

**CALIFORNIA EDUCATIONAL FACILITIES AUTHORITY  
BOND FINANCING PROGRAM  
EXECUTIVE SUMMARY**

<b>Applicant:</b>	California Institute of Technology ("Caltech") 1200 East California Blvd Pasadena, CA 91125 Los Angeles County	<b>Amount Requested:</b> \$165,000,000 <b>Requested Loan Term:</b> 30 years <b>Date Requested:</b> April 27, 2006 <b>Resolution Number:</b> F-235
<b>Facility Type:</b>	Private University	
<b>Project Locations:</b>	Pasadena, CA (Caltech campus) and 2632 East Washington Blvd., Pasadena, CA 91107 (Los Angeles County)	
<b>Accreditation:</b>	Western Association of Schools and Colleges Accreditation Board for Engineering and Technology, Inc.	

**Uses of Bond Proceeds:** Bond proceeds will be used to refund a 2003 CEFA bond issue and fund various capital projects, including the restoration of existing housing facilities, construction and/or renovation of various laboratories, construction of a campus center and a child care center, maintenance and upgrades of various other buildings.

<b>Type of Issue:</b>	Negotiated Public Offering (Variable/Fixed rates depending on market conditions)
<b>Credit Enhancement:</b>	None
<b>Expected Credit Rating:</b>	Aaa (Moody's)/AAA (S&Ps)
<b>Short Term Credit Rating:</b>	VMIG-1 (Moody's)/A-1+ (S&Ps)
<b>Managing Underwriter:</b>	Prager, Sealy & Co., LLC
<b>Co-Managing Underwriter:</b>	Morgan Stanley
<b>Bond Counsel:</b>	Orrick, Herrington and Sutcliffe, LLP

**Financial Overview:** Total revenues have steadily increased every year in our review period and have outpaced the growth in expenditures. Operating expenses had a moderate growth due to cost containment strategies. Caltech has seen an approximate 13% increase in total net assets over the review period, attributable to a \$1.4 billion fundraising campaign. The balance sheet exhibits exceptional debt service coverage, positive operating margins, and good liquidity.

<u>Sources of Revenues (\$000) - FYE 09/30/05</u>	<u>Amount</u>	<u>Percent</u>
Grants and contracts	\$1,914,486	83%
Investment return	214,115	9%
Net assets released from restrictions	87,545	4%
Auxiliary Enterprises	34,546	1%
Gifts	27,383	1%
Tuition and fees, net	19,393	1%
Other	<u>15,297</u>	<u>1%</u>
Total Revenue	<u>\$2,312,765</u>	<u>100%</u>

<u>Estimated Sources of Funds (\$000)</u>		<u>Estimated Uses of Funds (\$000)</u>	
Par Amount of Bonds	\$165,000	Capital Projects	\$243,000
Net Original Issue Discount	(2,576)	Advance Refund 1995 CEFA Bonds	75,689
Gift Funds	<u>158,000</u>	Financing Costs	<u>1,735</u>
Total Sources	<u>\$320,424</u>	Total Uses	<u>\$320,424</u>

**Legal Review:** Although disclosures were made by the applicant, the information disclosed does not appear to detrimentally affect the financial viability or legal integrity of the applicant.

**Staff Recommendation:** Staff recommends the Authority approve a Resolution in an amount not to exceed \$165,000,000 for the California Institute of Technology, subject to a bond rating of at least an "A" category by a nationally recognized rating agency and subject standard CEFA bond issuance guidelines for "A" category or higher rated bond issues.

**STAFF SUMMARY AND RECOMMENDATION  
BOND FINANCING PROGRAM**

April 27, 2006

CALIFORNIA INSTITUTE OF TECHNOLOGY (“Caltech”)

Resolution Number: F-235

**I. PURPOSE OF FINANCING:**

Caltech plans to complete several construction, renovation and upgrade projects to enhance its facilities. Bond proceeds and gift funds will be used to fund these projects. Additionally, Caltech will advance refund a portion of its Series 2003 CEFA bonds. The capital projects will be funded from approximately \$89,000,000 of bond proceeds with the remaining \$158,000,000 from the capital campaign.

