## A. UNDERSTANDING OF THE PROJECT AND WORK PLAN

### Understanding of the Project

The purpose of the study is to examine traffic using Alternate US Route 113 (US 113A), also known as South State Street, to:

- Determine its origin and destination,
- Determine causes for the existing travel patterns,
- Develop strategies for encouraging use of alternate parallel facilities.

The study will also assess current and future access to downtown Dover and determine its impact on US 113A. Strategies will be developed for managing the area's future transportation needs, including safety, the provision of alternate modes of travel and the diversion of through traffic.

### Study Area

The study area is bounded by Little Creek Road to the north, US Route 113 (US 113) and DE Routes 1 to the east, US 113A to Little Heaven to the south and US Route 13 (US 13) and US 113A to the west. Figure 1 shows a Location Map with the study area limits plotted. The study area includes the east-central portion of Kent County, encompassing southeast Dover, east Camden, and Magnolia. Within the study area, US 13, SR 1, US 113 and US 113A, similar to spokes in a wheel, serve as the primary access to the City of Dover. Route 10 traverses through the center of the study area in an east to west direction. Each roadway funnels all regional and local traffic from the south towards this center of employment, commerce, governmental and institutional services. The study area includes roughly a 7-mile stretch of US 113A from Division Street in Central Dover to Little Heaven. This corridor is comprised of vastly differing land uses ranging from small town urban characteristics in the City of Dover to suburban and rural landscapes south of the city limits.

### Scope of Work

Because it is anticipated that the study will be used as a basis for determining future land use strategies and transportation improvements, we plan to approach the project in a manner similar to that of a Needs Study.

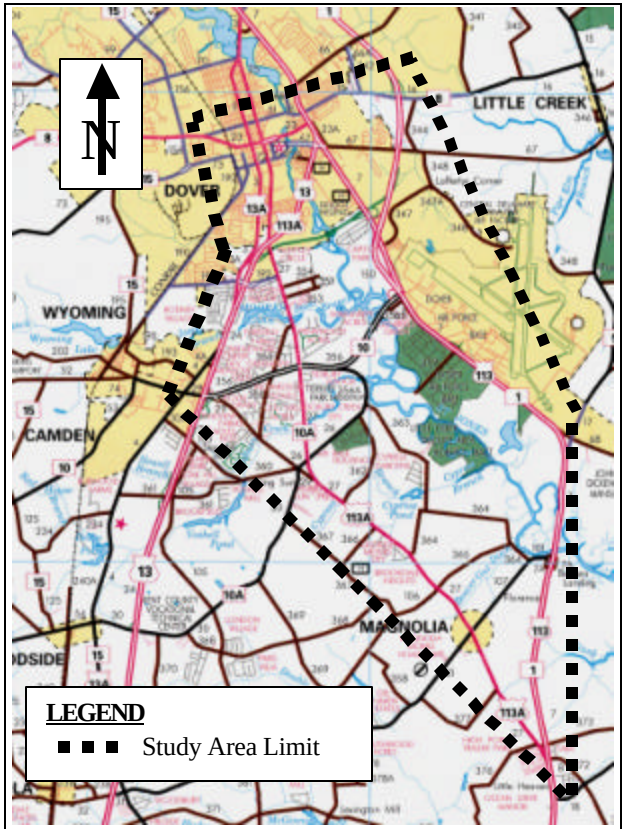


Figure 1. Study Area

We believe the critical challenge associated with this project is the acceptance by the local community of the study methods and results. Transportation studies are best conducted in a step by step manner with active community and agency involvement. In this manner, the public and reviewing agencies become owners of the project. Active involvement of these stakeholders ensures the diverse concerns of the community and reviewing agencies are addressed at an early stage. Effective involvement of the stakeholders will enable the project to move forward and eliminate "show stoppers" that, if identified too late in the process, might affect the project schedule.

