

CAPE COD PLANNING AND ECONOMIC DEVELOPMENT COMMISSION

1ST DISTRICT COURT HOUSE, BARNSTABLE, MASSACHUSETTS 02630

TELEPHONE: 617-362-2511

PROPOSED EXTENSION
OF OLD TOWN HOUSE ROAD
IN YARMOUTH AND BARNSTABLE

May, 1980

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1. Description of the Proposed Extension of Old Town House Road

The Proposed Extension of Old Town House Road shown on Map 1 consists of three parts:

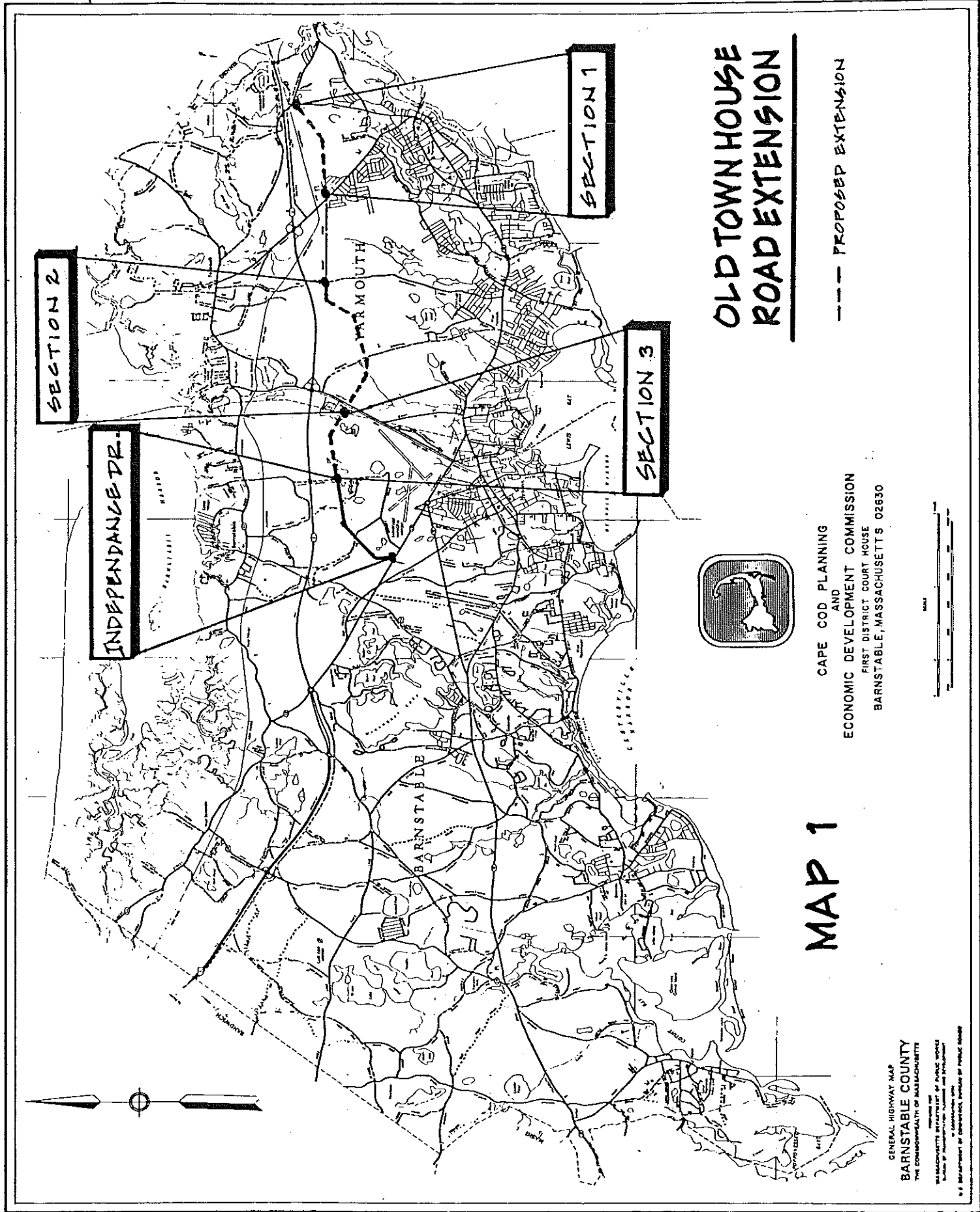
- Section 1 North Main Street to Union Street (Yarmouth)
- Section 2 West Yarmouth Road to Willow Street (Yarmouth)
- Section 3 Willow Street to Mary Dunn Road (Barnstable)

Section 1 and Section 2 in Yarmouth were taken as a County way by the Barnstable County Commissioners after a formal vote on January 11, 1974.

This action was taken based upon a petition from the Yarmouth Board of Selectmen on June 14, 1972 stating that public necessity and convenience require the layout, alteration, relocation or extension of a road known as Old Town House Road leading from North Main Street in South Yarmouth to Willow Street in West Yarmouth for a total distance of 23,086 feet (4.4 miles).

The taking on the average is 60 feet wide. The description of land taken can be found in the plan entitled "County of Barnstable, Plan of Layout of Old Town House Road in the Town of Yarmouth, by the County Commissioners. Scale: 40 feet to an inch, December, 1973, Newell B. Snow, Engr." as recorded in the Barnstable County Registry of Deeds. (Plan Book 279, Pages 24-42)

Section 3 of the Extension shown on Map 1 would connect the County taking with Independence Park Road. Segment 3 traverses land owned by Independence Park. While Section 3 is primarily in the Town of Barnstable a small section is located in Yarmouth.



SECTION 2

INDEPENDENCE DR.

