Statistical Section



Bending on the mizzen topsail. The original sails were made of flax. The main topsail on the Constitution is approximately the size of a regulation basketball court (3,700 sq. ft.).

Ten-Year Schedule Of Revenues And Other Financing Sources

All Governmental Fund Types

June 30, 1997 (Amounts in millions)

	1997	% Total	1:	996	% Total	1995	% Total	1994	% Total
Taxes\$	13,030	47.7	\$	11,926	47.5	\$ 11,262	45.9	\$ 10,611	45.7
Federal reimbursements	4,124	15.1		3,861	15.4	4,174	17.0	3,904	16.8
Federal grants	1,457	5.3		1,482	5.9	1,187	4.8	1,205	5.2
Lotteries	3,375	12.3		3,201	12.8	2,957	12.0	2,600	11.2
Assessments	552	2.0		595	2.4	572	2.3	544	2.3
Motor vehicle licenses and registrations	295	1.1		263	1.0	307	1.3	284	1.2
Fees, investment earnings, etc	930	3.4		1,110	4.4	1,154	4.7	1,113	4.8
Proceeds of dedicated income tax bonds	-	-		-	-	-	-	-	-
Proceeds of general obligation bonds	899	3.3		940	3.7	810	3.3	392	1.7
Proceeds of special obligation bonds	-	-		147	0.6	-	-	298	1.3
Proceeds of refunding bonds	723	2.6		-	-	514	2.1	836	3.6
Proceeds of capital lease	62	0.2		26	0.1	18	0.1	34	0.1
Operating transfers	1,920	7.0		1,551	6.2	1,534	6.3	1,367	5.9
Other financing sources	6					49	0.2	35	0.2
Total revenues and other financing sources \$	27,373	100.0	\$	25,102	100.0	\$ 24,538	100.0	\$ 23,223	100.0

 1993	% Total	1992	% Total	1991	% Total	1990	% Total	1989	% Total	1988	% Total
\$ 10,021	44.9	\$ 9,479	45.6	\$ 9,143	41.1	\$ 9,007	49.8	\$ 8,695	50.9	\$ 8,033	54.1
3,376	15.1	3,021	14.5	3,075	13.8	2,092	11.4	1,942	11.4	1,830	12.3
1,118	5.0	1,199	5.8	1,088	4.9	1,042	5.8	1,045	6.1	803	5.4
2,148	9.6	1,831	8.8	1,692	7.8	1,657	9.2	1,447	8.5	1,390	9.3
597	2.7	787	3.8	1,542	6.9	277	1.5	243	1.4	160	1.1
331	1.5	300	1.4	290	1.3	306	1.7	237	1.4	167	1.1
1,215	5.4	1,710	8.2	1,455	6.5	1,188	6.6	1,038	6.1	993	6.7
_	-	-	-	1,363	6.1	-	-	-	-	-	-
368	1.7	721	3.4	1,030	4.7	1,430	7.9	1,374	8.0	543	3.7
-	-	100	0.5	-	-	-	-	-	-	-	-
1,891	8.5	574	2.8	-	-	-	-	226	1.3	-	-
13	0.1	17	0.1	28	0.1	7	-	35	0.2	-	-
1,177	5.3	1,021	4.9	1,477	6.6	1,068	5.9	805	4.7	870	5.9
 46	0.2	47	0.2	36	0.2	30	0.2	5		52	0.4
\$ 22,301	100.0	\$ 20,807	100.0	\$ 22,219	100.0	\$18,104	100.0	\$17,092	100.0	\$14,841	100.0

Ten-Year Schedule Of Expenditures And Other Financing Uses By Secretariat All Governmental Fund Types

June 30, 1997 (Amounts in millions)