As such, we propose to complete the study using a step by step approach that divides each project phase into tasks. Each task contains a number of 'subtasks' which defines the technical work, the work products and involvement of the reviewing agencies and public. We believe this approach will best fulfill the needs of the MPO.

## Work Plan

We propose to conduct the study following the task list developed by the MPO to include:

- Task 1. Establish Steering Committees and Project Kick-off (N/A)
- Task 2. Define Study Area and Data Collection
- Task 3. Analysis of Existing and Future No Build Conditions
- Task 4. Develop and Analyze Improvement Alternatives
- Task 5. Develop Project Report

Because of the importance of the public involvement process to the overall success of the project, we have identified key meetings within each specific task. A detailed discussion of the public involvement process, entitled Agency and Public Coordination, is located Section B of this document.

### Task 1. Establish Steering Committee and Project Kickoff

Discussion for the task is also included in Section B. Public and Agency Coordination. Based on our input presented in this writeup, we have not included any manhours in this proposal to set up Committee, but, have assumed that the MPO will coordinate the members of this group.

### Task 2. Define Study Area and Data Collection

Upon completion of Task 1 we will begin data collection efforts for the study.

### Task 2A. Define Project Study Area

The Study Area has been defined within the RFP and described in Century's Statement of Qualifications dated December 10, 1999. No manhours are included in this proposal to complete this task.

### Task 2B. Traffic Data

The collection of existing Traffic Data is described in our subconsultant, Landmark Engineering proposal attached herein.

### Task 2C. Land Use Data

The collection of Land Use Data is described in our subconsultant, Landmark Engineering proposal attached herein.

### Task 2D: Origin and Destination Survey

An origin and destination survey (O-D survey) will provide valuable information in establishing both the travel patterns in the study area and also the need for improvements.

We propose to conduct a license plate survey within the study area. This type of survey can be used to determine the travel patterns within the study area as vehicles traveling along a route are tracked. Personnel located at strategic locations within the study area record the State and last digits of vehicles license plate as travel through the study area. This same information is collected at points where the vehicles leave the corridor; the data is correlated and travel patterns determined. License plates will be matched by Century's traffic engineer/technician while collating the data after the field work has been completed. We have assumed that there would be approximately ten (10) entry/exit locations at the borders of the study area, with each location staffed by two individuals for a period from 6 a.m. to 6 p.m. for one day. These locations will be presented and approved by DelDOT prior to beginning the study.

### Task 3. Analysis of Existing and Future No-Build Conditions

This task consists of four parts:

- Analysis of Existing Traffic Conditions
- Projection of Future Traffic Volumes (No-Build)
- Analysis of Future Traffic Conditions (No-Build)
- Develop the Preliminary Project Report

### Task 3A. Analysis of Existing Traffic Conditions

In this task, we will determine the existing levels of service and travel patterns at the key intersections and roadway segments within the study area. In addition, we will identify deficiencies in the existing transportation system such as geometry, transit, bicycle and pedestrian facilities. This analysis

provides the basis by which the impacts of future land use and network improvements are determined.

Analysis of the roadway links and signalized and unsignalized intersections will be performed using the *1997 Highway Capacity Manual* published by the Transportation Research Board. We will develop tables showing the levels of service during each analysis period. Concurrently, we will create trip tables using the results of the O&D study and, possibly, the DelDOT TAZones tables to quantify the origin, destination, and direction of motorists along the US 113A corridor. This data is critical in determining the extent of local and regional traffic in the corridor. Finally, we will develop a land use map showing the extent of approved and committed developments within the study area and develop projections of other developments likely to occur within the study area consistent with the current zoning and comprehensive plans.

We will meet with the MPO and stakeholders to review the results of our work. The purpose of the meeting will be to achieve consensus with respect to identified travel patterns, levels of service, roadway deficiencies and the level and location of development to be used in future tasks. As these elements provide the basis for the projection of future traffic volumes, we believe it is important that consensus be achieved among the parties.