SECTION 1

SECTION 3



CAPE COD PLANNING
AND
ECONOMIC DEVELOPMENT COMMISSION
FIRST DISTRICT COURT HOUSE
BARNSTABLE, MASSACHUSETTS 02630

MAP 1

GENERAL HIGHWAY MAP
BARNSTABLE COUNTY
THE COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS DEPARTMENT OF PUBLIC SAFETY
BUREAU OF HIGHWAYS AND TRANSPORTATION
IN COOPERATION WITH
U.S. DEPARTMENT OF COMMERCE, BUREAU OF PUBLIC ROADS

2. Urban Systems Designation

The Massachusetts Department of Public Works in January, 1980 added the roadway sections listed below to the Urban Systems Network. Map of roadway sections shown in Appendix A.

<u>Town</u>	<u>Route #</u>	<u>Street Name</u>	<u>Termini</u>
Barnstable	8659	Extension of Old Town House Road	Yarmouth T/L to Mary Dunn Road
Barnstable	8660	Independence Drive	Mary Dunn Road to Iyannough Road
Yarmouth	8531	Extension of Old Town House Road	Barnstable T/L to West Yarmouth Road
Yarmouth	8531	Extension of Old Town House Road	Union Street to North Main Street

Each of the above roadway sections as described above have been functionally reclassified as an urban collector.

These revisions have been made in accordance with the requirements of the 1973 Federal-Aid Highway Act and have been submitted to and approved by the Federal Highway Administration effective December 20, 1979.

Because of the above designation, future construction of the Proposed Extension of Old Town House Road qualifies for Urban Systems funding consideration.

Federal Aid Urban Systems funds of some \$23.9 million are apportioned annually to the Massachusetts Department of Public Works for projects on the Urban System.

Urban Systems projects are constructed with 70% Federal funding and 30% State funding.

3. Potential Benefits of the Proposed Extension

Potential benefits of the Proposed Extension of Old Town House Road are:

- lessen traffic congestion on Rt. 28 in the Mid-Cape area because the Extension would provide an alternative east-west connector serving the Towns of Yarmouth and Barnstable
- access to industrial lands necessary to the economic base of Yarmouth and Barnstable (refer to Map 2)
- lessen traffic congestion on Yarmouth Road (Willow St.) which is the major north-south artery over which ambulances and rescue squads must travel in going to the Cape Cod Hospital.

OLD TOWN HOUSE ROAD EXTENSION

--- PROPOSED EXTENSION

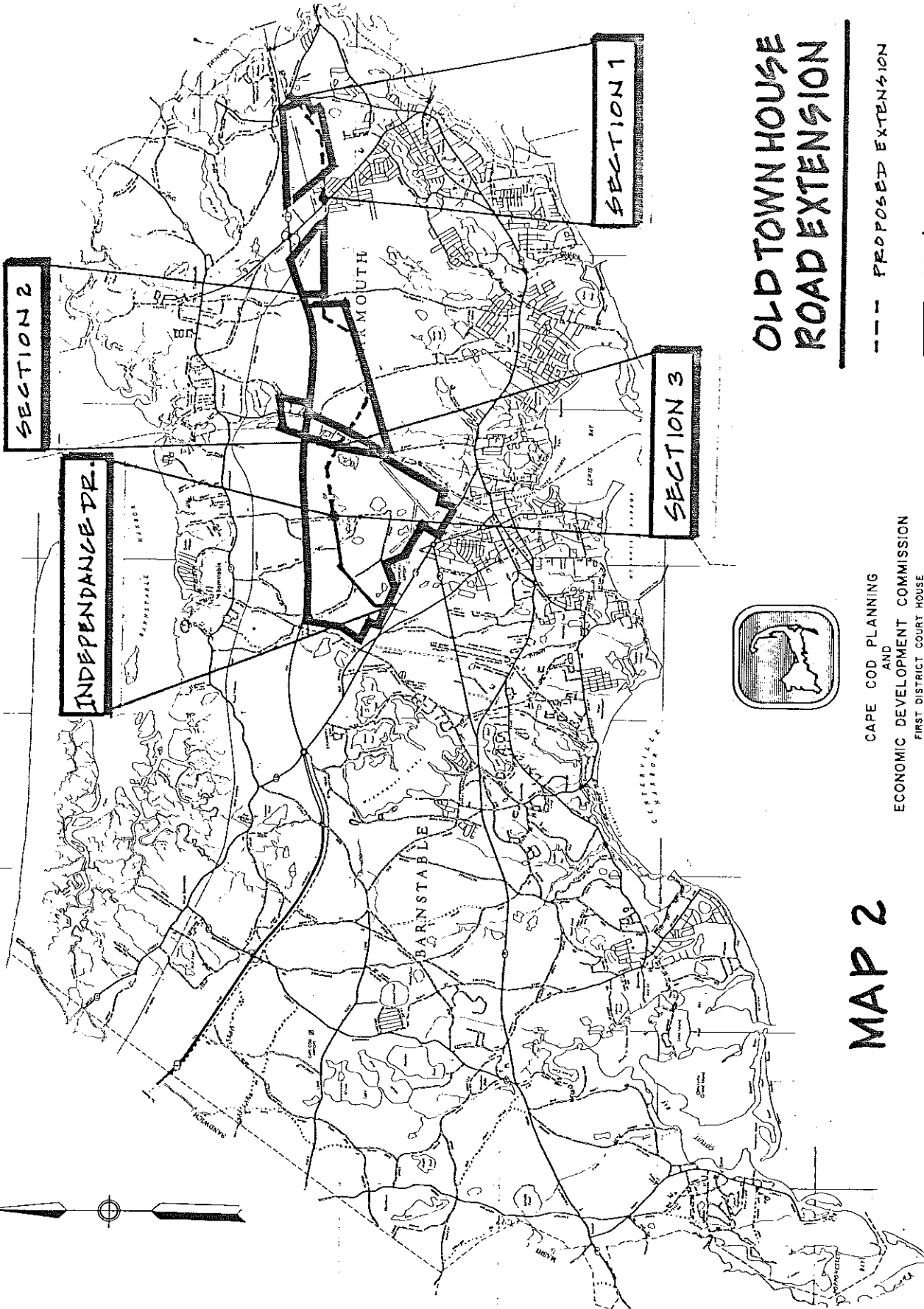
— INDUSTRIAL ZONE

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FIRST DISTRICT COURT HOUSE
BARNSTABLE, MASSACHUSETTS 02630

MAP 2

GENERAL HIGHWAY MAP
BARNSTABLE COUNTY
THE COMMONWEALTH OF MASSACHUSETTS

PREPARED FOR
MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS
BUREAU OF TRANSPORTATION PLANNING
IN COOPERATION WITH
U.S. DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS



4. Water Quality Considerations of Old Town House Road Extension

Through Section 208 of the Water Pollution Control Act Amendments of 1972 and the high level of federal funding for the program, Americans have expressed their deep commitment to maintaining and upgrading the quality of their water resources, particularly drinking water supplies. Though the emphasis in water supply protection thus far has been on facilities solutions, some regions, such as Cape Cod, have been able to devise preventive solutions based on non-structural techniques (land use and other regulatory measures).*

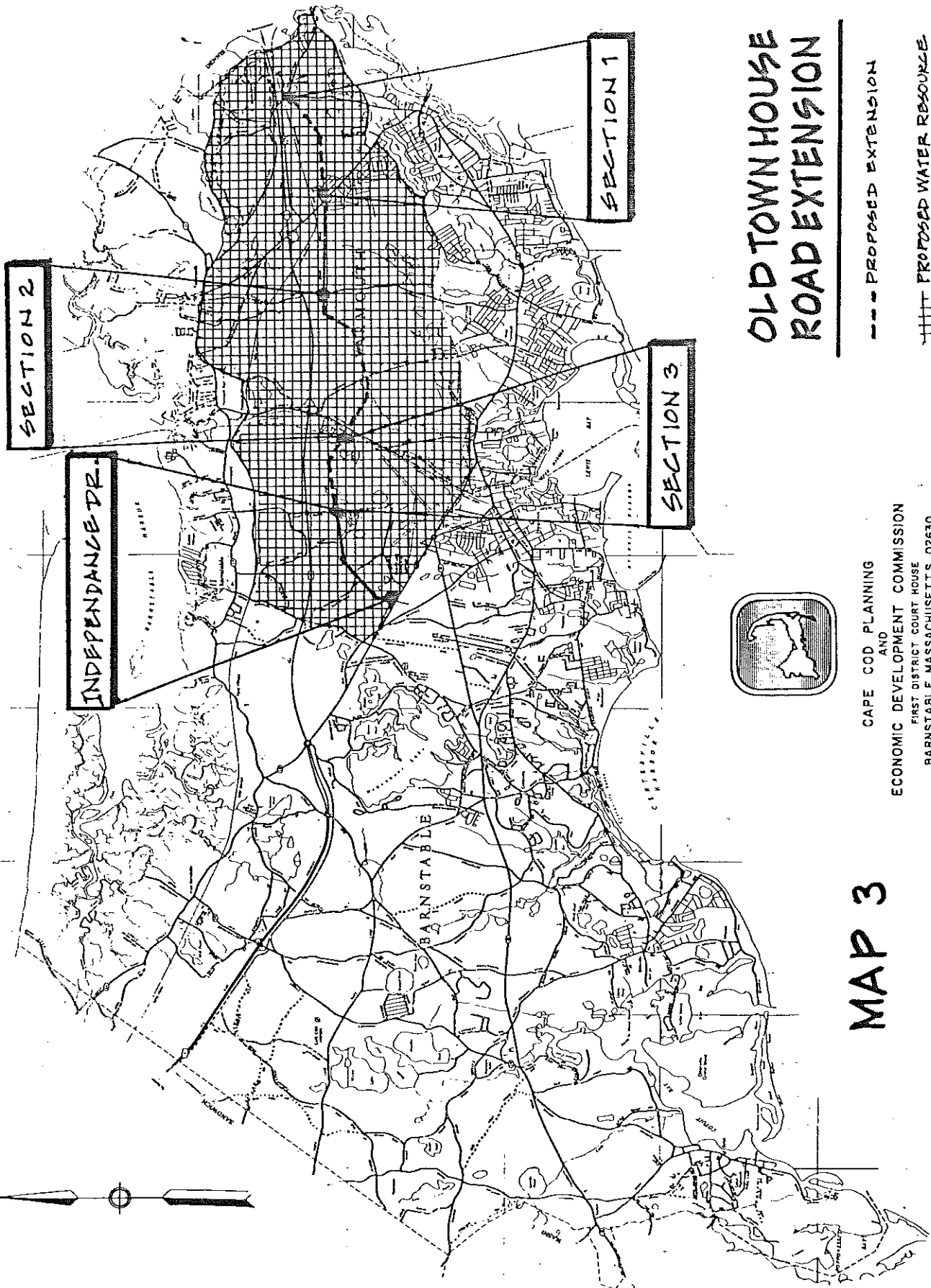
This preventive approach is especially suitable for Cape Cod for a number of reasons: (1) the Cape has generally excellent water quality; (2) the major pollution sources are non-point sources; (3) the Cape's fresh water aquifer, like the Cape itself, is a single, unique entity underlying the Cape and (4) this aquifer is the Cape's sole source of drinking water. The preventive measures utilized are land use and health regulations which manage the location, pattern, and pace of population growth, thereby eliminating, preventing, or minimizing land uses which can adversely affect water quality.

Preventive regulations are created and administered within designated "Water Resource Districts."* The Yarmouth and Barnstable districts are delineated on Map 3. The regulatory controls recommended for these districts are aimed at eliminating major non-point pollution sources (landfills, junkyards, etc.), reducing the number of non-point sources (lowering the density of use), and modifying harmful land use practices (limiting impervious surfaces, maintaining vegetative buffers, etc.). Through these measures it is expected that the quality and quantity of recharge to groundwater supplies will be maintained at a reasonable level.

