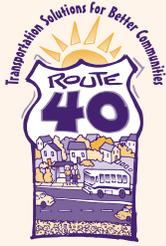


# 2000 CORRIDOR MONITORING AND TRIGGERING REPORT

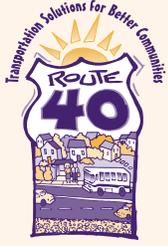
*June 2001*



## Route 40 Corridor Improvements

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## Route 40 Corridor Improvements

# INTRODUCTION

The Route 40 Corridor Improvements Project was initiated by the Delaware Department of Transportation in partnership with New Castle County and WILMAPCO in September 1998. Completion of the first four steps of this project produced a community-supported 20-year transportation plan prepared under the direction of a Steering Committee composed of civic leaders, elected officials, and business interests. Technical support for plan development was provided by a Project Team, composed of the Project Partners' staffs plus their planning/engineering consultants. The Route 40 Corridor 20-Year Transportation Plan (the Plan) was adopted on June 19, 2000.

The Plan addresses the conditions that will result from projected growth in housing, employment and traffic over the next 20 years. The Plan contains projects, separated into three phases (Phase I 2000-2007, Phase II 2008-2013, Phase III 2014-2020), which address projected transportation problems. By phasing projects over the next 20 years and using a monitoring and triggering mechanism, projects will be built only as conditions dictate, addressing one of the main goals of Steering Committee.

The fifth and final step of the project, now underway, is the implementation of the Plan recommendations. This Corridor Monitoring and Triggering Report is an essential component of this step. In order to assure that all projects in the Plan are implemented as conditions dictate—neither prior to the anticipated need, nor subject to unnecessary delay after need is identified—the Plan included an Implementation Strategy, which consists of five components:

- ◆ Corridor Preservation
- ◆ Monitoring
- ◆ Triggering
- ◆ Citizen Involvement
- ◆ Project Implementation

Citizen Involvement will be accomplished through a Corridor Monitoring Committee. This Committee is meeting quarterly with the Project Team to review changing conditions in the Corridor, which the Project Team will monitor throughout the year. The monitoring efforts, which are summarized in this report, consider:





## Route 40 Corridor Improvements

- ◆ Land Development
- ◆ Traffic
- ◆ Corridor Preservation
- ◆ Highway Safety
- ◆ Transit Service and Ridership
- ◆ Regional Highway and Transit Projects
- ◆ Status of Projects in Design
- ◆ Status and Impact of Implemented Projects

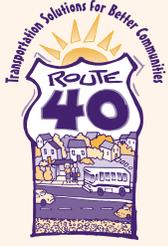
Each of these factors is discussed in the following sections. The Project Team's assessment of these monitored conditions forms the basis for the Triggering section. Examples of triggering, as defined in the Plan, are listed below:

- ◆ Major land development activity would trigger immediate review of transportation needs: level of service implications and strategy, transit service needs or opportunities, safety concerns, and pedestrian and bicycle needs.
- ◆ Steady deterioration in level of service to 'D' or worse would trigger a response in the form of strategies to stabilize/reduce demand (i.e. travel demand management measures or transit improvements) or increase capacity.
- ◆ Safety improvements recommended by the Highway Safety Improvements Program review team would trigger an evaluation by the Project Team of the compatibility of the proposed improvements with the Plan and of the need to make adjustments to the Plan.
- ◆ Transit service changes proposed by DTC would trigger an evaluation by the Project Team of any ancillary improvements needed to complement the service changes, such as sidewalks or shelters, that should be advanced in the Plan's implementation.
- ◆ Transportation improvements that are not part of the Plan but that impact the corridor and are proposed for implementation (for example, widening of Interstate 95) would trigger an evaluation by the Project Team. The evaluation would focus on compatibility of the proposed improvements with the Plan and the need to make adjustments to the Plan.

Assessment of these potential changes may trigger one of the following options to best respond to the new conditions:

- ◆ Continue with a Plan project or projects as currently scheduled in the TIP/CIP.
- ◆ Move a project(s) forward in the TIP/CIP schedule and determine appropriate level of effort for design activities.
- ◆ Move a project(s) back into the out years of the TIP/CIP schedule.

The Triggering section includes the response in the form of the updated CIP for the Route 40 Corridor Improvements Project. Also, any conditions that appear to be changing rapidly and require closer attention are noted.



# Route 40 Corridor Improvements

## MONITORING

### LAND Development

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#### Site Review Team

Development activity is monitored through regular meetings of the Site Review Team. The Site Review Team consists of members of the Project Team, including DelDOT, the New Castle County Department of Land Use, and the Delaware Transit Corporation. At these meetings the team reviews development proposals for consistency with and impact to the Plan. The team's comments include recommendations in such areas as corridor preservation, access management, and cost-sharing opportunities.

#### Summary of Development Activity

As shown in Table 1, New Castle County's Unified Development Code classifies land development into two categories: major and minor. (Click here to view Table 1.) In the Route 40 Corridor, during 2000, there were 15 major, 18 minor, and 19 resubdivision land development proposals submitted to New Castle County for review. Some of the plans submitted during the year replace previous ones, either recorded or unrecorded. Most importantly, there were no major land development proposals that were not already anticipated in the Plan.