The following information provides details pertaining to the projects and the financing:

***Capital Projects*..... \$243,000,000**

*Undergraduate Housing Renovation, Construction & Temporary Housing* (\$73,000,000) – The Undergraduate (UG) Housing projects will include renovation and restoration of the South and North UG Houses, UG “swing” temporary housing, associated dining remodeling, and the temporary relocation of the Student Activities Center. The restoration of the UG Housing consists of improvements to interior living spaces, as well as structural, seismic, electrical, HVAC and plumbing improvements.

*Chemistry Building* (\$35,000,000) – Caltech plans to construct a Chemistry and Chemical Engineering Laboratory (60,000 square feet). An essential feature of the building will be integration of chemistry and chemical engineering and of chemical sciences with other forefront areas of science and engineering research.

*Miscellaneous Deferred Maintenance and Renovation Projects* (\$20,000,000) – This consists of high priority maintenance and renovation projects, which includes the upgrades of fire protection, campus-wide steam and compressed air distribution systems, lighting and electrical, and building mechanical systems. Many mechanical, electrical and HVAC systems have exceeded their anticipated life expectancies and cannot be relied upon to adequately support current research activities.

*Robinson Laboratory Renovation* (\$18,000,000) – The Robinson Laboratory is an existing building that will be renovated to provide modern chemical, biological, and computer facilities; lecture and seminar rooms; and offices for faculty, postdocs, students, JPL associates, and visitors dedicated to global environmental science.

*Campus Center* (\$17,000,000) – The construction of the new 60,000 square foot Campus Center will provide needed facilities for musical performances and theatre arts, as well as service centers for students, faculty and staff. The plans call for a 400-seat music hall, a

250-seat multipurpose theater and greenroom space, a versatile art gallery/exhibition space, and various spaces for student activities.

*Astrophysics Laboratory* (\$16,000,000) – Intended for the Cahill Center for Astronomy, the facility will create an environment for productive interaction among observers, instrument builders, and theorists. The new laboratory will be approximately 100,000 gross square feet.

*Infrastructure Costs Related to Research Buildings* (\$15,000,000) – Caltech plans to perform several infrastructure upgrades to support the capital construction of new research buildings. Examples include a new substation, a chiller plant, distribution piping upgrades, a tunnel extension, sewage upgrades, water system upgrades, steam storm drains and utility connections.

*Biology Laboratory Renovations* (\$15,000,000) – Caltech plans to modernize space to accommodate the realignment of existing faculty into Affinity groups performing similar kinds of research. The Affinity groups would share common research equipment and facilities.

*Laboratory Renewal Projects* (\$12,000,000) – To accommodate the office and lab for new professorial appointments, Caltech will undertake a number of facilities renewal projects and the rehabilitation or modernization of laboratory space. The projects included will be new wet labs, offices, classrooms, clean rooms and post doctorate and student work areas.

*Refinance Acquisition Cost of CIT* (\$9,000,000) – In June 2003, Caltech purchased the former St. Luke Medical Center located at the 2632 East Washington Blvd. campus. Caltech intends to refinance the remaining loan balance. Caltech is currently renovating the building for research facilities.

*Information Science and Technology (IST) Building* (\$5,000,000) – Construction of the 60,000 square foot Annenberg/IST Center will consist of formal and informal assembly areas, classrooms, conference rooms, a library, and faculty and student offices in support of the cross-disciplinary approach comprising the IST initiative.

*Child Care Center* (\$5,000,000) – Caltech operates two separate childcare centers, one for school age children and one for preschool children. Caltech plans to combine both centers in to a new 200,000 square foot building.

*Guggenheim Laboratory* (\$3,000,000) – The Guggenheim project will provide seismic upgrade work required to strengthen the building and to conform to code. Projects will include the installation of needed fire sprinklers and asbestos abatement.