Groundwater flows away from a theoretical "groundwater divide," or water table high point. This divide on the Cape is located just south of and parallel to Route 6, creating flows towards Cape Cod Bay and Nantucket Sound. Recharge areas are those land areas around each of the towns' existing and future wells (refer to Maps 4 & 5 respectively) which contribute rainwater recharge to each well sufficient to ensure adequate flow through the well on the basis of projected summer average daily pump rates at 60% of capacity.

The location for the Proposed Extension of Old Town House Road in relation to the Town owned well fields is clearly shown on Map 6. Since many of the towns' wells are downgradient of the groundwater divide, generous land areas upgradient of the wells must be included in the recharge area circles and in the Water Resource District to assure adequate regulatory protection of the wells (see Map 4).

*Source: Cape Cod Planning and Economic Development Commission, Water Quality Management Plan/EIS for Cape Cod, September, 1978.



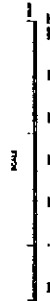
OLD TOWN HOUSE ROAD EXTENSION

--- PROPOSED EXTENSION

||||| PROPOSED WATER RESOURCE
DISTRICT

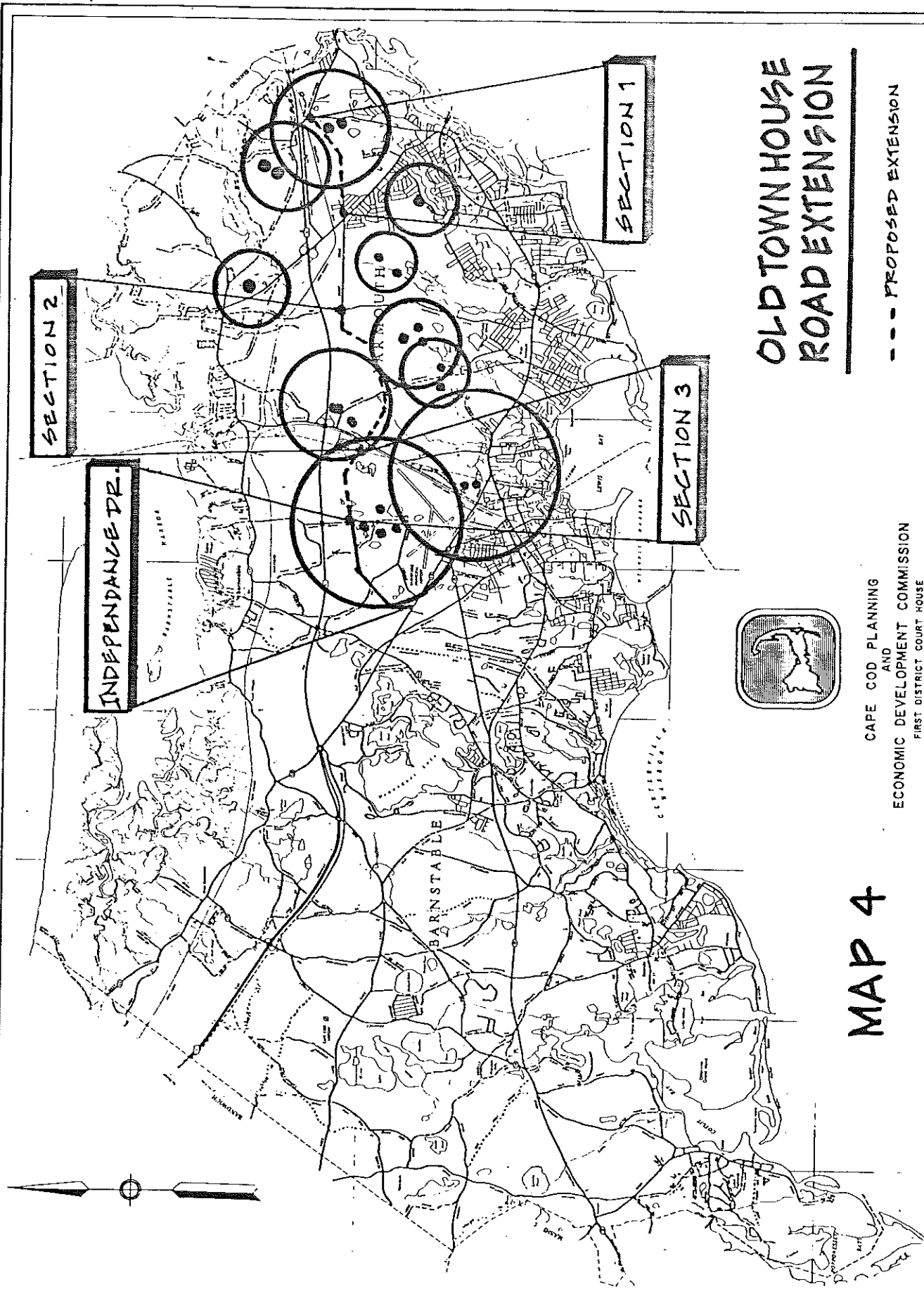


CAPE COD PLANNING
AND
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FIRST DISTRICT COURT HOUSE
BARNSTABLE, MASSACHUSETTS 02630



MAP 3

GENERAL HIGHWAY MAP
BARNSTABLE COUNTY
THE COMMONWEALTH OF MASSACHUSETTS
Produced for
the Department of Transportation
by the Massachusetts Department of Public Works
in cooperation with
the Department of Transportation, Division of Public Works