		%		%		%		%
	1997	Total	1996	Total	1995	Total	1994	Total
Legislature	\$ 49	0.2	\$ 49	0.2	\$ 47	0.2	\$ 43	0.2
Judiciary	433	1.6	404	1.7	356	1.5	338	1.5
Inspector General	2	_	2	-	2	-	1	_
Governor and Lieutenant Governor		_	5	-	5	-	4	_
Secretary of the Commonwealth	17	0.1	15	0.1	14	0.1	12	0.1
Treasurer and Receiver-General		10.0	2,576	10.5	2,353	9.7	2,052	8.9
Auditor of the Commonwealth	12	-	13	-	11	_	11	_
Attorney General	5	-	29	0.1	22	0.1	38	0.2
Ethics Commission	1	-	1	-	1	_	1	_
District Attorney	62	0.2	55	0.2	51	0.2	47	0.2
Office of Campaign and Political Finance	1	-	1	-	1	_	1	_
Disabled Persons Protection Commission	1	-	1	-	1	_	2	_
Board of Library Commissioners	6	_	4	-	5	_	5	_
Comptroller		_	7	-	6	-	6	_
Administration and finance	937	3.5	943	3.9	876	3.6	863	3.7
Environmental affairs	196	0.7	205	0.8	174	0.7	169	0.7
Communities and development	344	1.3	347	1.4	340	1.4	358	1.6
Health and human services		16.7	4,606	18.8	4,813	19.8	4,327	18.8
Transportation and construction	151	0.6	155	0.6	112	0.5	120	0.5
Education	1,026	3.8	958	3.9	865	3.6	458	2.0
Educational affairs	-	-	14	0.1	6	_	3	_
Higher education	90	0.3	80	0.3	75	0.3	67	0.3
Public safety	860	3.2	841	3.4	732	3.0	693	3.0
Economic development	33	0.1	111	0.5	199	0.8	214	0.9
Elder affairs	174	0.6	155	0.6	161	0.7	155	0.7
Consumer affairs	37	0.1	35	0.1	34	0.1	33	0.1
Labor		0.7	121	0.5	24	0.1	24	0.1
Independent commissions	-	-	-	_	_	_	-	_
Medicaid		13.0	3,241	13.3	3,252	13.4	3,216	14.0
Pension	413	1.5	382	1.6	414	1.7	830	3.6
Direct local aid	3,677	13.6	3,351	13.7	3,073	12.6	2,727	11.8
Capital outlay:								
Local aid	181	0.7	116	0.5	94	0.4	100	0.4
Capital acquisition and construction	2,051	7.6	1,673	6.8	1,698	7.0	1,464	6.4
Debt service	1,278	4.7	1,192	4.9	1,234	5.1	1,152	5.0
Other financing uses:								
Payments to refunded bond escrow agent	723	2.7	-	-	514	2.1	836	3.6
Fund deficit support	-	-	-	-	_	_	-	_
Transfers		12.3	2,753	11.3	2,732	11.2	2,651	11.5
Other		-	-	-	_	-	-	-
Total expenditures and other financing uses		100.0	\$ 24,441	100.0	\$ 24,297	100.0	\$ 23,021	100.0