The Project Partners are currently working together to develop a two-stage land use tracking system for the Route 40 Corridor. This system will allow the partner agencies to estimate the cumulative effect of development activity on regional demographics and traffic conditions. In the first and simplest stage of the system, annual estimates of population and employment will be used to compare current conditions with Plan projections. This step provides a cursory means to verify that the Plan projections are still valid.

In the second, more comprehensive stage, the impact of each development on traffic at key corridor intersections will be estimated. The County will provide information on new exploratory sketch plans, recordations, building permits, and certificates of occupancy in the Corridor on a quarterly basis. This information will be entered into a model that will estimate the traffic impacts of the developments. The second-stage system, while less specific and technically accurate than traffic impact studies, will supplement TISs to gauge the cumulative effect of development in the Corridor.

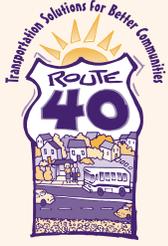


## Route 40 Corridor Improvements

The first results of this system are expected to be included in the next Route 40 Corridor Monitoring and Triggering Report.

### Developer Agreements

More than 40 land development projects in the Route 40 Corridor have developer agreements with the State or County regarding transportation improvements in the corridor. These improvements range from sidewalks to widening of roadways. The proposed land use tracking system will monitor these developer agreements as developments are constructed.



## Route 40 Corridor Improvements

### TRAFFIC

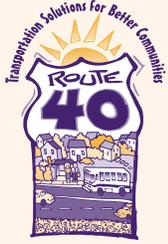
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To establish a baseline for comparison of traffic conditions along US 40 in the future, the Project Team conducted full-day traffic counts on road segments using road tubes. These segment counts were used to monitor trends in hourly and daily travel growth, as opposed to intersection counts, which were used to measure levels of service. The segment counts were compared with the traffic information utilized during development of the Plan, which were from counts conducted primarily in 1998 and 1999. Average daily traffic (ADT) volumes are summarized in Table 2. ([Click here to view Table 2.](#))

As indicated in Table 2, the daily counts remained relatively steady in most of the corridor, though west of SR 896 they actually decreased. The 2001 counts were performed in January (typically a lower traffic volume month) and the Plan counts were completed in various months. To determine if the trend indicated by these counts was valid, a calibration count was done for the SR 896 to SR 72 segment in February 2001, which is the same month that a previous count had been done in 2000. The results showed that ADTs remained relatively steady with no significant increases or decreases noted.

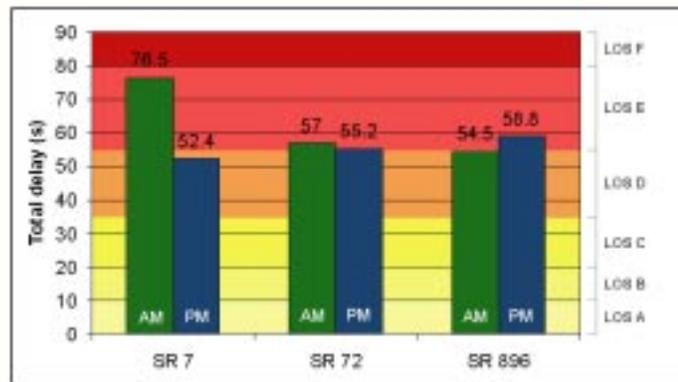
To compare current levels of service for intersections along US 40 to the levels of service used during the Plan development process, the Project Team conducted intersection counts during peak traffic hours at all signalized intersections on US 40 in January 2001. Unsignalized intersections were not counted because no improvements are included at these intersections in the Plan. It is assumed that any future signalization of these intersections, whether required due to land development or traffic growth, will have to meet intersection signalization warrants as required by DelDOT.

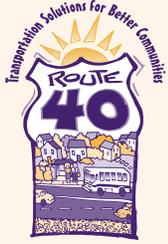
The traffic volumes collected at the signalized intersections were analyzed in a manner consistent with the traffic impact study process used by DelDOT and New Castle County. Additional field observations were conducted in April 2001 to verify assumptions used in the analysis. The results of the level of service analysis are summarized in Table 3. As indicated, the levels of service remained relatively steady, with seven intersections showing minor degradation and four slight improvement. ([Click here to view Table 3.](#))



## Route 40 Corridor Improvements

When the Plan was developed, only the intersection of US 40 with SR 7 operated at an unacceptable level of service E in the AM peak hour. That result continued to be valid in the current analysis, and two new intersections were shown to operate at LOS E: SR 72 (AM and PM) and SR 896 (PM only). The graphic below illustrates that the SR 72 and SR 896 intersections have just crossed the threshold from LOS D to E.





# Route 40 Corridor Improvements

## CORRIDOR Preservation

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### Right of Way Preserved

Those recorded plans where right-of-way was preserved, either through dedication to the State or reservation for future purchase by the State, will be identified. The details of the amount and location of the right of way preserved are being determined through coordination with the New Castle County Department of Land Use.

### Concept Design

#### GENERAL STATUS

The Plan recommended preparing concept designs in the first stage of implementation to identify right of way needs. In fulfillment of this directive, concept designs are being prepared for several Route 40 widening alternatives between SR 896 and SR 1, potentially including:

- ◆ widening to the outside only,
- ◆ widening primarily to the inside,
- ◆ widening both eastbound and westbound lanes to the north, and
- ◆ widening both eastbound and westbound lanes to the south.