MAP 4

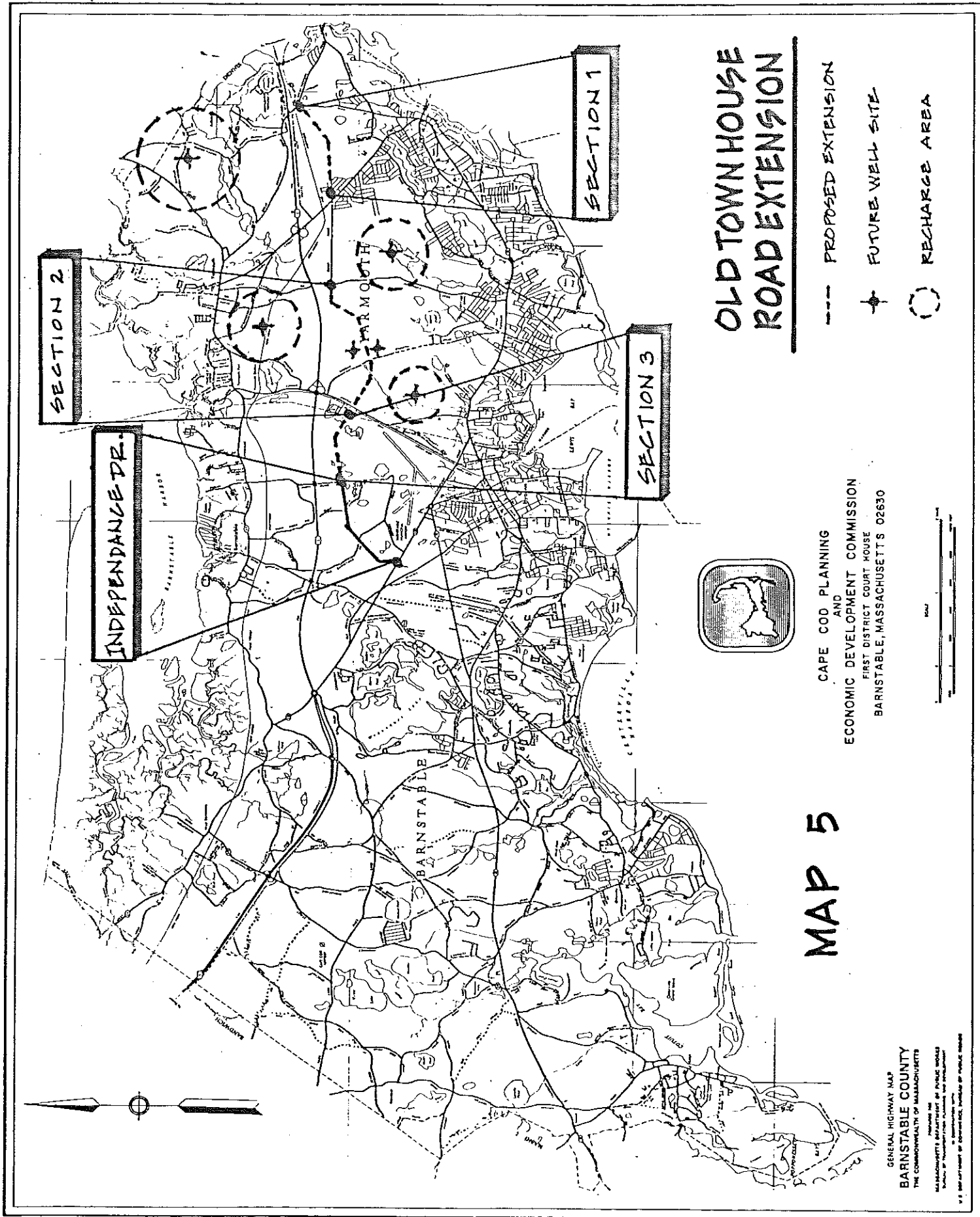
OLD TOWN HOUSE ROAD EXTENSION

- PROPOSED EXTENSION
- WELL SITE
- RECHARGE AREA

CAPE COD PLANNING
AND
ECONOMIC DEVELOPMENT COMMISSION
FIRST DISTRICT COURT HOUSE
BARNSTABLE, MASSACHUSETTS 02630



GENERAL HIGHWAY MAP
BARNSTABLE COUNTY
THE COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS
BUREAU OF TRANSPORTATION PLANNING AND DESIGN
1000 STATE STREET
BOSTON, MASSACHUSETTS 02116
U.S. DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS



SECTION 2

INDEPENDANCE DR.

