## CAPE COD COMMISSION CAPE COD METROPOLITAN PLANNING ORGANIZATION

<u>Unified Planning Work Program</u>
<u>for</u>
Transportation Planning Activities

October 1, 2004 - September 30, 2005

## **AMENDMENT**

Metropolitan Planning Organization Members
Daniel A. Grabauskas, Secretary, Executive Office of Transportation
John Cogliano, Commissioner, Massachusetts Highway Department
Robert W. Parady, Chair, Cape Cod Regional Transit Authority
David Ansel, Chair, Cape Cod Commission

Transportation Advisory Group: Cape Cod Joint Transportation Committee Robert A. Burgmann, Chair

Metropolitan Planning Organization Endorsement Date:

February \_\_\_\_\_\_, 2005

Prepared in Cooperation with the Executive Office of Transportation, the Massachusetts Highway Department and the U.S. Department of Transportation, Federal Highway Administration.

## **Cape Cod Metropolitan Planning Organization (MPO)**

## **UNIFIED PLANNING WORK PROGRAM (UPWP)**

October 1, 2004 through September 30, 2005

The signatures to follow certify that the Cape C (MPO), at their meeting on February, 2005 accordance with the Comprehensive, Cooperation process:	s, hereby approves the following action in
In accordance with the requirements of 2 Regulations, the MPO for Cape Cod has comple Cape Cod Unified Planning Work Program for October 1, 2004 through September 30, 2005, a	eted its review and hereby endorses the Transportation Planning Activities for
SIGNATORY CERTIFICATION:	
Daniel A. Grabauskas, Secretary Executive Office of Transportation	Date
John G. Cogliano, Commissioner Massachusetts Highway Department	Date
Susan Kadar, MPO Representative Cape Cod Commission	Date
Robert W. Parady, Chair Cape Cod Regional Transit Authority	Date

## Cape Cod Joint Transportation Committee Members

Robert A. Burgmann, PE Barnstable Richard Lafarge Bourne Allan Tkaczyk Brewster Paul DeCoste Chatham Joseph Rodricks, PE Dennis Terry Whalen Eastham Brian Currie Falmouth Lincoln Hooper Harwich R. Gregory Taylor, PE Mashpee Robert Bersin, PE Orleans

Don Richards Provincetown
Peter Tancredi, PE Sandwich
Paul Morris Truro
Mark Vincent Wellfleet
George R. Allaire, PE Yarmouth

Susan Kadar Cape Cod Commission Liaison

Joseph Potzka Cape Cod Regional Transit Authority

David M. Luce MassHighway

Bernard McCourt MassHighway District 5

Maggie Geist Assoc for the Preservation of Cape Cod

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#### INTRODUCTION

This Unified Planning Work Program (UPWP) was developed by the Cape Cod Commission transportation staff on behalf of the Cape Cod Metropolitan Planning Organization, in accordance with the Public Participation Plan for Cape Cod. The UPWP describes all significant transportation activities planned to be performed on Cape Cod over the twelve (12) month period in the following areas:

- 1) Management and Support of the Planning Process and Certification Activities the efforts required for coordinating transportation planning activities between CCC and Metropolitan Planning Organization (MPO) member communities, local, regional, state and federal agencies; efforts required to maintain the public participation process; efforts required for the administration of the CCC contract with the Massachusetts Highway Department (MassHighway) and the Executive Office of Transportation (EOT); development and approval of the Unified Planning Work Program and the Transportation Improvement Program.
- 2) Data Collection & Analysis Activities to continually gather and update traffic, accident and road data necessary for transportation planning and analysis; to maintain databases, to develop and update Cape Cod's travel demand forecasting model, to assist the state in the development and implementation of a pavement management system for federal aid roadways, a congestion management system, and an intermodal management.
- 3) Short and Long Range Transportation Planning -efforts to update and maintain the Regional Transportation Plan for Cape Cod, a certification activity that requires a new plan every three years. Also efforts to perform special planning studies of corridor safety/traffic flow and transit. Also integration of special studies into the regional transportation plan.
- 4) Other technical activities to provide other technical assistance to the region, including assistance in the design and implementation of projects, pavement management, participating in special studies and assistance in the planning, design and development of the Intelligent Transportation System for Cape Cod.
- 5) Regulatory review and planning assistance to the Towns- Review of Developments of Regional Impact and assistance in the development and implementation of Local Comprehensive Plans and Districts of Critical Planning Concern.
- 6) Other tentative planning efforts Efforts that have received preliminary approval that may be initiated during the UPWP period, including the Route 6A/Scenic Byways Program.
- 7) Cape Cod Advanced Public Transportation System Project Effort planned by the Cape Cod Regional Transit Authority.

## TASK #1 - MANAGEMENT AND SUPPORT OF THE PLANNING PROCESS AND CERTIFICATION ACTIVITIES

## **Task 1.1 - Unified Planning Work Program (Certification Activity)**

Objectives: To develop a Unified Planning Work Program (UPWP) that describes the transportation planning activities to be performed under MassHighway and EOT contracts with CCC. To obtain MPO endorsement of the UPWP.

Previous Work: Previous UPWPs (most recent MPO endorsed UPWP: August 2003)

Procedures: In conformance with applicable Federal and State guidelines, prepare a UPWP which describes all transportation and transportation-related planning activities anticipated to be carried out by CCC during the period, regardless of funding sources. Maintain the UPWP and make amendments as necessary.

Products: Unified Planning Work Program for Transportation Planning Activities for the period October 1, 2006 to September 30, 2007. Amendments to the current UPWP will be submitted as necessary. Monthly progress reports on MHD activities performed under the UPWP.

Schedule: Draft UPWP submitted to CCJTC June, 2006.

Draft UPWP submitted to MPO July, 2006.

Final UPWP submitted to MPO September, 2006.

Monthly progress reports.

Funding/Staffing breakdown:

Funding Source Amount CCC Staffing

FHWA/MassHighway \$ 8,000 4 person-weeks

## Task 1.2 - Transportation Improvement Program (Certification activity)

Objectives: To prepare a program of transportation improvement projects that is consistent with the region's transportation plan, the State Implementation Plan for FY 1995, EPA's Air Quality Conformity Regulations and FHWA/FTA's Planning Regulations. The Transportation Improvement Program (TIP) will include a three year program of projects for FY 2005 through 2007. The TIP will be endorsed by the Metropolitan Planning Organization (MPO) in accordance with federal regulations and the region's Public Participation Plan.

Previous Work: "Transportation Improvement Programs for Cape Cod", 1988 to present; latest endorsed (March 2004) document covers the period of federal fiscal years 2004-2008.

#### Procedures:

## I. TIP procedures

To continue to participate in a committee of Regional Planning Agency (RPA) Directors and the Transportation Program Managers Group to implement a process that will equitably allocate transportation funds throughout the Commonwealth and attempt to develop a ranking procedure that each RPA might agree to use.