An environmental assessment is also being prepared for this area. The purpose of this document is to obtain approval of the preferred widening alternative from federal and state agencies based on the level of environmental impact. When this document is approved, right-of-way limits will be more clearly defined for the 17 Plan projects that fall within the environmental assessment study area.

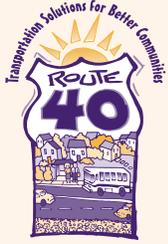
Concept design will also begin in 2001 for a number of the remaining Phase I projects. Projects identified for Phases II and III will be designed in subsequent years of Phase I.

#### NORFOLK SOUTHERN GRADE SEPARATION AT ROUTE 40

For the Fox Run Section V development proposal, the Project Team developed a concept design to determine the footprint of the grade separation for the Norfolk Southern railroad crossing of Route 40 as it impacts this property. Due to right-of-way needs and issues with the proposed site access, DelDOT is in negotiations to acquire the property.

#### ACCESS MANAGEMENT ON DEVELOPED PROPERTIES

There were several development proposals submitted in 2000 for properties along the south side of Route 40 between Glendale Boulevard and the Glendale Connector. The Project Team developed access management concepts that would limit the number of access points along Route 40. Although all of these recommendations were not implemented initially, the concepts are being considered for implementation through another project or future development proposals.



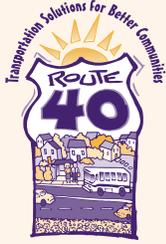
## Route 40 Corridor Improvements

### HIGHWAY Safety

#### Highway Safety Improvement Program Sites

The following sites within the corridor were part of DeIDOT's statewide 2000 and 2001 Highway Safety Improvement Program (HSIP). Accident rates were based on events that took place during the three preceding calendar years (e.g. 1997 – 1999 for 2000 HSIP). The recommendations from the HSIP review team and status of implementation are summarized below:

- ◆ 2000 Site A – Business 896, Cann Road to Muddy Run: The accident patterns were predominantly access-related. Access management solutions will be studied in Phase I under the Access Management Program and in conjunction with the Glasgow Avenue Main Street planning study.
- ◆ 2000 Site H – US 40, SR 72 to Becks Woods Drive: The accident patterns were scattered, with no pattern or consistent cause. The construction of the US 40 / SR 72 intersection improvements occurred during this period, which could have resulted in a higher-than-normal accident rate. There is no recommendation at this time.
- ◆ 2000 Site O – Hamburg Road, SR 9 to SR 1: Recommendations included minor signing and marking improvements, which were handed off to DeIDOT's Traffic Engineering and Management Section.
- ◆ 2000 Site X – Old Baltimore Pike, Albe Drive to Canoe Club Road: Accident patterns suggested the need for a coordinated signal system for the entire corridor. The Old Baltimore Pike study, recommended in the Plan, will further refine the recommendations.
- ◆ 2000 Site Z – SR 72, Connell Drive to Road 400: Accident patterns suggested minor capacity improvements are needed. Existing developer agreements will fund needed transportation improvements in this area.
- ◆ 2000 Site DD – SR 273, SR 1 to Edinburgh Drive: Recommendations included safety and capacity improvements at select intersections. An improvement study will be initiated in 2001.
- ◆ 2001 Site T – Old Baltimore Pike, Coochs Bridge Road to Albe Drive: This site is currently under study by the HSIP review team.
- ◆ 2001 Site AA – SR 72, US 13 to Sunnyside Lane: This site is currently under study by the HSIP review team.



## Route 40 Corridor Improvements

### Review of Safety Trends in the Corridor

Accident data were compiled for 21 road segments in the corridor to determine if there are other accident clusters that are not reflected in the Highway Safety Improvement Program that are in need of further study. Five years of data were compiled for each site covering the period from October 1995 through September 2000, the most recent recorded data available. A yearly average was developed for the first four years of data for each of the categories of accident reports and compared to the total accidents in the latest year. Those accident types by location that had an abnormally high increase are highlighted in bold type with the screening criteria being:

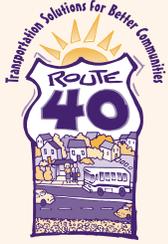
- ◆ 25% or greater increase when the average number of annual accidents was five or greater.
- ◆ 50% or greater increase when the average number of annual accidents was between two and five.

The nine locations that had an abnormally high increase were:

- ◆ US 40 - Maryland state line to US 13
- ◆ SR 896 - Porter Road to Old Baltimore Pike
- ◆ SR 7 - SR 71 to SR 273
- ◆ SR 72 - SR 71 to Reybold Road
- ◆ Old Baltimore Pike - SR 72 to SR 273
- ◆ Salem Church Road - US 40 to Old Baltimore Pike
- ◆ Walther Road - US 40 to Old Baltimore Pike
- ◆ Route 40 @ US 13
- ◆ Wilton Boulevard

Accident studies are underway to determine the reasons for the abnormal accident rates and whether any changes to the Plan are suggested.

In fall 2000, the Route 40 Steering Committee was made aware that a fatal accident involving a pedestrian occurred near the US40 / Church Road intersection. According to police reports, the pedestrian was intoxicated. This is a site where four fatal accidents have occurred over a five-year period, with three occurring in 1998 alone, not including the most recent one mentioned above. Roadway lighting was installed in 1999 as part of bus stop improvements at the intersection to increase driver awareness of pedestrians crossing US 40. This improvement was deemed by the Delaware State Police to be a significant deterrent to future accidents.