SECTION 1

SECTION 3

OLD TOWN HOUSE ROAD EXTENSION

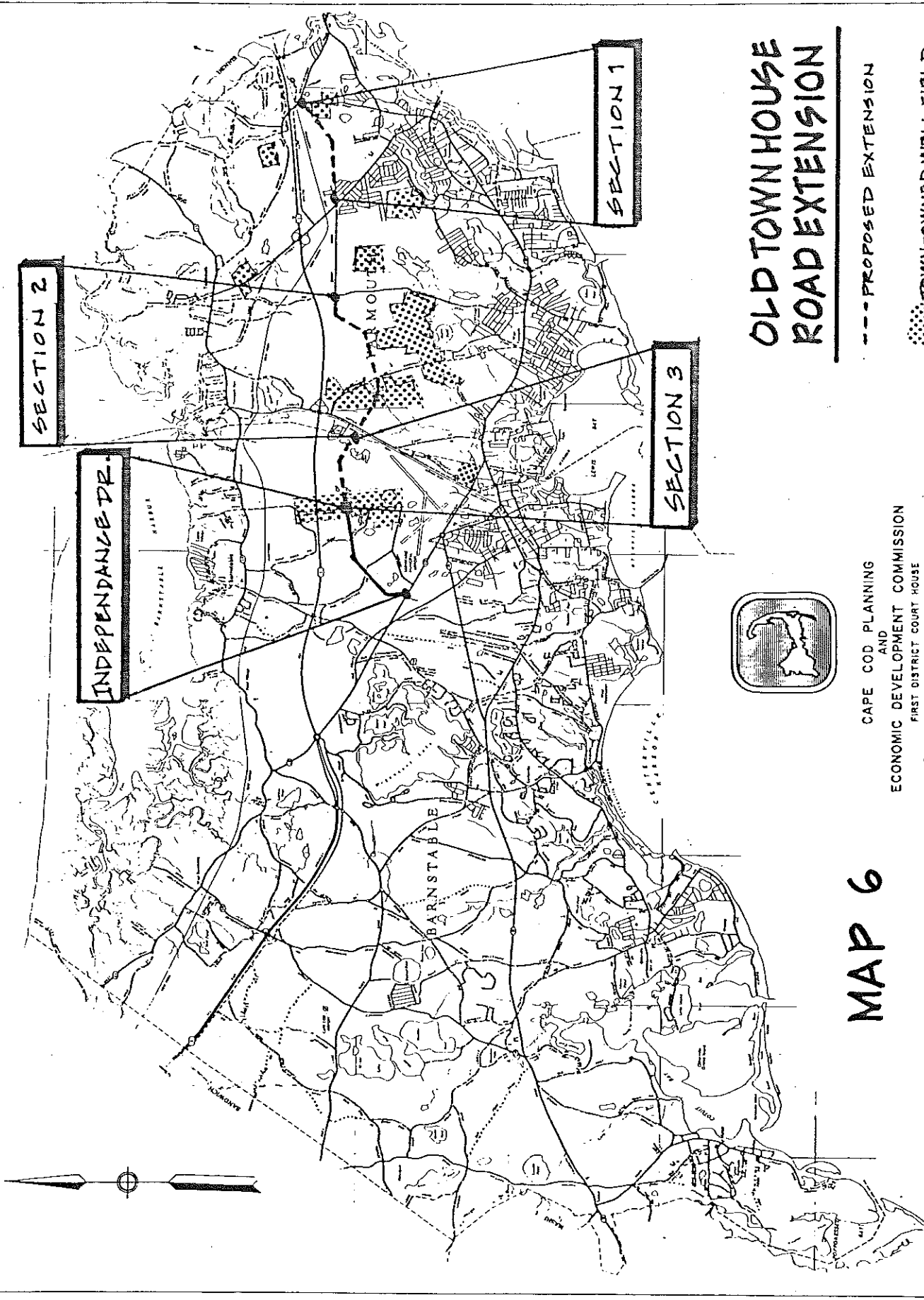
- PROPOSED EXTENSION
- ★ FUTURE WELL SITE
- RECHARGE AREA

MAP 5

CAPE COD PLANNING
AND
ECONOMIC DEVELOPMENT COMMISSION
FIRST DISTRICT COURT HOUSE
BARNSTABLE, MASSACHUSETTS 02630



GENERAL HIGHWAY MAP
BARNSTABLE COUNTY
THE COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS
Bureau of Transportation Planning and Development
© 1980 DEPARTMENT OF TRANSPORTATION, BUREAU OF PUBLIC WORKS



SECTION 2

INDEPENDANCE DR.

SECTION 1

SECTION 3

OLD TOWN HOUSE ROAD EXTENSION

--- PROPOSED EXTENSION

..... TOWN-OWNED WELL FIELD



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FIRST DISTRICT COURT HOUSE
BARNSTABLE, MASSACHUSETTS 02630

MAP 6



GENERAL HIGHWAY MAP
BARNSTABLE COUNTY
THE COMMONWEALTH OF MASSACHUSETTS
PLANNED FOR
MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS AND TRANSPORTATION
IN COOPERATION WITH
V.B. INTERNATIONAL BY CONSENTANCE, BUREAU OF PUBLIC WORKS

There are two major non-point pollutants of concern in industrial zones -- toxic materials and nitrates from sewage flows. The intentional discharge of toxic materials into the groundwater is prohibited outright, while the discharge of nitrates to the groundwater is regulated by performance standards. Without implementation of these controls the groundwater supplies will be seriously threatened by industrial development.

The 208 Plan's general control standards pertaining to toxic materials are: (1) toxic materials shall be stored in product tight containers with a product inventory used to detect product loss; (2) no toxic materials shall be present in wastes disposed on site; (3) disposal of process wastes shall not exceed those levels specified in the state's drinking water regulations. The Plan's nitrate loading standard is 16 lbs of nitrate/40,000 sq. ft. of lot area/year, which is double the State standard to allow for peak sewage flows, drought conditions, and other situations which would push the nitrate loading beyond the State standard for substantial periods of time.

As Map 2 indicates, the Yarmouth and Barnstable industrial zones straddle the groundwater divide, and bisect the proposed Water Resource Districts. The industrial zones thus provide deep recharge to the aquifer, potentially affecting well quality throughout the District. Land use surveys of the Yarmouth industrial zone indicate present zoning of 15,000 square foot lots. This survey also indicates several potential sources of pollutants associated with presently uncontrolled development. If development were to occur at the maximum density of 15,000 square feet per business, the nitrate loading would be 25 lbs/40,000 sq. ft./yr., or well above the 208 Plan standard of 16.

These considerations support the 208 Plan recommendations for larger lot sizes in the industrial zones. The need to preserve a maximum amount of lot in natural vegetation and to minimize impervious surfaces also supports larger lot sizes. In addition, other Cape towns already require considerably larger lots in their industrial zones. The 208 Plan thus recommends a minimum lot size of from 30,000 to 40,000 sq. feet per business. The Plan also emphasizes the need to strictly enforce the State Building Code requirement that changes in use of a building be issued a new Occupancy Permit. Such changes would also be controlled by proposed District regulations. Clearly, then, both the Yarmouth and Barnstable industrial zones constitute a highly significant recharge area. It is essential for the towns to have in place water resource district regulations before Old Town House Road is extended, thus opening up major portions of the industrial zones to development. In this way the continued high quality of drinking water supplies will be reasonably assured.