- II. Preparation of the draft TIP
- A. General
- 1. The TIP is a staged, multi-year, intermodal program of transportation projects which are consistent with the regional transportation plan. It is a management and project tracking tool that is used to monitor the progress in implementing the Regional Transportation Plan.
- 2. Insure early involvement of local legislators, major transportation providers, elected officials and citizens through adherence with the Plan for Public participation.
- 3. Provide technical assistance to municipalities and private interests in developing projects and priorities.
- 4. Coordinate with MassHighway District 5, MassHighway Planning and the Capital Expenditure and Program (CEPO) office in developing project information.
- 5. Include sections on:
  - a) The relationship of the TIP to the Regional Transportation Plan.
- b) Description of funding categories and amounts of federal funds proposed to be obligated during each program year.
- c) Previously funded projects and programs, and an identification of any significant delays in the planned implementation of major projects.
  - d) A description of the criteria and process for ranking projects.
- e) Air quality significance and the relationship of the TIP to the State Implementation Plan (SIP).
- f) A description of progress in implementing any required Transportation Control Measures (TCM's), including reasons for any significant delays in the planned implementation and strategies for ensuring their advancement.
- g) A list of all projects found to conform in a previous TIP and are now part of the base case for the purpose of the air quality conformity analysis.
- h) A financial plan that compares revenue needs to revenue sources for highway and transit programs.
- B. Development of the three year program of projects according to a uniform statewide format.
- 1. Update the list of transit, highway, or air quality projects that are expected to require federal transportation funds for planning and engineering, construction or purchase during the fiscal years the TIP is prepared for.

- a) Prepare a list of all regionally significant transportation projects or programs that require FHWA or FTA approval that are not using federal transportation funds.
- b) For information purposes list all regionally significant transportation projects proposed to be funded with federal funds other than from FHWA or FTA.
- c) For informational purposes list all regionally significant transportation projects.
- 2. The list of projects may include information such as the following:
  - a) The official MassHighway/EOT identifying project title.
  - b) Project description,
  - c) Regional priority
  - d) Estimated total cost.
- e) The amount of federal funds proposed to be obligated during each program year.
  - f) Proposed sources of federal and non-federal funds.
- g) Identification of the recipient/sub-recipient and the State and local agencies responsible for carrying out the project.
  - h) Identification of those projects which are identified as TCM's in the SIP.
- 3. Project information shall be of sufficient detail to permit air quality analysis in accordance with US EPA conformity requirements.
- 4. Prepare location maps of Cape Cod with federal aid projects in the annual element.
- 5. The total costs of projects seeking federal funds in each program year shall be in line with anticipated federal funds.

## C. AIR QUALITY

Prepare all documentation necessary for air quality conformity determination required by the Clean Air Act Amendments of 1990.

- 1. A review of the past year's accomplishment within the transportation element of the SIP.
- 2. A quantitative air quality analysis of all major TIP construction projects. Major air quality projects are defined as those which change vehicular speed or effect travel delay; as promulgated and endorsed by the State Air Quality Task Force. This analysis will include projects which require and EIS, EIR or Finding of No Significant Impact (FONSI); and will utilize methodology endorsed by the State Air Quality Task Force. The analysis to support the TIP will be based on a network-based transportation demand model which will be used to compare the build alternatives to the no-build alternative relative to air quality impacts.

#### D. PUBLIC PARTICIPATION

- 1. There will be reasonable opportunity for public comment in accordance with the Plan for Public Participation.
- 2. At least one formal public meeting will be held during the TIP development process.
- 3. The proposed and approved TIP will be published or otherwise made readily available for information purposes.

Note: The public meeting on the Transportation Improvement Program shall serve as the required public hearing for routine, traditional Section 5307 grants as determined by the Public Participation Plan for Cape Cod endorsed by the Cape Cod Metropolitan Planning Organization. Projects requiring an environmental assessment or an environmental impact statement will require additional public involvement, in accordance with the joint FHWA/FTA environmental regulations, 23 CFR part 771.

## III. TIP Approval

The above completed documents will be reviewed and endorsed by the MPO. The endorsed products to serve as the required air quality consistency documentation necessary for DOT (FHWA/FTA) and EPA conformity determination.

#### IV. Modification/Amendment

- A. Amendments to the TIP may require MPO approval.
- B. Administrative adjustments to the TIP may be approved by the CCC Executive Director, with appropriate notification to the MPO.

#### **Products:**

- I. TIP consistent with the State Implementation Plan and the Regional Transportation Plan.
- II. Modifications/amendments to the TIP as required.

Schedule: As determined by FHWA, FTA, EOT, MassHighway and MARPA.

Funding/Staffing breakdown:

Funding source Amount CCC Staffing

FHWA/MassHighway \$25,000 12.50 person-weeks

## Task 1.3 - CCJTC and MPO activities/Public Participation Process

Objectives: To maintain an open comprehensive, cooperative and continuing (3C) transportation planning and programming process involving the local, regional, state and federal levels of government in conformance with applicable federal and state requirements and guidelines.

Previous Work: Past maintenance of 3C process. Preparation of year 2003 update to the Cape Cod Regional Transportation Plan including information and strategies to ensure environmental justice.

#### Procedures:

- 1. Provide administrative and technical support to the 3C regional planning process, such as:
  - a) Community liaison and assistance on transportation planning matters.
- b) Review of federal and state transportation programs and related documents as required.
- 2. Provide for and support the public participation process (PPP) in transportation planning for Cape Cod.
  - a) Support Cape Cod Joint Transportation Committee (CCJTC).
- b) Develop, support and participate in local parking, traffic, bikeway and environmental committee meetings.
- c) Participate in information programs related to handicapped accessibility and environmental issues in transportation.
  - d) Preliminary and follow-up work for meetings as required.
- 3. Present transportation plans and programs (e.g., UPWP, Transportation Plan, TIP) developed through the public participation process to the Cape Cod Joint Transportation Committee and the Metropolitan Planning Organization (MPO) for appropriate action.
- 4. Management of transportation planning contracts with EOT/MassHighway.
  - a) Staff supervision and work assignments
  - b) Contract invoicing
  - c) Participation in educational programs for staff.

Products: Viable 3C process, including CCJTC and public participation program. Revision of PPP, as necessary.

Bibliography of CCC transportation reports and other technical

documents.

Transportation program annual report. Minutes and reports on CCJTC meetings. Letters, memoranda and notes as required.

Schedule: Meetings held monthly.

Transportation program annual report in January, 2005.

Other products as required.

Funding/Staffing breakdown:

Funding Source Amount CCC Staffing

FHWA/MassHighway \$30,000 15.0 person-weeks

#### Task 1.4 - Environmental Justice

Objectives: To ensure that all segments of the population are able to fully participate in transportation planning processes and has access to transportation facilities. To integrate the basic principles of Environmental Justice into the 3C Transportation Planning Process. To develop and maintain a Title VI Civil Rights Plan for the Cape Cod MPO.