## Route 40 Corridor Improvements

### TRANSIT Service and Ridership

The Route 40 Corridor transit services continue to have the highest rate of ridership and growth in New Castle County. During 2000, DART First State implemented two service changes in New Castle County that improved existing service and initiated the first phase of the transit recommendations included in the Plan.

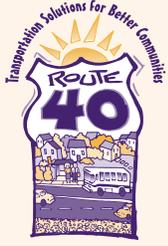
#### April 3, 2000 Service Changes:

- ◆ Route 40 (became 40 and 41)
  - Minor schedule adjustments to increase on-time performance and complement customer needs
  - Saturday service implemented in August 1999 continues to perform extremely well
  - Average weekday ridership – 900/day; average Saturday ridership – 400/day
- ◆ Route 54
  - Minor schedule adjustments to increase on-time performance and complement customer needs
  - During peak hour trips, larger vehicles added to accommodate customer demand
  - Average weekday ridership – 300/day
- ◆ Route 55
  - During peak hour trips, larger vehicles added to accommodate customer demand
  - Average weekday ridership – 270/day

#### December 11, 2000 Service Changes:

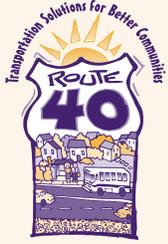
Although the ridership numbers are from historically low ridership months (December, January, and February), they do show the new services are performing well.

- ◆ Route 40
  - All trips will now operate as local to provide better service
  - Two new routes added during peak to meet customer demand and alleviate overcrowding
  - Saturday service continues to grow
  - Average weekday ridership – 700/day



## Route 40 Corridor Improvements

- ◆ NEW Route 41
  - Limited stop service added during peak hours to provide convenient service to Wilmington for customers boarding along US 40
  - Average weekday ridership – 120/day
  - Initial reports and field observations indicate new service is performing well and that customers are pleased with this alternative new service, which was designed to better meet their commute needs
- ◆ NEW Route 42
  - Two morning and two evening peak trips provide express service from Peoples Plaza to Wilmington along SR 896 and I-95
  - Initial reports and field observations indicate new service is performing well and that customers are pleased with this alternative new service, which was designed to better meet their commute needs
  - Average weekday ridership – 120/day
- ◆ Route 54
  - Minor schedule adjustments to increase on-time performance and complement customer needs
  - Larger vehicles added throughout the day to accommodate customer demand
  - Average weekday ridership – 300/day
- ◆ Route 55
  - Service on this route was originally slated to be cut, but through overwhelming community support it was retained and continues to grow
  - Larger vehicles used during peak to meet customer demand
  - Average weekday ridership – 700/day
- ◆ NEW Route 64
  - This is a local feeder that serves the neighborhoods between Governors Square and Fox Run Shopping Centers between 6AM and 6PM
  - Provides local service without the need to cross the highway, with transfers to bus Routes 40 & 41 for service to Wilmington
  - Average weekly ridership – 60/day
  - Operators on this route have experienced difficulty exiting Becks Woods Drive in the AM, eastbound direction only. This has resulted in a service adjustment. Buses are no longer entering Becks Woods from the eastbound direction.

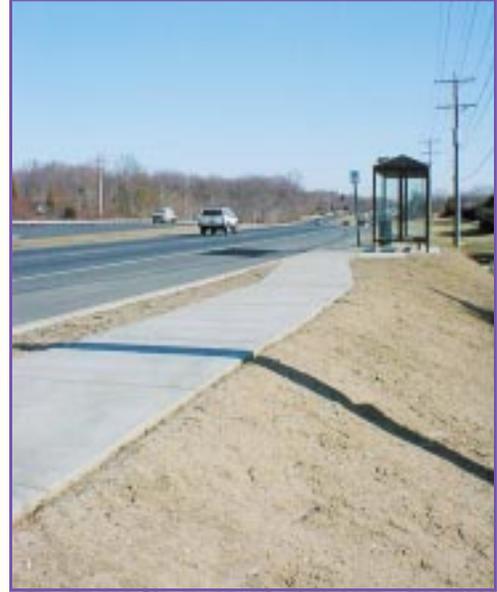


## Route 40 Corridor Improvements

### Bus Stop Improvements

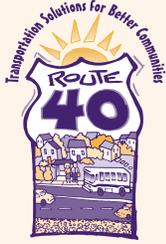
During 2000, a number of bus stops were improved to provide better accessibility and amenities. DART First State and DelDOT plan to improve additional stops in the Corridor and are working with the New Castle County Department of Land Use to ensure that developers provide access to bus stops and amenities when proposing new development.

To date, eight new bus shelters have been installed along the corridor. Safety has been enhanced at four major bus stops (Glasgow Pines, Fox Run Shopping Center, Buckley, and Salem Church Road) through the installation of sidewalks, crosswalks and pedestrian signals.



### Mid-County Facility

DTC has selected a 31-acre site for its new Mid-County Facility southwest of the intersection of US 13 and DE 72. This facility, as recommended by the Transit Working Group, will help provide better reliability for service in the area. The proposed maintenance and operations facility will include a one-story operations building for maintenance, a fueling facility, a bus wash building, administrative space, and parking for 96 buses. The facility should be operational in FY 2003.



