>Improve multi-modal options for residents</p>
Transit	<ul style="list-style-type: none"> • Study area high density or growth areas • Continued coordination with and promotion of other planning initiatives such as Livable Delaware that support increased transit service and use 	<p>Provide new bus routes to serve growth areas that have been established as a result of the Kent County Transfer of Development Rights (TDR) program</p>	<p>Improve multi-modal options for residents</p> <p>Improve multi-modal options for residents</p>
Corridor Upgrades	<ul style="list-style-type: none"> • South State Street Corridor (from south of Sorghum Mill Rd to SR 10) 	<p>Widen to provide additional four-lane section. Refer to estimated timeline on need for 4 lanes. Project planning & NEPA studies would be initiated if warranted. If project not feasible, a two way left turn lane or left turn lanes would be proposed.</p>	<p>Reduce Delay</p>

How We Responded

Improvements Potentially Needed in Long Range (by 2030)

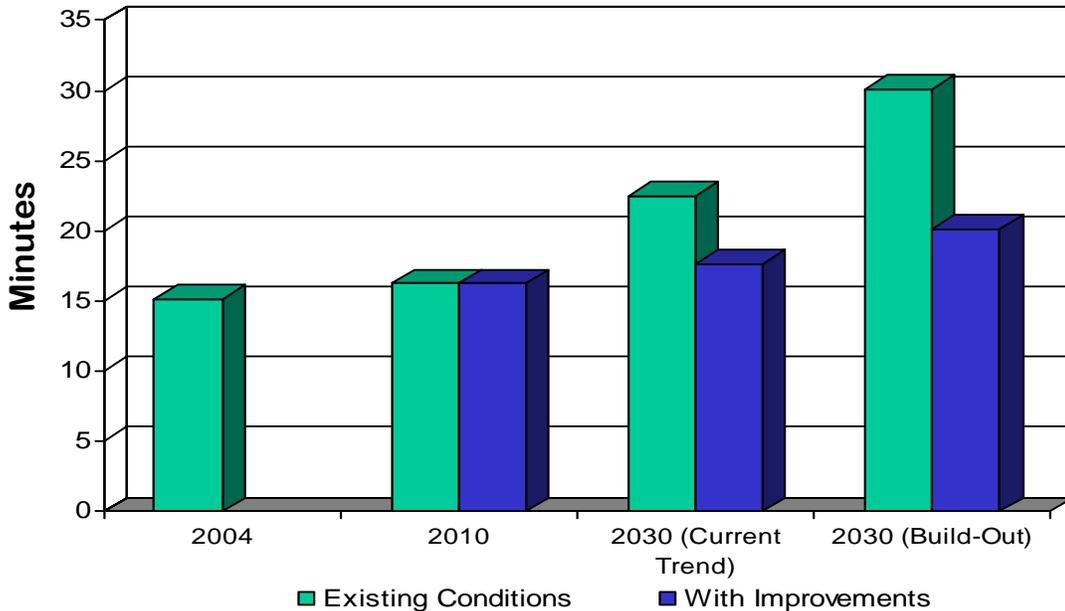


Will the Improvements Help?