Previous Work: Attendance at preliminary meetings with MassHighway and FHWA to discuss environmental justice requirements and receive guidance on ensuring compliance. Preparation of year 2000 update to the Cape Cod Regional Transportation Plan including information and strategies to ensure Environmental Justice.

#### Procedures:

Activities are expected to include a process for developing Environmental Justice (EJ) data and evaluating projects with respect to the protected populations or these processes must be developed in order for the MPO to be recertified (see October 7, 1999 FHWA memo 'Implementing Title VI Requirements in Metropolitan and Statewide Planning' for guidance). The EJ evaluation needs to be incorporated throughout the MPO planning process. The following efforts are suggested:

Environmental Justice Study – Development of an Evaluation Process

## Phase 1 Develop Environmental Justice Baseline Information

The 2000 Census data for minority populations is available and the income data is expected. This data locates the minority and low income households by census tract. This data will be geocoded into the regional model traffic analysis zones (TAZs) and a statistical process applied to the TAZ geographic areas to develop criteria for protected populations. The information for low income populations will be supplemented by Temporary Assistance for Needy Families (TANF) data to further refine the low income population areas.

This database will become the basis of the EJ analysis process to be developed in Phase 2.

## Phase 2 Develop Environmental Justice Criteria for the Cape Region

A number of criteria have been proposed to be applied to projects, access time changes from/to all traffic analysis zones (TAZs) to the protected communities is common. Access time must include transit as well as auto access.

The criteria need to be developed in a public process that includes minority and low income community participation and establishes a legally defensible basis for selecting the criteria. Criteria will be developed at workshops to be held in communities identified in Phase 1.

## Phase 3 Develop modeling and GIS Tools for Environmental Justice Evaluations

The tools for evaluation need to be developed based on the selected criteria. One likely tool is a model for transit access time. This may be based on the existing TransCad model package or another analysis method. The existing TransCad model can currently be used for auto measuring improvements in auto access to specific analysis zones and this process can be used when EJ target areas and criteria are established.

#### Products:

The following products are expected:

- Environmental Justice baseline information
- Environmental Justice Criteria for the Cape Region
- Title VI Civil Rights Plan for the Cape Cod MPO

Schedule: To be determined.

Funding/Staffing breakdown:

Funding Source	Amount	CCC Staffing			
FHWA/MassHighway	\$10,000	5.00 person-weeks			
FTA/EOT	\$ 4,881	2.44 person-weeks			
CCC	\$ 1,220	0.61 person-weeks			
Total	\$16,101	8.05 person-weeks			

## Task 1.5 - Access to Jobs

## Objective:

To work with the Cape Cod Regional Transit Authority to develop strategies to improve access to employment for welfare recipients and other low income persons.

Previous work:

Past coordination with CCRTA.

Products:

Participation at meetings, letters and memoranda as required.

Schedule:

As required per CCRTA schedule.

Funding/Staffing breakdown:

Funding Source Amount CCC Staffing

FHWA/MassHighway \$5,000 2.50 person-weeks

#### Task 1.6 - Other meetings and support of the planning process

Objectives: To participate in and provide support to meetings and other activities relevant to the transportation planning process. To coordinate transportation planning activities with other Regional Planning Agencies, MassHighway and MARPA, particularly regarding the statewide road and bridge program and policy/funding discussions.

Previous Work: Past support

Procedures: Flexible.

Products: Attendance at meetings; preparation of letters and memoranda.

Schedule: Progress reports prepared monthly. Other activities scheduled as required.

Funding/Staffing breakdown:

Funding Amount Staffing

MassHighway/FHWA \$21,130 10.56 person-weeks

#### TASK #2 - DATA COLLECTION AND ANALYSIS ACTIVITIES

#### Task 2.1 - Cape Cod Traffic Counting Program

Objectives: To create and maintain a database of traffic counting data for Cape Cod to be used for transportation planning. To monitor growth in traffic volumes and to determine existing traffic volumes on Cape Cod roads. To perform the coverage counts for MHD.

To perform bicycle and pedestrian activity counts in selected locations. To obtain data on road geometry, when necessary, as part of the traffic counting efforts.

Note: It is a goal of the region to install permanent traffic counters to provide continuous reliable data on traffic volumes, vehicle types and speed on all major roads. Permanent stations with remote access capabilities are the appropriate safe and cost-effective manner to collect the data.

Previous Work: Traffic counting program, 1984-2003.

Procedures: For the summer of 2004, approximately 5 coverage counts will be scheduled in each of Cape Cod's 15 towns, for a total of about 75 counts. Approximately 50% of the count locations for the summer of 2004 will be selected to support planning studies proposed in the Fiscal Year 2004 and proposed Fiscal Year 2005 Unified Planning Work Program. Additional counts, in coordination with or at the request of the towns and MassHighway, will be taken as schedule and weather permits. Where possible, FHWA traffic monitoring guide procedures will be followed. Police details, if required for the additional count locations, shall be the responsibility of the towns for local roads and MassHighway for state roads and locations requested by MassHighway. Turning movement counts will also be taken at selected intersections.

Work activities under this task are as follows:

- Placement of counters
- Retrieval of counters
- Routine checks of counters
- Equipment inventory and maintenance
- Data tabulation
- Data factoring
- Data analysis/recording
- Coordination of counters
- Coordination of safety measures with towns
- Coordination of external program counts
- Periodic calibration/verification of equipment per MassHighway guidelines
- Obtain necessary permits from towns and MassHighway
- Development of traffic count file and data base
- Data mapping
- Program evaluation
- Computer data entry and maintenance
- Updated geometric information, as needed. Gathered information to include sidewalks, shoulders and bicycle lanes.

#### Products:

• Cape Cod Traffic Counting Report for 2004. Report will contain information on study design, count location, date/time of peak hour volume, average daily traffic, factored average daily traffic. The most recent 10 years of counts conducted by CCC will be included in this report.

- Database that includes date of counts, general weather and traffic conditions average daily traffic, factored average daily traffic, peak hour traffic volume, breakdown of traffic by hour over period studied (kept on file).
- Factored counts for MassHighway.
- Expanded seasonal traffic counting data
- Turning movement counts at intersections, including bicycle and pedestrian counts.
- An analysis of traffic growth trends over the past 10, 5 and 3 year periods. For Cape Cod, subregions and major routes.
- Counts accessible at website (www.gocapecod.org).

#### Schedule:

Report on counts taken in 2004 submitted December, 2004.

Office file updated continuously.

Counts for the 2005 program will be taken June through August, 2005.