## Route 40 Corridor Improvements

### REGIONAL Highway and Transit Projects

During meetings with the Steering Committee, two major regional projects were mentioned as having a potential impact on the Route 40 Corridor: widening of I-95 and the US 301 project. Through discussions with DelDOT, review of the CIP, and review of WILMAPCO's 2025 Metropolitan Transportation Plan (MTP), the status of both is described below.

#### Widening of I-95 (MD/DE Line to SR 1)

This segment of I-95 is not projected to be widened until the 2016-2025 time period, based on the MTP. The widening is projected to add one lane in each direction from the Maryland state line to SR 1. There is nothing to report on in terms of planning or design efforts.

#### Widening of I-95 (SR 1 to I-295)

This segment of I-95 is not projected to be widened until the 2006-2015 time period, based on the MTP. The widening is projected to add one lane in each direction from SR 1 to I-295. There is nothing to report on in terms of planning or design efforts.

#### SR 1 / I-95 Interchange Improvements

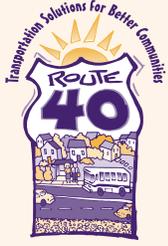
This interchange is not projected for improvements until the 2006-2015 time period, based on the MTP. The improvements are projected to provide two-lane ramps to and from the south. Planning efforts have recently been initiated.

#### Widening of SR 1 (US 13 to I-95)

This segment of SR 1 is not projected to be widened until the 2016-2025 time period, based on the MTP. The widening is projected to add one lane in each direction from US 13 to I-95. There is nothing to report in terms of planning or design efforts.

#### US 301 Project

The Major Investment Study (MIS) for this project was completed in January 2000; implementation of the study recommendations is pending. The only project currently in the MTP and scheduled for the near years (2001-2005) is Newtown Road, from SR 896 to SR 72. This would be a new two-lane road with widening of SR 72 to four lanes from Reybold Road to Old Baltimore Pike. Although this project is scheduled for the near term in the MTP, it is neither in design nor incorporated into the CIP.

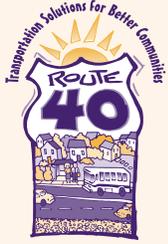


## Route 40 Corridor Improvements

### Elkton-Glasgow Bus Route

Effective October 2, 2000, DART First State's Bus Route 40 connects to the Cecil County Transportation Service and its Department of Aging bus route, "The Bus," with service to Elkton, Maryland. Cecil County riders can now transfer at Peoples Plaza in Glasgow to DART First State's Route 40 with service to Christiana Mall and Wilmington's Rodney Square.

The Elkton-Glasgow route operates weekdays from 8 AM to 4 PM. Initial reports indicate the service is doing well, offering Cecil County residents opportunities for shopping both inside and outside the Corridor.



## Route 40 Corridor Improvements

### STATUS of Projects in Design

#### Church Road (N382, US 40 to Wynnefield)

The first public workshop for Church Road was held on August 23, 1999. Following that workshop, along with numerous meetings with local residents, the initial improvements to Church Road were reevaluated to reduce the overall width by two lanes through providing a new connector road to US 40. This connector road will provide access to the Queensbury Village development and will intersect with Church Road south of the Leasure School and with US 40 east of the Leasure School.



Eden Square turn lane extension (looking west)

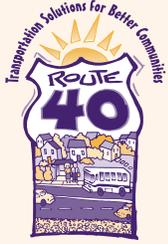
A second workshop was held on June 15, 2000 to present this new alternative to the public. With majority approval from the attendees, design is in progress. More detail is being developed, including stormwater management facilities, location of relocated utilities, and final right of way requirements.

#### SR 7, south of US 40 to Newtown Road

This project was part of transportation improvements required as part of an agreement between DeIDOT and First USA, a bank planning to develop 106 acres on the east side of SR 7. When First USA withdrew their plans to develop the site, the Department committed to building this project. DeIDOT has since committed Phase I funds to restart design, which had been halted at the semi-final stage. A design consultant was issued notice to proceed by DeIDOT in January 2001. Construction is expected to begin in 2002.

#### SR 7, Newtown Road to SR 273

This project was initiated to address Steering Committee concerns about traffic volumes in the area and for compatibility with transportation improvements for the development of the First USA site (SR 7, south of Route 40 to Newtown Road and the Newtown Road interchange on SR 1). Concept plans are currently being developed. A concept plan public workshop is anticipated to be held in summer 2001.



## Route 40 Corridor Improvements

### STATUS and Impact of Implemented Projects

#### Short Term Improvements Project (Route 40 Action Team Recommendations)

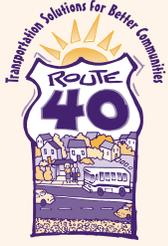
The Short Term Improvements Project was initiated by DelDOT as a result of recommendations from the Steering Committee to address traffic, pedestrian and transit safety/operations issues of immediate concern throughout the corridor. Two of the locations are now significantly improved from previous conditions. The first location, the entrance into Eden Square, was the site of an awkward weaving condition from the SR 1 southbound ramp. Through the completion of the new turn lane extension into Eden Square and associated SR 1 off-ramp improvements, this weaving condition has been addressed.



Intersection improvement at SR 7/ SR 273 (Looking East)

The second location, the intersection of Buckley Boulevard and Route 40, was the site of many vehicle turning conflicts in the median opening. The Buckley Civic Association requested that a signal be installed to better control traffic entering and exiting their community through the median opening on US 40. In order to determine if conditions at the intersection met national standards for a traffic signal, the Project Team conducted a signal warrant study and agreed that the warrants were indeed met. The signal is now operating and observations indicate a dramatic improvement in traffic operations and safety at the intersection.