5. Environmental Studies

a. Town Funding of Required Environmental Studies

Representatives of the Massachusetts Department of Public Works have suggested that the Towns of Barnstable and Yarmouth consider funding the environmental studies which would be required in regard to the Proposed Extension. This suggestion was based on two considerations: first, the environmental concerns are primarily local in scope; and second, participation by the Towns in resolving environmental issues will expedite the proposed project.

The close proximity of the Proposed Extension to public wells and recharge areas in Barnstable and Yarmouth as described above will be one major environmental concern evaluated if and when the decision is made by the Towns of Yarmouth and Barnstable to fund required environmental studies.

A full list of elements required in a full Environmental Impact Statement is contained in Figure 1.

Through a process of Scoping developed by the Massachusetts Department of Public Works, the pertinent environmental elements which must be addressed in regard to the Proposed Extension of Old Town House Road can be identified.

b. Estimated Cost of Environmental Studies

A high estimate for required environmental studies assumes the need to complete a full Environmental Impact Statement for the Proposal Extension with an Outside Consultant.

The estimated costs which would have to be provided by the Towns based upon an average cost of \$35,000 per mile to complete an Environmental Impact Statement (EIS) are as follows:

Yarmouth

Section 1	.66 miles	\$23,100
Section 2	1.00 miles	\$35,000

Barnstable

Section 3	.58 miles	\$20,300
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THE COMMONWEALTH OF MASSACHUSETTS

INTER OFFICE CORRESPONDENCE

DEPARTMENT OF PUBLIC WORKS

From John P. Hurley, Environmental Engr.

Attention of EIS Staff

April 17,

79

Subject List of elements for an EIS

FIGURE 1

The following is a list of elements to be addressed in Environmental Impact Statements that have been derived from FHPM, 7.7.2.

TRANSPORTATION - ENGINEERING

Need for Project	Services Offered	Alternate Transportation
Existing Roadways	Traffic Volume	Future Transportation
Existing Deficiencies	Users Benefit	Construction Impacts

SOCIAL

Community Cohesion	Health & Safety
Growth Rate & Pattern	Public Facilities
Population Characteristics	Aesthetics

ECONOMICS

Land Use	Joint Development-Other Projects
Growth Impact	Relocation Assistance
Tax Base	Maintenance Costs
Employment	

ENVIRONMENTAL

Air	Vegetation-Endangered Species
Noise	Cultural Resources
Water	Natural Resources
Wetlands & Coastal Zones	Open Space
Wildlife-Endangered Species	Landscape
	Ecology
	Energy Use
	Section 4(f)

CONCLUSIONS

Unavoidable-Adverse Effects	Measures to Minimize Harm
Short Term - Long Term	Participation
Commitment of Resources	

The listing should be distributed to all consultants for the use in preparing EIS's, and can also be used as a check-list in reviewing documents to ensure that all elements have been addressed.

c. Potential Source of Funding - Chapter 497 (Acts of 1971)

Under Chapter 497 of the Acts of 1971, the tax on gasoline in Massachusetts was raised one cent per gallon with the additional revenue to be made available to cities and towns for highway purposes, namely, to construct, maintain and police public ways. Environmental studies are an eligible expense under Chapter 497.

Roughly \$25 million was raised in fiscal year 1976 and distributed to the cities and towns by a formula using local road mileage, registered vehicles and equalized valuation for each city and town.

Like most State Aid highway programs, this one is reimbursable. By increasing the excises on gasoline and special fuel, additional revenue is provided the municipalities to cover costs actually incurred for highway purposes specified in Section 31 of Chapter 81 of the General Laws.

In order to receive these funds, it is necessary to file a request on a form (HED-077) provided for this purpose (see sample - Appendix B). Special attention should be given to page 2 of the form for eligible reimbursement before submitting it in duplicate with certified copies of the town votes and adequate documentation to substantiate those items for which reimbursement is requested. This shall particularly apply when the policing costs related to traffic control exceeds 25% of the police budget.

The amount provided each municipality under the Act is included in the State Tax Commissioner's notice to the cities and towns (The Cherry Sheet). The State Treasurer will credit the amount due after proper certification with payment by a check.