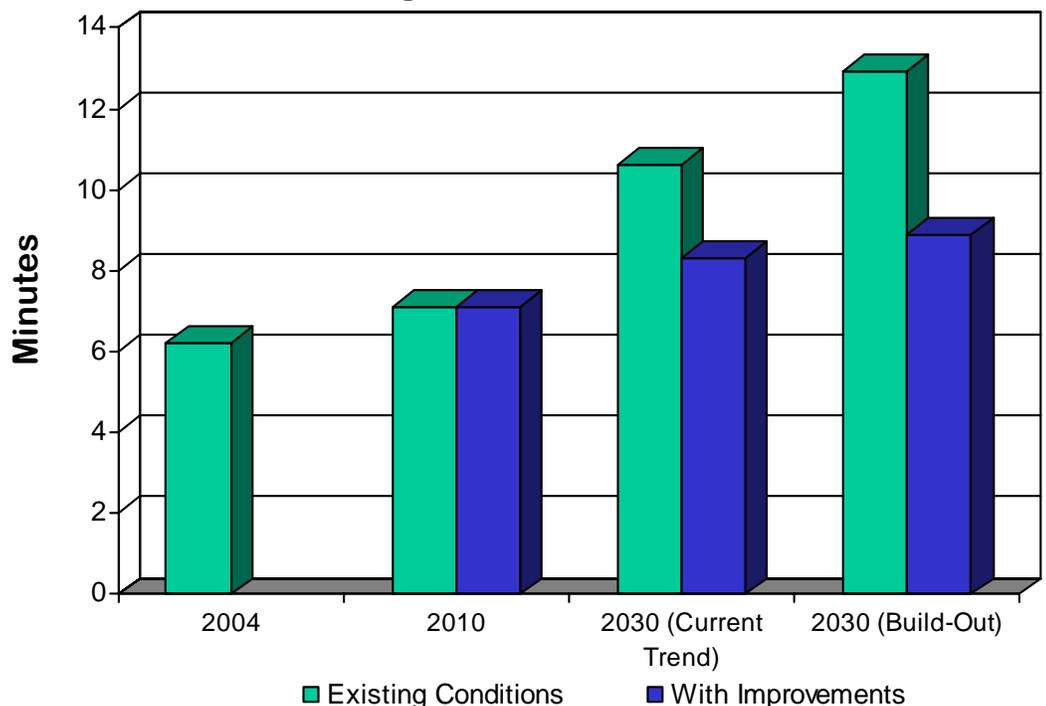


One of the performance measures the Study Team looked at was the predicted change in travel time for the average driver with and without the recommended transportation improvements.

Peak Hour Travel Times along S. State Street SR 1 to U.S. 13



Peak Hour Travel Times along S. State Street Sorghum Mill Road to U.S. 13

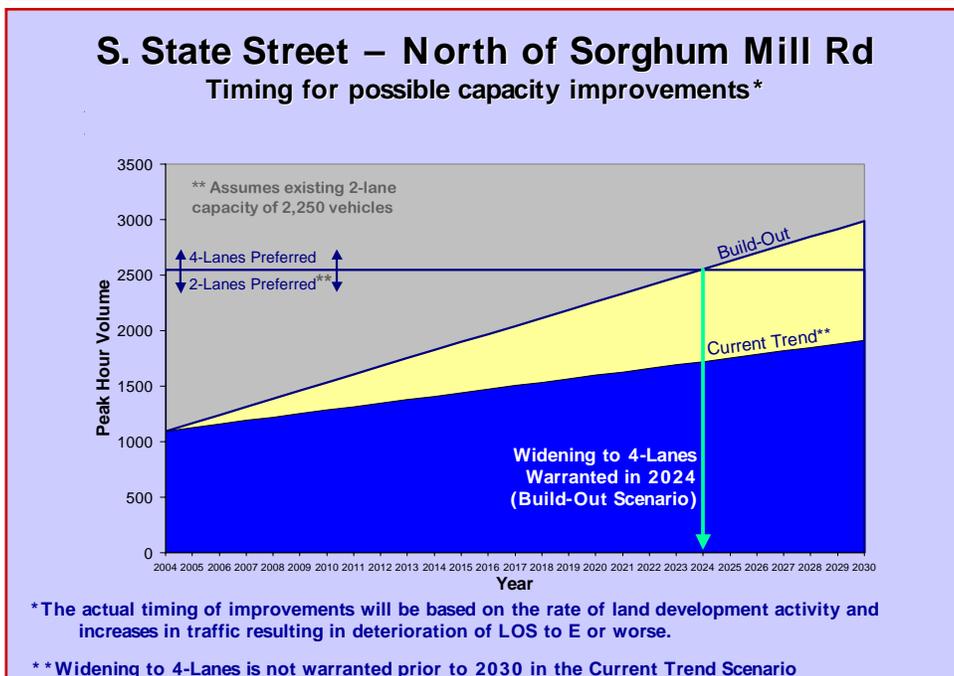
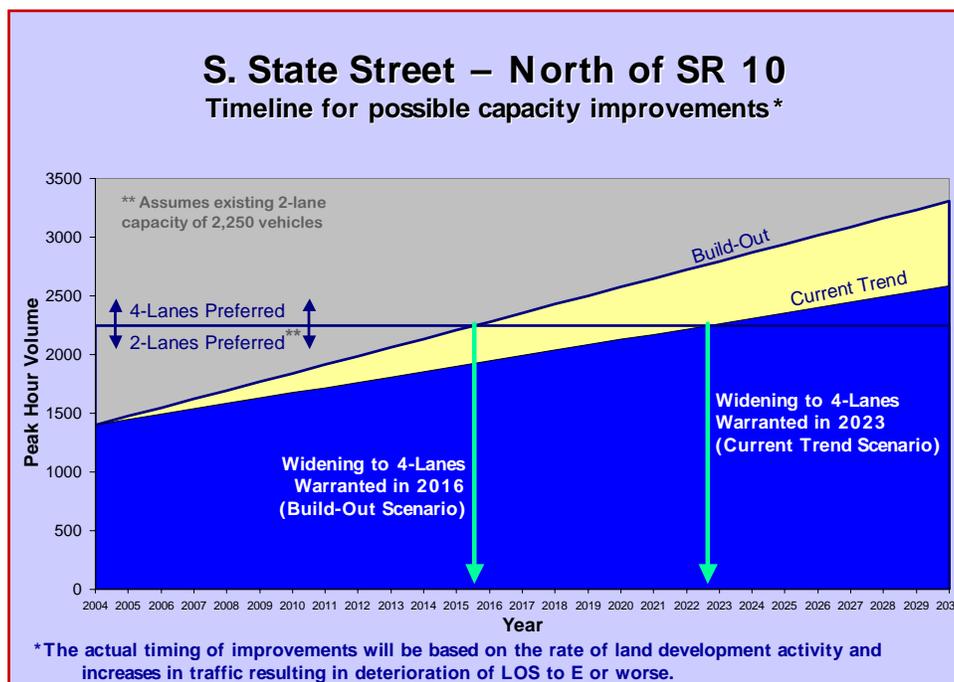