The remaining improvement locations consist primarily of sidewalk and intersection crosswalk installations. These improvements will serve to improve pedestrian safety and connectivity to existing transit stops and development adjacent to US 40. Construction at these locations was completed in spring 2001.



## Route 40 Corridor Improvements

### SR 7/SR 273 Intersection Improvement Project

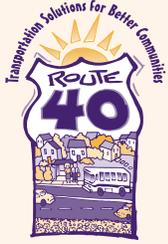
This project, implemented under the Churchmans Crossing Transportation Improvements Program, is now complete. The scope of the project involved adding an additional left turn lane in the median of the westbound SR 273 approach. This work resulted in improvement of the PM peak hour level of service from “F” to “D.”

### Pleasant Valley Road / Frazer Road Realignment Study

One recommendation of the Route 40 Plan was a detailed study of the intersections of Pleasant Valley Road and Frazer Road with US 40. The two side roads currently intersect US 40 about 1,650 feet apart, creating a dogleg for north-south travel. The purpose of this study, initiated by the Bear-Glasgow Council of Civic Organizations through the Route 40 Steering Committee, was to determine whether there was significant benefit to realigning Pleasant Valley Road and/or Frazer Road to meet at a common intersection on US 40.

The study was set into motion when St. Margaret of Scotland parish submitted an application for development of a church and school on the south side of US 40 between Pleasant Valley Road and Frazer Road. The study was undertaken to ensure that development of the parcel did not eliminate a beneficial realignment alternative.

A purpose and need study for the project was submitted to DeIDOT in November 2000. Based on detailed traffic analyses, as well as consideration of other potential elements of project need, there did not appear to be a need to realign the intersections of Pleasant Valley Road and Frazer Road with US 40 to create a single intersection. Any minimal benefits that may be gained by providing a continuous north-south collector route do not appear to merit right of way acquisition, construction costs, and potential environmental impacts associated with the realignment.



## Route 40 Corridor Improvements

### Old Baltimore Pike Bicycle Lanes

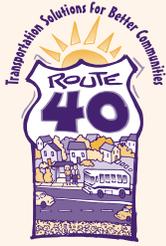
Phase I of the Plan recommended implementation of sidepaths along Old Baltimore Pike between SR 72 and SR 273. These sidepaths would provide bicycle and pedestrian access to and from the numerous residential communities that have been developed with direct or indirect access to Old Baltimore Pike during the 1990s. At the request of Senator Anthony J. DeLuca, a member of the Route 40 Steering Committee, the Department undertook a short-term project to provide more immediate bicycle access through signing and pavement markings.

Beginning in October 2000, the Project Team developed typical striping modifications and signing treatments that would encourage safe bicycle travel along this relatively high-speed roadway. Right-turn and acceleration lanes were restriped to reflect a better balance between vehicular and bicycle traffic. A traffic study conducted at the south leg of Salem Church Road and Old Baltimore Pike indicated that the second northbound left-turn lane could be removed in the short term, providing a critical link for westbound bicycles between that intersection and Hanna Drive.

Based on these analyses, fast-track plans were prepared for the improvements. During November and December, Department crews installed new pavement markings and signs, which are now complete.

### Becks Woods Traffic Calming Project

This project was identified by the Action Teams during the Plan development process. The Action Teams recommended installing traffic calming devices to slow down drivers on Beck Woods Drive. DeIDOT kicked off the project in December 2000 with the first meeting of the Traffic Committee. The committee is composed of community members, DeIDOT, and consultant staff. The committee is continuing to meet in 2001, working towards a public workshop in early fall 2001.



## Route 40 Corridor Improvements

# TRIGGERING

## ASSESSMENT of Monitored Conditions

Generally, conditions in the corridor did not change significantly in 2000. Average daily traffic volumes remained steady and intersection levels of service, with the exception of the intersections of US 40 with SR 896, SR 72, and SR 7, remained acceptable.

There were 15 major, 18 minor, and 19 resubdivision land development proposals submitted to New Castle County for review; however, there were no major land development proposals that were not already anticipated in the Plan. The Project Team is in the process of developing methods of comparing total development levels with those contained in the 2020 model used to develop future travel forecasts for the Plan, as noted in the Land Development Section.

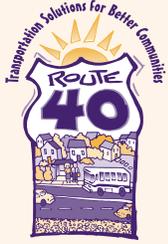
There were six HSIP sites studied in 2000. For three of these sites, more detailed studies will be undertaken this coming year to determine the nature of needed improvements. Sites A & X will be studied by the Project Team and the Site DD will be studied by the HSIP Review Team. There were two new HSIP sites identified in the Corridor in the 2001 program, and studies are underway to identify if any spot improvements are justified. A comparative analysis of annual accidents on 21 road segments suggested the need for additional studies of nine segments.

Concept design studies identified the need to deny access to/from US 40 and Rickey Boulevard for the proposed Fox Run Section V development (a conceptual plan was submitted to NCC) to preserve future options to construct the Norfolk Southern grade separation. DelDOT is preparing for negotiation with the property owner which could result in the need to purchase part or all of this parcel.

Recent transit improvements are generally working well, although a service adjustment may be needed to Route 64 to address difficulties experienced by operators turning left from the Becks Woods community.