Funding/Staffing breakdown:

Funding Source Amount CCC Staffing

FHWA/MassHighway \$45,000 22.5 person-weeks

## Task 2.2 - Transportation Database Management/Data & Information Requests

Objectives: To maintain and improve a database of Cape Cod road information and motor vehicle accident records, including bicycle and pedestrian accidents, to be used for geographical and historical accident analysis. To provide the transportation information for Cape Cod to local and state officials, transportation professionals and the public.

Previous Work: Accident databases prepared with data supplied by MassHighway. Original database included detailed data for the years 1989-1991 and 1993 and less detailed information for the years 1991-1996. Analysis included in the 1997 and 2000 Cape Cod Regional Transportation Plan.

Procedures: Integrate new records when available; maintain database, develop subroutines for analysis. When details are needed for specific locations, town accident records may be obtained and reviewed. CCC staff will contact MassHighway to request latest records. Respond to data and information requests from the public, transportation professionals and local, regional and state officials.

Products: Accident and road information database. Reports, letters and memoranda as required.

Schedule: Ongoing. Updated annually with receipt of MassHighway accident records. Responsive to need for local data.

Funding/Staffing breakdown:

Funding Source Amount CCC staffing

MassHighway/FHWA \$20,000 10.0 person-weeks

## Task 2.3 - Travel Demand Forecasting & computer modeling

Objectives: To continue to develop and calibrate computerized travel demand forecasting databases and models for Cape Cod, including year 2020 forecasts. Continue integration with Geographical Information Systems (GIS) data to provide a platform for GIS based traffic counts, congested link summaries, and accident summaries.

#### Previous Work:

- Transportation model, developed in 1999/2000 for base year of 1997.
- Route 28 traffic circulation studies (released and pending drafts) and models including:
  - ROUTE 28 BOURNE,
- ROUTE 28 TRAFFIC CIRCULATION STUDY, MASHPEE ROTARY AREA, (Including Segments in Barnstable and Falmouth).
- ROUTES 28 & 132 TRAFFIC CIRCULATION STUDY, BARNSTABLE AREA
  - ROUTE 28 TRAFFIC CIRCULATION STUDY, YARMOUTH-

#### **ORLEANS**

- OUTER CAPE CAPACITY STUDY
- MONOMOY CAPACITY STUDY

Procedures: Review and utilize available socio-economic, employment, population and housing data for base year and forecast year data. Utilize existing traffic volume and transit data to determine existing travel demands. Utilize existing transportation models for sub-regions of Cape Cod. Improve transfer methods of data between CCC Geographic Information Systems (GIS) services and transportation modeling effort. Expand transportation demand model to include Saturday morning element and to explicitly include alternate modes.

Products: Updated transportation model based on 2000 census information, reports of results, and summaries. Model will be used to support Task 3 and other regional planning and TIP activities.

Schedule: Ongoing through September 30, 2005. To be developed in coordination with MassHighway.

Funding/Staffing breakdown:

Funding Source Amount CCC Staffing

#### TASK #3 - SHORT AND LONG RANGE TRANSPORTATION PLANNING

## **Task 3.1 - Regional Transportation Plan (Certification activity)**

Objectives: To maintain and update the Regional Transportation Plan for Cape Cod, in conformance with the Transportation Equity Act for the 21st Century and successor acts, consistent with the goals and requirements of the Cape Cod Commission, towns, the MassHighway, EOT, FTA and the FHWA, considering all modes of transportation and both short and long-range elements. The Transit component will reflect the transit planning effort of Task 3.3, Development and Implementation of a Transit Plan for Cape Cod.

Previous work: Ten (10) year needs assessment prepared in October 1989.

Regional Policy Plan for Cape Cod, August, 1991. Long Range Transportation Plan, September, 1993.

Long Range Transportation Plan Amendments, September 1994.

Regional Policy Plan for Cape Cod, November, 1996.

Regional Transportation Plan, approved by MPO March 1997. Regional Transportation Plan, approved by MPO January 2001.

Procedures: Increased activity is expected because this is the year before a major update.

Products: Preliminary efforts towards major update, in consultation with MHD.

Schedule: To be determined on consultation with MHD.

Funding/Staffing breakdown:

Funding Source Amount CCC Staffing

FHWA/MassHighway \$30,000 15 person weeks

### Task 3.2- Upper Cape Long Range Transportation Study

Objectives: To evaluate recent transportation studies in the Canal Area and develop a scope of work for a future major transportation study. Long term goals include the identification of alternatives to improve transportation flow and safety on regional roads in the Upper Cape. Efforts to be conducted consistent with the Commonwealth of Massachusetts Fix It First and Communities First initiatives.

#### Previous Work:

- The draft Canal Area Transportation Study prepared by Rizzo Associates, Inc. for MHD dated December 21, 1998, and the subsequent draft studies done by staff at the Cape Cod Commission, the most recent dated August 22, 2001.
- Route 3/Route 6 Sagamore Grade Separation Revised Environmental Assessment/Final Environmental Impact Report (EOEA #11731) dated October 31, 2003

- Bourne Scenic Highway Study and Canal Area Study TransCAD Technical Assistance: Cape Cod Travel Demand Forecasting Model dated February 2000 Louis Berger Group, Inc.
- EOEA Build-out Analysis for Cape Cod,

#### Procedures:

(Note: A detailed study design will be developed.)

Prior to embarking on a detailed study of the Upper Cape transportation needs, a review of the existing body of work and an analysis of the needs not addressed previously must be done. The geographic area intended by the JTC request is also beyond the scope of the most recent studies and these additional areas need to be defined with respect to their needs as well.

The scope of work to be defined will also include several subject areas not specifically addressed by the previous studies including:

Freight
Rail Service
Emergency Services
Intelligent Transportation Systems
Alternative Transportation
Bicycle Facilities
Public Transportation
Passenger Rail
Canal Crossings
Capacity
Useful Life

#### Products:

Review of existing studies

Development of data collection and additional study needs

Development of Scope of Work and budget for subsequent phases

#### Schedule:

To be determined.

Funding/Staffing breakdown:

Funding source Amount CCC staffing MassHighway/FHWA \$30,000 15 person weeks

## Task 3.3 - Transit Planning & Intermodal Management System Activities

Objective: To develop and implement a comprehensive transit plan for Cape Cod, considering year round and seasonal needs, including a 5 year plan and early implementation items for the Cape Cod Regional Transit Authority and the Woods Hole, Martha's Vineyard and Nantucket Steamship Authority. To perform Intermodal Management Systems planning activities. Promotion of transportation alternatives through support, education and outreach, including coordination with the Cape Cod Chamber of Commerce and the Cape Cod Regional Transit Authority.

Previous work:

License plate surveys conducted Spring and summer 1999. Cape Cod Transit Summit - February, 2000.