***Advance Refund 2003 CEFA Bonds* ..... 75,689,000**

Caltech intends to advance refund a portion of the 2003 CEFA bond issue to achieve an expected present value savings of approximately 15%. Bond proceeds were originally used to complete a number of construction, renovation and system development projects to enhance its facilities.

**Financing Costs** ..... **1,735,000**

Cost of Issuance ..... \$528,000

Underwriters Fee and Expenses ..... 1,207,000

**Total Uses of Funds** ..... **\$320,424,000**

**Financing Structure**

- General obligation of California Institute of Technology
- Negotiated Public Offering, fixed and/or variable rate
- 30-year term, final maturity 2036
- No credit enhancement
- Expected credit rating: Long-term AAA (Standard & Poors)/Aaa (Moody's), Caltech's underlying rating
- Short-term credit rating: A-1+ (Standard & Poors)/VMIG1 (Moody's)

## II. FINANCIAL STATEMENTS AND ANALYSIS:

### CALIFORNIA INSTITUTE OF TECHNOLOGY Statement of Activities Unrestricted (000s)

	For the Year Ended September 30,		
	2005	2004	2003
<b>Revenues:</b>			
Tuition and fees	\$ 19,393	\$ 17,549	\$ 17,682
Investment return	214,115	166,958	132,504
Gifts	27,383	21,342	24,703
Grants and contracts:			
Jet Propulsion Laboratory - direct	1,638,455	1,585,669	1,421,894
Other United States government - direct	164,641	157,145	161,242
Non-United States government - direct	10,491	9,397	10,813
Indirect cost recovery and management allowance	100,899	97,437	96,395
Auxiliary enterprises	34,546	32,881	30,065
Other	15,297	16,305	34,271
Net assets released from restrictions	87,545	29,783	67,760
Total revenues and net assets released from restrictions	2,312,765	2,134,466	1,997,329
<b>Operating Expenses:</b>			
Instruction and academic support	211,286	200,735	187,469
Organized research			
Jet Propulsion Laboratory	1,638,455	1,585,669	1,421,894
Other Institute research	185,170	189,241	186,376
Institutional support	64,135	75,920	70,345
Auxiliary enterprises	35,342	33,585	33,169
Total expenses	2,134,388	2,085,150	1,899,253
Balance (Revenues minus expenses)	178,377	49,316	98,076
Other changes in net assets:			
Increase in minimum pension liability	(1,110)	0	0
Resignations of unrestricted net assets	326	1,571	(1,811)
<b>Increase in unrestricted net assets</b>	177,593	50,887	96,265
UNRESTRICTED NET ASSETS, BEGINNING OF YEAR	1,172,765	1,140,867	1,044,602
UNRESTRICTED NET ASSETS, END OF YEAR	\$ 1,350,358	\$ 1,172,765	\$ 1,140,867