There are no regional highway or transit projects planned that would trigger the need for improvements in the Route 40 corridor.

Based on all of the foregoing considerations, the following recommendations are made in response to corridor monitoring efforts:

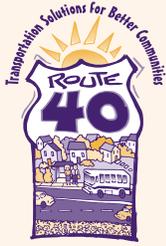


## Route 40 Corridor Improvements

### RECOMMENDATIONS

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- ◆ Continue funding of the Route 40 program in FY 2006 – FY 2008 to begin work on Phase II of the program. Note that because expensive projects are still recommended for Phase II (including US 40 widening and interchanges at SR 896 and SR 7), funding levels are recommended to increase per year to fund later years of program. This is estimated at about \$20 million per year beginning in FY 2008, not including additional funding through developer contributions.
- ◆ Maintain funding for SR 7 between US 40 and Newtown Road, as well as the Eden Square Connector, to alleviate capacity deficiencies at the US 40/SR 7 intersection. Construction of these two projects is currently scheduled for FY 2002-2003. Conceptual design for an interchange at SR 7 is currently underway.
- ◆ Maintain funding for improvements at US 40 and SR 72 including additional through lanes on SR 72 near the intersection, to alleviate capacity deficiencies. Construction is currently scheduled for FY 2005.
- ◆ Study opportunities for short-term signal timing changes at US 40 and SR 896 and continue concept design for a potential interchange. If next year's counts confirm LOS E, the CMC could recommend that interchange construction be moved to the beginning of Phase II.
- ◆ Investigate reasons for abnormal average annual accident increases on nine identified road segments.
- ◆ Continue to work with the Delaware State Police and the Office of Highway Safety on measures to reduce corridor-wide accidents.
- ◆ Monitor the effectiveness of safety improvements already implemented at SR 896 and consider additional improvements.
- ◆ Potentially revise the proposed Phase I implementation budget to provide enough funding for purchase of the former Fox Run V parcel, in order to preserve right-of-way for the US 40/Norfolk Southern grade separation.
- ◆ Consider improvements to DART Route 64 operations at Becks Woods Drive.



## Route 40 Corridor Improvements

# PUBLIC INVOLVEMENT

## ACTIVITIES during 2000

In an ongoing effort to keep the residents of the Route 40 Corridor informed of the decisions and progress made by the Route 40 Steering Committee, the following public involvement initiatives were undertaken during 2000.

**Newsletters**—The project team produced two Route 40 Corridor newsletters. The January 2000 issue was sent to approximately 975 residents, businesses and stakeholders on the mailing list. The January newsletter was also distributed to banks, shopping centers, post offices and other public locations along the Route 40 Corridor.



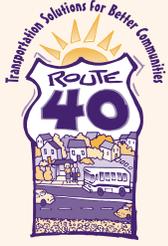
Topics covered in the January issue of the newsletter included:

- ◆ a report on the September 8, 1999 public workshop,
- ◆ recommendations for improvements from the Pedestrian/Bicycle and Transit Working Groups,
- ◆ winners of the Route 40 Before and After poster contest, and
- ◆ a brief description of the alternative improvement scenarios.

The second newsletter, dated August 2000, was sent to 100% of the Corridor's approximately 25,000 residents and businesses, and to the Route 40 mailing list. The August 2000 newsletter announced the adoption of the Plan by the Steering Committee and provided a report on the May 3 public workshop. This issue outlined the improvements that will be phased in over the next 20 years.

**Public Workshop**—Corridor residents were given the opportunity to receive information and express their opinions at a public workshop held on May 3<sup>rd</sup> at Hodgson Vo-Tech High School. Featured at the workshop was the draft 20-year long range transportation plan. Over 150 people attended the workshop. Some had suggestions for the Plan, but generally those attending liked what was being recommended.

**Presentations to Local Community Groups**—The Project Team made many presentations throughout the year to various interested groups, including the Bear-Glasgow



## Route 40 Corridor Improvements

Council, the 7 & 40 Alliance and WILMAPCO's Public Advisory and Technical Advisory Committees.

**Public Workshop Mailings**—Throughout the year, notices of DelDOT public workshops that were being held in the Route 40 Corridor project area were sent to the Route 40 mailing list. This provided interested stakeholders an opportunity to attend and provide feedback to DelDOT about various projects.

**Project Office**—A project office was established and staffed by members of the Project Team on the second Thursday of each month from 4 until 8PM at the Bear Library. The project office offered area residents the opportunity to view exhibits and talk with Project Team members in a casual atmosphere. The project office was discontinued in the summer of 2000.

**Web site, E-Mail, Project Mailing Address & Telephone Hotline**—A Route 40 Corridor Web site ([www.deldot.net/rt40](http://www.deldot.net/rt40)) was created and maintained throughout the Plan development process. The Web site contained information from the newsletters, updates on construction, details on the long range transportation plan and a schedule of public meetings and workshops. An e-mail address was published on the Web site and in the newsletters to provide corridor residents a means of communicating directly with DelDOT Project Team members. Also, a project post office box was established and a telephone "hotline" was set up to provide residents with another opportunity to comment or ask questions.

### **Route 40 Corridor Improvements**

PO Box 1489

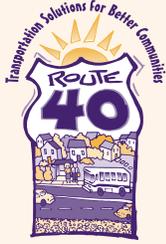
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**Local Press Exposure**—Several articles were published in the *Route 40 Flier* and the *News Journal*, giving added exposure to the accomplishments of the Steering Committee.