Development of early implementation items, including:

- Relax and Ride a shuttle service between the Rte. 128 MBTA//Amtrak station and the ferry facilities in Woods Hole;
- Sunday bus service on the SeaLine, Villager and H2O regular bus that extend from Falmouth to Orleans, including much of

routes
Barnstable;

- Three more round trips during the morning, mid afternoon and late-day rush hour on the SeaLine, between Falmouth and Hyannis;
- Villager bus service every 20 minutes on a route that runs from the west end of Hyannis through Main Street, the waterfront district, then along Route 132 to Cape Cod Community College and Barnstable Village;
- A new Villager II bus route through some East End neighborhoods of Hyannis to the shopping malls along Rte. 132;
- More frequent bus service to Barnstable Municipal Airport;
- Additional H2O Line bus service along Rte. 28 between Hyannis and Orleans, including a new late afternoon run and more trips to Dennisport and Patriot Square in So. Dennis.

Procedures: Continuation of effort started under previous UPWP.

Products: Advancement and implementation of Transit Plan for Cape Cod.

Schedule: To be determined.

FHWA/MassHighway t: \$27,500 13.75 person-weeks EOT/FTA funds: \$30,000 15.00 person-weeks CCC match: \$7,500 3.75 person-weeks Total: \$65,000 32.50 person weeks

## Task 3.4 - Follow-up on previous transportation planning studies

#### Objectives:

To allow for completion of and/or follow-up work on special transportation studies of prior UPWPs.

#### Previous work:

Refer to list of Significant Regional Transportation Studies in this document.

## Methodology:

To be determined in consultation with MHD, consistent with prior study designs, updated as necessary.

#### Products:

To be determined.

#### Schedule:

Flexible.

#### Funding/Staffing breakdown:

Funding Source Amount CCC Staffing

FHWA/MassHighway \$8,797 4.5 person-weeks

## Task 3.5 - Regional Congestion and Safety Analysis at 3 High Priority Locations

<u>Objectives</u>: To identify short and long term alternatives to improve transportation flow and safety at three high priority locations on selected sections of Route 28 between Yarmouth and Chatham. Efforts to be conducted consistent with the Commonwealth of Massachusetts Fix It First and Communities First initiatives.

#### Previous Work:

Traffic Circulation Studies for Route 28 - 1988-1990.

Rt 28 MacArthur Boulevard study.

Cape Cod Long Range Transportation Plan 1994.

Cape Cod Regional Transportation Plan 1997.

Cape Cod Regional Transportation Plan 2001.

Cape Cod Regional Transportation Plan 2003.

## Procedures:

(Note: A detailed study design will be updated.)

• Priority locations to be determined from the Regional Transportation Plan.

- Review existing data sources to document existing conditions. Sources to include:
  - 1. Cape Cod regional transportation model
  - 2. Cape Cod traffic counting program/MassHighway bridge counts
  - 3. Cape Cod congestion management system
  - 4. Cape-wide crash records information system
- Data Collection:
  - 1. Automatic Traffic Recorder and Turning Movement Count data
  - 2. Accident data
- Identify study area
- Prepare existing conditions summary, including:
  - 1. Traffic volumes
  - 2. Levels of service
  - 3. Recent crash history
- Utilize best available land use data (sources: GIS, Towns) to identify potential increases travel demand.
- Enhance computer model and develop travel demand forecasts
- Prepare future conditions summary, including:
  - 1. Traffic volumes
  - 2. Levels-of-service
- Utilize results of above procedures to develop recommendations consistent with Regional Transportation Plan, including recommendations for land use and access management, consistent with the Communities First and Fix It First Initiatives and the Sustainable Development Policy of the Commonwealth of Massachusetts.

#### Public participation:

1. Public meetings, as necessary

#### Products:

Interim and final reports.

#### Schedule:

Completion expected by September 30, 2004.

## Funding/Staffing breakdown:

Funding source Amount CCC staffing MassHighway/FHWA \$28,000 14 person-weeks

## Task 3.6 - Congestion Management System Development

Objective: To develop criteria for identifying congestion and methods to address congestion, consistent with the Commonwealth of Massachusetts' Fix It First Initiative, Communities First Initiative and Sustainable Development Policy.

Previous Work: Cape Cod Congestion Management System 1997 Report, January 21, 1998.

Procedures: To be developed.

Products: Congestion Management System Report for 2005

Schedule: To be determined.

Budget:

FHWA/MHD \$30,000 15 person-weeks

#### TASK #4 - OTHER TECHNICAL ACTIVITIES

## Task 4.1 - Intelligent Transportation Systems initiative for Cape Cod and Travel Smart Program

Objectives: To promote the most efficient, cost effective and environmentally sound use of our transportation system. To advance the development of a Transportation Management Center on Cape Cod. To work with the State in the advancement of intelligent transportation system initiatives for Cape Cod, including transit elements. To develop a product-oriented systems plan which provides specific solutions to transportation problems.

Previous Work: Intermodal and congestion management systems efforts. Assistance in Intelligent Transportation Systems (ITS) efforts on Cape Cod. Participation in Farradyne Systems study (1995). Participation in the Barnstable-Yarmouth Transportation Study. Transportation website "www.gocapecod.org." Assistance to the Cape Cod Chamber of Commerce with the development of the "Smart Guide" for 2001-2003 and prior years.

Procedures: Study elements to include:

- Assistance to the Massachusetts Highway Department with the development of intelligent Transportation System Architecture for Cape Cod. Efforts to include identification of stakeholders, attendance at meetings, review of documents and other assistance.
- Development of specific ITS criteria, goals and priorities consistent with the Cape Cod 2000 Regional Transportation Plan.
- Evaluation and integration of under-utilized sources of transportation information, including the Cape Cod Regional Transit Authority automated vehicle locator and the Route 132 closed loop signal system.
- Advancing 511 Traveler Information System.

Products: Continued identification and development of congestion and intermodal management strategies; updated and expanded website of transportation information, reports and memoranda as required. Several possible products include:

- Traveler information via internet
- Promotion of transportation alternatives
- ITS plans for Cape Cod Canal Area
- ITS plans for Hyannis area
- Summary reports of updates to CMS database
- Technical memoranda reporting analyses of travel patterns and traffic condition prediction methodology
- ITS coordination with other regions

Schedule: Continuous throughout year.

Funding/Staffing:

Funding source Amount CCC staffing Federal Highway/MassHighway \$20,000 10 person-weeks

#### Task 4.2 - Rural Roads Initiative

Objectives: To advance context sensitive design examples to provide safe, multi-modal mobility on Cape Cod and the Islands while maintaining the environmental, historic and scenic qualities of the existing surrounds. To participate with Martha's Vineyard, Nantucket, and the National Park Service/Cape Cod National Seashore on the implementation of the HPP Rural Roads Initiative, under the Transportation Equity Act for the 21st Century. To participate in the MHD Design Manual Task Force proceedings.