		%		%		%		%		%		%
1	1993	Total	1992	Total	1991	Total	1990	Total	1989	Total	1988	Total
\$	41	0.2	\$ 44	0.2	\$ 40	0.2	\$ 44	0.2	\$ 49	0.3	\$ 48	0.3
_	306	1.4	315	1.6	298	1.4	305	1.7	280	1.6	271	1.7
	1	_	1	-	1	_	1	-	1	_	1	_
	4	-	4	-	4	_	5	-	6	_	6	_
	14	0.1	12	0.1	13	0.1	11	0.1	14	0.1	13	0.1
	1,659	7.4	1,379	6.8	1,290	6.0	1,193	6.5	1,022	5.8	1,079	6.9
	10	-	10	-	11	0.1	11	0.1	13	0.1	13	0.1
	36	0.2	18	0.1	89	0.4	29	0.2	43	0.2	92	0.6
	1	-	1	-	1	-	1	-	1	-	1	-
	44	0.2	39	0.2	42	0.2	47	0.3	81	0.5	80	0.5
	-	-	1	-	1	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	5	-	4	-	21	0.1	20	0.1	-	-	-	-
	6	-	5	-	5	-	6	-	5	-	5	-
	682	3.0	833	4.1	878	4.1	874	4.7	485	2.7	737	4.7
	162	0.7	141	0.7	172	0.8	171	0.9	185	1.0	198	1.3
	364	1.6	397	2.0	410	1.9	403	2.2	390	2.2	349	2.2
	4,034	18.3	4,007	19.7	5,011	23.4	4,118	22.3	3,532	19.9	2,957	18.8
	273	1.2	92	0.5	176	0.8	162	0.9	60	0.3	94	0.6
	469	2.1	392	1.9	339	1.6	332	1.8	329	1.9	311	2.0
	10	-	17	-	-	-	-	-		-	-	-
	69	0.3	1,288	6.3	1,211	5.7	1,155	6.3	1,164	6.7	1,058	6.7
	611	2.7	658	3.2	148	0.7	154	0.8	164	0.9	162	1.0
	210	0.9	194	1.0	169	0.8	159	0.9	202	1.1	176	1.1
	150	0.7	137	0.7	143	0.7	150	0.8	175	1.0	145	0.9
	30	0.1	27	0.1	32	0.1	34	0.2	50	0.3	46	0.3
	24	0.1	19	0.1	21	0.1	23	0.1	24	0.1	19	0.1
	-	-	-	-	-	-	-	-	28	0.2	35	0.2
	3,151	14.0	2,853	14.3	2,872	13.4	1,929	10.4	2,336	13.2	1,707	10.8
	893	4.0	751	3.7	706	3.3	672	3.6	663	3.7	600	3.8
	2,547	11.3	2,278	11.2	2,608	12.2	2,937	15.9	2,961	16.7	2,769	17.8
	105	0.5	87	0.4	226	1.1	208	1.1	112	0.6	27	0.2
	1,133	5.0	1,157	5.7	945	4.4	929	5.0	1,125	6.3	842	5.3
	1,143	5.1	901	4.4	1,407	6.6	775	4.2	654	3.7	568	3.6
	1,891	8.4	574	2.8	-	-	-	-	226	1.3	-	-
	-	-	-	-	-	-	-	-	-	-	231	1.5
	2,364	10.5	1,654	8.2	2,098	9.8	1,613	8.7	1,348	7.6	1,088	6.9
											18	0.1
\$	22,442	100.0	\$ 20,290	100.0	\$21,388	100.0	\$18,471	100.0	\$17,728	100.0	\$15,746	100.0

Ten-Year Schedule Of Percentage Of Annual Debt Service Expenditures For General Bonded Debt To Total Expenditures All Governmental Fund Types

(Amounts in millions)

Fiscal year ended June 30	Debt service (1)	Total expenditures (2)	Ratio
1997	\$ 1,278	\$ 22,954	5.6
1996	1,192	21,688	5.5
1995	1,234	20,729	6.0
1994	1,151	19,534	5.9
1993	1,143	18,187	6.3
1992	901	18,061	5.0
1991	1,407	19,290	7.3
1990	775	16,861	4.6
1989	654	16,154	4.0
1988	568	14,199	4.0

⁽¹⁾ Debt service includes principal and interest payments related to general obligation long-term bonds and minibonds. Minibonds are general bonded debt instruments reported as fund liabilities because of their demand provisions.

⁽²⁾ Expenditures related to Higher Education in fiscal years subsequent to 1992 are presented in the University and College Fund Type. Prior years expenditures have not been restated to conform to this presentation.

Ten-Year Schedule Of Per Capita General Long-Term Bonded Debt

(Amounts in thousands)

Fiscal year ended June 30	Massachusetts resident population	Total long- term bonds and notes payable	Per capita long-term debt
1997	6,127	\$ 10,271,294	\$ 1.676
1996	6,101	10,065,578	1.650
1995	6,203	9,628,466	1.552
1994	6,089	9,427,745	1.548
1993	5,998	9,231,458	1.539
1992	5,998	9,264,430	1.545
1991	5,996	8,580,339	1.431
1990	6,020	6,605,039	1.097
1989	6,016	5,370,627	0.893
1988	5,981	4,272,384	0.714

Source: United States Department of Commerce, Bureau of the Census

Component Units Revenue Bond Coverage For The Last Ten Fiscal Years

(Amounts in thousands)