**CALIFORNIA INSTITUTE OF TECHNOLOGY**  
**Statement of Financial Position**  
**(000s)**

	As of September 30,		
	2005	2004	2003
<b>ASSETS:</b>			
Cash and cash equivalents	\$ 10,260	\$ 6,122	\$ 753
Advances on grants and contracts	2,854	2,935	56,234
Security deposits	234,767	244,665	0
Accounts and notes receivable			
United States government	156,396	145,411	148,802
Other	17,605	18,884	23,608
Contributions receivable	195,106	233,780	246,831
Investments, including securities pledged or on loan	1,780,900	1,540,028	1,460,381
Prepaid expenses and other assets	64,863	69,611	62,537
Deferred United States government buildings	276,072	249,194	217,582
Property, plant, and equipment, net	681,786	651,985	635,411
<b>TOTAL ASSETS</b>	<b>\$ 3,420,609</b>	<b>\$ 3,162,615</b>	<b>\$ 2,852,139</b>
<b>LIABILITIES AND NET ASSETS:</b>			
<b>Liabilities:</b>			
Accounts payable and accrued expenses	\$ 294,643	\$ 256,941	\$ 250,996
Security deposits	234,767	244,665	54,201
Deferred revenue and refundable advances	26,730	29,140	29,465
Annuities, trust agreements, and agency funds	91,324	72,549	73,165
Bonds and notes payable	242,906	239,688	244,470
Accumulated postretirement benefit obligation	299,478	271,910	232,433
<b>TOTAL LIABILITIES</b>	<b>1,189,848</b>	<b>1,114,893</b>	<b>884,730</b>
<b>Net assets:</b>			
Unrestricted	1,350,358	1,172,765	1,140,867
Temporarily Restricted	301,630	315,814	307,555
Permanently Restricted	578,773	559,143	518,987
<b>TOTAL NET ASSETS</b>	<b>2,230,761</b>	<b>2,047,722</b>	<b>1,967,409</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>\$ 3,420,609</b>	<b>\$ 3,162,615</b>	<b>\$ 2,852,139</b>

**Financial Ratios:**

	<b>Proforma (a)</b>			
	<b><u>FYE Sept 30, 2005</u></b>	<b><u>2005</u></b>	<b><u>2004</u></b>	<b><u>2003</u></b>
Debt service coverage (x)	2.77	2.90	1.84	2.83
Debt to expendable net assets (x)	0.20	0.15	0.16	0.17
Expendable net assets to operations (x)		0.77	0.71	0.76
Margin (%)		8	2	5

(a) Recalculates 2005 audited results to include the impact of this proposed financing.

## **Financial Discussion**

**Total revenues have steadily increased every year in our review period and have outpaced the growth in expenditures. Operating expenses had a moderate growth due to cost containment strategies.**

Caltech relies heavily on grants and contracts as a primary source of revenue. Such grants and contracts include the Jet Propulsion Laboratory (JPL), a federally funded research and development center managed by Caltech for the National Aeronautics and Space Administration (NASA). Together with other grants and contracts from U.S. and non-U.S. government entities, these sponsored research dollars comprise 83% of total revenues in fiscal year 2005 and have been in an upward trend since fiscal year 2003.

With student tuition and fees, auxiliary enterprises and gifts making up a combined 4% of total revenues, Caltech's other notable contribution to total revenue comes from returns on investments, which in fiscal year 2005 represents approximately 9% of total revenues. Due to improvement in market conditions, investment returns increased from \$132 million in fiscal year 2003 to \$214 million in fiscal year 2005, or 62%.

Additionally, Caltech exhibited a significant increase in net assets released from restrictions in fiscal year 2005. Net assets released from restriction in fiscal year 2005 were \$87 million and \$29 million in fiscal year 2004, almost a 200% increase. In fiscal year 2005 Caltech received a pledge of 10 million shares of stock from a Trustee and received \$47 million from the sale of 2 million of those shares. Also released was \$31.8 million for projects funded by the Gordon and Betty Moore Foundation and \$8 million in other releases. Fiscal year 2004 did not see such increases because Caltech did not receive any shares toward the Trustee's pledge. Although the increase from fiscal year 2004 to 2005 is significant, the total net assets released from restriction as a percentage of total revenues is minor, only about 4%.

During the past three years, operating expenses have increased \$235 million, a 12% change over the period. Consistent with its revenue streams, Caltech's organized research remains the most considerable expense category, representing approximately 85% of total operating expenses. In the current year, institutional support has declined 16% since fiscal year 2004. This reduction is a result of efforts put forth by management aimed at containing operating costs. These cost containment strategies include small changes to employee health benefits, reducing the rate of annual salary growth and selective budget cuts in various administrative departments. Management predicts these changes will not create a significant reduction in student services.