**Task 3B. Projection of Future Traffic Volumes (No-Build)**

All traffic projections will be completed by DelDOT and not included in the scope of work herein. Projections will need to be completed by DelDOT in a timely fashion to maintain the schedule that has been set. Century will review the traffic projections for appropriateness and coordinate with DelDOT as required.

**Task 3C. Analysis of Future Traffic Conditions (No-Build)**

Once projection of the volumes is complete we will conduct detailed analyses on not more than twenty (20) intersections using the projected "No-Build" volumes to identify deficiencies within the system. The volumes generated and the resultant levels-of-service will provide the baseline values by which the improvement alternatives can be evaluated and compared against one another. Appropriate graphics demonstrating traffic volumes, levels of service and system deficiencies will be developed. Once this is complete, we will meet with the MPO and interested stakeholders in order to review our projections, including generation and assignments, to develop a consensus. The volumes generated in this task form the basis for the future traffic analyses and the development of improvement alternatives. Therefore, it is important that the parties agree with the data and assumptions used to develop the future volumes.

**Task 3D. Develop the Preliminary Project Report**

The Preliminary Project Report will document the work completed and results of the study through Task 3. The report will describe the process used to determine existing and future base traffic volumes, travel patterns, land use projections, and existing and future conditions (levels of service). Graphics including level of service diagrams, maps showing the locations of future developments and distribution and assignment figures for the developments will be included in the report. Generally the outline of the report will include:

I. Introduction
   A. Project Purpose
   B. Scope of Work
   C. Project Goals and Objectives
II. Existing Traffic Conditions
   A. Existing Transportation Facilities
   B. Existing Traffic Conditions
      1. Traffic Volumes
      2. Traffic Patterns
      3. Levels of Service
III. Land Use Analysis
   A. Land Use, Zoning and Comprehensive Plans
   B. Projections of Future Land Use and Development
IV. Future Traffic Analysis (No-Build)
   A. Projection of Future Traffic Volumes
   B. Analysis of Future Traffic Conditions
      1. Levels of Service
      2. Identified Deficiencies

The Preliminary Project Report will be presented to the MPO, DelDOT and Kent County Planning for review and comment. Once comments are received from each party, the report will be revised and submitted to the Stakeholders and presented at the Public Meeting. One unbound original and

one electronic copy will be submitted to the MPO for their distribution to all parties (i.e. DelDOT, Planning, the Stakeholders and x number of copies for public review).

**Task 4. Develop and Analyze Improvement Alternatives**

Following the second public workshop we will hold a meeting with the MPO and stakeholders to discuss the comments and improvement options expressed by the community. The purpose of this meeting will also be to receive final comments on the Preliminary Project Report and to reach consensus on the options that should be advanced for consideration under this task. Once consensus is reached with respect to the results of the Phase 1 work, we will undertake alternative analysis.

**Task 4A. Define Improvement Alternatives**

This task involves defining the improvement options provided through the public workshop and stakeholders meetings. The improvements will be generally evaluated for their ability to provide relief of existing deficiencies, access to the central business district of Dover, ability to divert traffic from this corridor to other parallel facilities and increased safety and mobility. We believe the alternatives will fall into three categories: Congestion Management Strategies (CMS), Transportation Network Improvements and Legislative.

Congestion management is a series of strategies or improvements that better utilize the capacity of the existing transportation system through the implementation of reasonable cost-effective improvements or by reducing the number of vehicles on the roadway. Generally the strategies consist of:

- New or Improved Public Transportation Service
- Employer Trip Reduction Programs
- Staggering of Work Hours
- Carpooling/ Vanpooling Programs
- Parking Management
- Operational Improvements/ Bottleneck Elimination.

While not all of these strategies may be applicable to the project we believe new and improved public transportation service and operational improvements (bottleneck elimination) could provide solutions to deficiencies identified by the study. Regarding new and improved public transportation service, we will work with DTC staff to identify the need for new or improved services along the corridor. This evaluation will include new stops along the roadway, construction of facilities such as bus stop pads, shelters and pullover lanes to construction of new or improved existing park and ride facilities.