Fiscal year ended June 30	Net r	Net revenues (1) Debt service requirements (2)			Coverage
1997	\$	328,608	\$	283,975	1.16
1996		288,599		275,068	1.05
1995		272,308		232,473	1.17
1994 (5)		220,185		192,975	1.14
1993		332,195		305,156	1.09
1992		310,372		295,389	1.05
1991		278,822		260,982	1.07
1990		226,444		260,362	0.87
1989		219,764		49,120	4.47
1988		146,001		45,748	3.19

- (1) Net revenues represent the regular recurring operating income (loss) plus operating grants, transfers and depreciation of only those Authorities with revenue bonds outstanding.
- (2) Debt service requirements represent total debt service payments made less debt service paid on short-term borrowings of only those Authorities with revenue bonds outstanding.
- (3) Amounts are reflective of the implementation of the Governmental Accounting Standards Board Statement No. 14, "The Reporting Entity." Prior years have not been restated for incorporation of the new list of component units.

Source: Office of the Comptroller

Ten-Year Schedule Of Massachusetts And United States Resident Population

(Amounts in thousands)

Year	United States	% Change	Massachusetts	% Change	Massachusetts as % of U.S.
1997	267,645	0.9	6,127	0.4	2.3
1996	265,253	0.7	6,101	(1.6)	2.3
1995	263,434	0.9	6,203	1.9	2.4
1994	260,967	1.3	6,089	1.5	2.3
1993	257,592	1.0	5,998	0.0	2.3
1992	255,020	1.1	5,998	0.0	2.4
1991	252,177	1.1	5,996	(0.4)	2.4
1990	249,466	1.1	6,020	0.1	2.4
1989	246,820	0.9	6,016	0.6	2.4
1988	244,534	0.9	5,981	0.8	2.4

Source: United States Department of Commerce, Bureau of the Census

Nonagricultural Employment By Industry In Massachusetts and the United States for 1997

(Amounts in thousands)

Type of industry	MA	% of MA Total	U.S.	% of U.S. Total	MA % vs. U.S. %
Total manufacturing:	449	14.4	18,548	15.1	95.4
Total durable goods	279	9.0	10,851	8.8	102.3
Nondurable goods	170	5.4	7,697	6.3	85.7
Total non-manufacturing:	2,668	85.6	104,142	84.9	100.8
Construction and mining	100	3.2	6,403	5.2	61.5
Transportation and public utilities	127	4.2	6,293	5.2	80.8
Wholesale and retail	712	22.8	28,853	23.5	97.0
Finance, insurance and real estate	218	7.0	7,085	5.8	120.7
Other services	1,108	35.5	35,709	29.1	122.0
Federal, state and local government	403	12.9	19,799	16.1	80.1
Total	3,117		122,690		

Sources: Massachusetts Department of Employment and Training United States Department of Commerce

Ten Largest Massachusetts Industries By Number Of Employees As Of August, 1997

(Amounts in thousands)

<u>Industry</u>	Employees
Services	1,108
Wholesale and retail trade	712
Manufacturing - durable goods	279
Local government	242
Finance, insurance and real estate	218
Manufacturing - nondurable goods	170
Transportation and public utilities	127
State government	100
Construction and mining	100
Federal government	61

Source: Massachusetts Department of Employment and Training

Ten-Year Schedule Of Annual Average Civilian Labor Force, Unemployment And Unemployment Rates For Massachusetts And The United States

(Amounts in thousands)

		Massachusetts	8		United States		
Year	Labor Force	Unemployment	Unemployment Rate %	Labor Force	Unemployment	Unemployment Rate %	Massachusetts Rate as % of U.S. Rate
1997	3,247	121	3.7	136,361	6,437	4.7	78.7
1996	3,176	129	4.1	134,574	6,948	5.2	78.8
1995	3,161	162	5.1	132,440	7,476	5.6	91.1
1994	3,183	205	6.4	131,836	7,600	5.8	110.3
1993	3,158	207	6.6	128,633	8,252	6.4	103.1
1992	3,126	265	8.5	126,983	9,384	7.4	114.9
1991	3,127	280	9.0	125,303	8,426	6.7	134.3
1990	3,166	189	6.0	124,787	6,874	5.5	109.1
1989	3,180	127	4.0	123,869	6,528	5.3	75.5
1988	3,155	103	3.3	121,669	6,701	5.5	60.0

Sources: Massachusetts Department of Employment and Training United States Department of Labor, Bureau of Labor Statistics

Twenty-Five Largest Private Sector Massachusetts Employers

BankBoston

Bell Atlantic

Big Y Foods

Blue Cross of Massachusetts, Inc.