Travel Times
were just one of the performance measures the Study Team considered when evaluating how well the improvements would work

Timeline for Possible Capacity Improvements

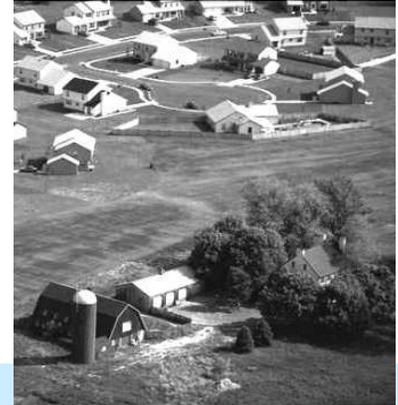
The possible need to widen South State Street from two to four lanes sometime in the future was the most significant improvement considered by the PAC and the public. Traffic models allowed the Study Team to identify timeframes to serve as the basis for the implementation of recommended project improvements.

The Study Team sought to ensure that no significant improvements would be recommended for implementation until enough “real world data” was collected to warrant those improvements. Therefore, a timeline was developed that identified traffic volume thresholds needed to justify a possible widening of South State Street.



Land Use Policy Recommendations

In addition to the transportation improvements shown earlier the PAC made recommendations regarding land use policies. The DeIDOT and Kent County partnership that created this plan also specified that Kent County would consider the land use policy recommendations made by the PAC when updating their comprehensive plan.



Promote TDR program within Study Area

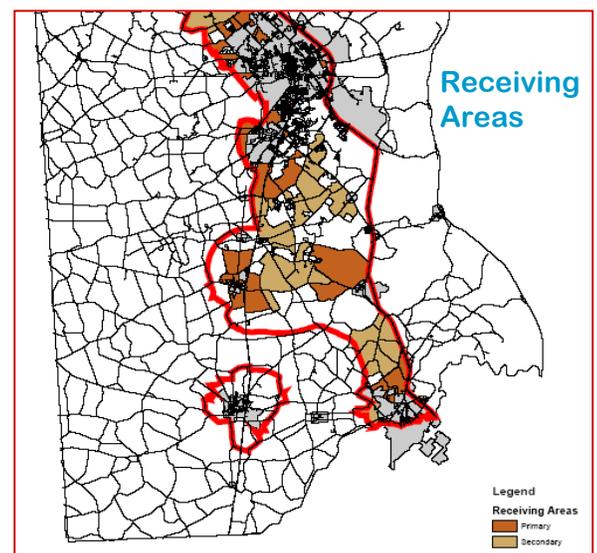
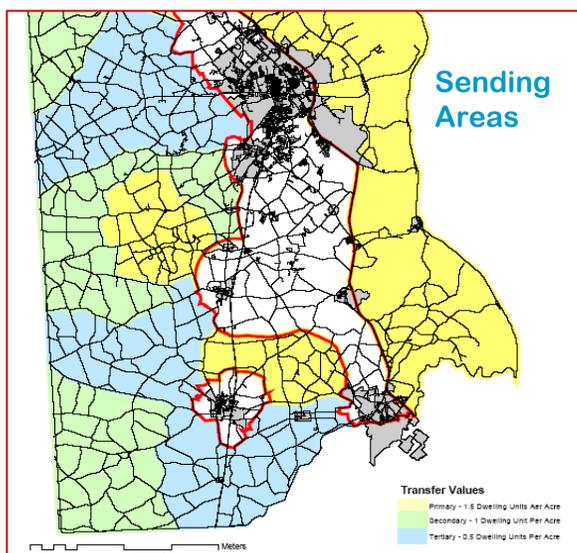
The Transfer of Development Rights (TDR) program adopted in 2004 allows a land owner to purchase development rights from a designated “sending” area and transfer those rights into a designated “receiving” area. The aim of the program is to promote orderly development in the Kent County Growth Zone while simultaneously preserving rural areas outside the Growth Zone. The Study Area’s designation as a receiving area (within the Kent County Growth Zone) may facilitate the approval of more mixed-use developments which could lead to reduced trips along South State Street and make more transit possible.