Previous Work: Meetings with MassHighway, Nantucket Planning & Economic Development Commission, the Martha's Vineyard Commission, the National Park Service/Cape Cod National Seashore and Congressman Delahunt's office to discuss the work effort. Development of a proposed Memorandum of Agreement, scope of work, budget and schedule.

Procedures: Staff oversight of design development of a transportation project on Cape Cod, including consultation with the National Park Service/Cape Cod National Seashore. Effort to be consistent with the Massachusetts' Communities First and Fix It First policies.

Products: Context sensitive design solution at one or more locations.

Schedule: To be determined.

Funding/Staffing:

Funding Source Amount CCC staffing MassHighway/FHWA \$20,000 10 person weeks

#### Task 4.3 - Pavement Management

Objectives: To update and implement a regional pavement management system for Cape Cod to provide an objective rating of pavement conditions and needs.

#### Previous Work:

- Eastham, Pilot Pavement Management Study, December 1990.
- Bourne, Preliminary Pavement Management Report, April 1992.
- Participation on technical coordination committees for pavement Management.
- Special Statewide pavement management systems effort -1994.

Procedures: To be determined in coordination with MHD and the towns.

Products: Preliminary assessment of pavement management needs.

Schedule: To be determined.

Funding/staffing:

Funding Source Amount CCC staffing MassHighway/FHWA \$5,000 2.50 person weeks

## Task 4.4 - Other technical assistance requests

Objectives: To provide the state, the towns and the region with technical transportation assistance, as needed.

Previous Work: Preparation of signal warrant analyses, review of local transportation improvement alternatives, preparation of local safety studies (Provincetown Bicycle Safety Study and Conwell Street Study).

Procedures: As required.

Products: Letters, reports, memoranda and analyses.

Schedule: Continuous throughout the year.

Funding/Staffing:

Funding Source Amount CCC staffing MassHighway/FHWA \$ 7,500 3.75 person weeks

## TASK #5 - CAPE COD COMMISSION TRANSPORTATION PLANNING & REGULATORY ACTIVITIES

## Task 5.1 - Review and Comment on Environmental Notification Forms, Environmental Impact Reports and Developments of Regional Impact

Objectives: The primary purpose of the CCC regulatory program is mitigation of transportation impacts in a manner that is consistent with Barnstable County's Regional Policy Plan. To ensure proper review and analysis of traffic impacts of major residential and commercial developments throughout the region. To provide such information to the CCC, EOT, MassHighway, EOEA-MEPA Unit, town officials and other interested parties, as required. To recommend mitigation measures and work with interested parties in applying conditions to projects. To assist the Cape Cod Commission regulatory staff in the review of developments of regional impact. To assist the Massachusetts Highway Department/Public Private Development Unit (MassHighway - PPDU) in the implementation of mitigation strategies.

Previous Work: Previous work includes analysis, review and comment on Environmental Notification Forms (ENFs), Environmental Impact Reports (EIRs) and Cape Cod Commission regulatory review.

#### Procedures:

Review ENF, EIR, EIS, MIS and/or traffic analyses.

Compute trip generation estimates.

Review traffic counts on adjacent street network; conduct special traffic counts, as necessary.

Perform preliminary site visit.

Compute LOS at site drive and area intersections, as necessary.

Attend MEPA site visit, if applicable.

Discuss project with interested parties.

Identification of appropriate mitigation measures.

Review mitigation measures for compliance and consistency with the Regional Policy Plan.

Written and oral comments and testimony to the Cape Cod Commission, MassHighway District 5, MEPA, the towns and other interested organizations as required.

Coordinate mitigation with MassHighway-PPDU.

Products: Discussions with MEPA, MassHighway, project proponents and town officials. Provide written comments. Testimony at DRI and other meetings as required. Advancement of measures to mitigate traffic impacts. Analysis and recommendation on transportation improvements necessary to mitigate impacts.

Schedule: As required to meet CCC, MEPA, EOT, MassHighway and local deadlines.

#### Funding/Staffing:

Support of this effort will be provided by the CCC. Below is the funding/staffing breakdown:

Funding Source Amount CCC Staffing

CCC \$125,958 63 person-weeks

# Task 5.2 - Assist Communities and the Region in the Development and Implementation of Local Comprehensive Plans (LCPs) and Districts of Critical Planning Concern (DCPCs)

Objectives: To provide technical assistance in the development and implementation of LCPs and DCPCs and other CCC funded transportation efforts.

Previous work: Past assistance in the development of LCPs in various Cape Cod towns.

Procedures: Advisory and analytical assistance.

Products: Letters, memoranda, testimony as required.

Schedule: As established by the Cape Cod Commission and the Towns and legislated requirements.

Funding/staffing:

Funding Source Amount CCC Staffing CCC \$125,958 63 person-weeks

## **Task 5.3 - Other transportation activities**

Objectives: To perform other transportation activities and transportation program management.

Previous work: Past transportation program administration.

Procedures: Flexible.

Products: Viable transportation planning program.

Schedule: Continuous throughout the year.

Funding/Staffing:

Funding Source Amount CCC staffing CCC \$62,979 31.5 person weeks

## TASK #6 - Other Tentative Planning Efforts

## Task 6.1 - Rt 6A/Scenic Byways

## Objectives:

To update the 1995 Rt 6A Corridor Management Plans; to develop and design byway related projects and to implement those projects. Efforts to be consistent with the National Scenic Byways Program and the Cape Cod and Islands Rural Roads Initiative.

#### Previous Work:

Develop of a Corridor Management Plan for Route 6A (April 1995) and related follow-up/implementation projects:

- Route 6A Corridor Management Plan
- Access Management Study
- Tree Canopy
- Bicycle Activities/Bicycle Safety/Bicycle Map
- Pedestrian Activities/Tour Network
- Pedestrian Safety Improvements

#### Procedures:

To be determined by a detailed study design consistent with the FHWA review and award of funding.

#### Products:

Updated Corridor Management Plan.

Development and design of projects.

Project Implementation.

#### Schedule:

• Updated Corridor Management Plan 12 months after notice to proceed.

#### Funding Staffing:

Scenic Byways funds. Breakdown of staffing and contractual assistance to be determined.

	FHWA	MHD	Total
Update of CMP	\$100,000	\$25,000	\$125,000

## Task 6.2 Minimodal Transportation Study

#### Objective:

To evaluate and identify "minimodal" locations in Orleans and to develop construction drawings and required permitting for a facility at MacMillan Wharf. Development of these transportation centers on Cape Cod is expected to promote transit as an alternative to automobile travel and to improve service coordination between public and private transportation providers.

#### Previous Work:

Cape Cod Transit Task efforts, including 5-Year Plan for Public Transportation on Cape Cod. Coordination with CCRTA in development of Hyannis Transportation Center.