Operational improvements consist of low cost intersection, signal and signing improvements. The types of improvements that are typical include spot intersection improvements, sidewalk and bicycle lane construction, signal coordination and timing and signing improvements. With the results of the traffic analysis, we will identify low cost improvements that will provide for increased mobility and safety along the corridor. To the end that the community desires US 113A to carry local trips, this could also include evaluation of directional signing changes to keep the more regionally oriented traffic on existing parallel routes.

Transportation Network Improvements consist of larger scale corridor improvements including roadway widening and construction of new alignments.

Legislative elements could consist of updated and revised land use controls and implementation of access management policies along the corridor. This category could even consist of requiring employer trip reduction programs, staggering of work hours and carpooling and vanpooling programs be implemented as part of new and proposed land development.

**Task 4B. Analyze Improvement Alternatives**

Based on the scope limitations of the project, we have assumed that we will retain two (2) improvement options for analysis. DelDOT will complete the required traffic projections and adjustements to the future traffic required for these alternatives. Once the traffic projections are complete, we will conduct detailed analysis of the intersections and roadway segments. Preliminary environmental impacts will also be determined. Volume figures, level-of-service tables, environmental impacts and other related data such as order of magnitude cost estimates will be summarized in order that comparisons can be made between the improvement alternatives as well as the baseline conditions. A list of advantages and disadvantages of each alternative will also be prepared.

Upon completion of this task, we will hold a meeting with the MPO and stakeholders to review the results of the alternative studies. Input will be

received from the group on the improvement options to be recommended as well as the format of the Final Project Report. Following this meeting we will hold the final public workshop. The purpose of the this meeting is to present the work completed under Task 4 and to receive input regarding the recommended alternatives.

**Task 4C. Develop Project Recommendations**

Following the stakeholder meeting and public workshop, we will develop detailed cost estimates for the recommended improvement alternatives. In addition, we will refine other strategies to be instituted along with the proposed improvements.

**Task 4D. Prepare Final Project Report**

The last task to be undertaken will be the preparation of the Final Project Report. This report will document the information presented in the preliminary report (Task 3D) as well as the results of the public meetings, stakeholder meetings and the alternatives analysis. The report will describe the process used to develop the future traffic projections, improvement alternates and recommendations. Graphics including level of service diagrams, maps showing the locations of future developments, distribution and assignment figures for the developments, and improvement alternatives will be included in the report. Generally the outline of the report will include:

I. Introduction
   - A. Project Purpose
   - B. Scope of Work
   - C. Project Goals and Objectives

II. Existing Conditions
   - A. Traffic Conditions
   - B. Land Use/ Socioeconomic Conditions

III. Projections of Future Traffic (No-Build)
   - A. Future Traffic Projections
   - B. Future Traffic Situation
   - C. Definition of Improvement Alternatives

III. Improvement Alternative Evaluation and Selection
   - A. Description of Improvement Alternative
   - B. Analyses of Improvement Alternatives
   - C. Comparison of Improvement Alternatives
   - D. Recommended Improvement Alternative(s)

IV. Implementation Plan
   - A. Define Timing for Improvements and Strategies
   - B. Define Funding Sources for Improvements
     1. Public Funded
     2. Private/ Developer Funded
     3. Policy/ Controls

V. Conclusions and Recommendations

The Final Project Report will be presented to the MPO, DelDOT and Planning for review and comment. Once comments are received from each party, the report will be revised and submitted to the Stakeholders. Once review and comment by the Stakeholders has been received, the report will be revised prior to the Public Meeting. Comments from the Public Hearing will incorporated into the Final Report. One unbound original and one electronic copy will be submitted to the MPO for their distribution to all parties (i.e. DelDOT, Planning, the Stakeholders and x number of copies for public review).