Boston University

Brigham & Women's Hospital Inc.

Digital Equipment Corporation

FMR Equipment

Friendly Ice Cream Corporation

General Electric Company

Harvard Community Health Plan, Inc.

Harvard University

Lucent Technologies

Massachusetts Institute of Technology

Massachusetts General Hospital

May Department Stores Company

Polaroid Corporation

Raytheon Company

S&S Credit Company

Sears Roebuck and Company

Shaw's Supermarkets, Inc.

Star Markets Company, Inc.

State Street Bank and Trust Company

United Parcel Service, Inc.

Wal-Mart

Source: Massachusetts Department of Employment and Training as of June, 1997

Calculation Of Transfers: Stabilization Fund

June 30, 1997 (Amounts in thousands)

This statement is prepared on the statutory basis of accounting pursuant to General Law Chapter 29, Sections and 5C as most recently ammended by Ch: 10 of Acts of 1997. It presents information contained in the offic books and accounting records of the Commonwealth. Financial statements supporting this calculation are are presented in the Financial Section of this report.

Part 1: Status of Consolidated Net Surplus in the Operating Funds before Stabilization Fund transfers, and Capital Projects Fund transfer but after authorization to retain 0.5% of net revenue from taxes.

Undesignated Fund Balance (Deficit) in the Operating Funds:

General FundHighway FundLocal Aid Fund	1,270,955 349,665 (1,338,883)
Consolidated Net Surplus	 281,737
Available to carry forward to subsequent fiscal year	 57,981
Consolidated net surplus before transfer to Capital Projects Fund	223,756
Part 2: Calculation of transfers to Capital Projects Fund:	
Transfer from General Fund to Capital Project Fund:	 89,503
Net Consolidated surplus available for Stabilization Fund	\$ 134,253
Part 3: Calculation of transfers to Stabilization Fund:	
From the General Fund, @ 60%From the Local Aid Fund, @ 40%	80,552 53,701
Total Transfers	\$ 134,253
Part 4: Status of Consolidated Net Surplus after Stabilization Fund transfers	
Undesignated Fund Balance (Deficit) in the Operating Funds:	
General FundHighway FundLocal Aid Fund	1,100,900 349,665 (1,392,584)
Consolidated Net Surplus	\$ 57,981
Part 5: Status of Stabilization Fund after transfers	
Reserved for Stabilization - Accumulated Balances	565,047 100,000 134,253
Reserved for Stabilization	\$ 799,300

Calculation Of Transfers: Tax Reduction Fund

June 30, 1997 (Amounts in thousands)

This statement is prepared pursuant to Chapters 29 and 29B of the Massachusetts General Laws. It is prepared on the statutory basis of accounting and presents information contained in the official books and accounting records of the Commonwealth. Supporting information is presented in individual schedules, as indicated, a in the Financial Section of this report. There are two computations of potential transfers to the Tax Reducti

The first computation is as follows:

Part 1: Comparison of Stabilization Fund, after current fiscal year transfers, to 5% of State Tax Revenues		
Undesignated Fund Balance in the Stabilization Fund	. \$	799,300
Allowable Stabilization Balance		908,503
Stabilization Fund Excess, if any, tranferrable to Tax Reduction Fund	. \$	
Part 2: Status of Stabilization Fund after transfers		
Stabilization Fund Balance Transfer to Tax Reduction Fund		
Stabilization Fund Balance after transfer to Tax Reduction Fund	\$	799,300
Part 3: Status of Tax Reduction Fund after transfers		
Tax Reduction Fund Balance Transfers from Stabilization Fund		91,764
Tax Reduction Fund Balance after transfers	\$	91,764
The second computation is as follows:		
Part 1: Comparison of State Tax Revenues to Allowable Tax Revenues		
FY96 Allowable State Tax Revenues		
Computed FY97 State Tax Revenue Base		
FY97 Computed Maximum and Allowable State Tax Revenues	. \$	14,157,614
FY97 State Tax Revenues	\$	12,874,419
State Tax Revenue Excess, if any, transferrable to Tax Reduction Fund	\$	