**Caltech has experienced a 13% increase in total net assets over the review period, attributable to a \$1.4 billion fundraising campaign. The balance sheet exhibits exceptional debt service coverage, positive operating margins, and good liquidity.**

In fiscal year 2002, Caltech began a \$1.4 billion fundraising campaign. Its progress towards that goal has increased the total net assets from \$1.9 billion in fiscal year 2003 to \$2.2 billion, or approximately 13% over the review period. Contributions towards the campaign have funded a variety of areas including scholarships, professorships, research projects, buildings and unrestricted uses.

During the review period, debt to expendable net assets has remained low. With an unrestricted and temporarily unrestricted net asset balance exceeding \$1.7 billion, the proforma debt to expendable net assets is a consistent 0.20x. Operating margins have varied, but is a solid 8% for 2005. The proforma debt service coverage ratio is 2.77x, indicating that Caltech will be able to repay the proposed debt



### III. STUDENTS, COLLEGE COSTS AND FACULTY STATISTICS:

#### Students

The following table provides information regarding the freshman applicant pool over the past five years. In academic year 2002-03 the number of freshman applications dropped by 750 applicants. Caltech believes this decrease is due to many different variables including a transition from a simple two-part application to a more complex one-part application as well as a decline in nationwide interest in engineering programs. Caltech reverted to the two-part application in academic year 2003-04. What seems like a decrease in freshman applications in 2004-05 is actually a result of a change in reporting methods. In previous years Caltech included applicants that filled out only the first part of the application as well as those who completed both parts in the freshman applicant data. For academic year 2004-05 Caltech reported only those applicants that completed both parts of the application.

#### APPLICATIONS

Academic Year	Freshman			Graduate		
	<u>Applications</u>	<u>Admissions</u>	<u>Matriculation</u>	<u>Applications</u>	<u>Admissions</u>	<u>Matriculation</u>
2004-05	2,761	566	207	3,876	551	208
2003-04	3,071	520	191	5,152	655	267
2002-03	2,615	560	252	4,579	509	254
2001-02	3,365	515	214	3,747	654	269
2000-01	3,515	473	205	3,886	622	245

The following table provides student enrollments and the number of degrees conferred at Caltech for each of the five most recent academic years.

#### ENROLLMENT AND DEGREES

Academic* Year	Enrollment			Degrees Awarded		
	<u>Undergraduate</u>	<u>Graduate</u>	<u>Total</u>	<u>Bachelor</u>	<u>Advanced</u>	<u>Total</u>
2004-05	896	1,275	2,171	217	311	528
2003-04	891	1,281	2,172	208	324	532
2002-03	939	1,181	2,120	244	249	493
2001-02	942	1,116	2,058	249	265	514
2000-01	929	1,039	1,968	204	279	483

\* Based on fall term data

A five-year summary of tuition, fees, room and board is provided below.

**TUITION, ROOM AND BOARD SUMMARY**

Academic Year	<u>Tuition</u>	<u>Room &amp; Board</u>	<u>Percent Increase</u>	
			<u>Tuition</u>	<u>Room &amp; Board</u>
2004-05	\$25,566	\$8,013	6.0%	6.0%
2003-04	\$24,117	\$7,560	9.0%	8.0%
2002-03	\$22,119	\$6,999	4.7%	7.0%
2001-02	\$21,120	\$6,543	5.8%	5.9%
2000-01	\$19,959	\$6,180	2.5%	3.0%

The following table reflects the number of full-time and part-time faculty appointments for the five most recent academic years

**FACULTY IN RESIDENCE AS OF SEPTEMBER 30,**

Academic Year	<u>Tenured Full Time</u>	<u>Other Full Time</u>	<u>Part Time FTE</u>	<u>FTE Total</u>
2004-05	283	265	144	692
2003-04	285	287	133	705
2002-03	275	285	118	678
2001-02	277	321	112	710

#### **IV. BACKGROUND:**

##### **General:**

California Institute of Technology (“Caltech”) is a privately supported university and research institution located on a 124-acre campus in Pasadena. Founded in 1891, Caltech provides education and training services, primarily for students at the undergraduate, graduate and postdoctoral levels, and performs research, training and other services under grants, contracts and similar agreements with sponsoring organizations that are primarily departments and agencies of the government of the United States. Caltech is known worldwide as one of the outstanding schools of science and engineering.