#### Procedures:

- Development of potential Orleans site alternatives
- Develop access plans, initial environmental screening and preliminary plans, specifications and estimates
- Evaluate surrounding land use and consistency with local and regional planning for the proposed sites
- Develop site needs and potential based on short and long range planning
- Evaluate potential of the proposed Orleans sites to meet potential service needs
- Present alternatives for public comment and recommend final alternatives for further design and development
- Development of permitting and construction plans for MacMillian Wharf site

#### Products:

- 1)Report on candidate Orleans locations and feasibility of minimodal transportation centers.
- 2) Permitting and construction drawings and documents for the MacMillian Wharf site.

#### Schedule:

To be determined.

#### Budget:

FTA \$295,104 EOT \$73,776

Task #7 - Cape Cod Advanced Public Transportation System Project

Objective: The FTA Program Fact Sheet for UA Formula Grants (49USC5307) lists as "Eligible Purposes: Planning, engineering design and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities; . . . computer hardware and software."

Previous Work: The CCRTA has undertaken an ITS project, the Cape Cod Advanced Public Transportation System Project (CC-APTS), since 1997 funded by capital grants from FTA, FHWA and EOT.

The transit ITS technologies being deployed on Cape Cod are: 1) a geographic information system (GIS) running on a local area network (LAN) and a wide area network (WAN), 2) global positioning system (GPS) based automatic vehicle location (AVL) for all CCRTA's multimodal (paratransit and fixed route) services, 3) upgraded paratransit scheduling and management information capabilities based on GIS technology with open data accessibility, 4) mobile data computers (MDC) for on-board vehicle data collection, downloading of paratransit schedules and two way messaging, and emergency alarms, integrated with AVL, 5) deployment of and electronic payment system or multipurpose regional smart card for market-based pricing strategies for transportation demand management, 6) designing and deploying a public access node or "public Hot Spot" to provide advanced travel information systems (ATIS) using wireless local area network (WLAN or Wi-Fi) technology at the Hyannis Intermodal Terminal and 7) design, test and deploy a wireless mesh network using fixed route and paratransit vehicles as mobile relays for IEEE 802.11b wireless local area network (WLAN or Wi-Fi) communications.

Procedures: CCRTA has retained a consulting firm, Bluegrass, Inc., to assist in the planning, engineering design and evaluation of CC-APTS. Bluegrass is a SOMBWA certified firm, as well. CCRTA is currently advancing toward a multi-modal electronic fare system in FY05 using the CC-APTS technology. CCRTA anticipates applying for a 5307 Planning Assistance grant of \$62,500 in FY05 to provide additional funding for this project.

Budget:

FTA \$50,000 CCRTA \$12,500

#### PL FUNDING SUMMARY & DISCUSSION

The Massachusetts Highway Department/Executive Office of Transportation receives Metropolitan Planning Funds (PL) from the Federal Highway Administration. These funds are passed through to planning agencies to conduct the comprehensive, cooperative and continuing (3C) transportation planning process. These funds are apportioned to states on the basis of urbanized area population and highway construction funding amounts. The state apportions the PL funds to the 10 urban area planning agencies, including the Cape Cod Commission/County of Barnstable.

The Cape Cod Commission's estimated PL funding and expenditure summary is as follows:

Total PL allocations as of July 1, 2003 (since 1991)	\$4,279,171
Total PL expenditures as of Sept. 30, 2003 (since 1991)	\$2,804,444
Total PL expenditures Oct. 1, 2003 through June 30, 2004	\$ 256,260
PL balance as of 7/1/03	\$1,218,467

The Cape Cod Commission continues to expend PL funds as anticipated. Expenditures through the end of FFY 2004 (September 30, 2004) are expected to be approximately \$120,000, leaving a year-end PL balance of approximately \$1,198,467.

## LIST OF SIGNIFICANT PLANNING STUDIES and OTHER GRANTS Significant regional transportation studies:

By the Cape Cod Commission:	
Cape Cod Transportation Improvement Program Draft FY2005-2009	July 2004
Cape Cod Transportation Improvement Program Amendment FY2004-2008	June 2004
Cape Cod Transportation Improvement Program Amendment FY2004-2008	March 2004
Route 6 Safety & Traffic Study (Eastham, Wellfleet, Truro, Provincetown)	March 2004
Cape Cod Transit Support Facilities Design Prototypes	
(Cape Cod Commission and National Park Service)	February 2004
2003 Cape Cod MPO Regional Transportation Plan	August 2003
Cape Cod Unified Planning Work Program for FY04	August 2003
Cape Cod Transportation Improvement Program FY2004-2008	August 2003
Cape Cod Transportation Improvement Program Amendment J	June 2003
Falmouth Steamship Authority Traffic Study (final draft)	February 2003
Cape Cod Traffic Counting Program Annual Report	January 2003
Cape Cod Unified Planning Work Program for FY03	August 2002
Cape Cod Transportation Improvement Program FY2003-2007	August 2002
Cape Cod Park & Ride Study	June 2002
Five-Year Public Transportation Plan (by CCC and the CC Transit Task Force)	June 2002
2002 Regional Policy Plan	April 2002
Marston Mills Recreational Fields Traffic Study	November 2001
Provincetown Bike Route Study	December 2000
Bicycle Safety Study - Provincetown	April 2000
A Strategic Plan for Expanded Cape Cod Ferry Service	Jan. 2000
Harwich Route 39/137 Planning Study	May 1999
Conwell Street Corridor Safety Study	May 1999
BL-2 Internal Road Transportation Benefits & Detriments (Sandwich)	November 1998