## Route 40 Corridor Improvements

### ACTIVITIES planned for 2001

To ensure the community is kept up-to-date and involved in the progress of transportation improvements in the Route 40 Corridor, the Project Team has put in place the following communications initiatives for 2001:

**Local Press Initiatives**—The local newspaper, the *Route 40 Flier*, has agreed to devote space once a month to current or upcoming transportation projects in the corridor. The Project Team will provide the paper with a list of current and upcoming projects. This will keep residents up to date on activities as they happen.

**Newsletter**—Details of the Corridor Monitoring and Triggering Report will be provided in a newsletter format and distributed prior to the CMC annual workshop. This will be sent to 100% of corridor residents list (approximately 26,000 addresses) and to the Route 40 mailing list.

**Website**—The Route 40 website will be maintained and updated on a quarterly or an as-needed basis to make sure all information is current and relevant.

**Public Workshops**—The Corridor Monitoring Committee will keep residents apprised of corridor improvement projects through an annual public workshop. Corridor residents will have the opportunity to view exhibits detailing the progress of projects, as well as ask questions of Corridor Monitoring Committee and Project Team members. Additional workshops will be held throughout the Corridor as individual projects from the Plan proceed through the design process.

**Stakeholder Updates/Public Notice Mailings**—Interested stakeholders (the CMC, former Route 40 Steering Committee Members, elected officials, civic associations and residents on the mailing list) will receive periodic updates as projects from the Plan are implemented. In addition, notices for public workshops or hearings for projects in the Corridor will also be sent to these stakeholders.

**E-Mail, Project Mailing Address & Telephone Hotline**—Residents will still be able to communicate with the Project Team through various channels—e-mail, mailing address or telephone.

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## CRITERIA FOR MAJOR VS. MINOR DEVELOPMENT PLANS

CRITERIA <sup>1</sup>	MAJOR	MINOR
Public/Private Street	New/Dedicated	None
Building (Sq. Ft. GFA)		
Undeveloped Site	<ul style="list-style-type: none"> <li>• 20,000 or more</li> </ul>	< 20,000
Developed Site	<ul style="list-style-type: none"> <li>• Additional 10% or <math>\geq</math> 50,000</li> </ul>	10% or < 50,000
Subdivision	<ul style="list-style-type: none"> <li>• 5 lots or more</li> </ul>	< 5 lots
Apartment/Multi-Family Dwelling Unit	<ul style="list-style-type: none"> <li>• 10 lots or more</li> </ul>	< 10 lots
Special	N/A	See Note 2

1. One or more need to be met

2. Development that would be considered a major land development in industrial or office parks for which a previous record major plan has been recorded to establish lots and otherwise depict the overall limits of development provided that no special studies are required for approval e.g. TIS, CNA, floodplain application, WRPA, subsidence. The project must be such that any issues or concerns are minor in nature and can be evaluated without the necessity of TAC review.

Additions of any size to existing institutional facilities provided that no special studies are required for approval e.g. TIS, CNA, floodplain application, WRPA, subsidence. The project must be such that any issues or concerns are minor in nature and can be evaluated without the necessity of TAC review.

## LINK VOLUMES - AVERAGE DAILY TRAFFIC COUNT (ADT)

ROUTE 40 LOCATIONS	PLAN COUNT (1996-2000)	2001 COUNT	2020 (FORECASTS)
MD / DE Line to SR 896	34,000	29,000	48,000
SR 896 to SR 72	29,000	27,000	50,000
SR 72 to Salem Church Road	32,000	34,000	52,000
Salem Church Road to Walther Road	41,000	43,000	58,000
Walther Road to US 13	27,000	27,000	33,000

Table 2

## SIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS) SUMMARY

INTERSECTION	PEAK HOUR (LOS)					
	Base (1998/1999)		2001		2020 w/o the plan	
	AM	PM	AM	PM	AM	PM
Pleasant Valley Road	C	C	C	C	F	F
Perch Creek Drive	-	-	B	A	-	-
Peoples Plaza north	B	C	A	B	B	C
Peoples Plaza south	B	B	B	C	B	C
Glasgow Avenue north	C	C	C	C	C	F
Glasgow Avenue south	C	D	B	C	C	E
SR 896	D	D	D	E	F	F
SR 72	D	D	E	E	F	F
Scotland Drive	C	B	B	B	D	E
Salem Church/Porter Rd	C	C	D	D	D	F
Brookmont Drive	B	B	B	B	B	E
Church Road	D	C	D	C	E	F
Walther Road	C	D	D	D	F	F
Governors Square	B	C	C	C	C	E
SR 7/Eden Square	E	D	E	D	F	F
SR 1 SB Ramps	A	A	A	A	A	B
SR 1 NB Ramps	B	B	B	A	B	E
Buckley Boulevard	-	-	B	B	-	-
School Bell Road	B	B	C	A	B	C
Wilton Boulevard	B	B	C	C	C	F
US 13	D	B	C	B	F	F

Table 3

<sup>1</sup> Different analysis methods may produce different results for the same intersection (i.e. Traffic Impact Studies). The methods used for these analyses were the latest accepted methods for calculating levels of service in effect at the time.

<sup>2</sup> Analysis performed using the 1994 edition of the Highway Capacity Manual.

<sup>3</sup> Analysis performed using the 1998 edition of the Highway Capacity Manual.



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