##### **Administration:**

Caltech has a self-perpetuating Board of Trustees with 45 elected Trustees, plus the President of the Institution as an ex-officio member, as well as a number of Senior Trustees who govern Caltech. Currently, there are 14 Senior Trustees (voting members of the Board) and 19 Life Trustees (non-voting members).

##### **Academic Programs:**

Caltech is organized into six academic divisions: Biology; Chemistry and Chemical Engineering; Humanities and Social Sciences; Engineering and Applied Science; Geological and Planetary Sciences; and Physics, Mathematics and Astronomy.

Research is conducted at Caltech in the areas of developmental biology, neurobiology, molecular chemistry, material sciences, and aeronautics. The majority of the research conducted at Caltech focuses on obtaining an understanding of the fundamentals of science and engineering, rather than focusing on the applications.

Caltech also operates a number of special research facilities, including several off-campus facilities. The largest off-campus facility operated by Caltech is the Jet Propulsion Laboratory (JPL), a world leader in planetary exploration. Caltech operates JPL for NASA under a cost reimbursement contract. JPL has a budget of approximately \$1.4 billion. The United States government owns JPL’s land, buildings, and equipment. The Vice President of Caltech is also the director of JPL.

##### **Accreditation and Affiliations:**

Caltech is fully accredited by the Senior Accrediting Commission of the Western Association of Schools and Colleges (WASC). In 1999, WASC reaffirmed accreditation of the University following a comprehensive review and is scheduled for a reaffirmation visit in 2008. The Accreditation Board of Engineering and Technology, Inc. (ABET) accredits Caltech’s Chemical Engineering and Engineering and Applied Science programs. ABET last affirmed Caltech’s accreditation in August 2002 with a scheduled reaffirmation visit in September 2006.

**Competition:**

Caltech is known as one of the outstanding schools of science and engineering in the world. The Institute is also a major science and engineering research center. As a result, Caltech can be highly selective in its admission process and does not face any significant competitive pressure from other Universities. In fact, the SAT score of incoming freshman has consistently been around 1,500 for the last ten years, an average that is one of the highest in the nation.

**V. OUTSTANDING DEBT (\$000):**

<u>Issue Name</u>	<u>Original Amount</u>	<u>Amount Outstanding as of 09/30/05*</u>	<u>Estimated Amount Outstanding after Proposed Financing</u>
<b>Existing Debt:</b>			
CEFA, 2003	\$72,320	\$70,441	\$0
CEFA, 1998	103,985	98,465	98,465
CEFA, 1994	30,000	30,000	30,000
JP Morgan Chase Money market loan	62,000	44,000	44,000
<b>Proposed Debt:</b>			
CEFA, 2006		N/A	165,000
<b>TOTAL DEBT</b>		<u>\$242,906</u>	<u>\$337,465</u>

*N/A – Not Applicable*

*\* Includes current portion of long-term debt.*

**VI. RELIGIOUS AFFILIATION DUE DILIGENCE:**

Staff has reviewed the Applicant's responses to the questions contained in the Religious Affiliation portion of the application. No information was disclosed in the questionnaire or discovered by staff to question the Applicant's compliance with the provisions of the Authority's Act relating to religious affiliation.

**VII. LEGAL REVIEW:**

Staff has reviewed the Applicant's responses to the questions contained in the Legal Status portion of the Application. Although disclosures were made by the applicant, the information disclosed does not appear to detrimentally affect the financial viability or legal integrity of the applicant.

**VIII. STAFF RECOMMENDATION:**

Staff recommends the Authority approve a Resolution in an amount not to exceed \$165,000,000 for California Institute of Technology, subject to a bond rating of at least an "A" category by a nationally recognized rating agency and subject standard CEFA bond issuance guidelines for "A" category or higher rated bond issues.