## B. PUBLIC AND AGENCY COORDINATION

We believe one of the critical challenges associated with this project is the acceptance by the local community and the concurrence of the other participating agencies. **The importance of public participation in the process can not be over emphasized.** An active program will ensure that the diverse concerns of the community are identified and addressed at the early stages and throughout the study. The public involvement process is especially critical for projects that might have controversial elements. Residents know their community and can provide valuable information on local conditions. The community, therefore, provides an important role in shaping the process and the critical decisions affecting their communities. Effective public coordination ensures that the project is advanced in a smooth manner, that issues are addressed and that there are no “show stoppers” identified too late in the process that they might affect the study schedule. An effective public involvement program can also minimize

controversy and assist in developing project concurrence through education and understanding of the issues and available solutions.

Given our understanding of the diverse interests within the County and the City of Dover, and differing solutions for an improved transportation system, it is Century's recommendation to begin the public involvement process early in the study. As such, we propose the following components be included in the program:

- Define Project Stakeholders
- Public Meetings/ Workshops
- Special Purpose Meetings
- Communications/Contacts/Other Services

**Define Project Stakeholders**

As described in Task 1 of the work plan, we will work with the MPO to develop a listing of the project stakeholders. We understand the importance of having a diverse group of stakeholders involved the process. Based upon our experience we recommend that both a Technical Advisory Group and a Citizens Advisory Group be formed for the project (hereinafter referred to as the stakeholders). We will conduct an initial meeting of the stakeholders to explain the purpose, scope and parameters of the study and 7 additional meetings throughout the duration of the Study as defined in the detailed scope of work.

A preliminary listing of agencies/ groups that would have representatives includes:

Technical Advisory Group

- Kent County Planning Office
- Kent County Engineering Department
- Kent County Parks & Recreation Department (Tidbury Park)
- City of Dover Planning Office
- City of Dover Public Works Department
- DelDOT Bike/Pedestrian Coordinator
- DelDOT Planning Section
- Delaware Transit Corporation
- DAFB Community Planner
- Caesar Rodney School District
- Kent County Board of Realtors
- Development Community Representative
- Department of Agriculture – Aglands Preservation Section
- Emergency Service Providers

Citizens Advisory Group

- State Representative Appointee from Each Election District (32nd, 33rd and 34th)
- State Senatorial Appointee from each Election District (16th and 17th)
- Levy Court Commissioners (or Appointees) from 2nd, 4th and 5th Levy Court Districts
- Representative from the MPO's Public Advisory Committee

Consult Planning Directors from City of Dover and Kent County for potential candidates for service on this Committee (i.e. local civic leaders, neighborhood association representatives, concerned citizens, etc.)

The meetings will be scheduled and held at a central and convenient location within the study area such as the Charlton and Frear Elementary School, Posthlewait Middle School or the DelDOT Administration Building. We will contact all of the stakeholders, arrange the meeting place and be responsible for other logistical requirements. Meeting minutes will be taken and provided to all members of the group within one week of the meeting. This will ensure any revisions or changes which might affect the direction of the work are made in a timely manner. General agendas for the meetings follows:

**Meeting No. 1 Agenda**

(To be held immediately after Notice to Proceed, Task 1)

- Introduction of the stakeholder members
- Define organizational structure of the group

- Introduction of the consultant team
- Introduction of the study goals and objectives
- Discussion of study scope and parameters
- *Open discussion*

Meeting No. 2 Agenda
(To be held upon completion of Task 2)

- Review of the project goals and objectives
- Summary of first public workshop
- Presentation of the work to date (volumes, land use, existing levels of service, etc.)
- Discussion of the elements of growth (generation rates, distribution, assignments)
- Discussion of generation, distribution, assignment methods
- Parameters for the existing and future conditions analyses
- Open discussion

Meeting No. 3 Agenda
(To be held following Task 3A)