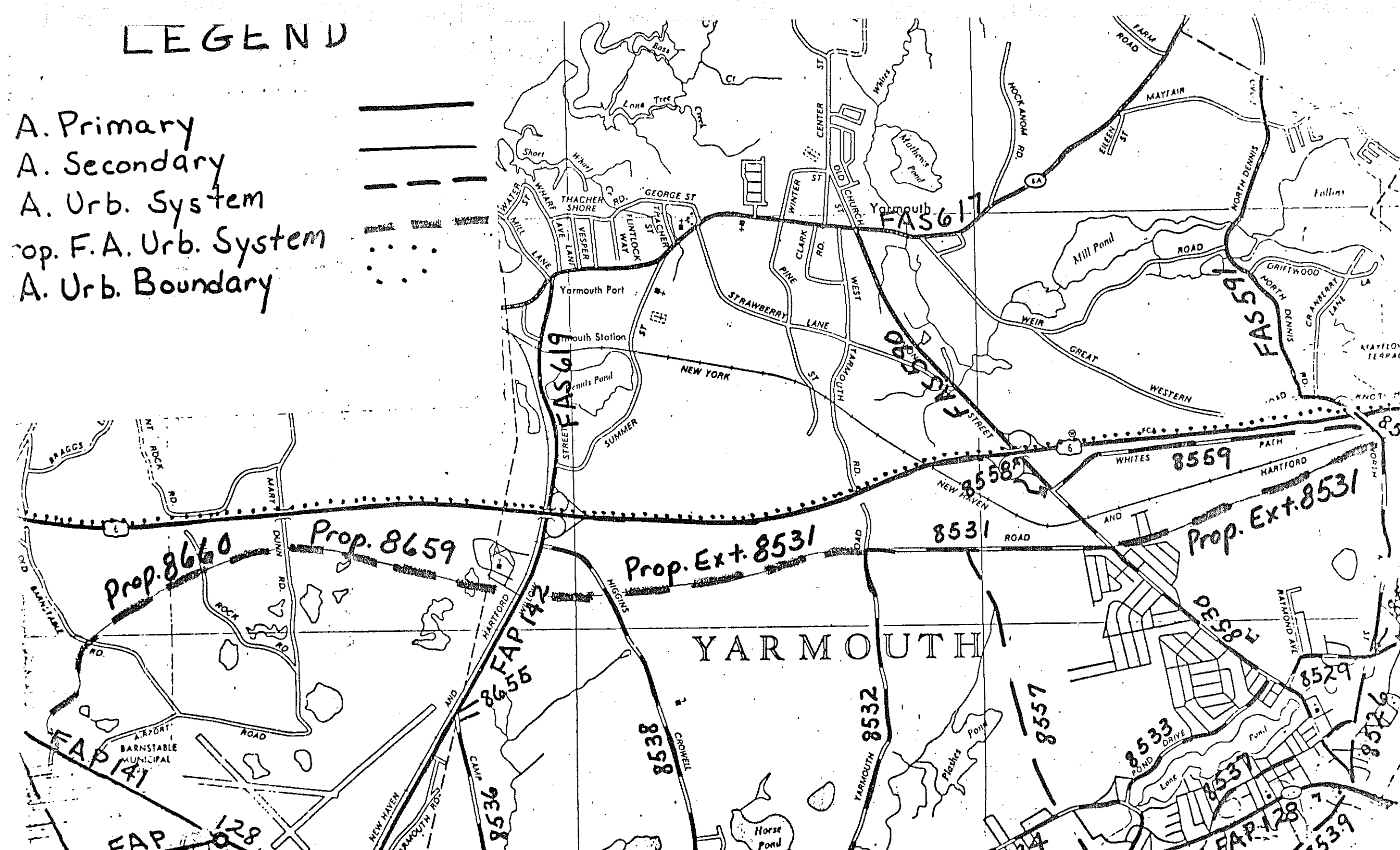
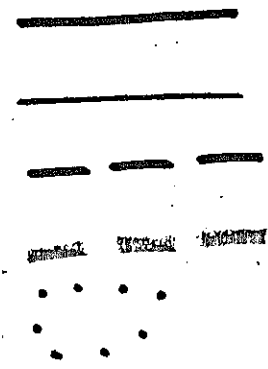
Note that items appearing on the "Cherry Sheet" are not available for appropriation, but must be credited to estimated receipts. When highway departments are preparing their annual budgets and articles for special work on specific public ways, highway and finance committees should recognize that the municipality will be receiving "Cherry Sheet" highway-related aid, and therefore, aid from "Chapter 497" should not be mentioned in any proposed budget or article for local consideration.

APPENDIX A

URBANS SYSTEMS DESIGNATION
FOR PROPOSED EXTENSION
OF OLD TOWN HOUSE RD

LEGEND

- A. Primary
- A. Secondary
- A. Urb. System
- Prop. F.A. Urb. System
- A. Urb. Boundary



APPENDIX B

FORM HED - 077

MASSACHUSETTS DEPARTMENT

OF PUBLIC WORKS

MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS

100 NASHUA STREET

BOSTON, MA 02114

CITY/TOWN _____

STATE AID (HIGHWAYS)

DATE _____

Chapter 81, Section 31

(Section 14, Chapter 497, Acts of 1971)

FOR YEAR _____

District Highway Engineer

Street

_____, MA
City/Town Zip Code

Dear Sir:

This is to certify that the following amount will be incurred as the actual cost during the fiscal year for construction, maintenance, and policing of streets and roads in accordance with Chapter 81, Section 31, as amended by Section 14, Chapter 497 of the Acts of 1971, as defined by the meanings listed on the attached sheet.

Attached are certified copies of the votes and appropriations as taken at the City Councillor's/Annual Town Meeting for the above mentioned items, amounting to \$_____.

Apportioned Amount \$ _____ Signed _____

District Highway Engineer

Mayor/Selectmen

Date _____

CONSTRUCTION

1. All operations on the travelled way on new location.
2. All operations on the travelled way where considerable reconstruction is to be undertaken.

Includes: resurfacing, shoulders, side road approaches, roadsides, drainage, structures, sidewalks, traffic control and service facilities, intersection construction, unusual or disaster operations and professional services, or any other such purpose the Commissioner of Public Works may specifically authorize.

MAINTENANCE

All operations on the travelled way:

1. scarifying, reshaping, applying dust palliatives and restoring material losses.
2. patching, mudjacking, joint filling, surface treating, etc. and replacement in kind.
3. restoration of erosion controls.
4. reshaping drainage channels and side slopes.
5. tree trimming.
6. replacing topsoil, sod, shrubs, curbing, gutters, riprap, underdrains, culverts.
7. cleaning and repairing culverts.
8. cleaning, repairing and painting of structures.
9. replacement of rail, floors, stringers and beams of structures.
10. replacement of walls and repairing of drawbridges.
11. removal of snow and ice.
12. removal of litter from the roadsides and drainage.
13. operation of drawbridges charged to highway traffic.
14. painting, repairing and replacement in kind of signs, guardrail, signals, lighting standards, etc.
15. maintenance and replacement in kind of rest areas.
16. serving of and furnishing power and light bulbs for highway lighting and traffic control devices.
17. roadside cleaning operations.
18. operation of roadside areas, towing service, information booths, etc.
19. or any other such purpose the Commissioner of Public Works may specifically authorize.

POLICING

All operations on the travelled way by law enforcement officials having to do with the direction or control of traffic; or any other such purpose as the Commissioner of Public Works may specifically authorize.