The Constitution's fine and fast sailing hull is ready for undocking, September 25, 1995.

U.S.S. Constitution ~ A Brief History

As a fledgling Nation, the United States was dependent on imports of both raw materials and finished goods imported through shipping. With the changing global political dynamics of the 1700s, there were no guaranteed alliances or protection on the open sea.

On March 27, 1794, Congress authorized the building of six frigates for the protection of U.S. commerce. Joshua Humphreys, master ship builder from Philadelphia, contributed the design specifications for the frigates, including the Constitution. Congress budgeted \$255,000 for the building of the Constitution and allowed cost overruns' increase to \$302,000. Paul Revere received \$3,800 for copper fasteners.

Humphreys' criteria for designing the ship was twofold - to be able to achieve fast speed under sail to enable the ship to outsail anything that it encountered and to be able to carry heavy armament and outgun any other ship. However, fast speed and heavy armament are two mutually exclusive design criteria requiring an innovative solution.

The difference in the buoyancy curve of a fast hull and the weight curve of a heavily armed ship result in a force that distorts the hull. With minimal buoyancy, the ends of the ship - the bow and stern-sag under the weight loads. In a wooden ship the distortion can be seen as a bending of the keel, an effect that creates a curve that resembled a hog's back and referred to as hogging.

The successful integration of the two design criteria demanded an innovative technical solution to the problems of strength of materials and hull design.

There are five key structural components that were part of the Constitution's original design: thick strakes, standard knees, midship knees, stanchions and diagonal riders. Humphreys' structural innovations (which had never been built before) stiffened the hull and resisted the forces of hogging.

Although the Constitution was repaired over the years, because of the expense of materials, techniques and labor to install, the five major structural components were not repaired. As early as 1820, the diagonal riders were not renewed.

In 1992 the ship was dry-docked for inspection and minor repair. It was determined to be in good condition, however, the Constitution had developed over 13 inches of hog.

After extensive examination and nondestructive testing, it was determined that the ship did not require extensive repairs, so the focus became the restoration of the five major structural components of her 1812 configuration.

Humphreys' original specifications for the structural components from 1794 were used as guides for the 1995 restoration.

In 1797, while observing the launch of the USS United States, Joshua Humphreys wrote to the Secretary of War, that ". . . without straining or hogging more than one and a quarter inch, as you will see by the enclosed certificate . . . the firmness of the ship is convincing proof of the utility of the diagonal riders in long ships,".¹

Today this can also be said of the Constitution. When it was undocked in September 1995, the hog was measured to be less than two inches.

On July 21, 1997, for the first time since 1881, after being tied to a pier for 116 years, the frigate made passage under sail, sailing in Massachusetts Bay off of Marblehead, under topsails, jibs, and spanker - her battle configuration. A living tribute to Humphreys' design.

¹ J. Humphreys' Letter Book, 1797-1800, Historical Society of Pennsylvania.



The U.S.S. Constitution is a national treasure and was restored with the support of people all over the country. The Old Ironsides Pennies Campaign was modeled after a 1903 effort to raise public dollars for an earlier restoration. Schools across the nation are engaged in this endeavor. To date, the campaign has donated to the Navy the three topsails an inner jib set during the first free sail since 1881.

Many of the Auditors, Treasurers and Comptrollers from across the nation had an opportunity to tour the U.S.S. Constitution this year at the National Association of State Auditors, , Treasurers and Comptrollers annual meeting in Boston. Massachusetts State Auditor Joe DeNucci, Treasurer Joe Malone and Comptroller William Kilmartin (below) hosted the event.