- Review of the project goals and objectives
- Presentation of work to date
- Discussion of existing traffic and land use conditions
- Open discussion

Meeting No. 4 Agenda
(To be held following Task 3C)

- Review of the project goals and objectives
- Presentation of work to date
- Review existing conditions
- Discussion of future traffic projections
- Discussion of future traffic analyses and results
- Discussion on the format of the Preliminary Project Report
- Format of the second public workshop
- Open discussion

Meeting No. 5 Agenda
(To be held after the second public workshop, Task 4)

- Review of the project goals and objectives
- Summary of the second public workshop
- Review of work completed to date
- Discussion of alternatives to be considered
- Open discussion

Meeting No. 6 Agenda
(To be held upon completion of Task 4B)

- Review of the project goals and objectives
- Presentation of work to date
- Discussion of alternatives considered
- Discussion of the findings of the analysis and alternatives to be dismissed
- Discussion of recommended alternatives
- Discussion on the format of the Final Project Report
- Discussion on the final public workshop format
- Open discussion

Meeting No. 7 Agenda
(To be held following during Task 4D)

- *Review of the project goals and objectives*
- Summary of the public workshop
- Discussion on the Final Project Report
- Open discussion

**Public Meetings/ Workshops**

We will be responsible for all aspects of the public meeting process including the meeting room rental, setup, audio visual equipment, all display boards and handouts, etc. We have performed similar roles on the SR 1 Project in Delaware and on the Middle River Employment Center Access Study in Maryland.

We propose three public meetings/workshops be held in conjunction with the project. The first would be immediately after the Notice to Proceed is issued for the project. The second meeting would be held upon completion of the existing conditions analysis and projection of future baseline conditions. The third meeting would be held upon

completion of the alternatives analysis and prior to the release of the Final Project Report.

The purpose of the first public workshop will be to introduce the project goals and objectives, introduce the project team (including stakeholders and consultants) and receive input from the community on issues they believe are affecting the corridor. The second workshop will be to report the results of the existing conditions analysis and future "No-Build" conditions. We will present information pertaining to travel patterns, levels of service, land use and future conditions. We will also receive input on the improvement alternatives to be studied. We anticipate the use of a design charrette during the workshop at which time residents will be asked to draw their visions for the corridor on mapping provided. From this we will develop the improvement options to be considered in the later tasks of the study. The final public workshop will be used to present the results of the alternatives analyses in an effort to receive a consensus on the preferred options to be recommended in the final report.

A meeting with local public officials will be held prior to any public meeting. In order to establish the preliminary mailing list, we will research tax maps and obtain property owners names and addresses. These residents will be notified of the project's progress and of any public meetings.

The format of the meetings is proposed as "plans available." This means that displays will be set up along the walls of the meeting room and persons will be able to review the work and discuss items directly with project staff who will be stationed throughout the room. We have used this format with great success on a number of transportation study and design projects. We will prepare handouts and comment sheets that will be distributed at each meeting. The handout sheets will discuss the work completed to date and the overall summary of the findings. The comment sheets will be available for interested persons to make comments relating to project and findings. A box will be placed at the sign-in desk where these can be deposited. All comment sheets will be maintained as part of the project file.

**Special Purpose Meetings (Focus Group)**

As requested, we will be available to hold additional meetings with interested agencies and special interest groups. On other projects, these have included meetings with local municipalities, citizen coalitions, environmental groups and agencies. We will coordinate these meetings with the appropriate parties, schedule necessary facilities and equipment and prepare notifications and minutes of all of these meetings.

Communications/Contacts/Other Services

A listing of all persons or groups who attend the public meetings will be maintained in the project files. The basis of this list will be the sign-in sheets from the meetings. Though we are not proposing one at this time, we can, at the request of the MPO, develop and mail a project newsletter. The newsletter would detail the work completed and findings of the studies, and detail upcoming stakeholder and public meetings. We have had similar experience producing these documents on other projects.