Massachusetts Military Reservation Master Plan Cape Cod Marine Transportation Feasibility Study Veterans Memorial Elementary School (Provincetown) Pedestrian Safety Study Route 28 & 132 Traffic Circulation Study - Barnstable Route 28 Traffic Circulation Study - Yarmouth to Orleans Route 28 Traffic Circulation Study - Mashpee Route 28/MacArthur Blvd Traffic Study - Bourne 10 Year Needs Assessment - Summary List Route 6 - Alternatives - Dennis to Orleans	September 1998 June 1998 May 1998 August 1992 March 1992 December 1989 April 1989 October 1989 October 1986
Environmental Impact Reports and Traffic Impact Studies (by others)  Barnstable Airport Improvement Project, Hyannis, MA (Final EIR/Final EA)  Proposed Cape Cod Hospital Expansion  CanalSide Commons Development Traffic Impact and Access Study  Sagamore Rotary Grade Separation (Revised EA/Final EIR)  South Cape Village Supplemental EIR  Sagamore Rotary Transportation Improvements Project  (Environmental Assessment and draft EIR)	May 2004 March 2004 March 2004 October 2003 October 2003 June 2003
Mashpee Place (final EIR) Cape Cod National Seashore Alternative Transportation Systems Long Range Planning Study	May 2003 May 2003
Wellfleet Harbor Actors Theater (Traffic Impact & Access Study) Cape Cod Hospital Proposed Hadaway Road Ambulatory Campus Falmouth Hospital Expansion Traffic Impact Study	October 2002 October 2002
Sandwich Shaw's (Traffic Impact & Access Study) Mashpee Shaw's (Traffic Impact & Access Study) Truro Stop & Shop (draft EIR) Orleans Shaw's (Traffic Impact & Access Study)	August 2002 August 2002 May 2002 January 2002
Atlantis Supermarket (ENF) Harwich Shaw's (Traffic Impact and Access Study) BJ's Wholesale Club	September 2001 April and July 2001 April 2001
Cotuit Landing - Barnstable (final) CanalSide Commons - Bourne (final) CanalSide Commons - Bourne (supplemental draft) Mashpee Commons - Mashpee (draft)	November 2000 October 2000 May 2000 March 2000
South Cape Factory Outlet - Mashpee (final) Route 3 - South Weymouth to Bourne - Corridor Needs Analysis South Cape Factory Outlet - Mashpee (draft) CanalSide Commons - Bourne (draft)	February 2000 May 1999 April 1999 Feb. 1999
Route 6 - Transportation Improvements Project Dennis to Orleans (draft)  Feasibility/Conceptual Planning Studies (by others) Sagamore Rotary Grade Separation Study	October 1994 March 1998
Conceptual Design & Feasibility Study for a New Route 6 Interchange in the Town of Barnstable	Jan. 1998

## Other active CCC Planning Grants:

US Dept of Housing & Urban Development - HOME program

Coastal Zone Management - Mass Bays Program

Exec. Office of Environmental Affairs - GIS Service Center

Federal Emergency Management Agency - Project Impact

Massachusetts Emergency Management Agency - Pre-Disaster Mitigation

List of staff and estimated percentage of time allocated MassHighway funded (PL) tasks in the 2005 UPWP:

Robert Mumford, Transportation Program Manager 20% Lev A. Malakhoff, Senior Transportation Engineer 75% Priscilla N. Leclerc, Senior Transportation Planner 75% Glenn Cannon, PE, Transportation Engineer 3% Clay Schofield, PE, Transportation Engineer 50% Tim Boesch, Transportation Engineer 3% Vacant, Transportation Analyst 75%

Seasonal Traffic Counting Technician(s) - approximately 20 person weeks 100%

## **Unified Planning Work Program**

## FY2005 Proposed Amendment

		MHD/FHWA	MHD/FHWA	Change	MHD/FHWA	EOT/FTA	EOT/FTA	CCC	CCRTA
		FY05 approved	FY05 proposed		Scenic Byway	Sec 5303	Other		
Task	Mgt & Support of the Planning Process								
	& Certification Activities								
	Unified Planning Work Program	\$6,500	\$8,000	\$1,500					
	Transportation Improvement Program	\$25,000	\$25,000	\$0					
	CCJTC and MPO activities/Public Participation Program Environmental Justice	\$19,000 \$10.000	\$35,000	\$16,000		<b>64.004</b>		£4.000	
	Access to Jobs	, .,	\$10,000 \$5,000	\$0 \$0		\$4,881		\$1,220	
	Other Meetings & Support of the planning process	\$5,000 \$21,130	\$21,130	\$0 \$0					
1.0	Total for Task 1	\$86,630	\$104,130	\$17,500		\$4,881		\$1,220	
	Total for Tack 1	Ψ00,000	Ψ101,100	Ψ11,000		Ψ1,001		Ψ1,220	
Task	Data Collection & analysis activities								
2.1	Traffic Counting Program	\$45,000	\$45,000	\$0					
	Transportation database management	\$20,000	\$20,000	\$0					
2.3	Computer modelling & travel demand forecasting	\$25,000	\$25,000	\$0					
	Total for Task 2	\$90,000	\$90,000	\$0					
Tools	Chart and lane range planning								
	Short and long range planning	ቀንባ ባርሳ	¢20,000	<b>ሰ</b> ስ	+				-
3.1	Regional Transportation Plan Upper Cape Long Range Transportation Study	\$30,000 \$50,000	\$30,000 \$25,000	\$0 (\$25,000)					<del>                                     </del>
3.2	Transit Planning	\$50,000	\$25,000	(\$25,000) \$0		\$30,000		\$7,500	<del>                                     </del>
2.3	Follow-up on previous planning studies	\$59,297	\$8,797	(\$50,500)		ψου,υυυ		φι,500	<del>                                     </del>
3.4	Congestion & Safety Analysis at 3 High Priority Location	\$09,297	\$28,000	\$28,000	<del>'                                     </del>				1
	Congestion & Salety Analysis at 3 High Phonty Educate Congestion Management System Development	\$0	\$30,000	\$30,000					<del>                                     </del>
0.0	Total for Task 3		\$149,297	(\$17,500)		\$30,000		\$7,500	
	Total for Facility	ψ.ισσ,.σ.	ψ1.10,201	(4.1,000)		400,000		ψ.,σσσ	
Task	Other technical activities								
4.1	ITS Initiative & Travel Smart Program	\$20,000	\$20,000	\$0					
	Cape Cod Rural Roads Initiative	\$20,000	\$20,000	\$0					
	Pavement Management	\$5,000	\$5,000	\$0					
4.4	Other Technical Assistance Requests	\$7,500	\$7,500	\$0					
	Total for Task 4	\$52,500	\$52,500	\$0					
	T	#00F 007	<b>\$005.007</b>						
	Totals	\$395,927	\$395,927						
Task	CCC Planning and regulatory activities								
	Regulatory							\$125,958	
5.2	Planning							\$125,958	
5.3	Other transportation activities							\$62,979	
	Total for Task 5							\$314,895	
T I -	Other Tentetine Blancine Effects								
	Other Tentative Planning Efforts				£405.000				
	Route 6A/Scenic Byways Minimodal Study				\$125,000		\$368,870		
0.2	Total for Task 6				\$125,000		\$368,870		
	Total to Task o				\$123,000		φ300,070		
Task	Cape Cod Advanced Public Transportation System	Proiect				\$50,000			\$12,500
. 451						<b>\$30,000</b>			Ţ. <u>Z</u> ,500
	Totals	\$395,927	\$395,927		\$125,000	\$84,881	\$368,870	\$323,615	\$12,500
	Control totals	. ,	\$395,927		\$125,000	\$84,881	\$368,870	\$323,615	
	Key:								
	MHD = Massachusetts Highway Department								
	EOT = Executive Office of Transportation								
	FHWA = Federal Highway Administration								
	FTA = Federal Transit Administration								
	CCC= Cape Cod Commission				1				
	CCRTA = Cape Cod Regional Transit Authority				1				
<b> </b>	PL = Planning funds				1				
	Sec 5303 = Federal Transit Planning Funds				++				-
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