Adopt an Adequate Public Facilities Ordinance (APFO)

An APFO helps to ensure that transportation and other public infrastructure (schools, transit, or libraries) are provided in tandem with new residential and commercial development. This type of policy requires a program to be set up that links developer fees to the facilities needed to support the new development activity.

Adopt Design Standards for the South State Street Corridor

Corridor design standards can assure the adequacy of building setbacks, entrance requirements, and the provision of parking. Design standards can create a preferred appearance for the corridor. Standards that limit the number of driveway access points can also improve the flow of traffic along the corridor.



Next Steps



Monitoring Program

The PAC has also recommended the creation of a South State Street Corridor Monitoring Program. A Corridor Monitoring Committee would be established to periodically review conditions in the South State Street corridor and make adjustments to recommendations as necessary. Based on DeIDOT's successful US 40 Corridor Monitoring Program, the South State Street monitoring program would operate by identifying thresholds or "triggers" for proposed major improvements. Some of the factors to be monitored by the committee include:

Land Development Activity

- Development location
- Number of units
- Traffic generated
- Status of projects

Projected Traffic Volumes

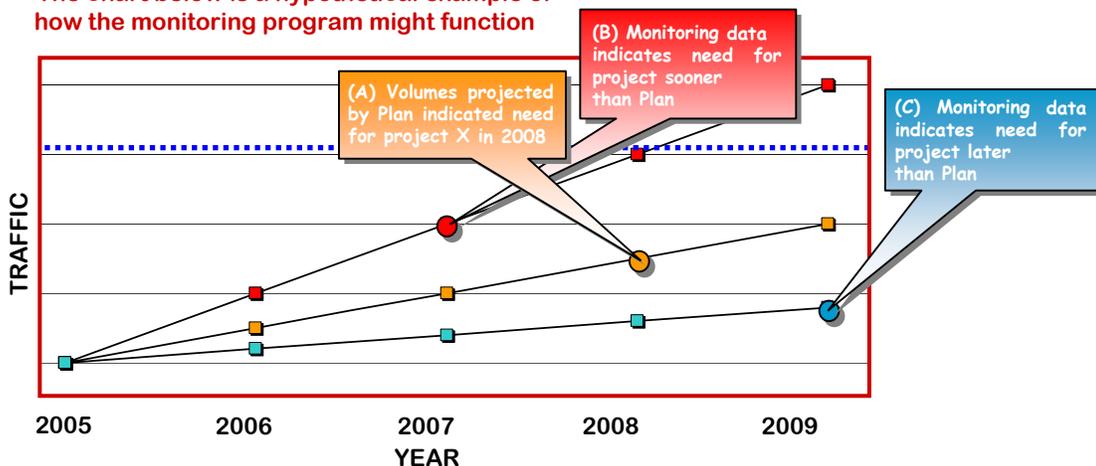
- Average daily traffic
- Current counts at key locations
- Short and long term forecasts
- Changes in intersection level of service (LOS)

Transit Service

- Existing service/ridership
- Needed changes in promotion or changes in service

Because the pace of development activity over time is always uncertain, this Committee's charge will be to focus on the Study area to determine the appropriate timing for project implementation. Representatives from DeIDOT, Kent County, the Dover-Kent MPO and the PAC would constitute the Committee. The Committee would meet on a regular basis to review data on existing transportation and development activity in the corridor. The Committee would also look at the forecasted trends to determine whether trigger points had been reached. When trends indicate that a recommended project is warranted, they would request that DeIDOT add it to the Capital Program for implementation.

The chart below is a hypothetical example of how the monitoring program might function





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